PULSE NEUTRON
DECAY LOG

COMPANY LINN ENERGY
WELL CLYDE H BALL 4 ATU 61
FIELD HUGOTON
CNTY GRANT STATE KS

COMPANY	LINN ENERGY	
WELL	CLYDE H BALL 4 ATU 61	
FIELD	HUGOTON	
COUNTY	GRANT	STATE KANSAS
LOCATION: API# 15-067-21758 SEC. 3 TWP. 30S RGE.38W		OTHER SERVICES: CRANE TRUCK

PERM. DATUM GROUND LEVEL ELEV. 3121'
LOG MEASURED FROM K.B. 7 FT. ABOVE PERMANENT DATUM
DRILLING MEASURED FROM K.B.

ELEV.:K.B. 3128'
D.F. ----
G.L. 3121'

DATE	3-OCT-2013		
RUN NO.	ONE		
DEPTH DRILLER	3122		
DEPTH LOGGER	3054		
BTM. LOG INTERVAL	3054		
TOP LOG INTERVAL	2200		
OPEN HOLE SIZE	N/A		
TYPE FLUID	WATER		
DENS. | VISC.	8.3		
MAX. REC. TEMP. `F	N/A		
EST. CEMENT TOP	NA		
TIME WELL READY	ON ARRIVAL		
TIME LOGGER ON BTM.	12:00		
EQUIP. NO.	14058		
LOCATION	LIBERAL, KS		
RECORDED BY	E. HULL		
WITNESSED BY	TROY ANDERSON		

BOREHOLE RECORD				TUBING RECORD			
RUN NO.	BIT	FROM	TO	SIZE	WGT.	FROM	TO

CASING RECORD	SIZE	WT/FT	GRADE	TYPE JOINT	TOP	BOTTOM
SURFACE STRING	8 5/8	24	J-55		SURF	725.5'
PROT. STRING						
PROD. STRING	5 1/2	15.5	J-55		SURF	3121.6
LINER						

All interpretations of log data are opinions based on inferences from electrical or other measurements. We do not guarantee the accuracy or correctness of any interpretation or recommendation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from any interpretation or recommendation made by any of our employees or agents.

REMARKS Rig: WEATHEFORD CRANE Service Order # 203390

1.) LOGGED OFF OF WIRELINE DEPTH. ZEROED USING K.B. OF 7 FT BHT 0 °F
2.) LOGGED PER CUSTOMERS REQUEST
3.) SHORT JOINT LOCATED FROM 2281-2303

Prints: 3

Bit Size	7.875
Well Status	
Surface Pressure	
Shut In	Flowing

EQUIPMENT DATA

Run No.	Tool Type	Tool No.	Other
1	CCL	PCUF 110	PND CCL
1	GAMMA RAY	PPUF 107	PND GAMMA RAY
1	GENERATOR	PMUF 111	PND GENERATOR

