

Schlumberger

GEOFRAME
PROCESSED
INTERPRETATION

FMI Image

2000 – 4100'

120" Scale – True Dip

* A Mark of Schlumberger

Using the following logs:

COMPANY: Battelle Pacific Northwest Lab
WELL: Wallula Basalt Pilot #1
FIELD: Wildcat
County: Walla Walla
State: Washington
COUNTRY: USA
Date Logged: 18-Apr-2009 Date Processed: 12-October-2009
Well Location: Sec 10, T7N, R31E
Elevations: KB: -304.571m DF: -304.571m GL: -304.571m
API Number: Job Number:

FOLD HERE The well name, location and borehole reference data were furnished by the customer.

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 interpretations made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Field Recording:	Location: SACRAMENTO	Software Version: 17C0-154	Engineer: BEN GRAU
Office Recording:	ICS Center: Denver DCS	Baseline: GF 4.4	Log Analyst: A. Mioduchowski/K

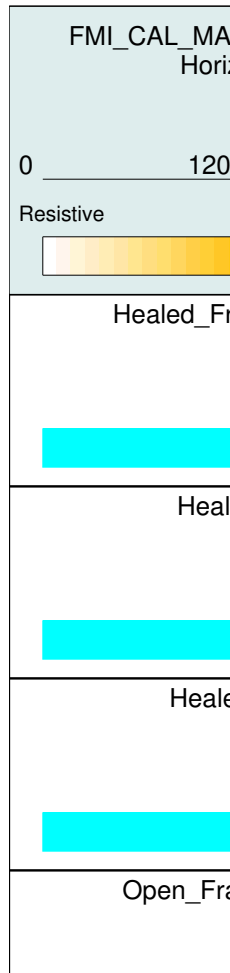
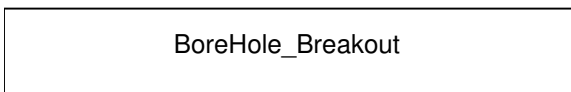
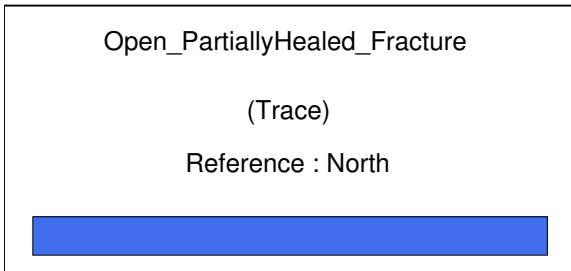
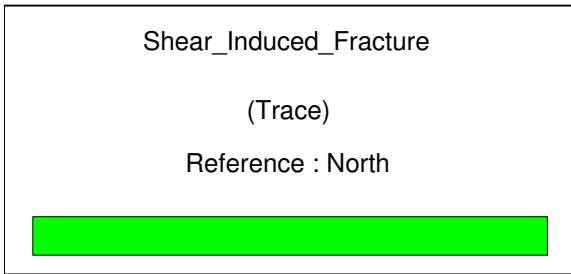
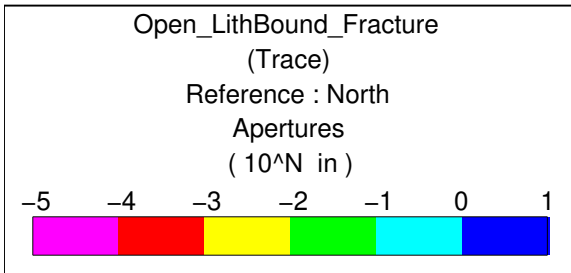
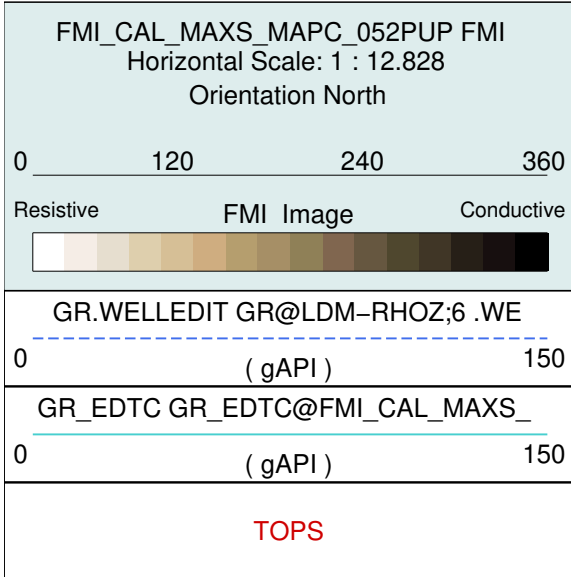
Mud and Borehole Measurements:

