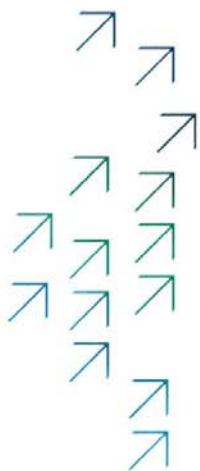




**Weatherford**  
LABORATORIES



SPECIAL CORE ANALYSIS FINAL REPORT

of

*MAGNETIC-I*

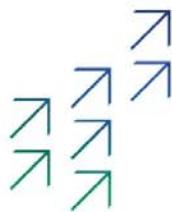
for

*QGC - A BG GROUP BUSINESS*

WEATHERFORD LABORATORIES (AUSTRALIA) PTY LTD



**Higher  
Standards**





**Weatherford®**  
LABORATORIES

5<sup>th</sup> May 2016

QGC – A BG Group Business  
Level 25, 275 George St  
Brisbane QLD 4000

Attention: Heidi Sutton

**FINAL REPORT: AB-76967**  
**Magnetic-1**

**CLIENT REFERENCE:** Call Off Order 4800049867

**MATERIAL:** Core Plugs

**WORK REQUIRED:** Special Core Analysis

Please direct technical inquiries regarding this work to the signatory below under whose supervision the work was conducted.

**KEVIN H FLYNN**  
General Manager  
SCAL Technical Director

Weatherford Laboratories shall not be liable or responsible for any loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from any information or interpretation given in this report. In no case shall Weatherford Laboratories be responsible for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report.

## CONTENTS

Contents .....	1
Introduction.....	3
Summary of Test Program.....	4
Sample Preparation and Base Parameter Determination .....	5
Cleaning and Drying .....	5
Porosity .....	5
Permeability to Air.....	6
Sample Saturation .....	6
Base Parameter Results.....	7
Electrical Properties and Capillary Pressure.....	10
Formation Factor.....	10
Nuclear Magnetic Resonance .....	11
Resistivity Index and Capillary Pressure .....	13
Electrical Properties and Capillary Pressure Results .....	14
NMR Test Results.....	17
Resistivity Index Test Results.....	58
Capillary Pressure Test Results .....	68
Mercury Injection Capillary Pressure .....	78
Mercury Injection Capillary Pressure Test Results .....	80

## **APPENDIX**

- I. Fluid Properties
- II. Equipment Schematics
- III. Plug Photography

## **INTRODUCTION**

This final report presents the results of a special core analysis study performed on plug samples from the Magnetic-1 well. Core plugs utilised were drilled during the routine core analysis study. All core plugs were 1½" diameter.

Following discussions between QGC and Weatherford Laboratories representatives, the test program was refined to that presented in summary format in Chapter 2 of this report. All subsequent chapters encompass descriptions of procedures and test results. The Appendices includes ancillary information pertinent to the study. All petrology analysis has been reported in a separate report.

## SUMMARY OF TEST PROGRAM

Sample	Depth	Test Sequence																				
		Sample Saturation		NMR T2 measurement on fully saturated plug		Porosity, Brine Perm & Formation Factor @ OB (400psi)		Porosity, Brine Perm & Formation Factor @ OB (1500psi)		Porosity, Brine Perm & Formation Factor @ OB (2500psi)		Porosity, Brine Perm & Formation Factor @ OB (4000psi)		Air-Brine Capillary Pressure porous plate at a single capillary pressure of 1000psi P <sub>c</sub> @ OB		Resistivity Index at overburden pressure (per liquid saturation)		NMR T2 distribution on desaturated sample		Set 1		Set 2
R2	2936.60	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
R3	2936.91	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
R8	2939.22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R9	2939.61	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R17	2942.30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R18	2942.60	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
R27	2945.53	X	X	X	X	X	X	X										X	X	X		
R28	2945.80	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R37	2948.89	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R38	2949.30	X	X	X	X	X	X	X										X	X	X		
R43	2950.88	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R44	2951.29	X	X																		X	
R53	2954.30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R54	2954.60	X	X	X	X	X	X	X										X	X	X		
R62	2958.30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R63	2958.60	X	X																		X	
R65	2959.19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R68	2959.90	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R77	2962.91	X	X																		X	
R80	2963.92	X	X																		X	
R86	2965.90	X	X																		X	
R91	2967.60	X	X	X	X	X	X	X										X	X	X		
R98	2970.89	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		
R99	2971.30	X	X	X	X	X	X	X										X	X	X		
R107	2973.91	X	X																		X	
R109	2974.61	X	X																		X	
R118	2977.55	X	X																		X	
R120	2978.30	X	X																		X	
R121	2978.61	X	X																		X	
R122	2978.91	X	X																		X	
R124	2979.60	X	X																		X	
R128	2980.93	X	X																		X	
R138	2990.53	X	X																		X	
R139	2990.58	X	X																		X	
R151	3005.55	X	X																		X	
R152	3005.60	X	X																		X	
	Total	36	36	19	19	19	19	19	13	13	13	13	13	6	6	36						

## **SAMPLE PREPARATION AND BASE PARAMETER DETERMINATION**

### **Cleaning and Drying**

All samples selected were cleaned during the routine core analysis program in a modified soxhlet system (Appendix II) using a chloroform:methanol azeotropic solvent mixture. Cleaning continued until tests for salt (silver nitrate precipitation) showed negative. The clean samples were dried to constant weight in an oven at 60°C and 40% relative humidity. Once dry, the samples were cooled to room temperature in an airtight chamber.

### **Porosity**

Porosity was determined in two stages. Initially, each sample was placed in a sealed matrix cup. Helium held at 100 psi reference pressure was then introduced to the cup. From the resultant pressure drop the unknown grain volume was determined from Boyle's Law.

$$\begin{aligned} P_1 V_1 &= P_2 V_2 \\ \Rightarrow P_1 V_r &= P_2 (V_r + V_c + V_l - V_g) \end{aligned}$$

where	$P_1$	=	initial pressure (psig)
	$V_r$	=	reference cell volume ( $\text{cm}^3$ )
	$V_c$	=	matrix cup volume ( $\text{cm}^3$ )
	$V_l$	=	line volume ( $\text{cm}^3$ )
	$V_g$	=	grain volume ( $\text{cm}^3$ )
	$P_2$	=	final pressure (psig)

and  $\rho = \frac{W_t}{V_g}$

where	$\rho$	=	grain density ( $\text{g}/\text{cm}^3$ )
	$W_t$	=	weight of sample (g)
	$V_g$	=	grain volume ( $\text{cm}^3$ )

Samples were then placed into individual thick walled rubber sleeves and the assembly loaded into a hydrostatic cell. With an ambient pressure (400 psi) applied to the sample, helium held at 100 psi reference pressure was released into the samples pore volume. The resultant pressure drop was used to determine pore volume at ambient. As requested helium porosity at overburden pressure was not determined.

$$\begin{aligned}
 Vb &= Vp + Vg \\
 \text{Ambient Porosity \%} &= \frac{Vp}{Vb} \times 100 \\
 \text{where } & \begin{aligned} Vp &= \text{ambient pore volume (cm}^3\text{)} \\ Vb &= \text{ambient bulk volume (cm}^3\text{)} \\ Vg &= \text{grain volume (cm}^3\text{)} \end{aligned}
 \end{aligned}$$

### Permeability to Air

The selected samples were placed into a Hassler cell (Appendix II) with an ambient confining pressure of 400 psi applied. The confining pressure was used to prevent bypassing of air around the sample when the measurement was made. In order to determine permeability, a known air pressure was applied to the upstream face of each sample, creating a flow of air through the core plug. Air permeability for each core sample was calculated using Darcy's Law through knowledge of the upstream pressure, flow rate, viscosity of air and sample dimensions.

$$\begin{aligned}
 Ka &= \frac{2000.BP.\mu.q.L}{(P_1^2 - P_2^2).A} \\
 \text{where } & \begin{aligned} Ka &= \text{air permeability (milliDarcy's)} \\ BP &= \text{barometric pressure (atmospheres)} \\ \mu &= \text{gas viscosity (cP)} \\ q &= \text{flow rate (cm}^3/\text{s) at barometric pressure} \\ L &= \text{sample length (cm)} \\ P_1 &= \text{upstream pressure (atmospheres)} \\ P_2 &= \text{downstream pressure (atmospheres)} \\ A &= \text{sample cross sectional area (cm}^2\text{)} \end{aligned}
 \end{aligned}$$

As requested air permeability was not determined at overburden pressure.

### Sample Saturation

The selected samples were initially vacuum saturated with synthetic formation brine, followed by pressure saturation at 2000 psi for a minimum of 24 hours. To determine complete saturation, the saturations were determined by mass balance and compared with that of porosimetry. In all cases samples were deemed suitable to proceed with the test program.



**QGC – A BG GROUP BUSINESS  
MAGNETIC-1**

**Base Parameter Results**

## BASE PARAMETERS

**Client** : QGC - A BG Group Business      **Date** : 10/09/2015  
**Well** : Magnetic-1      **File** : AB-76967  
**Samples** : RCA plugs      **Cleaning Method** : Chloro-Meth  
**Core Int 1**: 2936.00-2972.41m      **Drying Method** : Humidity Dry  
**Core Int 1**: 2972.41-3008.41m

<b>Sample Number</b>	<b>Depth (metres)</b>	<b>Dir</b>	<b>Ambient Porosity (Percent)</b>	<b>Grain Density (g/cm<sup>3</sup>)</b>	<b>Ambient Permeability (mD)</b>	<b>Remarks</b>
R2	2936.60	H	11.7	2.65	0.57	
R3	2936.91	H	11.7	2.65	0.53	
R8	2939.22	H	11.5	2.66	0.32	
R9	2939.61	H	10.8	2.65	0.36	
R17	2942.30	H	11.1	2.66	0.33	
R18	2942.60	H	11.3	2.66	0.34	
R27	2945.53	H	8.4	2.66	0.080	
R28	2945.80	H	9.0	2.65	0.18	
R37	2948.89	H	7.8	2.67	0.11	
R38	2949.30	H	11.6	2.66	0.25	
R43	2950.88	H	8.2	2.68	0.18	congl
R44	2951.29	H	8.7	2.66	0.33	congl, irreg
R53	2954.30	H	11.6	2.66	0.44	
R54	2954.60	H	9.5	2.67	0.18	
R62	2958.30	H	4.3	2.65	0.20	congl
R63	2958.60	H	2.6	2.67	0.051	congl, intbd, irreg
R65	2959.19	H	8.4	2.65	0.13	
R68	2959.90	H	10.4	2.65	0.28	
R77	2962.91	H	9.3	2.65	0.19	irreg
R80	2963.92	H	9.4	2.66	0.25	congl, irreg
R86	2965.90	H	6.8	2.65	0.25	congl, irreg
R91	2967.60	H	7.9	2.66	0.52	congl
R98	2970.89	H	6.0	2.66	0.52	congl
R99	2971.30	H	8.4	2.66	0.73	congl
R107	2973.91	H	7.9	2.68	0.16	congl, irreg
R109	2974.61	H	4.4	2.67	0.049	congl, irreg
R118	2977.55	H	3.0	2.67	0.37	congl, irreg
R120	2978.30	H	4.3	2.66	0.15	congl, irreg
R121	2978.61	H	3.4	2.66	0.061	congl, intbd, irreg

Sample Number	Depth (metres)	Dir	Ambient Porosity (Percent)	Grain Density (g/cm <sup>3</sup> )	Ambient Permeability (mD)	Remarks
R122	2978.91	H	2.6	2.67	0.019	congl, intbd, irreg
R124	2979.60	H	2.9	2.67	0.066	congl, intbd, irreg
R128	2980.93	H	0.9	2.71	0.0019	congl, intbd
R138	2990.53	H	4.5	2.66	0.0026	
R139	2990.58	H	4.7	2.66	0.0027	
R151	3005.55	H	5.5	2.66	0.0069	
R152	3005.60	H	6.2	2.67	0.0032	
			irreg	irregular		
			congl	conglomerate		
			intbd	interbedded		

## **ELECTRICAL PROPERTIES AND CAPILLARY PRESSURE**

### **Formation Factor**

On completion of base parameter and pressure saturation with synthetic formation brine, the selected samples continued on for formation resistivity factor analyses.

Each fully brine saturated sample was sandwiched between a pair of stainless steel core holder platens. These platens also act as the current carrying and potential electrodes. This assembly was placed into a snugly fitting rubber overburden sleeve and then loaded into a Hydrostatic-type core holder. Selected samples underwent analysis at 400, 1500 and 2500 psi before applying the overburden pressure of 4000 psi. Confining pressures were gradually applied and pore volume reduction determined by the pore volume squeeze out volume (see Appendix II for schematic).

Synthetic brine (Appendix I) was slowly flowed through each sample at low rate. During this process, sample resistivity was monitored on a digi-bridge capable of measuring sample resistance to 0.001 (ohms) accuracy. In each case, the current frequency was selected to yield minimum phase angles, thus ensuring maximum electrical contact (between each sample and the current carrying the potential electrodes). Values of sample resistance ( $R_c$ ) and effluent brine resistivity ( $R_w$ ) were recorded daily. Each sample was deemed to be at ionic equilibrium when three consecutive daily readings were recorded within 1%.

From these stable data, the following results were recorded:

$$Ro = \frac{A.R_c}{100L}$$

where  $Ro$  = sample resistivity (ohm.m)  
 $R_c$  = sample resistance (ohms)  
 $L$  = electrode gap (sample length - cm)  
 $A$  = cross sectional area ( $\text{cm}^2$ )  
100 = units conversion

Formation resistivity factor was calculated using the following equations:

$$FF = \frac{a}{\Phi^m}$$

$$\text{and } FF = \frac{Ro}{R_w}$$

where  $R_w$  = brine resistivity (ohm.m)  
 $a$  = intercept (assumed = 1)  
 $m$  = cementation exponent

$$\text{and } \Phi = \text{porosity (fraction)}$$

The brine resistivity ( $R_w$ ) was accurately determined by a NATA certified fluids laboratory.

During the formation factor experiment the permeability was calculated using Darcy's Law through knowledge of the differential flooding pressure, flow rate, viscosity of brine and the sample dimensions.

$$K_w = \frac{14696 q L \mu T}{\Delta P A}$$

<i>where</i>	
	14696 = units conversion
	$K_w$ = permeability to brine
	$q$ = flow rate ( $cm^3/s$ )
	$\Delta P$ = differential flooding pressure (psig)
	$L$ = sample length (cm)
	$A$ = sample cross sectional area ( $cm^2$ )
	$\mu T$ = brine viscosity (cP) at $T$ ( $^{\circ}C$ )

On completion of formation factor and brine permeability selected samples were increased to the next scheduled overburden pressure and the procedure repeated until samples had reached a confining pressure of 4000 psi.

### Nuclear Magnetic Resonance

NMR analysis was performed using a 2 MHz Magritek NMR spectrometer. The spectrometer operates at a magnet strength of 0.046 Tesla and can accommodate plug samples up to 38mm diameter and 6cm long. As requested no data interpretation has been performed on these samples.

A CPMG sequence (Carr-Purcell-Meiboom-Gill) is used to measure T2. It comprises of a 90° magnetic pulse, followed by a train of 180° magnetic pulses. Thus pulse sequence eliminates effects due to local variations in magnetic field. Therefore the signal decay is due to interactions with neighbouring spins and surfaces. The CPMG sequence eliminates dephasing effects due to magnet inhomogeneities and therefore measures the true T2 of the sample. In a porous rock system, there will be a continuous range of pore sizes, rather than several discrete sizes. This means that the CPMG echo-train comprises of a continuous range of relaxation times. Each pore-size has a distinctive T2 value. The echo-train corresponding to one particular pore-size will have a characteristic T2 value and signal amplitude proportional to the amount of fluid contained in pores of that size. For a pore system with a continuous range of pore sizes, each pore size has a corresponding T2 value and signal amplitude. The resulting echo-train therefore consists of a continuous distribution of T2 values each with different signal amplitudes. This cannot be deconvoluted by fitting to a continuous distribution of exponential decays, it is mathematically too difficult. The problem is solved by selecting 50 T2 values over a specified time range evenly spaced in logarithmic time. The echo-train is fitted using these values, calculating the signal amplitude associated with each one. The result is plotted as a T2 distribution. Resonance Instruments WinDXP software is used to obtain T2 distributions from the CPMG echo-train data. The WinDXP software uses a procedure called zeroth order regularisation to obtain the distributions. The T2 distribution obtained from rocks saturated with a single fluid phase wetting the surface of the pores reflects the pore-size distribution of the rocks where pore-size is measured as the ratio between its surface area and volume.

$$\frac{1}{T_2} = \rho_2 \frac{s}{v}$$

Where

$T_2$	=	$T_2$ relaxation time
$\rho_2$	=	surface relaxation constant
$s$	=	pore surface area
$v$	=	pore volume

NMR porosity was calculated by comparing the total amplitude of the signal obtained from each sample (by summing the amplitudes in the saturated sample T2 distribution) to that of a known standard. In this case the reference standard was a sealed glass phial containing formation brine. The number of scans used for the reference sample are selected to allow the signal amplitude of the sample and reference to be directly comparable.

NMR measures the fluid within the sample, whereas helium porosity is a measure of accessible pore space. Therefore the measured NMR porosity and helium porosity may be different, in particular for samples containing isolated pores, clays and bitumens or asphaltines.

The selected samples were desaturated by single point porous plate capillary pressure. NMR T2 measurements were then carried out on all desaturated samples. Desaturated sample NMR T2 distributions indicate bound water in micropores.

T2 cut-offs define the transition point from free to bound fluid. T2 cut-offs can be calculated from the point where the end-point brine saturation ( $Sw_i$ ) intercepts the saturated state T2 curves such that:

$$Sw_{irr} = \sum_{T_2=0.1ms}^{T_2cutoffs} A(T_2)$$

Where

$A$	=	signal amplitude in the brine saturated $T_2$ distribution
$SW_{irr}$	=	irreducible water saturation after desaturation

This approach to calculating T2 cut-offs assumes that the pore network is similar in structure to a bundle of capillary tubes.

## REFERENCES

COATES, G.R., MILLER, M., GILLEN, M., and HENDERSON, G. (1991)- The MRIL in Conoco 33-1: an Investigation of a New Magnetic Resonance Imaging Log. Trans. 32nd Annual Logging Symposium, June 16, Midland, TX, paper DD.

KENYON, W.E., DAY, P.I., STRALEY, C., and WILLEMSSEN, J.F. (1986) – A Three-Part Study of NMR Longitudinal Relaxation Properties of Water-Saturated Sandstones. SPE Formation Evaluation, September.

PRESS, W.H., TEUKOLSKY, W.T., VETTERLING, W.T and FLANNERY, B.P., Numerical recipes in FORTRAN (Second Edition) ISBN -521-43064-1.

# Resistivity Index and Capillary Pressure

Upon completion of the preceding formation factor and NMR analyses the data was reviewed and samples selected for single point and full curve desaturation in conjunction with resistivity index. The top end-face port was connected to a supply of humidified air and the bottom port connected to a graduated receiving tube (Appendix II). The samples were de-saturated by gradually increasing the displacing fluid pressure to the samples. The actual pressures utilised were inversely proportional to the individual sample permeability data. The capillary pressure curve was terminated at 1000 psi. A small amount of oil was placed into the collection tubes to prevent any potential brine loss by evaporation. Sample resistances ( $R_t$ ) were measured at successive decreasing brine saturations, which were calculated from the following equation:

$$\text{Water Saturation (\%)} = \frac{\text{Pore Volume @ OB (cm}^3\text{)} - \text{Brine Expelled (cm}^3\text{)}}{\text{Pore Volume @ OB (cm}^3\text{)}} \times 100$$

Capillary pressure curves plot water saturation (x-axis) against applied displacing fluid pressure. The ratio of the sample resistance ( $R_c$ ) values to the previously determined FF values (at 100% saturation) were used to calculate the formation resistivity indices.

$$Rt = \frac{A.Rc}{100.L}$$

where  $Rc$  = sample resistance (ohms)  
 $Rt$  = resistivity of a partially brine saturated sample (ohm.m)  
 100 = units conversion

$$and \quad RI = \frac{Rt}{Rw.FF}$$

where       $RI$       =      resistivity index  
                $Rw$       =      resistivity of brine ( $\text{ohm.m}$ )  
                $FF$       =      formation factor

(modified from standard Archie equation to include  $R_w$ )

These RI values (for each sample) were plotted against brine saturation ( $S_w$ ) on graphs with logarithmic axes and the gradient of the best-fit line through the co-ordinate (1.0, 1.0) was calculated. Each gradient is quoted as the saturation exponent ( $n$ ) for that sample in accordance with Archie's formula.

$$RI = \frac{1}{Sw^n}$$

Samples that underwent single point desaturation then proceeded with effective permeability to gas determination and NMR at residual water saturation analysis.



