

HSM-15A_A proVISION Plus Processed Result

* A Mark of Schlumberger

Using the following logs: proVISION, NeoScope

COMPANY: IODP

WELL: HSM_15A_A

RIG: Joides Resolution

COUNTRY: New Zealand

Date Logged: 20-Dec-2017 Date Processed: 27-Dec-2017

Surface Location Longitude: 178° 53' 45.618" E Latitude: 38° 51' 32.202" S

Elevations: DF: 11 m GI: -2637 m

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

Any interpretation, research, analysis, data, results, estimates, or recommendation furnished with the services or otherwise communicated by Schlumberger to the customer at any time in connection with the services are opinions based on inferences from measurements, empirical relationships, and/or assumptions; which, inferences, empirical relationships and/or assumptions are not infallible and with respect to which professionals in the industry may differ. Accordingly, Schlumberger cannot and does not warrant the accuracy, correctness, or completeness of any such interpretation, research, analysis, data, results, estimates, or recommendation. The customer acknowledges that it is accepting the services "as is," that Schlumberger makes no representation or warranty, express or implied, of any kind or description in respect thereto, and that such services are delivered with the explicit understanding and agreement that any action taken based on the services received shall be at its own risk and responsibility, and no claim shall be made against Schlumberger as a consequence thereof.

Svc. Order #:	Techlog Vers: 2017.2	Analyst Manas	Process Date: 27-Dec-2017
---------------	----------------------	---------------	---------------------------

Mud and Borehole Measurements:		
Casing Size:	BHT : 5 degC	Bit Size: 8.5 in
Casing ID:	Type Fluid in Hole: Sea Water	
Casing Weight	Mud density: 8.6 lbm/gal	

Remarks:

1. proVISION Plus processing result
2. T2 cutoff used is for clastics which is 33 ms.
3. Data might be affected due to borehole conditions.

Acquisition & Calibration

Echo Amplitude MC:	358.819	Number Sub-Meas:	3
Frequency MC:	246.64 (kHz)	Number Echoes:	1500;64;32;0;0
Antenna Q MC:	128.809	Number Repeats:	1;32;64;0;0
Temperature MC:	26 (degC)	Echo Spacing:	1200;800;600;0;0 (us)
Loop MC:		Wait Time:	12.7751;0.048;0.016;0 (s)

Processing Parameters

Preprocessing

Stacking Levels:	9
Despike:	yes
Burst Baseline Corr:	no
Bend Ringing Corr:	no
Signal Phasing:	Manual

