

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION OIL & GAS CONSERVATION DIVISION

1261248

Form ACO-1
August 2013
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #			API No. 15				
Name:			Spot Description:				
Address 1:			SecTwpS. R				
Address 2:			F6	eet from North /	South Line of Section		
City:	State: Z	ip:+	Fe	eet from East /	West Line of Section		
Contact Person:			Footages Calculated from	Nearest Outside Section C	Corner:		
Phone: ()			□ NE □ NW	V □SE □SW			
CONTRACTOR: License #			GPS Location: Lat:	, Long:			
Name:				(e.g. xx.xxxxx)	(e.gxxx.xxxxx)		
Wellsite Geologist:			Datum: NAD27	NAD83 WGS84			
Purchaser:			County:				
Designate Type of Completion:			Lease Name:	W	ell #:		
	e-Entry	Workover	Field Name:				
	_		Producing Formation:				
☐ Oil ☐ WSW ☐ D&A	☐ SWD	∐ SIOW ∏ SIGW	Elevation: Ground: Kelly Bushing:				
	GSW	Temp. Abd.	Total Vertical Depth:	Plug Back Total D	epth:		
CM (Coal Bed Methane)	dow	Temp. Abd.	Amount of Surface Pipe Se	et and Cemented at:	Feet		
☐ Cathodic ☐ Other (Co	ore. Expl., etc.):		Multiple Stage Cementing	Collar Used? Yes	No		
If Workover/Re-entry: Old Well I			If yes, show depth set:				
Operator:			If Alternate II completion, c	cement circulated from:			
Well Name:			feet depth to:	w/	sx cmt.		
Original Comp. Date:							
Deepening Re-perf	J	ENHR Conv. to SWD	Drilling Fluid Managemer	nt Plan			
Plug Back	Conv. to G		(Data must be collected from to				
Commingled	Permit #		Chloride content:	ppm Fluid volume	: bbls		
Dual Completion			Dewatering method used:_				
SWD			Location of fluid disposal if	hauled offsite:			
ENHR	Permit #:						
GSW	Permit #:		Operator Name:				
			Lease Name:				
Spud Date or Date R	eached TD	Completion Date or	Quarter Sec	TwpS. R	East West		
Recompletion Date		Recompletion Date	County:	Permit #:			

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY							
Confidentiality Requested							
Date:							
Confidential Release Date:							
Wireline Log Received							
Geologist Report Received							
UIC Distribution							
ALT I II Approved by: Date:							

Page Two



Operator Name:				_ Lease l	Name: _			Well #:		
Sec Twp	S. R	East V	West	County	:					
INSTRUCTIONS: Shopen and closed, flow and flow rates if gas to	ring and shut-in pres o surface test, along	sures, whether s with final chart(shut-in pre s). Attach	ssure reac extra shee	hed stati t if more	c level, hydrosta space is neede	itic pressures, bot d.	tom hole temp	erature, flui	d recovery,
Final Radioactivity Lo- files must be submitte						gs must be ema	ailed to kcc-well-lo	gs@kcc.ks.go	v. Digital el	ectronic log
Drill Stem Tests Taker (Attach Additional S		Yes	No				on (Top), Depth ar			mple
Samples Sent to Geo	logical Survey	Yes	☐ No		Nam	e		Тор	Da	tum
Cores Taken Electric Log Run		☐ Yes ☐ Yes	☐ No ☐ No							
List All E. Logs Run:										
			CASING		☐ Ne					
	0: 11-1-	· ·				ermediate, product		# O	T	d Damasat