**QGC – A BG GROUP BUSINESS  
MAGNETIC-1**

**Electrical Properties and Capillary Pressure Results**

## ELECTRICAL PROPERTIES SUMMARY



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Rw of Saturant** 0.22 at 25°C  
**Overburden** Various

Sample Number	Depth (metres)	Ambient 400 psi			Overburden 1500 psi			Overburden 2500 psi			Overburden 4000 psi		
		Ambient			Formation			Cementation			Formation		
		Effective Porosity	Formation Factor FF	Cementation Exponent m	Porosity	Formation Factor FF	Cementation Exponent m	Porosity	Formation Factor FF	Cementation Exponent m	Porosity	Formation Factor FF	Cementation Exponent m
R2	2936.60	11.7	66.4	1.96	11.1	78.3	1.98	10.9	87.5	2.02	10.8	96.3	2.06
R3	2936.91	11.7	61.8	1.92	11.3	74.2	1.98	11.1	79.9	2.00	11.0	86.1	2.02
R8	2939.22	11.5	61.7	1.91	11.1	72.2	1.95	10.9	77.9	1.96	10.7	90.3	2.01
R9	2939.61	10.8	58.2	1.82	10.2	77.0	1.90	10.0	84.6	1.93	9.9	99.1	1.99
R17	2942.30	11.1	55.3	1.83	10.6	67.6	1.88	10.4	75.2	1.91	10.2	89.5	1.97
R18	2942.60	11.3	55.0	1.84	10.9	67.2	1.90	10.6	76.5	1.93	10.4	84.9	1.97
R27	2945.53	8.4	77.0	1.75	8.0	94.4	1.80	7.9	108	1.84	7.8	124	1.89
R28	2945.80	9.0	70.0	1.76	8.4	93.4	1.83	8.2	103	1.85	8.0	110	1.86
R37	2948.89	7.8	58.9	1.60	7.2	84.1	1.68	7.0	92.8	1.71	6.9	98.4	1.72
R38	2949.30	11.6	66.1	1.94	11.0	76.4	1.97	10.9	90.0	2.03	10.7	98.0	2.05
R43	2950.88	8.2	83.5	1.77	7.9	125	1.90	7.7	184	2.03	7.6	192	2.04
R53	2954.30	11.6	58.2	1.89	11.0	81.3	1.99	10.8	89.5	2.02	10.7	94.5	2.04
R54	2954.60	9.5	60.9	1.75	9.1	72.0	1.78	8.9	76.0	1.79	8.8	87.8	1.84
R62	2958.30	4.3	185	1.66	3.9	236	1.69	3.7	290	1.72	3.6	294	1.72
R65	2959.19	8.4	84.6	1.80	8.0	104	1.84	7.8	117	1.87	7.7	140	1.92
R68	2959.90	10.4	71.9	1.89	9.8	89.6	1.94	9.7	101	1.98	9.6	115	2.02
R91	2967.60	7.9	104	1.83	7.4	129	1.86	7.3	143	1.90	7.2	164	1.93
R98	2970.89	6.0	140	1.75	5.5	166	1.77	5.4	188	1.79	5.3	197	1.80
R99	2971.30	8.4	89.3	1.81	7.5	113	1.82	7.3	119	1.83	7.2	150	1.90

‡ Ambient porosity data measured by helium porosimetry on humidity dried plug samples

## ***BRINE PERMEABILITY AND POROSITY SQUEEZOUT***

**Client** : QGC - A BG Group Business  
**Well** : Magnetic-1

**Date** 6/01/2016  
**File** AB-76967

Sample Number	Depth (metres)	400	1500	2500	4000	Grain Density	Ambient Permeability	400	1500	2500	4000	Remarks
		Effective Porosity	Porosity Squeezout	Porosity Squeezout	Porosity Squeezout	(g/cm <sup>3</sup> )	(mD)	Liquid Permeability	Liquid Permeability	Liquid Permeability	Liquid Permeability	
		(Percent)	(Percent)	(Percent)	(Percent)		(mD)	(mD)	(mD)	(mD)	(mD)	
R2	2936.60	11.7	11.1	10.9	10.8	2.65	0.57	0.056	0.011	0.0067	0.0048	
R3	2936.91	11.7	11.3	11.1	11.0	2.65	0.53	0.033	0.0098	0.0058	0.0035	
R8	2939.22	11.5	11.1	10.9	10.7	2.66	0.32	0.022	0.0071	0.0048	0.0025	
R9	2939.61	10.8	10.2	10.0	9.9	2.65	0.36	0.033	0.0064	0.0034	0.0021	
R17	2942.30	11.1	10.6	10.4	10.2	2.66	0.33	0.023	0.0040	0.0022	0.0011	
R18	2942.60	11.3	10.9	10.6	10.4	2.66	0.34	0.025	0.0064	0.0027	0.0015	
R27	2945.53	8.4	8.0	7.9	7.8	2.66	0.080	0.0026	0.00038	0.00017	0.000090	
R28	2945.80	9.0	8.4	8.2	8.0	2.65	0.18	0.014	0.0013	0.00050	0.00030	
R37	2948.89	7.8	7.2	7.0	6.9	2.67	0.11	0.021	0.0006	0.00025	0.00011	
R38	2949.30	11.6	11.0	10.9	10.7	2.66	0.25	0.017	0.0034	0.0020	0.0012	
R43	2950.88	8.2	7.9	7.7	7.6	2.68	0.18	0.027	0.0042	0.0019	0.00096	
R53	2954.30	11.6	11.0	10.8	10.7	2.66	0.44	0.028	0.013	0.0080	0.0050	
R54	2954.60	9.5	9.1	8.9	8.8	2.67	0.18	0.0097	0.0013	0.00059	0.00029	
R62	2958.30	4.3	3.9	3.7	3.6	2.65	0.20	0.018	0.0016	0.00063	0.00016	
R65	2959.19	8.4	8.0	7.8	7.7	2.65	0.13	0.0094	0.0018	0.00092	0.00057	
R68	2959.90	10.4	9.8	9.7	9.6	2.65	0.28	0.033	0.0044	0.0028	0.0017	
R91	2967.60	7.9	7.4	7.3	7.2	2.66	0.52	0.019	0.0046	0.0015	0.00067	
R98	2970.89	6.0	5.5	5.4	5.3	2.66	0.52	0.074	0.0084	0.0029	0.0012	
R99	2971.30	8.4	7.5	7.3	7.2	2.66	0.73	0.054	0.0047	0.0018	0.00065	

‡ Ambient porosity data measured by helium porosimetry on humidity dried plug samples



**QGC – A BG GROUP BUSINESS  
MAGNETIC-1**

**NMR Test Results**

**2MHz - NMR T2****Plugs at 100% Sw and Swir**

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw

Sample ID	R2	R3	R8	R9	R17	R18	R27	R28	R37
<b>Core Data</b>									
Sample Type	Plugs								
Depth (meter)	2936.60	2936.91	2939.22	2939.61	2942.30	2942.60	2945.53	2945.80	2948.89
Caliper Bulk Volume (cc)	55.36	55.35	55.72	55.77	55.77	55.81	56.04	55.88	55.79
Net Confining Stress (Psi)	Ambient								
Sample Temperature	Ambient								
Helium Porosity (%)	11.7	11.7	11.5	10.8	11.1	11.3	8.4	9.0	7.8
<b>NMR Data</b>									
Saturation (mL) @ Sw=100%	6.95	7.00	6.94	6.37	6.72	6.90	5.49	5.61	5.68
Total Porosity (% of BV)	12.6	12.6	12.5	11.4	12.1	12.4	9.8	10.0	10.2
Clay Bound Water (% of BV)	0.7	1.0	1.2	0.9	1.1	1.7	2.2	1.5	3.3
Effective Porosity (% of BV)	11.9	11.6	11.2	10.6	11.0	10.7	7.6	8.6	6.8
Saturation (frac) @ Sw=100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
T2 log mean @ Sw=100%	25.96	23.73	21.93	25.43	16.90	8.73	7.42	12.14	2.88
T2 Saturation (mL) @ Swir		2.55	2.77	2.41	3.04	3.06		3.11	3.21
Saturation (% of BV) @ Swir		4.6	5.0	4.3	5.4	5.5		5.6	5.8
T2 Saturation (frac), Swir		0.364	0.400	0.378	0.452	0.443		0.555	0.565
T2 log mean, Swir		2.46	1.77	2.23	2.06	1.42		1.97	1.02
Clay Bound Water Cutoff (ms)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
T2 Cutoff (ms)		8.39	9.51	10.01	9.29	5.58		11.50	2.91

**2MHz - NMR T2****Plugs at 100% Sw and Swir**

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw

Sample ID	R38	R43	R44	R53	R54	R62	R63*	R65	R68
<b>Core Data</b>									
Sample Type	Plugs								
Depth (meter)	2949.30	2950.88	2951.29	2954.30	2954.60	2958.30	2958.60	2959.19	2959.90
Caliper Bulk Volume (cc)	55.83	55.89	55.84	55.80	55.87	56.05	55.89	56.15	55.86
Net Confining Stress (Psi)	Ambient								
Sample Temperature	Ambient								
Helium Porosity (%)	11.6	8.2	8.7	11.6	9.5	4.3	2.6	8.4	10.4
<b>NMR Data</b>									
Saturation (mL) @ Sw=100%	6.75	5.04	5.39	6.74	6.05	3.15	3.69	5.32	6.20
Total Porosity (% of BV)	12.1	9.0	9.7	12.1	10.8	5.6	6.6	9.5	11.1
Clay Bound Water (% of BV)	0.8	1.0	1.1	0.5	1.9	1.9	4.1	1.2	0.7
Effective Porosity (% of BV)	11.3	8.0	8.6	11.6	8.9	3.7	2.5	8.2	10.4
Saturation (frac) @ Sw=100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
T2 log mean @ Sw=100%	8.53	16.71	13.59	27.58	10.30	2.97	1.11	11.58	21.30
T2 Saturation (mL) @ Swir		2.25		2.30		2.39		2.59	2.39
Saturation (% of BV) @ Swir		4.03		4.12		4.27		4.62	4.28
T2 Saturation (frac), Swir		0.447		0.341		0.759		0.487	0.386
T2 log mean, Swir		2.24		3.01		1.33		1.72	2.40
Clay Bound Water Cutoff (ms)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
T2 Cutoff (ms)		12.33		8.82		9.33		7.39	8.19

\*Sample is fractured

**2MHz - NMR T2****Plugs at 100% Sw and Swir**

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw

Sample ID	R77	R80	R86	R91	R98	R99	R107	R109	R118
<b>Core Data</b>									
Sample Type	Plugs								
Depth (meter)	2962.91	2963.92	2965.90	2967.60	2970.89	2971.30	2973.91	2974.61	2977.55
Caliper Bulk Volume (cc)	55.80	55.82	55.90	56.12	55.94	45.88	56.22	56.22	56.14
Net Confining Stress (Psi)	Ambient								
Sample Temperature	Ambient								
Helium Porosity (%)	9.3	9.4	6.8	7.9	6.0	8.4	7.9	4.4	3.0
<b>NMR Data</b>									
Saturation (mL) @ Sw=100%	5.72	5.87	4.38	5.14	3.78	4.41	5.42	2.92	2.59
Total Porosity (% of BV)	10.2	10.5	7.8	9.2	6.8	9.6	9.6	5.2	4.6
Clay Bound Water (% of BV)	1.3	1.1	1.6	2.4	2.2	2.2	2.6	0.7	1.4
Effective Porosity (% of BV)	9.0	9.4	6.3	6.8	4.5	7.4	7.0	4.5	3.2
Saturation (frac) @ Sw=100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
T2 log mean @ Sw=100%	8.25	17.03	4.86	3.05	2.25	3.35	5.79	7.92	3.24
T2 Saturation (mL) @ Swir					2.43				
Saturation (% of BV) @ Swir					4.35				
T2 Saturation (frac), Swir					0.64				
T2 log mean, Swir					1.46				
Clay Bound Water Cutoff (ms)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
T2 Cutoff (ms)					2.56				

**2MHz - NMR T2****Plugs at 100% Sw and Swir**

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw

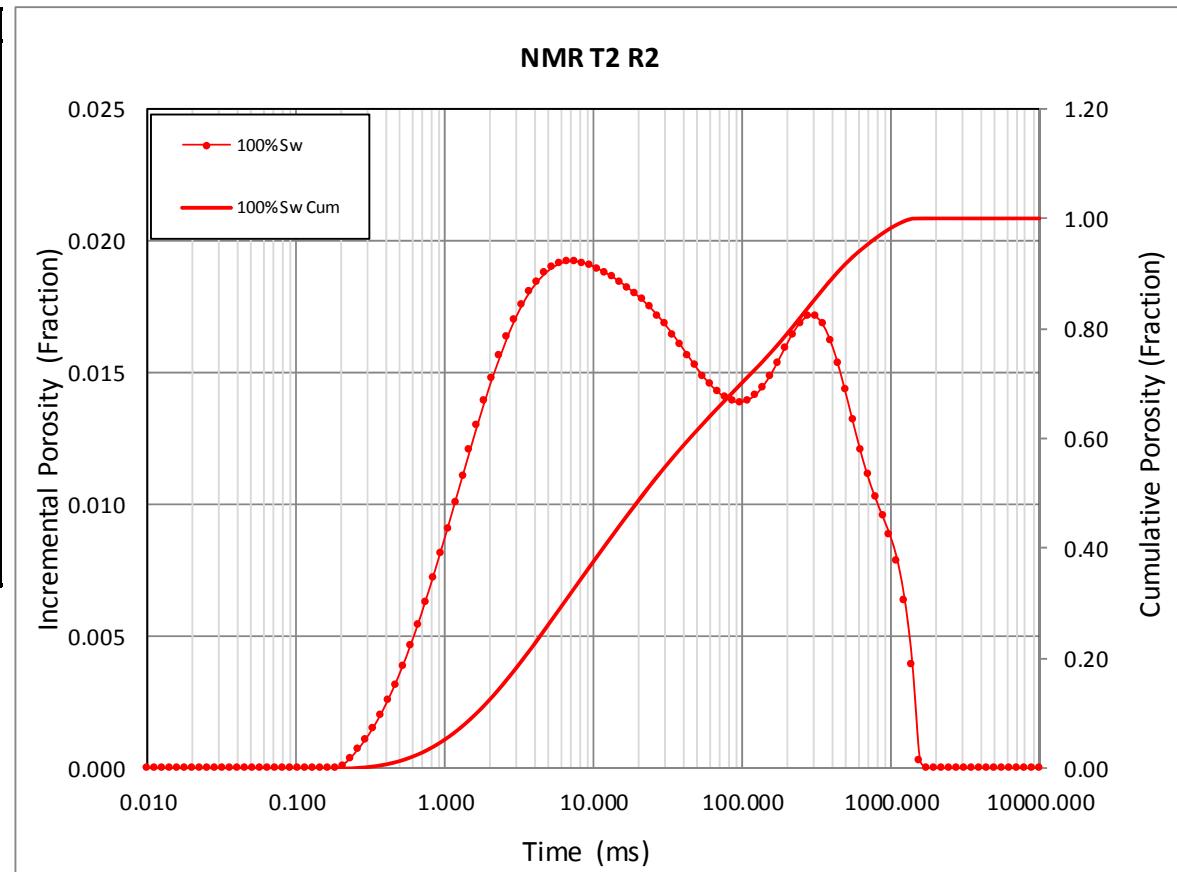
Sample ID	R120	R121*	R122*	R124*	R128	R138	R139	R151	R152
<b>Core Data</b>									
Sample Type	Plugs								
Depth (meter)	2978.30	2978.61	2978.91	2979.60	2980.93	2990.53	2990.58	3005.55	3005.60
Caliper Bulk Volume (cc)	52.51	52.11	47.84	46.11	55.47	56.09	55.72	55.71	55.84
Net Confining Stress (Psi)	Ambient								
Sample Temperature	Ambient								
Helium Porosity (%)	4.3	3.4	2.6	2.9	0.9	4.5	4.7	5.5	6.2
<b>NMR Data</b>									
Saturation (mL) @ Sw=100%	2.81	3.53	3.22	3.15	1.25	3.92	3.78	5.54	5.97
Total Porosity (% of BV)	5.4	6.8	6.7	6.8	2.3	7.0	6.8	9.9	10.7
Clay Bound Water (% of BV)	1.1	3.2	3.5	3.2	1.3	3.5	3.3	7.8	7.8
Effective Porosity (% of BV)	4.3	3.6	3.3	3.6	0.9	3.4	3.5	2.2	2.9
Saturation (frac) @ Sw=100%	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
T2 log mean @ Sw=100%	4.98	1.71	1.46	1.92	1.41	1.08	1.24	0.72	0.66
T2 Saturation (mL) @ Swir									
Saturation (% of BV) @ Swir									
T2 Saturation (frac), Swir									
T2 log mean, Swir									
Clay Bound Water Cutoff (ms)	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
T2 Cutoff (ms)									

\*Sample is fractured

**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R2
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2936.60
Caliper Bulk Volume (cc)	55.36
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.74
<b>NMR Data</b>	
Total Porosity (% of BV)	12.6
Clay Bound Water (% of BV)	0.7
Effective Porosity (% of BV)	11.9
Saturation (mL) @ Sw=100%	6.95
T2 log mean @ Sw=100%	25.96
Clay Bound Water Cutoff (ms)	1.04



## 2MHz - NMR T2

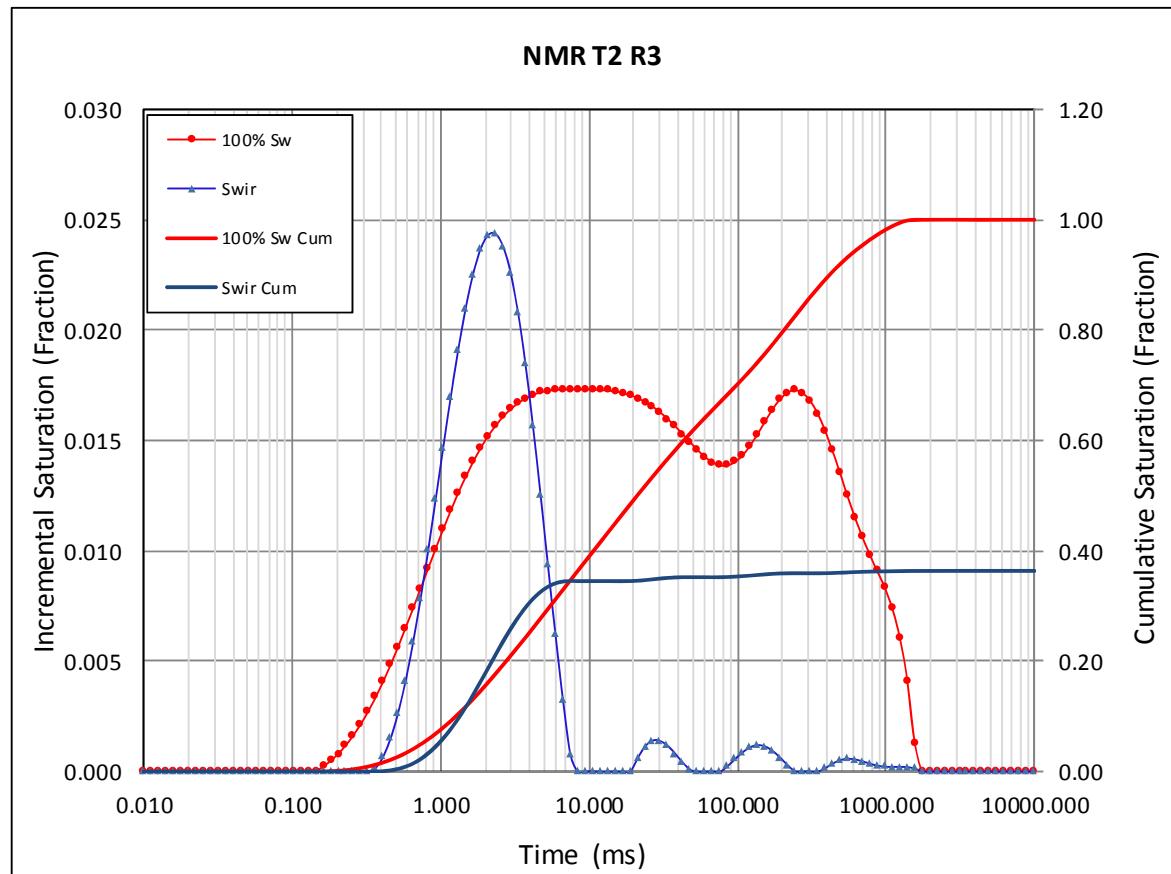
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R3
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2936.91
Caliper Bulk Volume (cc)	55.35
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.7
<b>NMR Data</b>	
Total Porosity (% of BV)	12.6
Clay Bound Water (% of BV)	1.0
Effective Porosity (% of BV)	11.6
Saturation (mL) @ Sw=100%	7.00
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	23.73
Saturation (% of BV) @ Swir	4.6
Saturation (mL) @ Swir	2.55
Saturation (frac) @ Swir	0.364
T2 log mean @ Swir	2.46
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	8.39



