

BP004488

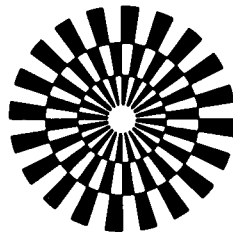
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EVALUATION OF CORE DATA

WELL: 7/12-6

DATE: NOVEMBER 1981



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EVALUATION OF CORE DATA

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COMMENTS

The plugs were attempted to be flushed in cool solvents, using toluene and methanol. No or poor flow was recorded using a pump pressure of 20 bars.

Following this cleaning procedure the core plugs were saturated with simulated formation brine.

Using simulated formation brine the permeability of the core plugs was measured. A pump pressure of 30 bars was used.

Three plugs were then picked out for further measurements.

The flow was switched to depolarised kerosene with a viscosity of 1.50 cp. The confining pressure and the pump pressure required to force oil into the core were recorded. Pump pressure of 20 bars and a confining pressure of 30 bars yielded no recordable flow. At a pump pressure of 29 bars a flow was recorded.

The plugs were then cleaned by reflux extraction using toluene and methanol, and then resaturated with simulated formation brine.

Using simulated formation brine the permeability was measured.

A pump pressure of 5 bar was used.

The flow was switched to depolarised kerosene. The confining pressure and the pump pressure required to force oil into the core plug were recorded. Oil invasion was recorded at the first pump pressure used, which was 5 bars. The confining pressure was then 15 bars.

The plugs were cleaned again by reflux extraction and measured for helium porosity and Klinkenberg corrected air permeability.



Sample list.

Sample no.	Depth (m)
1A	3515.64-75 m BRT
1B	3515.64-75 " .
2	3533.28-38 "
3	3535.80-89 "
4	3539.39-49 "
5	3518.10 "



EVALUATION OF CORE DATA AFTER FLUSHING

THE PLUGS IN COOL SOLVENTS.

Sample no	K brine (md)	Confining pressure (bar) (when oil was first forced into the plug)	Pump pressure (bar) (when oil invasion was first recordable)	"Koil" (md)
1 A	0,00042	40	29	0,000038
1B	0,00044			
2	0,051			
3	0,00021	40	29	0,000017
4	0,0024	40	29	0,00010
5	0,0055			





EVALUATION OF CORE DATA AFTER
CLEANING THE PLUGS BY REFLUX
EXTRACTION.

Sample no	K brine (md)	Confining pressure (bar) (When oil was forced into the plug)	Pump pressure (bar) (the first pump pressure applied to the plug)	"Koil" (md)
1A	0,00062	15	5	0,00059
3	0,00073	15	5	0,00054
4	0,0078	15	5	0,0022



EVALUATION OF CORE DATA AFTER

CLEANING THE PLUGS AGAIN BY

REFLUX EXTRACTION.



POROSITY

Sample no.	% Porosity	Grain density
1A	8,4	2,73
3	7,6	2,69
4	9,8	2,70



KLINKENBERG CORRECTED AIR PERMEABILITY

Sample no.	(Mean pressure) ⁻¹ (atm.abs.) ⁻¹	Air permeability md	Klinkenberg corrected md
1A	0,580	0,818	
	0,453	0,778	
	0,372	0,755	0,641
3	0,511	0,190	
	0,410	0,182	
	0,342	0,177	0,152
4	0,666	0,981	
	0,503	0,900	
	0,405	0,861	0,671