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 # 34089
Name: Agricultural Energy Services
Address 1: PO BOX 31865
Address 2:
City: EDMOND State: OK Zip: 73003 + ____
Contact Person: Montgomery Escue
Phone: (405) 208-2096
CONTRACTOR: License # 5929
Name: Duke Drilling Co., Inc.
Wellsite Geologist: Tom Williams
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 #:

06/11/2018 — Spud Date or Recompletion Date
06/26/2018 — Date Reached TD
08/2/2018 — Completion Date or Recompletion Date

API No.: 15-175-22263-00-00
Spot Description:
W2 - NE - SW - NW Sec. 23 Twp. 33 S. R. 31 ☐ East ☑ West
1650 Feet from ☑ North / ☐ South Line of Section
710 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: ________ *(e.g. xx.xxxxx)*, Long: ________ *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Seward
Lease Name: DON THORP Well #: 3-23
Field Name:
Producing Formation: St. Louis
Elevation: Ground: 2750 Kelly Bushing: 2758
Total Vertical Depth: 5997 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 1622 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: 7000 ppm Fluid volume: 250 bbls
Dewatering method used: Hauled to Disposal

Location of fluid disposal if hauled offsite:

Operator Name: Max's Water Service
Lease Name: Ibreigier #1 License #: 34021
Quarter NE Sec. 17 Twp. 33 S. R. 27 ☐ East ☑ West
County: Meade Permit #: D21232

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: 11/07/2018
☐ **Confidential Release Date:**
☑ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☑ **I** ☐ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 11/30/2018

Operator Name: Agricultural Energy Services   Lease Name: DON THORP   Well #: 3-23

Sec. 23 Twp. 33 S. R. 31 ☐ East ☑ West   County: Seward

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).

	Yes	No
Drill Stem Tests Taken *(Attach Additional Sheets)*	☑ Yes	☐ No
Samples Sent to Geological Survey	☑ Yes	☐ No
Cores Taken	☐ Yes	☑ No
Electric Log Run	☑ Yes	☐ No
Geologist Report / Mud Logs	☑ Yes	☐ No

List All E. Logs Run:
Attached

☑ Log   Formation (Top), Depth and Datum   ☐ Sample

Name	Top	Datum
Attached	Attached	Attached

CASING RECORD ☑ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	1621	Lite/Class A	703	0.25 cello
Production	7.875	5.500	15.5	5982	ASC	285	5# Gibsonite

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/ Injection: 08/09/2018

Producing Method: ☐ Flowing ☑ Pumping ☐ Gas Lift ☐ Other *(Explain)*

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

DISPOSITION OF GAS: ☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*

METHOD OF COMPLETION: ☐ Open Hole ☑ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*

PRODUCTION INTERVAL:

Top	Bottom
5892	5912

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*
4	5908	5912			3500 gls A
	5892	5894			NA

TUBING RECORD: Size: Set At: Packer At:

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

Form	ACO1 - Well Completion
Operator	Agricultural Energy Services
Well Name	DON THORP 3-23
Doc ID	1426692

All Electric Logs Run

Sonic
Neutron Density
Microlog
Dual Induction

Form	ACO1 - Well Completion
Operator	Agricultural Energy Services
Well Name	DON THORP 3-23
Doc ID	1426692

Tops

Name	Top	Datum
Heebner	4260	-1513
Lansing	4406	-1659
Kansas City	4478	-1731
Marmaton	5033	-2286
Cherokee	5208	-2461
Morrow Sh	5519	-2772
Miss Chester	5571	-2824
St Louis	5728	-2981
LTD	5987	-3240

Form	ACO1 - Well Completion
Operator	Agricultural Energy Services
Well Name	DON THORP 3-23
Doc ID	1426692

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	24	1621	Lite/Class A	703	0.25 cello
Production	7.875	5.500	15.5	5982	ASC	285	5# Gibsonite

State of Kansas

Corporation Commission
Conservation Division
266 N. Main St., Ste. 220
Wichita, KS 67202-1513

Phone: 316-337-6200
Fax: 316-337-6211
http://kcc.ks.gov/

November 07, 2018

Montgomery Escue
Agricultural Energy Services
PO BOX 31865
EDMOND, OK 73003

Re: ACO-1
API 15-175-22263-00-00
DON THORP 3-23
NW/4 Sec.23-33S-31W
Seward County, Kansas

Dear Montgomery Escue:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 06/11/2018 and the ACO-1 was received on November 07, 2018 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department

Customer Name Agricultural Energy
Well Name Don Thorp 3-23
Job Type Long String

District Liberal
Supervisor Victor Corona-Marta
Engineer Kevin Aldridge

Seq No.	Start Date/Time	Category	Event	Equipment	Event ID	Density (lb/gal)	Pump Rate (bpm)	Pump Vol (bbls)	Pipe Pressure (psi)	Comments
	6/27/2018 9:00pm	Mobilization	Arrive on Location	Cement Pump Truck						Arrived at loaction
		StandBy	Other (See comment)							Help put float equipment/ and rig up to rig
	4:00am	Operational	Other (See comments)							Rig crew started to circulate for 2 hours
	6:15am	Operational	Safety Meeting							Safety Meeting
	6:30am	Operational	Pressure Test	Cement Pump Truck					2500	Pressure test lines to 2500psi
	6:32	Operational	Pump Spacer	cement pump truck			2	24	310	Spacer 24bbls of HIVIS SWEEP Spacer
	6:45	Operational	Pumping Cement	cement pump truck		12	4	19.5	0	Rat & Mouse Hole 17bbls from 50sacks
										at 12lbs
	7:03	operational	pump tail cement	cement pump truck		13.8	4	78	390	Cement 78bbls from 285sacks
										at 13.8lbs
	7:29	Operational	Drop Top Plug							drop plug/wash pump on to pit
		Operational	Pump Displacement	cement pump truck						Start Displaicement 141bbls with KCL water
	7:36	Operational	Pump Displacement	cement pump truck		8.4	5	20	50	20bbls gone
	7:40	Operational	Pump Displacement	cement pump truck	64	8.4	5	40	50	40bbls gone
	7:44	Operational	Pump Displacement	cement pump truck		8./4	5	60	50	60bbls gone
	7:47	Operational	Pump Displacement	cement pump truck		8/.4	5	80	50	80bbls gone
	7:51	Operational	Pump Displacement	cement pump truck		8.4	5	100	340	100bbls gone
	7:55	Operational	Pump Displacement	cement pump truck	64	8.4	4	120	710	120bbls gone
	7:59	Operational	Pump Displacement	cement pump truck	64	8.4	4	131	800	131bbls gone/slow down rate
	8:03	Operational	Pump Displacement	cement pump truck	64	8.4	3	141	1560	Bump plug /check if float holds
										Had .5bbls in water returns
										Rig down
										Crew and I thanked the company man and
50										rig crew for job opportunity
51										
52										
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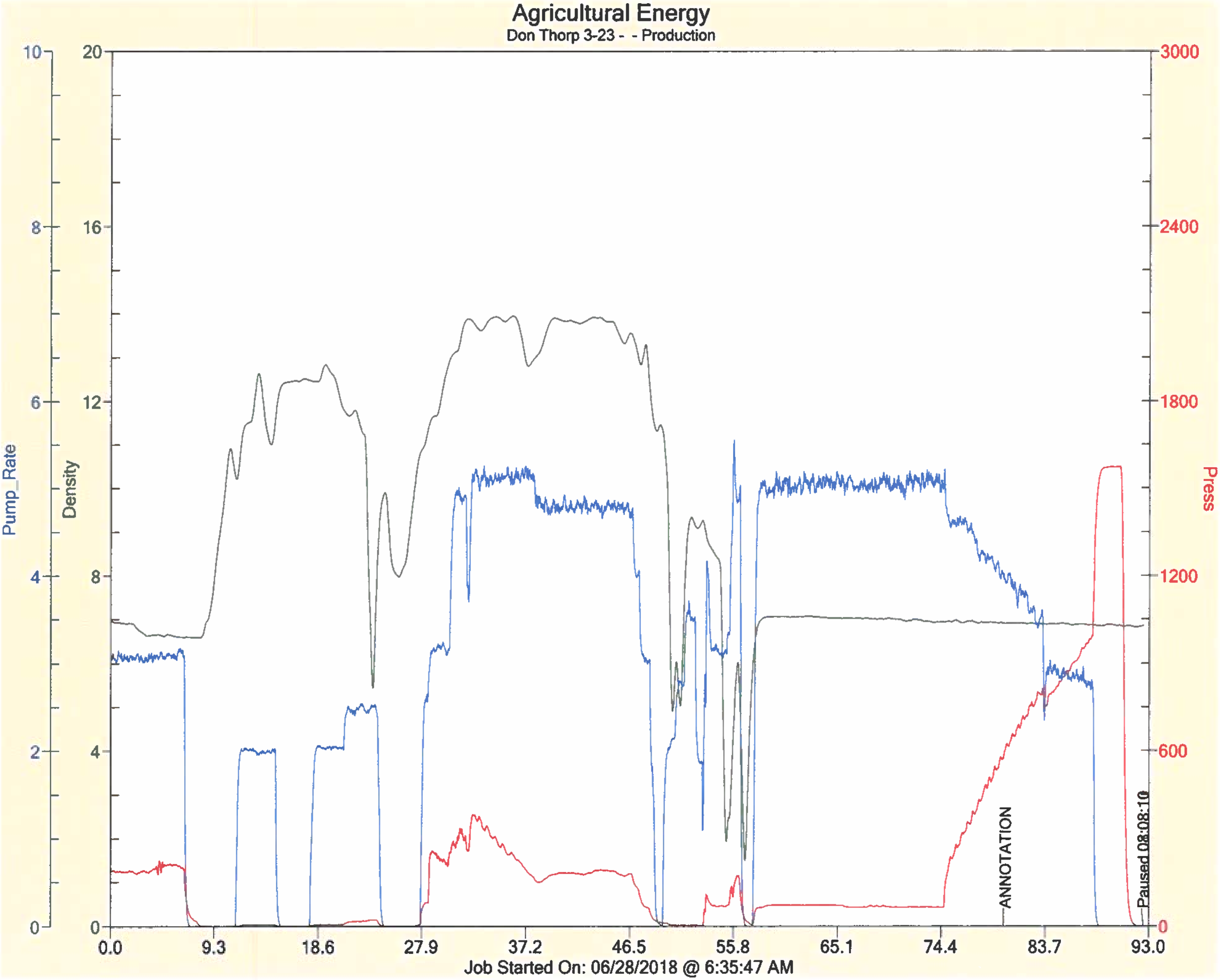
Customer:	Agricultural Energy
Date:	Wednesday, June 27, 2018
Well Name:	Don Thorp 3-23
Well Location:	Seward KS
Supervisor:	Victor Corona-Marta

Equipment Operators: Victor Corona-Marta - Saul Lopez - Gerardo Burciaga - Victor Garcia

Performance	Customer	
Was the appearance of the personnel and equipment satisfactory?	Yes	No
Was the job performed in a professional manner?	Yes	No
Were the calculations prepared and explained properly?	Yes	No
Were the correct services dispatched to the job site?	Yes	No
Were the services performed as requested?	Yes	No
Did the job site environment remain unchanged?	Yes	No
Did the equipment perform in the manner expected?	Yes	No
Did the materials meet your expectations?	Yes	No
Was the crew prepared for the job?	Yes	No
Was the crew prompt in the rig-up and actual job?	Yes	No
Were reasonable recommendations given, as requested?	Yes	No
Did the crew perform safely?	Yes	No
Was the job performed to your satisfaction?	Yes	No

Customer Signature: Date:6/27/2018

Additional Comments:



Agricultural Energy
Don Thorp 3-23 - - Production
Pump_Rate
Density
Press
ANNOTATION
Paused 08:08:10
0.0
9.3
18.6
27.9
37.2
46.5
55.8
65.1
74.4
83.7
93.0
Job Started On: 06/28/2018 @ 6:35:47 AM

CEMENT MIXING WATER GUIDELINES

Company Name: Agricultural Energy

Lease Name: Don Thorp 3-23

County: Seward

State: Kansas

Water Source: TANK

Submitted By: Victor Corona-Marta

Date: 6/27/2018

pH Level	7	Must be less than 8.5
Sulfates	400	Must be less than 1,000 PPM
Chlorides	0	Must be less than 3,000 PPM
Temperature	64	

COMMENTS

Customer Signature

Thank You

Cementing Treatment

Start Date	6/27/2018	**Field Ticket#**	FT-08149-T8H9P60202-69334
End Date	6/28/2018	**Well**	DON THORP 3-23
Client	AGRICULTURAL ENERGY SERVICES	**API#**	15-175-22261
Client Field Rep.	Chuck Schmidt	**Well Classification**	
Service Sup.	Victor Corona-Marta	**County**	SEWARD
District	Liberal, KS	**State/Province**	KS
Type of Job	Long String	**Formation**	
Execution ID	EXC-08149-T8H9P602	**Rig**	
Project ID	PRJ1008106		

WELL GEOMETRY

Type	ID (in)	OD (in)	Wt. (lb/ft)	MD (ft)	TVD (ft)	Excess(%)	Grade	Thread
Previous Casing	8.10	8.63	24.00	1,700.00	1,700.00			
Open Hole	7.88			6,000.00	6,000.00	25.00		
Casing	4.95	5.50	15.50	6,000.00	6,000.00			

Shoe Length (ft): 42

HARDWARE

Bottom Plug Used?	No	**Tool Type**	Float Collar
Bottom Plug Provided By		**Tool Depth (ft)**	5,995.00
Bottom Plug Size		**Max Tubing Pressure - Rated (psi)**	
Top Plug Used?	Yes	**Max Tubing Pressure - Operated (psi)**	
Top Plug Provided By	BJ	**Max Casing Pressure - Rated (psi)**	
Top Plug Size	5.500	**Max Casing Pressure - Operated (psi)**	
Centralizers Used	Yes	**Pipe Movement**	None
Centralizers Quantity	14.00	**Job Pumped Through**	Manifold
Centralizers Type	Bow	**Top Connection Thread**	ltc
Landing Collar Depth (ft)	5,995	**Top Connection Size**	5.5

CIRCULATION PRIOR TO JOB

Cementing Treatment

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

TEMPERATURE

Ambient Temperature (°F)	70.00	**Slurry Cement Temperature (°F)**	70.00
Mix Water Temperature (°F)	70.00	**Flow Line Temperature (°F)**	

BJ FLUID DETAILS

Fluid Type	Fluid Name	Density (ppg)	Yield (Cu Ft/sk)	H2O Req. (gals/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol (sk)	Vol (Cu Ft)	Vol (bbls)
Spacer / Pre Flush / Flush	Spacer	8.4000			3,223.00				24.0000
Tail Slurry	Tail Cement	13.8000	1.5414	6.91	4,000.00	2,000.00	285	439.0000	78.1000
Displacement Final	Displacement	8.3400			0.00			0.0000	141.8000
Top-Out / Scavenger Slurry	Mouse Hole Plug	12.0000	2.2054	12.57		0.00	50	111.0000	19.8000

Fluid Type	Fluid Name	Component	Concentration	UOM
Spacer / Pre Flush / Flush	Spacer	IntegraGuard ULTRA	100.0000	PCT
Tail Slurry	Tail Cement	CEMENT EXTENDER, GYPSUM, A-10	5.0000	BWOB

Cementing Treatment

Tail Slurry	Tail Cement	CEMENT, CLASS H, HSR	50.0000	PCT
Tail Slurry	Tail Cement	EXTENDER, BENTONITE	2.0000	BWOB
Tail Slurry	Tail Cement	SALT,SODIUM CHLORIDE, A-5	10.0000	BWOW
Tail Slurry	Tail Cement	FOAM PREVENTER, FP-25	0.2000	LBS/SK
Tail Slurry	Tail Cement	CEMENT, FLY ASH (POZZOLAN)	50.0000	PCT
Tail Slurry	Tail Cement	IntegraSeal KOL	5.0000	LBS/SK
Tail Slurry	Tail Cement	FLUID LOSS, FL-52	0.5000	BWOB
Tail Slurry	Tail Cement	DISPERSANT, CD-31	0.2000	BWOB
Displacement Final	Displacement	CLAY STABILIZER ResCare CS	6.0000	GPT
Top-Out / Scavenger Slurry	Mouse Hole Plug	CEMENT, FLY ASH (POZZOLAN)	40.0000	PCT
Top-Out / Scavenger Slurry	Mouse Hole Plug	CEMENT, ASTM TYPE I	60.0000	PCT
Top-Out / Scavenger Slurry	Mouse Hole Plug	EXTENDER, BENTONITE	8.0000	BWOB
Top-Out / Scavenger Slurry	Mouse Hole Plug	IntegraSeal CELLO	0.2500	LBS/SK

TREATMENT SUMMARY

Time	Fluid	Rate (bpm)	Fluid Vol. (bbls)	Pipe Pressure (psi)	Annulus Pressure (psi)	Comments
	Spacer	5.00	24.00			
	Tail Cement	5.00	78.10			
	Displacement	5.00	141.80			
	Mouse Hole Plug	5.00	19.80			

	Min	Max	Avg
Pressure (psi)	0.00	3,000.00	500.00
Rate (bpm)	3.00	5.00	5.00

DISPLACEMENT AND END OF JOB SUMMARY

Displaced By	BJ	**Amount of Cement Returned/Reversed**	0.00
Calculated Displacement Volume (bbls)	141.00	**Method Used to Verify Returns**	Visual
Actual Displacement Volume (bbls)	141.00	**Amount of Spacer to Surface**	0.00
Did Float Hold?	Yes	**Pressure Left on Casing (psi)**	0.00
Bump Plug	Yes	**Amount Bled Back After Job**	0.50

Cementing Treatment

Bump Plug Pressure (psi)	1,560.00	**Total Volume Pumped (bbls)**	263.00
Were Returns Planned at Surface	No	**Top Out Cement Spotted**	No
Cement returns During Job	Full	**Lost Circulation During Cement Job**	No

CEMENT PLUG

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

SQUEEZE

Injection Rate (bpm)		**Fluid Density (ppg)**	
Injection Pressure (psi)		**ISIP (psi)**	
Type of Squeeze		**FSIP (psi)**	
Operators Max SQ Pressure (psi)			

COMMENTS

Treatment Report

pump 19bbls for rat and mouse hole, pump 24bbls ultra flush spacer, pump 78bbls of cement, wash pump and lines to pit, displacement of 141bbls.

Job Summary

job summary on job log

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Plug 1
Print Date	November 27, 2018

Field Ticket # FT-07639-T4R8P00202-64844

Field Ticket #	FT-07639-T4R8P00202-64844	**Credit Approval #**	
Client	Agricultural Energy Services	**Purchase Approval #**	
	PO BOX 31865, EDMOND, 73003	**Invoice #**	

Field Rep	Edgar Rodriguez	**Well**	DON THORP 3-23
Field Client Rep	Galen Roach	**Well API #**	15-175-22261
District	Liberal, KS	**County**	SEWARD
Job Type	Plug 1	**State/Province**	KS
Job Depth (ft)	600.00	**Field**	KISMET
Gas Used On Job	No	**Lease**	

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Plug 1
Print Date	November 27, 2018

Field Ticket # FT-07639-T4R8P00202-64844

MATERIALS

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L488168	CEMENT, ASTM TYPE I	SK	127.0000	$44.11	$5,601.97	50.00	$2,800.99
L100317	CEMENT, FLY ASH (POZZOLAN)	SK	85.0000	$25.68	$2,182.80	50.00	$1,091.40
L100120	EXTENDER, BENTONITE	LB	726.0000	$2.08	$1,510.08	50.00	$755.04
				Product Material Subtotal:	**$9,294.85**		**$4,647.43**

SERVICES

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100049	Cement pump charge, 1,001-2,000 feet/ 301-600 m	4/HR	1.00	$4,680.00	$4,680.000	70.00	$1,404.000
S-100004	Cement Crew Mobilization-Demobilization Fee	EA	1.00	$10,880.00	$10,880.000	70.00	$3,264.000
S-100001	Mileage - vehicle heavy weight	MI	50.00	$18.96	$948.000	70.00	$284.400
				Service Subtotal:	**$16,508.00**		**$4,952.40**

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Plug 1
Print Date	November 27, 2018

Field Ticket # FT-07639-T4R8P00202-64844

FIELD ESTIMATES

TOTAL GROSS AMOUNT	$25,802.850
TOTAL % DISC	62.795%
TOTAL NET AMOUNT	$9,599.830

Arrive Location

Client Rep.

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

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

BJ REPRESENTATIVE	**CLIENT AUTHORIZED AGENT**
Edgar Rodriguez	Galen Roach

8146

FIELD TICKET

Client	AGRICULTURAL ENERGY SERVICES
Well	DON THORP 3-23
Job Description	Long String
Print Date	June 28, 2018

Field Ticket # FT-08149-T8H9P60202-69334

Field Ticket #	FT-08149-T8H9P60202-69334	**Credit Approval #**	
Client	AGRICULTURAL ENERGY SERVICES	**Purchase Approval #**	
	PO BOX 31865, EDMOND, 73003	**Invoice #**	

Field Rep	Victor Corona-Marta	**Well**	DON THORP 3-23
Field Client Rep	Chuck Schmidt	**Well API #**	15-175-22261
District	Liberal, KS	**County**	SEWARD
Job Type	Long String	**State/Province**	KS
Job Depth (ft)	5,997.00	**Field**	KISMET
Gas Used On Job	No	**Lease**	

FIELD TICKET

Client AGRICULTURAL ENERGY SERVICES

Well DON THORP 3-23

Job Description Long String

Print Date June 28, 2018

Field Ticket # FT-08149-T8H9P60202-69334

MATERIALS

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L100318	CEMENT EXTENDER, GYPSUM, A-10	LB	1,197.0000	$0.72	$861.84	65.00	$301.64
L488168	CEMENT, ASTM TYPE I	SK	30.0000	$44.11	$1,323.30	65.00	$463.16
L100022	CEMENT, CLASS H, HSR	SK	143.0000	$50.27	$7,188.61	65.00	$2,516.01
L100317	CEMENT, FLY ASH (POZZOLAN)	SK	163.0000	$25.68	$4,185.84	65.00	$1,465.04
L017064	CENTRALIZER,5-1/2"NON-WELD	EA	15.0000	$193.05	$2,895.75	65.00	$1,013.51
L488515	CLAY STABILIZER ResCare CS	GAL	36.0000	$33.68	$1,212.48	65.00	$424.37
L017116	Collars and Cement Baskets, 5-1/2 in.	EA	3.0000	$440.00	$1,320.00	65.00	$462.00
L100290	DISPERSANT, CD-31	LB	48.0000	$14.74	$707.52	65.00	$247.63
L100120	EXTENDER, BENTONITE	LB	823.0000	$2.08	$1,711.84	65.00	$599.14
L013391	FLOAT SHOE 5-1/2 - 8rd	EA	1.0000	$1,111.00	$1,111.00	65.00	$388.85
L488015	FLUID LOSS, FL-52	LB	120.0000	$23.28	$2,793.60	65.00	$977.76
L101196	FOAM PREVENTER, FP-25	LB	57.0000	$14.52	$827.64	65.00	$289.67
L398117	IntegraGuard ULTRA	BBL	24.0000	$234.85	$5,636.40	65.00	$1,972.74
L100295	IntegraSeal CELLO	LB	13.0000	$5.76	$74.88	65.00	$26.21
L415082	IntegraSeal KOL	LB	1,425.0000	$1.20	$1,710.00	65.00	$598.50
L017421	Latch Down Plug & Assembly, 5-1/2 in.	EA	1.0000	$1,717.00	$1,717.00	65.00	$600.95
L100404	SALT,SODIUM CHLORIDE, A-5	LB	1,643.0000	$1.04	$1,708.72	65.00	$598.05
				Product Material Subtotal:	**$36,986.42**		**$12,945.23**

SERVICES

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100004	Cement Crew Mobilization-Demobilizaton Fee	EA	1.00	$10,880.00	$10,880.000	88.00	$1,305.600
S-100053	Cement pump charge,	6/HR	1.00	$7,032.00	$7,032.000	88.00	$843.840

FIELD TICKET

Client AGRICULTURAL ENERGY SERVICES

Well DON THORP 3-23

Job Description Long String

Print Date June 28, 2018

Field Ticket # FT-08149-T8H9P60202-69334

	5,001-6,000 feet/1,501 - 1,800 m						
S-100001	Mileage - vehicle heavy weight	MI	50.00	$18.96	$948.000	88.00	$113.760
S-100002	Mileage - vehicle light weight	MI	50.00	$10.72	$536.000	88.00	$64.320
				Service Subtotal:	**$19,396.00**		**$2,327.52**

FIELD TICKET

Client AGRICULTURAL ENERGY SERVICES

Well DON THORP 3-23

Job Description Long String

Print Date June 28, 2018

Field Ticket # FT-08149-T8H9P60202-69334

FIELD ESTIMATES

TOTAL GROSS AMOUNT	$56,382.420
TOTAL % DISC	72.912%
TOTAL NET AMOUNT	$15,272.750

Arrive Location

Client Rep.