REMARKS

MAIN LOG

DEPTH SCALE: **5":100'**

VERSION: **147R 2.0b"**

MAIN PASS

203390 MAIN

FINISH DEPTH: **2197.8** Feet DIRECTION: **UP** DATE: **10/03/2013** TIME: **14:32** MODE: **ORIGINAL**

Collar Locator
-5000.0 Millivolts 500.0

Gamma Ray
0 Counts/Second 150

OUTPUT QUALITY
0.0 200000.0

BGD FAR
0.0 3000.0

BGD NEAR
0.0 30000.0

Tension
0 2000

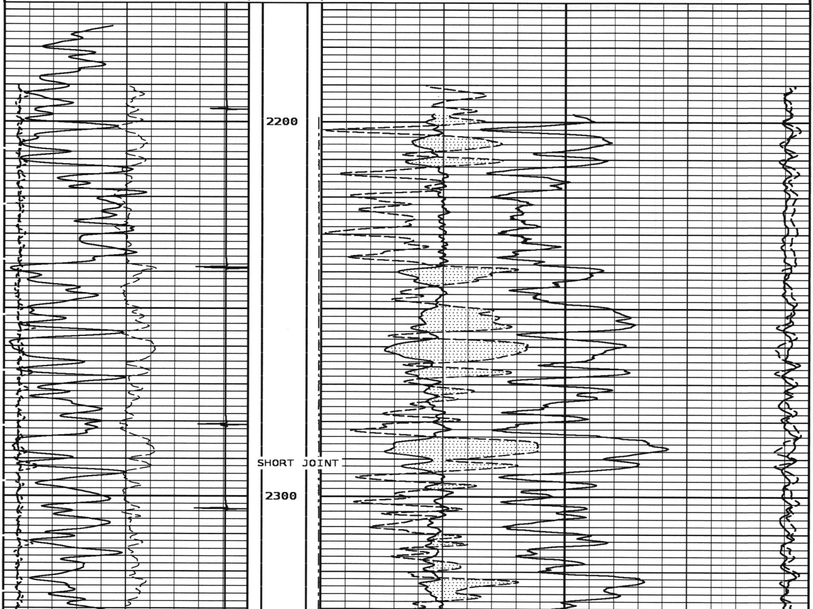
RATIO
6.0 1.0