Purpose of String	Size Hole Drilled	Size Cas Set (In O		Weig Lbs. /		Setting Depth	Type of Cement	# Sacks Used		d Percent itives
		AD	DITIONAL	CEMENTIN	NG / SQL	JEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Ce	ement	# Sacks	Used		Type and F	ercent Additives		
Perforate Protect Casing										
Plug Back TD Plug Off Zone										
Did you perform a hydrau	•					Yes	No (If No, ski	p questions 2 ar	nd 3)	
Does the volume of the to							= :	p question 3)	of the ACO	()
Was the hydraulic fractur	ing treatment information	on submitted to the	e chemicai d	isciosure re	gistry?	Yes	No (If No, fill	out Page Three	or the ACO-1	<i>)</i>
Shots Per Foot		ION RECORD - I Footage of Each I					cture, Shot, Cement mount and Kind of Ma		d	Depth
TUBING RECORD:	Size:	Set At:		Packer A	i:	Liner Run:	Yes No			
Date of First, Resumed	Production, SWD or Ef	NHR. Prod	ducing Meth	ıod:		1				
			Flowing	Pumpin	g	Gas Lift C	Other (Explain)			
Estimated Production Per 24 Hours	Oil	Bbls.	Gas	Mcf	Wate	er B	bls. (Gas-Oil Ratio		Gravity
DISPOSITIO	ON OF GAS:		M	METHOD OF	COMPLE	ETION:		PRODUCTION	ON INTERVA	
Vented Sold		Open		Perf.	Dually	Comp. Cor	mmingled			
	bmit ACO-18.)		(Specify)		(Submit)	ACO-5) (Sub	mit ACO-4)			



CEMENTING LOG

STAGE NO.

201	3 10	0	. \			CEMENT DATA:
Date O 7 ~ C	Dist	nici(STEAT)	-	Ticket No. 655		Spacer Type: FIGSA
Lease COST	DSAS PE			7 10 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ومنا	Amt. Sks Yield 1(3/sk Dansity PPG
County STO	Stora)		5	State KS	1- 1111	
Location 28	1/50 g	west	MYCCA CY	ield		LEAD: Pump Time Thicken) hrs. Type 65/35+67/agel
CASING DATA	: Conductor		PTA 🔲	Squeeze 🔲 N	Aiso []	275
Size 85/%	Surface Type		ediale 🔲 P	_	iner 🔝	TAIL: Pump Time Thicken his. Type CIBSS A 30/000
	* * *******					Amt. //38 Sks Yield /.33 ft ³ /sk Density /S. 2 PPG
						WATER; Lead gals/sk Tail gals/sk Total Bbls.
Casing Depths:	Гор		_ Bottom Z	<i>a</i> 3		Pump Trucks Used 398 / BEAL NOWE!
		***************************************				Bulk Equip. MARYIN SPANGER BARG
Drill Pipe: Size _		Weigh	1	Collars		
Open Hole: Size	121/4	т.о. 9	02 ft.	P.B. to	ft.	Float Equip: Manufacturer
CAPACITY FACT	ORS:					Stoe; Type Depth
Casing:	8bls/Lin, ft	15637	Lin. (t./E	Ы,		r) . ~
Open Holes:	Bbls/Lin. ft		Lin. ft./E	Ы		Centralizers: Quantity S Plugs Top Btm.
Drill Pipe:				lbl		Stage Collars
Annulus:				Ы		Special Equip.
				bl		Disp. Fluid Type Amt Bbls, Welght PPG
Perforations: 1				fl. Aml		Viul Type Weight PPG
COMPANY REPR	esentative					CEMENTER KRUIN Eddy
TIME	PRESSU	RES PSI	FILE	ID PUMPED I	DATA .	
AM/PM	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	REMARKS
545 AM						ON LOCATION/Hold Society meeting/Rigup
						CASING Crew RAW 903 Ft of 85/8 COSING
740 Am						HOOK TO HEAD Broke Circul Rig Mud
			5		4	Pump 5 AHGAD Fresh H20
000 BW			96.48		4	Mix 2755x 65/35+676651+37656+ 14490
030 AM			15.47		4	MIX 100 SX C/ASS A 3% CC
OSOAM			5688		_ \$	Displace 56-88 BBIS Fresh H20