## 2MHz - NMR T2

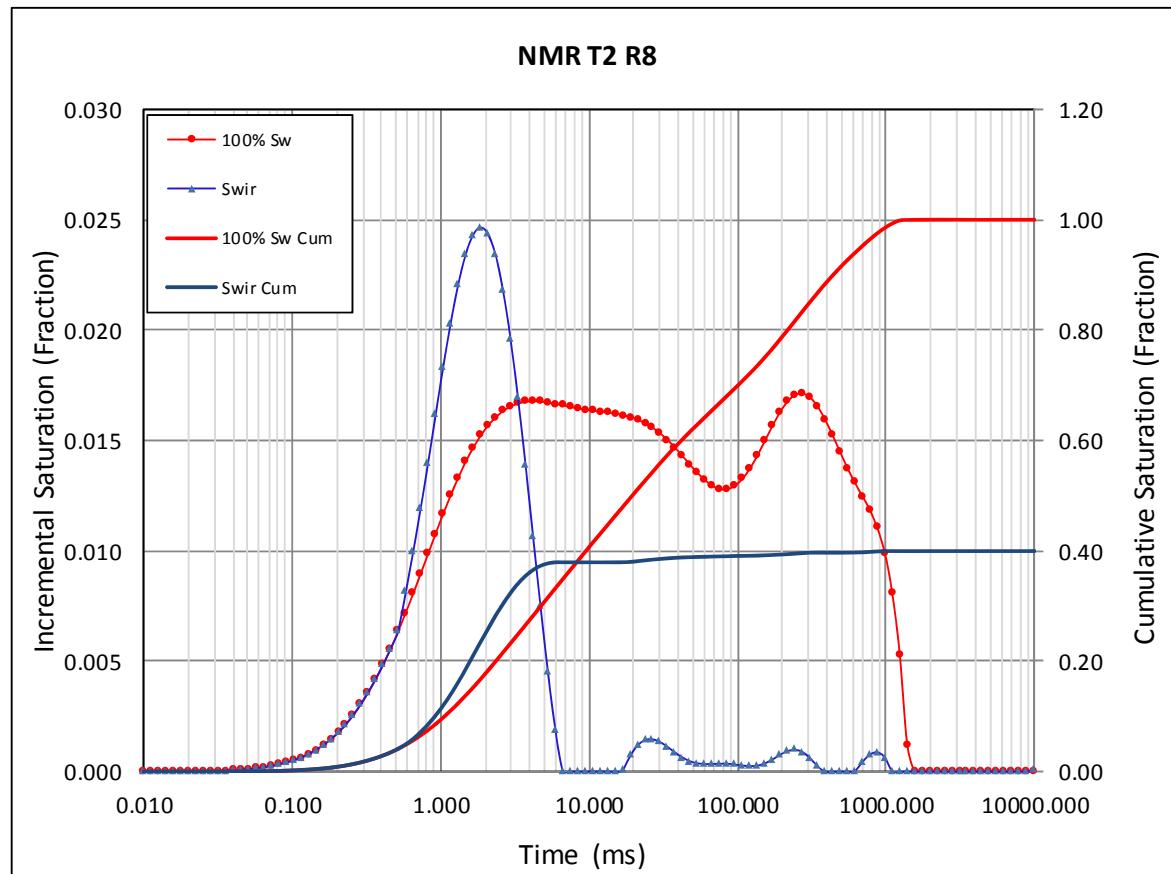
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R8
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2939.22
Caliper Bulk Volume (cc)	55.72
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.5
<b>NMR Data</b>	
Total Porosity (% of BV)	12.5
Clay Bound Water (% of BV)	1.2
Effective Porosity (% of BV)	11.2
Saturation (mL) @ Sw=100%	6.94
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	21.93
Saturation (% of BV) @ Swir	5.0
Saturation (mL) @ Swir	2.77
Saturation (frac) @ Swir	0.400
T2 log mean @ Swir	1.77
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	9.51



**2MHz - NMR T2**

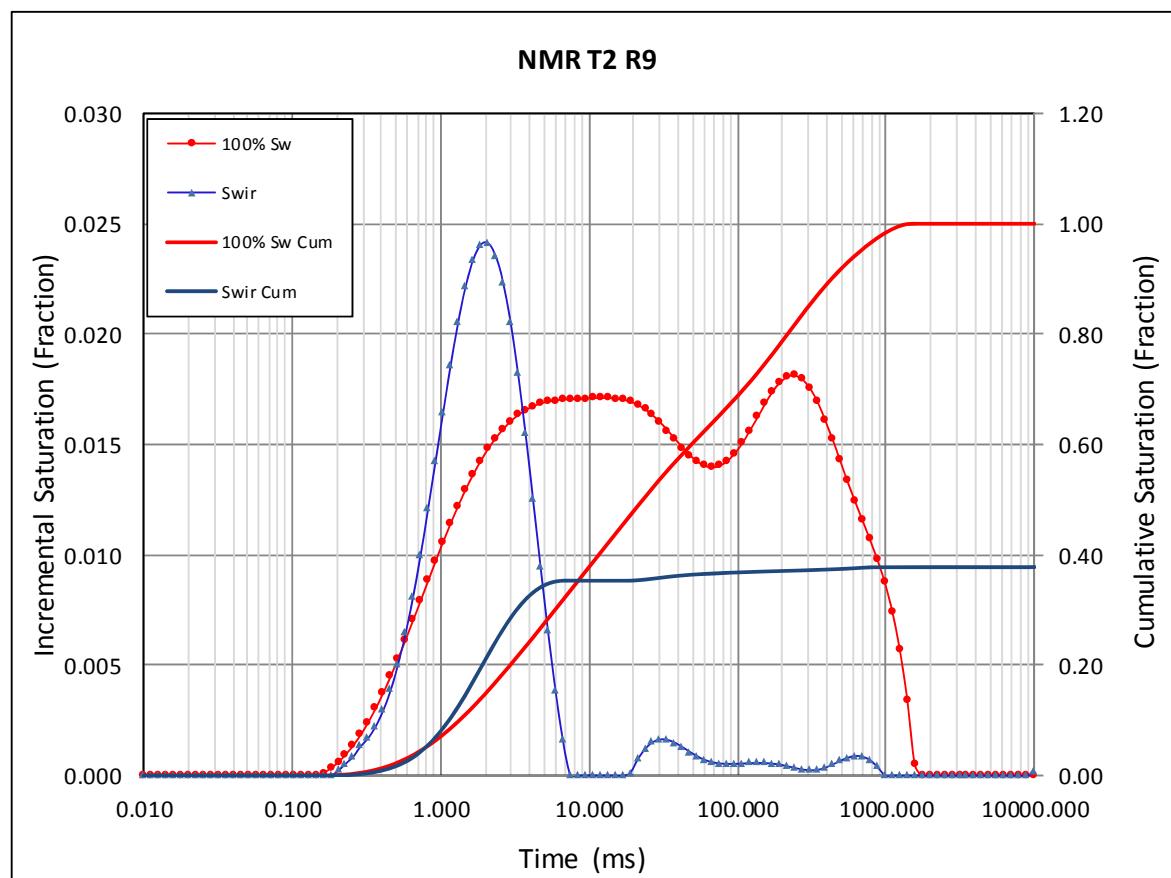
**Plugs at 100% Sw and Swir**

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R9
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2939.61
Caliper Bulk Volume (cc)	55.77
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	10.8
<b>NMR Data</b>	
Total Porosity (% of BV)	11.4
Clay Bound Water (% of BV)	0.9
Effective Porosity (% of BV)	10.6
Saturation (mL) @ Sw=100%	6.37
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	25.43
Saturation (% of BV) @ Swir	4.3
Saturation (mL) @ Swir	2.41
Saturation (frac) @ Swir	0.378
T2 log mean @ Swir	2.23
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	10.01



## 2MHz - NMR T2

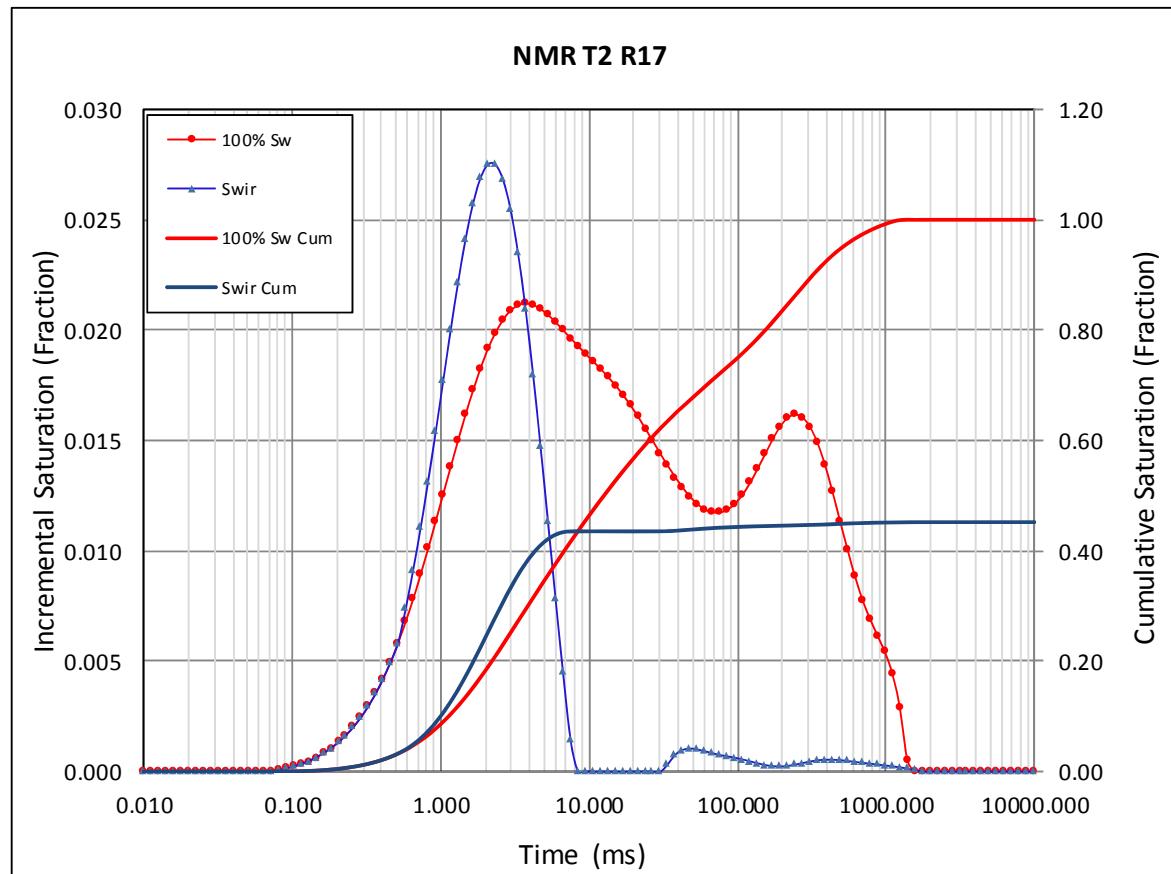
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R17
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2942.30
Caliper Bulk Volume (cc)	55.77
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.1
<b>NMR Data</b>	
Total Porosity (% of BV)	12.1
Clay Bound Water (% of BV)	1.1
Effective Porosity (% of BV)	11.0
Saturation (mL) @ Sw=100%	6.72
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	16.90
Saturation (% of BV) @ Swir	5.4
Saturation (mL) @ Swir	3.04
Saturation (frac) @ Swir	0.452
T2 log mean @ Swir	2.06
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	9.29



## 2MHz - NMR T2

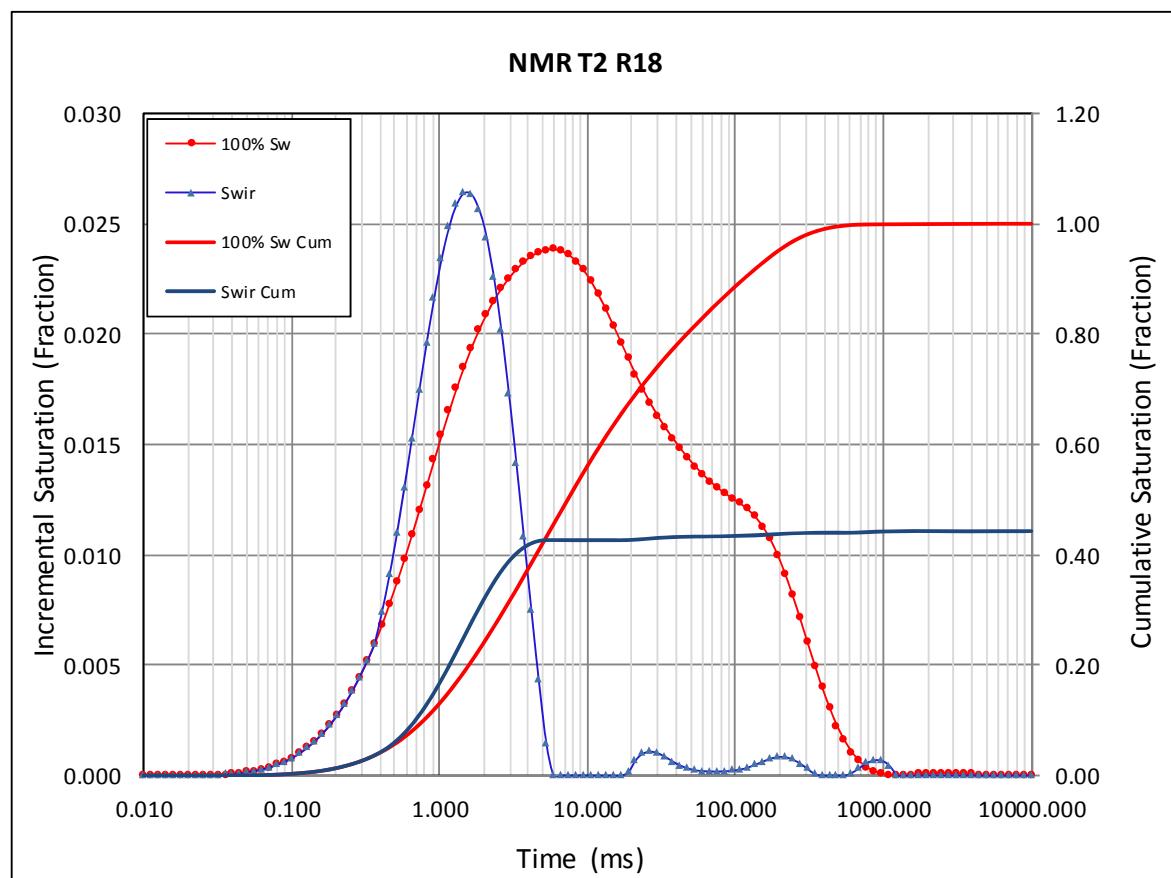
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

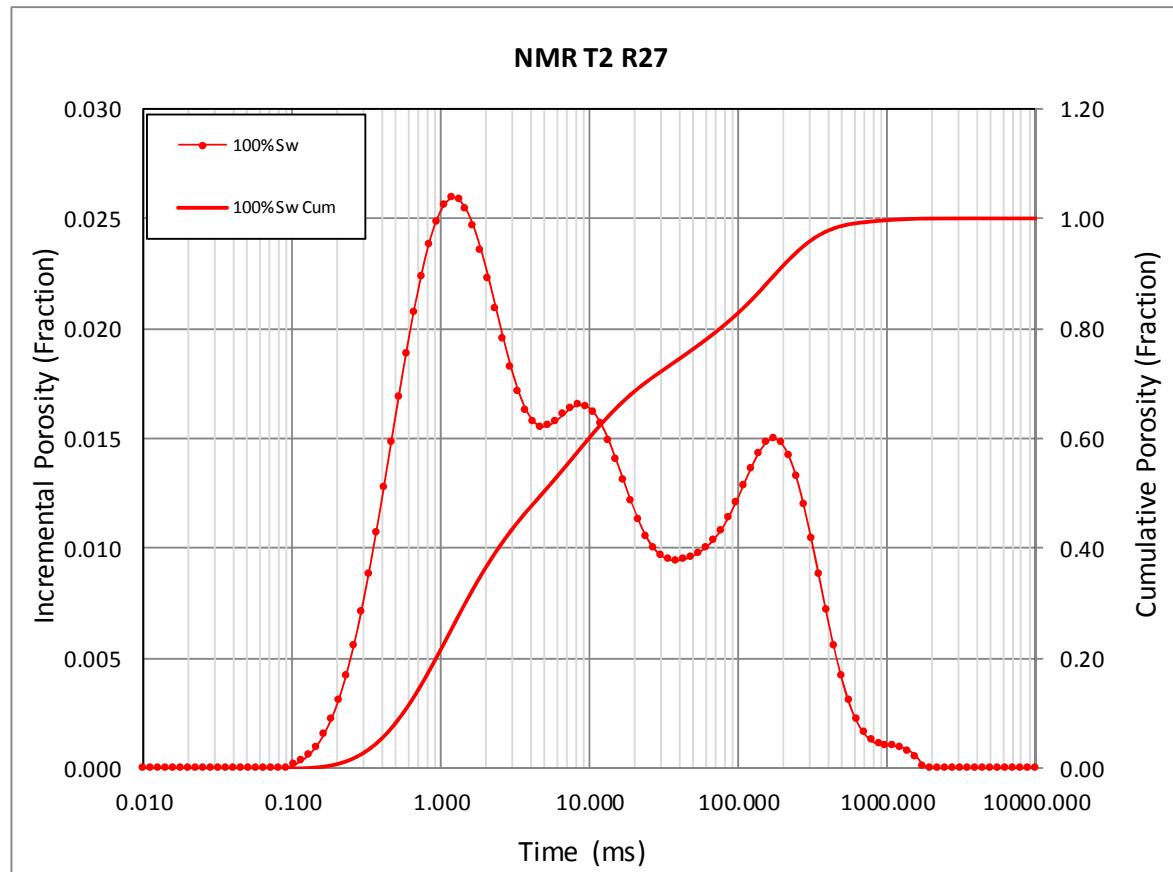
Sample ID	R18
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2942.60
Caliper Bulk Volume (cc)	55.81
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.3
<b>NMR Data</b>	
Total Porosity (% of BV)	12.4
Clay Bound Water (% of BV)	1.7
Effective Porosity (% of BV)	10.7
Saturation (mL) @ Sw=100%	6.90
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	8.73
Saturation (% of BV) @ Swir	5.5
Saturation (mL) @ Swir	3.06
Saturation (frac) @ Swir	0.443
T2 log mean @ Swir	1.42
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	5.58