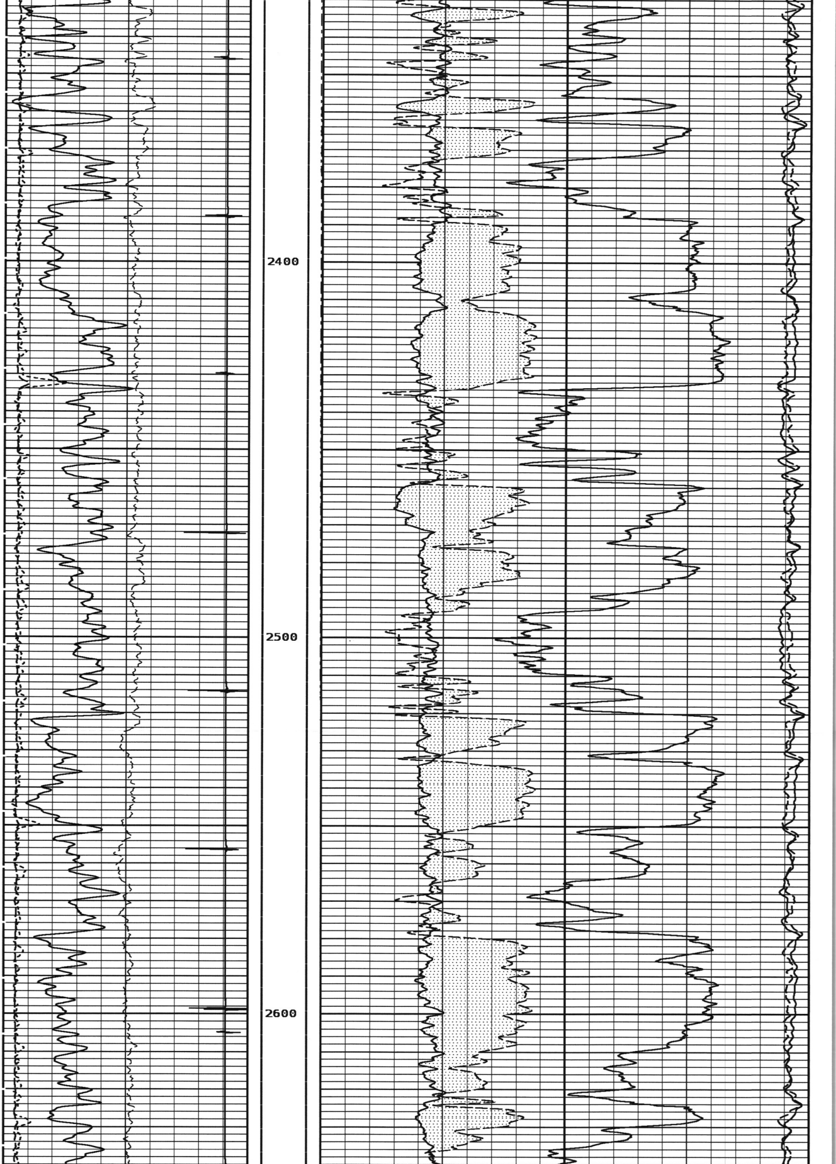
RBNF
5.0 15.0

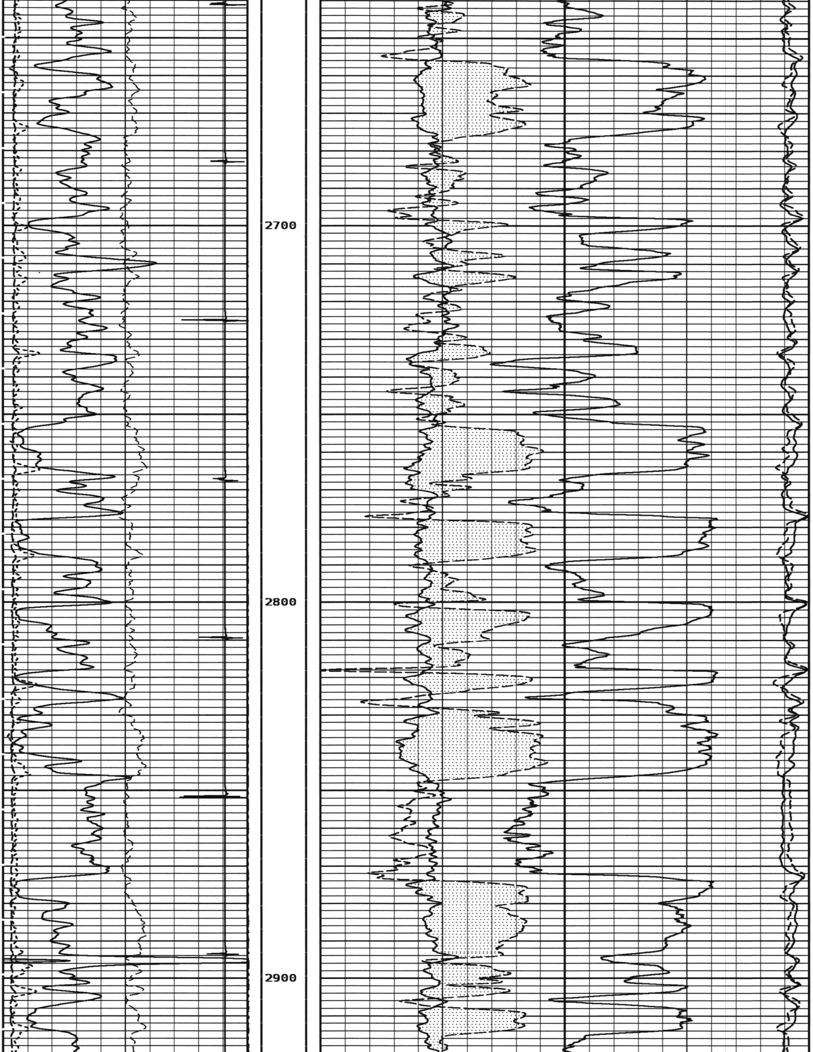
FAR 1
40.0 Counts/Second 0.0

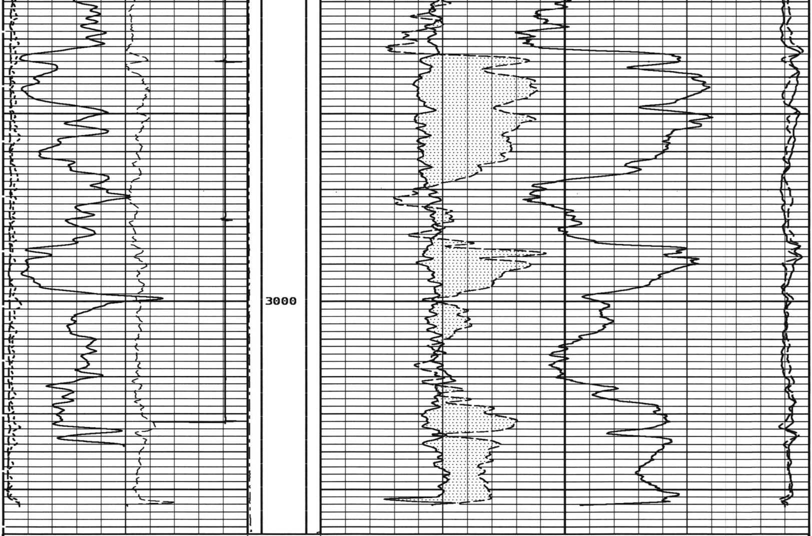
NEAR 1
240.0 Counts/Second 0.0

Formation Sigma
60.0 0.0









BGD NEAR
0.0 30000.0

BGD FAR
0.0 3000.0

OUTPUT QUALITY
0.0 200000.0

Gamma Ray
0 Counts/Second 150

Collar Locator
-5000.0 Millivolts 500.0

Tension
0 2000

Formation Sigma