Inversion


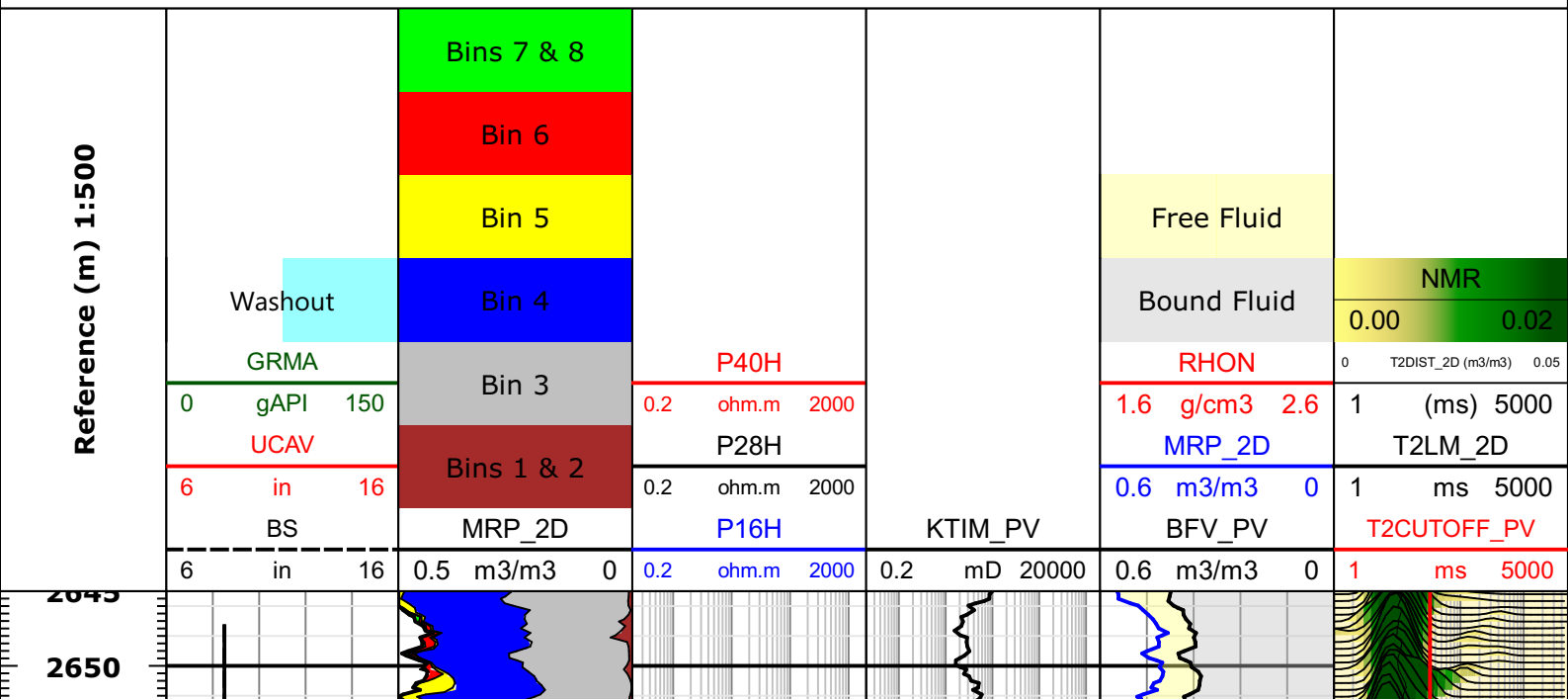
T2 Minimum:	1 (ms)
T2 Maximum:	5000 (ms)
Inversion Components:	30
Interpolation:	64
Sub Measurements:	1;2;3
Start Echo:	2;2;2
EPM Processing:	Auto
T1/T2 Input:	1.5
Polarization Correction:	no
Regularization:	Manual
Regularization Factor:	0.2