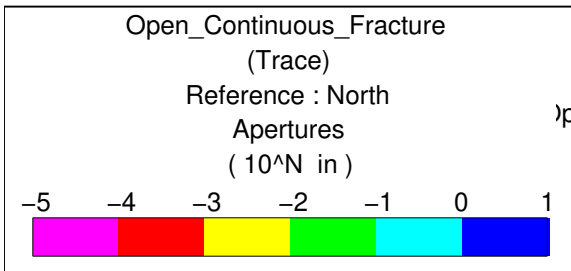
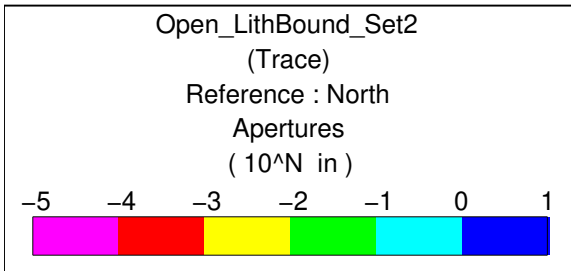
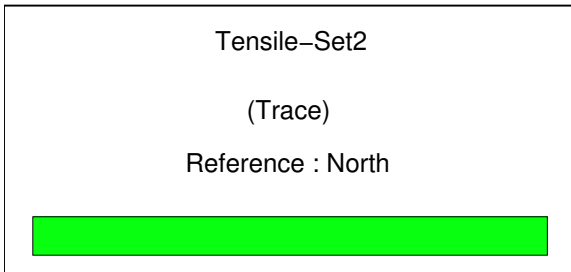
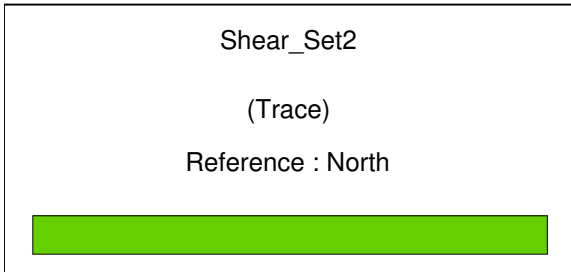
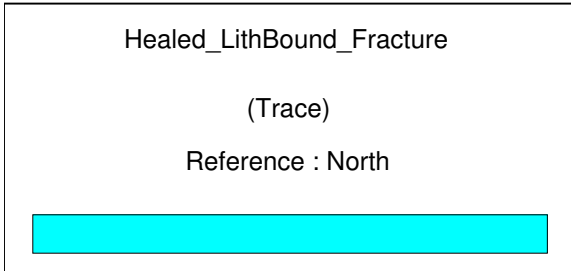
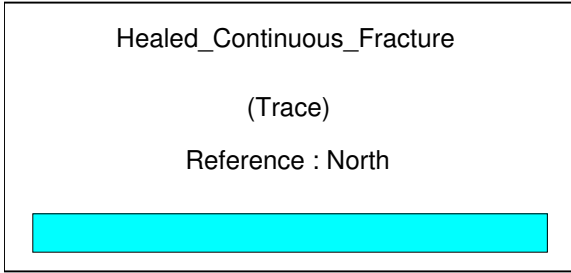
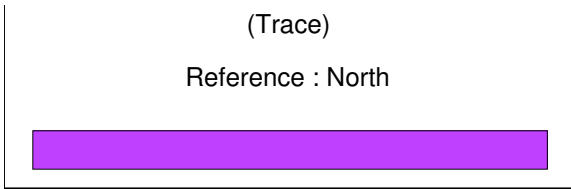
Rm @ Measured Temperature: 23.1ohm.m @	BHT: 100.5degF	Bitsize: 12.25in
Rmf @ Measured Temperature: @	Type Fluid in Hole:	FRESH WATER
Rmc @ Measured Temperature: @	Mud Density: 8.4lbm/gal	

