

Company: Pine Ridge Oil & Gas, LLC

Well: Hully Gully 13-54-1-13

Field: Wildcat

County: Lincoln State: Colorado

Platform Express  
Triple Combo

County:	Lincoln
Field:	Wildcat
Location:	SWSW Sec 1, T13S, R54W
Well:	Hully Gully 13-54-1-13
Company:	Pine Ridge Oil & Gas, LLC
Location:	
SWSW Sec 1, T13S, R54W	Elev.: 4862.00 ft
SHL: 660' FSL X 765' FWL	G.L. 4847.00 ft
Lat: 38.93844 Long: -103.40186	D.F. 4861.00 ft
Permanent Datum:	Ground Level
Log Measured From:	Kelly Bushing
Drilling Measured From:	Kelly Bushing
API Serial No.	Section: 1
05-073-06537-0000	Township: 13S
	Range: 54W

Logging Date	21-Aug-2013	21-Aug-2013
Run Number	ADT-HRLA	Density-CNL
Depth Driller	6089.00 ft	6088.00 ft
Schlumberger Depth	6088.00 ft	6088.00 ft
Bottom Log Interval	6088.00 ft	6088.00 ft
Top Log Interval	5908.00 ft	5908.00 ft
Casing Driller Size @ Depth	7 in @ 5917.00 ft	7 in @ 5917.00 ft
Casing Schlumberger	5908 ft	5908 ft
Bit Size	6.125 in	6.125 in
Type Fluid In Hole	Produced Water	Produced Water
Density	8.5 lbm/gal	8.5 lbm/gal
Fluid Loss	PH	
Source of Sample	Calculated	Calculated
RM @ Meas Temp	0.11 ohm.m @ 75 degF	0.11 ohm.m @ 75 degF
RMF @ Meas Temp	0.09 ohm.m @ 68 degF	0.09 ohm.m @ 68 degF
RMC @ Meas Temp		
Source RMF	RMC	Pressed
RM @ BHT	0.05 @ 170 0.04 @ 170	0.05 @ 170 0.04 @ 170
Max Recorded Temperatures	170 degF	170 degF
Circulation Stopped	21-Aug-2013 01:30:00	21-Aug-2013 01:30:00
Logger on Bottom	21-Aug-2013 08:45:00	
Unit Number	Location: 3030	3030 Casper, WY
Recorded By	Avery Becker	Avery Becker
Witnessed By	Pat Jackson	Pat Jackson

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

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HRLT-B:932 36.19  
HRUH-B:946  
HRUC-B:935  
HRLS-B:932  
HRLH-B:791  
HRLC-B:791  
AH-270

ADT-C:746 11.99  
HECH-KDB:756  
ADC-C:740  
ADS-C:746  
ADP-C:738

BNS-STD 0.46



Lengths are in ft  
Maximum Outer Diameter = 5.000 in  
Line: Sensor Location, Value: Gating Offset  
All measurements are relative to TOOL\_ZERO

Equip name Length MP name Offset  
LEH-QT 28.03  
LEH-QT

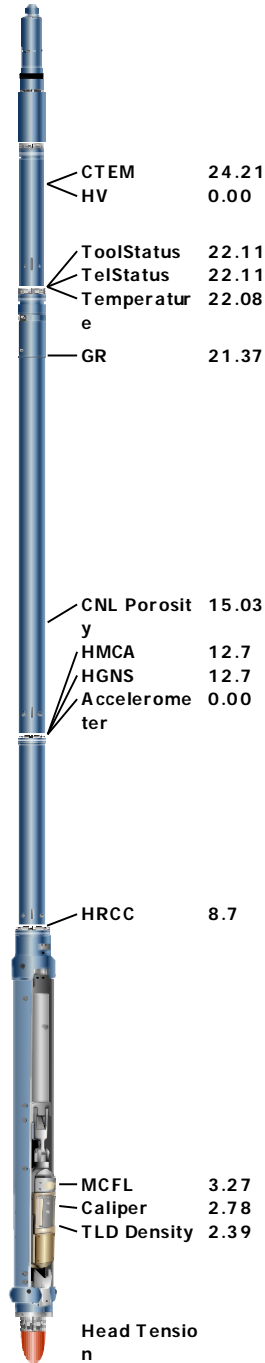
DTC-H:9469 25.11  
ECH-KC:10530  
DTC-H:9469