60.0 0.0

RBNF
5.0 15.0

RATIO
6.0 1.0

NEAR 1
240.0 Counts/Second 0.0

FAR 1
40.0 Counts/Second 0.0

START DEPTH: **3062.0** DIRECTION: **UP** DATE: **10/03/2013** TIME: **14:31** MODE: **ORIGINAL**

203390 MAIN

MAIN PASS

DEPTH SCALE: **5":100'** VERSION: **147R 2.0b"**

REMARKS

MINERAL ACTIVATION PASS

DEPTH SCALE: **5":100'**

VERSION: **147R 2.0b"**

MAIN PASS

203390 ACTIVATION

FINISH DEPTH: **2168.5** Feet DIRECTION: **UP** DATE: **10/03/2013** TIME: **15:06** MODE: **ORIGINAL**

OUTPUT QUALITY
0.0 300000.0

Gamma Ray
0 Counts/Second 150

Collar Locator
-5000.0 Millivolts 500.0

BGD NEAR
0.0 30000.0

BGD FAR
0.0 3000.0

Tension
0 2000

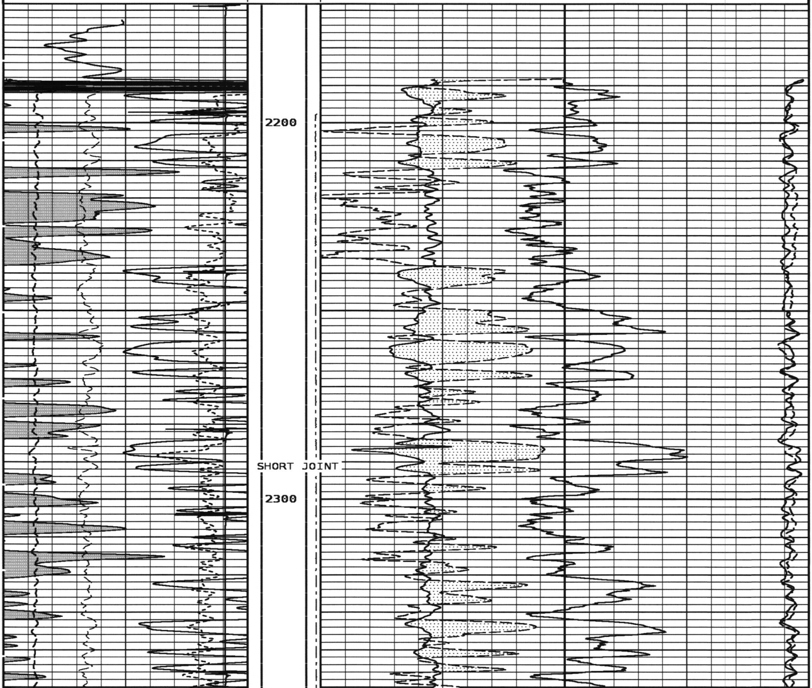
RBNF
5.0 15.0

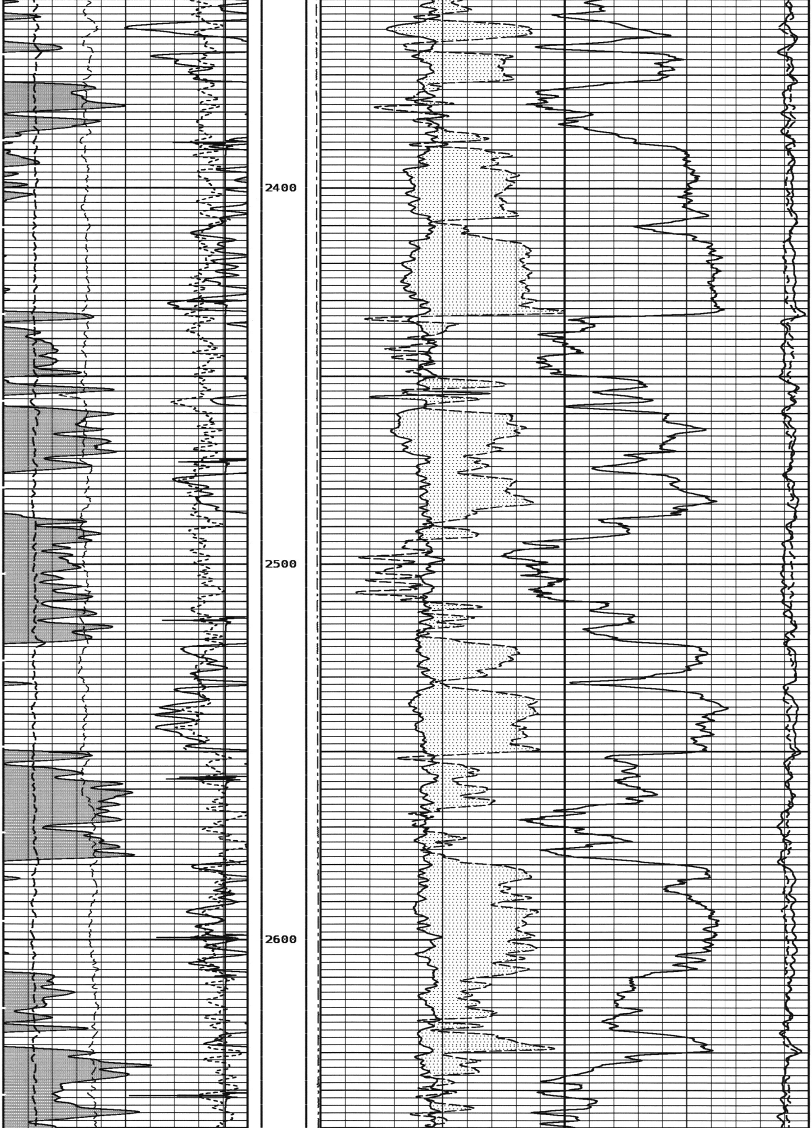
RATIO
6.0 1.0

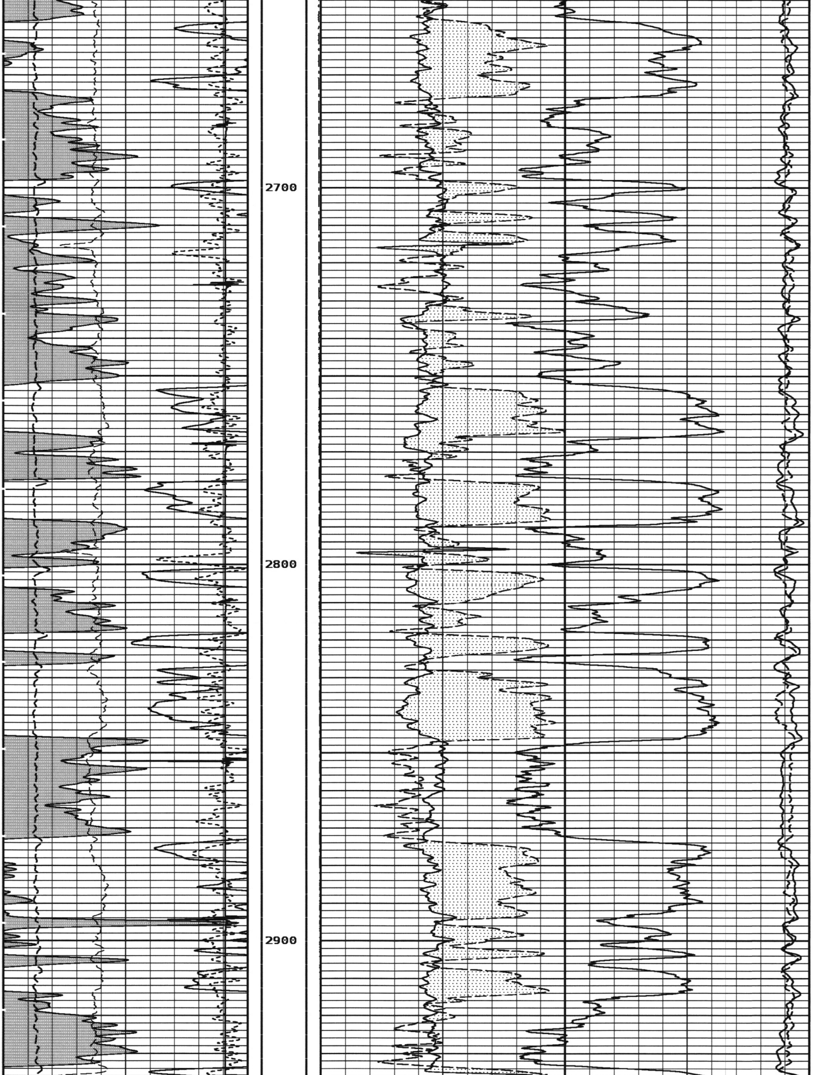
NEAR 1
240.0 Counts/Second 0.0