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

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

BJ REPRESENTATIVE	**CLIENT AUTHORIZED AGENT**
Victor Corona-Marta	Chuck Schmidt
Victor A Corona Marta	Chuck Schmidt

AGRICULTURAL ENERGY SERVICES

DON THORP 3-23 PRODUCTION

Long String

15-175-22261

SEWARD, KS

June 26, 2018

Cementing Quotation

Prepared For		**Prepared by**	
Client Contact		Quote Writer	Kevin Aldridge
Title		Title	Sales Engineer
Company	AGRICULTURAL ENERGY SERVICES	Bus Phone	+1 (405) 5612803 x6310
Bus Phone		Email	Kevin.Aldridge@bjservices.com
Email		Mobile	405-423-6862
Mobile			

Service Point		**Service Representatives**	
District	Liberal, KS	Account Rep	Kevin Aldridge
		Title	Sales Engineer
		Bus Phone	+1 (405) 5612803 x6310
		Email	Kevin.Aldridge@bjservices.com
		Mobile	405-423-6862

Operator Name	AGRICULTURAL ENERGY SERVICES		
Well	DON THORP 3-23		
Date	26 June, 2018	**Quote #**	QUO-08566-G5D4Y5

JOB AT A GLANCE

Zone	Production
Job Code	Long String
Depth (TVD) (ft)	6000.00
Depth (MD) (ft)	6000.00
Hole Size (in)	7.875
Casing Size (in)/Weight (lb/ft)	5.500 / 15.500
Pump Via	Casing
Total Mix Water Required (gals)	2,061.000

Cement Fluids

Fluid	Volume (bbls)	Density (ppg)	Yield (Cu Ft/sk)
SPACER : Spacer	12.00	8.4000	
TAIL SLURRY : Tail Cement	55.00	14.5000	1.6044
DISPLACEMENT : Displacement	141.80	8.3400	
TOP-OUT SLURRY : Mouse Hole Plug	19.80	12.0000	2.2054

Operator Name	AGRICULTURAL ENERGY SERVICES
Well	DON THORP 3-23
Date	26 June, 2018

Quote # QUO-08566-G5D4Y5

WELL DATA

Inner/Outer Geometry

Type	OD (in)	ID (in)	Weight (lbs/ft)	MD (ft)	TVD (ft)	Excess (%)	Grade
Previous Casing	8.630	8.097	24.000	1,700.000	1,700.000		
Open Hole		7.875		6,000.000	6,000.000	25.000	
Casing	5.500	4.950	15.500	6,000.000	6,000.000		

Landing Collar Depth (ft)	5,958.00
Mud Density (ppg)	
Mud Type	
Estimated Static Temp (°F)	125.00
Estimated Circulating Temp (°F)	106.00

VOLUME CALCULATIONS

1400.000 ft x 0.17325 cf/ft with 25.00 % excess = 303.188 cf
42.000 ft x 0.13364 cf/ft with 0 % excess = 5.613 cf

TOTAL SLURRY VOLUME = 309 cf

Operator Name	AGRICULTURAL ENERGY SERVICES
Well	DON THORP 3-23
Date	26 June, 2018

Quote # QUO-08566-G5D4Y5

FLUID SPECIFICATIONS

Fluid	Density (ppg)	Vol. (bbls)
SPACER : Spacer	8.4000	12.00
IntegraGuard ULTRA CONCENTRATE, 1.0000 GPB		

Fluid	Density (ppg)	Yield (Cu Ft/sk)	Planned Top of Fluid (Ft)	Length (Ft)	Vol. (Cu Ft)	Vol. (sks)	Vol. (bbls)
TAIL SLURRY : Tail Cement	14.5000	1.6044	4,600.00	1,400.00	309.00	195	55.00
CEMENT, CLASS H, HSR, 100.0000 PCT							
FOAM PREVENTER, FP-25, 0.1400 LBS/SK							
IntegraSeal KOL, 5.0000 LBS/SK							
SALT,SODIUM CHLORIDE, A-5, 10.0000 BWOW							
FLUID LOSS, FL-52, 0.5000 BWOB							
EXTENDER, BENTONITE, 2.0000 BWOB							
CEMENT EXTENDER, GYPSUM, A-10, 5.5000 BWOB							
TOP-OUT SLURRY : Mouse Hole Plug	12.0000	2.2054		0.00	111.00	50	19.80
CEMENT, FLY ASH (POZZOLAN), 40.0000 PCT							
CEMENT, ASTM TYPE I, 60.0000 PCT							
IntegraSeal CELLO, 0.2500 LBS/SK							
EXTENDER, BENTONITE, 8.0000 BWOB							

Fluid	Density (ppg)	Vol. (bbls)
DISPLACEMENT : Displacement	8.3400	141.80

Operator Name	AGRICULTURAL ENERGY SERVICES
Well	DON THORP 3-23
Date	26 June, 2018

Quote # QUO-08566-G5D4Y5

CEMENT PROPERTIES

	Tail Slurry	Top-Out / Scavenger Slurry
Slurry Weight (ppg)	14.5000	12.0000
Slurry Yield (Cu Ft/sk)	1.6044	2.2054
Amount of Mix Water (gals/sk)	7.34	12.57
Amount of Mix Fluid (gals/sk)	7.34	12.57
Estimated Pumping Time - 70 BC (HH:MM)		
Free Water @ 90^{0} Angle	@	@
Free Water @ 45^{0} Angle	@	@
Fluid Loss		

Operator Name AGRICULTURAL ENERGY SERVICES

Well DON THORP 3-23

Date 26 June, 2018

Quote # QUO-08566-G5D4Y5

Notes

PRICE ESTIMATES

Product Materials

Product	Quantity	UOM	Unit Price	Gross Amount	Discount (%)	Net Amount
CEMENT, CLASS H, HSR	195.0000	SK	$50.270	$9,802.650	65.000	$3,430.928
FOAM PREVENTER, FP-25	28.0000	LB	$14.520	$406.560	65.000	$142.296
CEMENT EXTENDER, GYPSUM, A-10	1,009.0000	LB	$0.720	$726.480	65.000	$254.268
SALT,SODIUM CHLORIDE, A-5	1,194.0000	LB	$1.040	$1,241.760	65.000	$434.616
IntegraGuard ULTRA CONCENTRATE	12.0000	GAL	$159.600	$1,915.200	65.000	$670.320
CEMENT, ASTM TYPE I	30.0000	SK	$44.110	$1,323.300	65.000	$463.155
FLUID LOSS, FL-52	92.0000	LB	$23.280	$2,141.760	65.000	$749.616
IntegraSeal KOL	975.0000	LB	$1.200	$1,170.000	65.000	$409.500
IntegraSeal CELLO	13.0000	LB	$5.760	$74.880	65.000	$26.208
CEMENT, FLY ASH (POZZOLAN)	20.0000	SK	$25.680	$513.600	65.000	$179.760
CENTRALIZER,5-1/2"NON-WELD	15.0000	EA	$193.050	$2,895.750	65.000	$1,013.513
Collars and Cement Baskets, 5-1/2 in.	3.0000	EA	$440.000	$1,320.000	65.000	$462.000
EXTENDER, BENTONITE	711.0000	LB	$2.080	$1,478.880	65.000	$517.608
FLOAT SHOE 5-1/2 - 8rd	1.0000	EA	$1,111.000	$1,111.000	65.000	$388.850
Latch Down Plug & Assembly, 5-1/2 in.	1.0000	EA	$1,717.000	$1,717.000	65.000	$600.950
			Product Material Subtotal:	**$27,838.82**		**$9,743.59**

Service Charges

Service	Quantity	UOM	Unit Price	Gross Amount	Discount (%)	Net Amount
Cement Crew Mobilization-Demobilizaton Fee	1.0000	EA	$10,880.000	$10,880.000	88.000	$1,305.600
Cement pump charge, 5,001-6,000 feet/1,501 -1,800 m	1.0000	6/HR	$7,032.000	$7,032.000	88.000	$843.840
Mileage - vehicle heavy weight	50.0000	MI	$18.960	$948.000	88.000	$113.760
Mileage - vehicle light weight	50.0000	MI	$10.720	$536.000	88.000	$64.320
			Service Subtotal:	**$19,396.00**		**$2,327.52**
			TOTALS:	**$47,234.82**	**74.44**	**$12,071.11**

Client will be charged for all 'SPECIAL PROPPANTS' delivered to location, whether they are pumped or not. All proppants other

than standard grade frac sand are considered 'SPECIAL PROPPANTS'.
The technical data contained in this proposal is based on the best information available at the time of writing and is subject to further analysis and testing. The pricing data contained in this proposal are estimates only and may vary depending on the work actually performed. Pricing does not include federal, state and local taxes or royalties.
This quotation is based on BJ services being awarded the work on a first call basis and within thirty (30) days of the proposal date. These prices will be subject to review if the work is done after thirty (30) days from the proposal date, or on a second or third call basis.

BJ SERVICES TERMS & CONDITIONS

All work orders for services ("Services" or "Work") and purchase orders for the supply of products or chemicals ("Products") (collectively, "Work Orders") to be provided in the United States and/or Canada by BJ Services, LLC or its subsidiaries or affiliates (collectively "BJ") to its customers (each a "Customer") are subject to acceptance by BJ, and any Work Orders so accepted will be governed by the pricing proposal, the Work Order, and these Terms and Conditions, unless the Customer and BJ (collectively the "Parties") have executed a Master Service Agreement, which terms shall control.

1. PAYMENT TERMS

Unless alternate payment terms are specified or approved by the BJ Credit Department, all charges billed by BJ must be paid within thirty (30) days of the date of invoice. For invoices, unpaid after thirty (30) days, discounts from list price may be revoked, interest may be charged at the rate of ten percent (10%) per annum or the maximum legal rate, liens and security interests may be filed and registered, and Customer shall pay BJ all costs of collection, including reasonable attorneys' fees and court costs, in addition to other amounts due. Operating, production or well conditions that prevent satisfactory operation of Services or Products do not relieve Customer of its payment responsibility. BJ reserves the right to require payment COD based on credit review at time of Work.

2. CANCELLATION AND RETURNS

A. Products: Product Orders may only be cancelled with written authorization from BJ. Customer may be charged a restocking charge of twenty-five percent (25%), plus any packing and transportation costs incurred. Products specially manufactured to Customer specifications, or orders for substantial quantities may not be cancelled. Delivered Products may only be returned for credit (less the restocking fee and transport costs) in unused, reusable condition, in original unopened containers.

B. Services: In the event Customer cancels an order for Services without cause, Customer shall be liable for all reasonable costs incurred by BJ including mobilization/demobilization.

3. THIRD-PARTY CHARGES, TAXES

Customer shall pay all third-party charges, in compliance with BJ's current price list, and any sales, use, rental or other taxes that may be applicable. Customer shall pay all applicable customs, excise, import and other duties unless otherwise agreed in writing by BJ. Customer shall provide necessary import licenses and extensions.

4. INDEPENDENT CONTRACTOR

It is expressly understood that BJ is an independent contractor, and that neither BJ nor its principals, partners, shareholders, members, directors, officers, employees or subcontractors are servants, agents or employees of Customer. Where BJ provides Services in Louisiana, the Services provided by BJ and its subcontractors are an integral part of, and are essential to the ability of Customer to generate Customer's goods, products, and services, and therefore BJ and Customer agree that Customer is the statutory employer of BJ's employees and its subcontractor's employees under La. R.S. 23:1061 (A) (3).

5. LIABILITIES, RELEASES AND INDEMNIFICATION:

A. In these Terms and Conditions (i) "BJ Group" means BJ, its subsidiary and affiliated companies; its subcontractors at any tier; and the officers, directors, employees, consultants, and agents of all of the foregoing; (ii) "Claims" means all claims, demands, causes of action, liabilities, damages, judgments fines, penalties, awards, losses, costs, expenses (including, without limitation, attorneys' fees and costs of litigation) of any kind or character arising out of, or related to, the performance of the Services or Products provided; (iii) "Consequential Damages" means any indirect, special, punitive, exemplary or consequential damages or losses under applicable law; (iv) "Customer Group" means Customer, its parent, subsidiary and affiliated or related companies; its co-lessees, co-owners, partners, joint operators and joint ventures; its client or customer if it is not the end user of the Services or Products; its other contractors at any tier; and the officers, directors, employees, consultants, and agents of all of the foregoing; (v) "Pollution Claims" means all Claims relating to pollution or contamination of water, land, or air, including without limitation, adverse effects on the environment or any form of property, or any violation or alleged violation of environmental statutes, ordinances, laws, orders, rules and regulations; (vi) "Tools" means any of BJ Group's instruments, equipment, or tools, and (vii) "Waste" means any cuttings, muds, waste, water, or materials from the well that where Services are performed by BJ.

B. BJ SHALL RELEASE, INDEMNIFY, DEFEND AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR RELATED TO (I) PERSONAL OR BODILY INJURY, ILLNESS, SICKNESS, DISEASE OR DEATH OF ANY MEMBER OF BJ GROUP, AND (II) LOSS, DAMAGE OR DESTRUCTION OF REAL OR PERSONAL PROPERTY, WHETHER OWNED, LEASED, OR CHARTERED, OF ANY MEMBER OF BJ GROUP.

C. CUSTOMER SHALL RELEASE, INDEMNIFY, DEFEND AND HOLD BJ GROUP HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR RELATED TO (I) PERSONAL OR BODILY INJURY, ILLNESS, SICKNESS, DISEASE OR DEATH OF ANY MEMBER OF CUSTOMER GROUP, AND (II) LOSS, DAMAGE OR DESTRUCTION OF REAL OR PERSONAL PROPERTY WHETHER OWNED, LEASED, OR CHARTERED, OF ANY MEMBER OF CUSTOMER GROUP.

D. SUBJECT TO THE PERSONAL INJURY PROVISIONS OF ARTICLE 5(B)) ABOVE, BJ SHALL PROTECT, DEFEND AND INDEMNIFY CUSTOMER GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS AND CAUSES OF ACTION, INCLUDING POLLUTION CLAIMS, ARISING FROM POLLUTION OR CONTAMINATION WHICH ORIGINATES ABOVE THE SURFACE OF THE LAND OR WATER AND IS DIRECTLY ASSOCIATED WITH BJ GROUP'S EQUIPMENT OR OTHER QUIPMENT IN ITS CONTROL, AND SHALL ASSUME ALL RESPONSIBILITY FOR CONTROL AND REMOVAL OF SAME.

E. SUBJECT TO THE PERSONAL INJURY PROVISIONS OF 5(C) ABOVE, CUSTOMER SHALL PROTECT, DEFEND AND INDEMNIFY BJ GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION ARISING DIRECTLY OR INDIRECTLY FROM ANY EXISTING POLLUTION AT THE SITE AND FROM ALL OTHER POLLUTION OR CONTAMINATION, INCLUDING BUT NOT LIMITED TO POLLUTION RESULTING FROM FIRE, BLOWOUT, CRATERING, SEEPAGE OR OTHER UNCONTROLLED FLOW OF OIL, GAS, OR

OTHER SUBSTANCE; OR RELATED TO THE TRANSPORTATION, STORAGE, TREATMENT, DISPOSAL OR HANDLING OF WASTE, AND SHALL ASSUME ALL RESPONSIBILITY FOR CONTROL AND REMOVAL OF SAME.

F. NOTWITHSTANDING ANYTHING TO THE CONTRARY HEREIN, CUSTOMER SHALL RELEASE, PROTECT, DEFEND, AND INDEMNIFY BJ GROUP FROM AND AGAINST ALL CLAIMS, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER, IN THE EVENT OF CATASTROPHIC LOSSES INCLUDING BUT NOT LIMITED TO: (I) LOSS OR DAMAGE TO A HOLE(S) OR WELL(S), INCLUDING ITS CASING, (II) LOSS OR DAMAGE TO ANY GEOLOGICAL FORMATION, STRATA OR OIL OR GAS RESERVOIR OR MINERAL OR WATER RESOURCE,

(III) IMPAIRMENT OF PROPERTY RIGHTS OR OTHER INTERESTS IN OR TO LAND, OIL, GAS, MINERAL, OR WATER RESOURCES, OR THE QUIET ENJOYMENT THEREOF, (IV) SUBSURFACE TRESPASS,

(V) DAMAGE FROM ANY RADIOACTIVE SOURCES AND (VI) REGAINING CONTROL OF ANY WILD WELL OR OUT OF CONTROL WELL, UNDERGROUND OR ABOVE THE SURFACE, INCLUDING REMOVAL OF WRECK AND DEBRIS, EMEDIATING ENVIRONMENTAL DAMAGEAND ALL COSTS RELATED THERETO.

G. CUSTOMER SHALL RELEASE, DEFEND, INDEMNIFY AND HOLD BJ GROUP HARMLESS FROM AND AGAINST ANY CLAIMS FOR CONSEQUENTIAL DAMAGES ASSERTED BY OR IN FAVOR OF ANY MEMBER OF CUSTOMER GROUP. BJ SHALL RELEASE, DEFEND, INDEMNIFY AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ANY CLAIMS FOR CONSEQUENTIAL DAMAGES ASSERTED BY OR IN FAVOR OF ANY MEMBER OF BJ GROUP.

H. THE EXCLUSIONS OF LIABILITY, RELEASES AND INDEMNITIES SET FORTH IN THIS ARTICLE 5 APPLY TO ANY CLAIM(S) WITHOUT REGARD TO THE CAUSE(S) THEREOF, INCLUDING BUT NOT LIMITED TO PRE-EXISTING CONDITIONS, WHETHER SUCH CONDITIONS BE PATENT OR LATENT, THE UNSEAWORTHINESS OF ANY VESSEL OR VESSELS, IMPERFECTION OF MATERIAL, DEFECT OR FAILURE OF PRODUCTS OR EQUIPMENT, BREACH OF REPRESENTATION OR WARRANTY (EXPRESS OR IMPLIED), ULTRAHAZARDOUS ACTIVITY, STRICT LIABILITY, TORT, BREACH OF CONTRACT, BREACH OF DUTY (STATUTORY OR OTHERWISE), BREACH OF ANY SAFETY REQUIREMENT OR REGULATION, OR THE NEGLIGENCE, GROSS NEGLIGENCE, OR OTHER LEGAL FAULT OR RESPONSIBILITY OF ANY PERSON, PARTY, OR ENTITY (INCLUDING THE INDEMNIFIED OR RELEASED PARTY), WHETHER SUCH FORM OF NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, ACTIVE OR PASSIVE.

6. <u>INSURANCE</u>

Each Party agrees to support the indemnity obligations contained in Article 5 by carrying insurance (or qualified self-insurance) with reputable insurance companies in the following minimum amounts:

A. Workers' Compensation Insurance complying with applicable state, provincial and federal laws, and Employers' Liability Insurance in the amount of $1,000,000 each accident for bodily injury by accident/$1,000,000 each employee for bodily injury by disease/ $1,000,000 policy limit.

B. Commercial General Liability Insurance, including Products and Completed operations aggregate, sudden and accidental pollution (which may be provided for in a separate policy), in the amount of $1,000,000 combined single limit per occurrence/$2,000,000 in the aggregate.

C. Automobile Liability Insurance in the amount of $1,000,000 combined single limit for Bodily Injury and property Damage, including coverage for all owned, hired, and non-owned vehicles.

D. Excess Liability Insurance over that required in A (for Employer's Liability only), B and C in the minimum amount of $5,000,000 each occurrence and in the aggregate, specifically including contractual liability coverage.

Upon written request, each party shall furnish to the other party certificates of insurance evidencing that adequate insurance to support each party's obligations has been secured. To the extent of each party's release and indemnity obligations, each party agrees that all such insurance policies shall (i) be primary to the other party's insurance, (ii) include the other party, its parent, subsidiary and affiliated or related companies, its subcontractors and other contractors, and its and their respective officers, directors, employees, consultants and agents as additional insured, and (iii) be endorsed to waive subrogation against the other party, its parent, subsidiary and affiliated or related companies, its subcontractors and othe contractors, and its and their respective officers, directors, employees, consultants and agents.

7. <u>CONFIDENTIALITY</u>

Each party shall maintain all data and information obtained from the other party in strict confidence, subject only to disclosure required by law or legal process. The design, construction, application and operation of BJ's Services and Products embody proprietary and confidential information. Customer shall maintain this information in strict confidence and shall not disclose it to others, subject only to disclosure required by law or legal process.

8. <u>ACCESS TO WELL AND WELL SITE STORAGE</u>

Customer shall provide at its expense adequate access to and from the well site, and shall obtain all permits, licenses or other authorization required for BJ to enter upon work areas for the purposes contemplated. Customer shall provide proper storage space at the well site, meeting all applicable safety and security requirements and consistent with good industry practices, for the Tools and Products, including, without limitation, all radioactive materials. BJ reserves the right not to perform Worl if the job or conditions of the location render such performance inadvisable.

9. <u>STANDARD OF PERFORMANCE</u>

A. <u>Services:</u> BJ warrants (i) that all Services shall be performed in compliance with all laws, rules and regulations (including all safety codes, statutes, regulations, precautions, and procedures) and utilizing all necessary Protective equipment and devices, (ii) that all Services shall be done with the utmost skill, care and diligence, in a good and workmanlike manner, in accordance with the terms hereof, the specifications set forth in the applicable Order, and good industry standards of performance and in a timely manner; and (iii) that BJ, its subcontractors and their employees are sufficiently experienced and suitably trained to perform the Services. In the event that the Services fail to conform to such specifications, BJ shall re-perform that part of the non-conforming Services, provided BJ is notified in writing by Customer prior to demobilization.