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R27
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2945.53
Caliper Bulk Volume (cc)	56.04
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	8.36
<b>NMR Data</b>	
Total Porosity (% of BV)	9.8
Clay Bound Water (% of BV)	2.2
Effective Porosity (% of BV)	7.6
Saturation (mL) @ Sw=100%	5.49
T2 log mean @ Sw=100%	7.42
Clay Bound Water Cutoff (ms)	1.04



## 2MHz - NMR T2

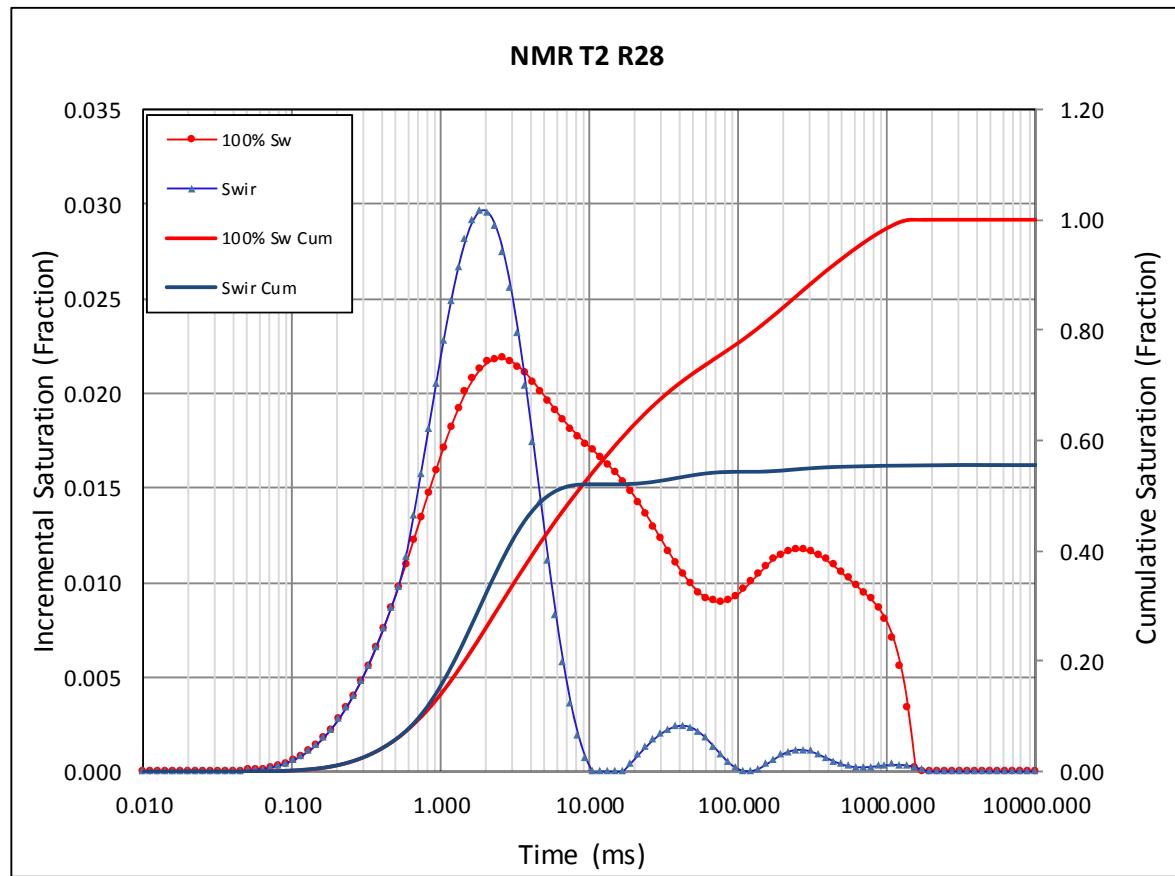
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R28
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2945.80
Caliper Bulk Volume (cc)	55.88
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	9.0
<b>NMR Data</b>	
Total Porosity (% of BV)	10.0
Clay Bound Water (% of BV)	1.5
Effective Porosity (% of BV)	8.6
Saturation (mL) @ Sw=100%	5.61
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	12.14
Saturation (% of BV) @ Swir	5.6
Saturation (mL) @ Swir	3.11
Saturation (frac) @ Swir	0.555
T2 log mean @ Swir	1.97
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	11.50



## 2MHz - NMR T2

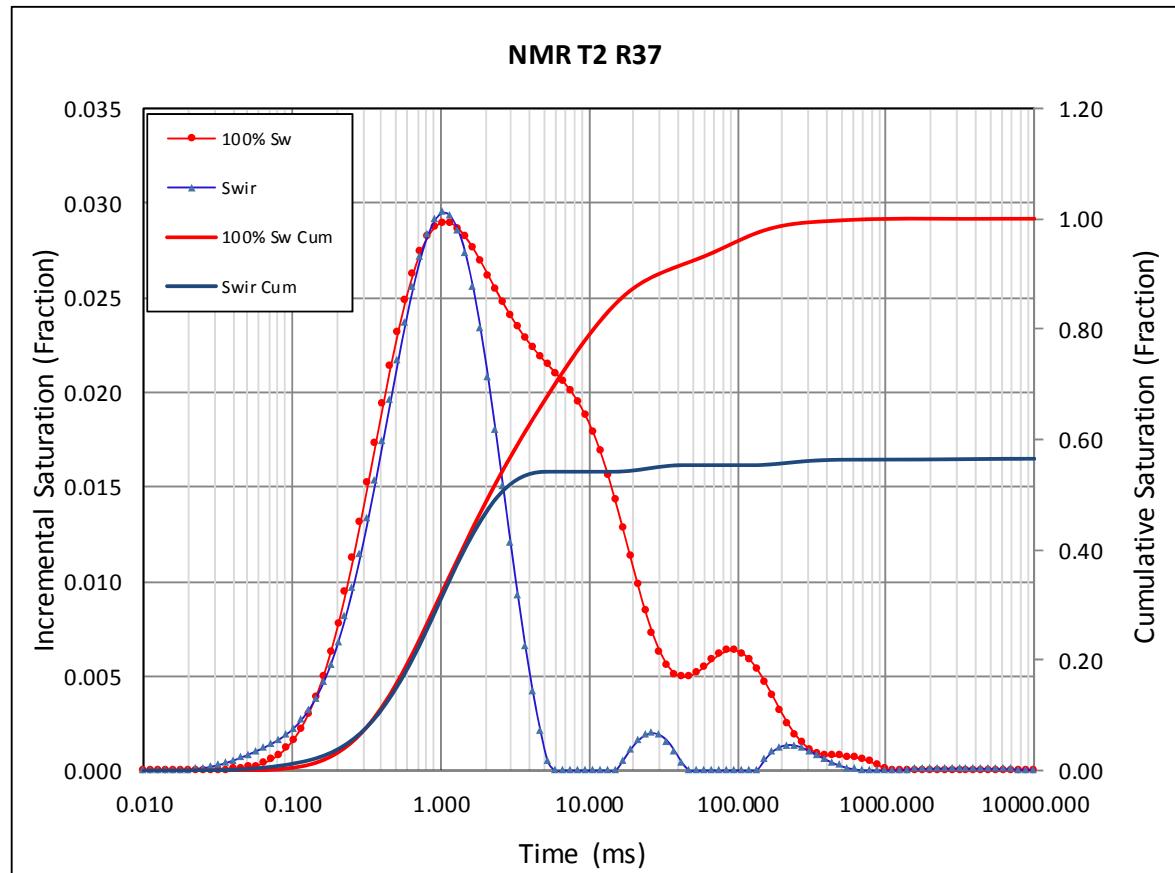
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

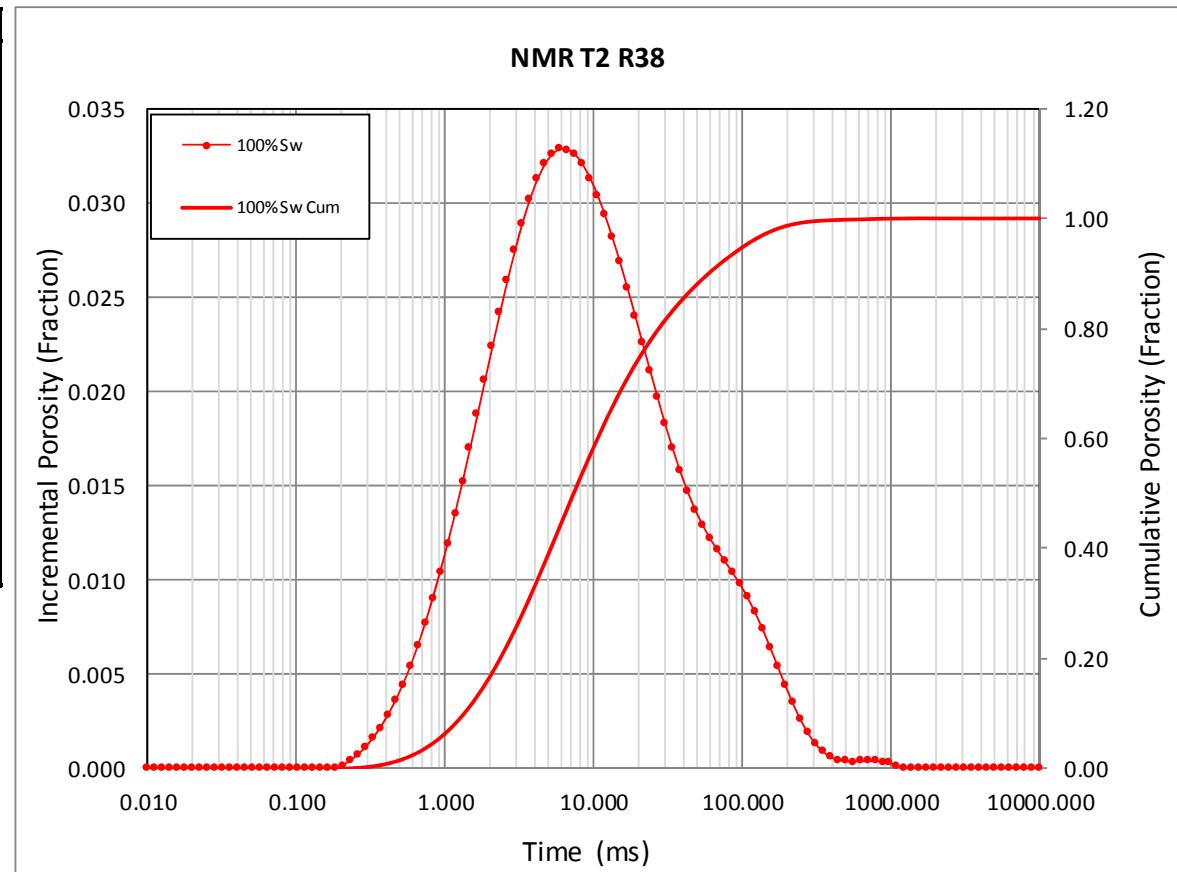
Sample ID	R37
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2948.89
Caliper Bulk Volume (cc)	55.79
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	7.8
<b>NMR Data</b>	
Total Porosity (% of BV)	10.2
Clay Bound Water (% of BV)	3.3
Effective Porosity (% of BV)	6.8
Saturation (mL) @ Sw=100%	5.68
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	2.88
Saturation (% of BV) @ Swir	5.8
Saturation (mL) @ Swir	3.21
Saturation (frac) @ Swir	0.565
T2 log mean @ Swir	1.02
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	2.91



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R38
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2949.30
Caliper Bulk Volume (cc)	55.83
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.55
<b>NMR Data</b>	
Total Porosity (% of BV)	12.1
Clay Bound Water (% of BV)	0.8
Effective Porosity (% of BV)	11.3
Saturation (mL) @ Sw=100%	6.75
T2 log mean @ Sw=100%	8.53
Clay Bound Water Cutoff (ms)	1.04



## 2MHz - NMR T2

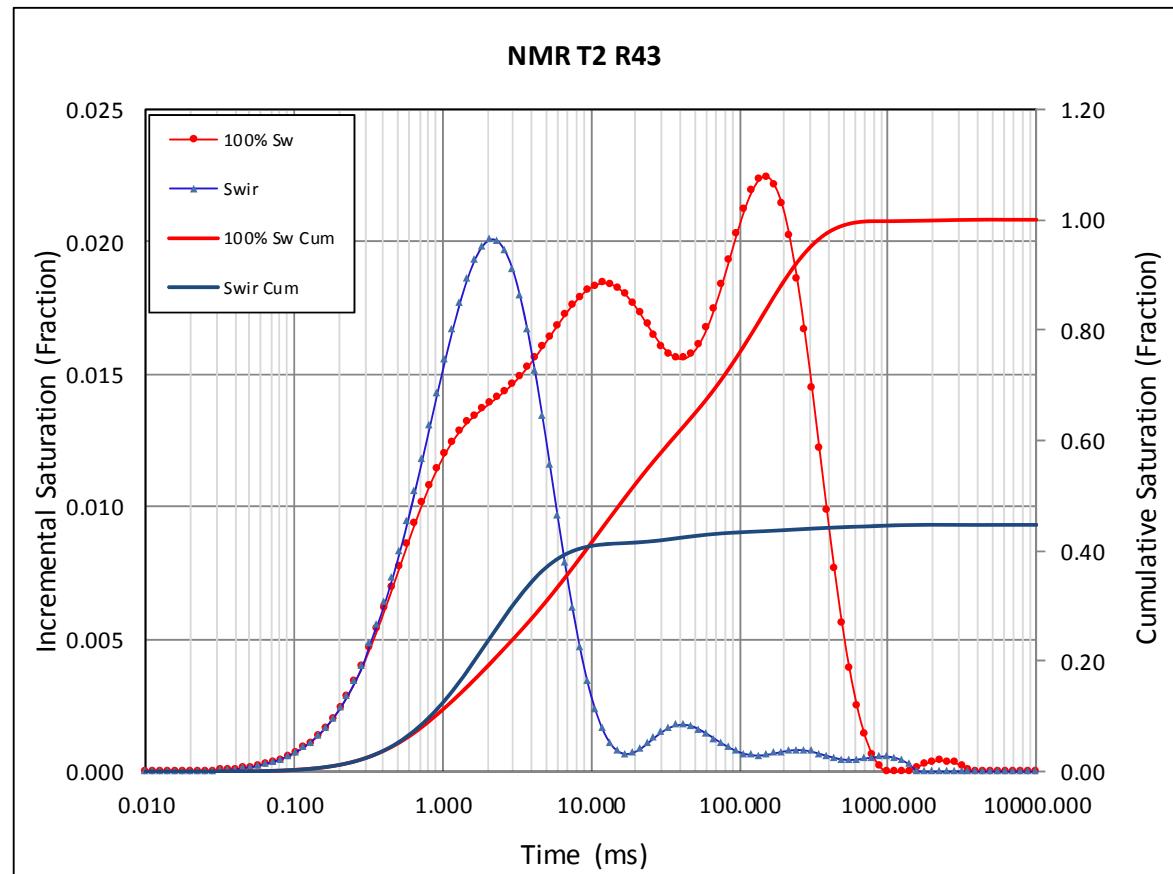
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

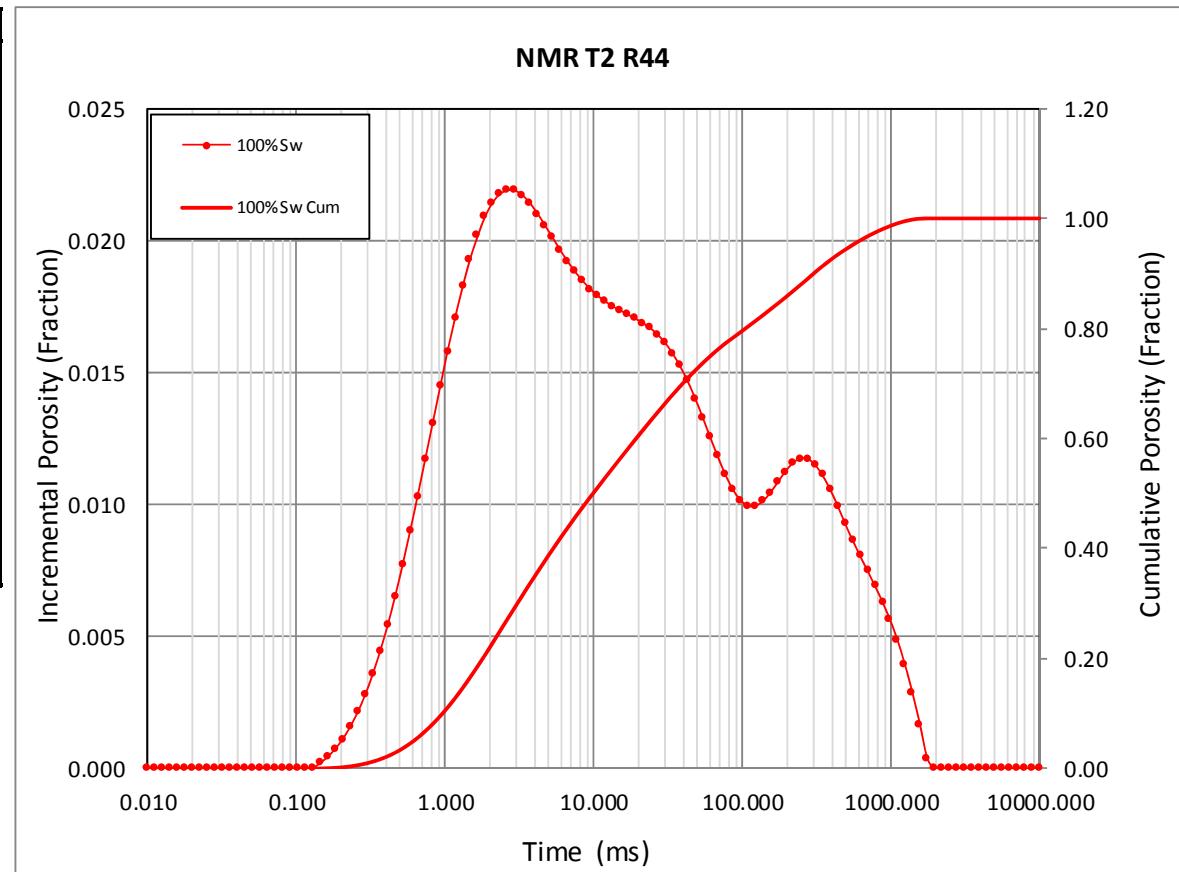
Sample ID	R43
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2950.88
Caliper Bulk Volume (cc)	55.89
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	8.2
<b>NMR Data</b>	
Total Porosity (% of BV)	9.0
Clay Bound Water (% of BV)	1.0
Effective Porosity (% of BV)	8.0
Saturation (mL) @ Sw=100%	5.04
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	16.71
Saturation (% of BV) @ Swir	4.0
Saturation (mL) @ Swir	2.25
Saturation (frac) @ Swir	0.447
T2 log mean @ Swir	2.24
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	12.33



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R44
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2951.29
Caliper Bulk Volume (cc)	55.84
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	8.69
<b>NMR Data</b>	
Total Porosity (% of BV)	9.7
Clay Bound Water (% of BV)	1.1
Effective Porosity (% of BV)	8.6
Saturation (mL) @ Sw=100%	5.39
T2 log mean @ Sw=100%	13.59
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**