1100 Am						SHUKT IN
						Rig Down
						Cement Did Circ
VAL DISP. PRESS	•	PSI	BUMP PLUG	то		PSI BLEEDBACKBBLS. THANK YOU



CEMENTING LOG

STAGE NO.

Date 04-06	-/4/ Dist	infrest L	Beard	Ticket No.655	۱۶	Spacer Type: Fresh HAO
Company KAL	USAS Pet	coleum		Rig H2 PULL		Amt. Sks Yield It 3/sk Density PPG
Loaso CASTI				Well No		- Pro
County Staff Location 281		mt Cross		State <u>KS</u> Field <u>17-24 -</u>	1/1	d? .))
12. Nort			100	Field 11 - A	L7	LEAD: Pump Time Thicken his. Type ASC + 2% Gel +
CASING DATA			PTA 🗆	Squeeze 🗍 🐧	Aisc []	6% Gyet 5 1 1 10% SAIT + 3 % F 1 160 Excess Amt. 150 Sks Yield 1.5) 13 /sk Density PPG
	Surface	_		roduction M L		TAIL: Pump Time Theckes hrs. Type 60/40 4°/6
Size 5/2	Түрө			Collar		Yy flo Excess
						Amt. 50 Sks Yield 1141 [13/sk Density 14,5 PPG
-						WATER: Lead gals/sk Tail gals/sk Total Bbls.
				0:0 40		
Casing Depths: 1	Top		Boltom	213-23		Pump Trucks Used 398 / Ben Neusell
********						Bulk Equip. 544/239 Dustin Chambers
	<u> </u>					
Drill Pipe: Size _		Malah	•	Collers	1	
Open Hole: Size .	27/8	T.D. 4	1210 1	P.B. to		Float Fortin Manufacturer
CAPACITY FACT						Float Equip: Manufacturer Depth
Casing:	Bbls/Lin, ft	<u>,0238</u>	Lin. it./i	ВЫ		Float: Type Depth
Open Holes:	8bls/Lin. ft		Lin. ft./I	ВЫ,		Centrelizers: Quantity Plugs Top Btm
Drill Pipe:	Bbls/Lin. ft	**************	Lin, (1./1	ВЫ		Stage Collars
Annulus:	-		-	3bl		Special Equip.
				3bl	· · · · · · · · · · · · · · · · · · ·	Disp. Fluid Type FCSL H20 Amt 99,222 Bbls. WeightPPG
Perforations: F	rom	(t. t	0	ft. Amt		Mud Type Weight PPG
						12.1.51
COMPANY REPR	ESENTATIVE			· · · · · · · · · · · · · · · · · · ·		CEMENTER KEUTH Eddy
TIME	PRESSU	RES PSI	FLU	JID PUMPED	DATA	
AM/PM	DRILL PIPE CASING	ANNULUS	TOTAL FLUID	Pumped Per Time Period	RATE Bbls Min.	REMARKS
500 Pm						oix location / Hold Sarety meeting / Rig up
0 0 0 0 0						
						Rig RAN Pt OF CASING + Float Equip
12.SSAM					1,	Bloke Circ W/ Bigmud
			10		5	Pump 10 BBIS Fresh HAG
130 am			10		5	0 -1
(30 CUL)			lo	<u> </u>	· 3	Pump 10 CW-555-50
			15	i i	5	Pump 15 BBIS Behind Fash H20
		~~~	-F	†	ţ,	TWITE IS WORD BOTTON PARENTED
			12.55	×	4	Plug Rat and Mouse Hole 505x 60/40+49/0+1/49/
	,					
150Am			41,94		4	Hook to Head mix 1505x ASC +2% Gel+6% Gye+ 5# Kol + 10% Spl++.3% Fl-160
						5 161 + 10 % SRIT + , 3% FI-160
		·				-
						SHUT DOWN WASh UP
RISAM			99.27		5	Hook to HEAD + DISPIACE BBIS FRESH H20
						THUS TO FLEND & DIS FRESH HAS
						LAND Plug. @ PST
						,
						Release Plug Did Hold
						Rig Down
	L					P .
VAL DISP. PRESS	600 PSI	PSI	BUMP PLUG	TO //00 1	257	PSI BLEEDBACK 12 BB) RBIS THANK YOU

## LITHOLOGY STRIP LOG

## **WellSight Systems**

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

Well Name: Castle Peak #2

Well Id:

Location: NW SW 17-24-14W

License Number:

Spud Date: 3-31-15 Drilling Completed: 4-6-15

**Surface Coordinates:** 

**Bottom Hole** 

Coordinates:

Ground Elevation (ft): 1993 K.B. Elevation (ft): 2005 Logged Interval (ft): 2000 To: 4210 Total Depth (ft): 4210

Formation: Mississippian

Type of Drilling Fluid:

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

Region:

### **OPERATOR**

Company: Kansas Petroleum Resources, LLC

Address: 200 E. 1st Street Suite 307

Wichita, Ks 67202

### **GEOLOGIST**

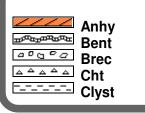
Name: Rod Andersen

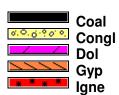
Company: Address:

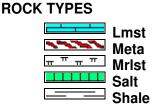
Cores

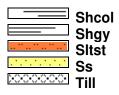
**DSTs** 

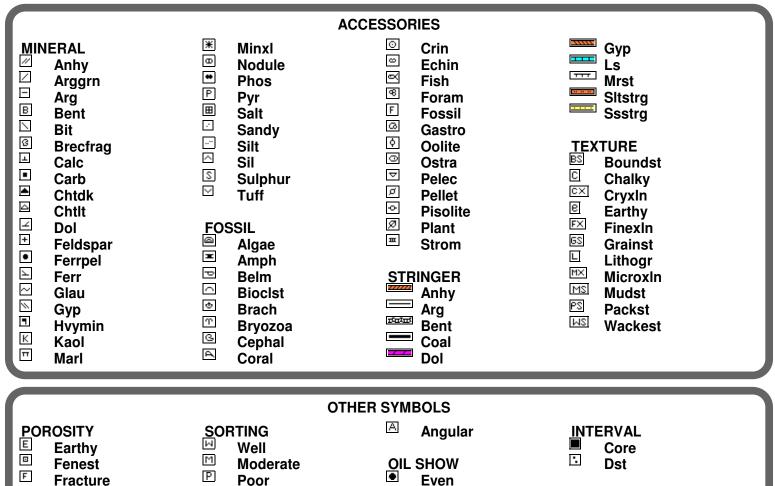
#### **Comments**

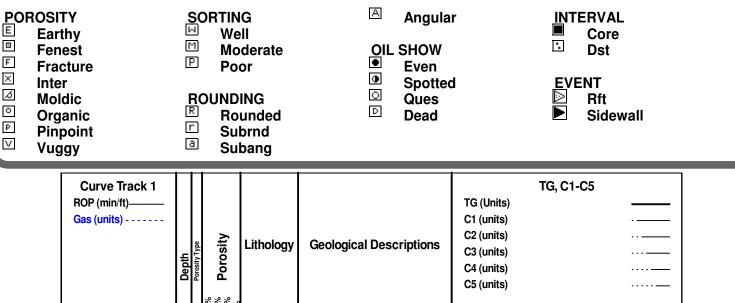


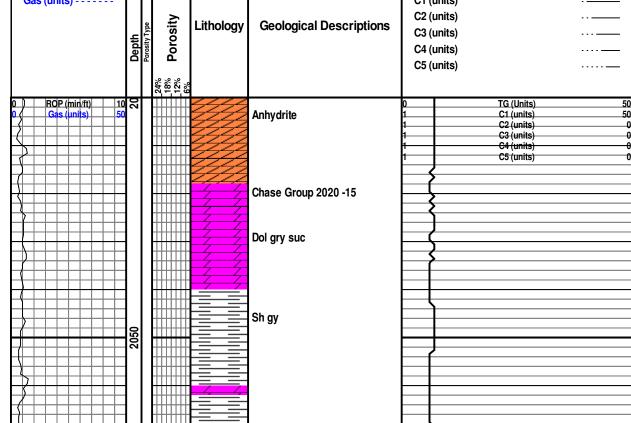


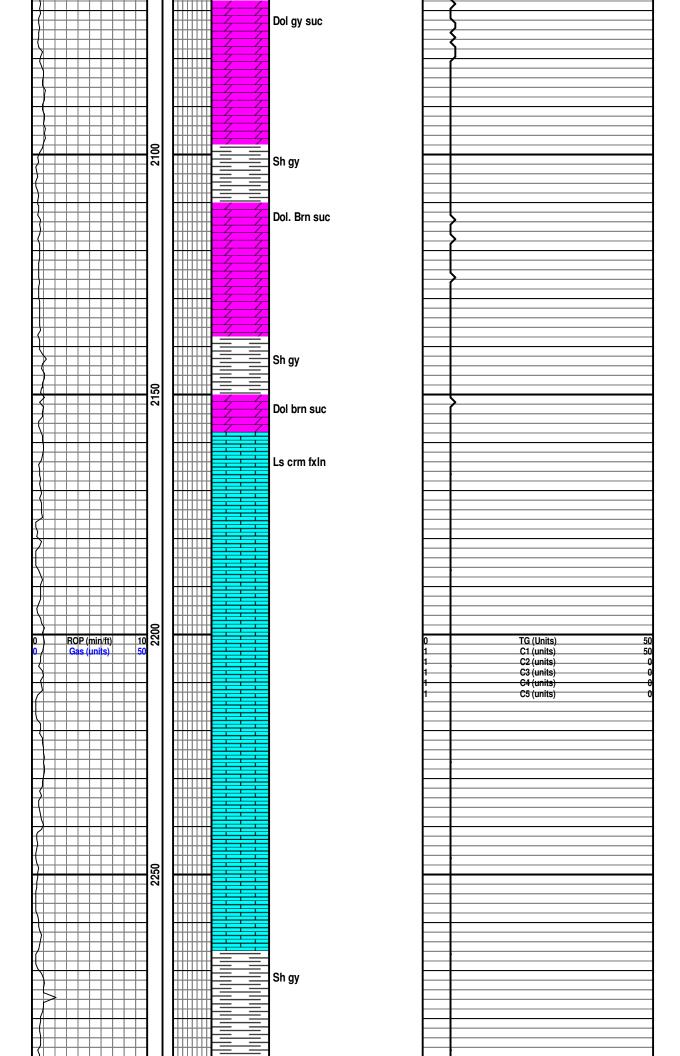


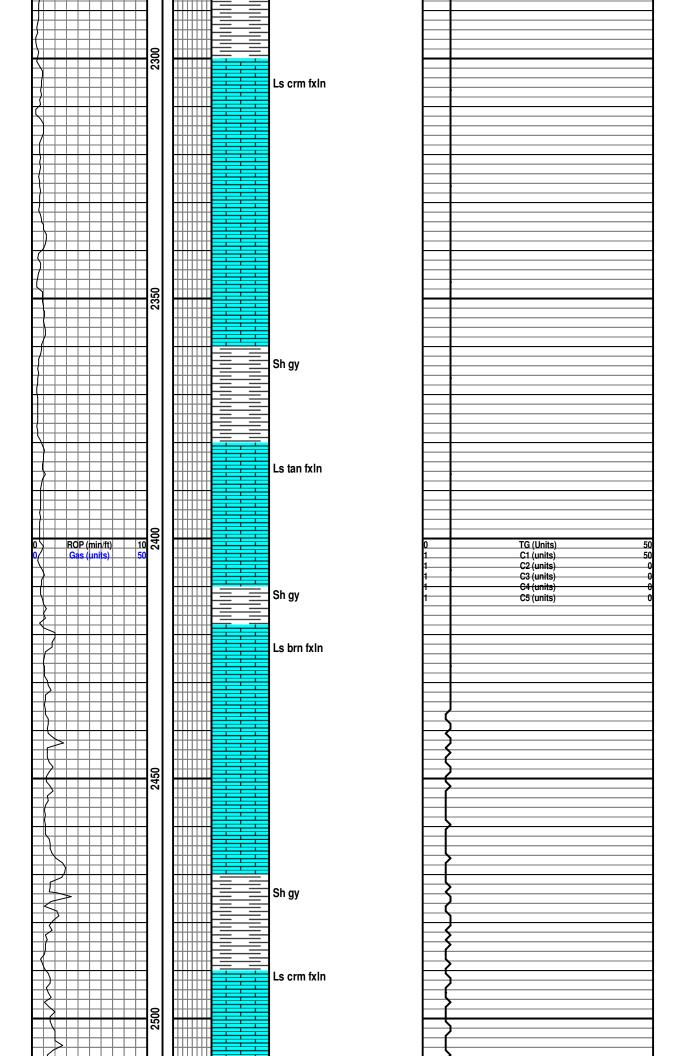


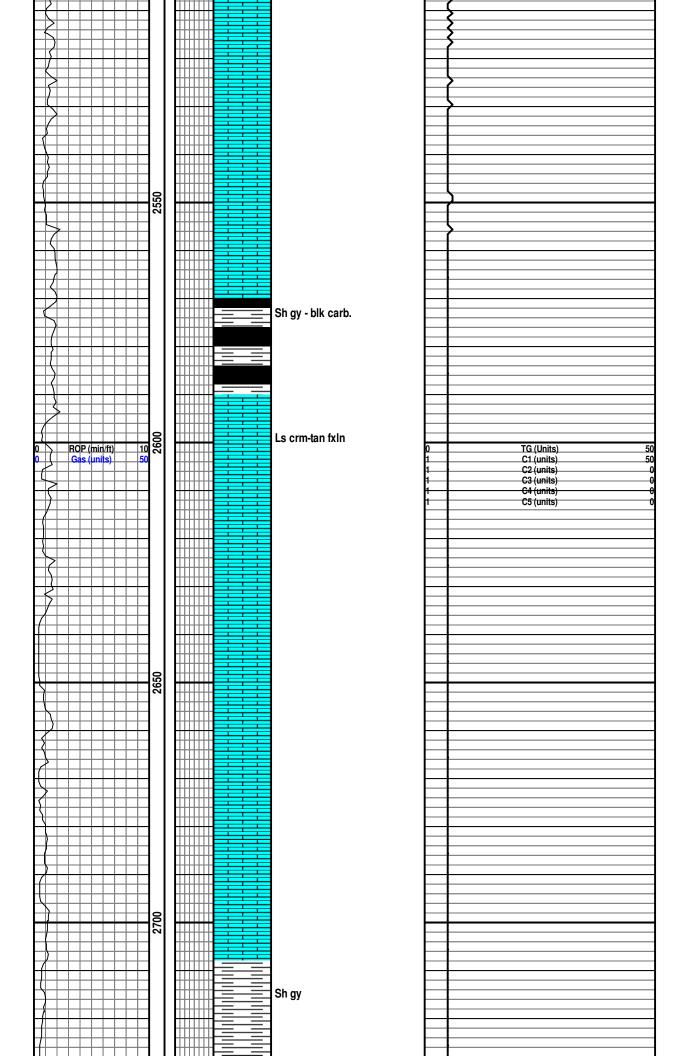


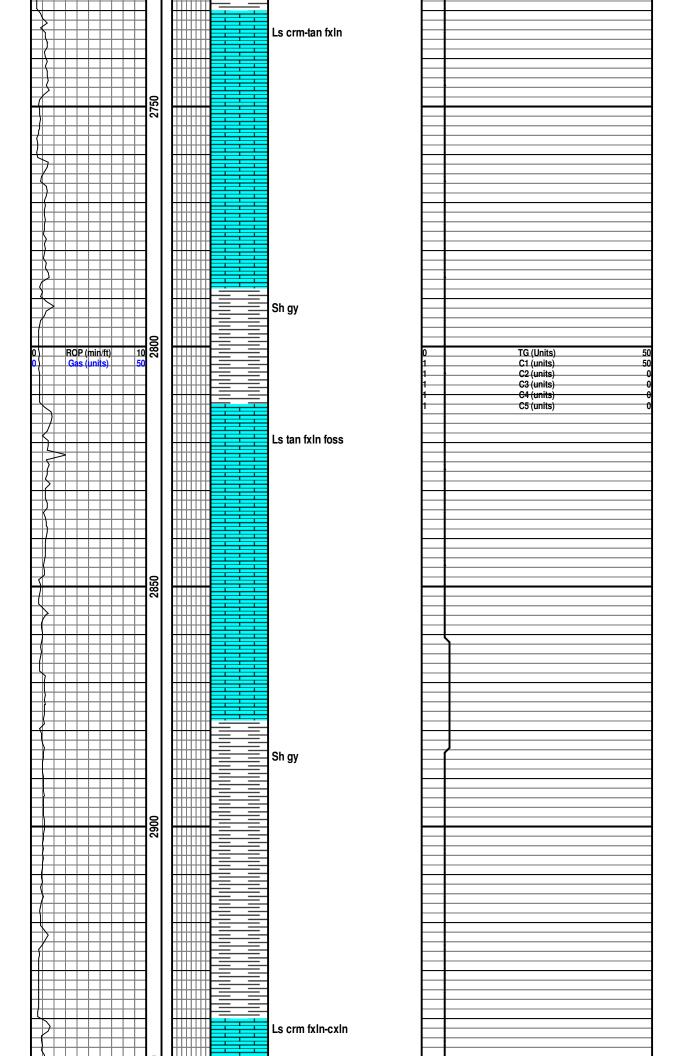


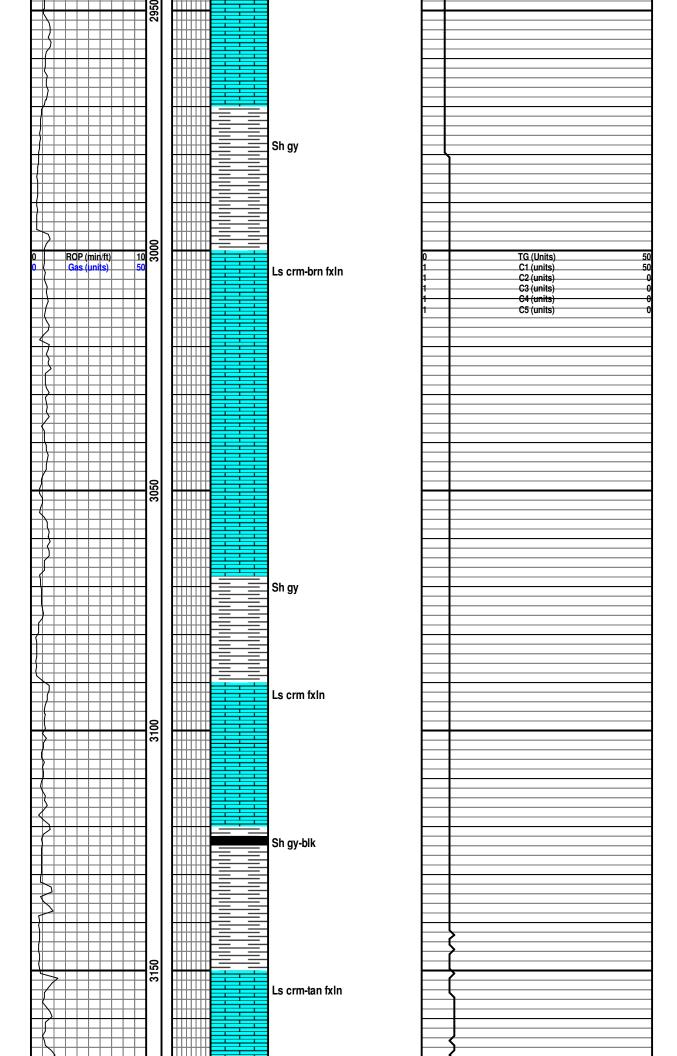


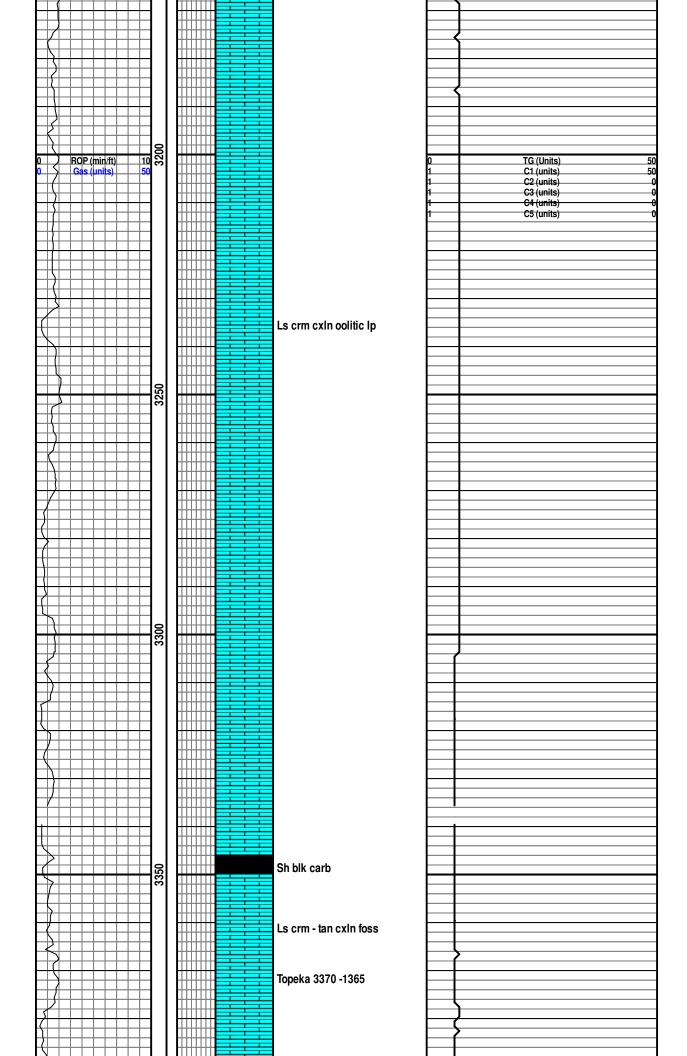


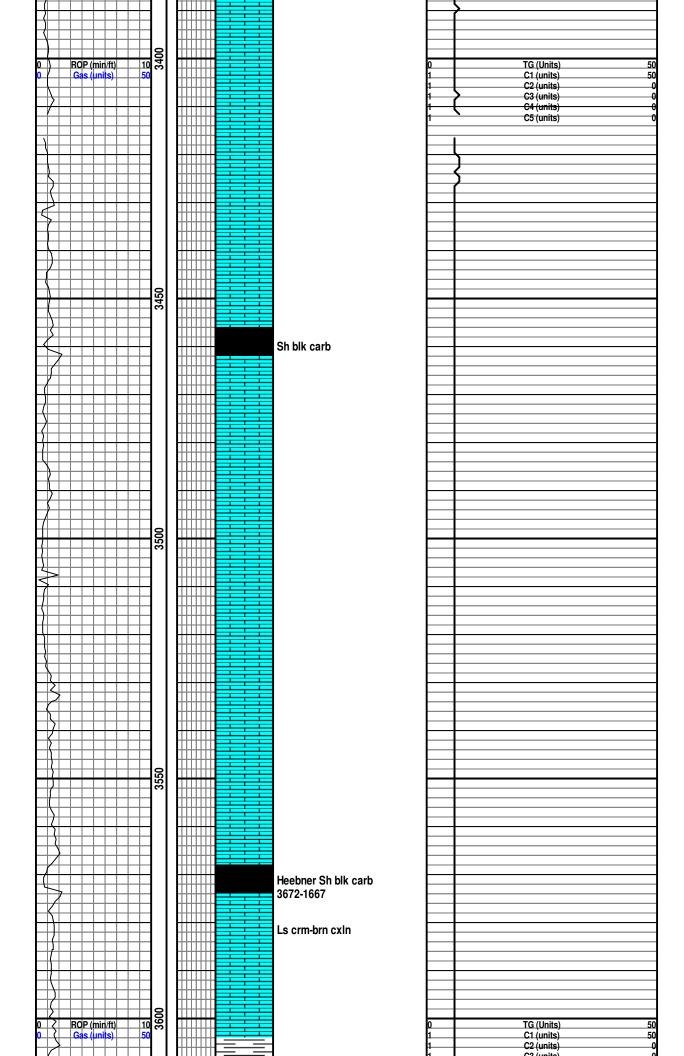


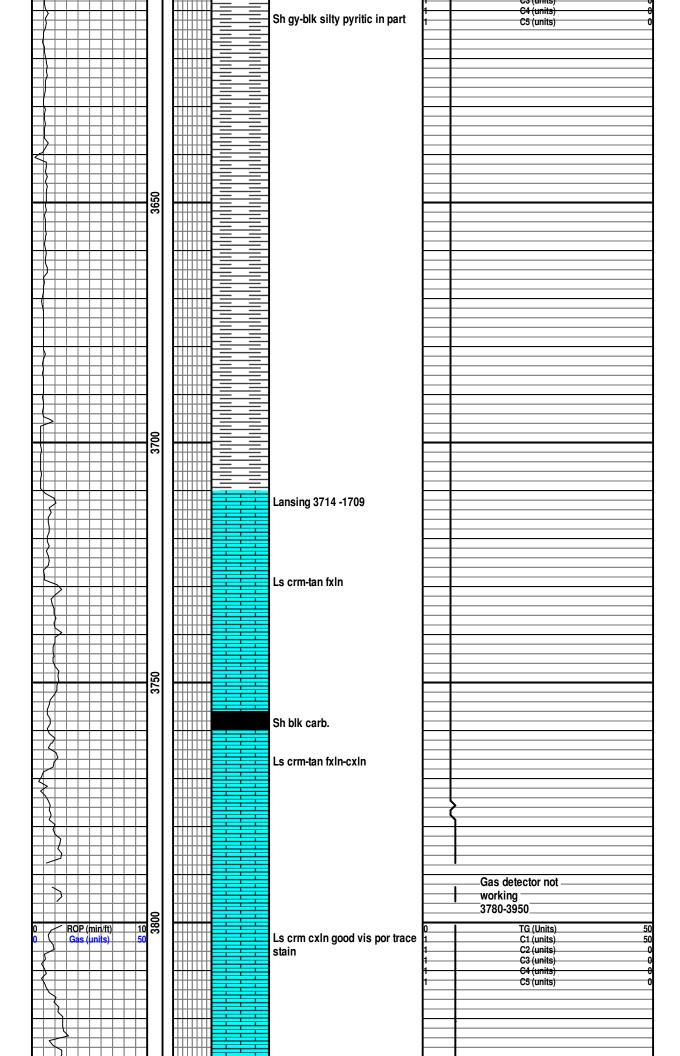


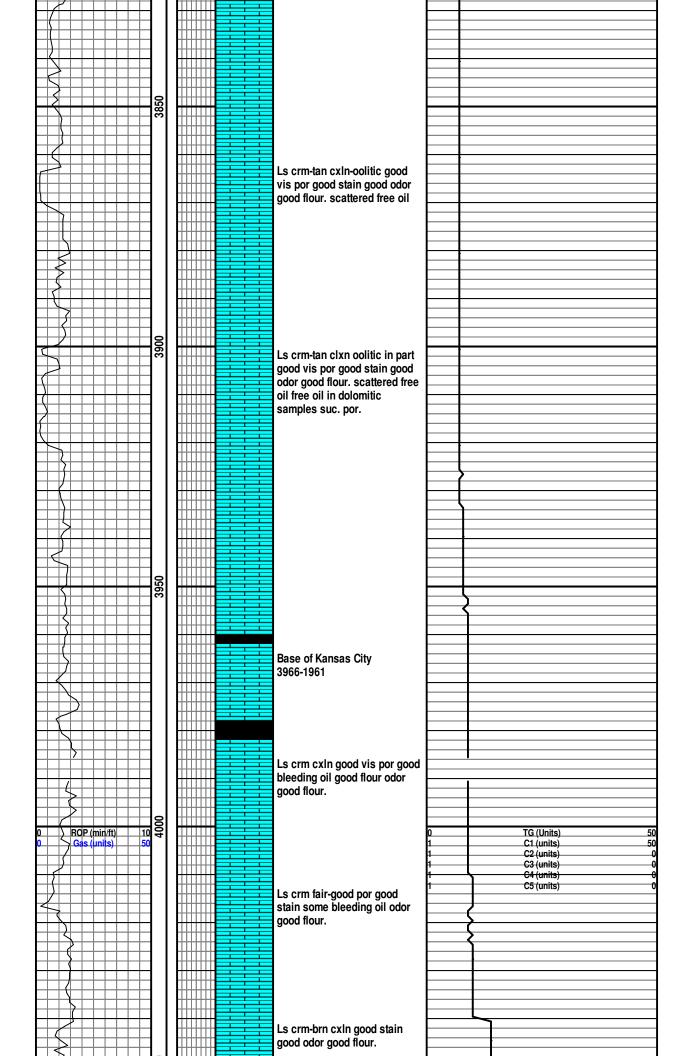


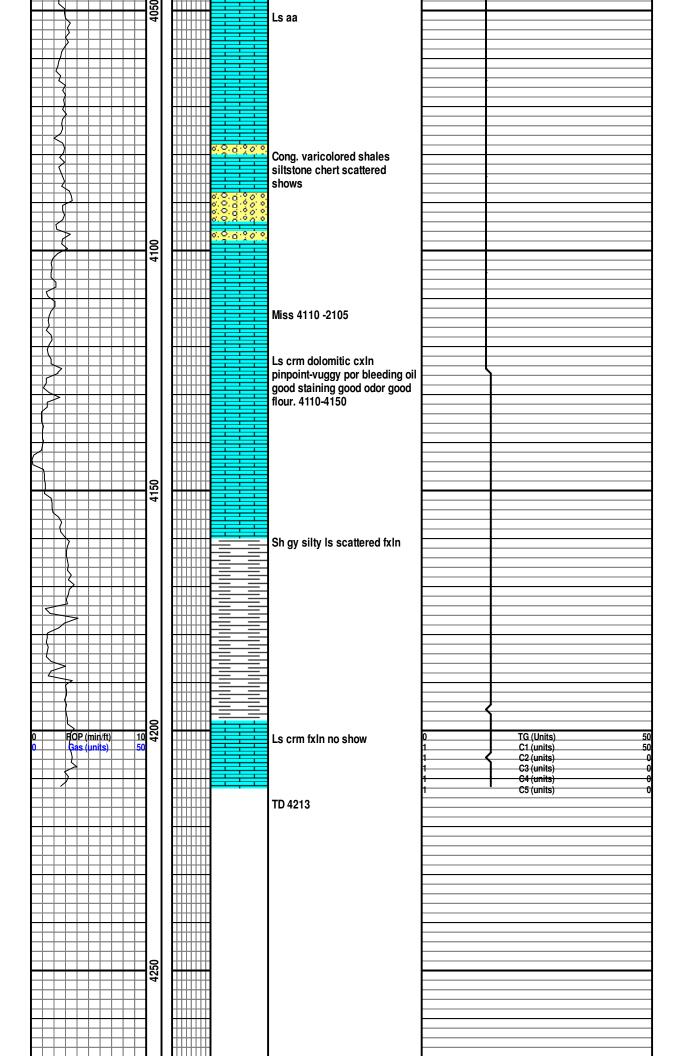




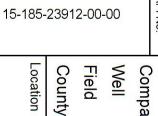








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Stafford

1980' FSL & 660' FWL

Other Services CNL/CDL

MEL

API No.

**Pioneer Energy Services** 

Dual Induction

Company Kansas Petroleum Resources, LLC

Castle Peak #2

Dillwin West

<<< Fold Here >>>

ax Rec.

uipment Number

itnessed By

Andersen Schmidt Hays perating Rig Time

1/2 Hours

15 118 ource of Rmf / Rmc

Meas. Meas

lemp lemp

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**®** 

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Charts

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l emp

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Permanent Datum Ground Level Log Measured From Kelly Bushing Drilling Measured Frokelly Bushing

12

Ft. Above Perm. Datum Elevation 1993 Rge:

C TIE

/6/2015

Sec:

Twp: 24S

14W

Elevation 2005 1993

epth Driller

om Logged

nterva

4209 4208 900

Log Interval

salinity,ppm Cl

sity / Viscosity Fluid Loss

arce of Sample

Flowline

8.0

55

pe Fluid in Hole

Chemica

899 7.875

902

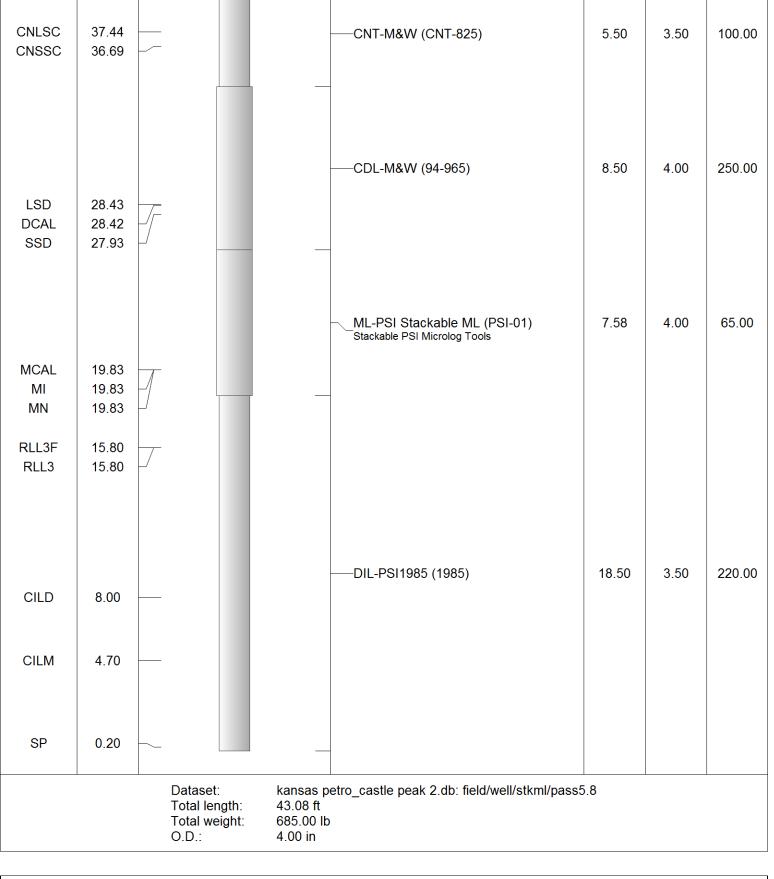
asing Logger asing Driller

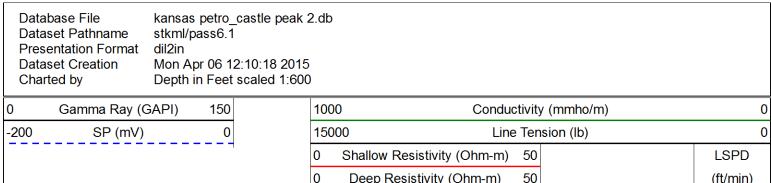
#### Comments

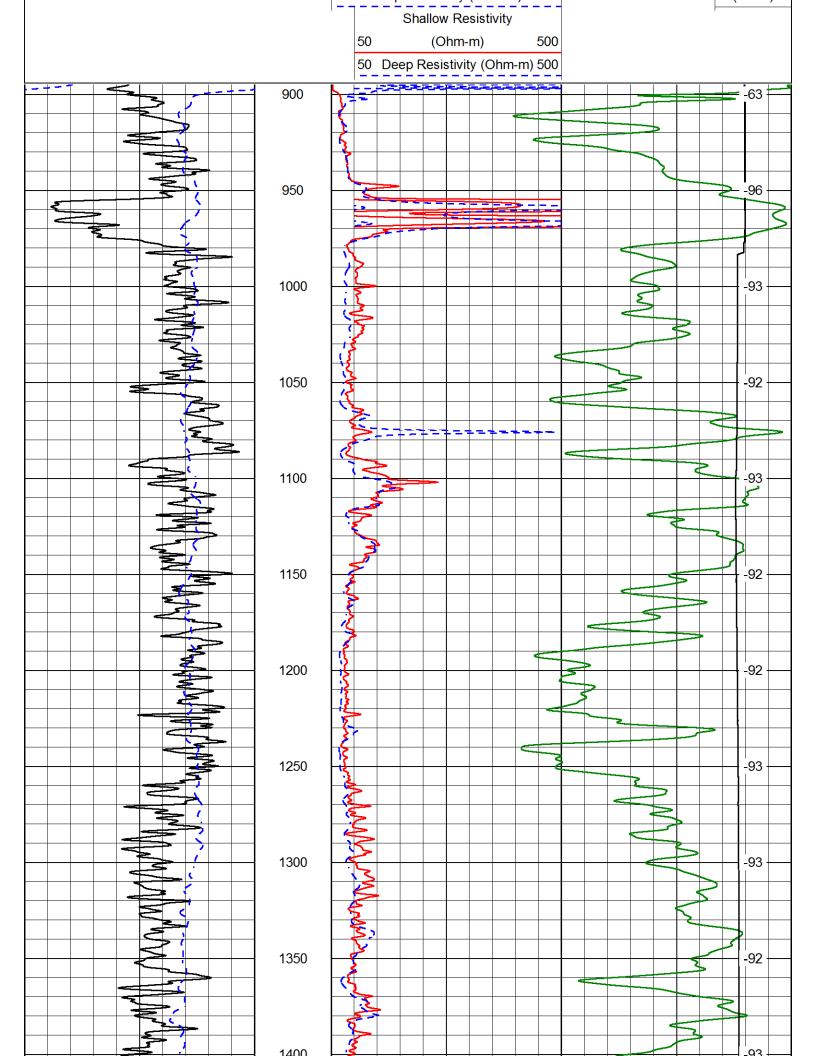
Thank you for using Pioneer Energy Services 785.625.3858

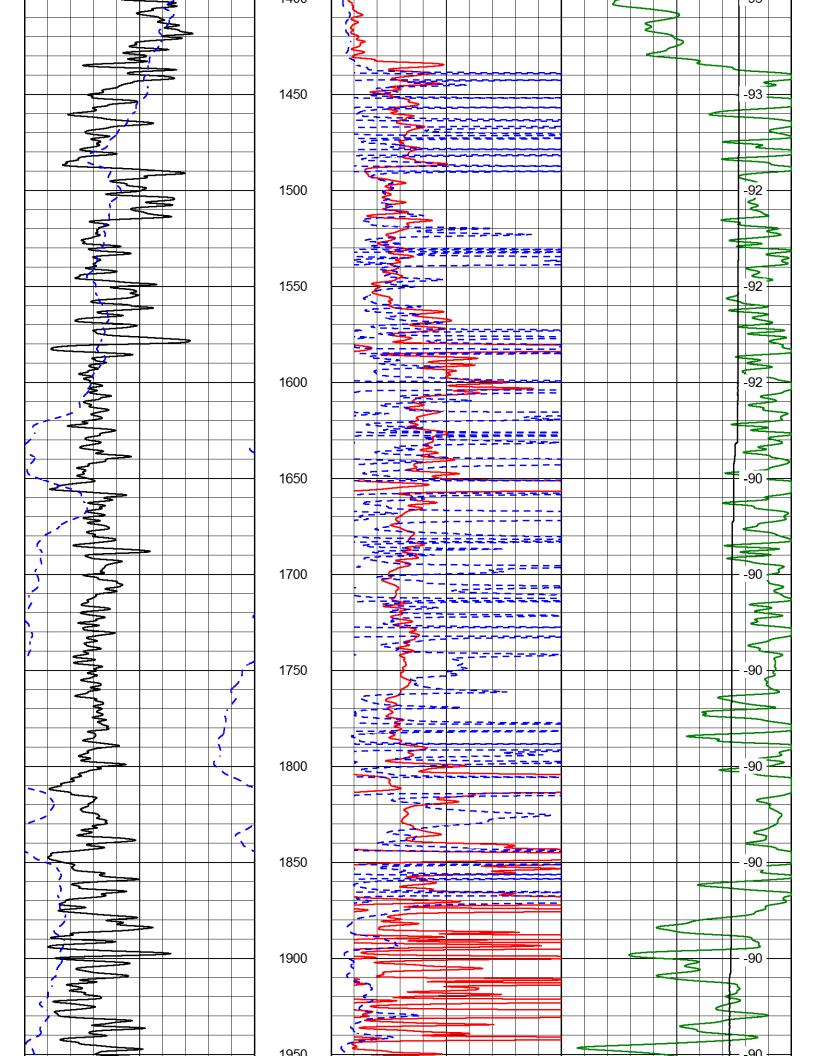
> St. John (Hwy 281 & Hwy 50), West to NW 80th, 1/4 North, East into

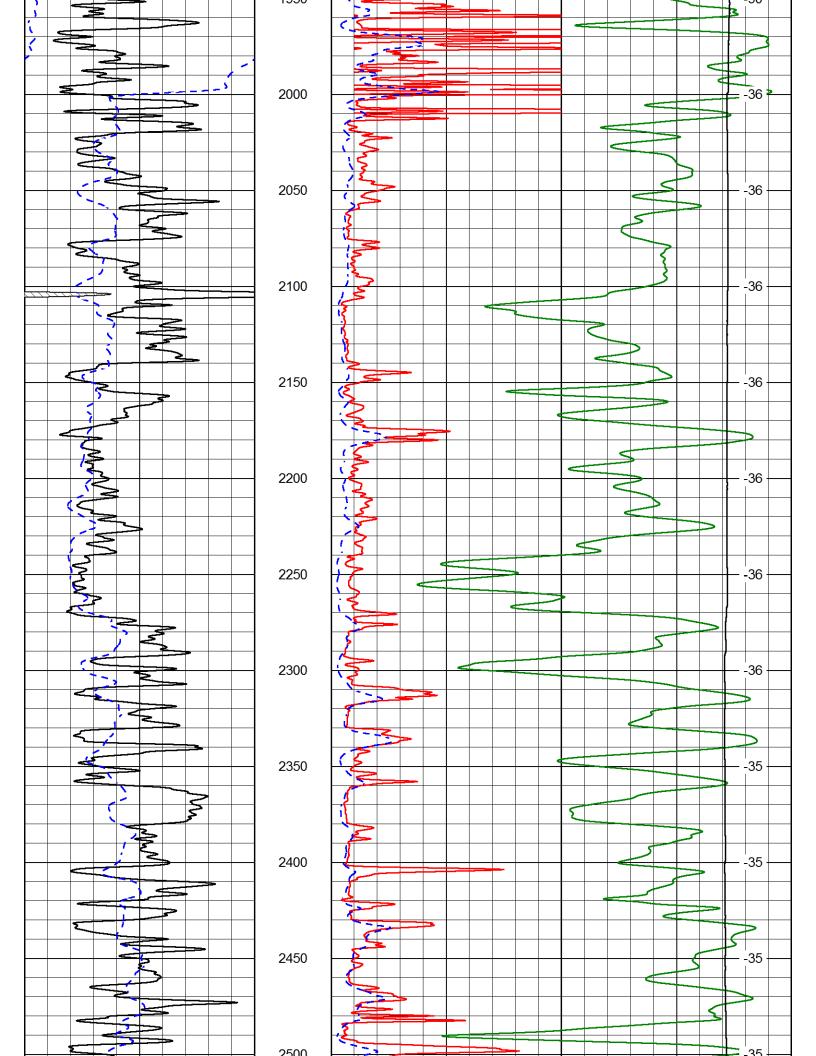
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.58	_	——GR-M&W (233-M&W)	3.00	3.50	50.00

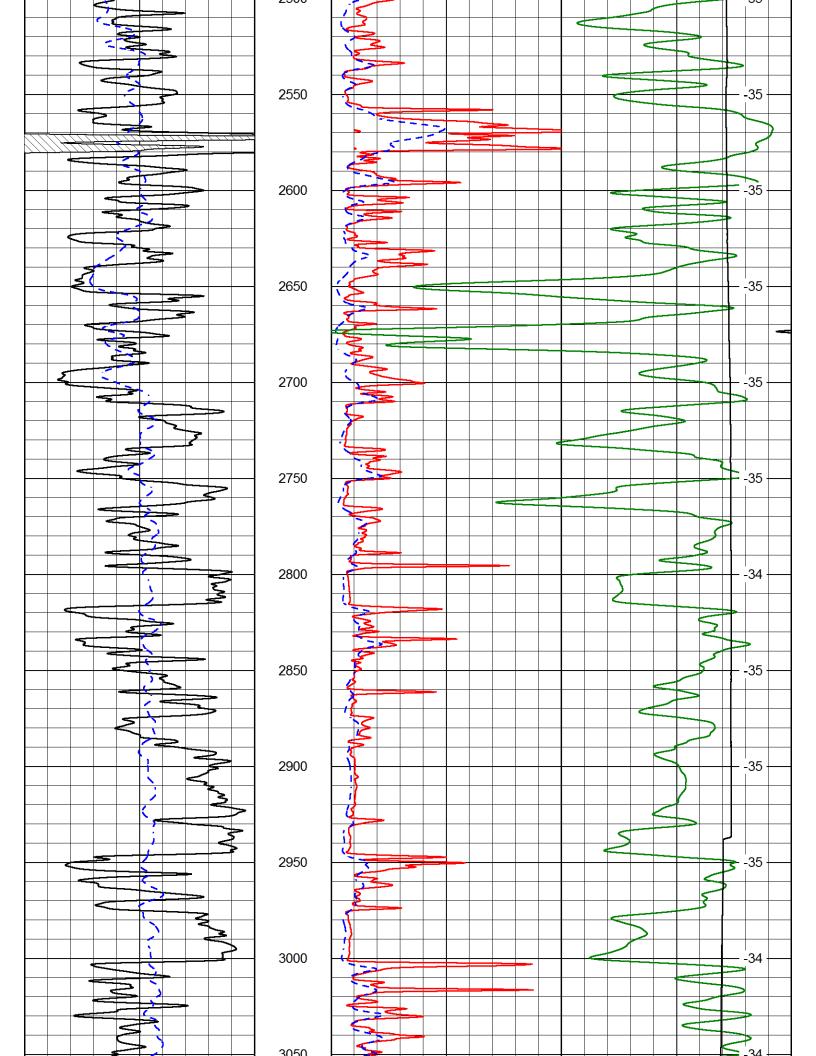


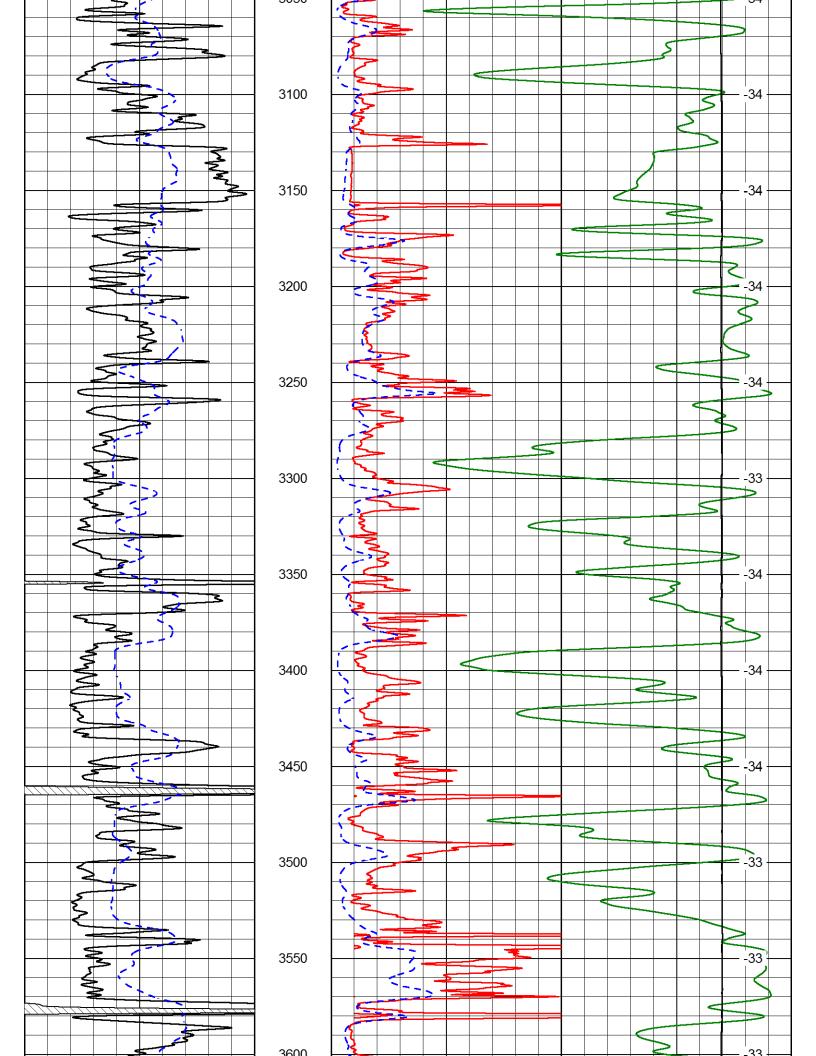


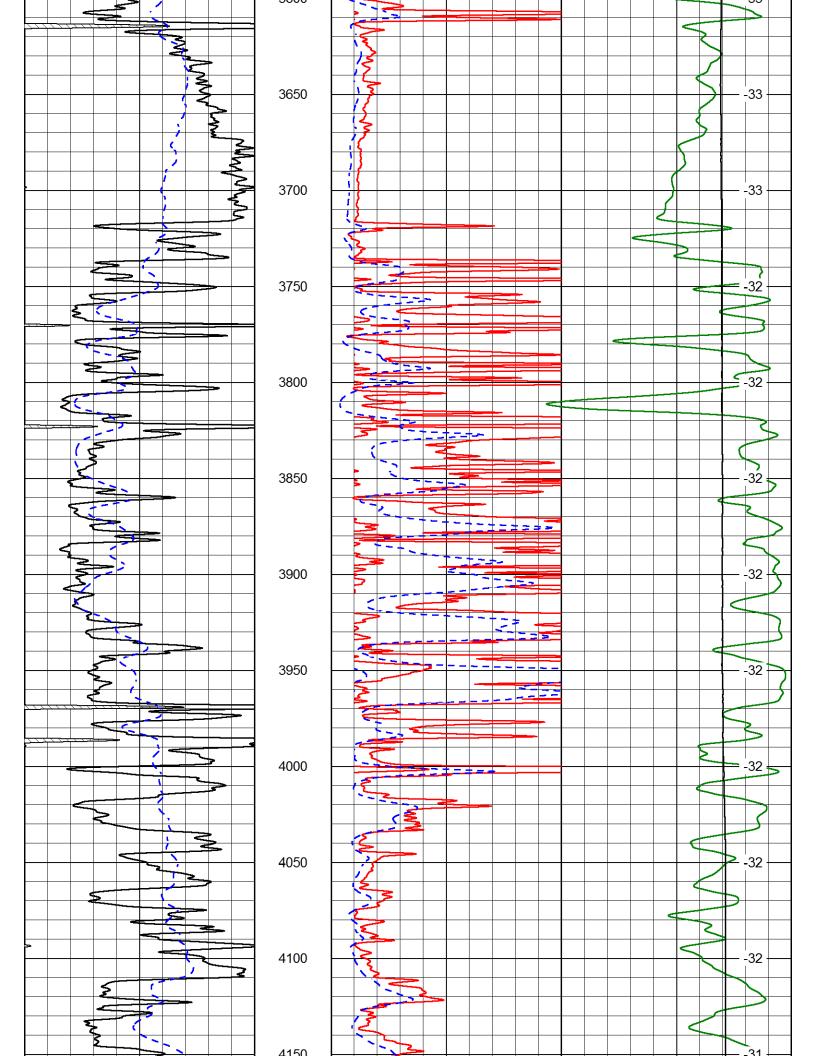


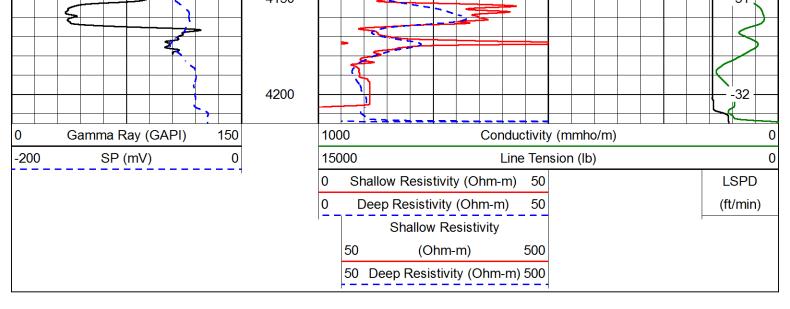


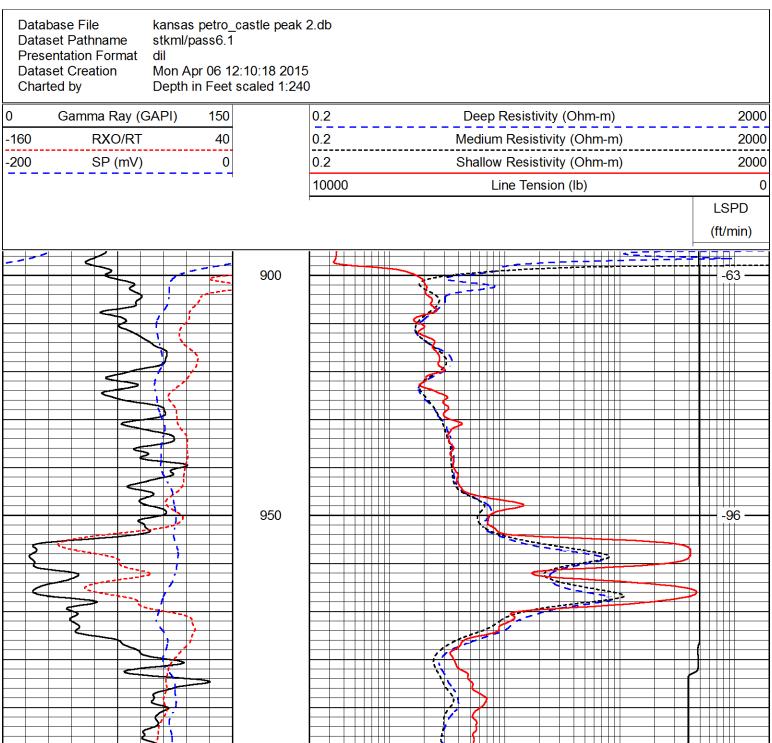