B. <u>Products:</u> BJ warrants that the Products shall conform to BJ's published specifications or the specifications agreed to in writing. If any of the Products fail to conform, BJ shall repair or replace the non-conforming Products, or issue credit to the Customer. In the event BJ is requested to develop, manufacture, test or use Products that are intended to satisfy a unique need identified by Customer and are not "standard" Products of BJ ("Specialty Products"), Customer recognizes and agrees that Specialty Products may not have or contain the same or similar characteristics as BJ's standard Products, including historical performance against which future performance can be measured. In developing, manufacturing, testing and using any Specialty Product, BJ will be relying upon information and specifications provided by Customer regarding its unique needs, and will have no responsibility for the design, manufacture or engineering of any such Specialty Product. Upon inspection, if the Specialty Product fails to meet the specifications agreed to in writing by Customer, then BJ shall, at its option, repair or replace the non-conforming specialty Products with the type originally furnished to Customer or substitute with standard Products. BJ's warranty obligations are non-transferrable and void if the non-conformity were caused by (i) Customer's failure to properly store or maintain the Products, (ii) abnormal well conditions, abrasive materials, corrosion due to aggressive fluids or incorrect specifications provided by Customer, (iii) unauthorized alteration of the Products, (iv) loss or damage while on Customer's site due to any negligence, vandalism or force majeure, or (v) use or handling by Customer in a manner inconsistent with BJ's recommendations.

Further, BJ's warranty obligations shall terminate if Customer fails to perform its obligations under these Terms and Conditions. All transportation charges and removal and reinstallation charges related

to the repair or replacement of non-conforming Products shall be borne by Customer, including shipment to BJ's facility.

C. Goods: BJ shall assign any vendor or supplier's warranty to Customer for any Products or goods purchased, to the extent such warranties are assignable.

D. Recommendations: Interpretations, research, analysis, recommendations, advice or interpretational data (specifically including, without limitation, any engineering designs, geological studies or analyses, well programs, reservoir models, production optimization or management programs) ("Recommendations") furnished by BJ are opinions based upon models, production optimization or management programs) ("Recommendations") furnished by BJ are opinions based upon inferences from measurements, empirical relationships and assumptions, and industry practice. The inferences, assumptions and practices are not infallible, and with respect to which professional geologists, engineers, drilling consultants, and analysts may differ. Accordingly, BJ does not warrant the accuracy, correctness, or completeness of any interpretations or Recommendations, or that reliance on its interpretations and/or Recommendations will accomplish any particular results. CUSTOMER ASSUMES FULL RESPONSIBILITY FOR THE USE OF SUCH RECOMMENDATIONS AND FOR ITS DECISIONS. OTHER THAN THE PROVISIONS IN THIS ARTICLE 9, BJ MAKES NO WARRANTY OR GUARANTEE OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING NO IMPLIED WARRANTY OF RCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING ANY SERVICES, EQUIPMENT OR PRODUCTS. IN NO EVENT SHALL BJ BE LIABLE FOR CONSEQUENTIAL DAMAGES INCURRED BY CUSTOMER GROUP AS A RESULT OF DEFECTIVE OR NON-CONFORMING SERVICES, EQUIPMENT OR PRODUCTS.

10. INTELLECTUAL PROPERTY

A. BJ intends to protect its intellectual property. Customer shall not resell the Products (or drawings related thereto) to others or reverse engineer or permit others to reverse engineer for the purpose of manufacturing similar Products. BJ owns and has legal rights to practice certain copyrights, trademarks, industrial designs, patents or pending applications on certain technology and items related to the Services or Products furnished. In the vent that BJ makes any improvements on such technology, then BJ shall own all such improvements, including drawings, specifications, calculations and other documents.

B. BJ warrants that the use or sale of Products will not infringe valid patents of others by reason of the use or sale of such Products, and hereby agrees to RELEASE, DEFEND, INDEMNIFY AND HOLD CUSTOMER GROUP HARMLESS FROM AND AGAINST ALL CLAIMS for infringement of any such patent, provided that Customer shall promptly notify.

BJ in writing upon receipt of any claim for infringement, or upon the filing of any such suit for infringement, whichever first occurs, and shall afford BJ full opportunity, at BJ's option and expense, to answer such claim or threat of suit, assume the control of the defense of such suit, and settle or compromise same in any way BJ sees fit. BJ does not warrant that such Products: (i) will not infringe any such patent when not of BJ's manufacture, or specially made, in whole or in part, to the Customer's design certifications; or (ii) if used or sold in combination with other materials or apparatus or used in the practice of processes, will not, as a result of such combination or use, infringe any such patent, and BJ shall not be liable; AND CUSTOMER SHALL RELEASE, DEFEND, INDEMNIFY AND HOLD BJ HARMLESS FOR DAMAGES OR LOSSES OF ANY NATURE HATSOEVER RESULTING FROM ALLEGED PATENT INFRINGEMENT ARISING PURSUANT TO (I) AND (II) ABOVE.

11. FORCE MAJEURE

If either party is unable because of Force Majeure to carry out any of its obligations under these Terms and Conditions, other than obligations to pay money, then on such party giving notice and particulars in writing to the other party within a reasonable time after the occurrence of the cause relied upon, such obligations shall be suspended. "Force Majeure" shall include any event that is beyond the reasonable control of the party so affected including, without limitation, acts of God, laws and regulations, government action, war, civil disturbances, hijack, piracy, criminal action by a third party, threats or acts of terrorism, strikes and labor problems, delays of vendors or carriers, lightening, fire, flood, washout, storm, breakage or accident to equipment or machinery, and shortage of raw materials. If any suspension due to Force Majeure exceeds ten (10) consecutive days, either party may terminate these Terms and Conditions by written notice to the other party and Customer shall be liable for demobilization and any other reasonable costs incurred by BJ incidental to such termination.

12. LAWS, RULES, REGULATIONS, AND EXPORT CONTROL

BJ and Customer agree to comply with all laws, rules, regulations and decrees of any governmental or regulatory body having jurisdiction over the Services or Products to be provided by BJ or the work site or that may otherwise be applicable to BJ's or Customer's performance under these Terms and Conditions

Services and Products and/or related technical data covered by these Terms and Conditions may be subject to U.S., Canadian and/or foreign trade controls. Customer agrees that it will not sell, re-export or transfer Products and/or related technical data except in full compliance with all governmental requirements including but not limited to economic sanctions and export controls administered by the U.S. Department of Treasury, U.S. Department of Commerce and U.S. Department of State.

Operator Name AGRICULTURAL ENERGY SERVICES

Well DON THORP 3-23

Date 26 June, 2018

Quote # QUO-08566-G5D4Y5

Customer agrees to comply with all BJ requests for trade compliance information, statements, and other assurances including, without limitation, requests for End- User and Routed Transaction certifications. BJ reserves the right to refuse to fulfill any Work Order or otherwise perform under these Terms and Conditions if BJ in its sole discretion determines that such action may violate any law or regulation.

13. GOVERNING LAW, JURY WAIVER, AND VENUE

For all Work performed on a worksite within the United States of America, this MSA shall be exclusively governed by the laws of the State of Texas, without regard to any choice of laws or conflicts of law provisions. Venue shall lie exclusively in the state or federal courts of Harris County, Texas and Customer consents to personal jurisdiction therein. In the event Texas law cannot be applied to such Work, the law of the state where the Work was performed will govern.

For all Work performed on a worksite within Canada, this MSA shall be construed and the legal relations determined in accordance with the laws of the Province of Alberta.

The Parties agree to submit to binding arbitration in Calgary, Alberta, Canada. Each Party waives any objection that the designed courts above are an inconvenient forum or venue.

References in these Terms and Conditions to any act, law, statute, rule, or regulation shall be deemed to include references to such as the same may be amended, replaced, or reenacted from time to time.

EACH PARTY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT TO ANY ACTION, CLAIM, SUIT OR PROCEEDING ARISING OUT OF OR RELATING TO THESE TERMS AND CONDITIONS.

14. ASSIGNMENT

BJ shall have the right to assign these Terms and Conditions to any of its affiliated companies without the consent of Customer.

15. GENERAL

Failure of either party to enforce any of these Terms and Conditions shall not be a waiver of the right to enforce. These Terms and Conditions contain all representations of the Parties and supersedes all prior oral or written agreements or representations and may only be amended by an agreement executed by both Parties. In the event of conflict between the provisions of these Terms and Conditions and any other terms in Customer's purchase orders, field work orders, work tickets, invoices, statements, or any other type of memoranda or other documents used by Customer, whether oral or written, the provisions of these Terms and Conditions shall govern.

CUSTOMER SIGNATURE:

Name:

Title:

Date:

Company:

Address:

DRILL STEM TEST REPORT

Prepared For: **Agricultural Energy Services**

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

Don Thorp #3-23

23-33s-31w Seward,KS

Start Date: 2018.06.20 @ 05:54:56
End Date: 2018.06.20 @ 15:19:56
Job Ticket #: 63881 DST #: 1

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

Printed: 2018.06.26 @ 16:05:17

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63881 **DST#: 1**

Test Start: 2018.06.20 @ 05:54:56

GENERAL INFORMATION:

Formation: **Drum**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:45:26
Time Test Ended: 15:19:56

Test Type: Conventional Bottom Hole (Initial)
Tester: Brandon Turley
Unit No: 79

Interval: 4680.00 ft (KB) To 4740.00 ft (KB) (TVD)
Total Depth: 4740.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

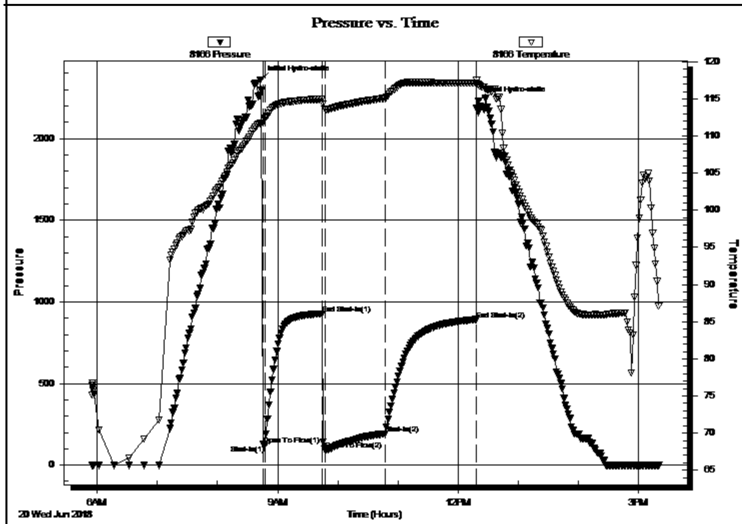
Reference Elevations: 2744.00 ft (KB)
2737.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8166 **Inside**

Press@RunDepth: 192.46 psig @ 4682.00 ft (KB)
Start Date: 2018.06.20 End Date: 2018.06.20
Start Time: 05:55:01 End Time: 15:19:56

Capacity: 8000.00 psig
Last Calib.: 2018.06.20
Time On Btm: 2018.06.20 @ 08:42:56
Time Off Btm: 2018.06.20 @ 12:20:26

TEST COMMENT: IF: BOB in 1 1/2 mins. 60"
IS: No return.
FF: BOB Gas to surface in 7 mins.
FS: BOB in 2 min 13"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2360.22	111.70	Initial Hydro-static
3	126.67	111.80	Open To Flow (1)
5	120.72	112.48	Shut-In(1)
61	927.30	114.96	End Shut-In(1)
65	94.29	113.61	Open To Flow (2)
124	192.46	115.10	Shut-In(2)
215	892.28	117.16	End Shut-In(2)
218	2231.96	116.88	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	gocw m 40%g 20%o 20%w 20%m	0.87
186.00	gocw m 60%g 10%o 10%w 20%m	2.61
169.00	ocm 10%o 90%m	2.37
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	3.00	6.13
Last Gas Rate	0.13	13.50	9.83
Max. Gas Rate	0.13	14.00	10.01

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63881 **DST#: 1**

Test Start: 2018.06.20 @ 05:54:56

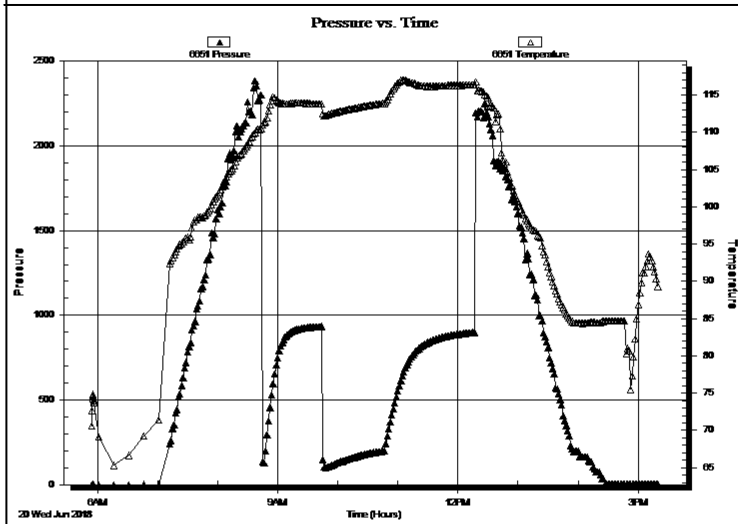
GENERAL INFORMATION:

Formation:	**Drum**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Initial)
Time Tool Opened:	08:45:26	Tester:	Brandon Turley
Time Test Ended:	15:19:56	Unit No:	79
Interval:	**4680.00 ft (KB) To 4740.00 ft (KB) (TVD)**	Reference Elevations:	2744.00 ft (KB)
Total Depth:	4740.00 ft (KB) (TVD)		2737.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Good	KB to GR/CF:	7.00 ft

Serial #: 6651 **Outside**

Press@RunDepth:	psig @ 4682.00 ft (KB)			Capacity:	8000.00 psig
Start Date:	2018.06.20	End Date:	2018.06.20	Last Calib.:	2018.06.20
Start Time:	05:54:36	End Time:	15:19:31	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF: BOB in 1 1/2 mins. 60"
IS: No return.
FF: BOB Gas to surface in 7 mins.
FS: BOB in 2 min 13"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	gocw m 40%g 20%o 20%w 20%m	0.87
186.00	gocw m 60%g 10%o 10%w 20%m	2.61
169.00	ocm 10%o 90%m	2.37
0.00	GTS	0.00

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	3.00	6.13
Last Gas Rate	0.13	13.50	9.83
Max. Gas Rate	0.13	14.00	10.01

DRILL STEM TEST REPORT

TOOL DIAGRAM

Trilobite Testing, Inc

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63881 **DST#: 1**

Test Start: 2018.06.20 @ 05:54:56

Tool Information

Drill Pipe:	Length:	4664.00 ft	Diameter:	3.80 inches	Volume:	65.42 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
					Total Volume:	65.42 bbl	

Drill Pipe Above KB:	14.00 ft
Depth to Top Packer:	4680.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	59.00 ft
Tool Length:	89.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:	2000.00 lb
Weight set on Packer:	30000.00 lb
Weight to Pull Loose:	90000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	68000.00 lb
Final	70000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			4655.00		
Hydraulic tool	5.00			4660.00		
Jars	5.00			4665.00		
EM Tool	3.00			4668.00		
Safety Joint	3.00			4671.00		
Packer	5.00			4676.00	30.00	Bottom Of Top Packer
Packer	4.00			4680.00		
Stubb	1.00			4681.00		
Perforations	1.00			4682.00		
Recorder	0.00	8166	Inside	4682.00		
Recorder	0.00	6651	Outside	4682.00		
Perforations	20.00			4702.00		
Change Over Sub	1.00			4703.00		
Drill Pipe	32.00			4735.00		
Change Over Sub	1.00			4736.00		
Bullnose	3.00			4739.00	59.00	Bottom Packers & Anchor
Total Tool Length:	**89.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63881 **DST#: 1**

Test Start: 2018.06.20 @ 05:54:56

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	48.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	8.36 in^3	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	2200.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	gocw m 40%g 20%o 20%w 20%m	0.870
186.00	gocw m 60%g 10%o 10%w 20%m	2.609
169.00	ocm 10%o 90%m	2.371
0.00	GTS	0.000

Total Length: 417.00 ft Total Volume: 5.850 bbl

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

DRILL STEM TEST REPORT

GAS RATES

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63881 **DST#: 1**

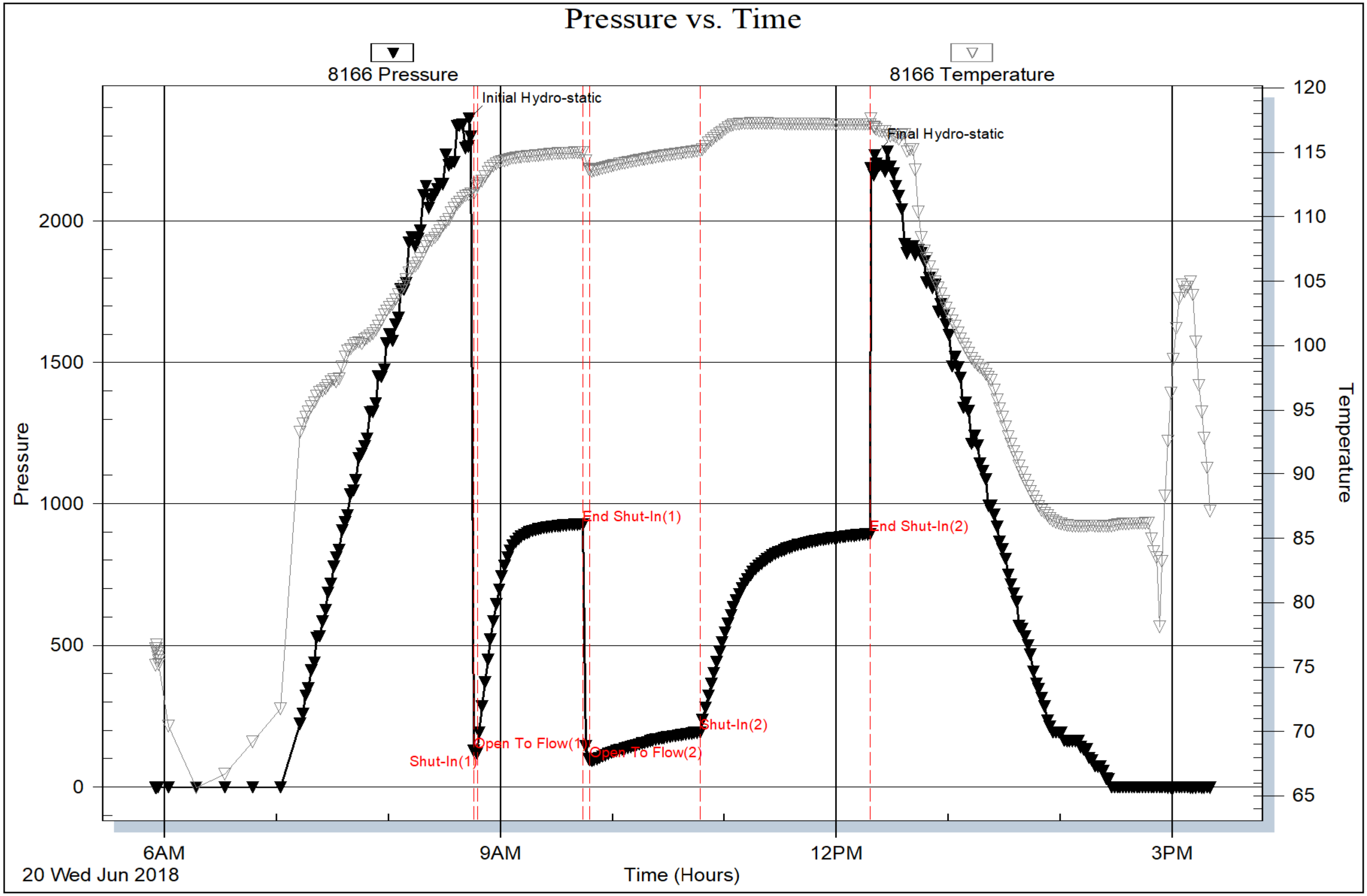
Test Start: 2018.06.20 @ 05:54:56

Gas Rates Information

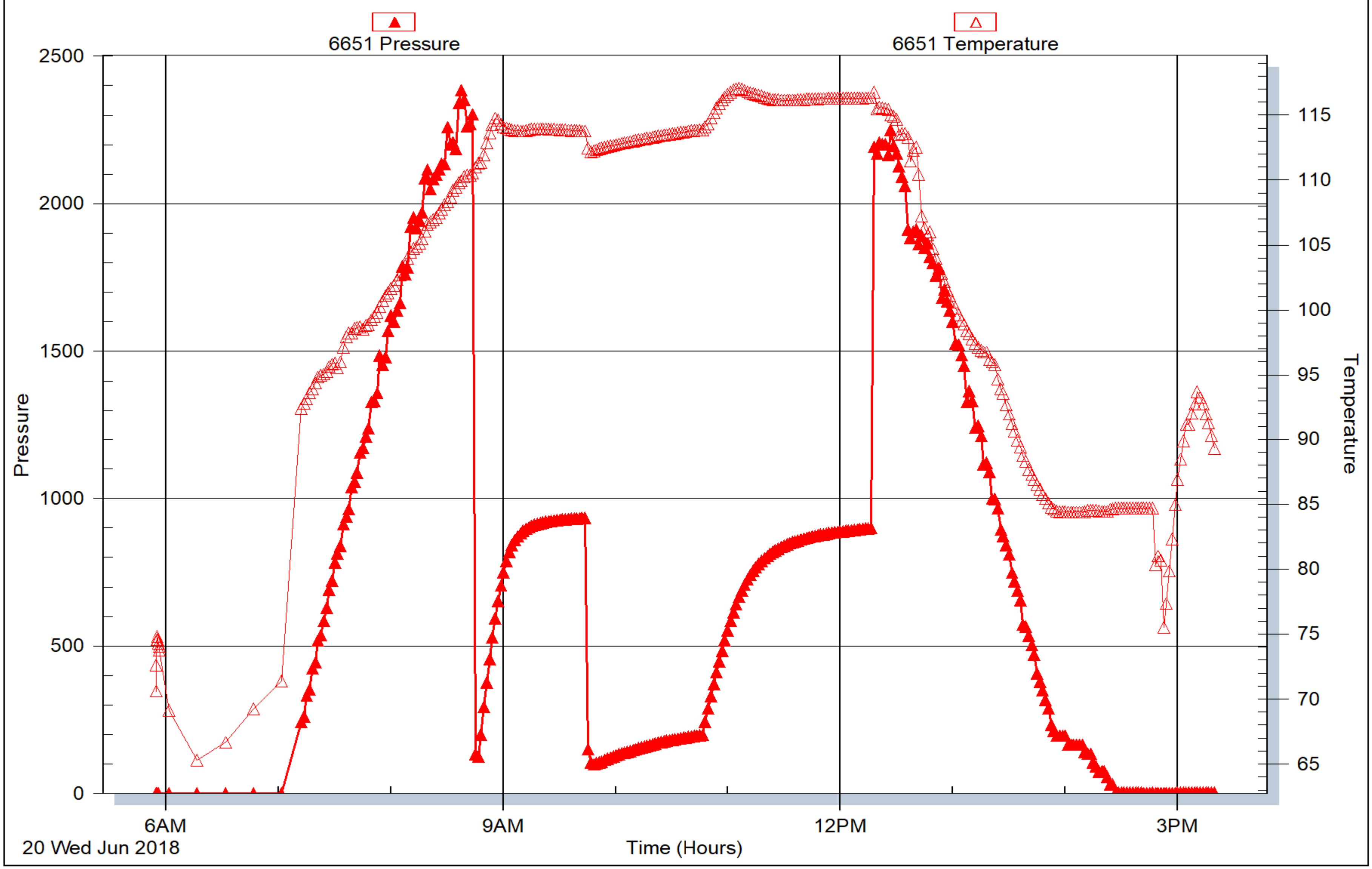
Temperature: 125 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.13	3.00	6.13
2	20	0.13	7.00	7.54
2	30	0.13	11.00	8.95
2	40	0.13	14.00	10.01
2	50	0.13	13.60	9.87
2	60	0.13	13.50	9.83