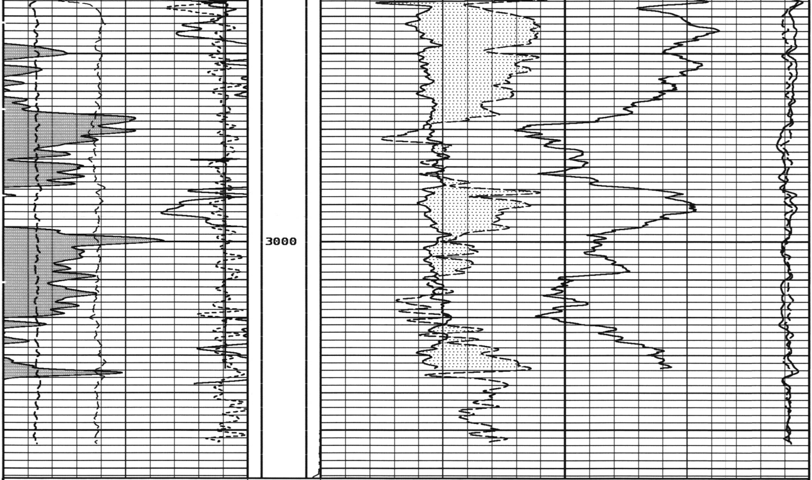
FAR 1
40.0 Counts/Second 0.0

Formation Sigma
60.0 0.0









BGD FAR	Tension	Formation Sigma	
0.0 3000.0	0 2000	60.0 0.0	
BGD NEAR		**RATIO**	**FAR 1**
0.0 30000.0		6.0 1.0	40.0 Counts/Second 0.0
Collar Locator		**RBNF**	**NEAR 1**
-5000.0 Millivolts 500.0		5.0 15.0	240.0 Counts/Second 0.0
Gamma Ray			
0 Counts/Second 150			
OUTPUT QUALITY			
0.0 300000.0			