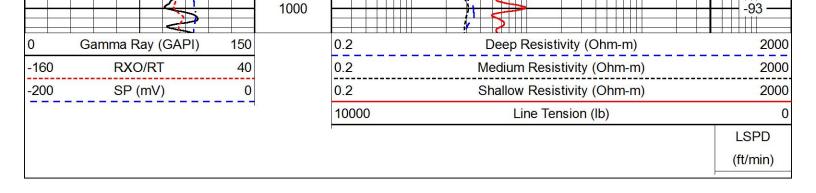














# Main Pass

Pioneer Energy Services

Database File kansas petro_castle peak 2.db

Dataset Pathname stkml/pass5.1

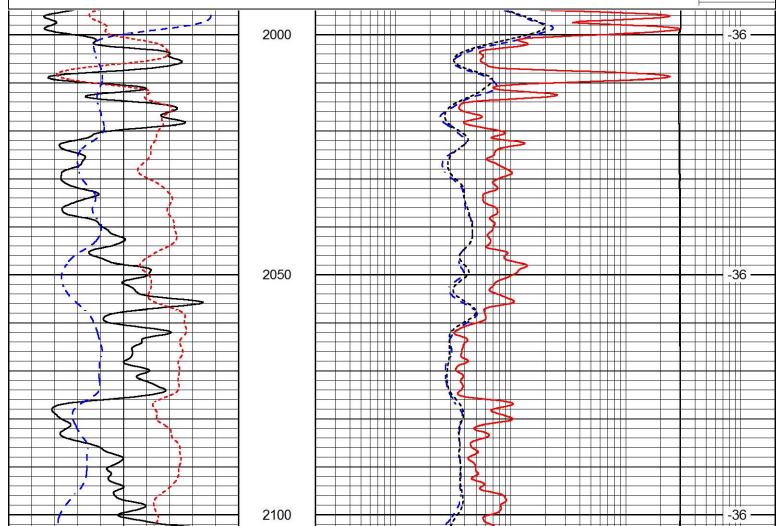
Presentation Format dil

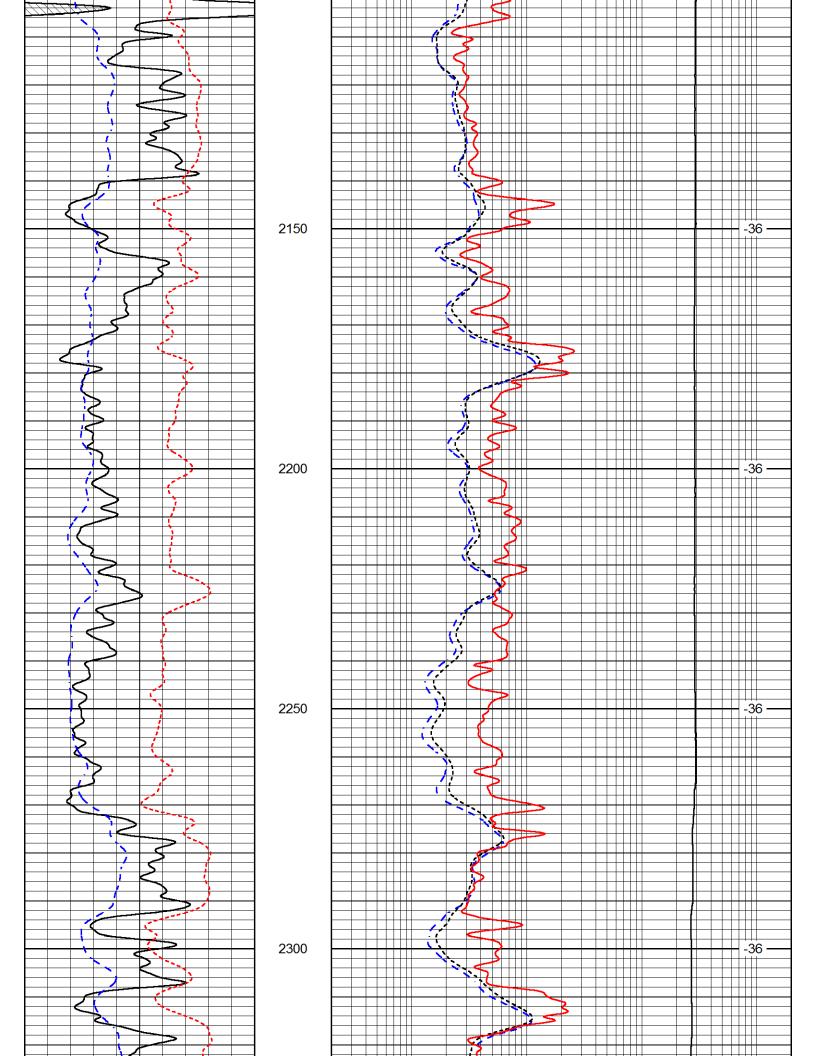
Dataset Creation Mon Apr 06 12:08:03 2015 Charted by Depth in Feet scaled 1:240

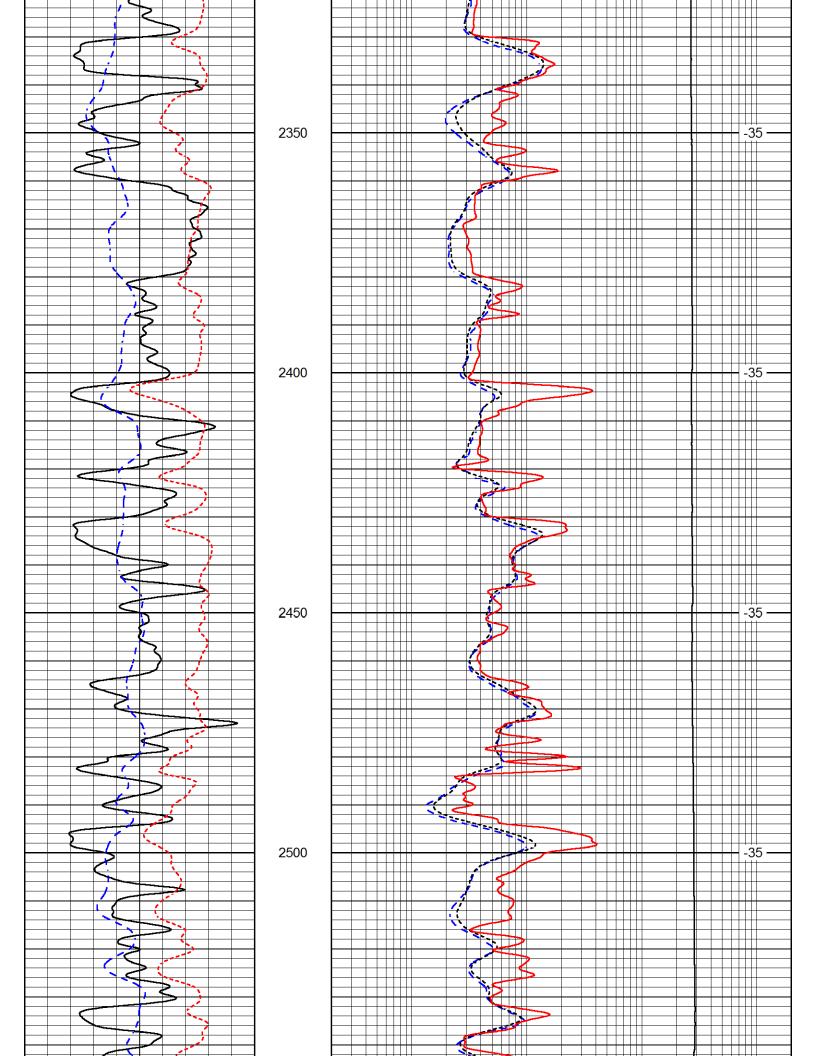
0	Gamma Ray (GAPI)	150
-160	RXO/RT	40
-200	SP (mV)	0

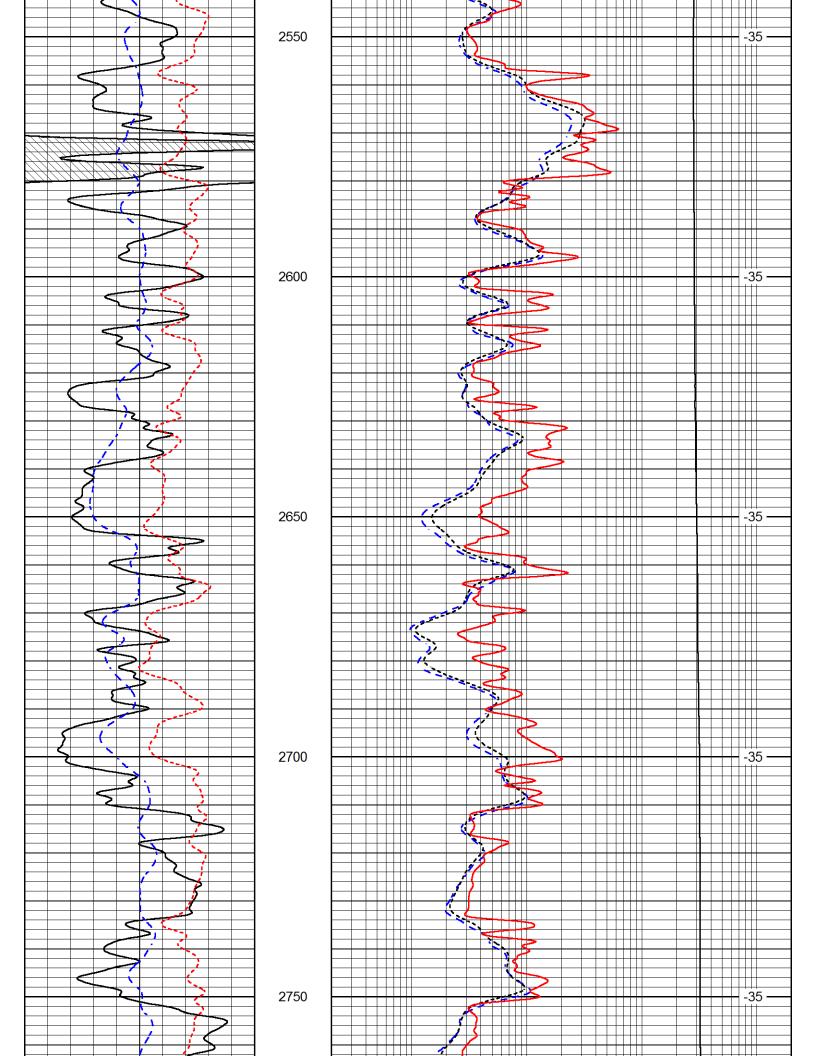
0.2	Deep Resistivity (Ohm-m)	2000
0.2	Medium Resistivity (Ohm-m)	2000
0.2	Shallow Resistivity (Ohm-m)	2000
10000	Line Tension (lb)	0

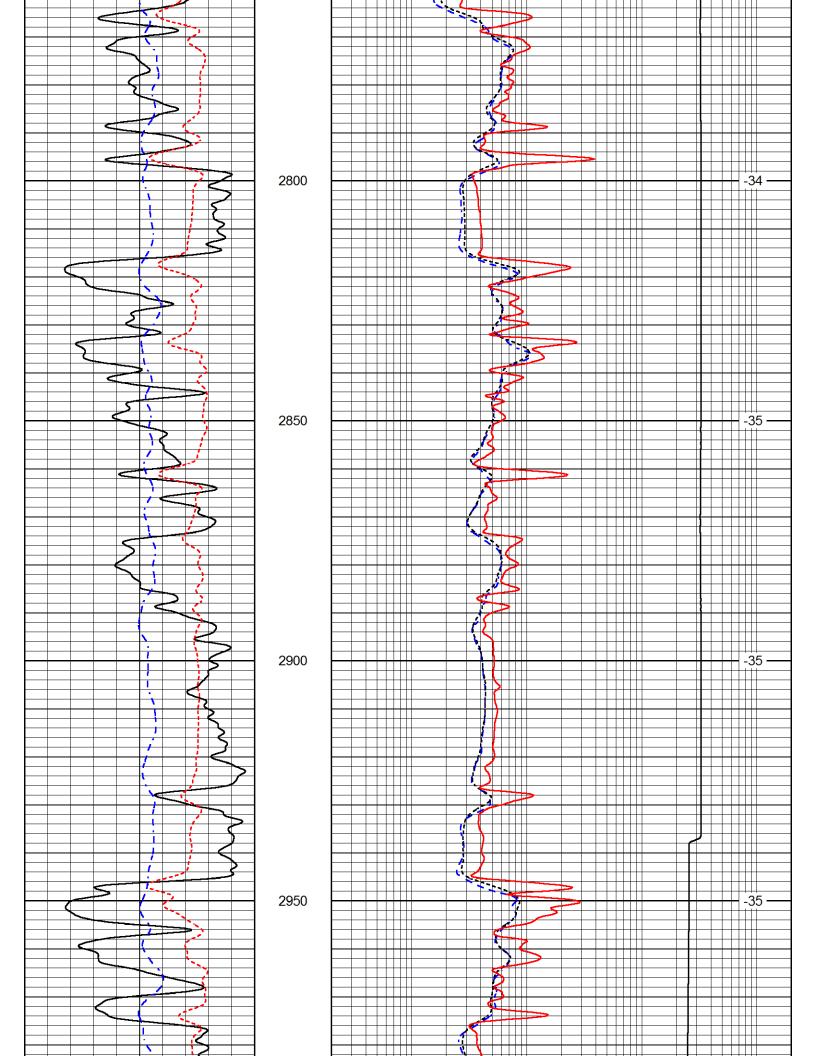
LSPD (ft/min)

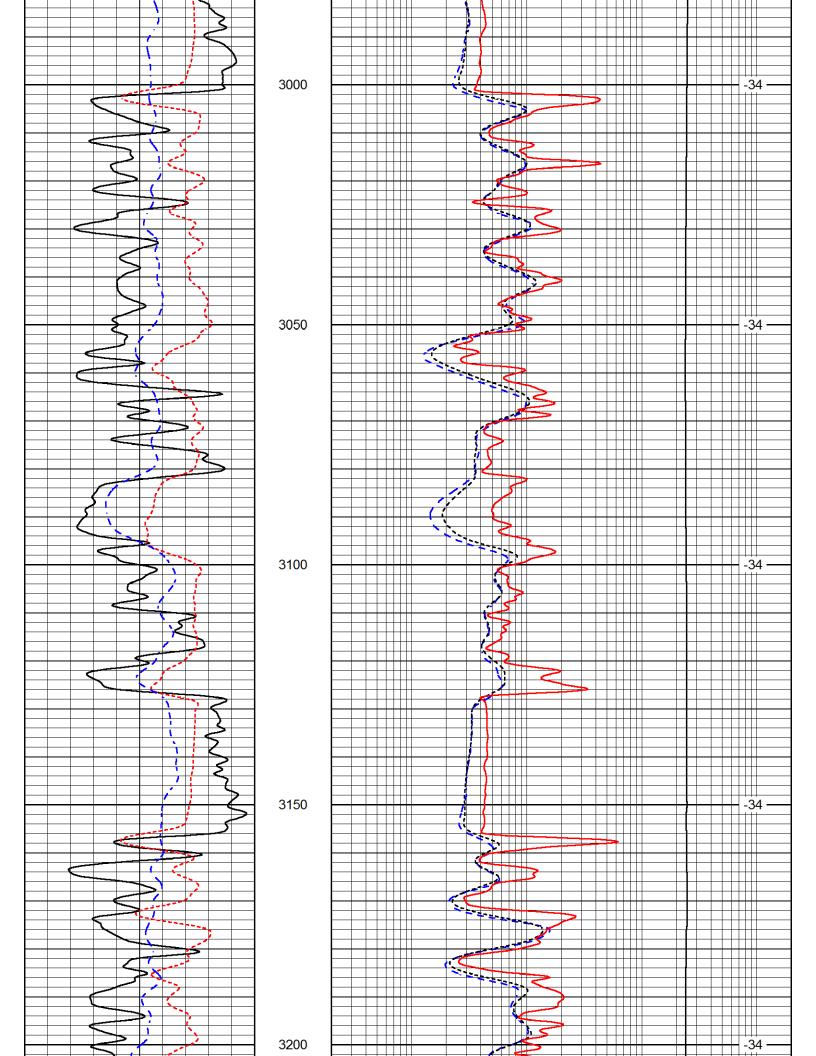


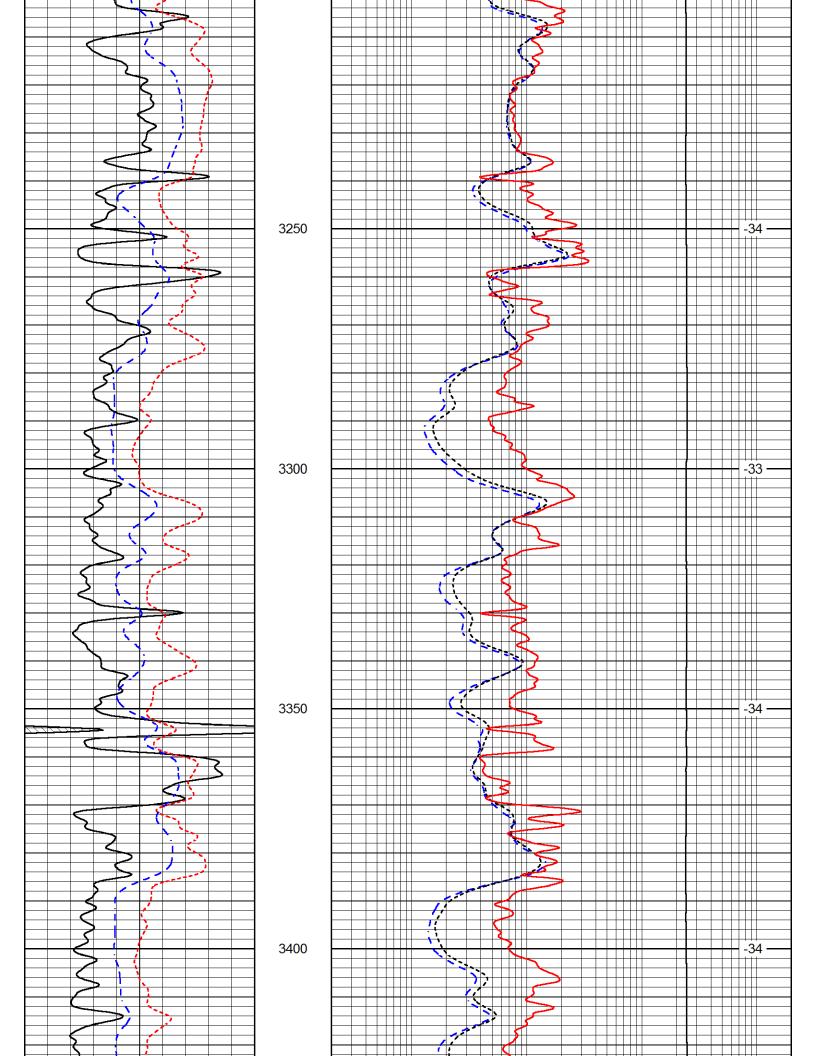


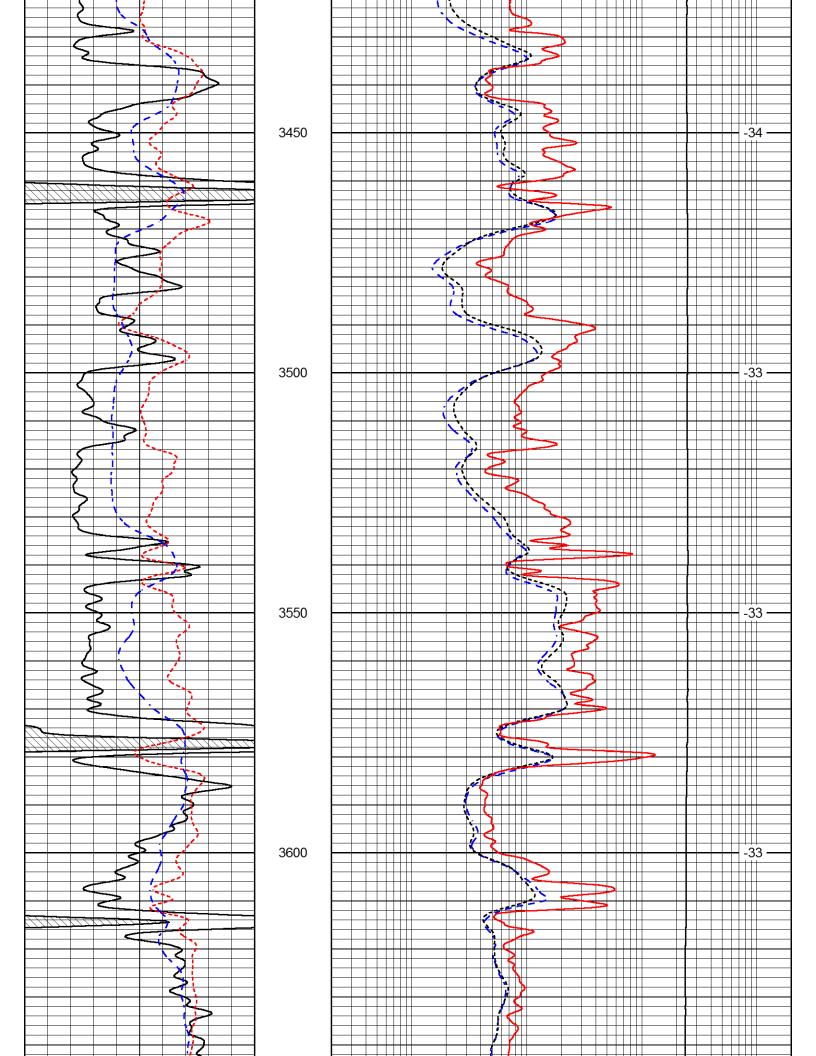


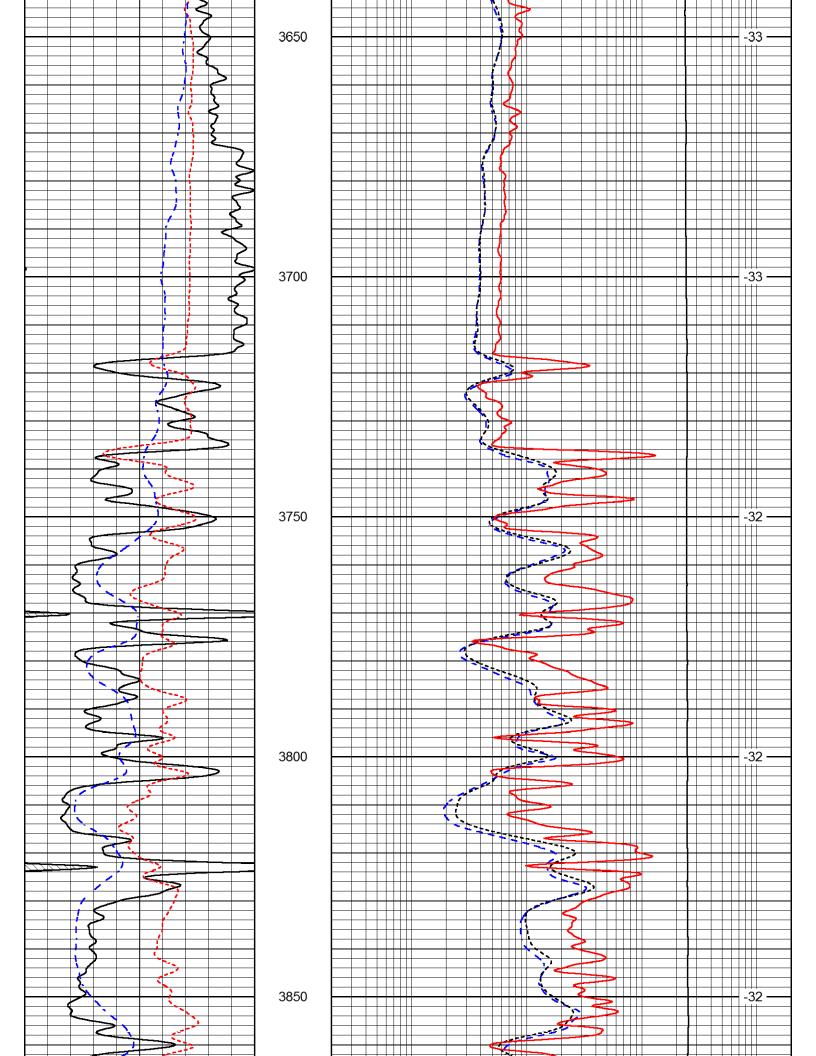


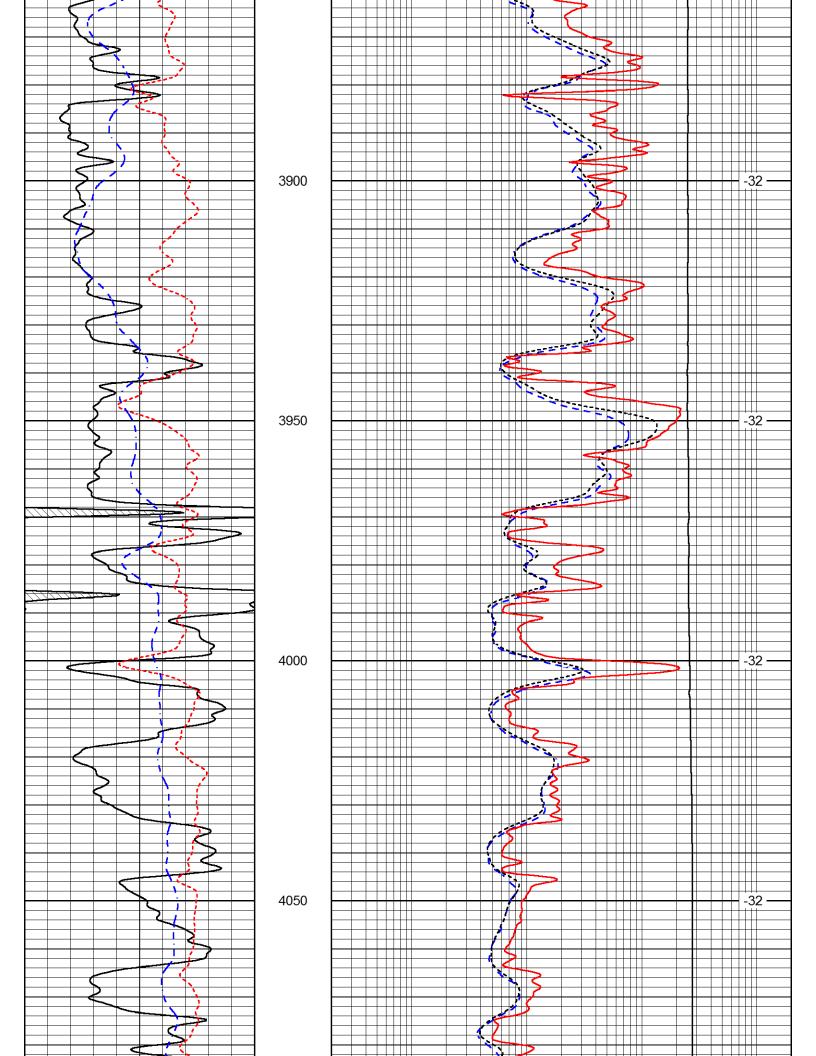


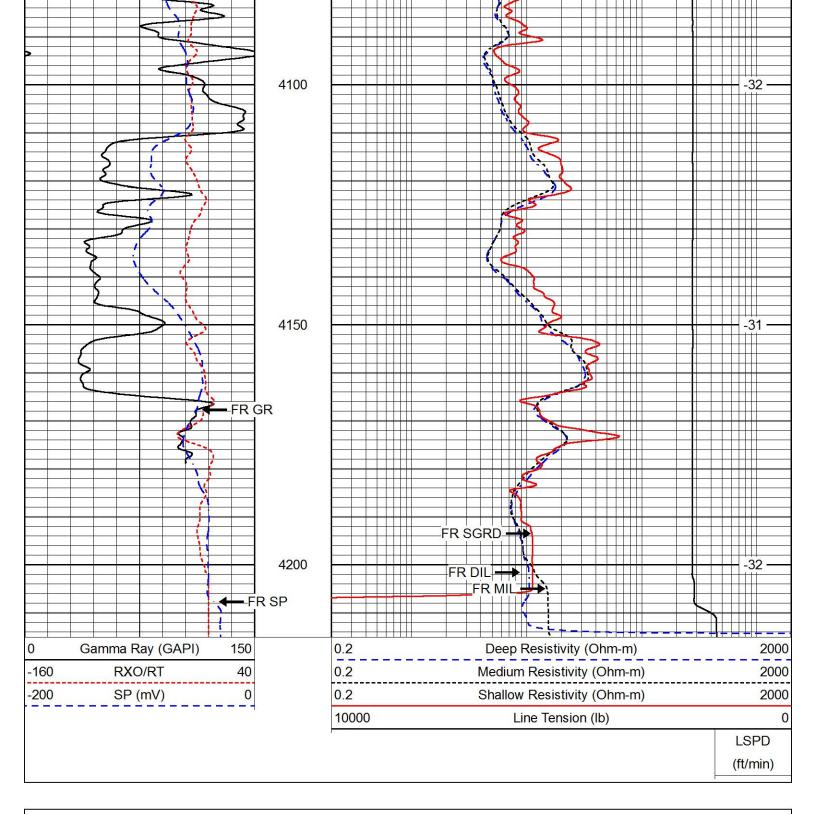














# Repeat Section

#### Pioneer Energy Services

Database File kansas petro_castle peak 2.db
Dataset Pathname stkml/pass4.1

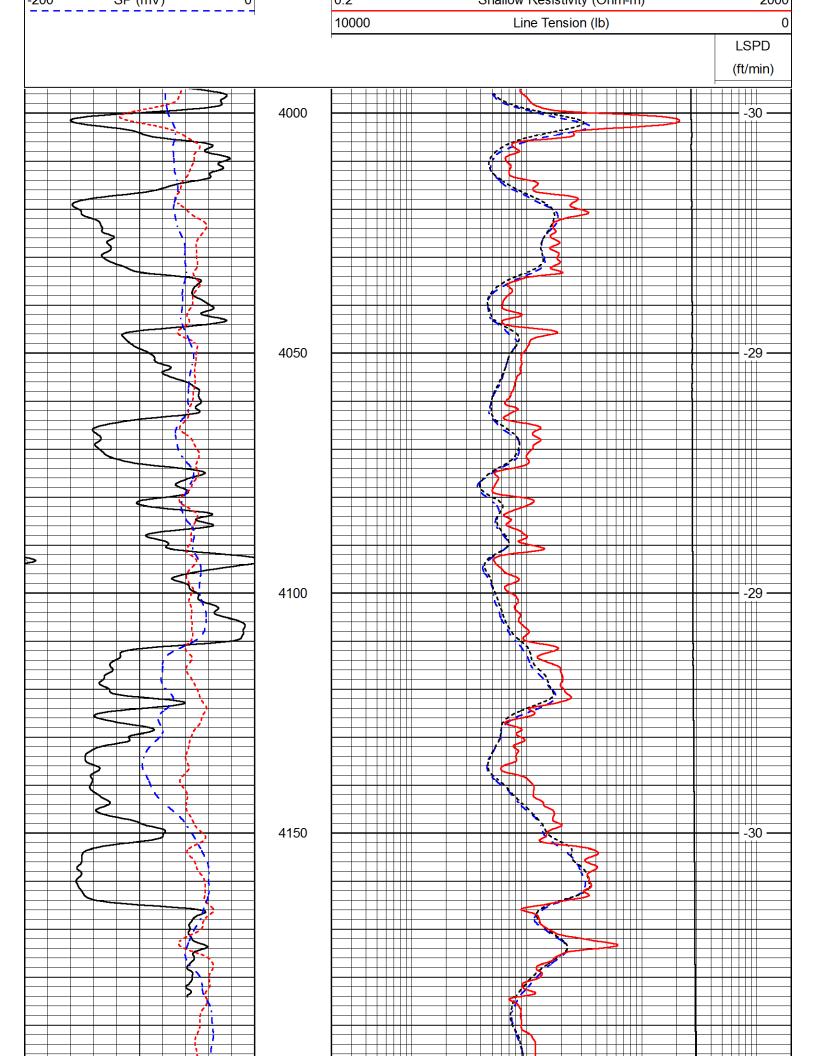
Presentation Format di

all

Dataset Creation Charted by

Mon Apr 06 11:55:44 2015 Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150	0.2	Deep Resistivity (Ohm-m)	2000
-160	RXO/RT	40	0.2	Medium Resistivity (Ohm-m)	2000
200	SD (m\/)	Ω	0.3	Shallow Posistivity (Ohm m)	2000



		4200											-30	
0	Gamma Ray (GAPI) 150	)	0.2			De	ep Resistiv	ity (Oh	ım-m	1)			2	000
-160	RXO/RT 40	)	0.2			Med	lium Resisti	ivity (C	hm-ı	m)			2	000
-200	SP (mV)		0.2	 	;	Shal	llow Resisti	ivity (C	hm-	m)	 		2	000
		-1	10000				Line Tens	sion (lb	)					0
												L	SPD	)
												(ft	/mir	1)

								(ft/min
Database File Dataset Pathname Dataset Creation	stkml/pas	etro_castle pe ss5.1 06 12:08:03 2	eak 2.db	oration Report	:			
			Dual Induction	on Calibration	Report			
	Serial- Surfac	Model: e Cal Perform	ned:	19	85-PSI1985			
		Readings		F	References		Resi	ults
Loop:	Air	Loop		Air	Loop		m	b
Deep Medium	178.615 161.982	710.235 1441.110	_	0.000	255.800 255.800	mmho/m mmho/m	0.450 0.340	-29.000 -26.000
			Microlog	Calibration Re	eport			
	Serial- Perfori				SI-01-PSI St nu Nov 20 02			
		Readings		F	References		Resi	ults
	Zero	Cal		Zero	Cal		m	b
Normal Inverse Caliper	0.0000 0.0000 1.0001	1.0000 1.0000 1.1397	_	0.0000 0.0000 6.5000	1.0000 1.0000 18.5000	Ohm-m Ohm-m in	30500.0000 35500.0000 86.0000	-0.5000 -0.5000 -81.7750
		C	compensated D	ensity Calibra	ation Report			
	Master Before	e / Verifier: Calibration P Survey Verifi	erformed: cation Performetion Performet	/ W ed:	-965-M&W ed Oct 29 06	S:02:28 2014	ı	
Master Calibratio	n							
		Density		Fa	r Detector	Near De	tector	
Magnesium Aluminum		1.755 2.685	g/cc g/cc	_	5991.97 1103.34		35.64 cps 57.57 cps	

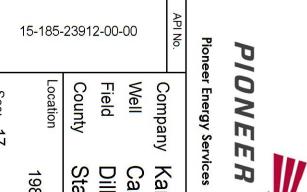
Density/Spine Ratio = 0.531

Reading

Spine Angle = 75.06

Size