HGNS-B:863 22.11  
HGNH:2883  
NPV-N  
NSR-F:5069  
HGNS-B:863  
HACCZ-B:452  
HMCA-B

HDRS-B:1716 12.7  
ECH-MEB:1866  
HRC C-B:860  
HRMS-B:1716  
Long Spacing  
GSR-J:5094  
GPV-Q  
Backscatter  
Short Spacing  
HRGD-B:1748

BNS-STD 0.46  
Head Tension  
TOOL\_ZERO

Lengths are in ft



## Depth Summary

Depth Control Parameters	ADT-HRLA	Density-CNL	
Conveyance Type	Wireline	Wireline	
Log Sequence	Subsequent trip to well	Subsequent run in well	

Stretch Correction ( ft )	6.00		
Reference Log Date	18-Aug-2013	18-Aug-2013	
Reference Log Name	Reservoir Saturation Tool	Reservoir Saturation Tool	
Reference Log Run Number	One	One	
Depth Remark Parameters	ADT-HRLA	Density-CNL	
Depth Remark 1	Subsequent run in well, full depth control procedures followed	Subsequent run in well, full depth control procedures followed	
Depth Remark 2	IDW used as primary depth device, Z-chart used for secondary	IDW used as primary depth device, z-chart used for secondary	
Depth Measuring Device	ADT-HRLA	Density-CNL	
Type	IDW-JA	IDW-JA	
Serial Number	5979	5979	
Calibration Date	15-May-2013	15-May-2013	
Calibration Cable Type	7-39P-LXS	7-39P-LXS	
Wheel Correction 1	-7	-7	
Wheel Correction 2	-6	-6	
Tension Device	ADT-HRLA	Density-CNL	
Type	CMTD-B/A	CMTD-B/A	
Serial Number	2858	2858	
Calibration Date	20-Aug-2013	12-Aug-2013	
Calibrator Serial Number	78135	1816	
Calibration Points	10	10	
Calibration RMS	11	24	
Calibration Peak Error	18	41	
Logging Cable	ADT-HRLA	Density-CNL	
Type	7-39P-LXS	7-39P-LXS	
Serial Number	711136	711136	
Logging Cable Length ( ft )	15500.00	15500.00	

## Survey Record

<b>Survey Calculation</b>			
Method :	Minimum Radius of Curvature	DLS Method :	Lubinski
North Reference :	True North	Total Correction Formula :	Magnetic Dec

<b>Rig Location</b>			
Latitude :	38.938440 degrees	Longitude :	-103.40186 degrees

<b>Tie In Point</b>			
Measured Depth:	0.00 ft	Inclination:	0.00 deg
True Vertical Depth:	0.00 ft	North Displacement:	0.00 ft
		Azimuth:	0.00 deg
		East Displacement:	0.00 ft

<b>Survey Quality Index</b>			
28 : Tie-In Point			

<b>Survey Correction Index</b>			
0 : No correction			

<b>Survey Description Index</b>			
0 : Not Flagged Survey			

Seq	MD (ft)	Incl (deg)	Azim (deg)	Course (ft)	TVD (ft)	V Sec (ft)	N/ -S (ft)	E/ -W (ft)	Closure (ft)	at Azim (deg)	DLS deg/100ft	Tool Type	QI	CI	DI
1	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	90.00	0.00	TIP	28	0	0

## Merged Data

## 5" Triple Combo

## Integration Summary

Output Channel(s)	Output Description	Input Parameter	Output Value	Unit
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## Composite Summary

# Composite Summary

Run Name	Pass Objective	Direction	Top	Bottom	Start	Stop	Depth Shift	Include Parallel Data
ADT-HRLA	Log[3]:Up	Up	5788.88 ft	6132.17 ft	21-Aug-2013 9:05:09 AM	21-Aug-2013 9:17:32 AM	-5.50 ft	
Density-CNL	Log[3]:Up	Up	5779.13 ft	6111.45 ft	21-Aug-2013 11:23:56 AM	21-Aug-2013 11:34:18 AM	-0.50 ft	