Pressure vs. Time
8166 Pressure
8166 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure
0
500
1000
1500
2000
Temperature
65
70
75
80
85
90
95
100
105
110
115
120
6AM
9AM
12PM
3PM
20 Wed Jun 2018
Time (Hours)

Pressure vs. Time



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **Agricultural Energy Services**

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

Don Thorp #3-23

23-33s-31w Seward,KS

Start Date: 2018.06.21 @ 10:57:17
End Date: 2018.06.21 @ 18:42:47
Job Ticket #: 63882 DST #: 2

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

Printed: 2018.06.26 @ 16:02:27

DRILL STEM TEST REPORT

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63882 **DST#: 2**

Test Start: 2018.06.21 @ 10:57:17

GENERAL INFORMATION:

Formation: **Swope**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:59:17
Time Test Ended: 18:42:47

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Interval: 4886.00 ft (KB) To 4932.00 ft (KB) (TVD)
Total Depth: 4932.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

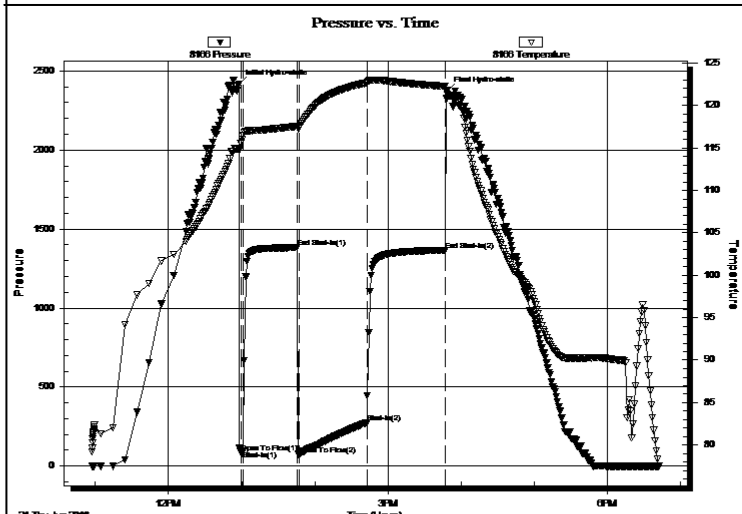
Reference Elevations: 2744.00 ft (KB)
2737.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8166 **Inside**

Press@RunDepth: 274.01 psig @ 4888.00 ft (KB)
Start Date: 2018.06.21 End Date: 2018.06.21
Start Time: 10:57:22 End Time: 18:42:46

Capacity: 8000.00 psig
Last Calib.: 2018.06.21
Time On Btm: 2018.06.21 @ 12:57:47
Time Off Btm: 2018.06.21 @ 15:48:47

TEST COMMENT: IF: BOB immediately built to 75"
IS: No return.
FF: BOB Gas to surface in 25 min.
FS: BOB in 2 min. 61"



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2415.39	114.91	Initial Hydro-static
2	86.59	115.55	Open To Flow (1)
4	95.43	116.50	Shut-In(1)
48	1382.38	117.55	End Shut-In(1)
49	68.24	117.32	Open To Flow (2)
105	274.01	122.65	Shut-In(2)
170	1366.58	122.25	End Shut-In(2)
171	2373.50	121.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mcw 95%w 5%m	4.35
186.00	gocmw 20%g 5%o 40%w 35%m	2.61
93.00	gocw m 10%g 2%o 10%w 78%m	1.30
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	3.00	6.13
Last Gas Rate	0.13	3.00	6.13
Max. Gas Rate	0.13	3.00	6.13

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC.

Agricultural Energy Services	**23-33s-31w Seward,KS**
PO Box 31865 Edmond, OK 73003	**Don Thorp #3-23**
	Job Ticket: 63882 **DST#: 2**
ATTN: Tom Williams	Test Start: 2018.06.21 @ 10:57:17

GENERAL INFORMATION:

Formation: **Swope**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 12:59:17
Time Test Ended: 18:42:47

Test Type: Conventional Bottom Hole (Reset)
Tester: Brandon Turley
Unit No: 79

Interval: 4886.00 ft (KB) To 4932.00 ft (KB) (TVD)
Total Depth: 4932.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Good

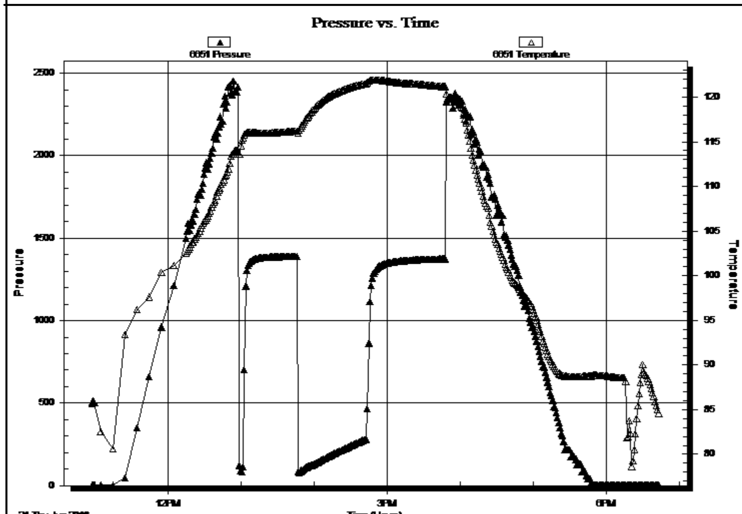
Reference Elevations: 2744.00 ft (KB)
2737.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 6651 **Outside**

Press@RunDepth: psig @ 4888.00 ft (KB)
Start Date: 2018.06.21 End Date: 2018.06.21
Start Time: 10:57:54 End Time: 18:43:18

Capacity: 8000.00 psig
Last Calib.: 2018.06.21
Time On Btm:
Time Off Btm:

TEST COMMENT: IF: BOB immediately built to 75"
IS: No return.
FF: BOB Gas to surface in 25 min.
FS: BOB in 2 min. 61"



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
310.00	mcw 95%w 5%m	4.35
186.00	gocmw 20%g 5%o 40%w 35%m	2.61
93.00	gocwm 10%g 2%o 10%w 78%m	1.30
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	3.00	6.13
Last Gas Rate	0.13	3.00	6.13
Max. Gas Rate	0.13	3.00	6.13

DRILL STEM TEST REPORT

TOOL DIAGRAM

TRILOBITE TESTING, INC.

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63882 **DST#: 2**

Test Start: 2018.06.21 @ 10:57:17

Tool Information

Drill Pipe:	Length:	4883.00 ft	Diameter:	3.80 inches	Volume:	68.50 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight to Pull Loose:	90000.00 lb
					Total Volume:	68.50 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		27.00 ft					String Weight: Initial	66000.00 lb
Depth to Top Packer:		4886.00 ft					Final	68000.00 lb
Depth to Bottom Packer:		ft						
Interval betw een Packers:		46.00 ft						
Tool Length:		76.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			4861.00		
Hydraulic tool	5.00			4866.00		
Jars	5.00			4871.00		
EM Tool	3.00			4874.00		
Safety Joint	3.00			4877.00		
Packer	5.00			4882.00	30.00	Bottom Of Top Packer
Packer	4.00			4886.00		
Stubb	1.00			4887.00		
Perforations	1.00			4888.00		
Recorder	0.00	8166	Inside	4888.00		
Recorder	0.00	6651	Outside	4888.00		
Perforations	7.00			4895.00		
Change Over Sub	1.00			4896.00		
Drill Pipe	32.00			4928.00		
Change Over Sub	1.00			4929.00		
Bullnose	3.00			4932.00	46.00	Bottom Packers & Anchor
Total Tool Length:	**76.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63882 **DST#: 2**

Test Start: 2018.06.21 @ 10:57:17

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 59.00 sec/qt
Water Loss: 6.79 in³
Resistivity: 0.00 ohm.m
Salinity: 2150.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 0 deg API
Water Salinity: 53000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
310.00	mcw 95%w 5%m	4.348
186.00	gocmw 20%g 5%o 40%w 35%m	2.609
93.00	gocw m 10%g 2%o 10%w 78%m	1.305
0.00	GTS	0.000

Total Length: 589.00 ft Total Volume: 8.262 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: .11@91=53000

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63882 **DST#: 2**

Test Start: 2018.06.21 @ 10:57:17

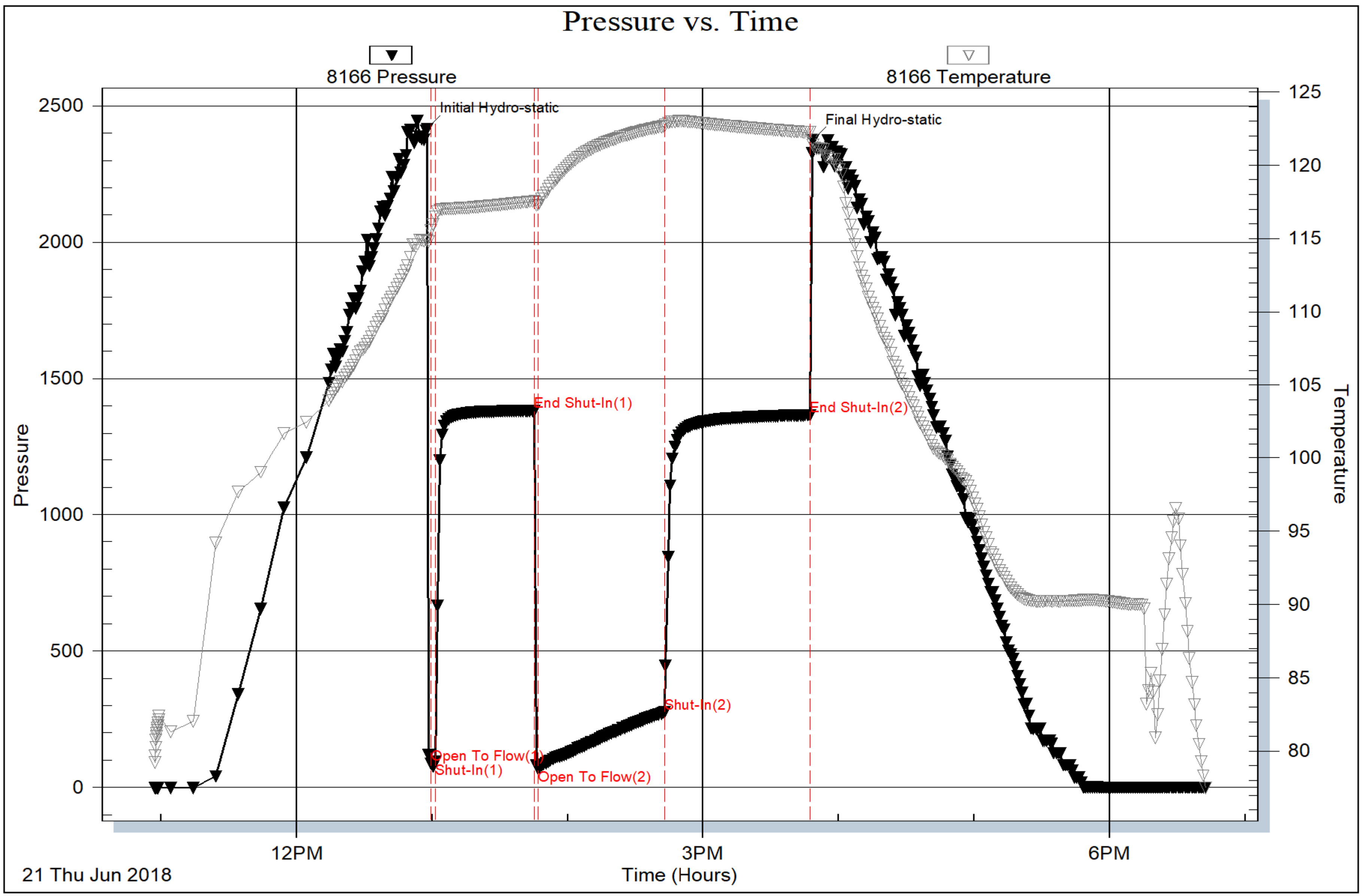
Gas Rates Information

Temperature: 125 (deg F)
Relative Density: 0.65
Z Factor: 0.8

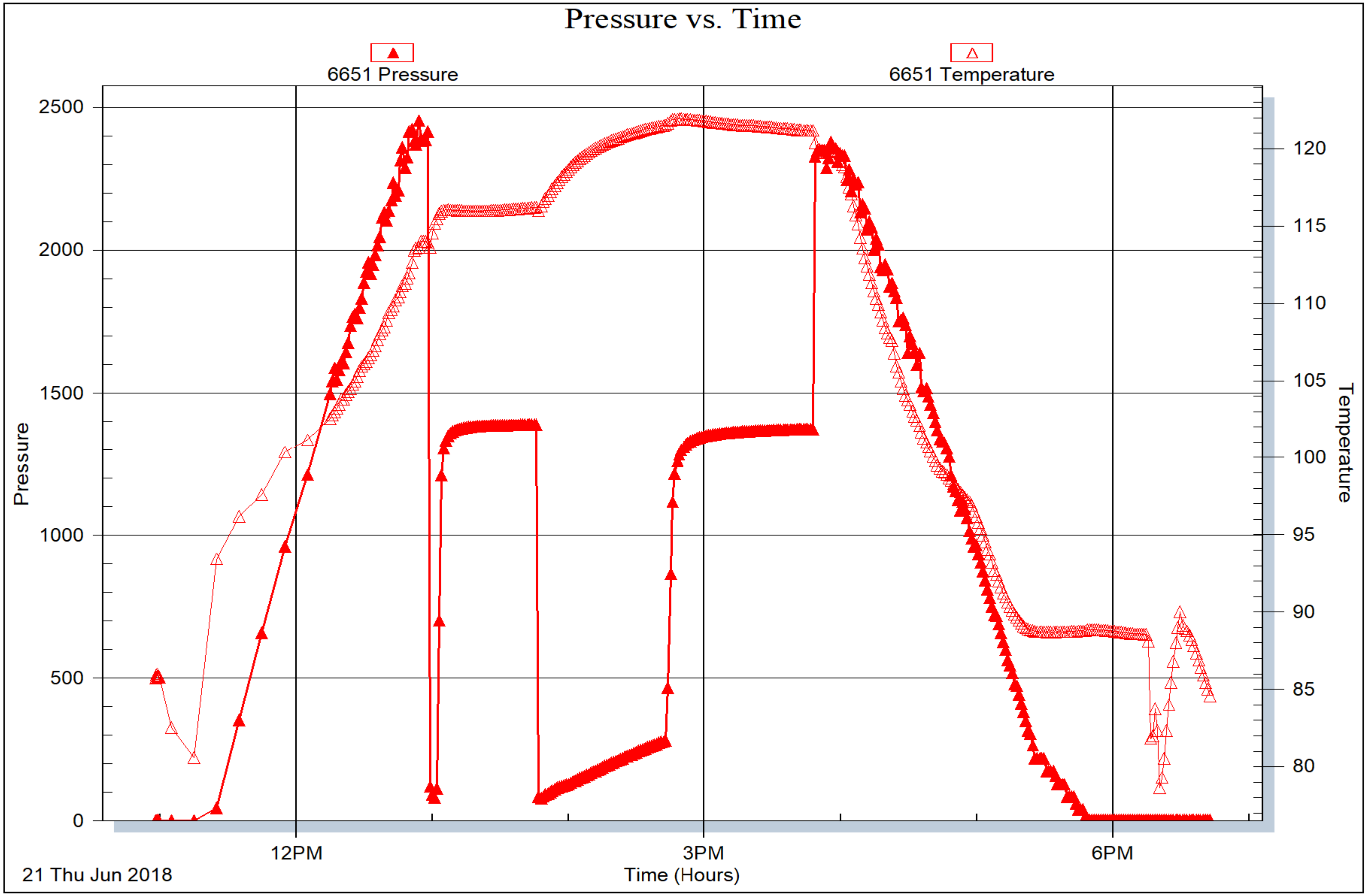
Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	30	0.13	3.00	6.13
2	40	0.13	3.00	6.13
2	50	0.13	3.00	6.13
2	60	0.13	3.00	6.13

Serial #: 8166 **Inside** Agricultural Energy Services Don Thorp #3-23 DST Test Number: 2



Serial #: 6651 **Outside** Agricultural Energy Services Don Thorp #3-23 DST Test Number: 2



DRILL STEM TEST REPORT

Prepared For: **Agricultural Energy Services**

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

Don Thorp #3-23

23-33s-31w Seward,KS

Start Date: 2018.06.25 @ 15:59:01
End Date: 2018.06.26 @ 02:00:01
Job Ticket #: 63883 DST #: 3

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

Printed: 2018.06.26 @ 16:00:43

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63883 **DST#: 3**

Test Start: 2018.06.25 @ 15:59:01

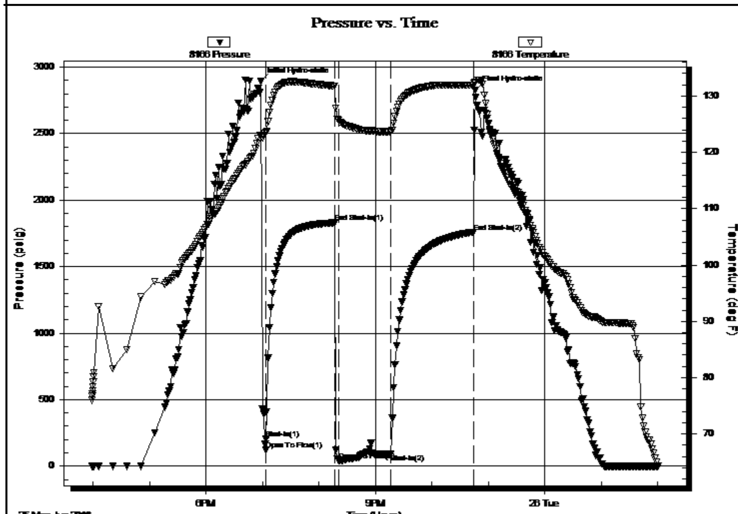
GENERAL INFORMATION:

Formation:	**St Louis**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened:	19:03:31	Tester:	Brandon Turley
Time Test Ended:	02:00:01	Unit No:	79
Interval:	**5790.00 ft (KB) To 5825.00 ft (KB) (TVD)**	Reference Elevations:	2744.00 ft (KB)
Total Depth:	5825.00 ft (KB) (TVD)		2737.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Good	KB to GR/CF:	7.00 ft

Serial #: 8166 **Inside**

Press@RunDepth:	89.46 psig @	5792.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2018.06.25	End Date:	2018.06.26	Last Calib.:	2018.06.26
Start Time:	15:59:06	End Time:	02:00:01	Time On Btm:	2018.06.25 @ 18:58:31
				Time Off Btm:	2018.06.25 @ 22:46:01

TEST COMMENT: IF: BOB immediately built to 241"
IS: No return.
FF: BOB Gas to surface in 2 min.
FS: No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2891.65	123.08	Initial Hydro-static
5	119.02	123.48	Open To Flow (1)
6	203.92	123.59	Shut-In(1)
79	1830.06	131.78	End Shut-In(1)
83	39.73	125.67	Open To Flow (2)
138	89.46	123.63	Shut-In(2)
226	1759.64	131.96	End Shut-In(2)
228	2829.85	132.47	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	gocm 45%g 5%o 50%m	0.87
20.00	ocm 5%o 95%m	0.28
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	14.57	10.00
Last Gas Rate	0.13	30.27	15.42
Max. Gas Rate	0.13	30.27	15.42

DRILL STEM TEST REPORT

TRILOBITE TESTING, INC

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63883 **DST#: 3**

Test Start: 2018.06.25 @ 15:59:01

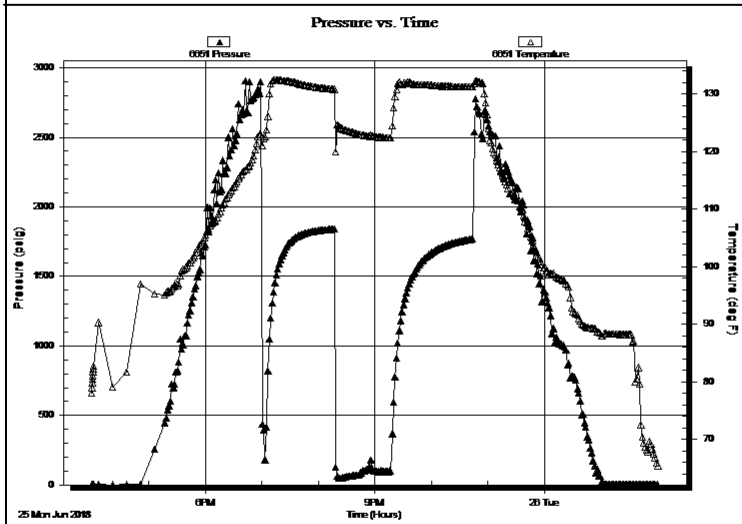
GENERAL INFORMATION:

Formation:	**St Louis**		
Deviated:	No Whipstock: ft (KB)	Test Type:	Conventional Bottom Hole (Reset)
Time Tool Opened:	19:03:31	Tester:	Brandon Turley
Time Test Ended:	02:00:01	Unit No:	79
Interval:	**5790.00 ft (KB) To 5825.00 ft (KB) (TVD)**	Reference Elevations:	2744.00 ft (KB)
Total Depth:	5825.00 ft (KB) (TVD)		2737.00 ft (CF)
Hole Diameter:	7.88 inches Hole Condition: Good	KB to GR/CF:	7.00 ft

Serial #: 6651 **Outside**

Press@RunDepth:	psig @	5792.00 ft (KB)		Capacity:	8000.00 psig
Start Date:	2018.06.25	End Date:	2018.06.26	Last Calib.:	2018.06.26
Start Time:	15:59:23	End Time:	02:00:18	Time On Btm:	
				Time Off Btm:	

TEST COMMENT: IF: BOB immediately built to 241"
IS: No return.
FF: BOB Gas to surface in 2 min.
FS: No return.