Small Ring	4.00	in	1.03		
Large Ring	14.00	in	1.45		
	Compensated Neutron Calibration Report				
			•		
		Serial Number: Tool Model:	CNT-825 M&W		
CALIBRATION					
Detector	R	Readings	Target	Normalization	
Short Space	6	240.00 cps	1000.00 cps	1.6025	
Long Space	4	60.00 cps	1000.00 cps	1.9500	
		Gamma Ray (	Calibration Report		
Serial Number:		233-M&W			
Tool Model:		M&W			
Performed:		Thu Aug 14	14:54:58 2014		
Calibrator Value:		100.0	GAPI		
Background Reading:		65.0	cps		
Calibrator Reading:		207.0	cps		
Sensitivity:		0.5700	GAPI/cps		



**Dual Compensated** Porosity Log

Drilling Measured From Permanent Datum og Measured From Operating Rig Time Max. Rec. Temp. Run Number One 3ottom Logged Interval Vitnessed By WO ecorded By epth Logger epth Driller quipment --/pe Fluid In Hole Level Density Salinity, PPM CI Logged Interval 7.875 Borehole Record Company Kansas Petroleum Resources, LLC Location Sec: From Ground Level Kelly Bushing Kelly Bushing Castle Peak #2 Stafford Dillwin West 1980' FSL & 660' FWL Rod Andersen Twp: 10 902 TD Chemical 6200 9.0 Full CNL / CDI 4/6/2015 1/2 Hours Schmidt 4180 2000 4209 118 24S Hays 12 Size Ft. Above Perm. Datum Elevation 1993 Wgt. 23# Rge: State Kansas 14W Casing Record From 0 i i iii ODX Elevation DIL/MEL 2005 1993 902 7

<<< Fold Here >>>

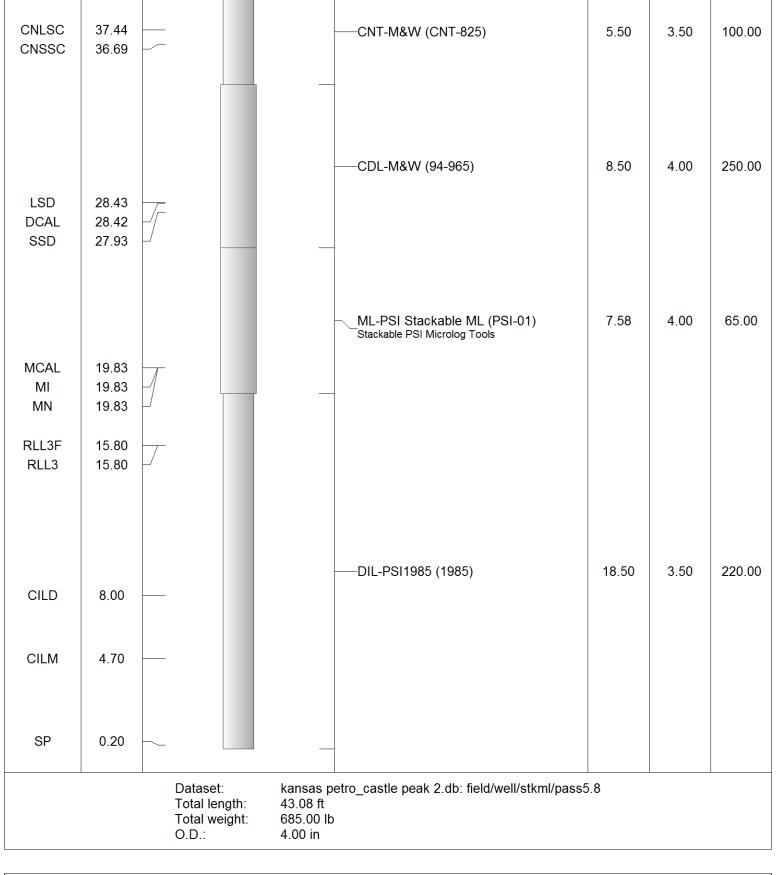
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

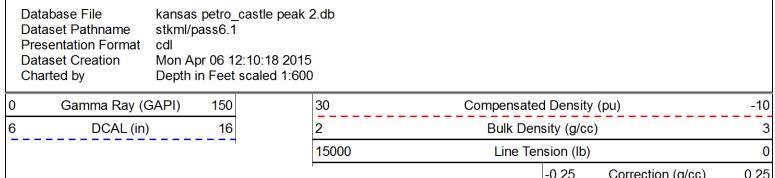
#### Comments

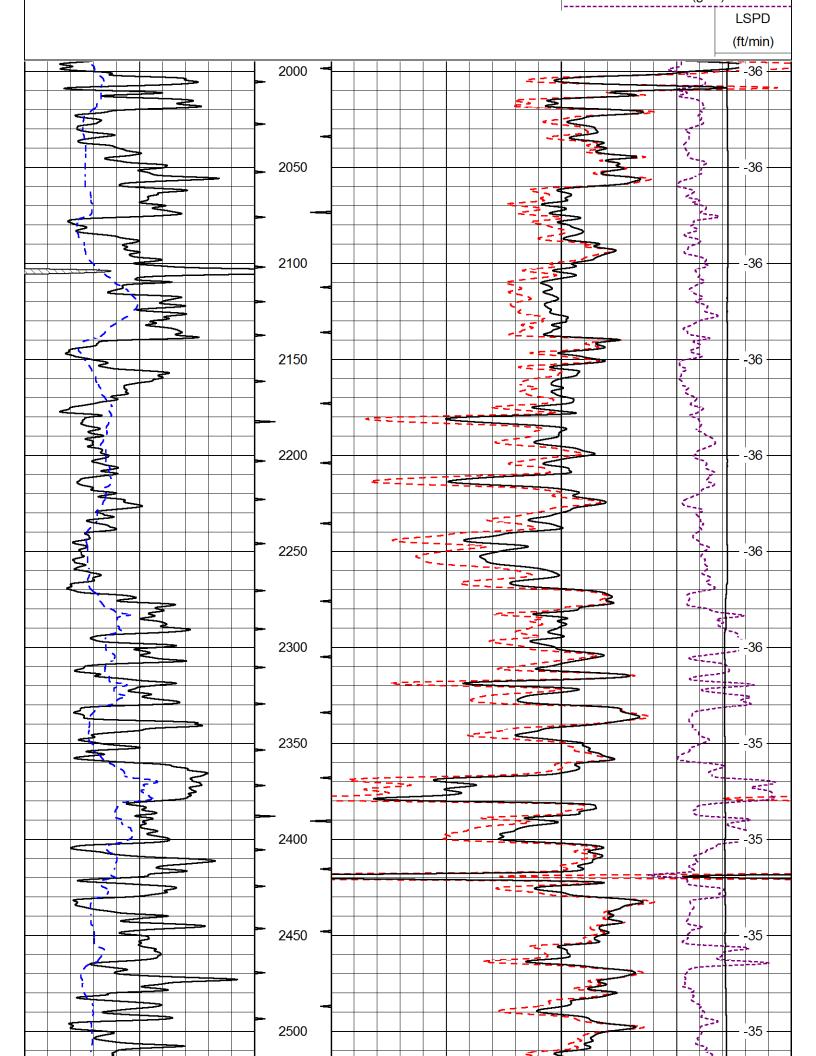
Thank you for using Pioneer Energy Services 785.625.3858

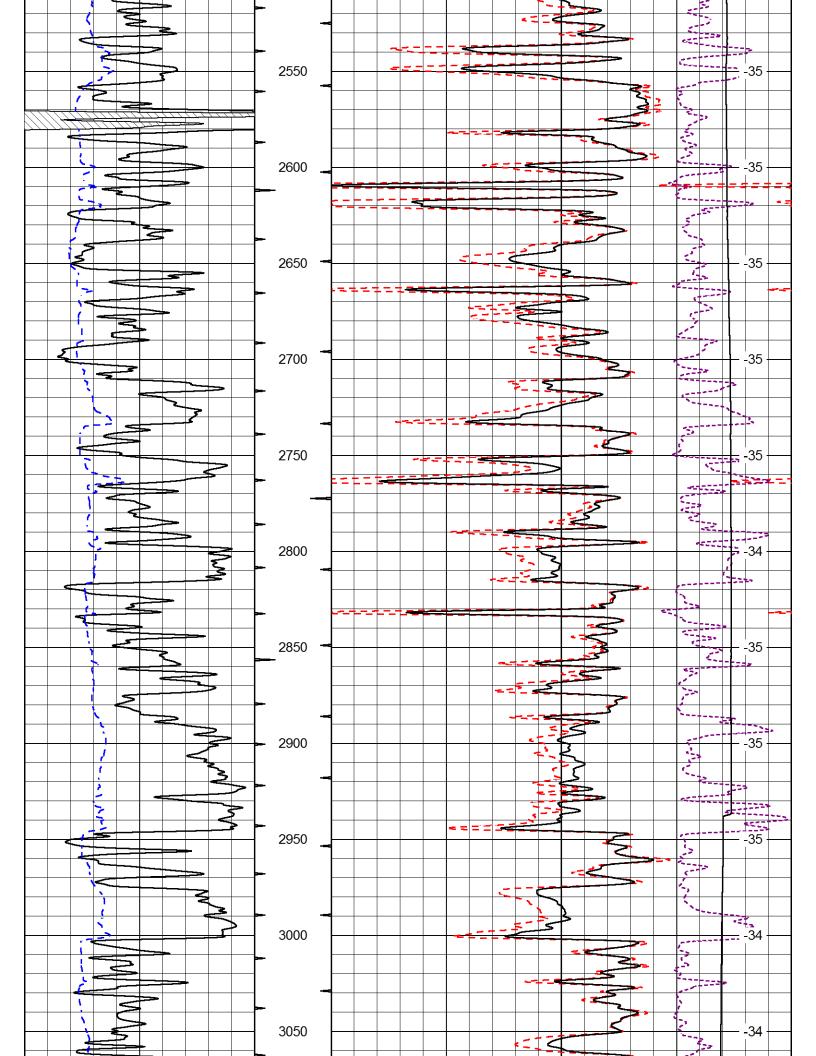
> St. John (Hwy 281 & Hwy 50), West to NW 80th, 1/4 North, East into

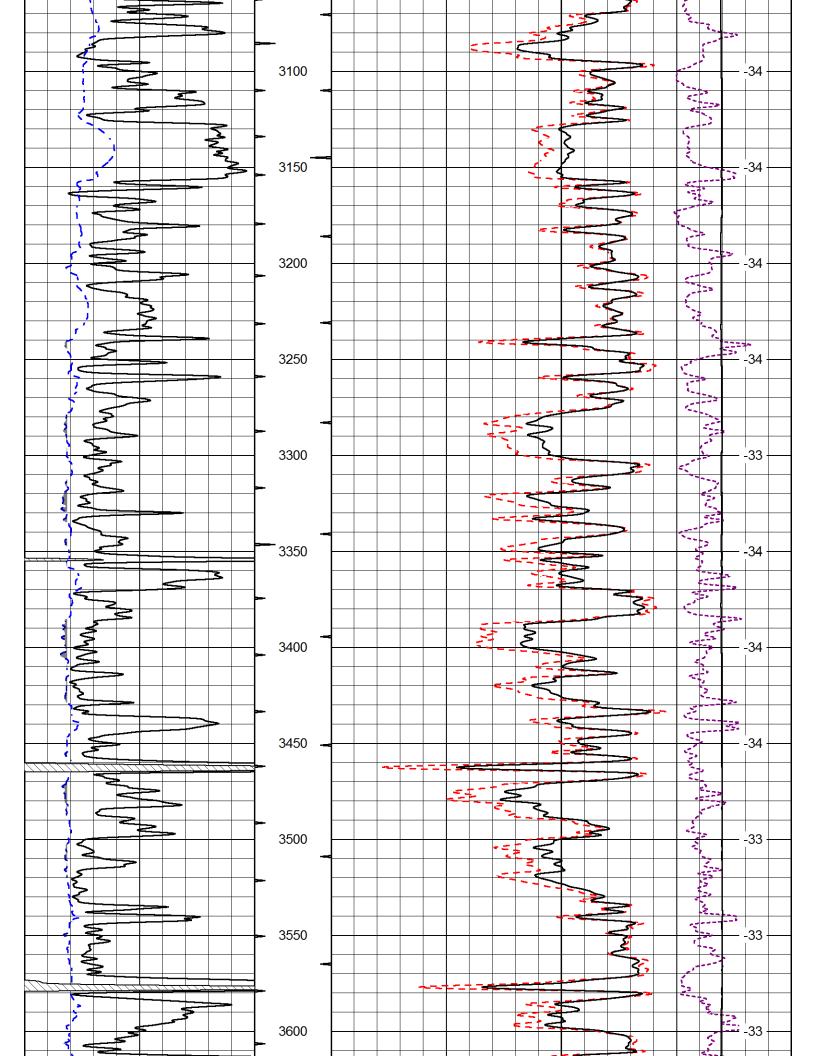
Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.58	_	——GR-M&W (233-M&W)	3.00	3.50	50.00

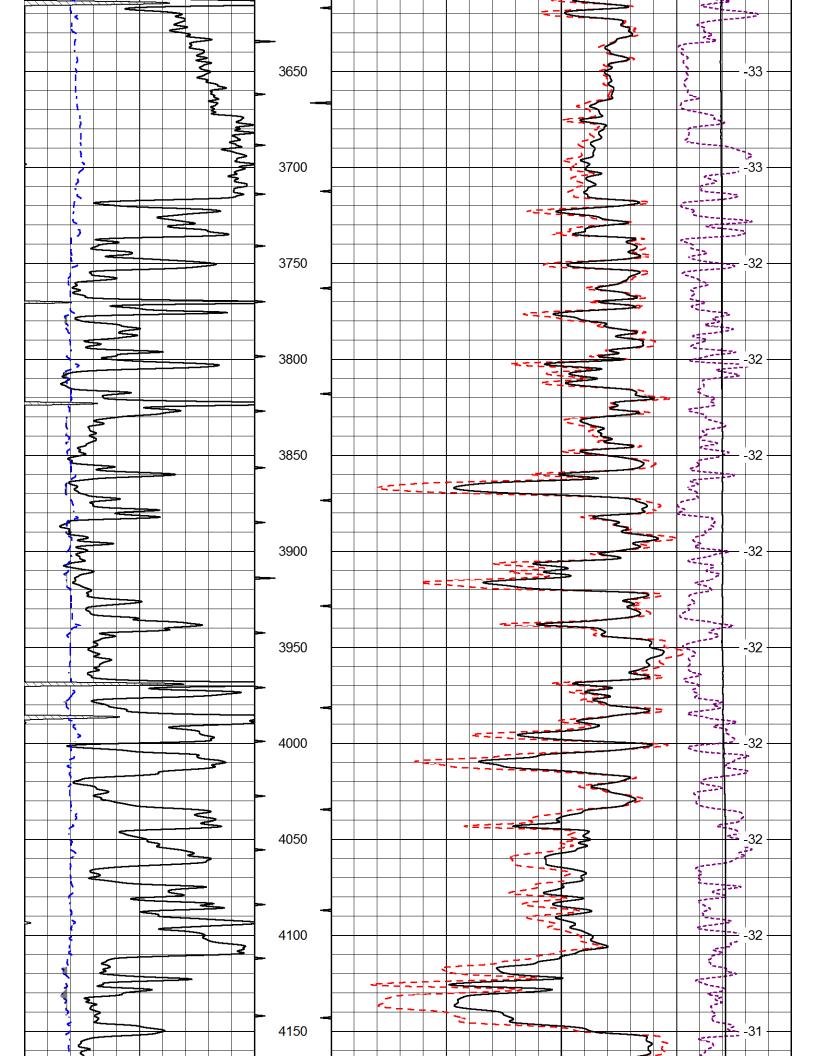


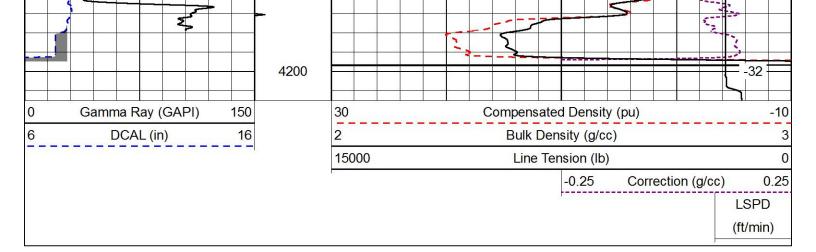














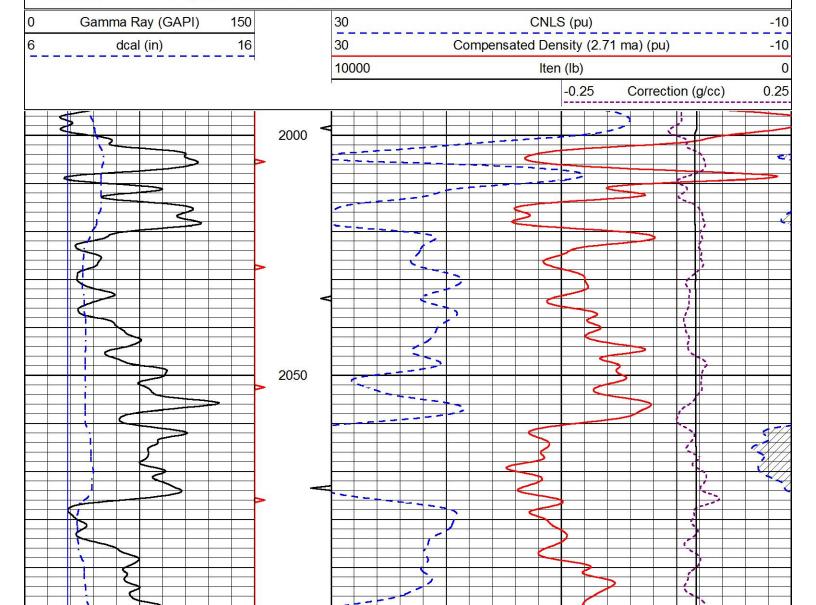
### Main Pass

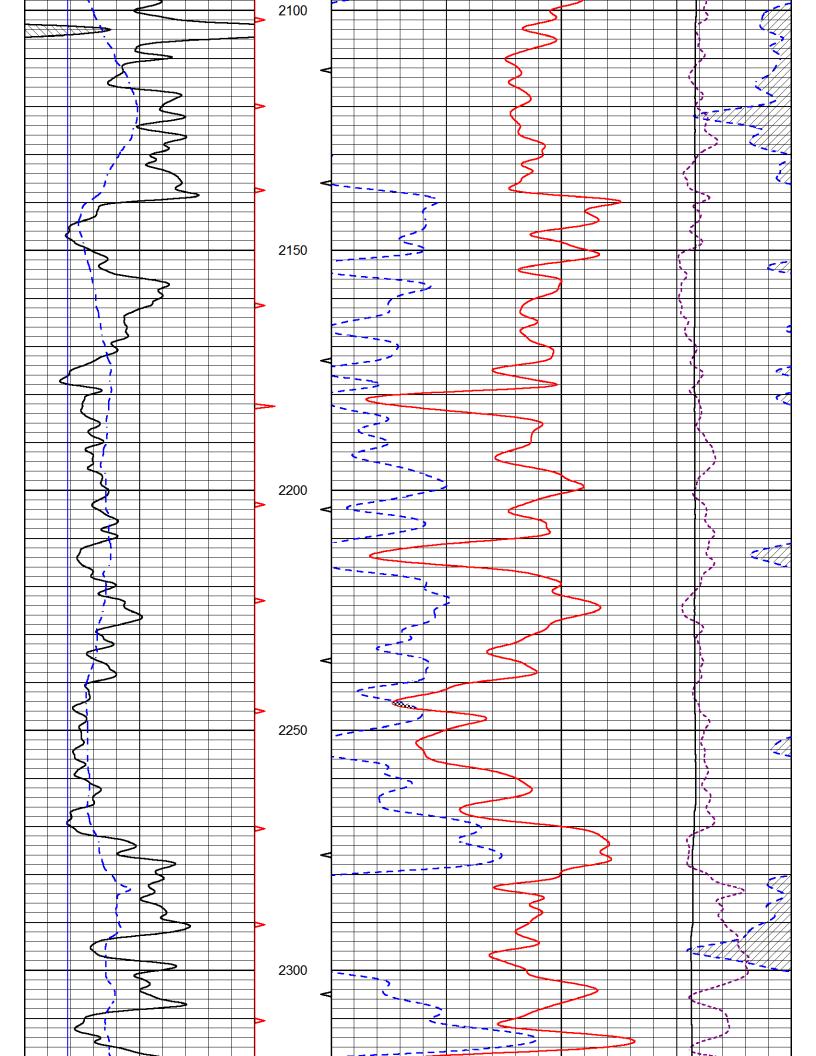
**Pioneer Energy Services** 

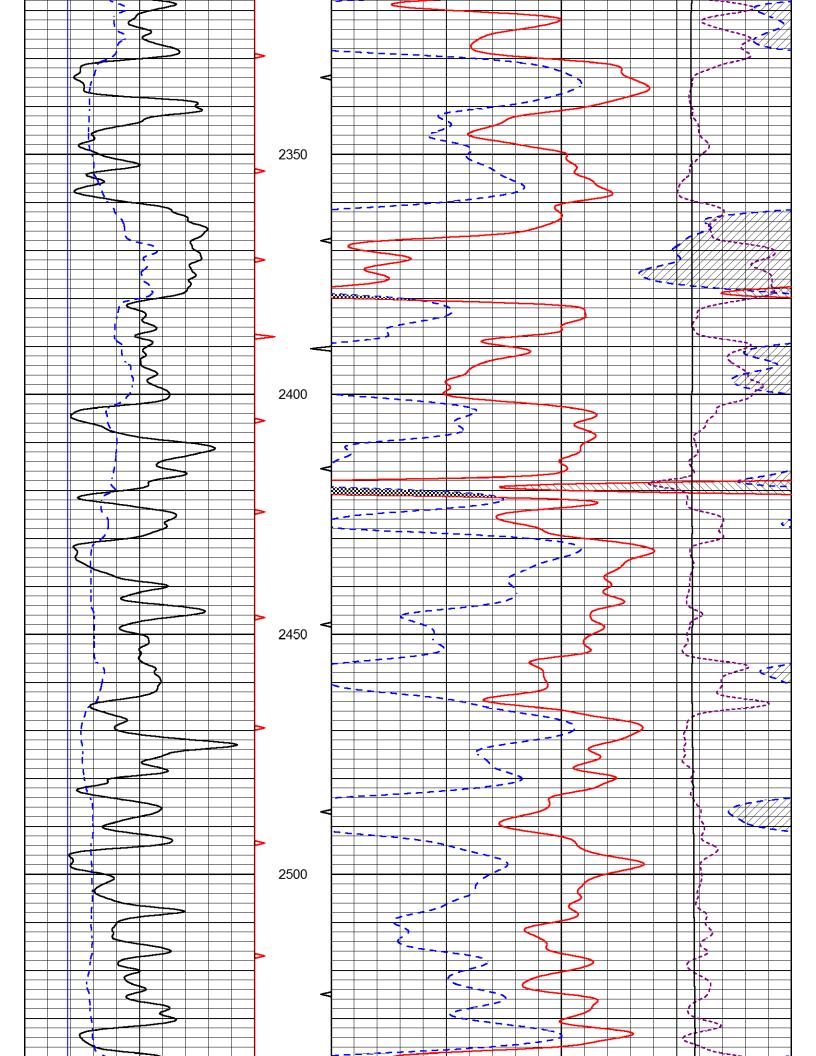
Database File kansas petro_castle peak 2.db

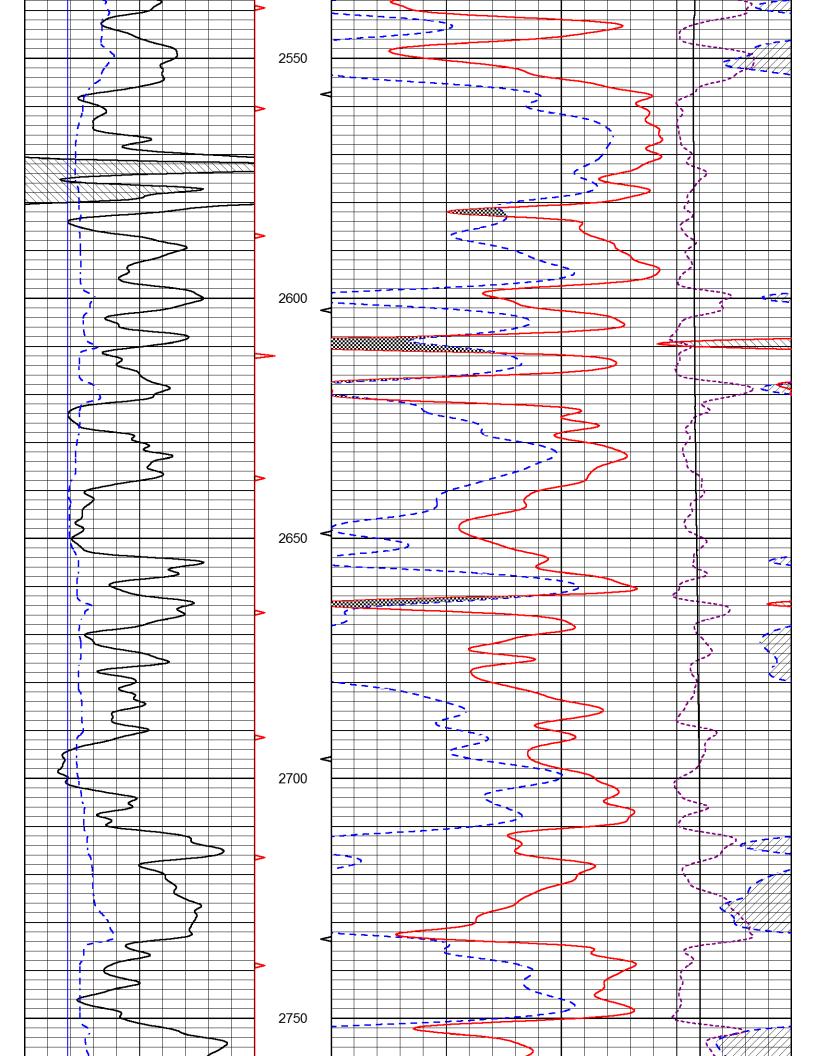
Dataset Pathname stkml/pass5.1
Presentation Format cndlspec

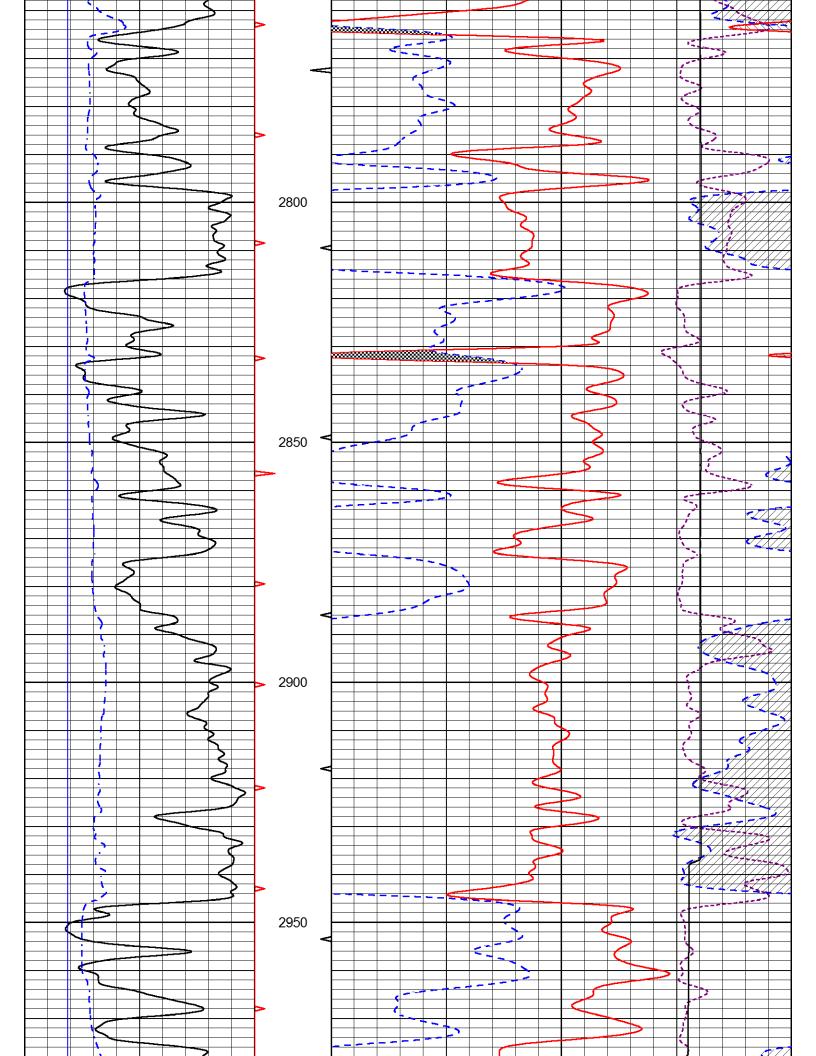
Dataset Creation Mon Apr 06 12:08:03 2015 Charted by Depth in Feet scaled 1:240

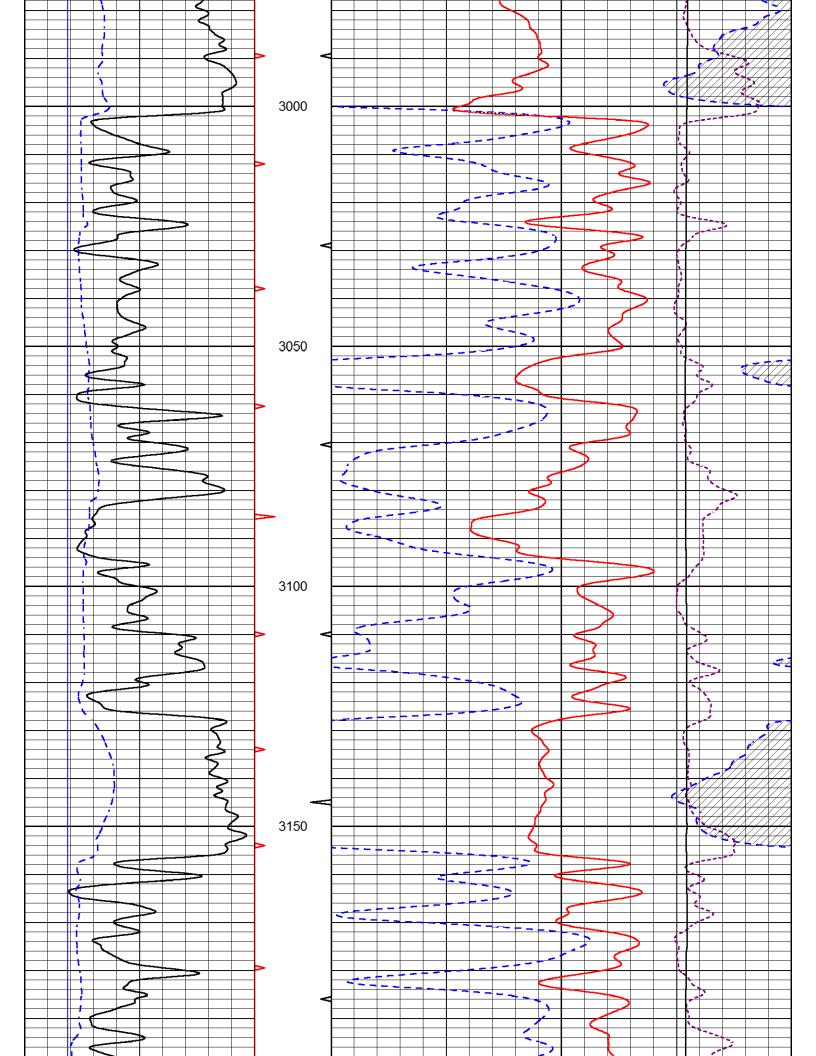


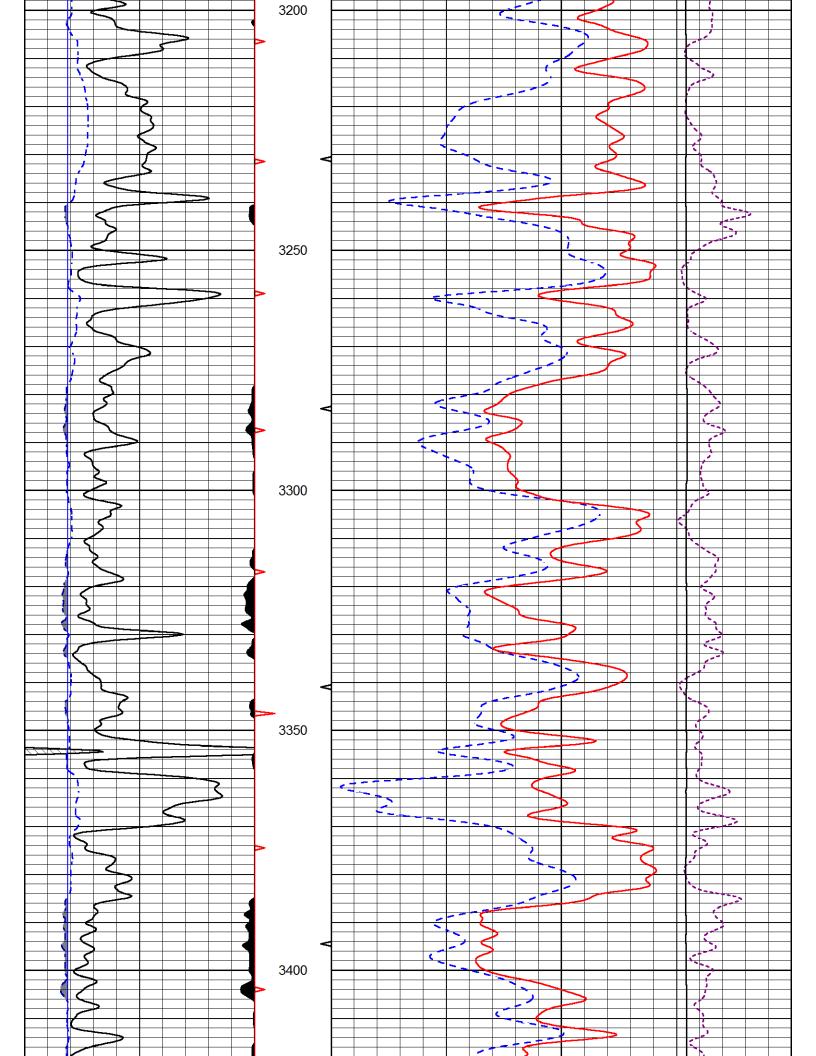


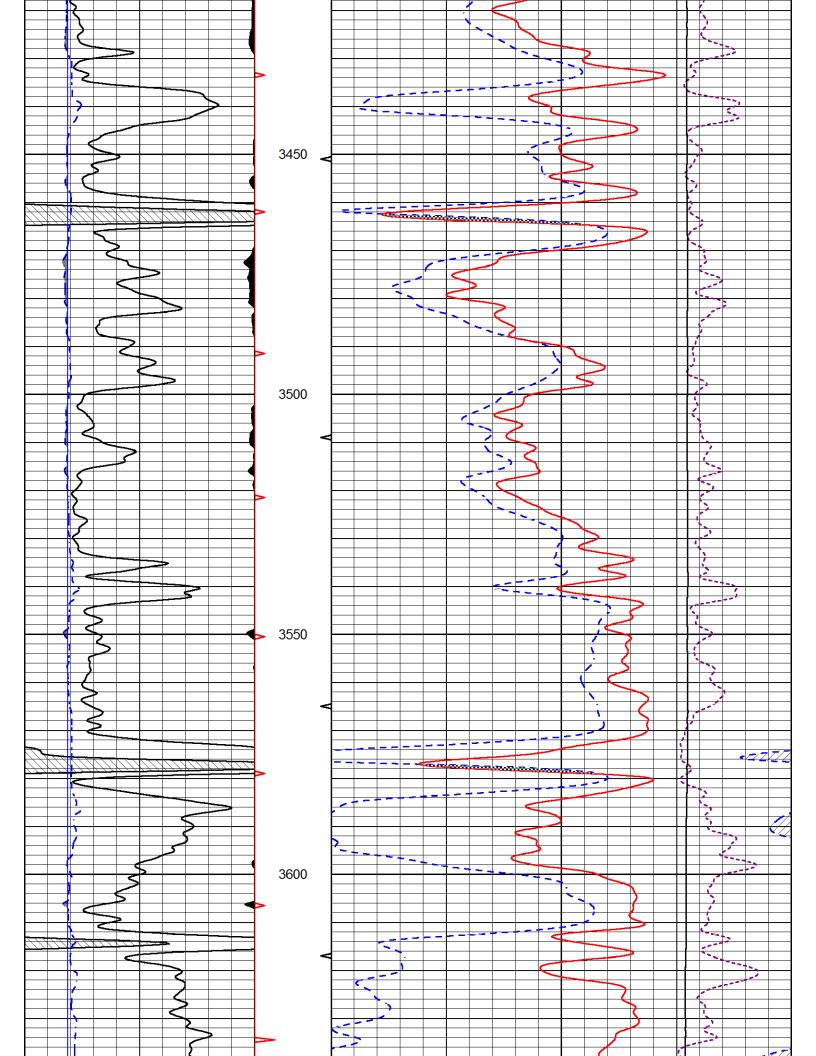


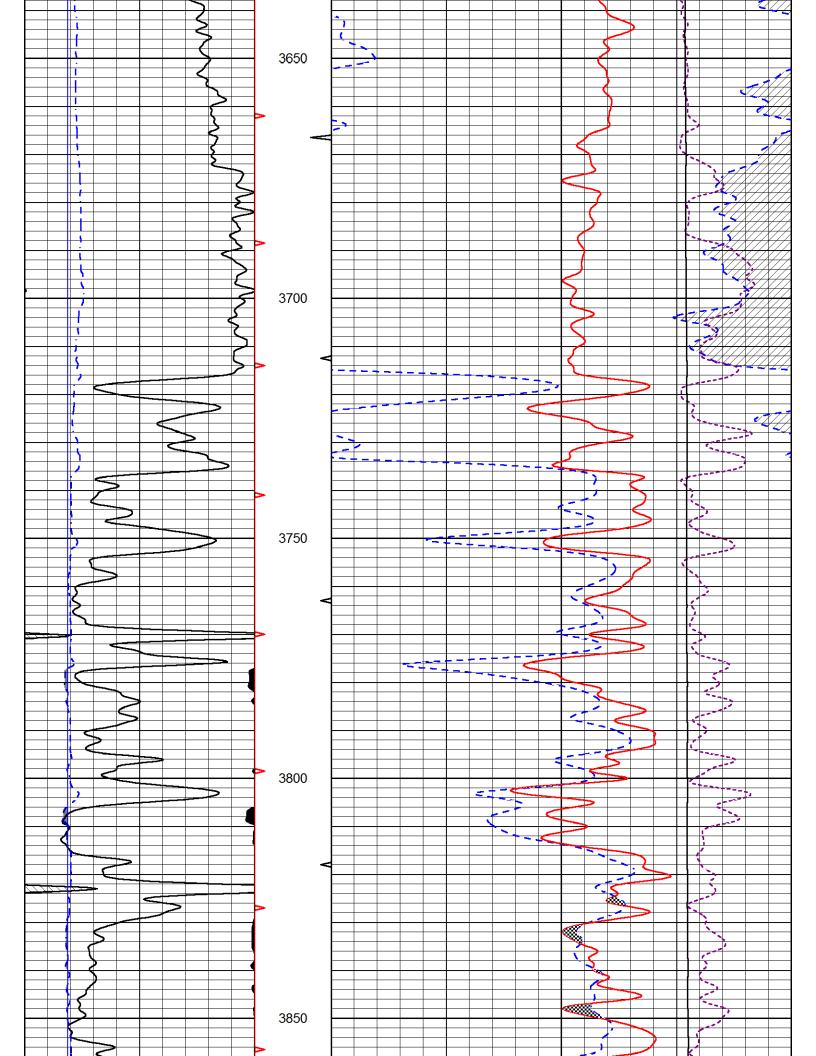


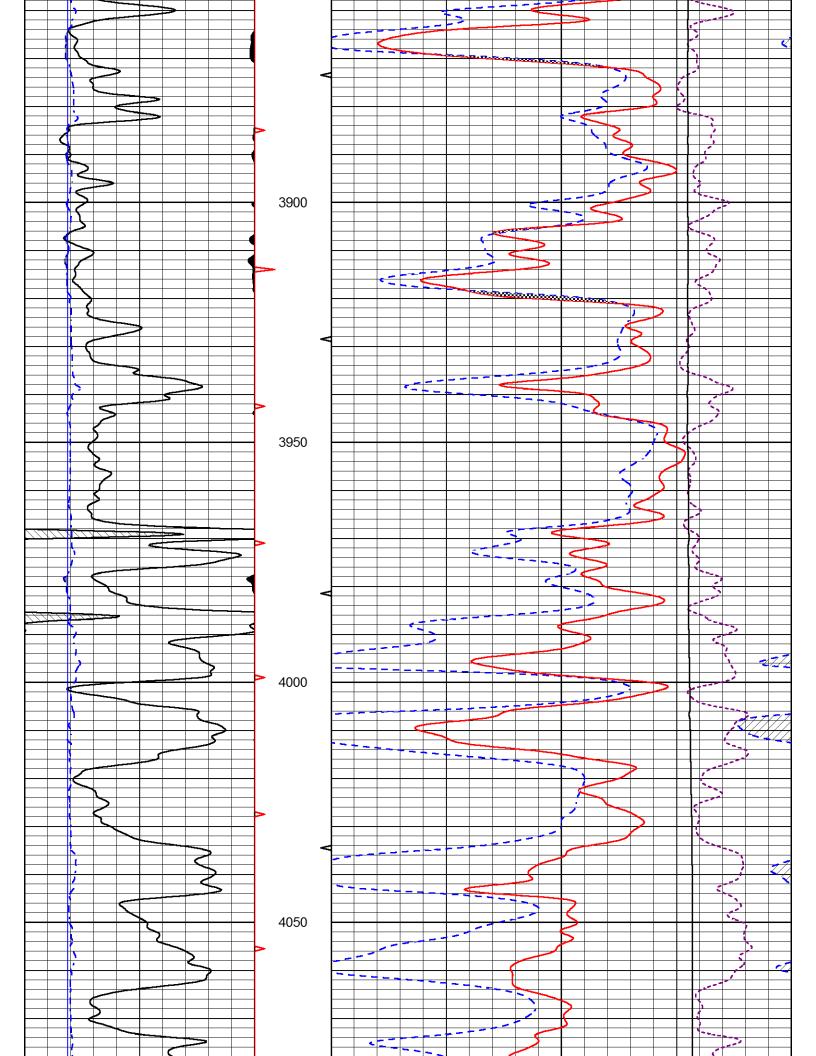


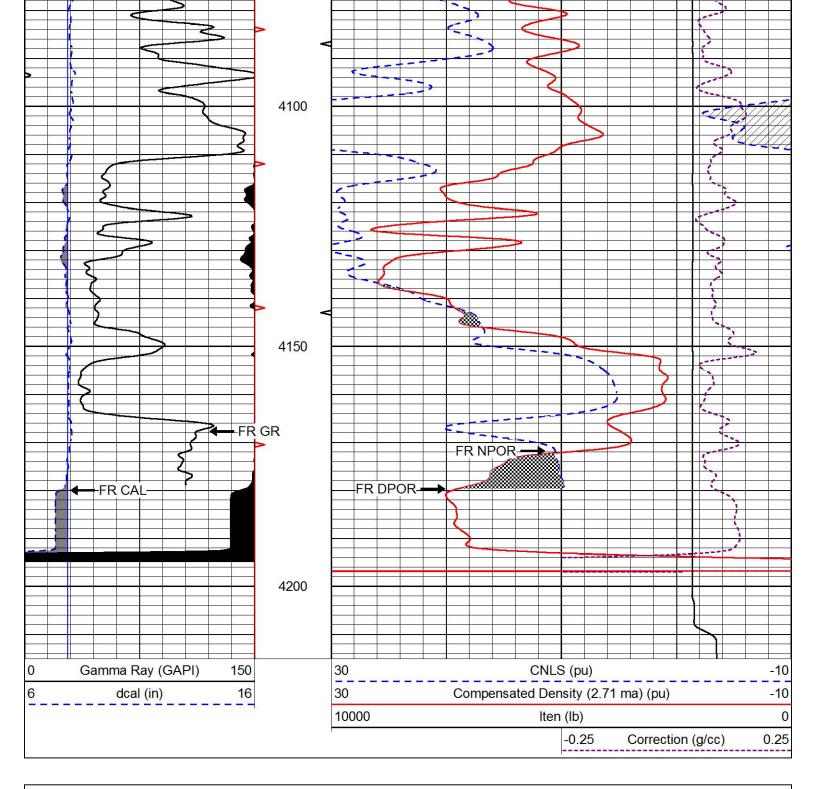














## Repeat Section

**Pioneer Energy Services** 

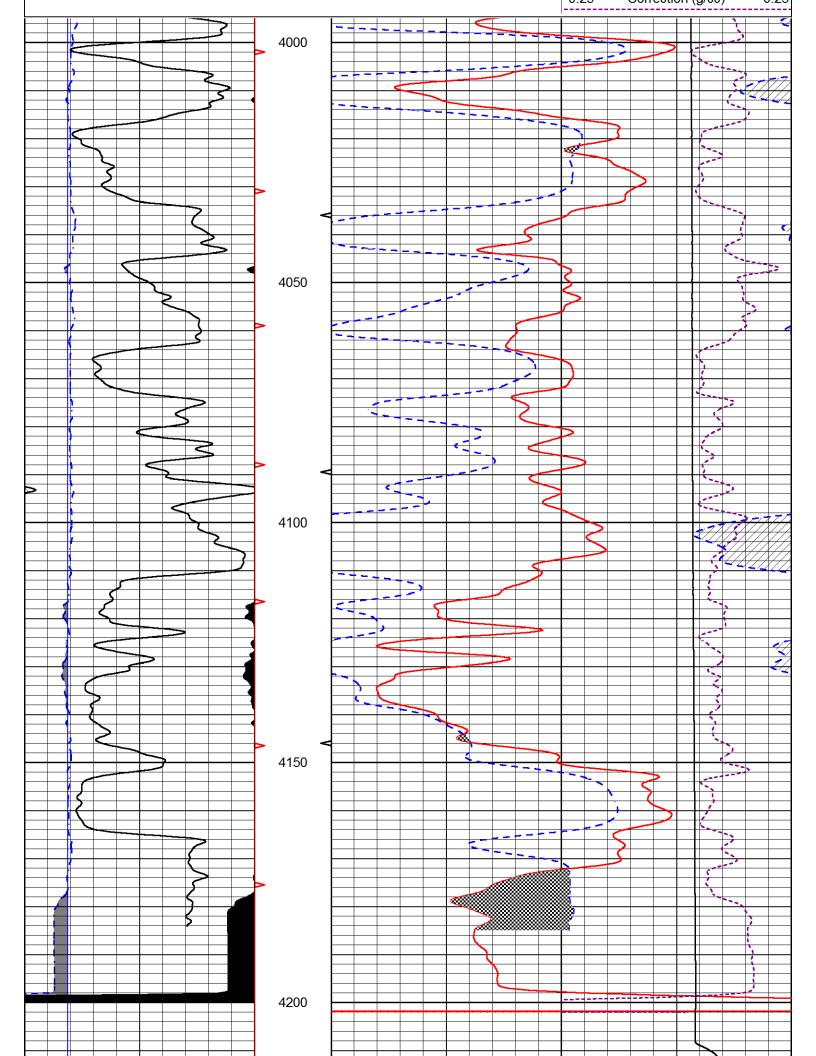
Database File kansas petro_castle peak 2.db

Dataset Pathname stkml/pass4.1 Presentation Format cndlspec

**Dataset Creation** Mon Apr 06 11:55:44 2015 Charted by Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
6	dcal (in)	16