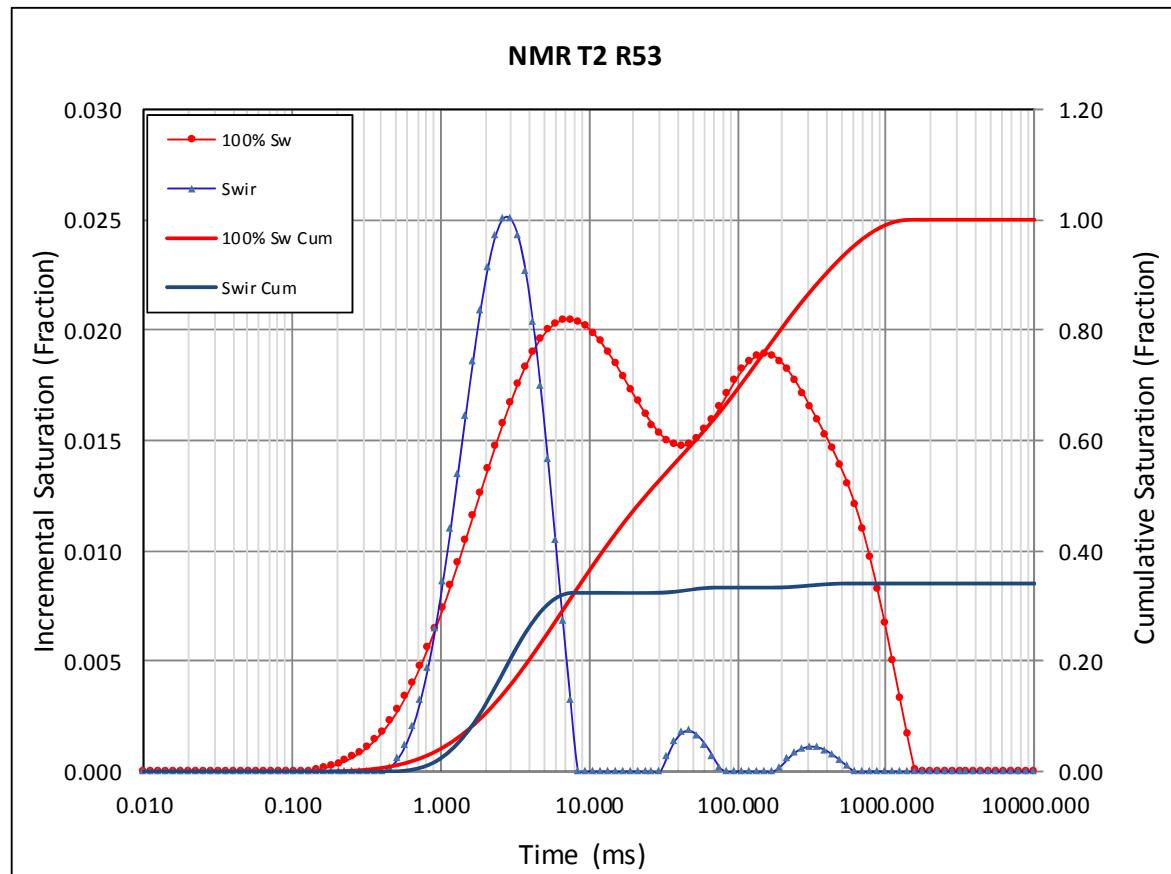
**Plugs at 100% Sw and Swir**

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

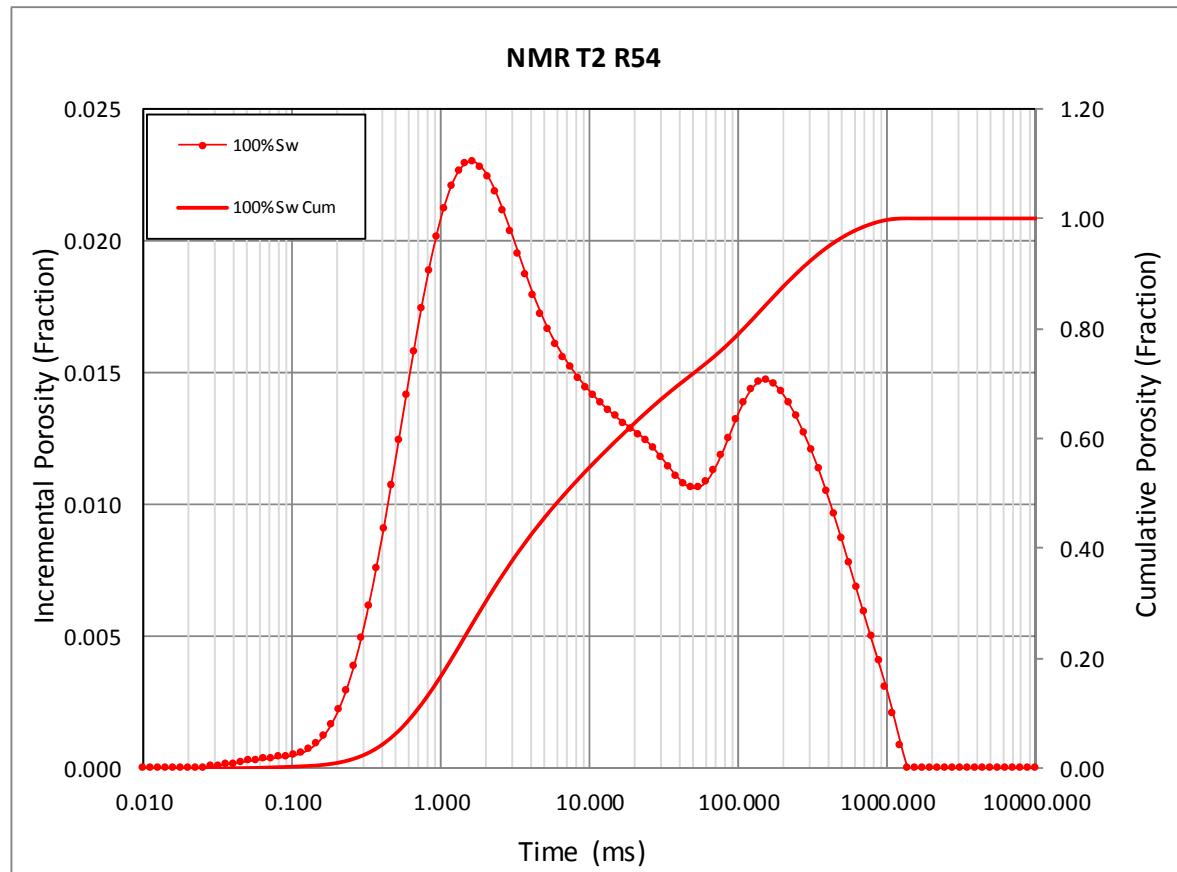
Sample ID	R53
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2954.30
Caliper Bulk Volume (cc)	55.80
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	11.6
<b>NMR Data</b>	
Total Porosity (% of BV)	12.1
Clay Bound Water (% of BV)	0.5
Effective Porosity (% of BV)	11.6
Saturation (mL) @ Sw=100%	6.74
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	27.58
Saturation (% of BV) @ Swir	4.1
Saturation (mL) @ Swir	2.30
Saturation (frac) @ Swir	0.341
T2 log mean @ Swir	3.01
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	8.82



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R54
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2954.60
Caliper Bulk Volume (cc)	55.87
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	9.50
<b>NMR Data</b>	
Total Porosity (% of BV)	10.8
Clay Bound Water (% of BV)	1.9
Effective Porosity (% of BV)	8.9
Saturation (mL) @ Sw=100%	6.05
T2 log mean @ Sw=100%	10.30
Clay Bound Water Cutoff (ms)	1.04



## 2MHz - NMR T2

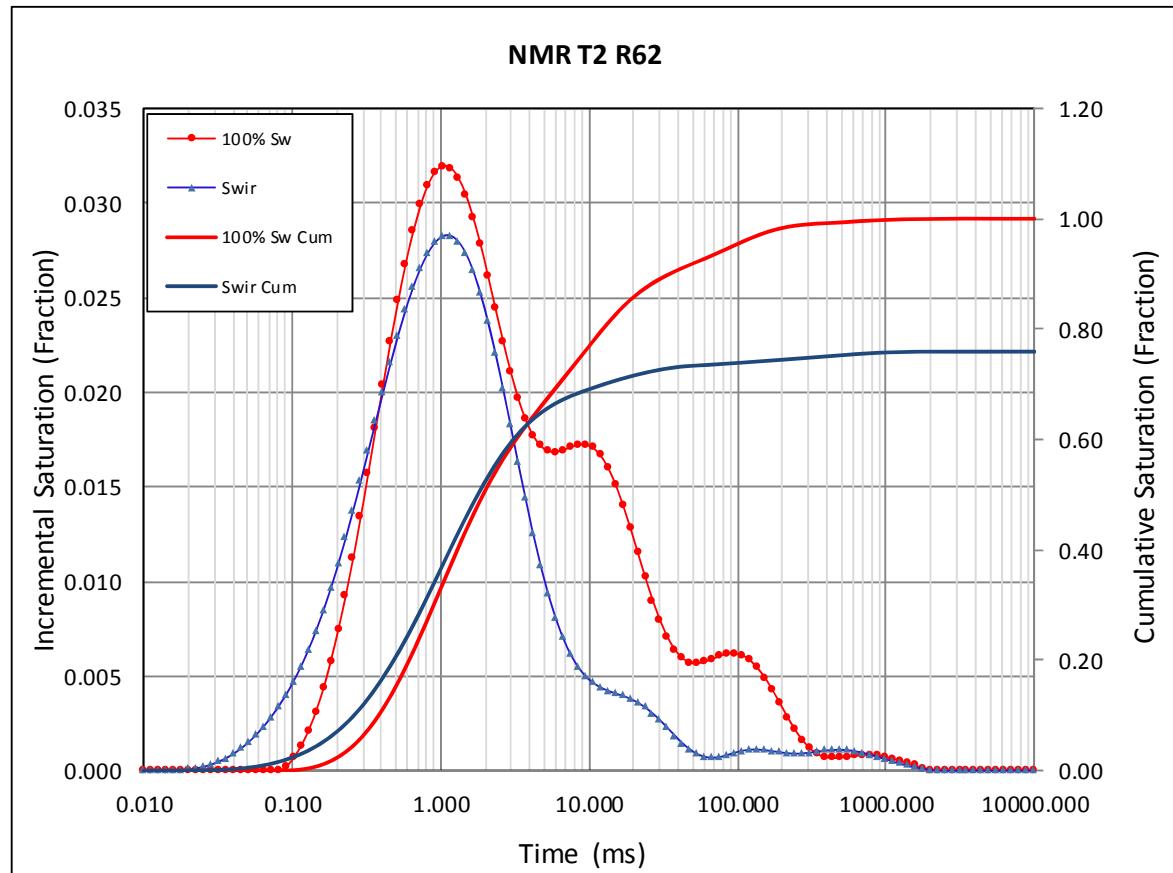
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R62
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2958.30
Caliper Bulk Volume (cc)	56.05
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	4.3
<b>NMR Data</b>	
Total Porosity (% of BV)	5.6
Clay Bound Water (% of BV)	1.9
Effective Porosity (% of BV)	3.7
Saturation (mL) @ Sw=100%	3.15
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	2.97
Saturation (% of BV) @ Swir	4.3
Saturation (mL) @ Swir	2.39
Saturation (frac) @ Swir	0.759
T2 log mean @ Swir	1.33
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	9.33

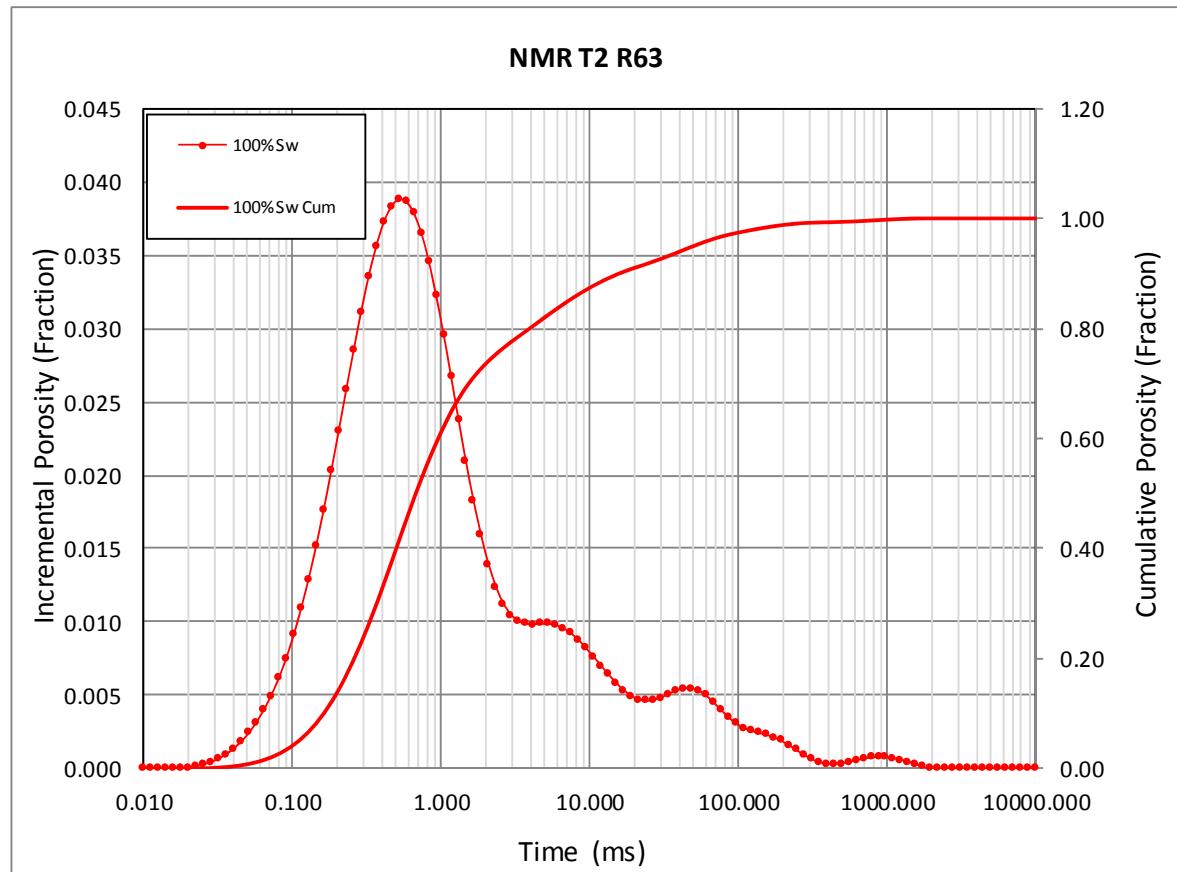


**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R63*
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2958.60
Caliper Bulk Volume (cc)	55.89
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	2.64
<b>NMR Data</b>	
Total Porosity (% of BV)	6.6
Clay Bound Water (% of BV)	4.1
Effective Porosity (% of BV)	2.5
Saturation (mL) @ Sw=100%	3.69
T2 log mean @ Sw=100%	1.11
Clay Bound Water Cutoff (ms)	1.04

\*Sample is fractured



## 2MHz - NMR T2

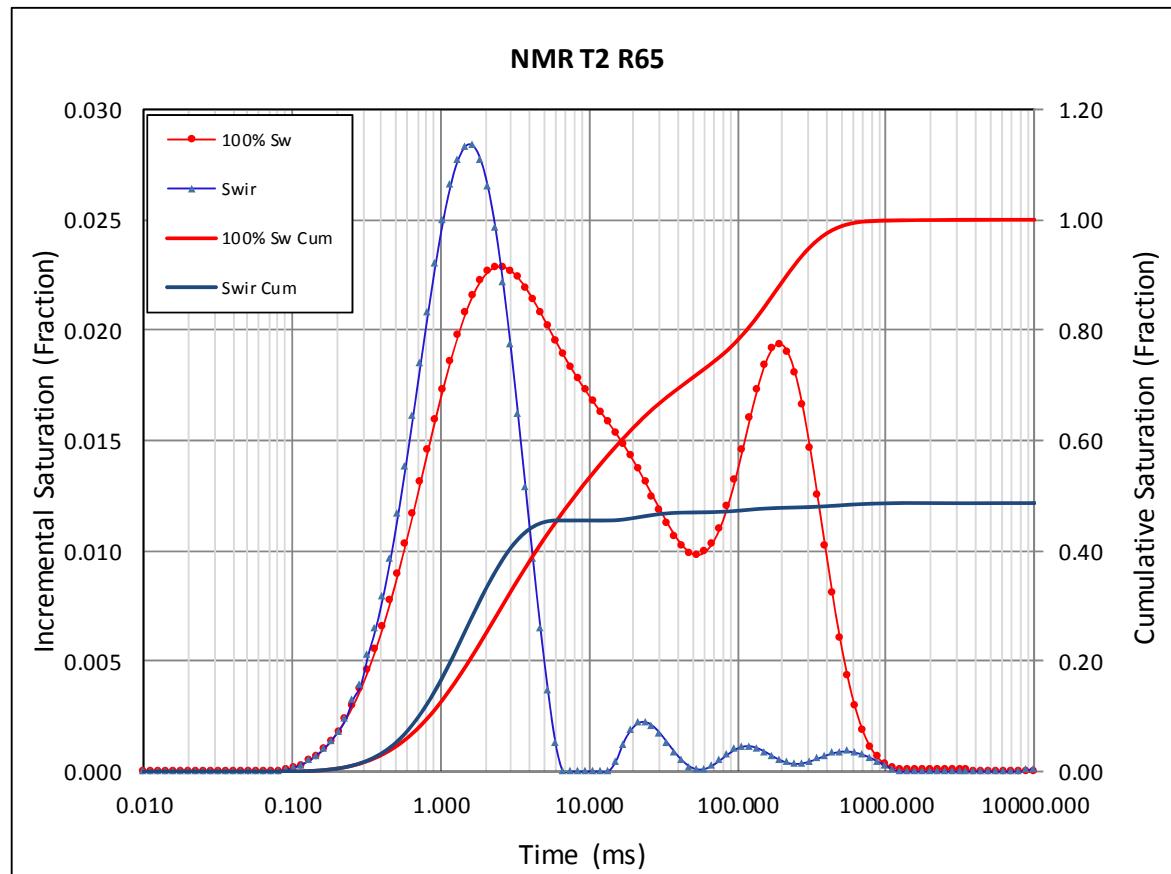
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

Sample ID	R65
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2959.19
Caliper Bulk Volume (cc)	56.15
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	8.4
<b>NMR Data</b>	
Total Porosity (% of BV)	9.5
Clay Bound Water (% of BV)	1.2
Effective Porosity (% of BV)	8.2
Saturation (mL) @ Sw=100%	5.32
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	11.58
Saturation (% of BV) @ Swir	4.6
Saturation (mL) @ Swir	2.59
Saturation (frac) @ Swir	0.487
T2 log mean @ Swir	1.72
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	7.39



## 2MHz - NMR T2

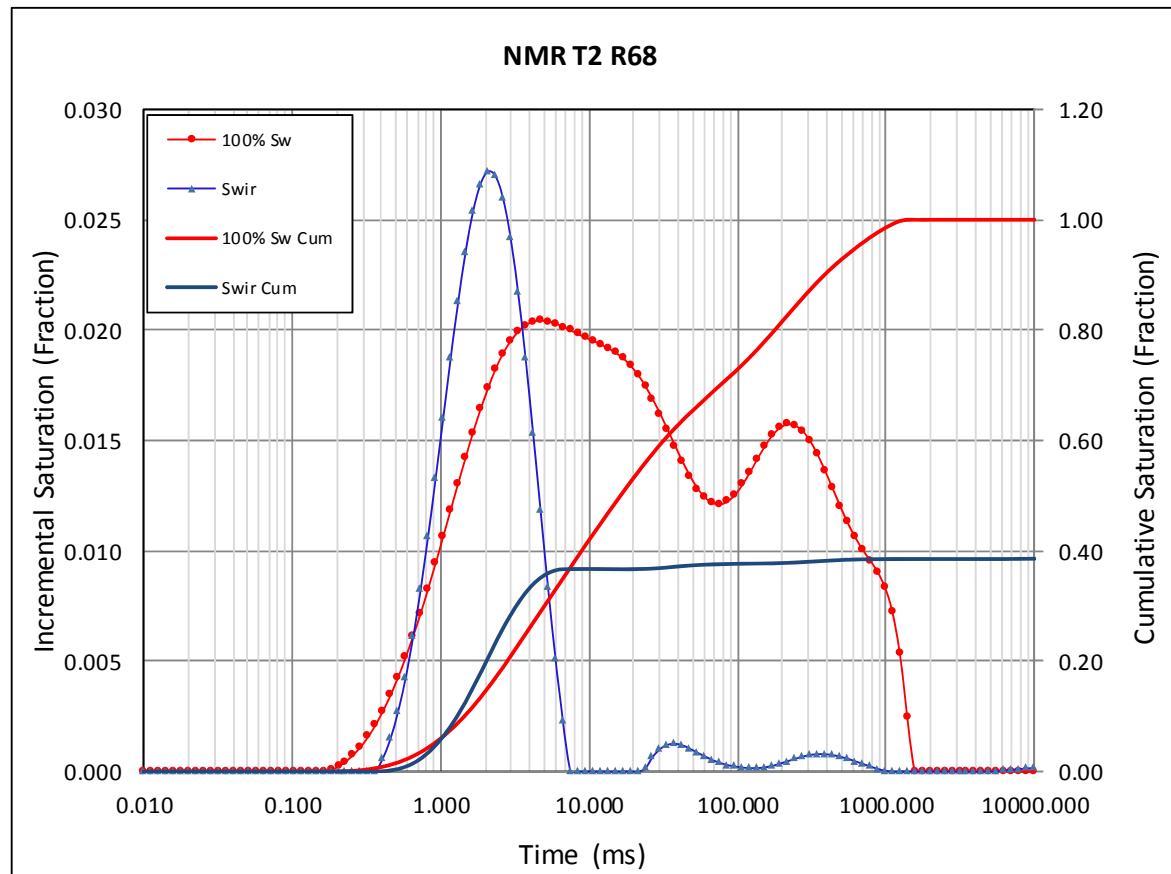
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