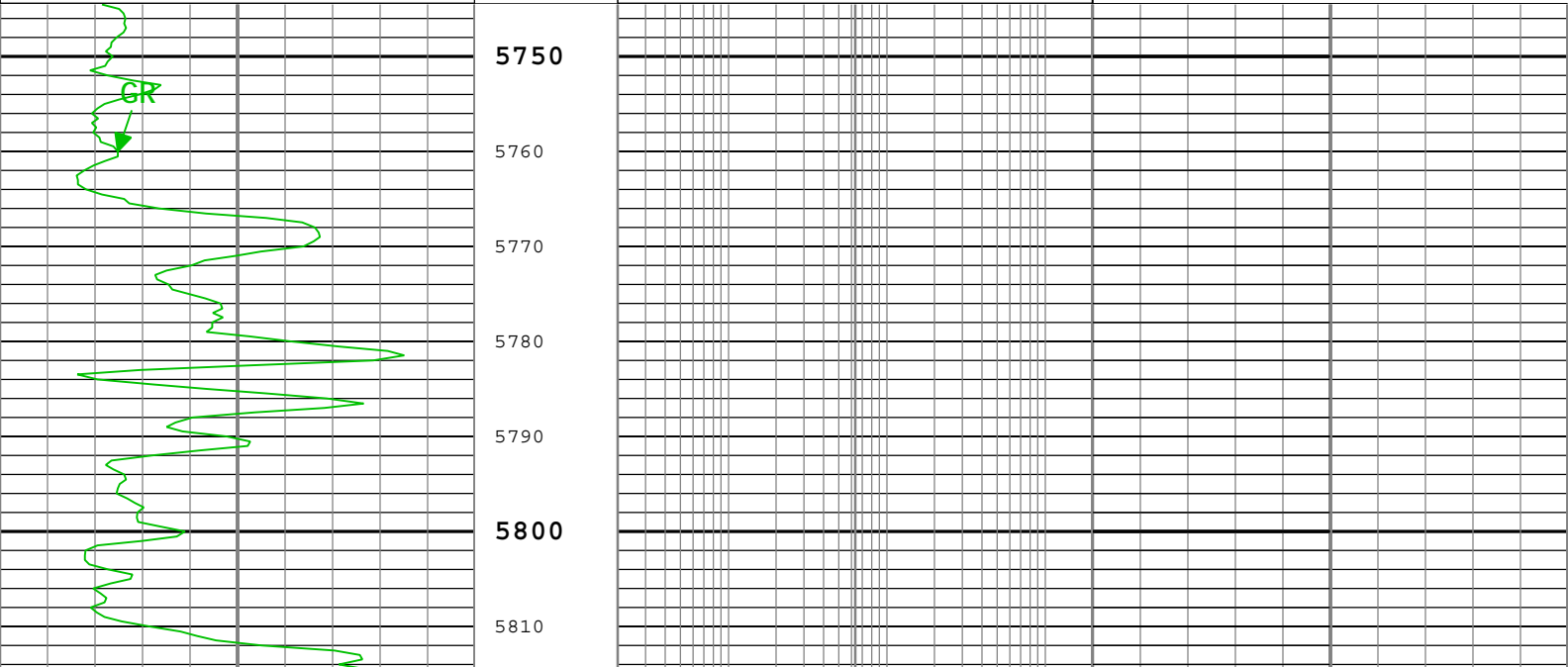
All depths are referenced to toolstring zero