PRESSURE SUMMARY

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

Recovery

Length (ft)	Description	Volume (bbl)
62.00	gocm 45%g 5%o 50%m	0.87
20.00	ocm 5%o 95%m	0.28
0.00	GTS	0.00

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	14.57	10.00
Last Gas Rate	0.13	30.27	15.42
Max. Gas Rate	0.13	30.27	15.42

DRILL STEM TEST REPORT

TOOL DIAGRAM

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63883 **DST#: 3**

Test Start: 2018.06.25 @ 15:59:01

Tool Information

Drill Pipe:	Length:	5788.00 ft	Diameter:	3.80 inches	Volume:	81.19 bbl	
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
Drill Collar:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	
					Total Volume:	81.19 bbl	

Tool Weight:	2000.00 lb
Weight set on Packer:	30000.00 lb
Weight to Pull Loose:	95000.00 lb
Tool Chased	0.00 ft
String Weight: Initial	78000.00 lb
Final	80000.00 lb

Drill Pipe Above KB:	28.00 ft		
Depth to Top Packer:	5790.00 ft		
Depth to Bottom Packer:	ft		
Interval betw een Packers:	35.00 ft		
Tool Length:	65.00 ft		
Number of Packers:	2	Diameter:	6.75 inches

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut In Tool	5.00			5765.00		
Hydraulic tool	5.00			5770.00		
Jars	5.00			5775.00		
EM Tool	3.00			5778.00		
Safety Joint	3.00			5781.00		
Packer	5.00			5786.00	30.00	Bottom Of Top Packer
Packer	4.00			5790.00		
Stubb	1.00			5791.00		
Perforations	1.00			5792.00		
Recorder	0.00	8166	Inside	5792.00		
Recorder	0.00	6651	Outside	5792.00		
Perforations	28.00			5820.00		
Bullnose	5.00			5825.00	35.00	Bottom Packers & Anchor
Total Tool Length:	**65.00**					

TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

FLUID SUMMARY

Agricultural Energy Services

PO Box 31865
Edmond, OK 73003

ATTN: Tom Williams

23-33s-31w Seward,KS

Don Thorp #3-23

Job Ticket: 63883 **DST#: 3**

Test Start: 2018.06.25 @ 15:59:01

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	0 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	0 ppm
Viscosity:	61.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	6.79 in³	Gas Cushion Type:			
Resistivity:	0.00 ohm.m	Gas Cushion Pressure:	psig		
Salinity:	1700.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	gocm 45%g 5%o 50%m	0.870
20.00	ocm 5%o 95%m	0.281
0.00	GTS	0.000

Total Length: 82.00 ft Total Volume: 1.151 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

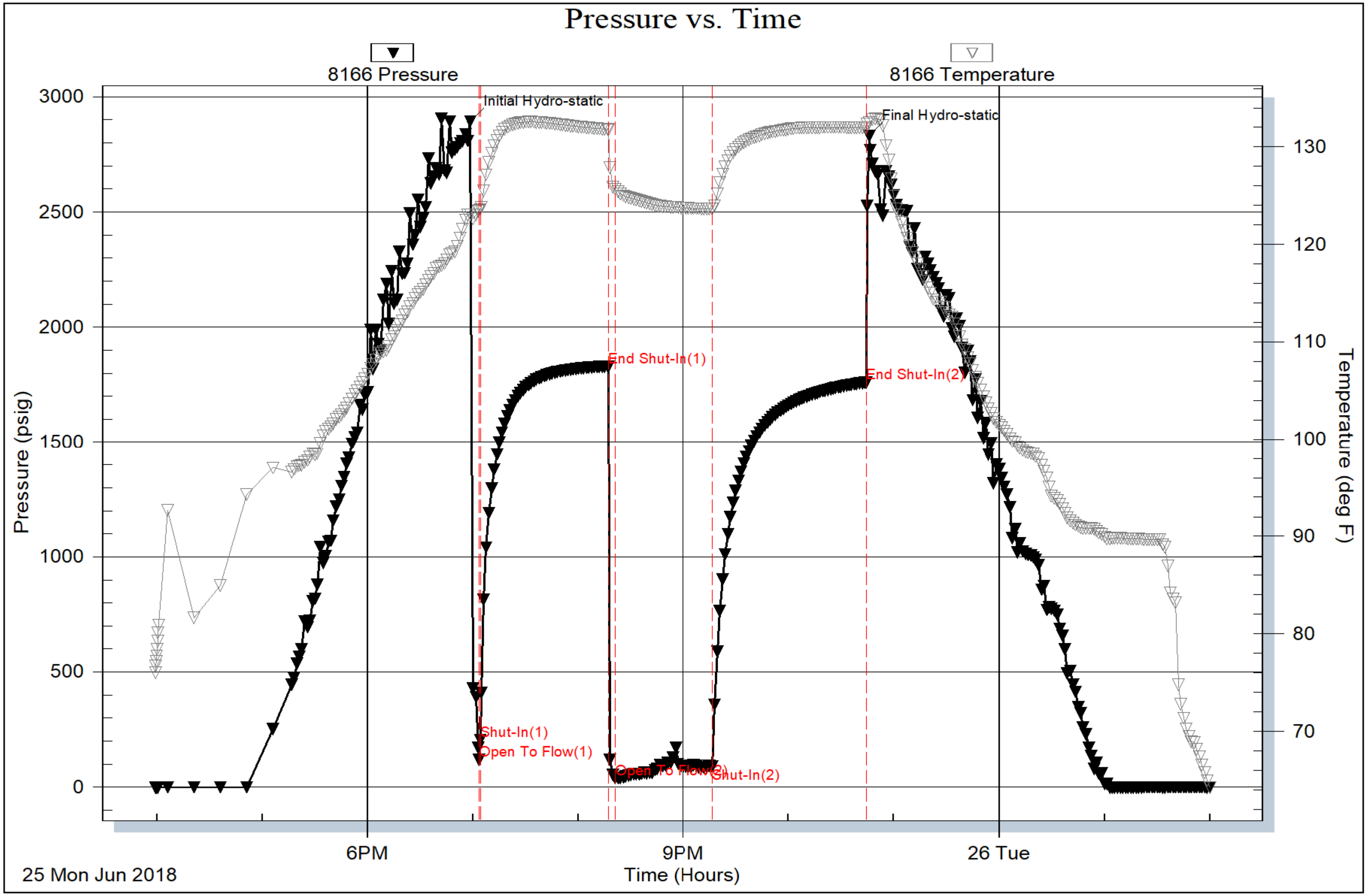
Gas Rates Information

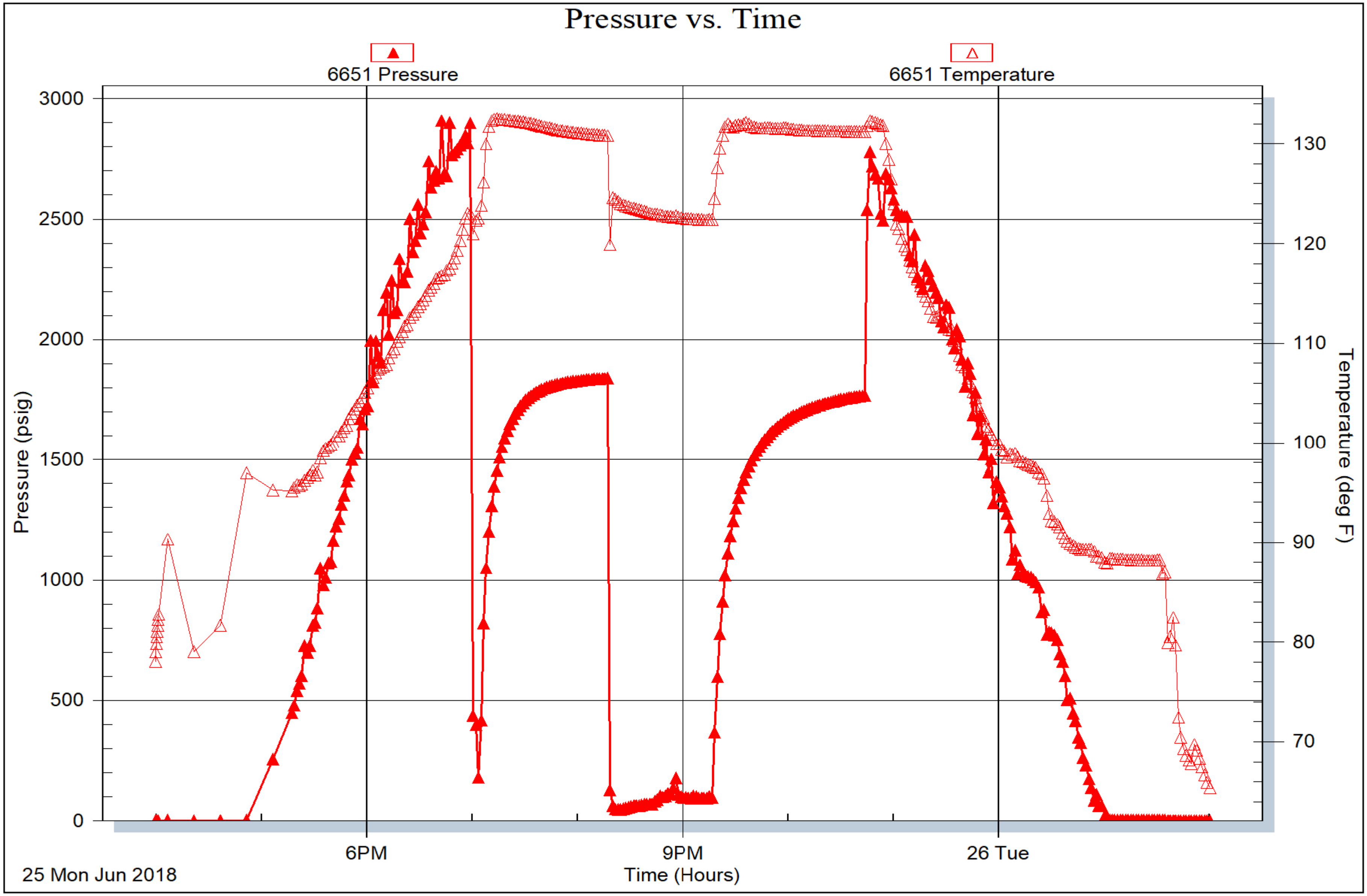
Temperature: 150 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	10	0.13	14.57	10.00
2	20	0.13	20.00	11.88
2	30	0.13	23.00	12.91
2	40	0.13	26.99	14.29
2	50	0.13	29.16	15.04
2	60	0.13	30.27	15.42

Serial #: 8166 **Inside** Agricultural Energy Services Don Thorp #3-23 DST Test Number: 3




Pressure vs. Time
6651 Pressure
6651 Temperature
Pressure (psig)
3000
2500
2000
1500
1000
500
0
Temperature (deg F)
130
120
110
100
90
80
70
6PM
9PM
26 Tue
25 Mon Jun 2018
Time (Hours)

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

4/10

Test Ticket

NO. 63881

Well Name & No. Don Thorp 3-23 Test No. 1 Date 6-20-18

Company Agricultural Energy Elevation 2744 KB 2737 GL

Address P.O. Box 31865 Edmond ok 73063

Co. Rep / Geo. Tom Williams Rig Duke 2

Location: Sec. 23 Twp. 33 Rge. 31 Co. Seward State KS

Interval Tested	4680 4740	Zone Tested	Drum		
Anchor Length	60	Drill Pipe Run	4664	Mud Wt.	9.3
Top Packer Depth	4675	Drill Collars Run	—	Vis	48
Bottom Packer Depth	4680	Wt. Pipe Run	—	WL	8.4
Total Depth	4740	Chlorides	2200 ppm System	LCM	2

Blow Description IF: BoB 1½ min, 60"

IS: No return.

EF: BOB. Gas to surface in 7 min.

EF: BoB in 2 min. 13"

Rec	Feet of	%gas	%oil	%water	%mud
169	ocm		10		90
186	gocwm	60	10	10	20
62	gocwm	40	20	20	20

Rec Total 417 BHT 117 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	2360	☑ Test		T-On Location	3:30
(B) First Initial Flow	126	☑ Jars		T-Started	5:54
(C) First Final Flow	120	☑ Safety Joint		T-Open	8:43
(D) Initial Shut-In	927	☑ Circ Sub	W/C	T-Pulled	12:16
(E) Second Initial Flow	94	☑ Hourly Standby		T-Out	15:20
(F) Second Final Flow	192	☑ Mileage	220 -	Comments	EM tool out of town pay
(G) Final Shut-In	892	☐ Sampler			
(H) Final Hydrostatic	2231	☐ Straddle		☐ Ruined Shale Packer	
		☐ Shale Packer		☐ Ruined Packer	
Initial Open	3	☐ Extra Packer		☐ Extra Copies	
Initial Shut-In	60	☐ Extra Recorder		Sub Total	
Final Flow	60	☐ Day Standby		Total	
Final Shut-In	90	☐ Accessibility		MP/DST Disc't	
		Sub Total			

Approved By Tom M Willis Our Representative [signature]

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Agricultural — OPERATOR

Don Thorp 3-23 — WELL NAME AND NO.

1 — DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
				10	3	8/64	6.1
				15	6		7.1
				20	7		7.5
				25	9		8.2
				30	11		8.9
				35	13		9.6
				40	14		9.9
				45	14		9.9
				50	13.6		9.84
				55	13.5		9.67
				60	13.5		9.67

Remarks:

TRILOBITE TESTING INC.
1515 Commerce Parkway • Hays, Kansas 67601
4/10

Test Ticket

NO. 63882

Well Name & No. Don Thorp 3-23 Test No. 2 Date 6-21-18
Company Agricultural Energy Elevation 2744 KB 2737 GL
Address
Co. Rep / Geo. Tom Williams Rig Duke 2
Location: Sec. 23 Twp. 33 Rge. 31 Co. Seward State KS

Interval Tested 4886 4932 Zone Tested Swope
Anchor Length 46 Drill Pipe Run 4883 Mud Wt. 9.2
Top Packer Depth ~~48~~4881 Drill Collars Run — Vis 59
Bottom Packer Depth 4886 Wt. Pipe Run — WL 6.8
Total Depth 4932 Chlorides 2150 ppm System LCM 2
Blow Description IF: BoB 75"
IS: No return.
~~F~~ FF: BoB. Gas to surface in 25 min.
FS: BoB in 1 min. 61"

Rec	Feet of	%gas	%oil	%water	%mud
93	gocwm	10	2	10	78
186	gocmw	20	5	40	35
310	mcw			95	~~5~~ 5

Rec Total 589 BHT 122 Gravity — API RW .11 @ 91 °F Chlorides 53,000 ppm

(A) Initial Hydrostatic 2415
(B) First Initial Flow 86
(C) First Final Flow 95
(D) Initial Shut-In 1382
(E) Second Initial Flow 68
(F) Second Final Flow 274
(G) Final Shut-In 1366
(H) Final Hydrostatic 2373

Initial Open 3
Initial Shut-In ~~30~~ 45
Final Flow 60
Final Shut-In 60

- [x] Test
- [x] Jars
- [x] Safety Joint
- [x] Circ Sub N/C
- [ ] Hourly Standby
- [x] Mileage 220 -
- [ ] Sampler
- [ ] Straddle
- [ ] Shale Packer
- [ ] Extra Packer
- [ ] Extra Recorder
- [ ] Day Standby
- [ ] Accessibility

Sub Total

T-On Location 10:30
T-Started 10:57
T-Open 12:58
T-Pulled 15:46
T-Out 18:50
Comments EM tool out of town pay

- [ ] Ruined Shale Packer
- [ ] Ruined Packer
- [ ] Extra Copies

Sub Total
Total
MP/DST Disc't

Approved By [signature] Our Representative [signature]

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

OPERATOR: AES

WELL NAME AND NO.: Don Thorp 3-23

DST NO.: 2

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
				30	3	8/64	6.1
				40	3		6.1
				50	3		6.1
				60	3		6.1

Remarks:

101 NCR

4/10

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63883

Well Name & No. Don Thorp 3-23 Test No. 3 Date 6-25-18

Company Agricultural Energy Elevation 2744 KB 2737 GL

Address

Co. Rep / Geo. Tom williams Rig Duke 2

Location: Sec. 23 Twp. 33 Rge. 31 Co. Seward State KS

Interval Tested 5790 5825 Zone Tested ST Louis

Anchor Length 35 Drill Pipe Run 5788 Mud Wt. 9.1

Top Packer Depth 5785 Drill Collars Run — Vis 61

Bottom Packer Depth 5790 Wt. Pipe Run — WL 6.8

Total Depth 5825 Chlorides 1700 ppm System LCM 14

Blow Description IF: BoB 240"

IS: No return.

FF: BoB G&S to surface in 2 min.

FS: No return.

Rec	Feet of	%gas	%oil	%water	%mud
20	ocm		5		95
62	gocm	45	5		50

Rec Total 82 BHT 132 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic 2891
(B) First Initial Flow 119
(C) First Final Flow 203
(D) Initial Shut-In 1830
(E) Second Initial Flow 39
(F) Second Final Flow 89
(G) Final Shut-In 1759
(H) Final Hydrostatic 2829

Initial Open 3
Initial Shut-In 75
Final Flow 60
Final Shut-In 90

- [x] Test
- [x] Jars
- [x] Safety Joint
- [x] Circ Sub N/C
- [x] Hourly Standby
- [x] Mileage 220
- [ ] Sampler
- [ ] Straddle
- [ ] Shale Packer
- [ ] Extra Packer
- [ ] Extra Recorder
- [x] Day Standby
- [x] Accessibility 150.00

Sub Total

T-On Location 13:50
T-Started 15:59
T-Open 19:00
T-Pulled 22:48
T-Out 2:00

Comments EM tool Accessibility No room to get between Pipe on Mert bord.

- [ ] Ruined Shale Packer
- [x] Ruined Packer
- [ ] Extra Copies

Sub Total

Total

MP/DST Disc't

Approved By Tho M Villio

Our Representative [signature]

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601 • (913) 625-4778

GAS VOLUME REPORT

Agricultural
OPERATOR

Don Thorp 3-23
WELL NAME AND NO.

3
DST NO.

Min.	Ins. of Water PSIG	Orifice Size	MCF/D	Min.	Ins. of Water PSIG	Orifice Size	MCF/D
				10	14.57	8/64	10.18
				20	20	8/64	12.05
				30	23	8/64	13.34
				40	26.94	8/64	14.41
				50	29.16	8/64	15.21
				60	30.27	8/64	15.58

Remarks:

101 NCR

Agricultural Energy Services

Don Thorp 3-23

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

Well Name: Don Thorp #3-23
API: 15-175-22263-00-00
Location: NW/4 of Section 23-T33S-R31W
License Number: 34089 Region: Seward Co., KS
Spud Date: 6/11/2018 Drilling Completed: 6/27/2018
Surface Coordinates: 1650' FNL & 710' FWL

Bottom Hole Coordinates: 1650' FNL & 710' FWL
Ground Elevation (ft): 2,739' K.B. Elevation (ft): 2,747'
Logged Interval (ft): 2,600' To: 5,997.96' Total Depth (ft): 5,997.96'
Formation: St. Louis
Type of Drilling Fluid: Chemical

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

OPERATOR

Company: Agricultural Energy Services, Inc.
Address: P.O. Box 622377
Oviedo, FL 32762

GEOLOGIST

Name: Thomas M. Williams
Company: Petroleum Geologist
Address: Wichita, KS

CORE

Contractor:
Core #:
Formation:
Core Interval: From: To: Cut: Recovered:
Bit type:
Size:
Coring Time:

Formation Tops

	Sample Top	E-Log Top
Herrington	2604 (+143)	2594 (+153)
Krider	2642 (+105)	2633 (+114)
Winfield	2701 (+46)	2692 (+55)
Towanda	2754 (-7)	2746 (+1)
Ft. Riley	2821 (-74)	2818 (-71)
Florence	2876 (-129)	2866 (-119)
Wreford	2921 (-174)	2920 (-173)
Council Grove	2961 (-214)	2954 (-207)
Funston (A1)	2973 (-226)	2962 (-215)
Crouse (B1)	3033 (-286)	3028 (-281)
Middleburg (B2)	3060 (-313)	3052 (-305)
Eiss (B3)	3085 (-338)	3075 (-328)
Morrill (B4)	3100 (-353)	3092 (-345)
Cottonwood	3147 (-400)	3146 (-399)
Neva (C)	3185 (-438)	3172 (-425)
Foraker	3284 (-537)	3266 (-519)
Wabaunsee	3420 (-673)	3412 (-665)
Topeka	3620 (-873)	3610 (-863)
Lecompton	4061 (-1314)	4051 (-1304)
Kanwaka Sh	4155 (-1408)	4143 (-1396)
Oread Lm	4227 (-1480)	4217 (-1470)
Heebner Sh	4270 (-1523)	4260 (-1513)
Base/Heebner	4281 (-1534)	4269 (-1522)
Toronto 1	4292 (-1545)	4281 (-1534)
Toronto 2	4312 (-1565)	4300 (-1553)
Lansing	4410 (-1663)	4406 (-1659)
Kansas City	4484 (-1737)	4478 (-1731)
Iola Lm	4600 (-1853)	4592 (-1845)
Drum 1	4669 (-1922)	4656 (-1909)
Drum 2	4706 (-1959)	4697 (-1950)
Swope Lm	4881 (-2134)	4871 (-2124)
Hertha Porosity	4940 (-2193)	4930 (-2183)
Marmaton	5043 (-2296)	5033 (-2286)
Pawnee	5106 (-2359)	5095 (-2348)
Ft. Scott Lm	5151 (-2402)	5143 (-2396)
Cherokee Sh	5218 (-2471)	5208 (-2461)
Thorp Lm	5381 (-2634)	5372 (-2625)
Atoka Lm	5415 (-2668)	5406 (-2659)
Morrow Sh	5519 (-2772)	5519 (-2772)
Morow Lm	5535 (-2788)	5543 (-2796)
Miss. Chester	5580 (-2833)	5571 (-2824)
Ste. Genevieve	5654 (-2907)	5648 (-2901)
St. Louis	5743 (-2996)	5728 (-2981)
St. Louis 'B' Porosity	5808 (-3061)	5800 (-3053)
St. Louis 'C' Porosity	5900 (-3153)	5890 (-3143)

DSTs

DST #1 Drum (2) 4680-4740'
IHP 2360#
IFP 127-121# 3"
ISIP 927# 60"
FFP 94-192# 60"
FSIP 892# 90"
FHP 2232#
IF BOB 1.5"
FF Ga. 9.9 MCF
Rec: 62' GOCWM 40% G, 20% O, 20% W, 20% M
186' GOCWM 60% G, 10% Oil, 10% W, 20% M
169' OCM 10% Oil, 90% M

DST #2 Swope 4886-4932'
IHP 2415#
IFP 87-95# 3"
ISIP 1382# 45"
FFP 68-274# 60"
FSIP 1367# 60"
FHP 2374#
IF BOB 1 min.
FF Ga 6.1 MCF
Rec: 93' GOCWM 10% G, 2% O, 10% W, 78% M
186' GOCMW 20% G, 5% O, 40% W, 35% M
310' MCW 95% W, 5% M

DST #3 St. Louis 'B' 5790-5825'
IHP 2892#
IFP 119-204# 3"
ISIP 1830# 75"
FFP 34-89# 60"
FSIP 1760# 90"
FHP 2830#
IF BOB 2"
FF Ga. 15 MCF
Rec: 62' GOCM 45% G, 5% O, 50% M
20' OCM 5% o, 95% M