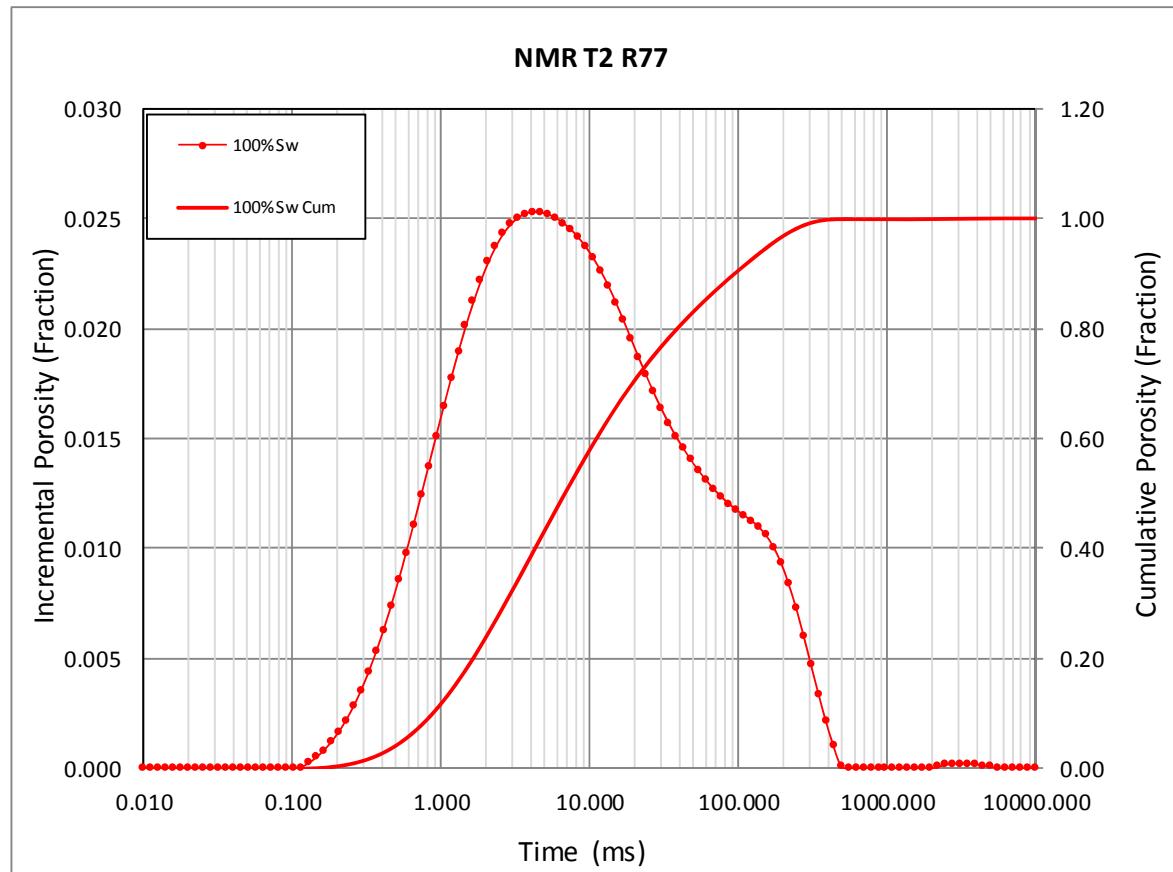
Sample ID	R68
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2959.90
Caliper Bulk Volume (cc)	55.86
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	10.4
<b>NMR Data</b>	
Total Porosity (% of BV)	11.1
Clay Bound Water (% of BV)	0.7
Effective Porosity (% of BV)	10.4
Saturation (mL) @ Sw=100%	6.20
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	21.30
Saturation (% of BV) @ Swir	4.3
Saturation (mL) @ Swir	2.39
Saturation (frac) @ Swir	0.386
T2 log mean @ Swir	2.40
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	8.19



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

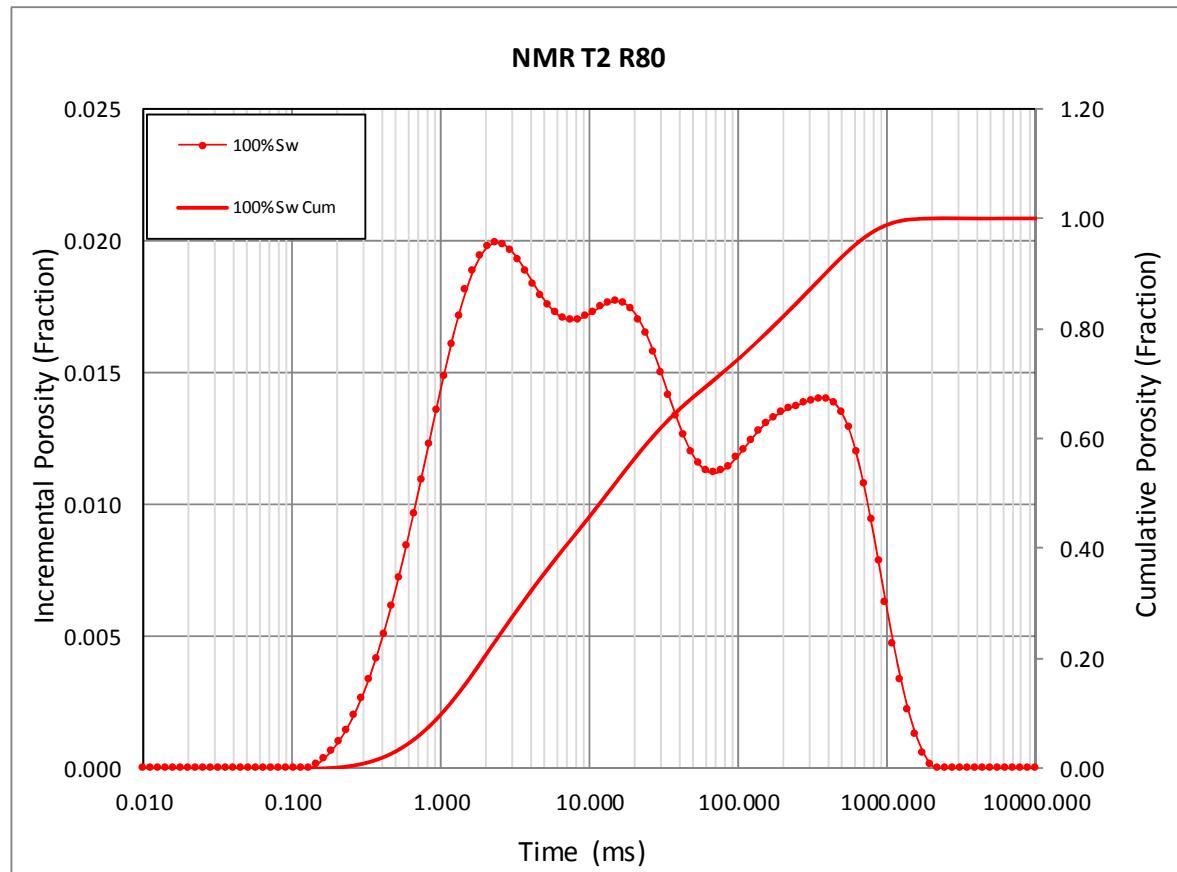
Sample ID	R77
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2962.91
Caliper Bulk Volume (cc)	55.80
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	9.32
<b>NMR Data</b>	
Total Porosity (% of BV)	10.2
Clay Bound Water (% of BV)	1.3
Effective Porosity (% of BV)	9.0
Saturation (mL) @ Sw=100%	5.72
T2 log mean @ Sw=100%	8.25
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

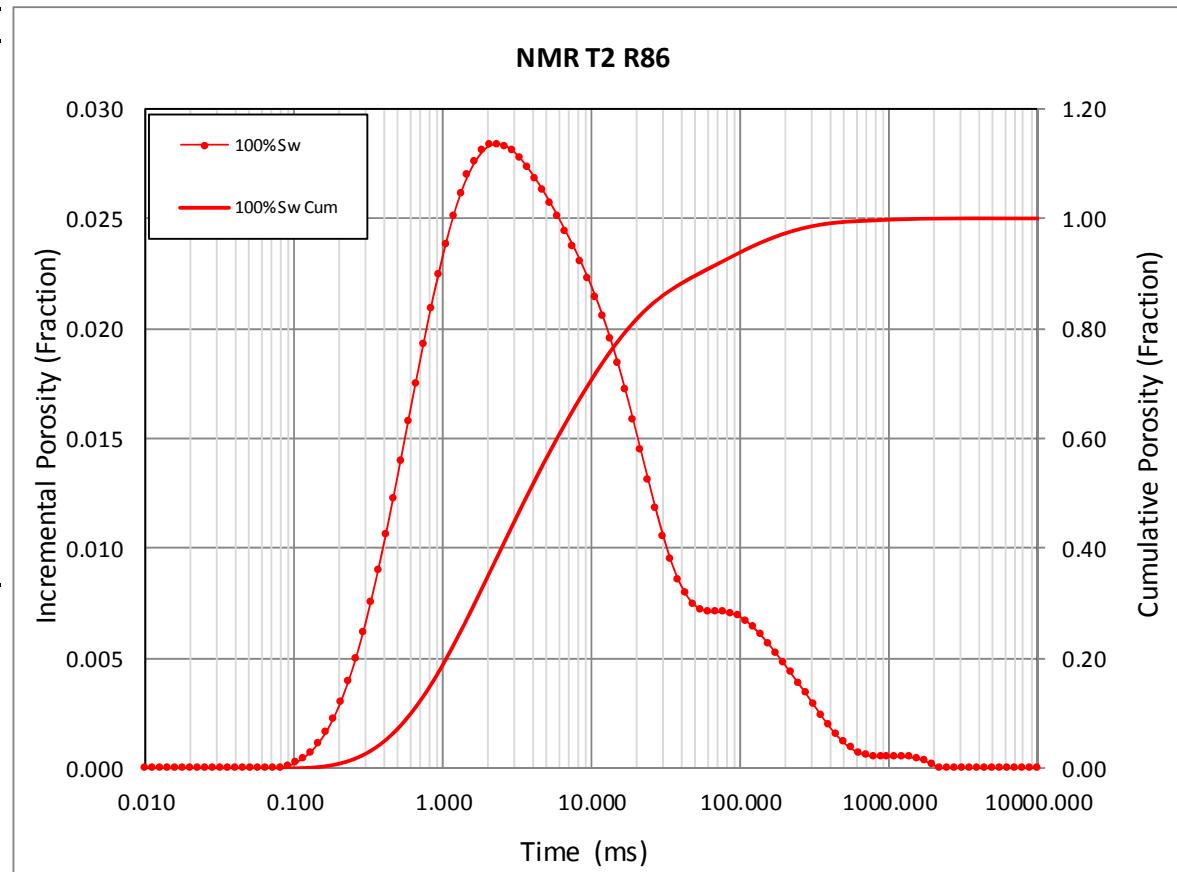
Sample ID	R80
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2963.92
Caliper Bulk Volume (cc)	55.82
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	9.44
<b>NMR Data</b>	
Total Porosity (% of BV)	10.5
Clay Bound Water (% of BV)	1.1
Effective Porosity (% of BV)	9.4
Saturation (mL) @ Sw=100%	5.87
T2 log mean @ Sw=100%	17.03
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

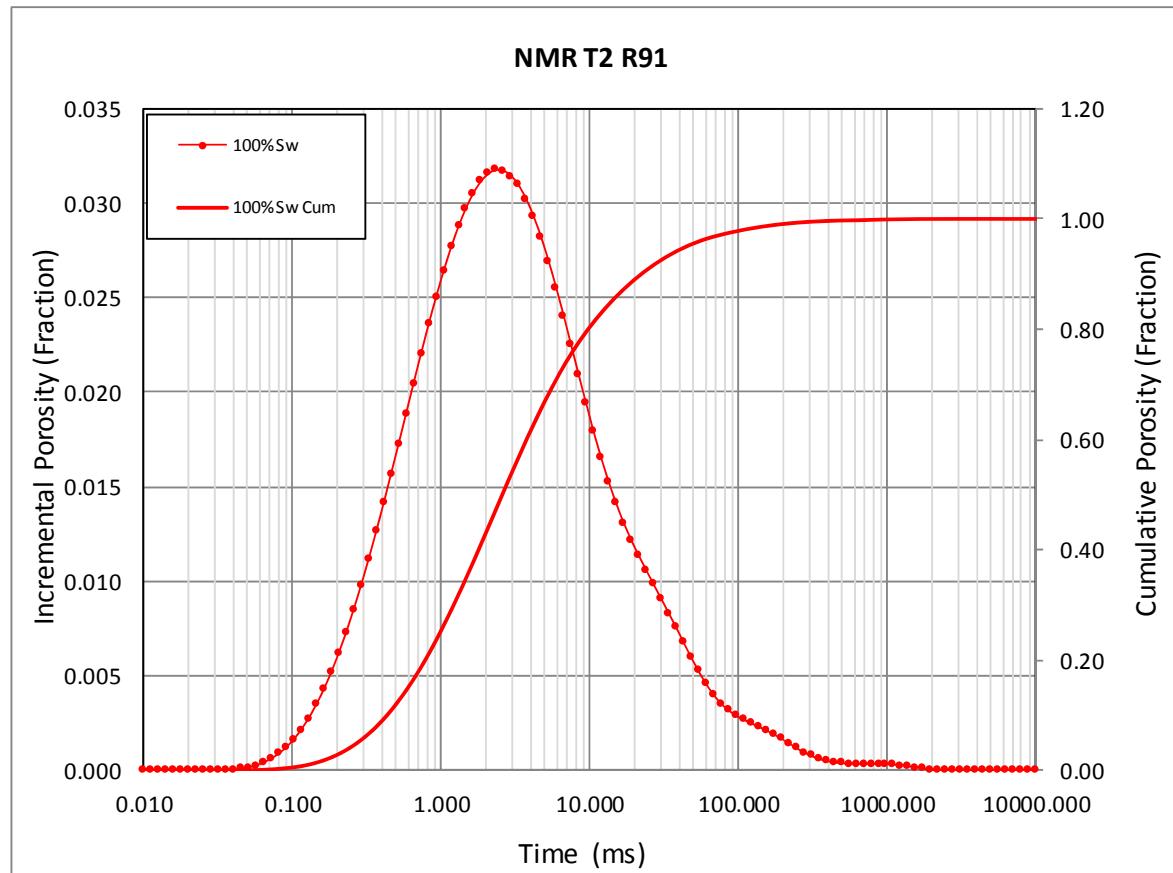
Sample ID	R86
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2965.90
Caliper Bulk Volume (cc)	55.90
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	6.77
<b>NMR Data</b>	
Total Porosity (% of BV)	7.8
Clay Bound Water (% of BV)	1.6
Effective Porosity (% of BV)	6.3
Saturation (mL) @ Sw=100%	4.38
T2 log mean @ Sw=100%	4.86
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R91
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2967.60
Caliper Bulk Volume (cc)	56.12
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	7.89
<b>NMR Data</b>	
Total Porosity (% of BV)	9.2
Clay Bound Water (% of BV)	2.4
Effective Porosity (% of BV)	6.8
Saturation (mL) @ Sw=100%	5.14
T2 log mean @ Sw=100%	3.05
Clay Bound Water Cutoff (ms)	1.04