30	CNLS (pu)	-10
30	Compensated Density (2.71 ma) (pu)	-10
10000	Iten (lb)	0
	-0.25 Correction (a/cc)	0.25



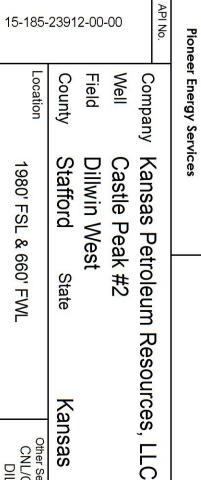
-1	-10			
30 Compensated Density (2.71 ma) (pu) -				
	0			
(g/cc) 0.2	.25			
(	(g/cc) 0			

			Calibra	ition Report				
Database File Dataset Pathname Dataset Creation	stkml/pas	etro_castle pe ss5.1 06 12:08:03 2						
			Dual Induction	Calibration	Report			
	Serial-l Surfac	Model: e Cal Perform	ned:	19	85-PSI1985			
		Readings		F	References		Resu	ults
Loop:	Air	Loop		Air	Loop		m	b
Deep Medium	178.615 161.982	710.235 1441.110		0.000	255.800 255.800	mmho/m mmho/m	0.450 0.340	-29.000 -26.000
			Microlog Ca	alibration Re	eport			
	Serial-l Perforr				SI-01-PSI St nu Nov 20 02	ackable ML 2:23:03 2014		
		Readings		F	References		Resu	ults
	Zero	Cal		Zero	Cal		m	b
Normal Inverse Caliper	0.0000 0.0000 1.0001	1.0000 1.0000 1.1397	_	0.0000 0.0000 6.5000	1.0000 1.0000 18.5000	Ohm-m Ohm-m in	30500.0000 35500.0000 86.0000	-0.5000 -0.5000 -81.7750
		C	Compensated Der	nsity Calibra	ation Report			
	Master Before	/ Verifier: Calibration F Survey Verifi	Performed: loation Performed ation Performed:	/ W	-965-M&W ed Oct 29 00	5:02:28 2014		
Master Calibration	n							
		Density		Fa	r Detector	Near De	tector	
Magnesium Aluminum		1.755 2.685	g/cc g/cc		5991.97 1103.34		35.64 cps 57.57 cps	
	;	Spine Angle =	= 75.06	De	ensity/Spine	Ratio = 0.53	1	
		Size		F	Reading			
Small Ring Large Ring	-	4.00 14.00	in in		1.03 1.45			
		C	compensated Neu	ıtron Calibra	ation Report			
			Serial Number:		NT-825			

Tool Model:

M&W

CALIBRATION				
Detector	Readings	Target	Normalization	
Short Space Long Space	6240.00 cps 460.00 cps	1000.00 cps 1000.00 cps	1.6025 1.9500	
	Gamma Ray C	alibration Report		
Serial Number: Tool Model: Performed:	233-M&W M&W Thu Aug 14	14:54:58 2014		
Calibrator Value:	100.0	GAPI		
Background Reading: Calibrator Reading:	65.0 207.0	cps cps		
Sensitivity:	0.5700	GAPI/cps		



Castle Peak #2

Dillwin West

Stafford

1980' FSL & 660' FWL

Other Services CNL/CDL

**Pioneer Energy Services** 

Microresistivity

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Permanent Datum Ground Level Log Measured From Kelly Bushing Drilling Measured Frokelly Bushing

12

Ft. Above Perm. Datum Elevation 1993 Rge:

C TIE

/6/2015

Sec:

Twp: 24S

14W

Elevation 2005 1993

epth Driller

om Logged

nterva

4209 4208 2000

Log Interval

salinity,ppm Cl

sity / Viscosity Fluid Loss

arce of Sample

Flowline

8.0

55

pe Fluid in Hole

Chemica

899 7.875

902

asing Logger asing Driller

ax Rec.

uipment Number

itnessed By

perating Rig Time

1/2 Hours

Hays

15 118

<<< Fold Here >>>

Andersen Schmidt ource of Rmf / Rmc

Meas. Meas

lemp lemp

> 0.68 .38 .50

**®** 

88 65

Charts

**(9**)

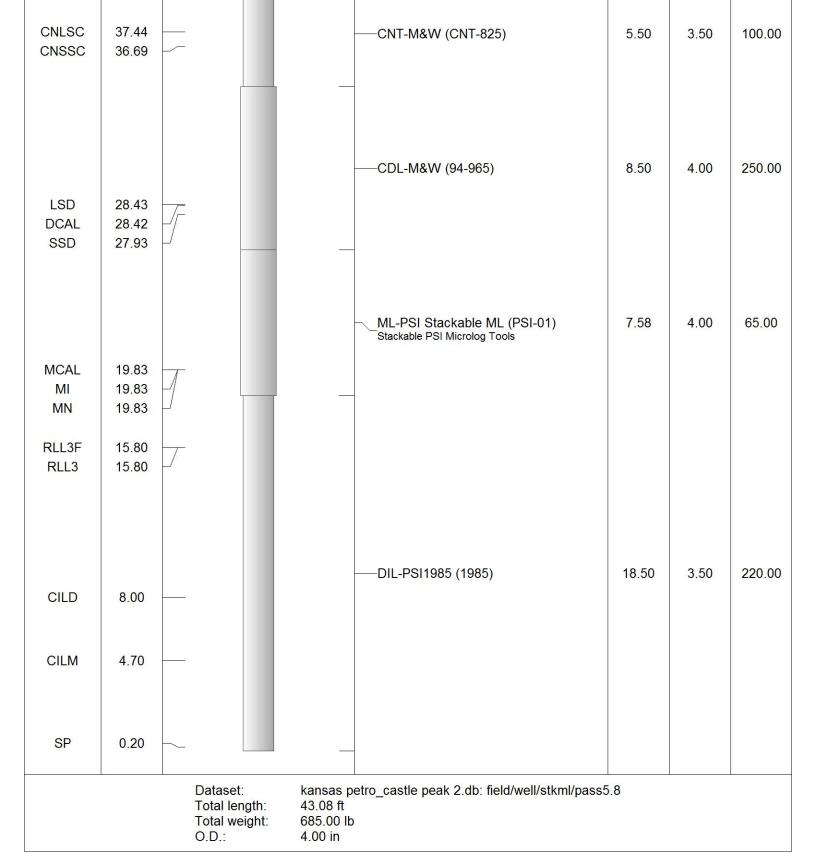
l emp

#### Comments

Thank you for using Pioneer Energy Services 785.625.3858