Comments

Log Top Comp. #3-23 #2-23 #1-23

Base/Heeb...4269 (-1522)....4279 (-1523) -1......4282 (-1539) -17
Lansing.........4406 (-1659)....4412 (-1656) +3......4420 (-1677) -18
Drum 2..........4697 (-1950)....4694 (-1938) +12....4698 (-1955) -5
Pawnee.........5095 (-2348)....5092 (-2336) +12....5086 (-2343) +5
Cherokee Sh5208 (-2461)....5206 (-2450) +11....5205 (-2462) -1
Morrow Sh....5519 (-2772)....5506 (-2750) +22....5504 (-2761) +11
Chester.........5571 (-2824)....5552 (-2796) +28....5551 (-2808) +16
Ste. Gen.......5648 (-2901)....5618 (-2862) +39....5623 (-2880) +21
'B' Porosity..5800 (-3053)....5780 (-3024) +29....5782 (-3039) +14

ROCK TYPES

Anhy, Bent, Brec, Cht, Clyst, Carb.sh, Congl, Dol, Gyp, Igne, Lmst, Meta, Mrlst, Salt, Shale, Shcol, Shgy, Sltst, Ss, Till

Curve Track 1
ROP (min/ft)
MD
Shows
Lithology
Geological Descriptions
TG, C1-C5
TG (Units)
C1 (units)
C2 (units)
C3 (units)
C4 (units)
C5 (units)

CEMENT BOND LOG WITH GAMMA RAY (CORRECTED COPY)

PIONEER
Pioneer Energy Services

Company	AGRICULTURAL ENERGY SERVICES
Well	DON THORP #3-23
Field	KISMET
County	SEWARD
State	KANSAS

Company AGRICULTURAL ENERGY SERVICES
Well DON THORP #3-23
Field KISMET
County SEWARD State KANSAS

Location: API #: 15-175-22263
1650' FNL & 710' FWL
SEC 23 TWP 33S RGE 31W

Other Services

Permanent Datum		Elevation 2739'	Elevation
Log Measured From	KB 8		K.B. 2747'
Drilling Measured From	KB		D.F. N/A
			G.L. 2739'

Date	05 JUL 2018	
Run Number	ONE	
Depth Driller	5997'	
Depth Logger	5932'	
Bottom Logged Interval	5930'	
Top Log Interval	3660'	
Open Hole Size	7.875"	
Type Fluid	WATER	
Density / Viscosity	8.33	
Max. Recorded Temp.	N/A	
Estimated Cement Top	3860'	
Time Well Ready	N/A	
Time Logger on Bottom	N/A	
Equipment Number	P-65	
Location	LIB	
Recorded By	P. NICHOLS	
Witnessed By	J. SCHMIDT	

Borehole Record			Tubing Record			
Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String	5.5"	15.5#	SURFACE	5997'
Liner				

<<< Fold Here >>>

Comments

CORRELATED TO PIONEER INDUCTION LOG DATED 27 JUNE 2018
CREW TODAY: HUMISTON, URIEL

Log Variables

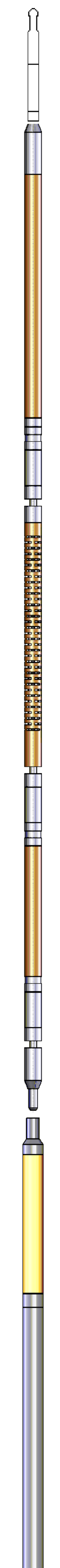
Database C:\ProgramData\Warrior\Data\agricultural energy services_don_thorp_3_23_1517522
Dataset field/well/run1/pass3/_vars_

Top - Bottom

PPT	CASEWGHT	MAXAMPL	MINAMPL	MINATTN	SRFTEMP	CASETHCK
usec	lb/ft	mV	mV	db/ft	degF	in

usec	lb/ft	mV	mV	db/ft	degF	in
0	15.5	72	1	0.08	0	0

CASEOD in	PERFS	TDEPTH ft	BOTTEMP degF	BOREID in
5.5	0	0	100	7.875

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
CHD	14.58					
			CHD-Titan 1 7/16" Titan Cable Head	1.00	1.44	2.00
			RBT-Probe (pro_rib_2750_5.50) Probe Radii Bond Tool with Digital Telemetry	8.75	2.75	90.00
WVFS8	9.02					
WVFS7	9.02					
WVFS6	9.02					
WVFS5	9.02					
WVFS4	9.02					
WVFS3	9.02					
WVFS2	9.02					
WVFS1	9.02					
WVFCAL	9.02					
WVF3FT	9.02					
WVF5FT	8.02					
GR	4.83					
HEADVOLT	4.83					
CCL	3.92					
GR	2.58					
			GR-PTS275Inv (125010)	4.83	2.75	

Dataset:	agricultural energy services_don_thorp_3_23_1517522261_7_5_2018_cbl.db: field/well/run1/pass3
Total length:	14.58 ft
Total weight:	92.00 lb
O.D.:	2.75 in

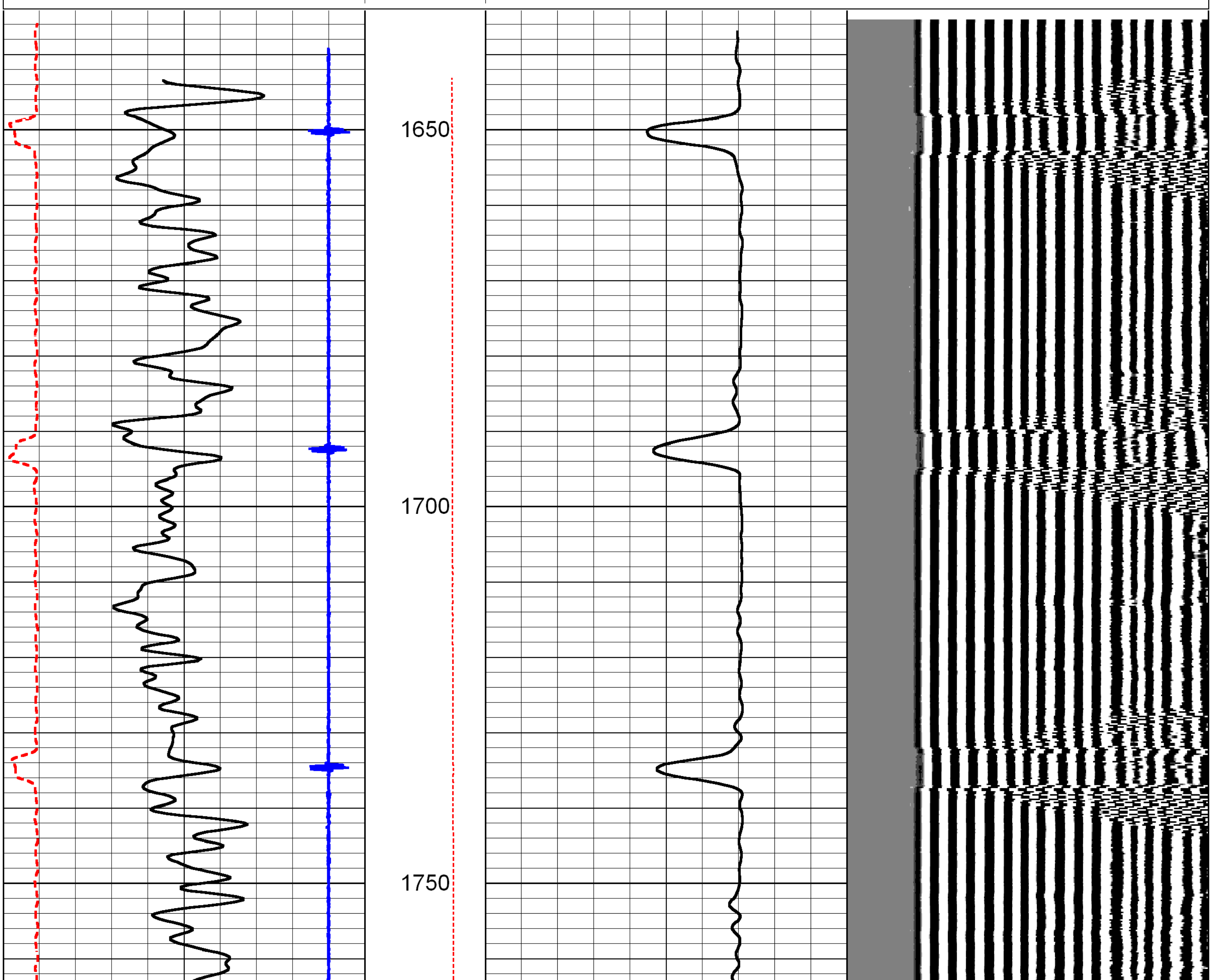
PIONEER

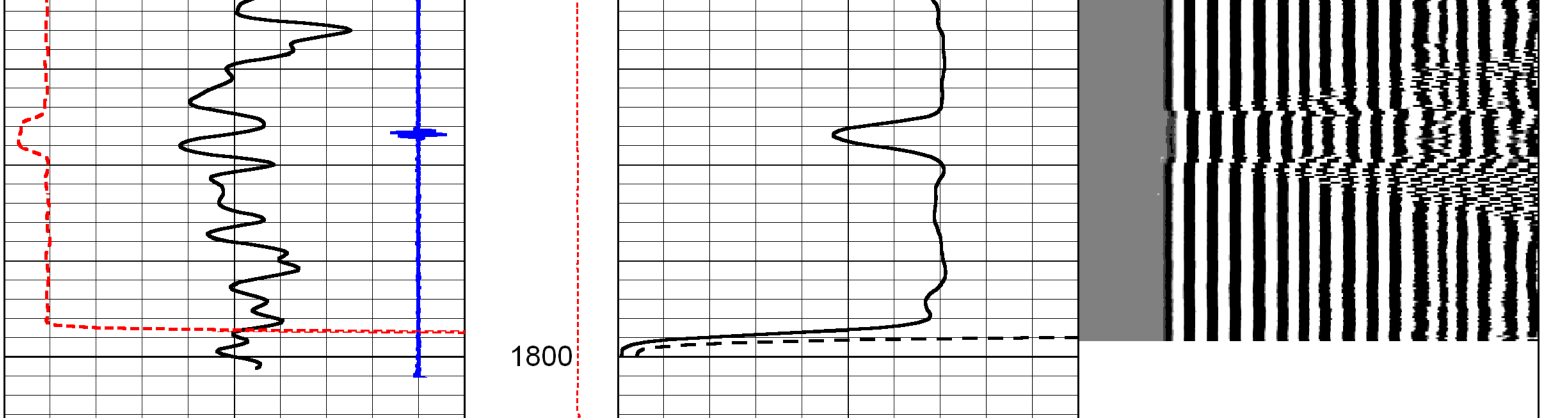
Pioneer Energy Services

FREE PIPE SECTION

Database File	agricultural energy services_don_thorp_3_23_1517522261_7_5_2018_cbl.db
Dataset Pathname	pass1
Presentation Format	cblpn
Dataset Creation	Thu Jul 05 11:09:05 2018
Charted by	Depth in Feet scaled 1:240

0 Gamma Ray (cps) 150	LTEN (lb) 0 2000	0 Pipe Amplitude (mV) 100	200 VDL 1200
72 Casing Collars -8		0 Amplified Amplitude (mV) 20	
276 TT3FT1 (usec) 176			





0 Gamma Ray (cps) 150	LTEN (lb)	0 Pipe Amplitude (mV) 100	200 VDL 1200
72 Casing Collars -8	0 2000	0 Amplified Amplitude (mV) 20	
276 TT3FT1 (usec) 176			

PIONEER

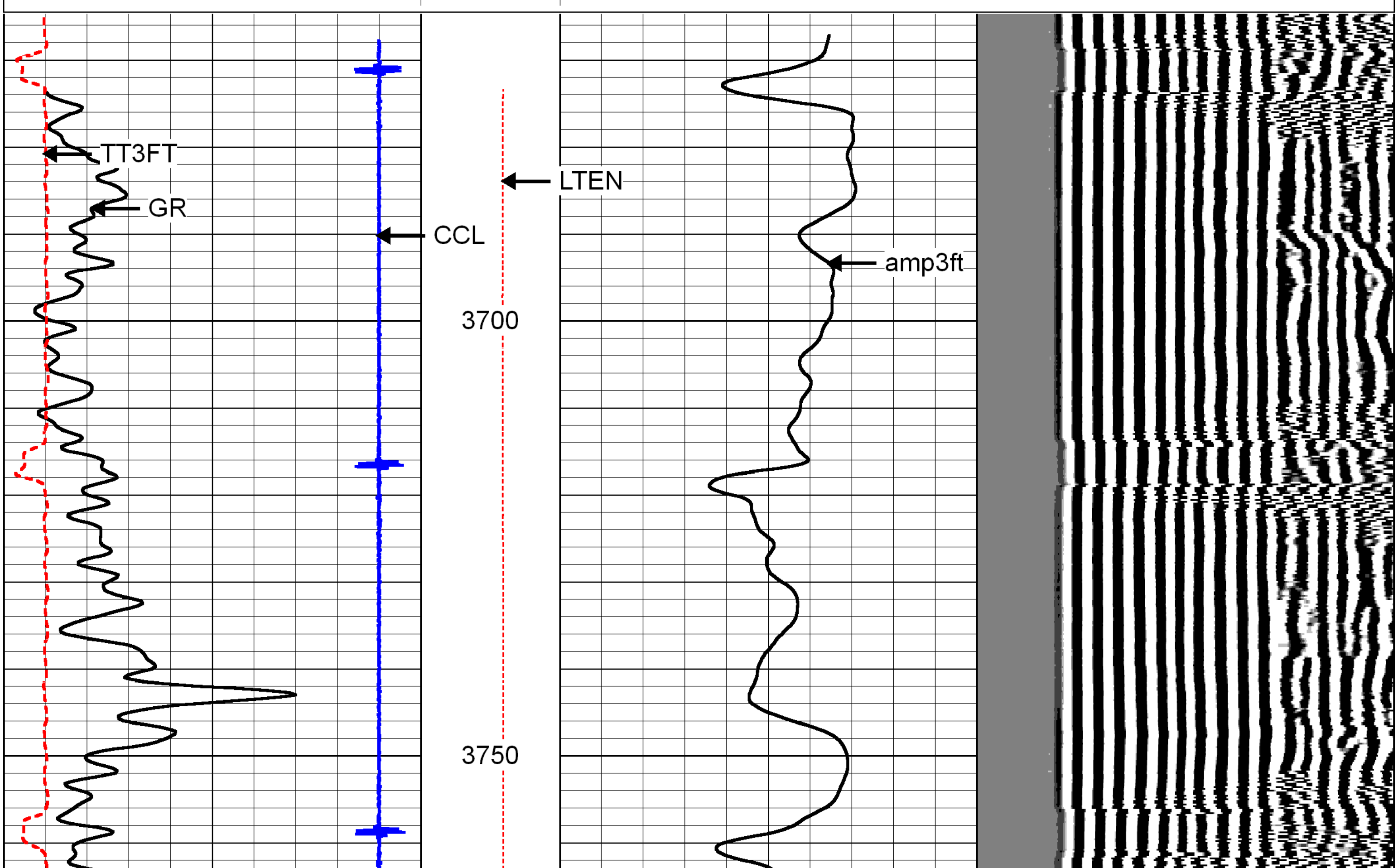
Pioneer Energy Services

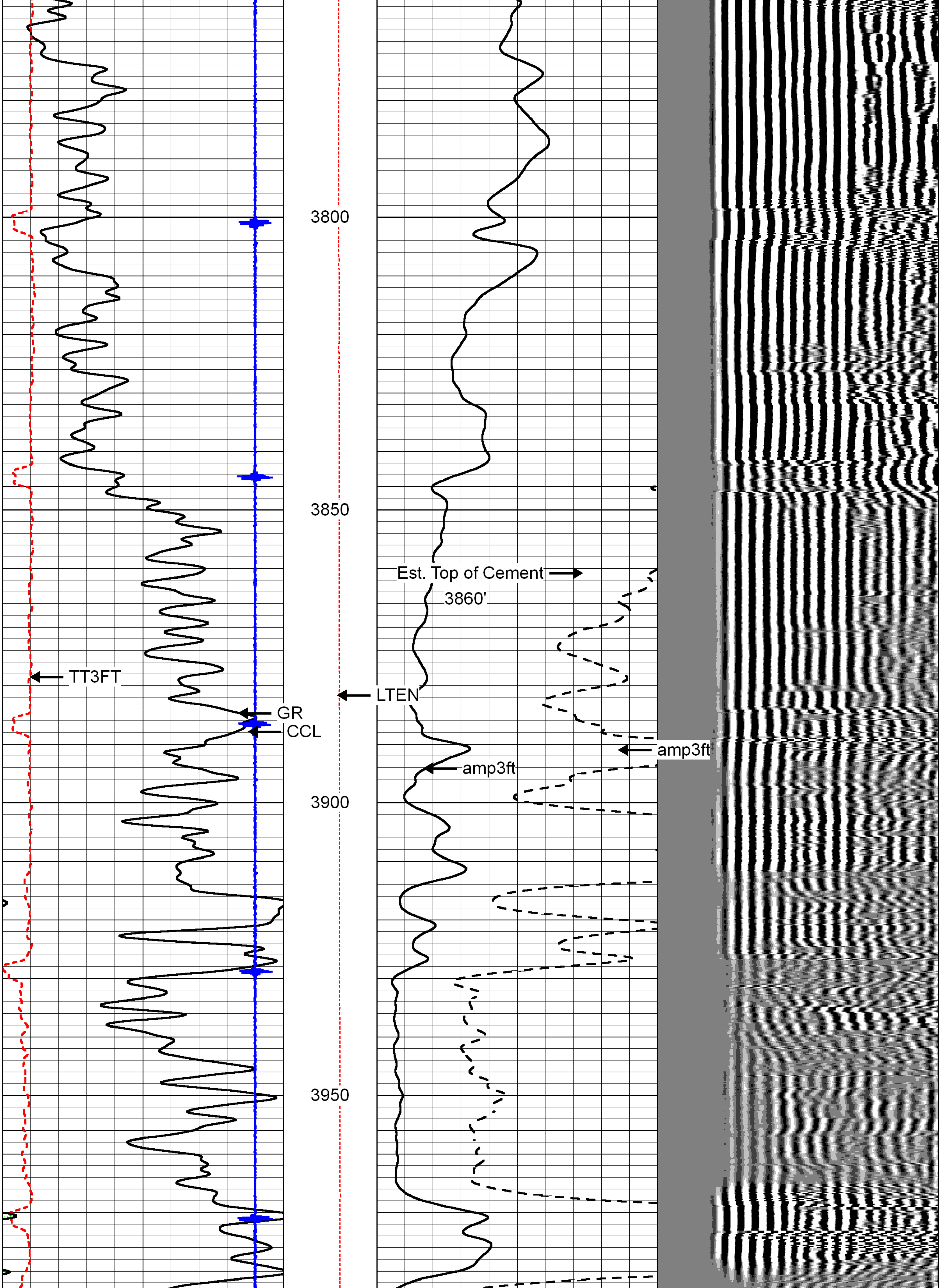
MAIN LOG SECTION

SCALE 1:240

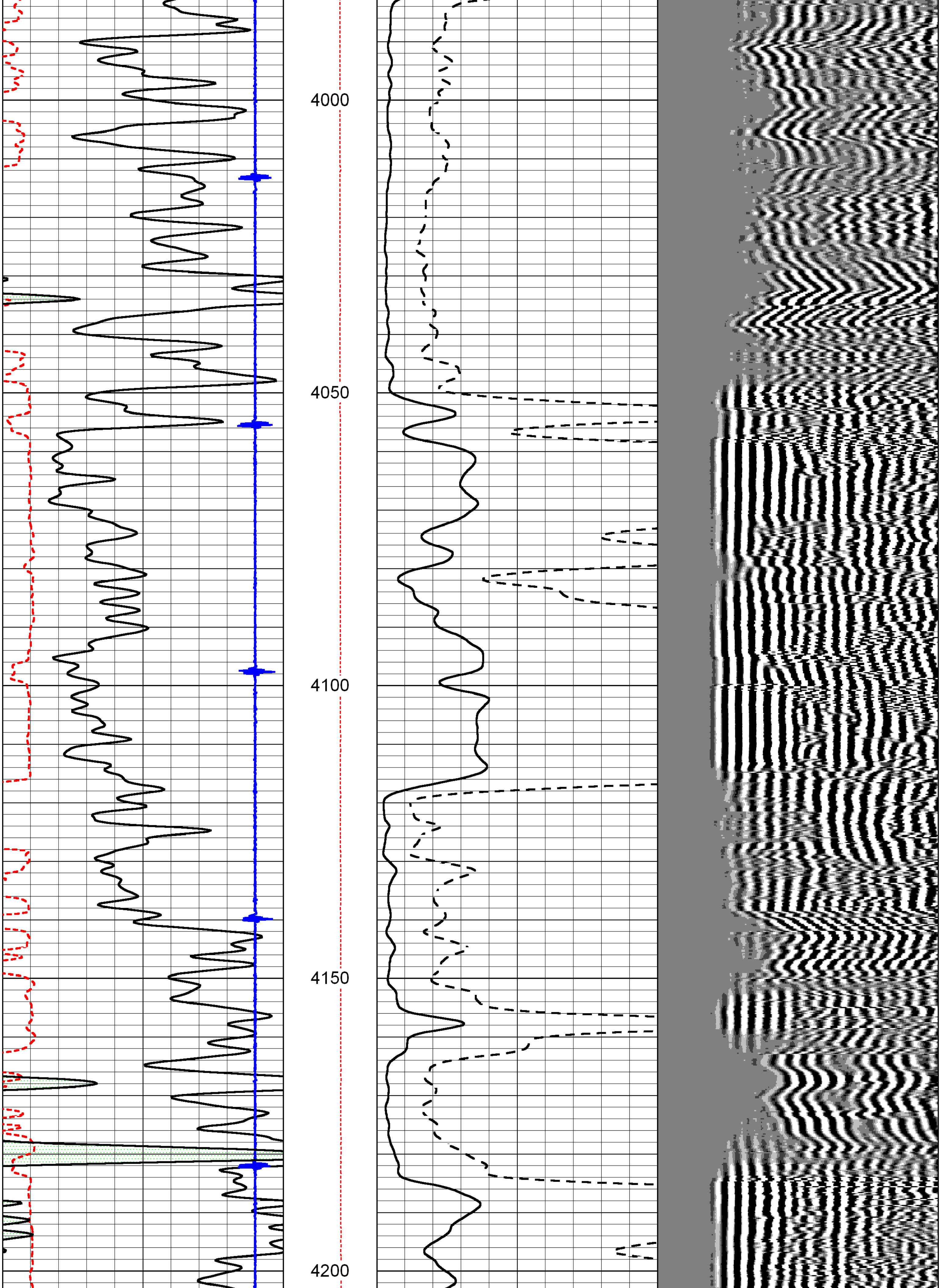
Database File	agricultural energy services_don_thorp_3_23_1517522261_7_5_2018_cbl.db
Dataset Pathname	pass3
Presentation Format	cblpn
Dataset Creation	Thu Jul 05 11:37:06 2018
Charted by	Depth in Feet scaled 1:240

0 Gamma Ray (cps) 150	LTEN (lb)	0 Pipe Amplitude (mV) 100	200 VDL 1200
72 Casing Collars -8	0 3000	0 Amplified Amplitude (mV) 20	
276 TT3FT1 (usec) 176			

