

2 Net Pay Criteria

Porosity	(ϕ)	>	10%
Shale Volume	(Vsh)	<	45%
Water Saturation	(Sw)	<	50%

3 Interpretation Method

Environmentally and depth corrected log readings were quantitatively evaluated using a quicklook interpretation method.

PARAMETER		DERIVATION
*	Porosity (ϕ)	Neutron - Density
**	Shale Volume (Vsh)	Spontaneous Potential
	True Resistivity (Rt)	HRI Deep Induction Log
	Water Saturation (Sw)	Indonesian Equation
	Tortuosity (a)	Variable (see 4)
	Saturation Exponent (n)	2.0
	Cementation Exponent (m)	Variable (see 4)

* Porosity (ϕ)

Porosities calculated using the density-neutron cross-plot method result in high porosity values over the coal seams and anomalously low water saturations.

In an attempt to resolve this problem the raw density and neutron log data were filtered and blocked, an algebraic statement was then used to define coals:

When: Density is $\leq 2.15 \text{ gcm}^3$
 Neutron is $\geq 0.25 \text{ pu}$

Then: Porosity is = 0

Log calculated porosity is therefore a neutron-density cross plot with a user defined coal flag defaulting porosity to zero over coal beds.

** Shale Volume (Vsh)

Due to numerous coal seams present throughout the EVCM sequence at Flinders 1 the SP log was used to define shaliness rather than the GR log.