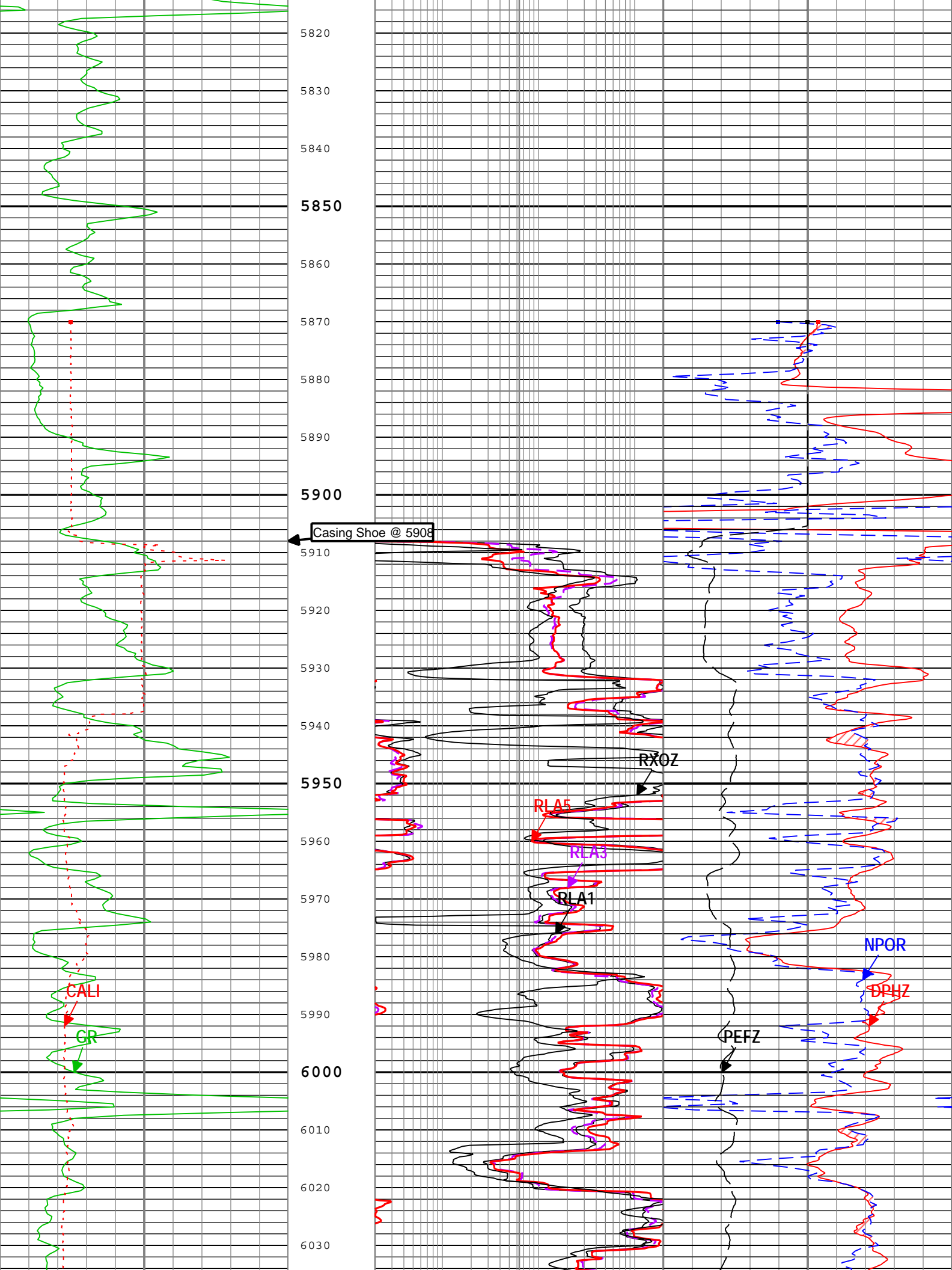
Log	Merged Data
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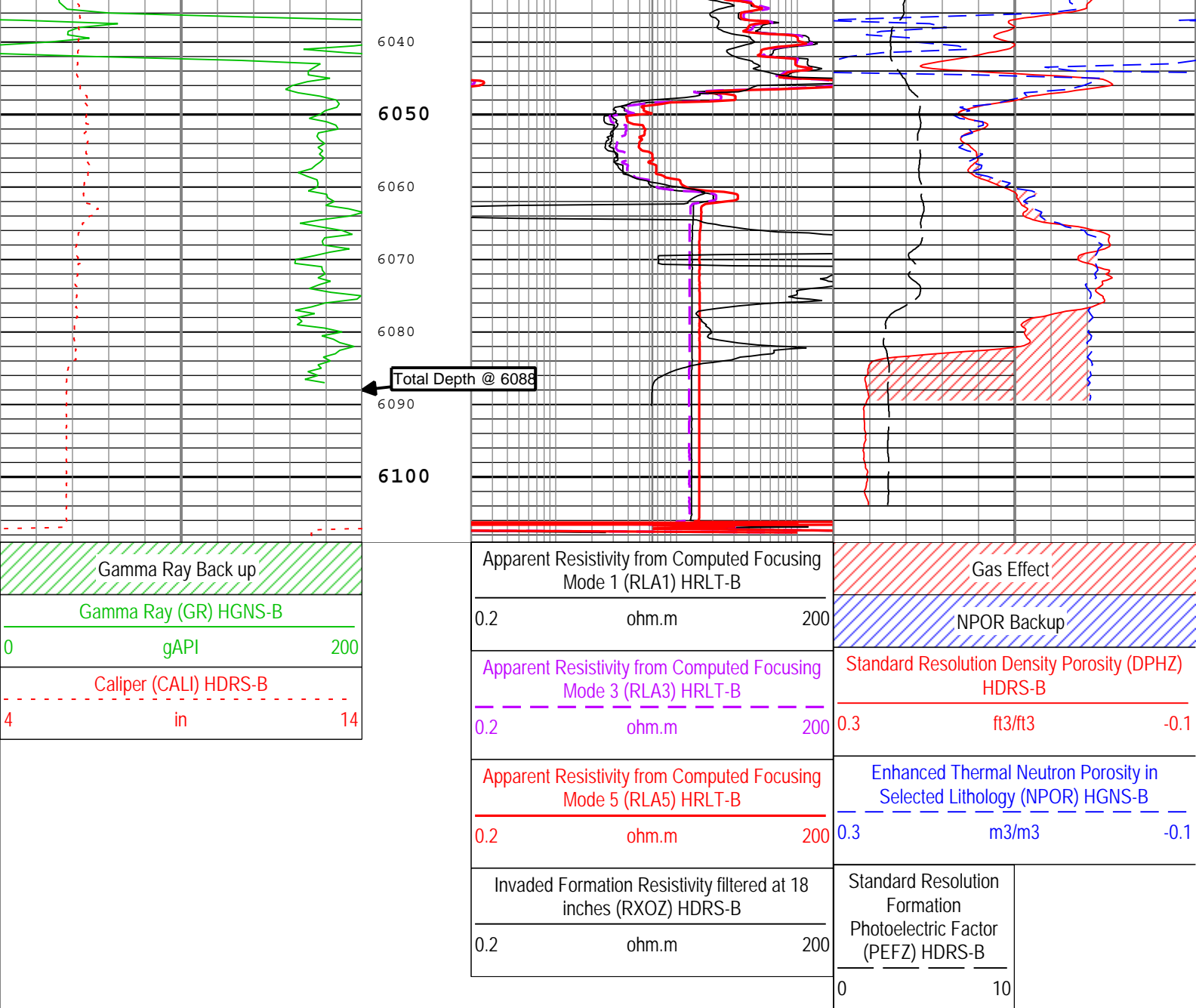
Description: HGNS standard resolution porosities for Platform Express    Format: Log ( TripleCombo-5 )    Index Scale: 5 in per 100 ft    Index Unit: ft    Index Type: Measured Depth    Creation Date: 21-Aug-2013 11:47:22