> St. John (Hwy 281 & Hwy 50), West to NW 80th, 1/4 North, East into

Sensor	Offset (ft)	Schematic	Description	Length (ft)	O.D. (in)	Weight (lb
GR	40.58		——GR-M&W (233-M&W)	3.00	3.50	50.00





### Main Pass

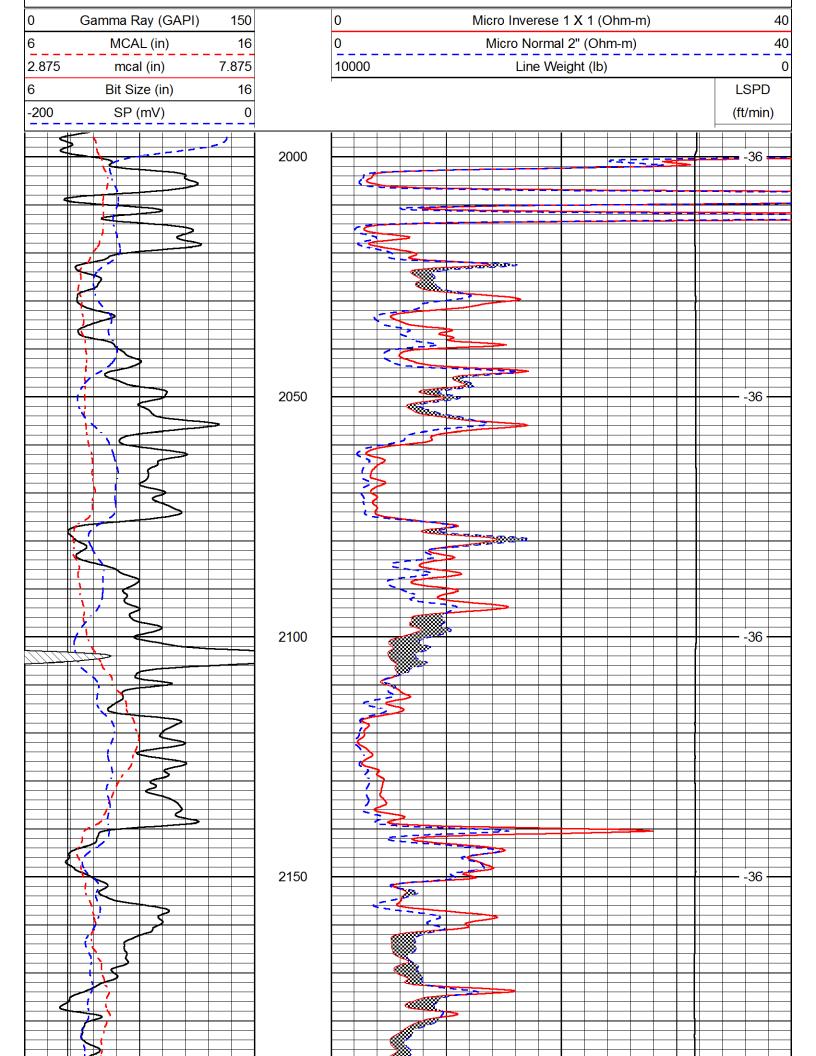
**PIONEER**Pioneer Energy Services

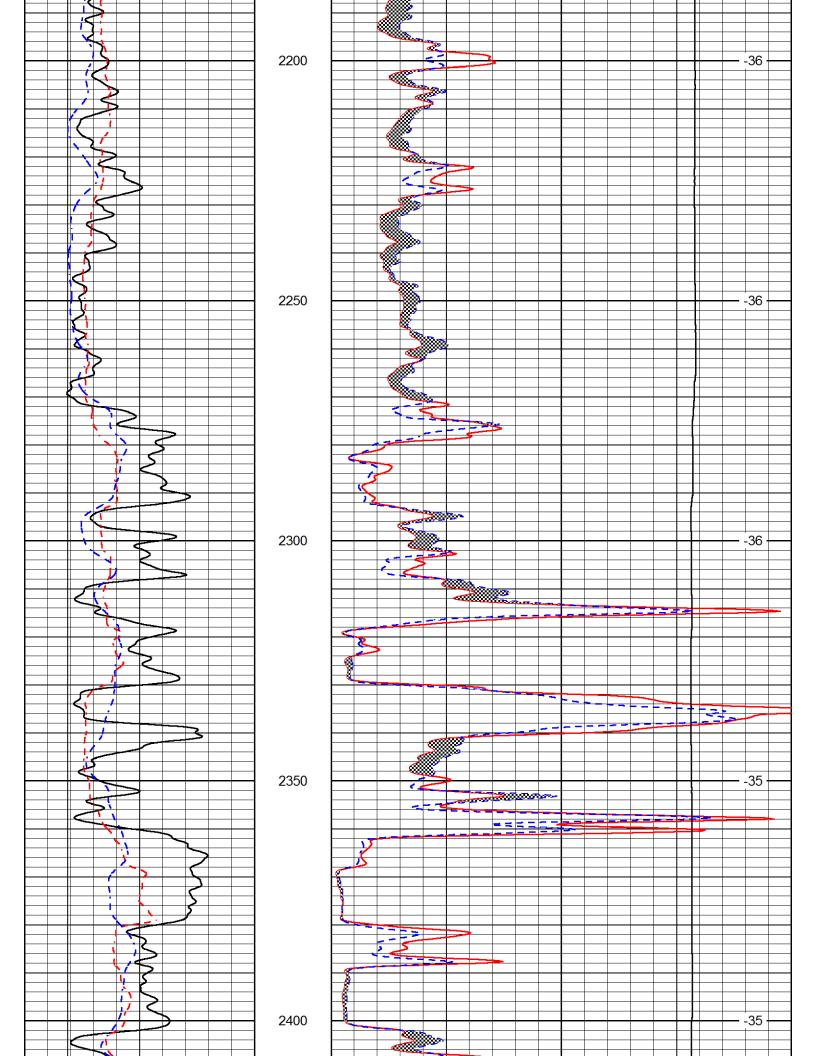
Database File
Dataset Pathname
Presentation Format
Dataset Creation
Charted by

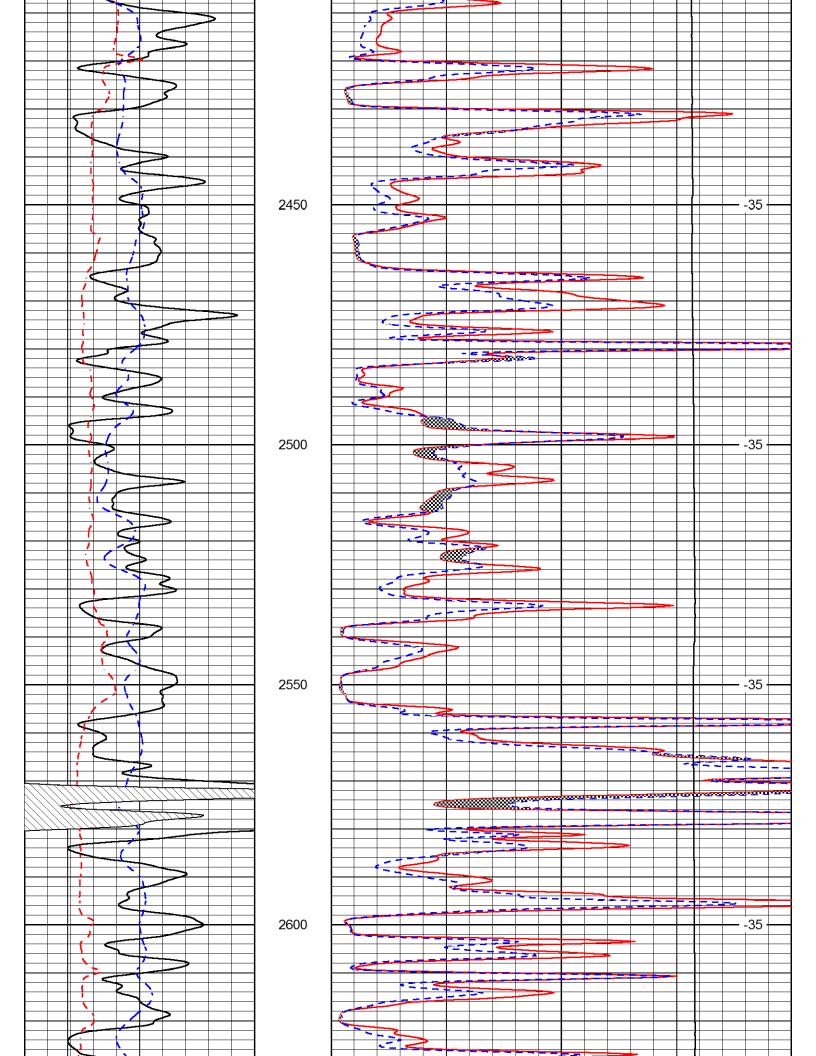
kansas petro_castle peak 2.db stkml/pass5.1

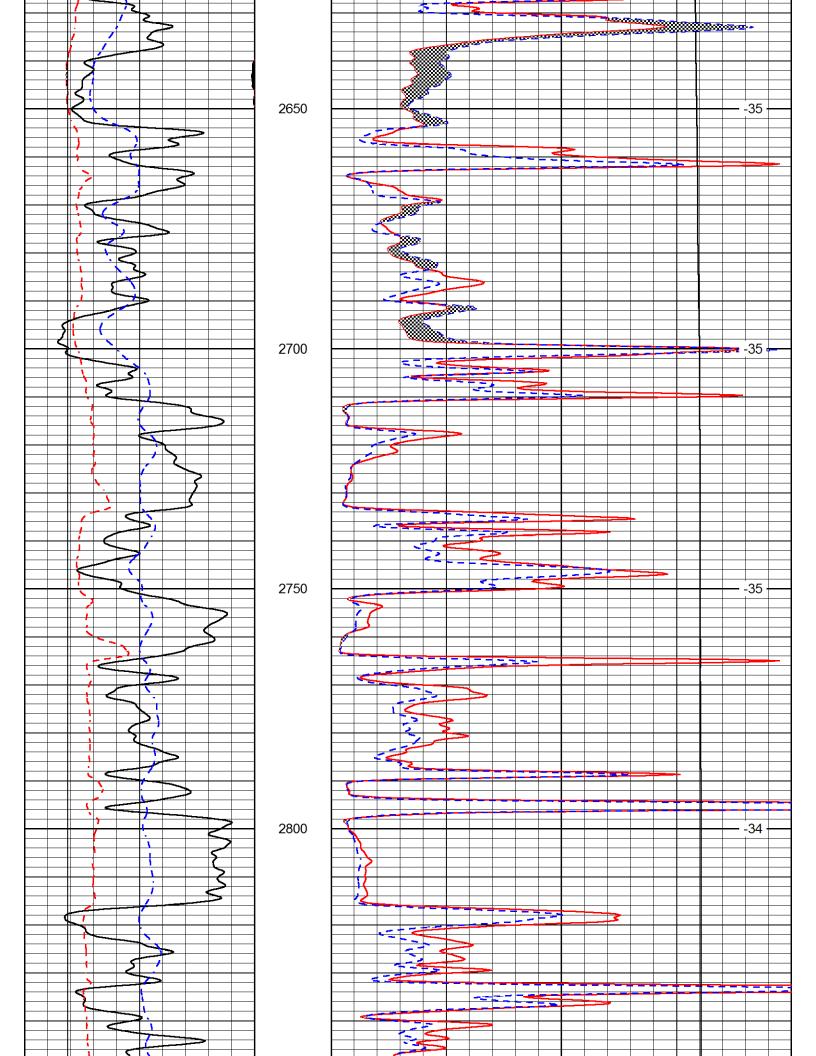
micro

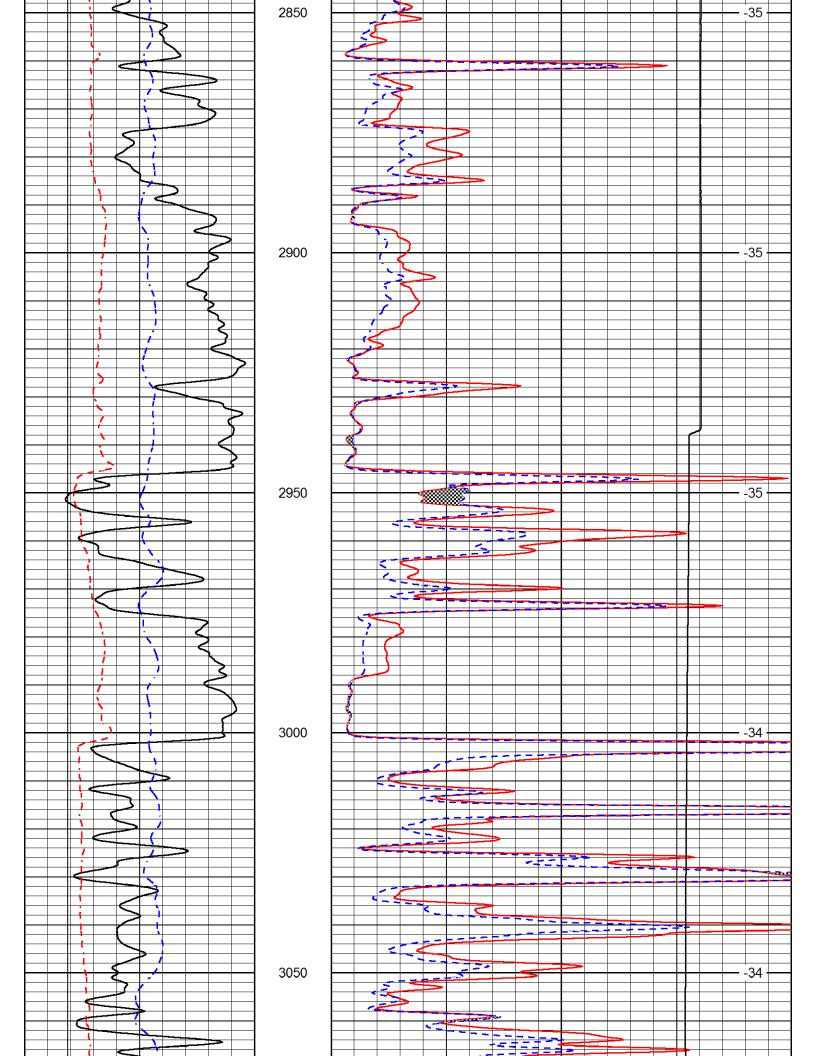
Mon Apr 06 12:08:03 2015 Depth in Feet scaled 1:240

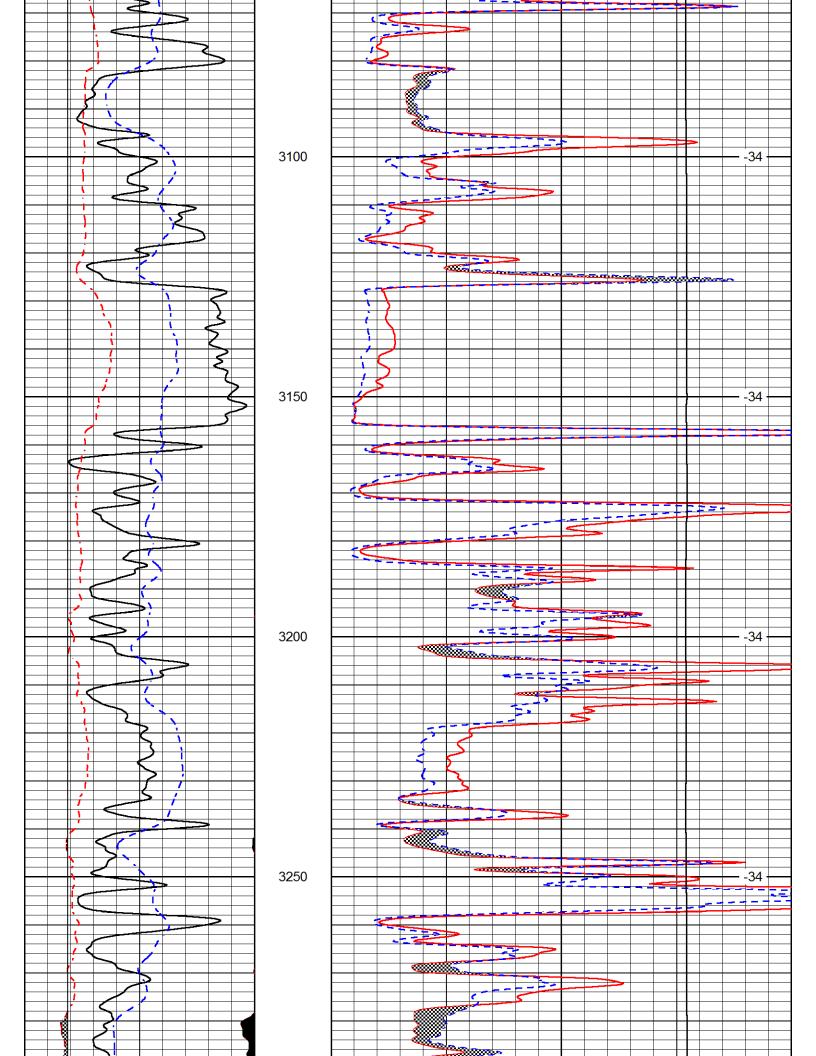


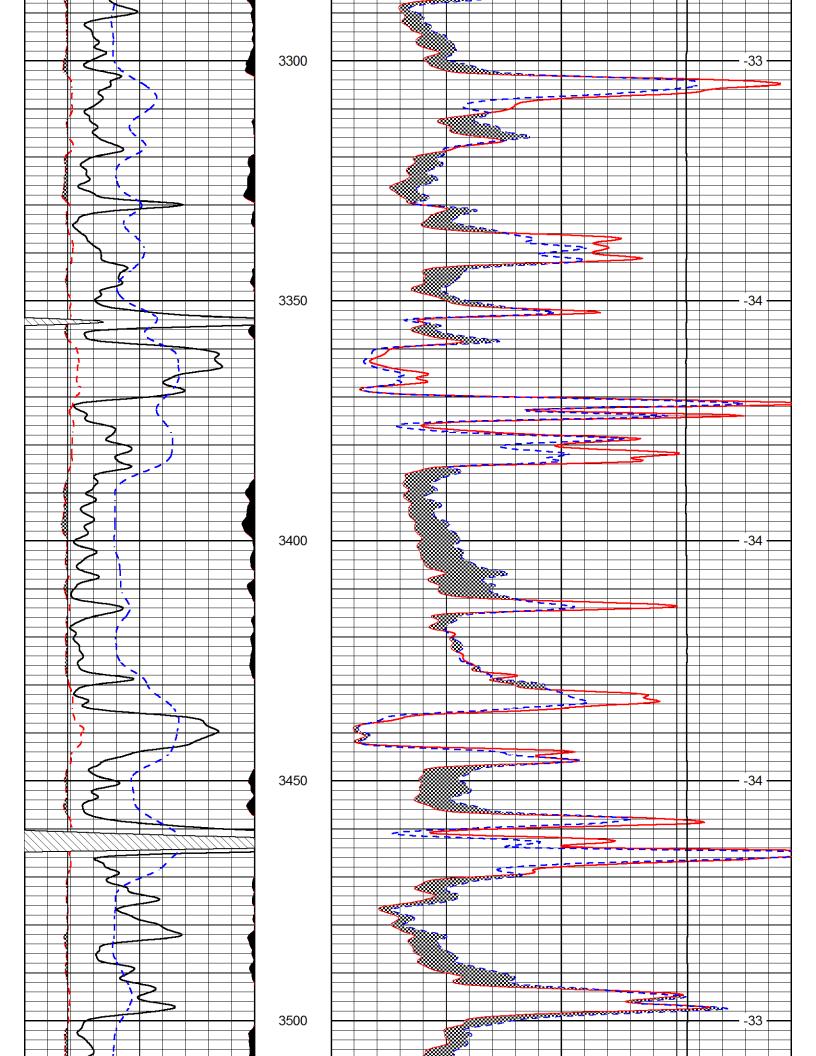


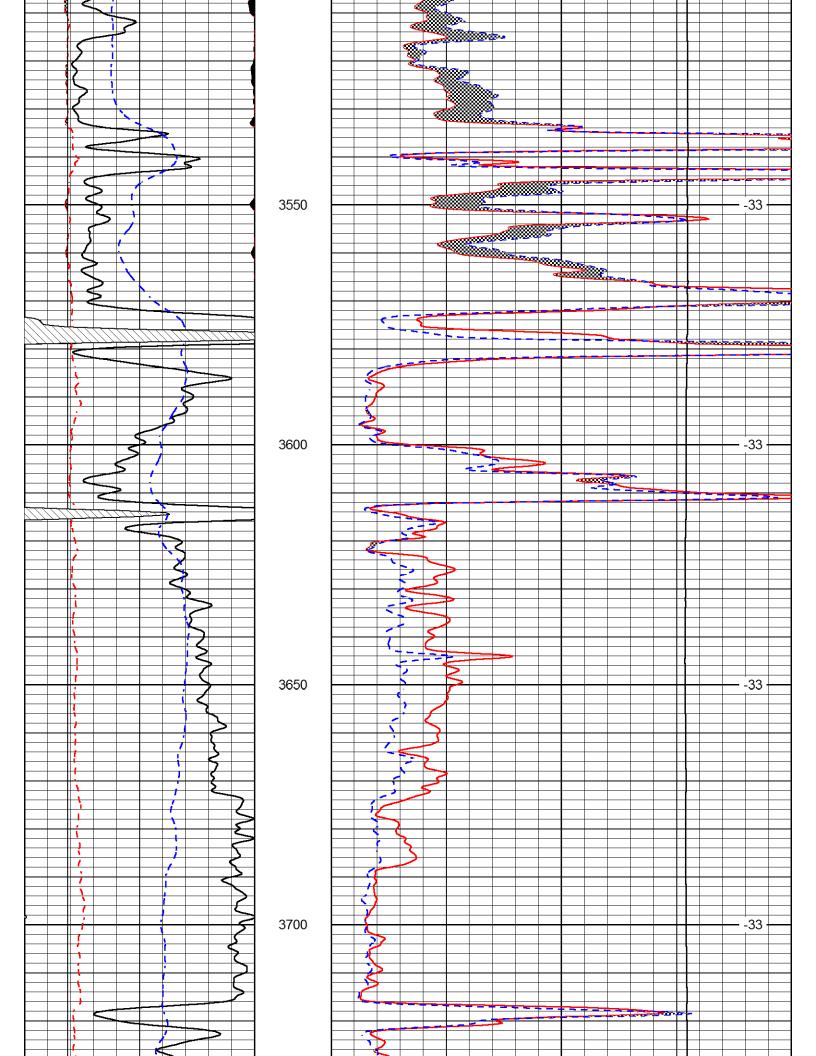


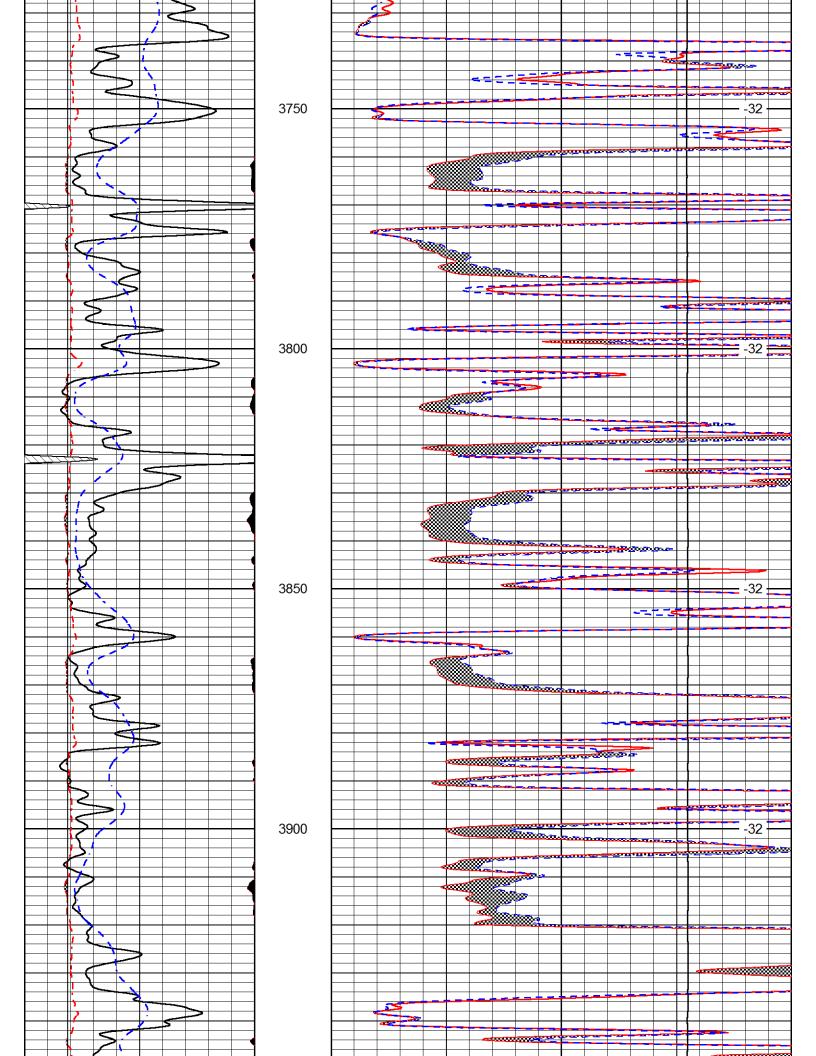


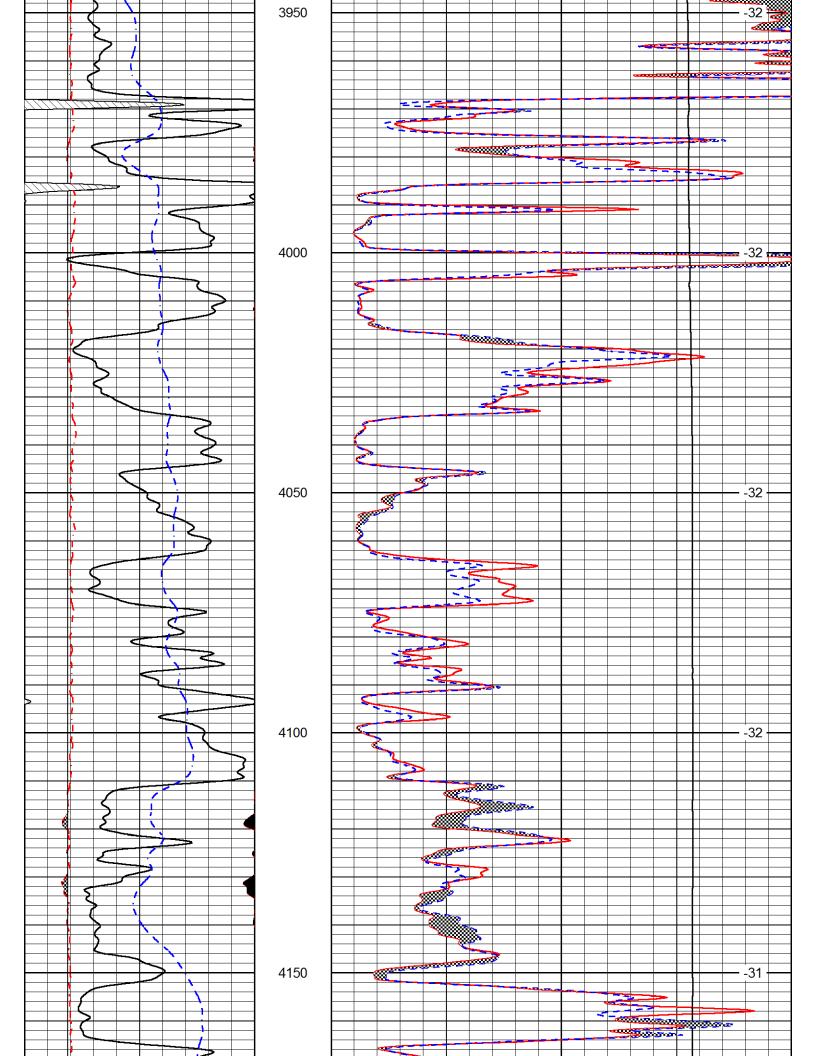


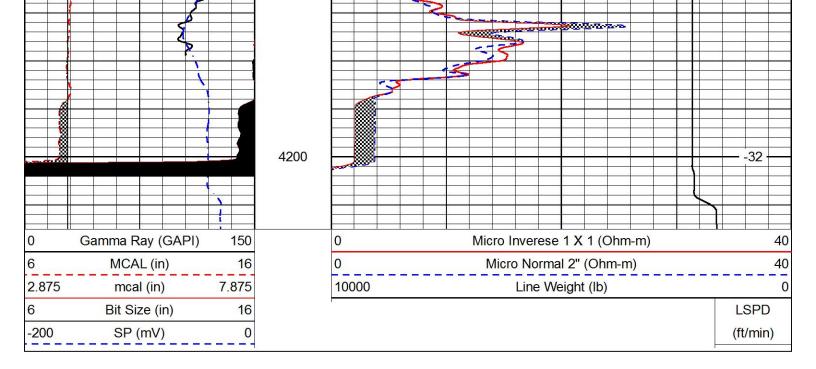














## Repeat Section

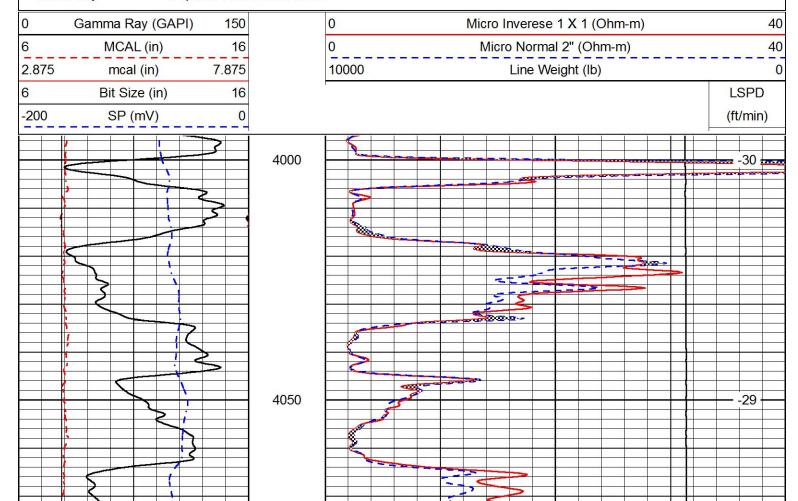
**Pioneer Energy Services** 

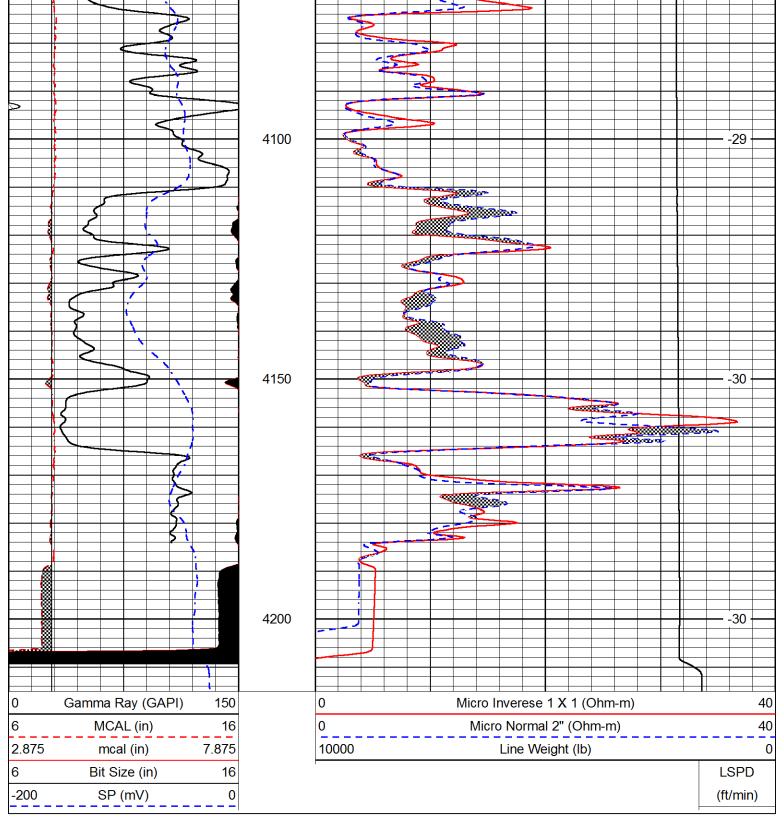
Database File kansas petro_castle peak 2.db

Dataset Pathname stkml/pass4.1

Presentation Format micro

Dataset Creation Mon Apr 06 11:55:44 2015 Charted by Depth in Feet scaled 1:240





		Calibration Report				
Database File Dataset Pathname Dataset Creation	kansas petro_castle peak 2.db stkml/pass5.1 Mon Apr 06 12:08:03 2015					
	Dual Induction Calibration Report					
	Serial-Model: Surface Cal Performed:	1985-PSI1985				
	Readings	References	Results			
Loon:	Air Loop	Air Loop	m h			

100р.	All	ьоор			All	гоор		111	b	
Deep Medium	178.615 161.982	710.235 1441.110		_	0.000	255.800 255.800	mmho/m mmho/m	0.450 0.340	-29.000 -26.000	
			Mic	crolog (	Calibration Re	eport				
	Serial- Perfori	Model: med:					ackable ML 2:23:03 2014			
Readings					References			Results		
	Zero	Cal			Zero	Cal		m	b	
Normal Inverse Caliper	0.0000 0.0000 1.0001	1.0000 1.0000 1.1397		_	0.0000 0.0000 6.5000	1.0000 1.0000 18.5000	Ohm-m Ohm-m in	30500.0000 35500.0000 86.0000	-0.5000 -0.5000 -81.7750	
			Compens	ated De	ensity Calibra	ation Report				
Serial-Model: Source / Verifier: Master Calibration Performed: Before Survey Verification Perfor After Survey Verification Perform										
Master Calibrat	tion									
		Density			Fai	r Detector	Near Det	tector		
Magnesium Aluminum		1.755 2.685	g/cc g/cc			5991.97 1103.34		5.64 cps 7.57 cps		
		Spine Angle	= 75.06		De	ensity/Spine	Ratio = 0.53	1		
		Size			F	Reading				
Small Ring Large Ring		4.00 14.00	in in			1.03 1.45				
		(	Compens	ated Ne	eutron Calibra	ation Report				
			Serial Nu Tool Mod			NT-825 &W				
CALIBRA	TION									
Detector			Readings	6	Target		Normali	ization		
<u> </u>		6240.00 460.00	cps cps	1000.0 1000.0		1.6025 1.9500				
			Gam	ma Ra	y Calibration	Report				
Serial N Tool Mo Perforn			M	3-M&V &W nu Aug	V 14 14:54:58 2	2014				
Calibra	tor Value:		10	0.0	G/	API				
Backgr Calibra	ıg:	65.0 207.0		-	cps cps					
			0.5700			GAPI/cps				