Remarks:

Rm for aperture = 15.7 ohmm
PEX log curves are depth adjusted to match FMI image

Segment racing employed to measure joint/polyganal fracture texture (pink curves)

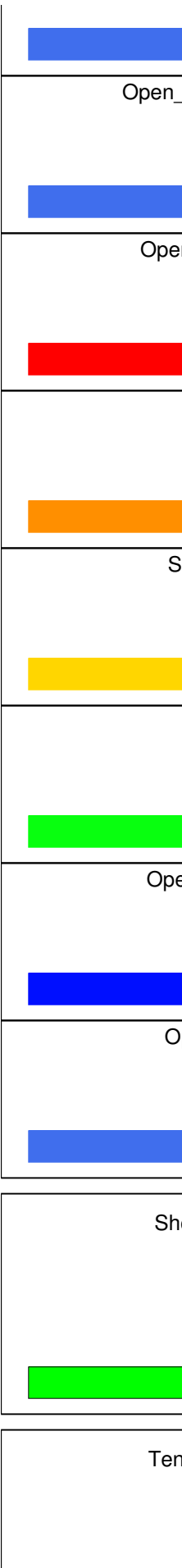




AHT10.WELLED	0.1 (ohm.m) ¹⁰⁰⁰
AHT20.WELLED	0.1 (ohm.m) ¹⁰⁰⁰
AHT30.WELLED	0.1 (ohm.m) ¹⁰⁰⁰
AHT60.WELLED	0.1 (ohm.m) ¹⁰⁰⁰
AHT90.WELLED	0.1 (ohm.m) ¹⁰⁰⁰
SRES@FMI_CAL	0.1 (ohm.m) ¹⁰⁰⁰

Open_LithBound_Fracture Mean Aperture	▲	0.0001 (in)	1
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DPHZ.WELLEDI	0.4 (ft3/ft3) -0.1
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DATA.SEGMENTTRACELENGTH_ITT D en		PartiallyHealed_Fract	Shale	NPOR.WELLEDI	
-5000	()	Mean Aperture		0.4 (ft3/ft3)	-0.1
Net Segment Trace Length ()		0.0001 (in)	1	Water	PEFZ.WELLEDI
Net Segment Porosity ()		PartiallyHealed_Fract	Halite	X Over	
Open_PartiallyHealed_Fracture (Trace)		Mean Aperture	1	Induced Frac	
Reference : North Apertures (10^N in)		0.0001 (in)	1	10 (1/ft) 0	
MD 1 : 10 ft		Open_LithBound_Set2	Social Minera	Breakout TL	
INCLINOME Borehole drift	-5 -4 -3 -2 -1 0 1	Mean Aperture	Social Minera	0 (1/ft) 10	
0 Deg 10		0.0001 (in)	1	Siderite	
HCAL.WELL 10 (in) 20		NetFracPoro ()	Albite	Induced	
Breakout		Open_LithBound_Set3	ELAN_	Breakout TL	
		Mean Aperture	1 (v/v) 0	NetHealTL ()	
		0.0001 (in)	1	MD 1 : 10 ft	
				NetOpenTL ()	