Channel	Source	Sampling	Pass Code
CALI	HDRS-B:HRCC-B:HRCC-B	1in	Run #2:Log[3]:Up
DPHZ	HDRS-B:HRMS-B:HRGD-B	2in	Run #2:Log[3]:Up
GR	HGNS-B:HGNS-B:HGNS-B	6in	Run #1:Log[3]:Up
NPOR	HGNS-B:HGNS-B:HGNS-B	6in	Run #2:Log[3]:Up
PEFZ	HDRS-B:HRMS-B:HRGD-B	2in	Run #2:Log[3]:Up
RLA1	HRLT-B:HRLS-B:HRLS-B	2in	Run #1:Log[3]:Up
RLA3	HRLT-B:HRLS-B:HRLS-B	2in	Run #1:Log[3]:Up
RLA5	HRLT-B:HRLS-B:HRLS-B	2in	Run #1:Log[3]:Up
RXOZ	HDRS-B:HRMS-B:HRGD-B	2in	Run #2:Log[3]:Up

<div> <div>Gamma Ray Back up</div> <div>Gamma Ray (GR) HGNS-B</div> <div>0gAPI200</div> <div>Caliper (CALI) HDRS-B</div> <div>4in14</div> </div>	<div> <div>Apparent Resistivity from Computed Focusing Mode 1 (RLA1) HRLT-B</div> <div>0.2ohm.m200</div> </div>	<div> <div>Standard Resolution Formation Photoelectric Factor (PEFZ) HDRS-B</div> <div>010</div> </div>
	<div> <div>Apparent Resistivity from Computed Focusing Mode 3 (RLA3) HRLT-B</div> <div>0.2ohm.m200</div> </div>	<div> <div>Gas Effect</div> <div>NPOR Backup</div> </div>
	<div> <div>Apparent Resistivity from Computed Focusing Mode 5 (RLA5) HRLT-B</div> <div>0.2ohm.m200</div> </div>	<div> <div>Standard Resolution Density Porosity (DPHZ) HDRS-B</div> <div>0.3ft3/ft3-0.1</div> </div>
	<div> <div>Invaded Formation Resistivity filtered at 18 inches (RXOZ) HDRS-B</div> <div>0.2ohm.m200</div> </div>	<div> <div>Enhanced Thermal Neutron Porosity in Selected Lithology (NPOR) HGNS-B</div> <div>0.3m3/m3-0.1</div> </div>