## 2MHz - NMR T2

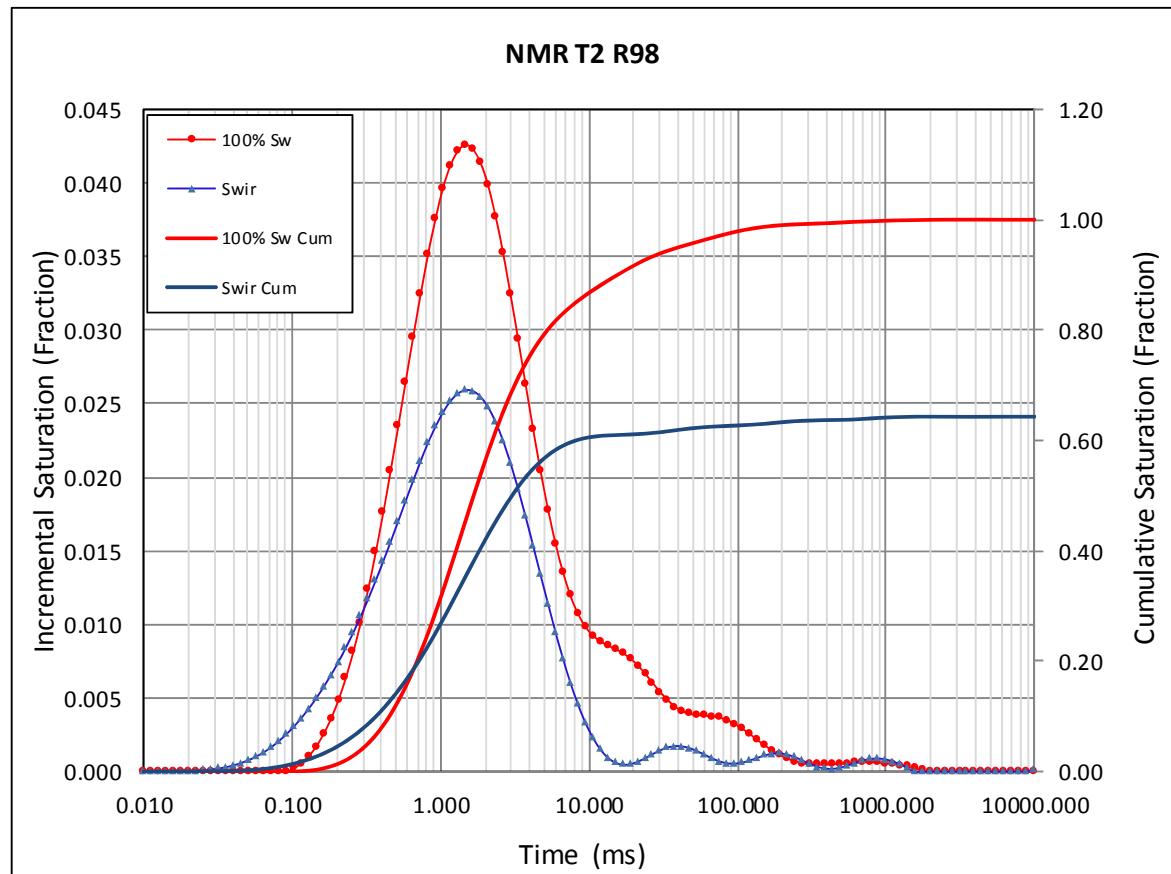
### Plugs at 100% Sw and Swir

Client: QGC - A BG Group Business

Well: Magnetic-1

File: AB-76967 0.1 Te 100% Sw and Swir

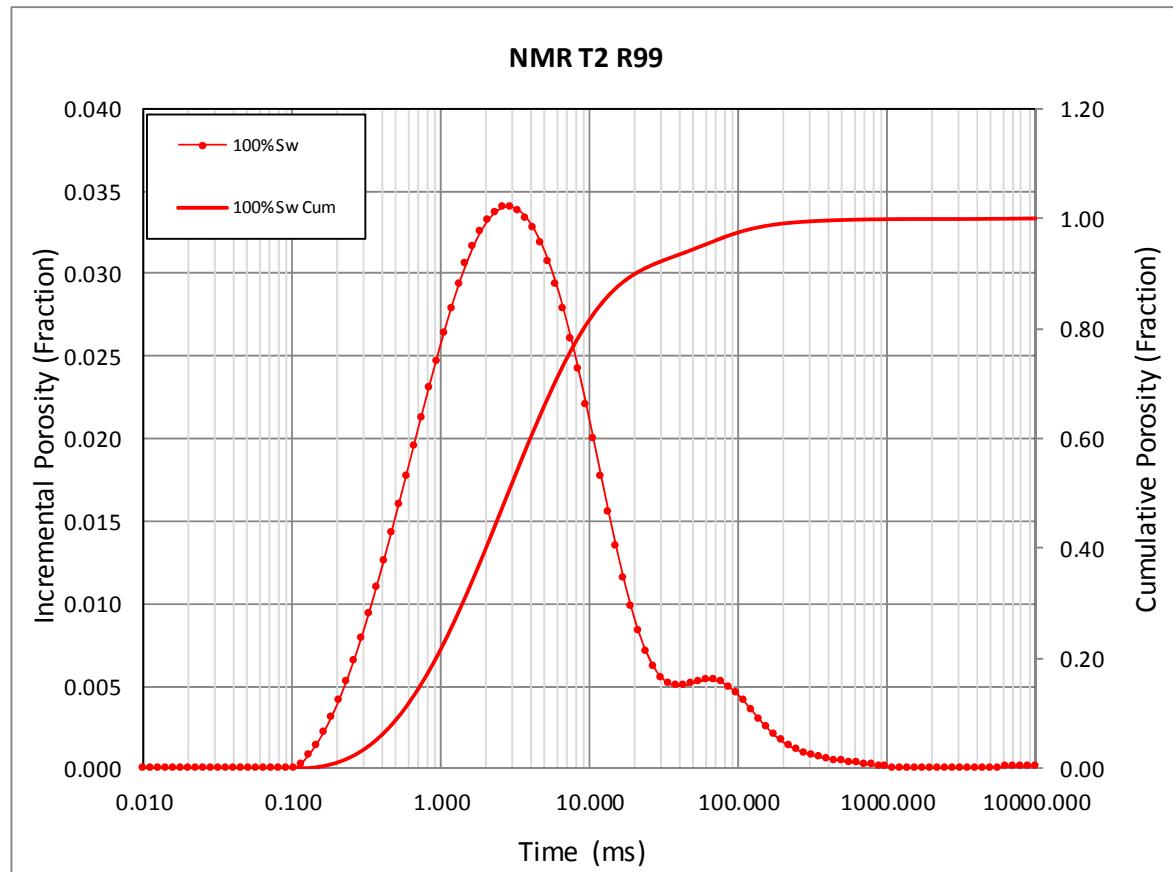
Sample ID	R98
<b>Core Data</b>	
Sample Type	Plugs
Depth, meters	2970.89
Caliper Bulk Volume (cc)	55.94
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	6.0
<b>NMR Data</b>	
Total Porosity (% of BV)	6.8
Clay Bound Water (% of BV)	2.2
Effective Porosity (% of BV)	4.5
Saturation (mL) @ Sw=100%	3.78
Saturation (frac) @ Sw=100%	1.000
T2 log mean @ Sw=100%	2.25
Saturation (% of BV) @ Swir	4.3
Saturation (mL) @ Swir	2.43
Saturation (frac) @ Swir	0.643
T2 log mean @ Swir	1.46
Clay Bound Water Cutoff (ms)	1.04
T2 Cutoff (ms)	2.56



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

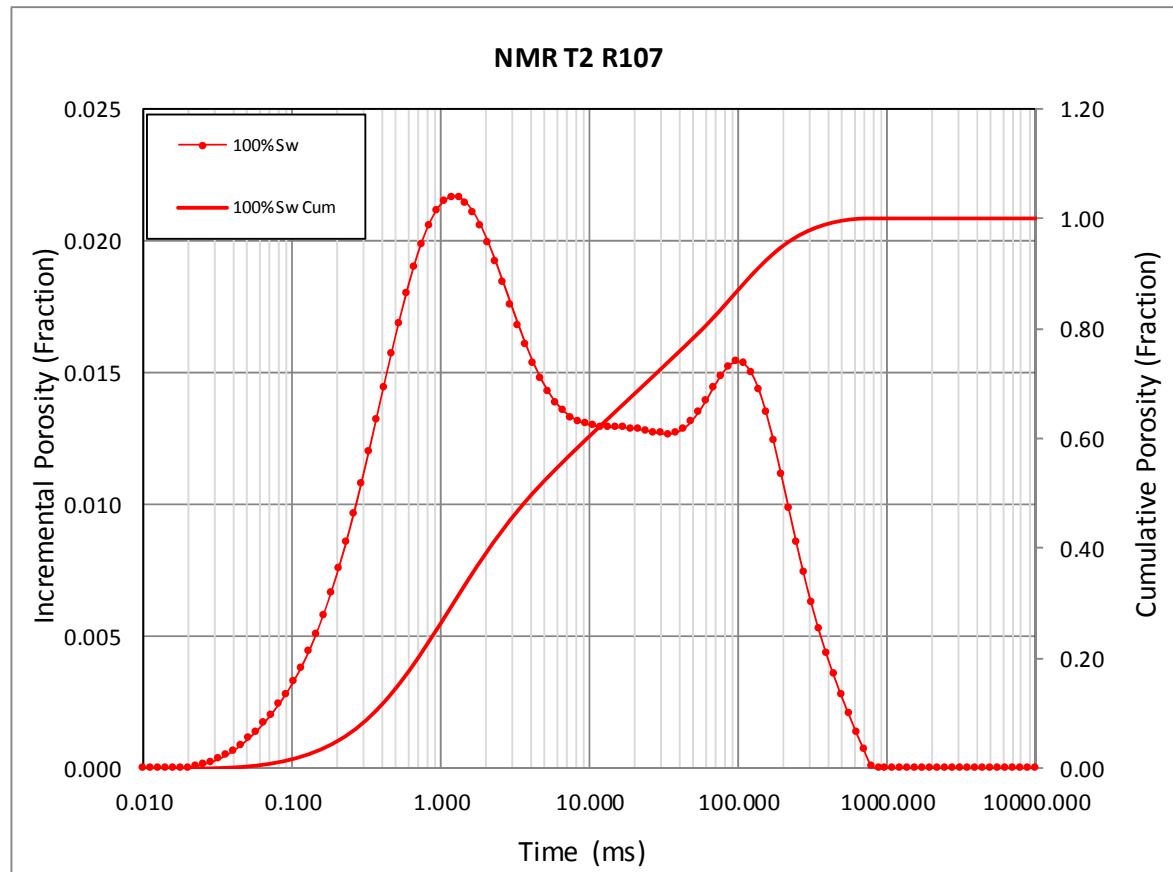
Sample ID	R99
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2971.30
Caliper Bulk Volume (cc)	45.88
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	8.38
<b>NMR Data</b>	
Total Porosity (% of BV)	9.6
Clay Bound Water (% of BV)	2.2
Effective Porosity (% of BV)	7.4
Saturation (mL) @ Sw=100%	4.41
T2 log mean @ Sw=100%	3.35
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

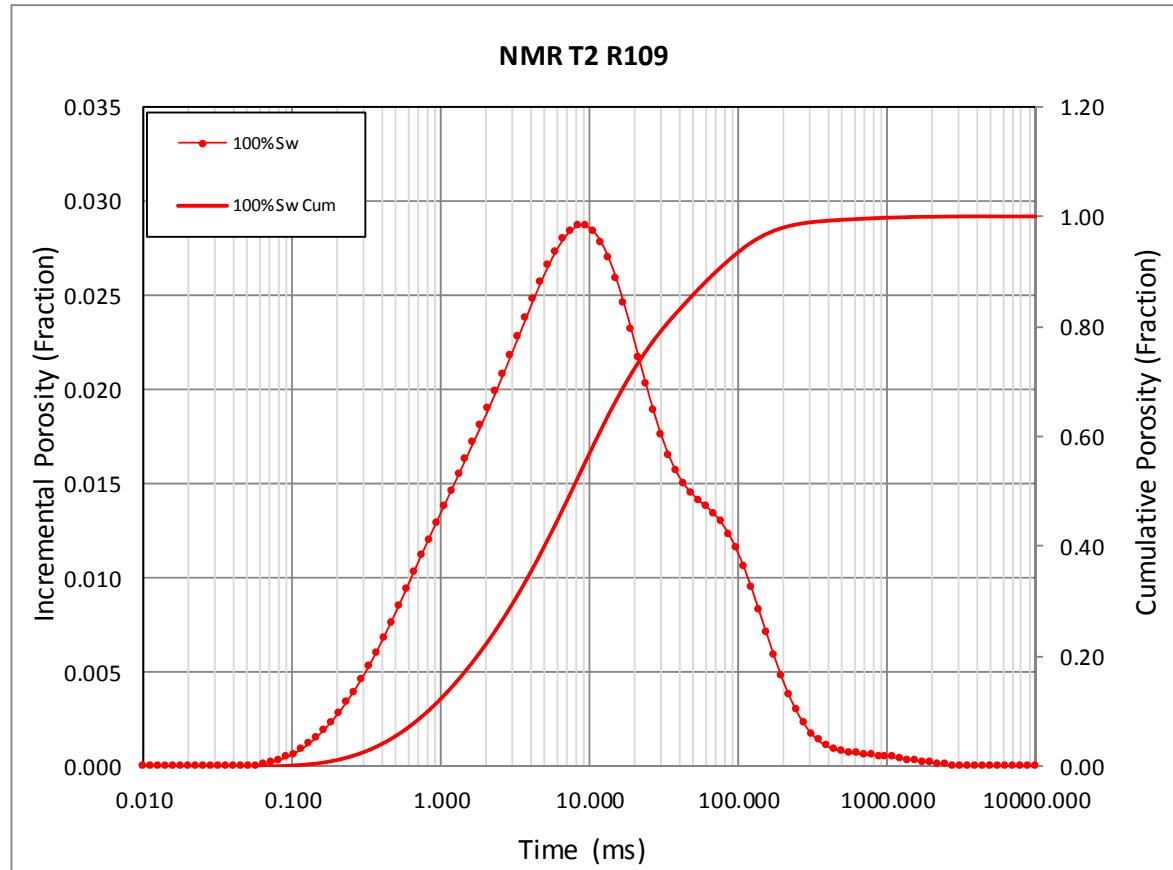
Sample ID	R107
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2973.91
Caliper Bulk Volume (cc)	56.22
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	7.86
<b>NMR Data</b>	
Total Porosity (% of BV)	9.6
Clay Bound Water (% of BV)	2.6
Effective Porosity (% of BV)	7.0
Saturation (mL) @ Sw=100%	5.42
T2 log mean @ Sw=100%	5.79
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

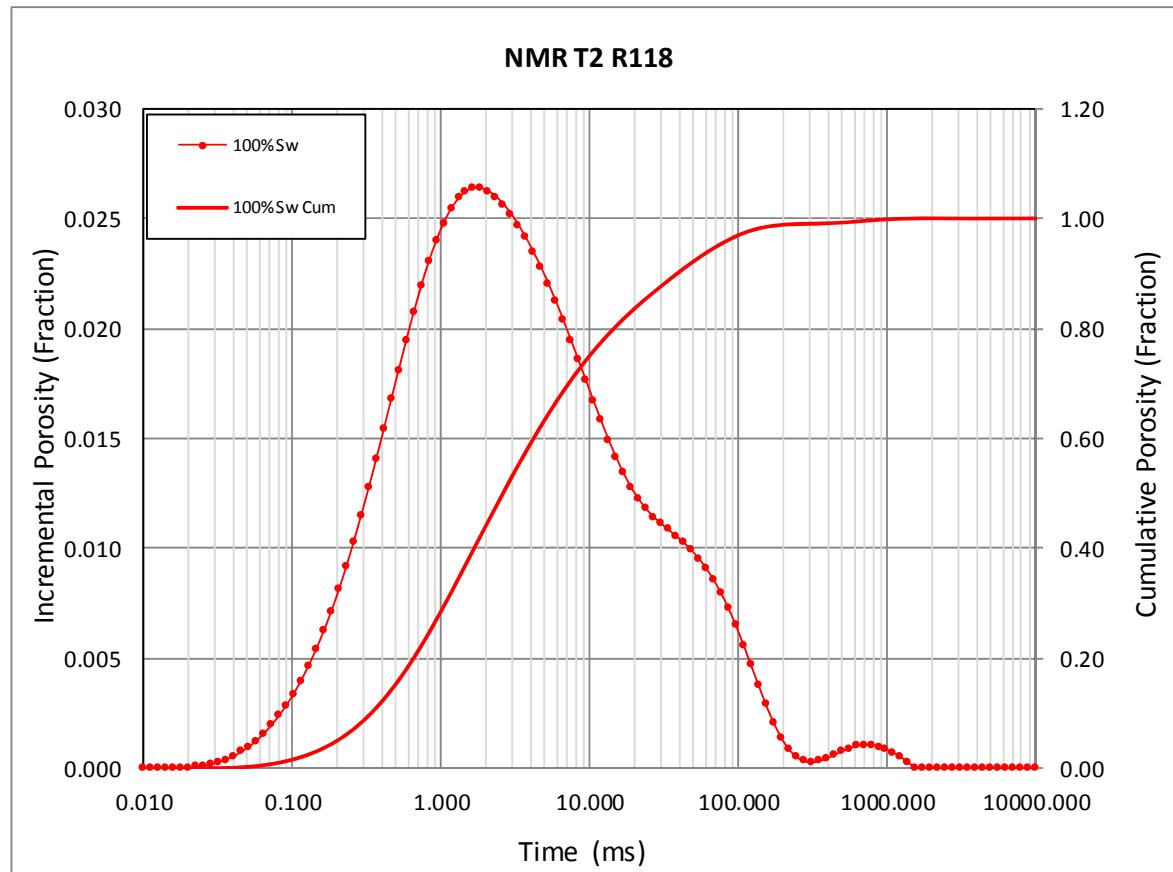
Sample ID	R109
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2974.61
Caliper Bulk Volume (cc)	56.22
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	4.38
<b>NMR Data</b>	
Total Porosity (% of BV)	5.2
Clay Bound Water (% of BV)	0.7
Effective Porosity (% of BV)	4.5
Saturation (mL) @ Sw=100%	2.92
T2 log mean @ Sw=100%	7.92
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

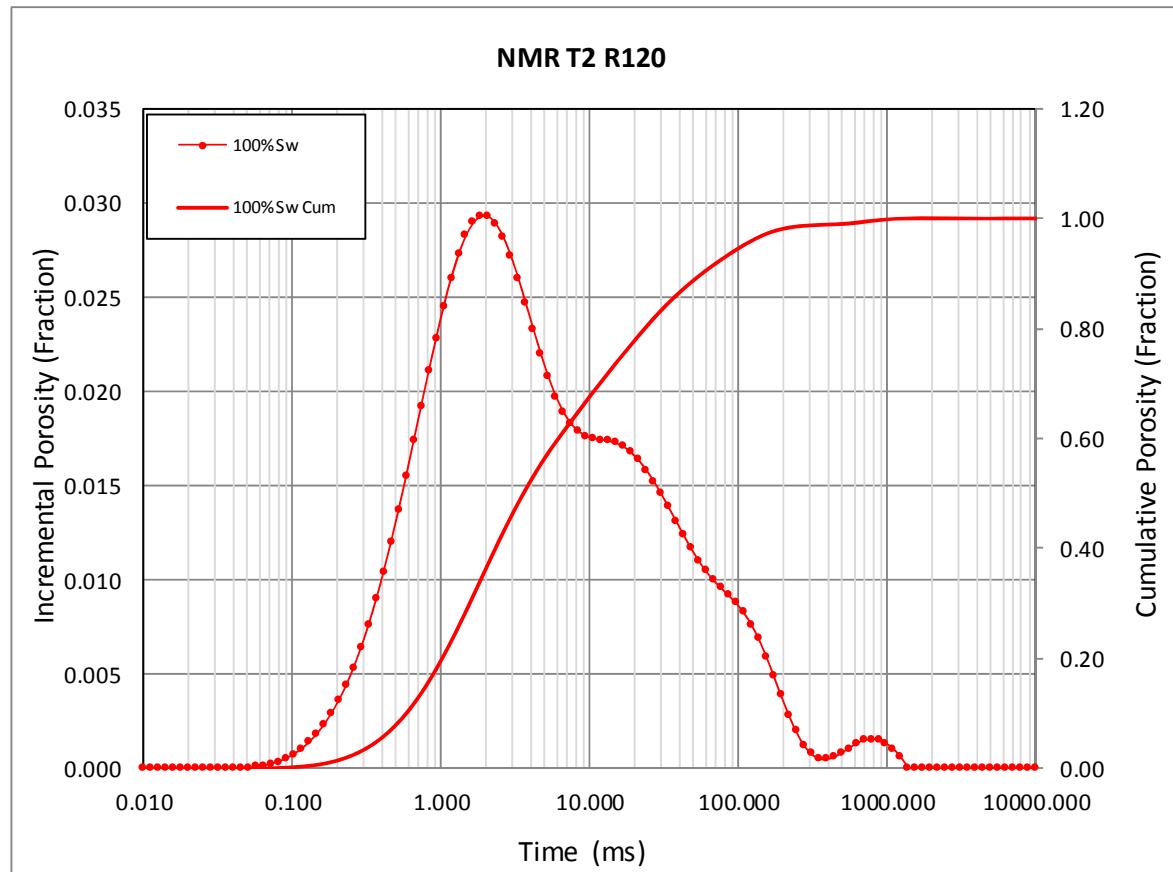
Sample ID	R118
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2977.55
Caliper Bulk Volume (cc)	56.14
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	3.04
<b>NMR Data</b>	
Total Porosity (% of BV)	4.6
Clay Bound Water (% of BV)	1.4
Effective Porosity (% of BV)	3.2
Saturation (mL) @ Sw=100%	2.59
T2 log mean @ Sw=100%	3.24
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R120
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2978.30
Caliper Bulk Volume (cc)	52.51
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	4.26
<b>NMR Data</b>	
Total Porosity (% of BV)	5.4
Clay Bound Water (% of BV)	1.1
Effective Porosity (% of BV)	4.3
Saturation (mL) @ Sw=100%	2.81
T2 log mean @ Sw=100%	4.98
Clay Bound Water Cutoff (ms)	1.04