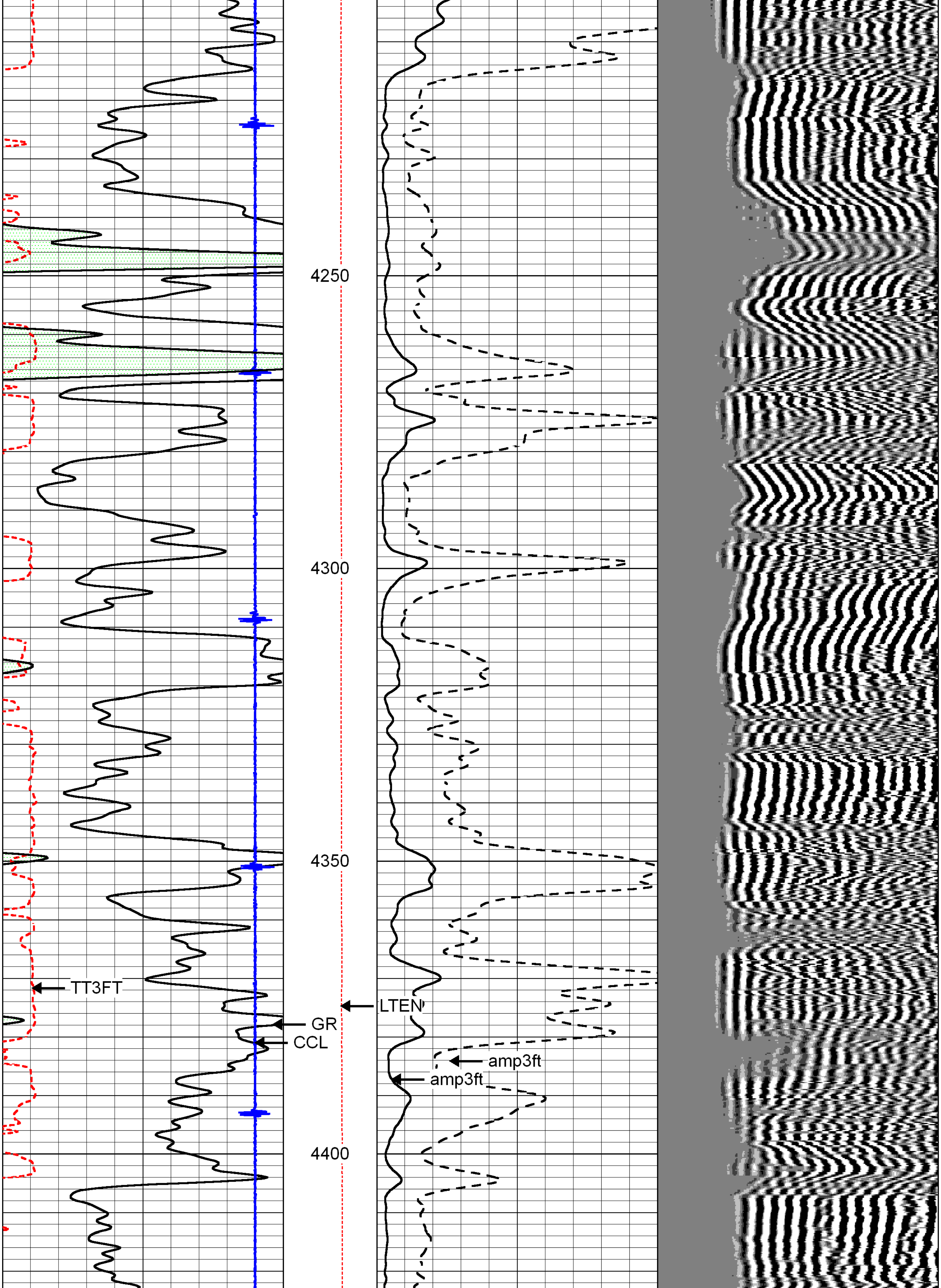


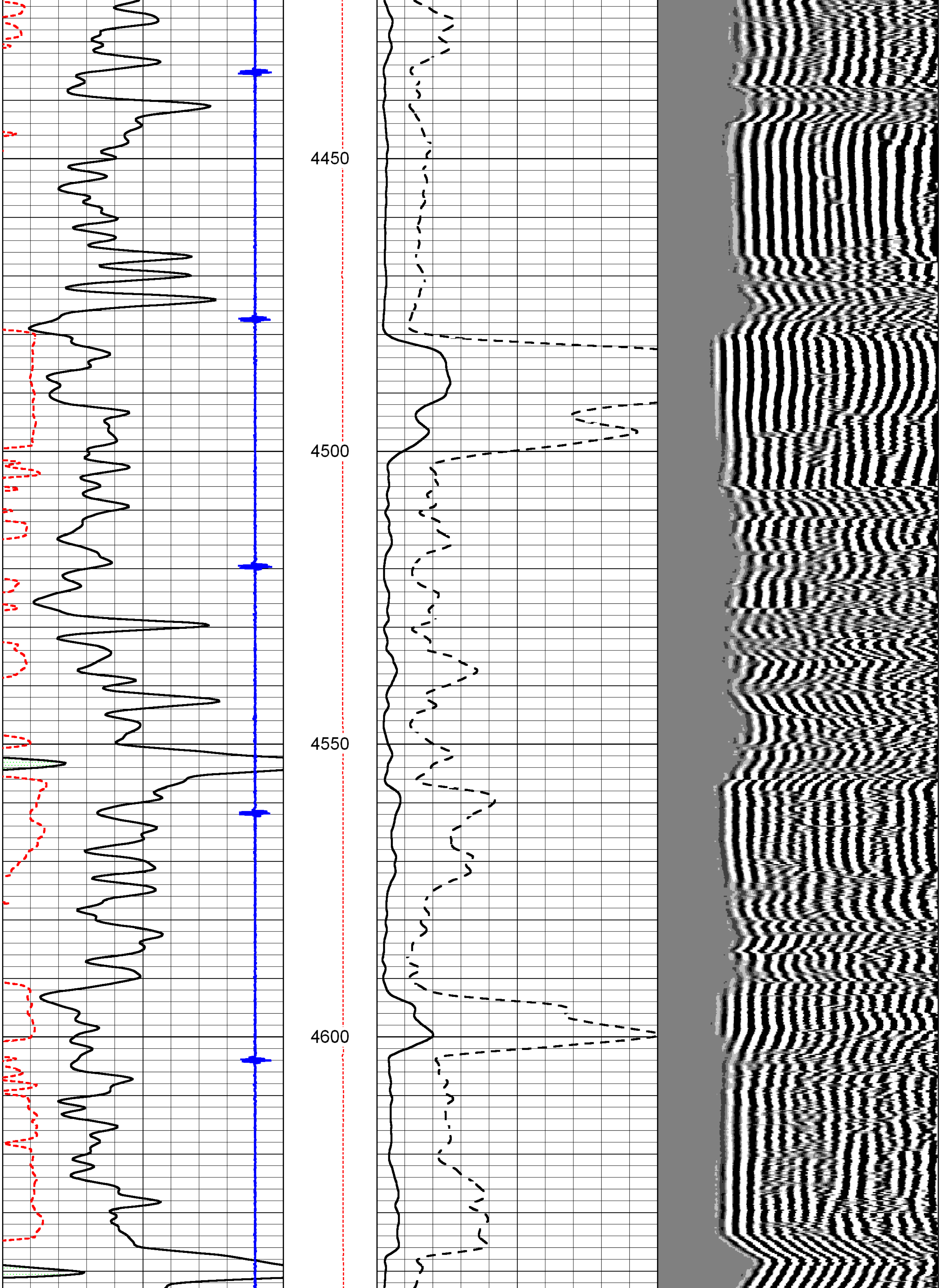


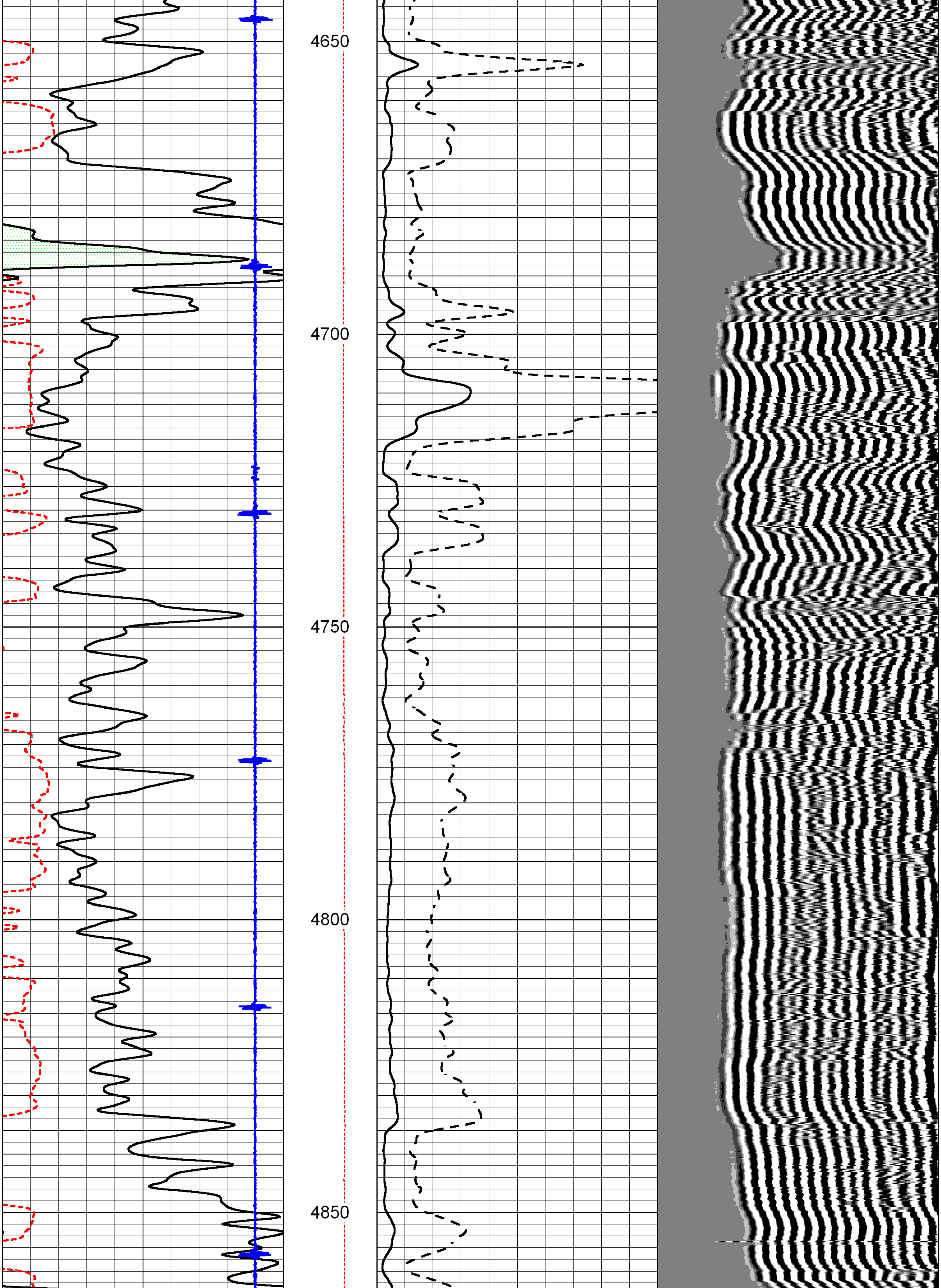
3800
3850
Est. Top of Cement
3860'
TT3FT
LTEN
GR
CCL
amp3ft
amp3ft
3900
3950