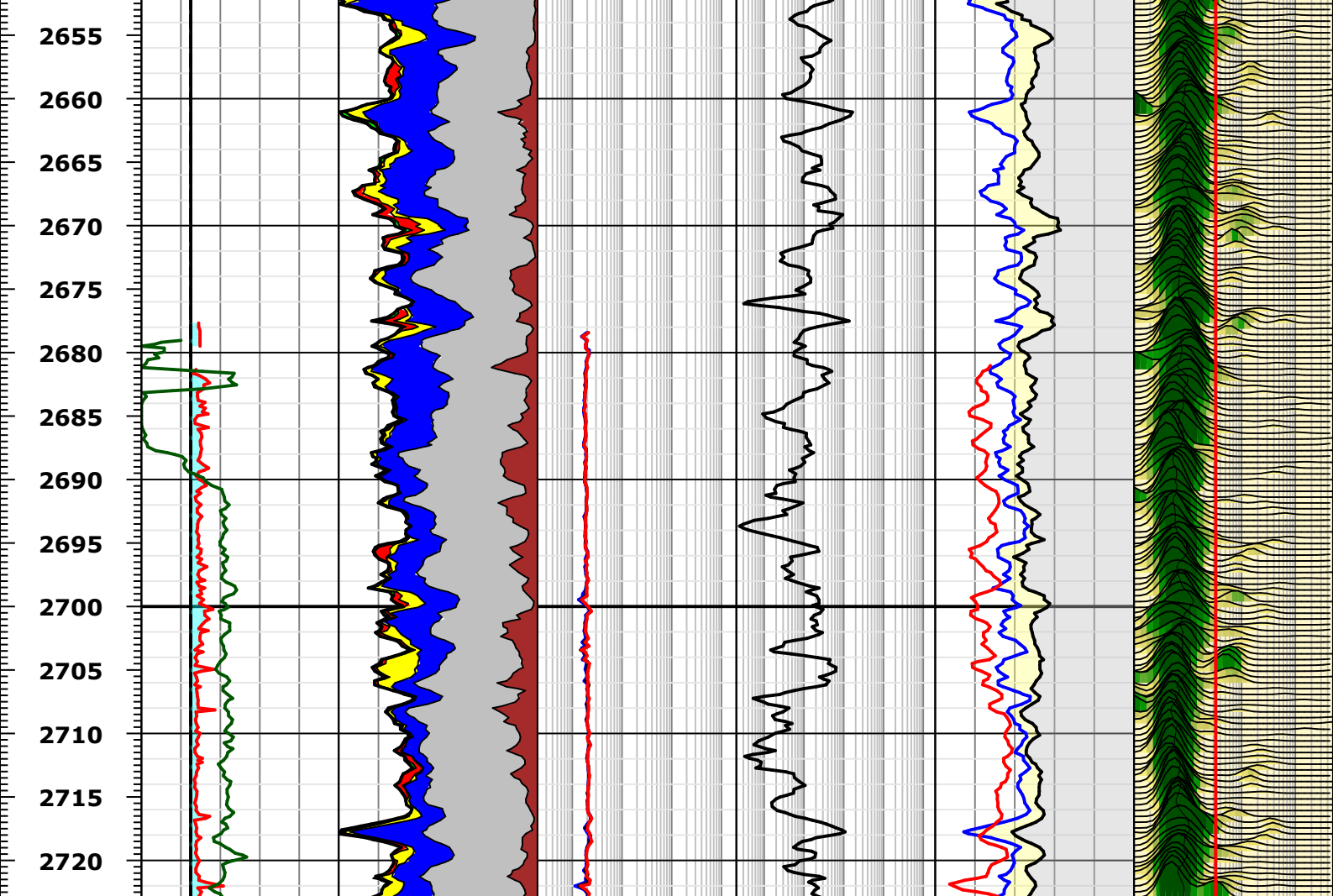
LQC Threshold Parameters

Polarization Corr Threshold:	0.015 (m3/m3)
Bad Hole Porosity:	0.4 (m3/m3)
Bad Hole T2:	10 (ms)

Bound Fluid Permeability and Bin Porosity

Parameters	Permeability	Timur	SDR
T2 Cutoff: 33 (ms)	Computed:	yes	no
	Multiplier:	1	4
	Porosity Exponent:	4	4
	Ratio/T2LM Exp:	2	2
Bin Porosities (ms)	Bound Fluid Min:	0.01 (m3/m3)	
		1	1
		3	10
		10	33
		33	100
		100	300
		300	1000
		1000	5000



Reference (m) 1:500	Washout		Bins 7 & 8						Free Fluid	NMR	
	GRMA		Bin 6						Bound Fluid	0.00	0.02
	0	gAPI 150	Bin 5						RHON	0	T2DIST_2D (m3/m3) 0.05
	UCAV		Bin 4	P40H					1.6 g/cm3 2.6	1	(ms) 5000
	6	in 16	Bin 3	P28H					MRP_2D	T2LM_2D	
	BS		Bins 1 & 2	P16H			KTIM_PV		0.6 m3/m3 0	1	ms 5000
	MRP_2D							BFV_PV	T2CUTOFF_PV		
	6	in 16	0.5 m3/m3 0	0.2 ohm.m 2000	0.2	mD 20000	0.6 m3/m3 0	1	ms 5000		