START DEPTH: **3062.7** DIRECTION: **UP** DATE: **10/03/2013** TIME: **15:06** MODE: **ORIGINAL**

203390 ACTIVATION

MAIN PASS

DEPTH SCALE: **5":100'** VERSION: **147R 2.0b"**

REMARKS

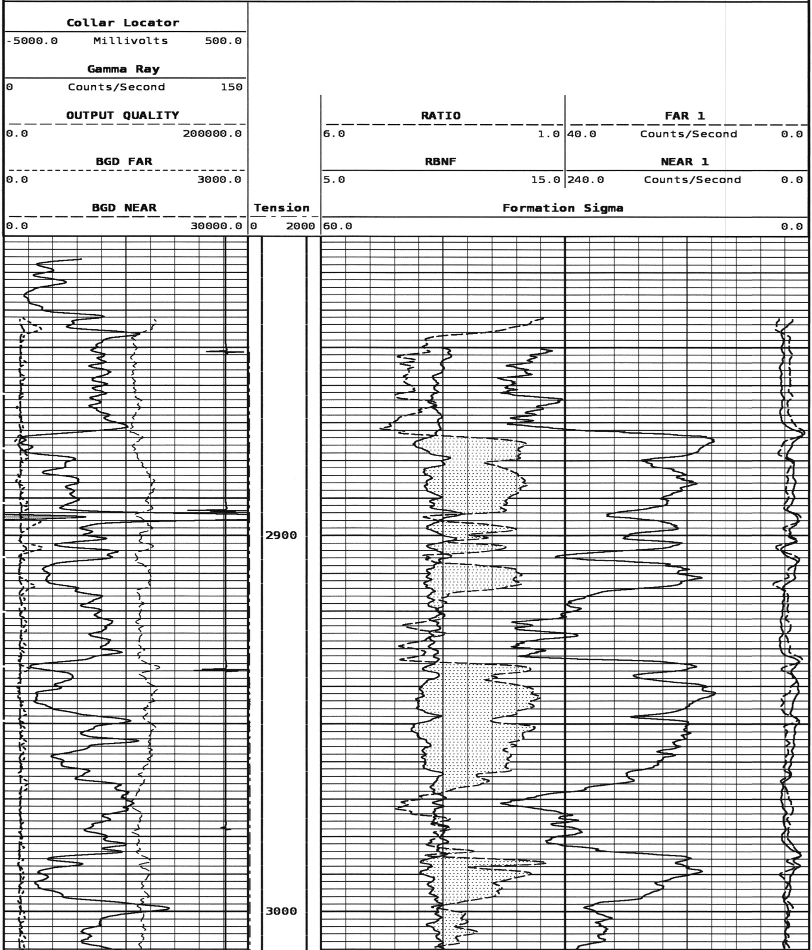
REPEAT SECTION

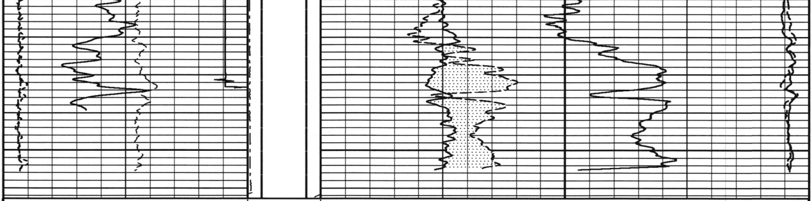
DEPTH SCALE: **5":100'** VERSION: **147R 2.0b"**

REPEAT PASS

203390 REP

FINISH DEPTH: **2820.8** Feet DIRECTION: **UP** DATE: **10/03/2013** TIME: **14:37** MODE: **ORIGINAL**





BGD NEAR
0.0 30000.0

BGD FAR
0.0 3000.0

OUTPUT QUALITY
0.0 200000.0

Gamma Ray
0 Counts/Second 150

Collar Locator
-5000.0 Millivolts 500.0

Tension
0 2000

Formation Sigma
60.0 0.0

RBNF
5.0 15.0

RATIO
6.0 1.0

NEAR 1
240.0 Counts/Second 0.0

FAR 1
40.0 Counts/Second 0.0

START DEPTH: **3062.8** DIRECTION: **UP** DATE: **10/03/2013** TIME: **14:37** MODE: **ORIGINAL**

203390 REP

REPEAT PASS

DEPTH SCALE: **5":100'** VERSION: **147R 2.0b"**

Cased Hole Cablehead

Weight	2.2 Lbs.
Length	12.2"
Max. Diameter	
Total Stack Weight	320 lbs. in air
Total Stack Length	40.06'

PND comms./CCL

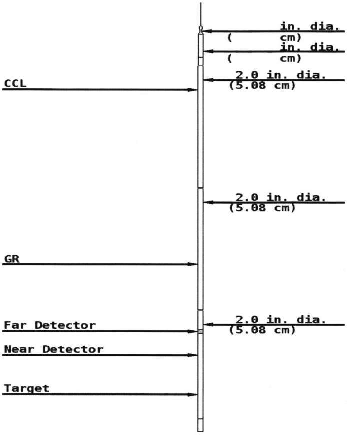
Weight
Length
Max. Diameter

PND Processor Unit

Weight
Length
Max. Diameter

PND Measure Unit

Weight
Length
Max. Diameter



COMPANY	LINN ENERGY		
WELL	CLYDE H BALL 4 ATU 61		
FIELD	HUGOTON		
COUNTY	GRANT	STATE	KANSAS

Weatherford®