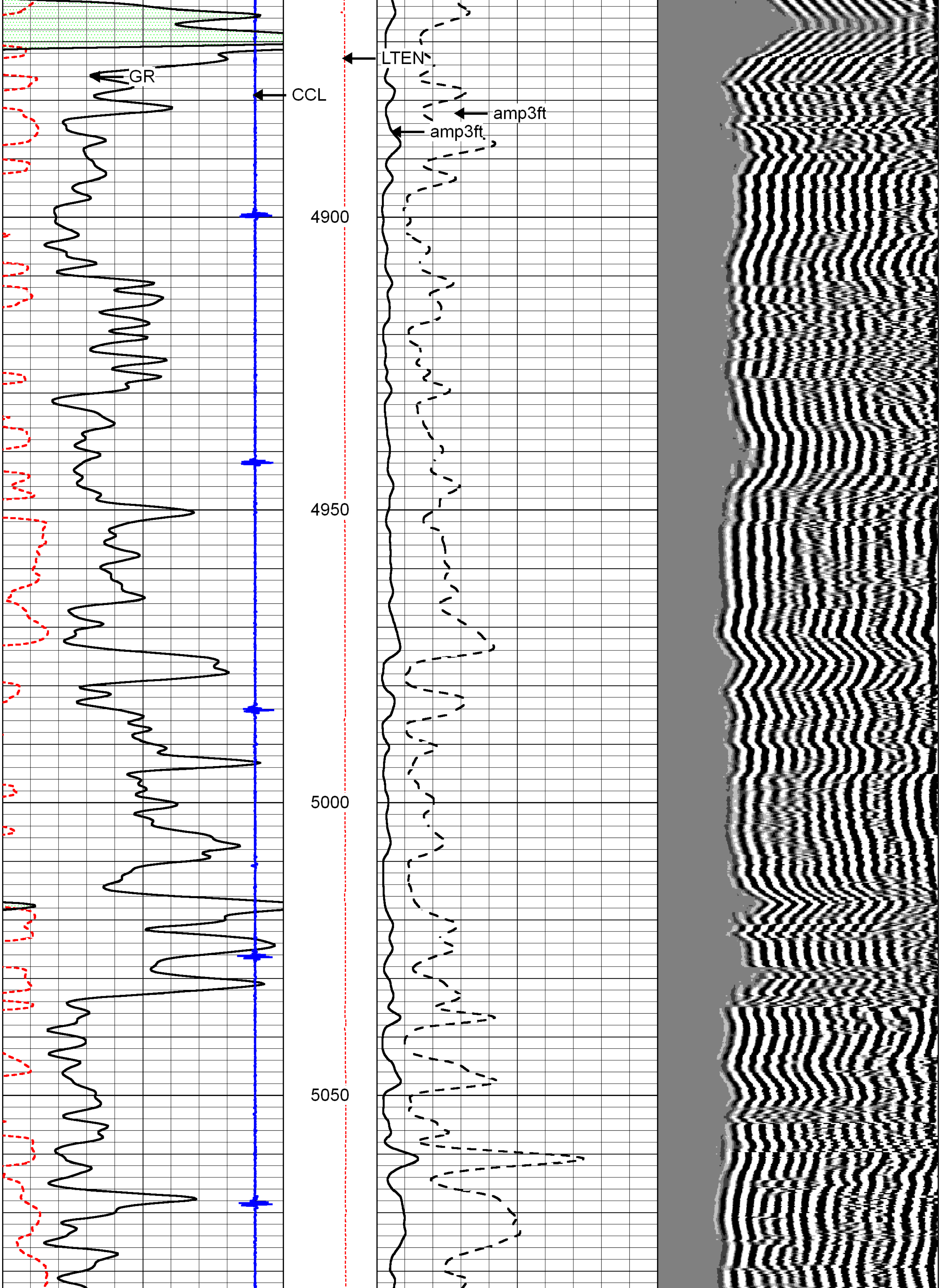


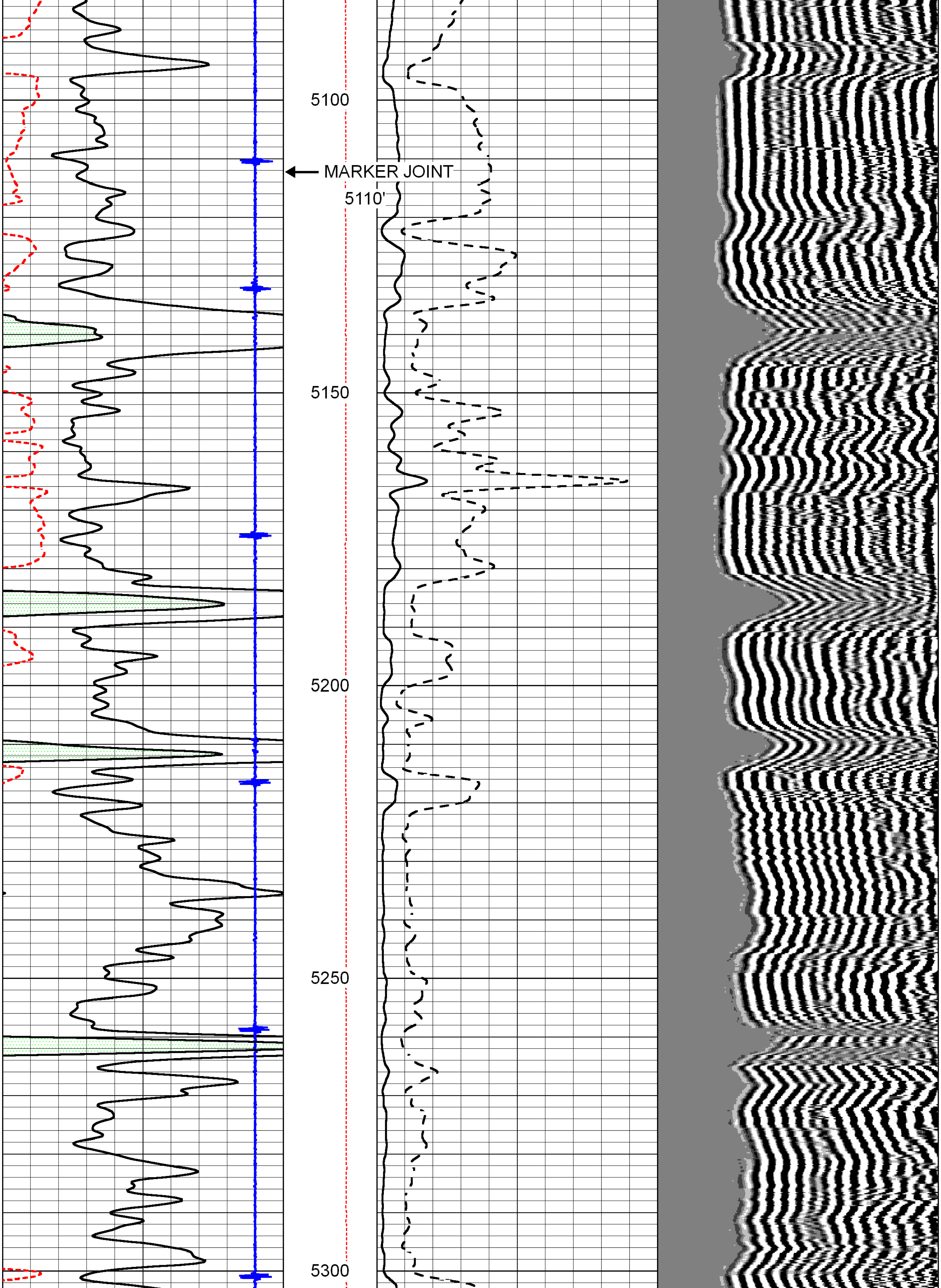
4000
4050
4100
4150
4200


4250
4300
4350
4400
TT3FT
GR
CCL
LTEN
amp3ft
amp3ft

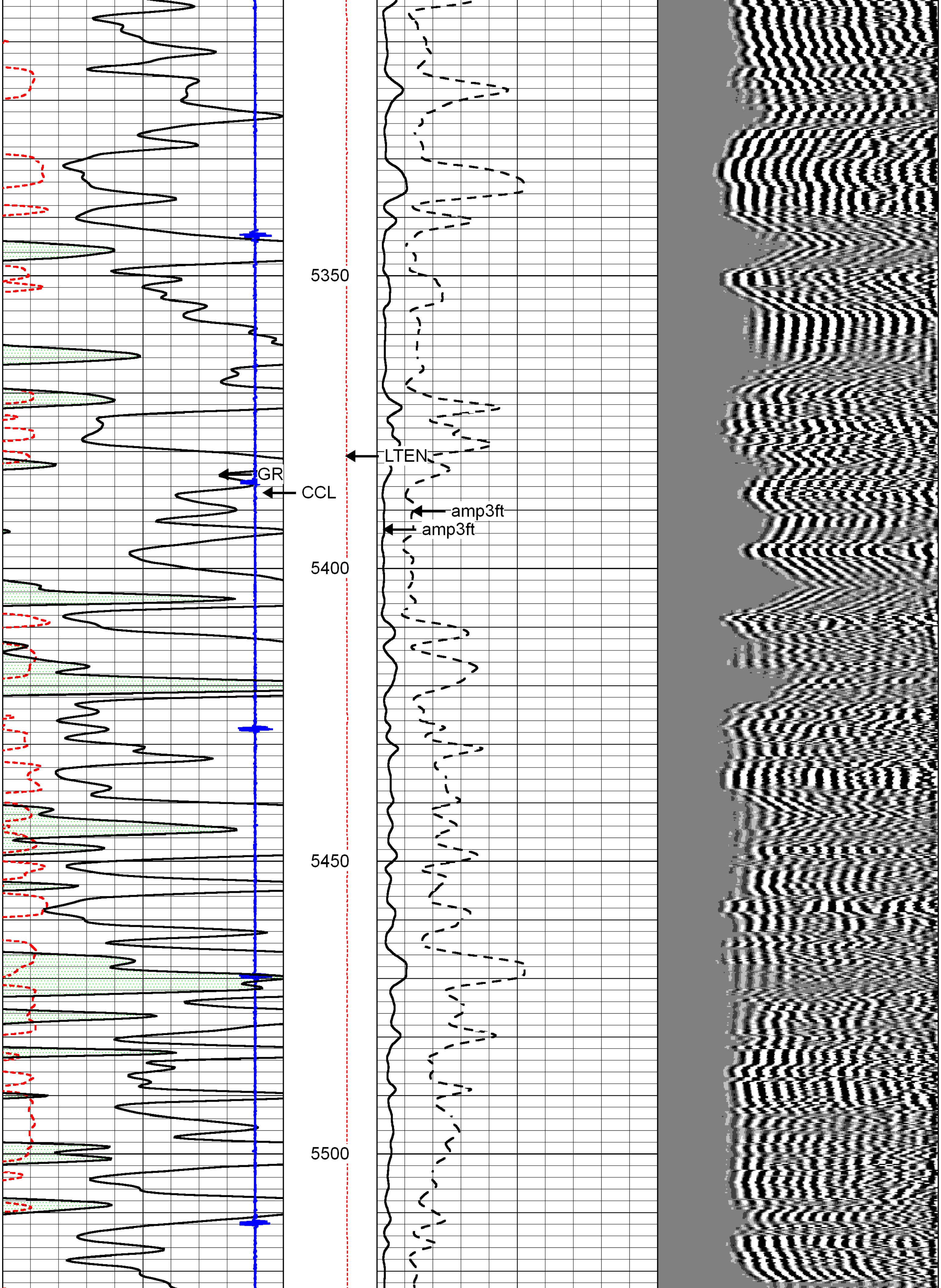

4450
4500
4550
4600

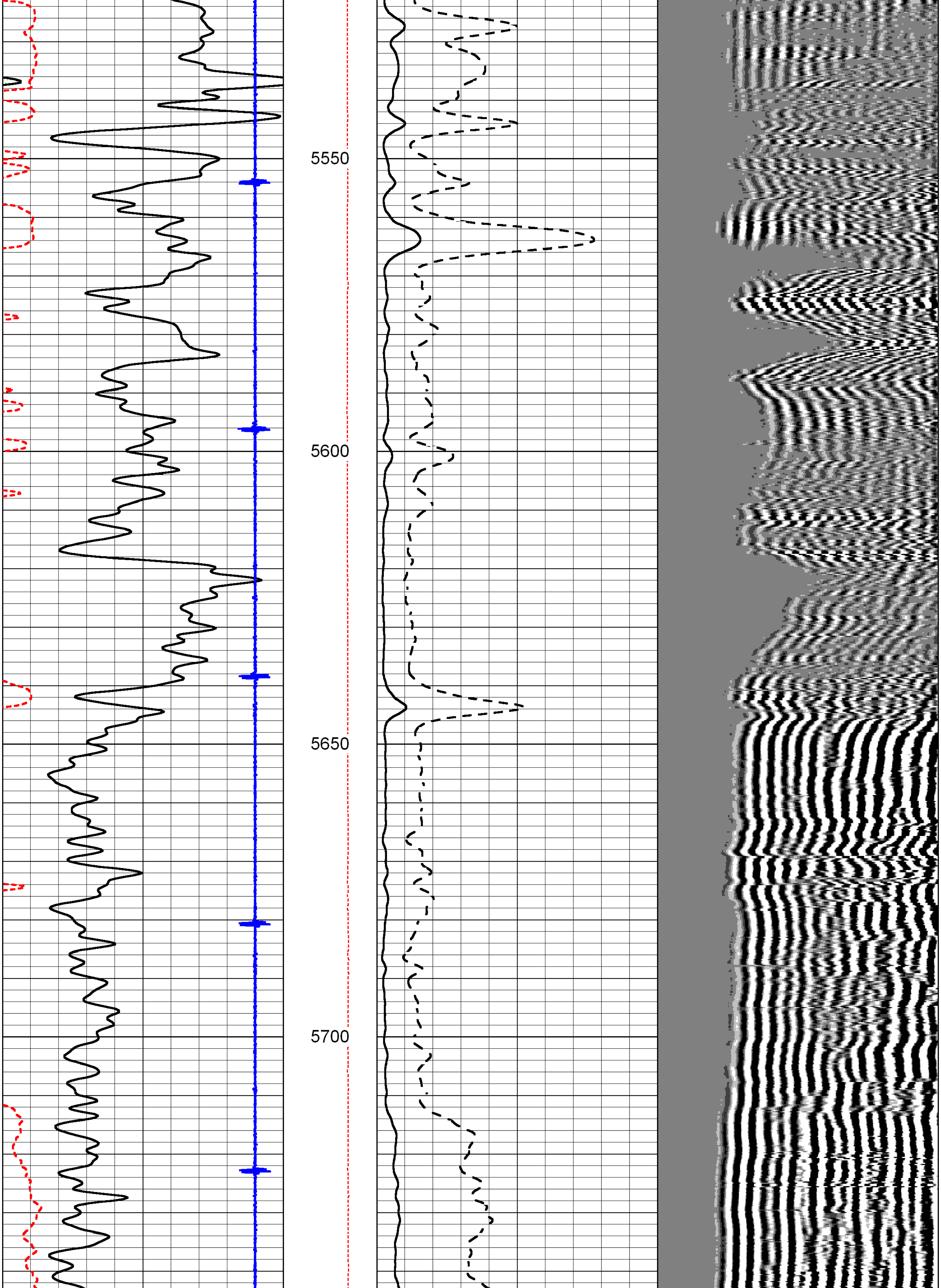

4650
4700
4750
4800
4850

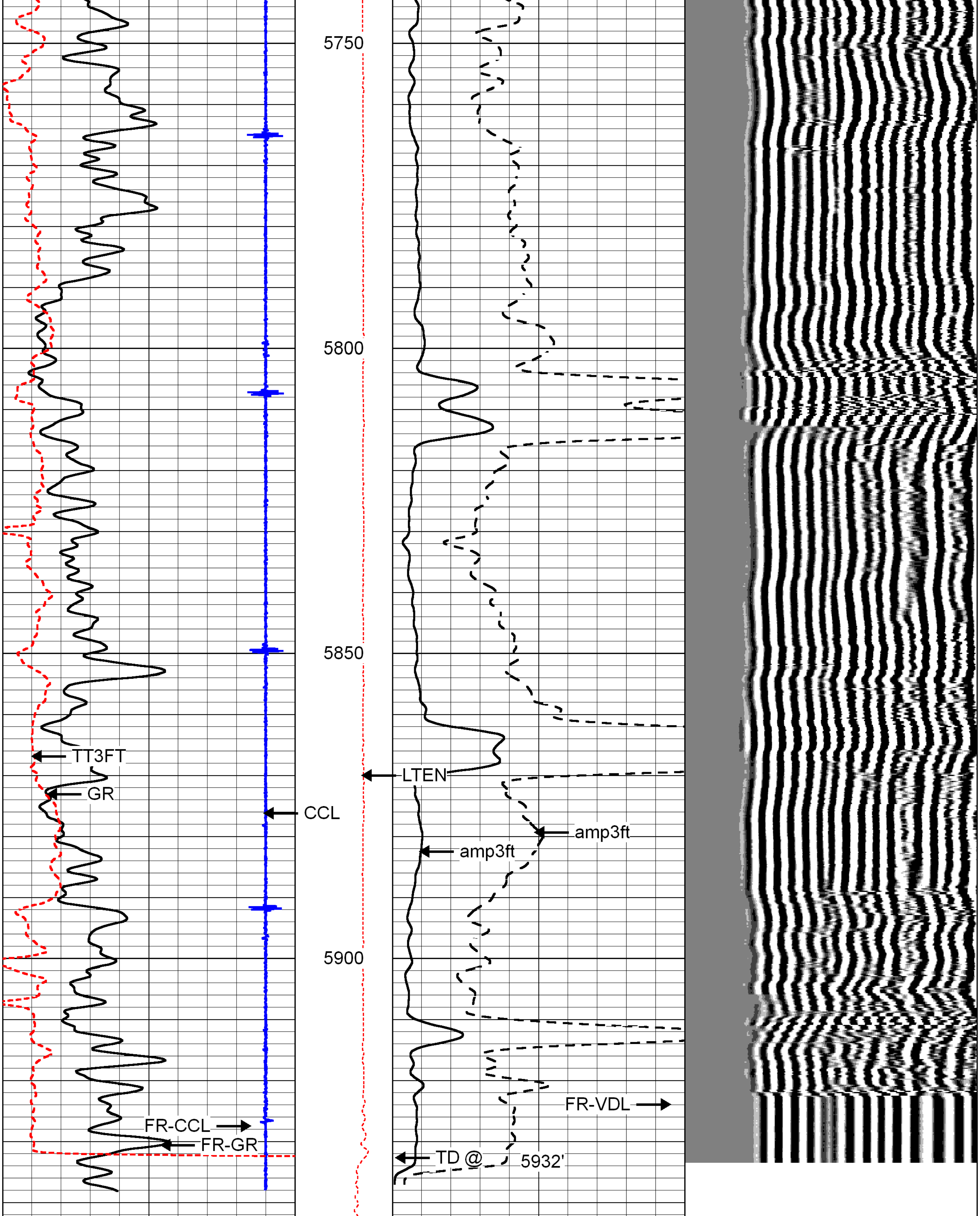

GR
CCL
LTEN
amp3ft
amp3ft
4900
4950
5000
5050



5100
MARKER JOINT
5110'
5150
5200
5250
5300


5350
GR
CCL
LTEN
amp3ft
amp3ft
5400
5450
5500


5550
5600
5650
5700



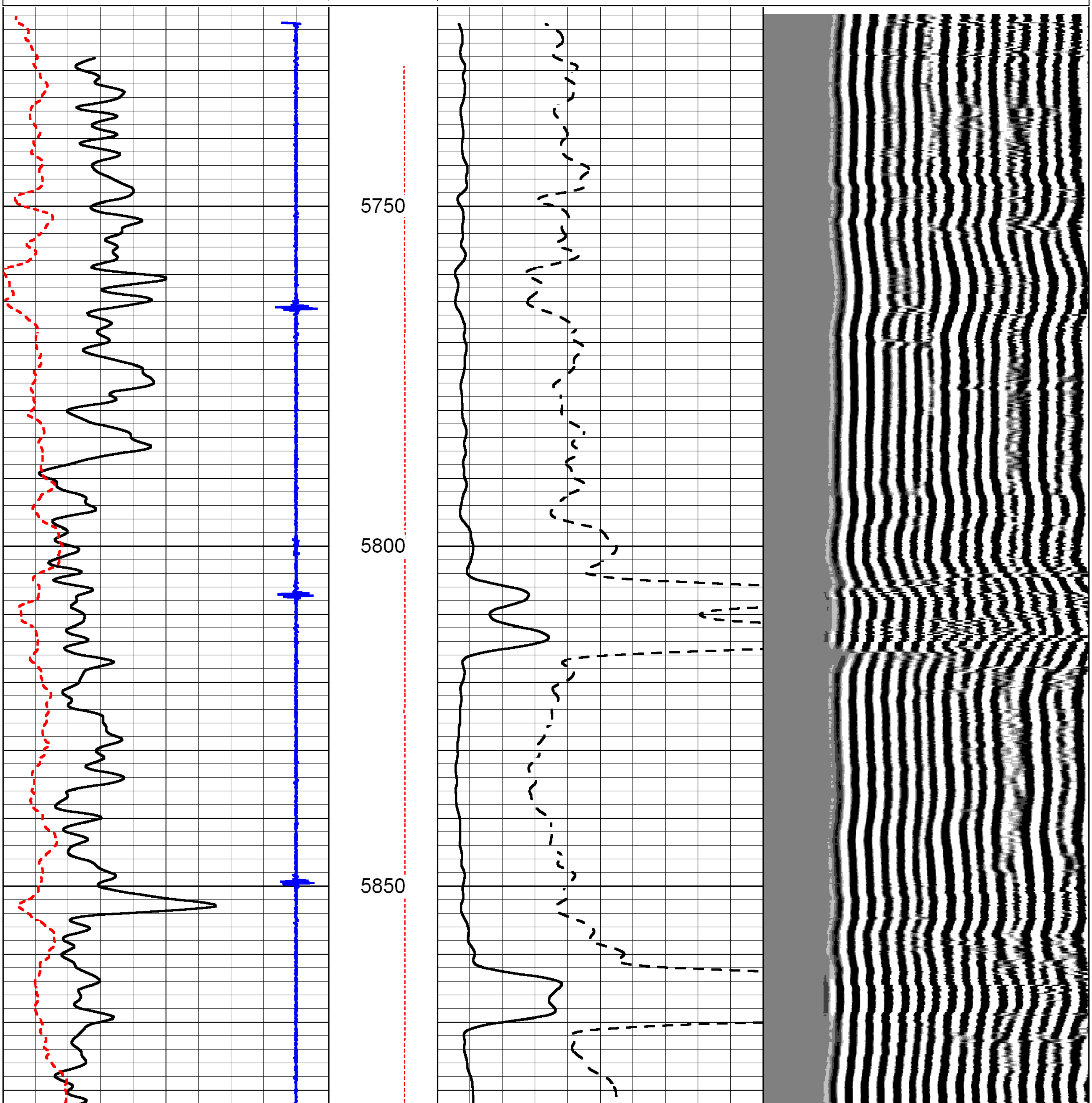
0 Gamma Ray (cps) 150	LTEN (lb)	0 Pipe Amplitude (mV) 100	200 VDL 1200
72 Casing Collars -8		0 Amplified Amplitude (mV) 20	
276 TT3FT1 (usec) 176	0 3000		

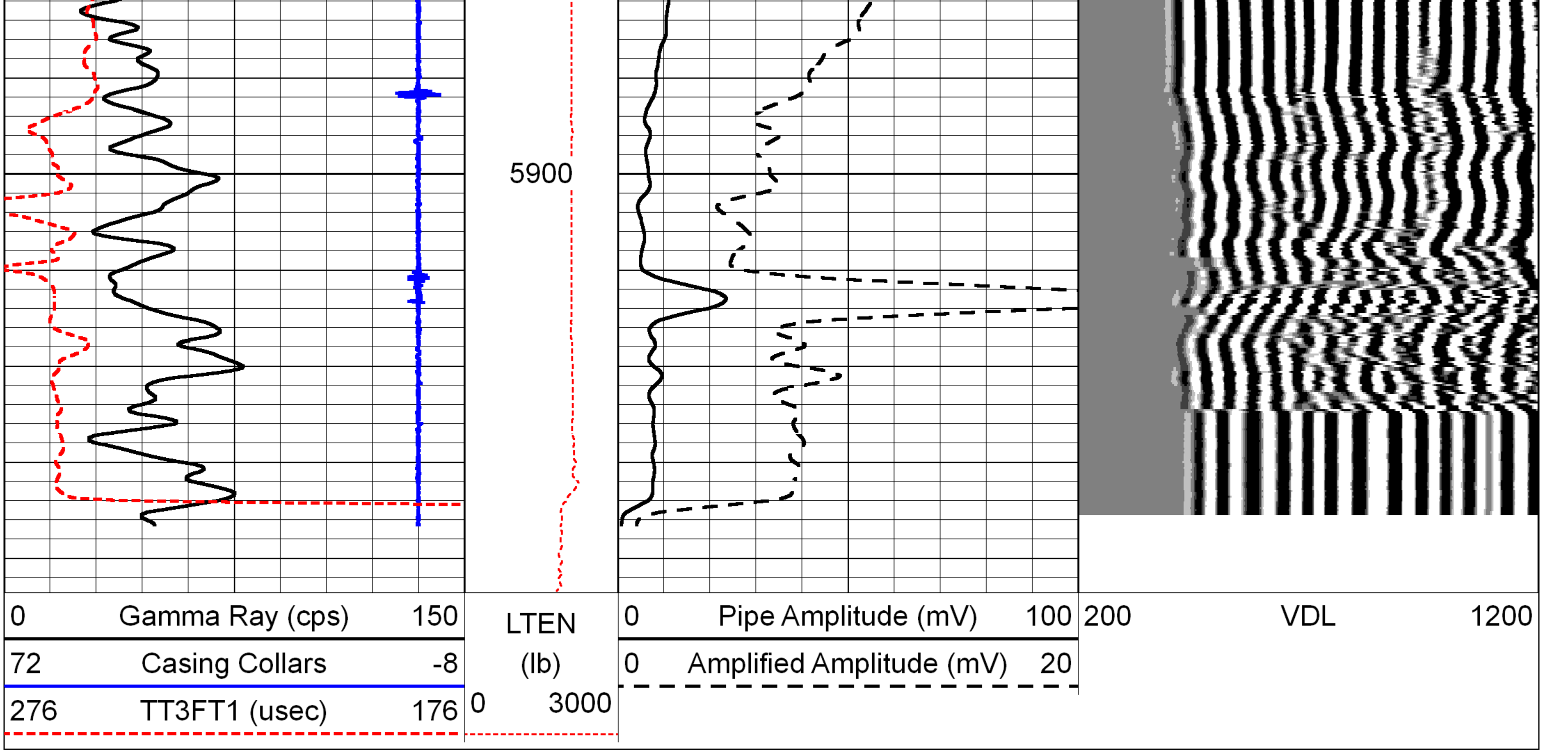
REPEAT SECTION

Pioneer Energy Services

Database File	agricultural energy services_don_thorp_3_23_1517522261_7_5_2018_cbl.db
Dataset Pathname	pass2
Presentation Format	cblpn
Dataset Creation	Thu Jul 05 11:31:58 2018
Charted by	Depth in Feet scaled 1:240

0 Gamma Ray (cps) 150	LTEN (lb)	0 Pipe Amplitude (mV) 100
72 Casing Collars -8	0 3000	0 Amplified Amplitude (mV) 20
276 TT3FT1 (usec) 176		200 VDL 1200





Calibration Report

Database File	agricultural energy services_don_thorp_3_23_1517522261_7_5_2018_cbl.db
Dataset Pathname	pass3
Dataset Creation	Thu Jul 05 11:37:06 2018

Gamma Ray Calibration Report

Serial Number:	125010	
Tool Model:	PTS275Inv	
Performed:	Tue Jul 03 11:37:56 2018	
Calibrator Value:	1.0	cps
Background Reading:	0.0	cps
Calibrator Reading:	1.0	cps
Sensitivity:	1.4700	cps/cps

Segmented Cement Bond Log Calibration Report

Serial Number:	pro_rib_2750_5.50	
Tool Model:	Probe	
Calibration Casing Diameter:	5.500	in
Calibration Depth:	1636.867	ft

Master Calibration, performed Thu Jul 05 12:07:49 2018:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	0.005	1.993	1.000	71.921	35.680	0.819
CAL	-0.000	2.499				
5'	0.005	1.597	1.000	71.921	44.537	0.783
SUM						
S1	0.033	1.934	0.000	100.000	52.600	-1.746
S2	0.007	2.016	0.000	100.000	49.776	-0.350
S3	0.004	2.046	0.000	100.000	48.971	-0.218
S4	0.004	2.051	0.000	100.000	48.842	-0.197

S4	0.004	2.051	0.000	100.000	48.842	-0.197
S5	0.004	2.000	0.000	100.000	50.094	-0.180
S6	0.004	1.948	0.000	100.000	51.458	-0.229
S7	0.005	1.924	0.000	100.000	52.101	-0.238
S8	0.005	1.932	0.000	100.000	51.889	-0.238

Internal Reference Calibration, performed (Not Performed):

	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	-0.000	2.499	1.000	0.000

Air Zero Calibration, performed Mon Jun 18 09:24:17 2018:

	Raw (v)	Calibrated (v)	Results
	Zero	Zero	Offset
3'	0.000	0.000	0.000
5'	0.000	0.000	0.000
SUM			
S1	0.000	0.000	0.000
S2	0.000	0.000	0.000
S3	0.000	0.000	0.000
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

PIONEER
Pioneer Energy Services

Company	AGRICULTURAL ENERGY SERVICES
Well	DON THORP #3-23
Field	KISMET
County	SEWARD
State	KANSAS

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Surface
Print Date	November 27, 2018

Field Ticket # FT-07729-Z1G3J30202-29589

Field Ticket #	FT-07729-Z1G3J30202-29589	**Credit Approval #**	
Client	Agricultural Energy Services	**Purchase Approval #**	
	PO BOX 31865, EDMOND, 73003	**Invoice #**	

Field Rep	Edgar Rodriguez	**Well**	DON THORP 3-23
Field Client Rep	JASON SCHMIDT	**Well API #**	15-175-22263
District	Liberal, KS	**County**	SEWARD
Job Type	Surface	**State/Province**	KS
Job Depth (ft)	1,621.00	**Field**	KISMET
Gas Used On Job	No	**Lease**	

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Surface
Print Date	November 27, 2018

Field Ticket # FT-07729-Z1G3J30202-29589

MATERIALS

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
L100112	ACCELERATOR, SALT, CHLORIDE, CALCIUM, A-7P, PELLETS	LB	1,867.0000	$2.40	$4,480.80	69.00	$1,389.05
L017120	BASKET,CEM,08.625" METAL	EA	1.0000	$885.50	$885.50	69.00	$274.51
L013156	Cement Nose, 8-5/8 in.	EA	1.0000	$460.00	$460.00	69.00	$142.60
L488168	CEMENT, ASTM TYPE I	SK	510.0000	$44.11	$22,496.10	69.00	$6,973.79
L100317	CEMENT, FLY ASH (POZZOLAN)	SK	194.0000	$25.68	$4,981.92	69.00	$1,544.40
L017068	CENTRALIZER,8-5/8"NON-WELD	EA	5.0000	$246.40	$1,232.00	69.00	$381.92
L100120	EXTENDER, BENTONITE	LB	2,887.0000	$2.08	$6,004.96	69.00	$1,861.54
L017299	INSERT FLOATS,with afu kit, 8-5/8 in.	EA	1.0000	$1,452.75	$1,452.75	69.00	$450.35
L100295	IntegraSeal CELLO	LB	139.0000	$5.76	$800.64	69.00	$248.20
L86718	PLUG,CEMENT 8.6 TOP	EA	1.0000	$287.04	$287.04	69.00	$88.98
				Product Material Subtotal:	**$43,081.71**		**$13,355.34**

SERVICES

Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
S-100004	Cement Crew Mobilization-Demobilization Fee	EA	1.00	$10,880.00	$10,880.000	92.00	$870.400
S-100049	Cement pump charge, 1,001-2,000 feet/ 301-600 m	4/HR	1.00	$4,680.00	$4,680.000	92.00	$374.400
S-100066	Cement pump charge, Additional Hours	HR	5.00	$2,720.00	$13,600.000	92.00	$1,088.000
S-100001	Mileage - vehicle heavy weight	MI	50.00	$18.96	$948.000	92.00	$75.840
				Service Subtotal:	**$30,108.00**		**$2,408.64**

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Surface
Print Date	November 27, 2018

Field Ticket # FT-07729-Z1G3J30202-29589

FIELD ESTIMATES

TOTAL GROSS AMOUNT	$73,189.710
TOTAL % DISC	78.461%
TOTAL NET AMOUNT	$15,763.980

Arrive Location

Client Rep.

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

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

BJ REPRESENTATIVE	**CLIENT AUTHORIZED AGENT**
Edgar Rodriguez	JASON SCHMIDT

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Surface
Print Date	November 27, 2018

Field Ticket # FT-07729-Z1G3J30202-29589

Field Ticket #	FT-07729-Z1G3J30202-29589	**Credit Approval #**	
Client	Agricultural Energy Services	**Purchase Approval #**	
	PO BOX 31865, EDMOND, 73003	**Invoice #**	

Field Rep	Edgar Rodriguez	**Well**	DON THORP 3-23
Field Client Rep	JASON SCHMIDT	**Well API #**	15-175-22263
District	Liberal, KS	**County**	SEWARD
Job Type	Surface	**State/Province**	KS
Job Depth (ft)	1,621.00	**Field**	KISMET
Gas Used On Job	No	**Lease**	

FIELD TICKET

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Well	DON THORP 3-23
Job Description	Surface
Print Date	November 27, 2018

Field Ticket # FT-07729-Z1G3J30202-29589

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L100295	IntegraSeal CELLO	LB	139.0000	$5.76	$800.64	69.00	$248.20
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				Product Material Subtotal:	**$43,081.71**		**$13,355.34**

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Product Code	Description	UOM	Quantity	List Price	Gross Amount	Disc (%)	Net Amount
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S-100001	Mileage - vehicle heavy weight	MI	50.00	$18.96	$948.000	92.00	$75.840
				Service Subtotal:	**$30,108.00**		**$2,408.64**

FIELD TICKET

Client	Agricultural Energy Services
Well	DON THORP 3-23
Job Description	Surface
Print Date	November 27, 2018

Field Ticket # FT-07729-Z1G3J30202-29589

FIELD ESTIMATES

TOTAL GROSS AMOUNT	$73,189.710
TOTAL % DISC	78.461%
TOTAL NET AMOUNT	$15,763.980

Arrive Location

Client Rep.

Service Order

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Edgar Rodriguez	JASON SCHMIDT