Description: HGNS standard resolution porosities for Platform Express Format: Log ( TripleCombo-5 ) Index Scale: 5 in per 100 ft Index Unit: ft Index Type: Measured Depth Creation Date: 21-Aug-2013 11:47:22

## Channel Processing Parameters

### ADT-HRLA: Parameters

Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
CALI_SHIFT	CALI Supplementary Offset	ADT-C	0	in
CBLO	Casing Bottom (Logger)	WLSESSION	5908	ft
CDEN	Cement Density	HGNS-B	2	g/cm3
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	MRES	
HRLT_PROCRM	Mud Resistivity Select	HRLT-B	HRLT Compute	
KFAC_HRLT	HRLT Geometrical Factor Option	HRLT-B	Sonde	
PROCMSO	Mechanical Standoff Size	HRLT-B	0.6	in

PROCSPO	Sonde Position	HRLT-B	Eccentered	
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## ADT-HRLADepth Zoned Parameters

Parameter	Value	Start ( ft )	Stop ( ft )
BS	8.75	5744.5	5917
BS	6.125	5917	6109

All depth are actual.

## Density-CNL: Parameters

Parameter	Description	Tool	Value	Unit
BARI	Barite Mud Presence Flag	Borehole	No	
BHS	Borehole Status (Open or Cased Hole)	Borehole	Open	
BS	Bit Size	WLSESSION	Depth Zoned	in
BSAL	Borehole Salinity	Borehole	62079.93	ppm
CALI_SHIFT	CALI Supplementary Offset	HDRS-B	0	in
CBLO	Casing Bottom (Logger)	WLSESSION	5908	ft
DFD	Drilling Fluid Density	Borehole	8.5	lbm/gal
DFT	Drilling Fluid Type	Borehole	Water	
DFT_WATER	Drilling Fluid Water Type	Borehole	Produced Water	
DHC	Density Hole Correction	HDRS-B	Bit Size	
FD	Fluid Density	Borehole	1	g/cm3
FSAL	Formation Salinity	Borehole	0	ppm
GCSE_DOWN_PASS	Generalized Caliper Selection for WL Log Down Passes	Borehole	BS	
GCSE_UP_PASS	Generalized Caliper Selection for WL Log Up Passes	Borehole	CALI	
GRSE	Generalized Mud Resistivity Selection, from Measured or Computed Mud Resistivity	Borehole	REMS	
GTSE	Generalized Temperature Selection, from Measured or Computed Temperature	Borehole	CTEM	
HSCO	Hole Size Correction Option	HGNS-B	Yes	
MATR	Rock Matrix for Neutron Porosity Corrections	Borehole	LIMESTONE	
MDEN	Matrix Density for Density Porosity	Borehole	2.71	g/cm3
MFST	Mud Filtrate Sample Temperature	Borehole	68	degF
MST	Mud Sample Temperature	Borehole	75	degF
RMFS	Resistivity of Mud Filtrate Sample	Borehole	0.09	ohm.m
RMS	Resistivity of Mud Sample	Borehole	0.11	ohm.m
SOCO	Standoff Correction Option	HGNS-B	Yes	

## Density-CNLDepth Zoned Parameters

Parameter	Value	Start ( ft )	Stop ( ft )
BS	8.75	5751.1	5917
BS	6.125	5917	6109

All depth are actual.

## Tool Control Parameters

## Density-CNL: Parameters

Parameter	Description	Tool	Value	Unit
HMCA_BRD_TYPE	HMCA Board Type	HGNS-B	0	
HRGD_BRD_TYPE	HRGD Board Type	HDRS-B	WITHOUT_HET	
MAX_LOG_SPEED	Toolstring Maximum Logging Speed	WLSESSION	3600	ft/h
STSO_HRDD	Temperature Source for the Density Algorithm	HDRS-B	Decaytime algorithm	



Well: Hully Gully 13-54-1-13

Field: Wildcat

County: Lincoln

State: Colorado

Platform Express

Triple Combo