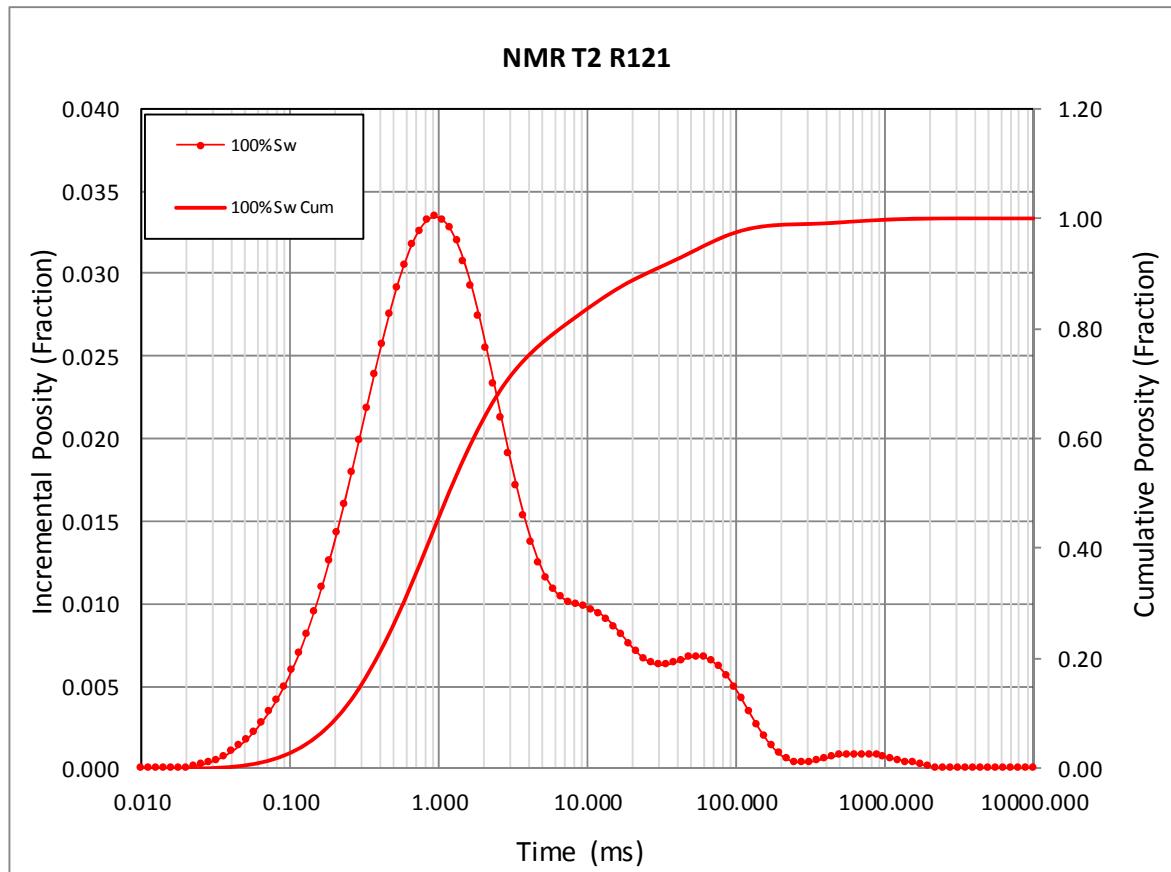


**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R121*
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2978.61
Caliper Bulk Volume (cc)	52.11
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	3.40
<b>NMR Data</b>	
Total Porosity (% of BV)	6.8
Clay Bound Water (% of BV)	3.2
Effective Porosity (% of BV)	3.6
Saturation (mL) @ Sw=100%	3.53
T2 log mean @ Sw=100%	1.71
Clay Bound Water Cutoff (ms)	1.04

\*Sample is fractured

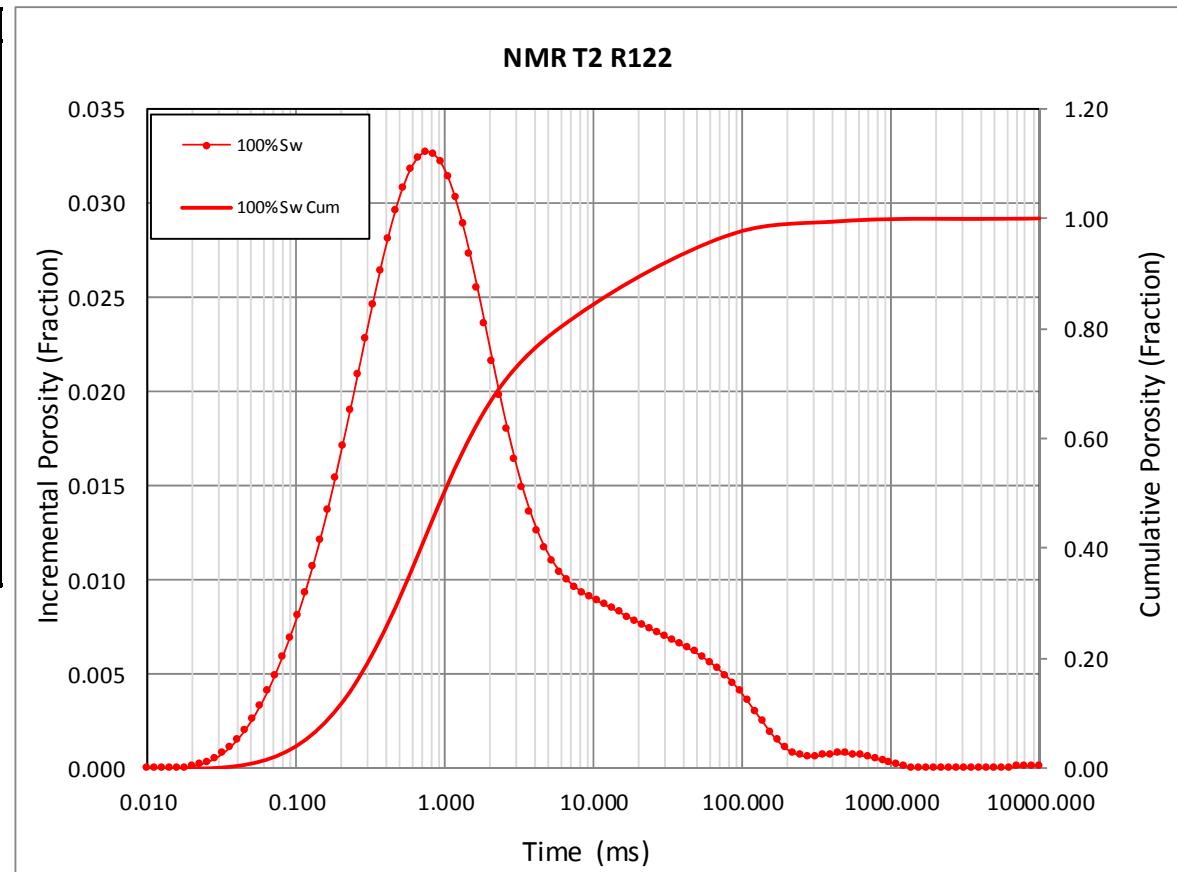


**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R122*
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2978.91
Caliper Bulk Volume (cc)	47.84
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	2.60
<b>NMR Data</b>	
Total Porosity (% of BV)	6.7
Clay Bound Water (% of BV)	3.5
Effective Porosity (% of BV)	3.3
Saturation (mL) @ Sw=100%	3.22
T2 log mean @ Sw=100%	1.46
Clay Bound Water Cutoff (ms)	1.04

\*Sample is fractured

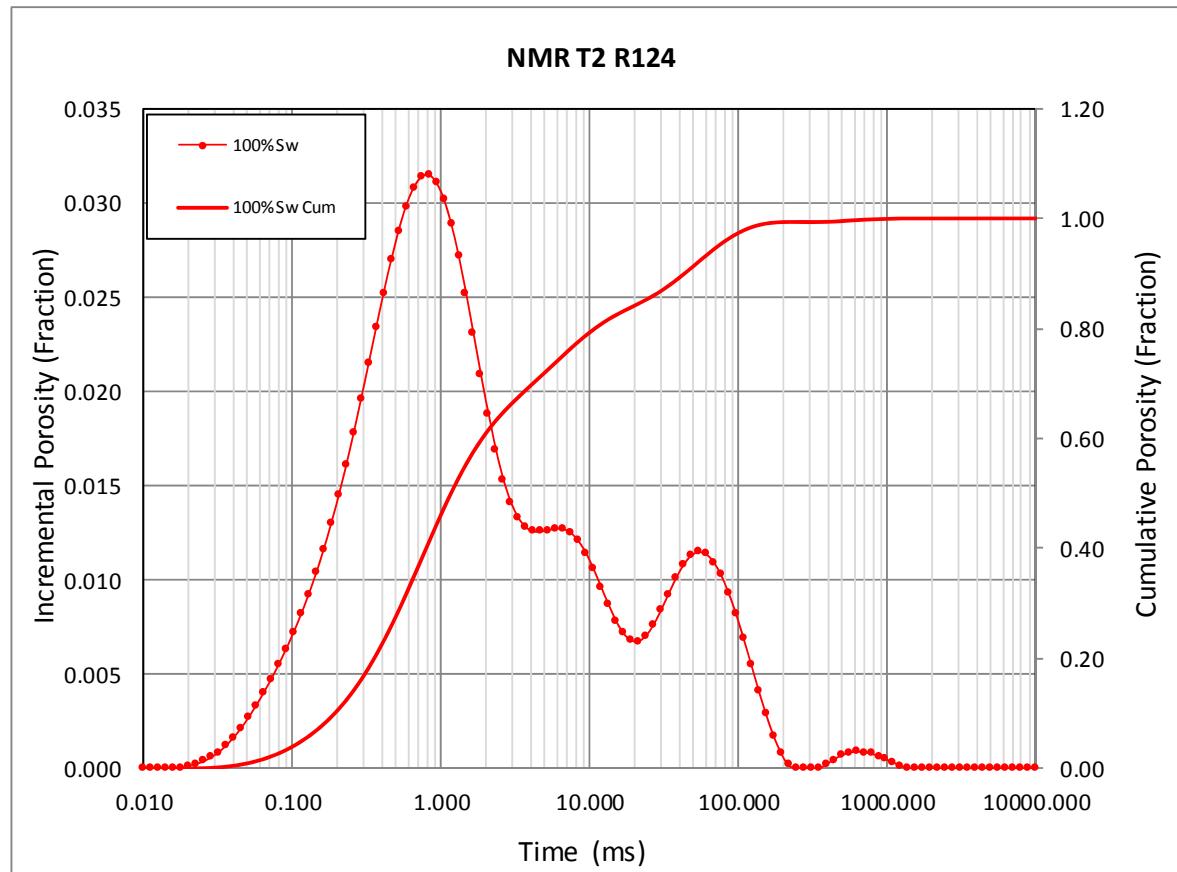


**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R124*
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2979.60
Caliper Bulk Volume (cc)	46.11
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	2.94
<b>NMR Data</b>	
Total Porosity (% of BV)	6.8
Clay Bound Water (% of BV)	3.2
Effective Porosity (% of BV)	3.6
Saturation (mL) @ Sw=100%	3.15
T2 log mean @ Sw=100%	1.92
Clay Bound Water Cutoff (ms)	1.04

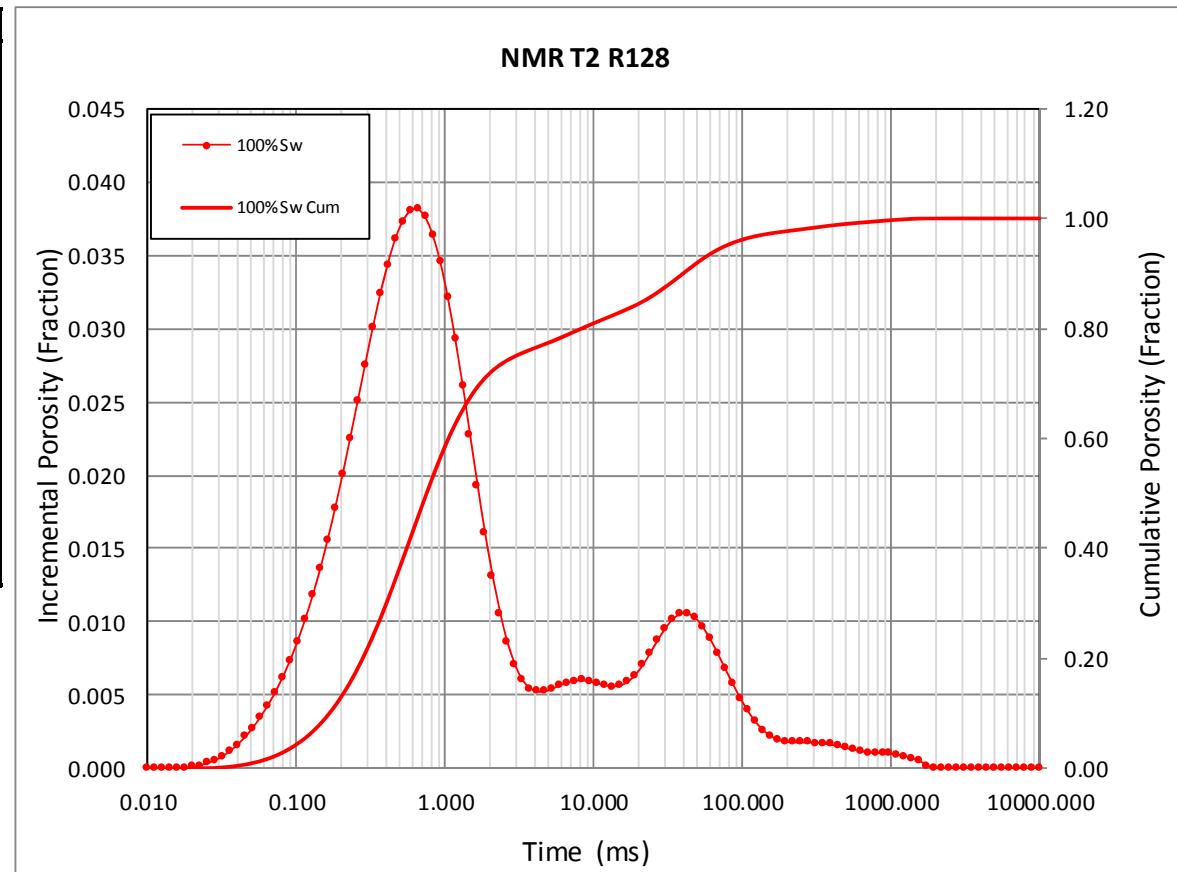
\*Sample is fractured



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

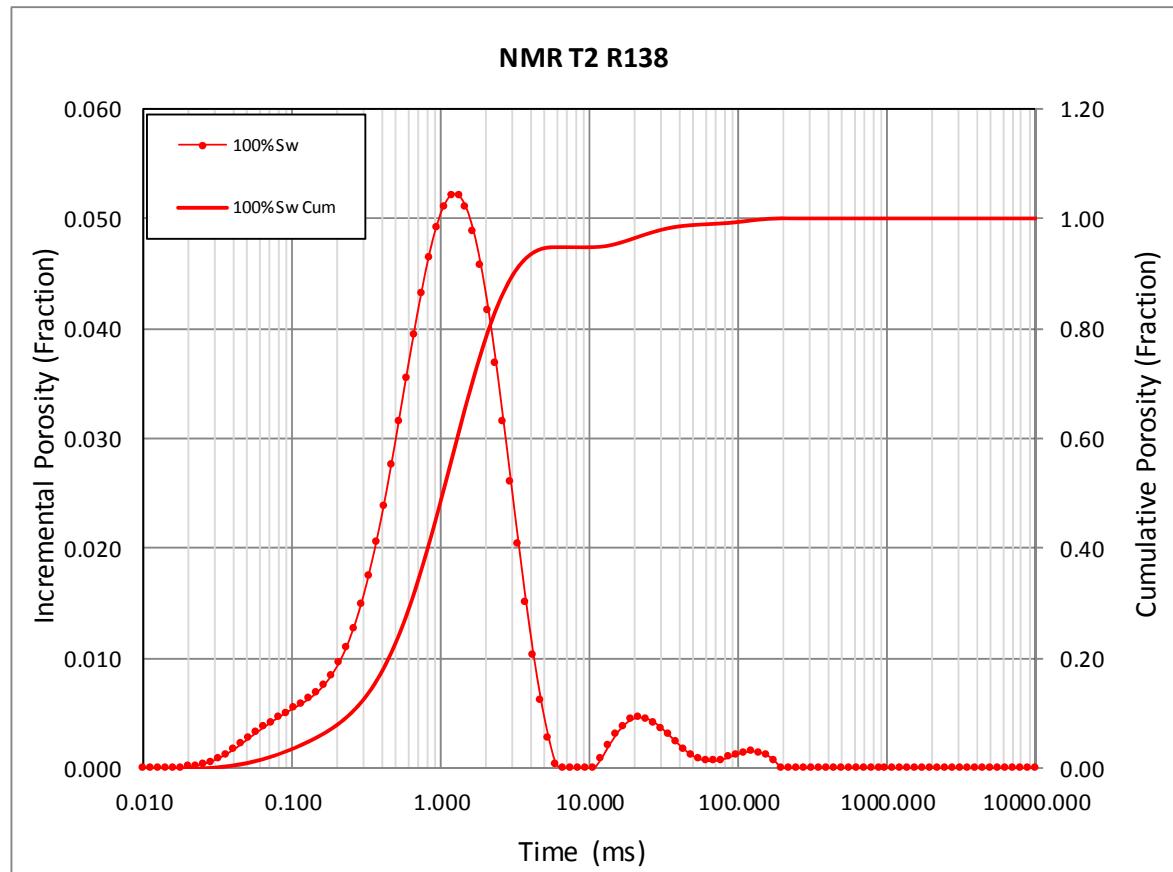
Sample ID	R128
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2980.93
Caliper Bulk Volume (cc)	55.47
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	0.89
<b>NMR Data</b>	
Total Porosity (% of BV)	2.3
Clay Bound Water (% of BV)	1.3
Effective Porosity (% of BV)	0.9
Saturation (mL) @ Sw=100%	1.25
T2 log mean @ Sw=100%	1.41
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

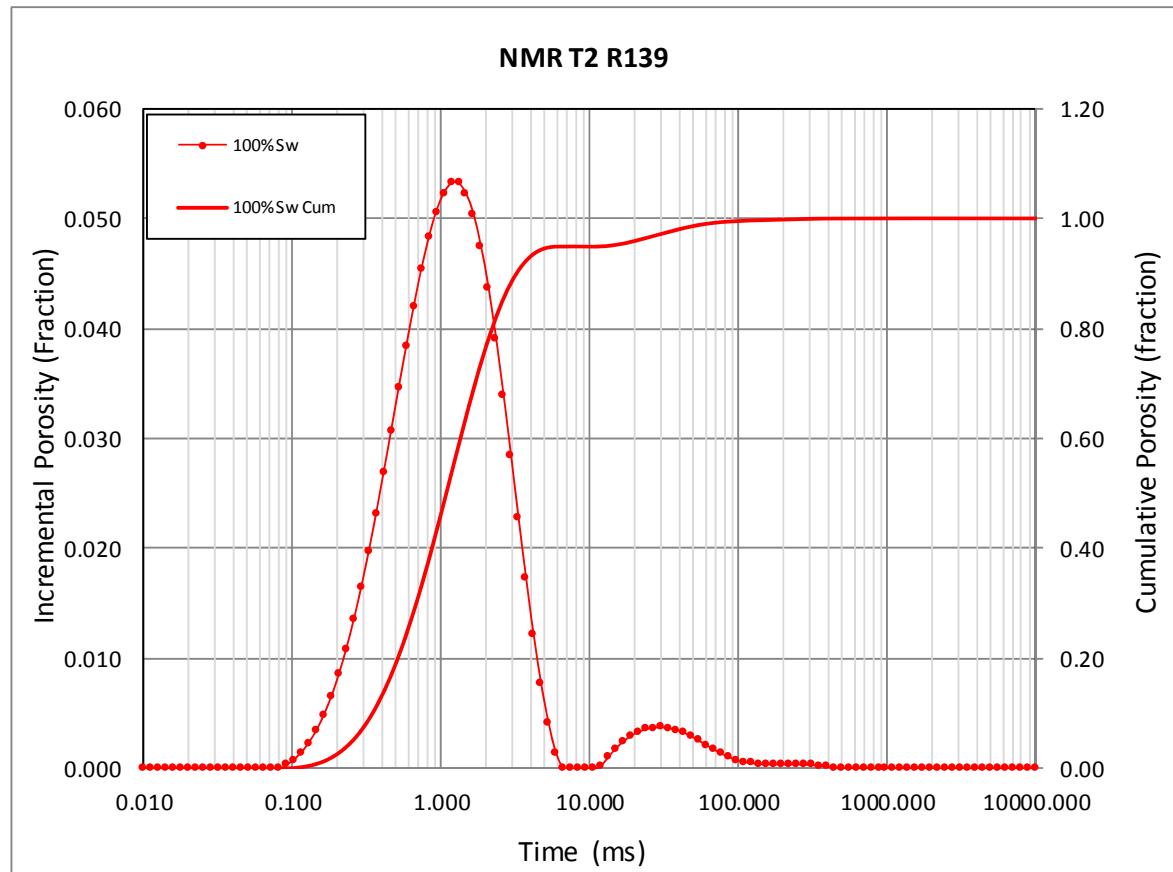
Sample ID	R138
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2990.53
Caliper Bulk Volume (cc)	56.09
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	4.49
<b>NMR Data</b>	
Total Porosity (% of BV)	7.0
Clay Bound Water (% of BV)	3.5
Effective Porosity (% of BV)	3.4
Saturation (mL) @ Sw=100%	3.92
T2 log mean @ Sw=100%	1.08
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

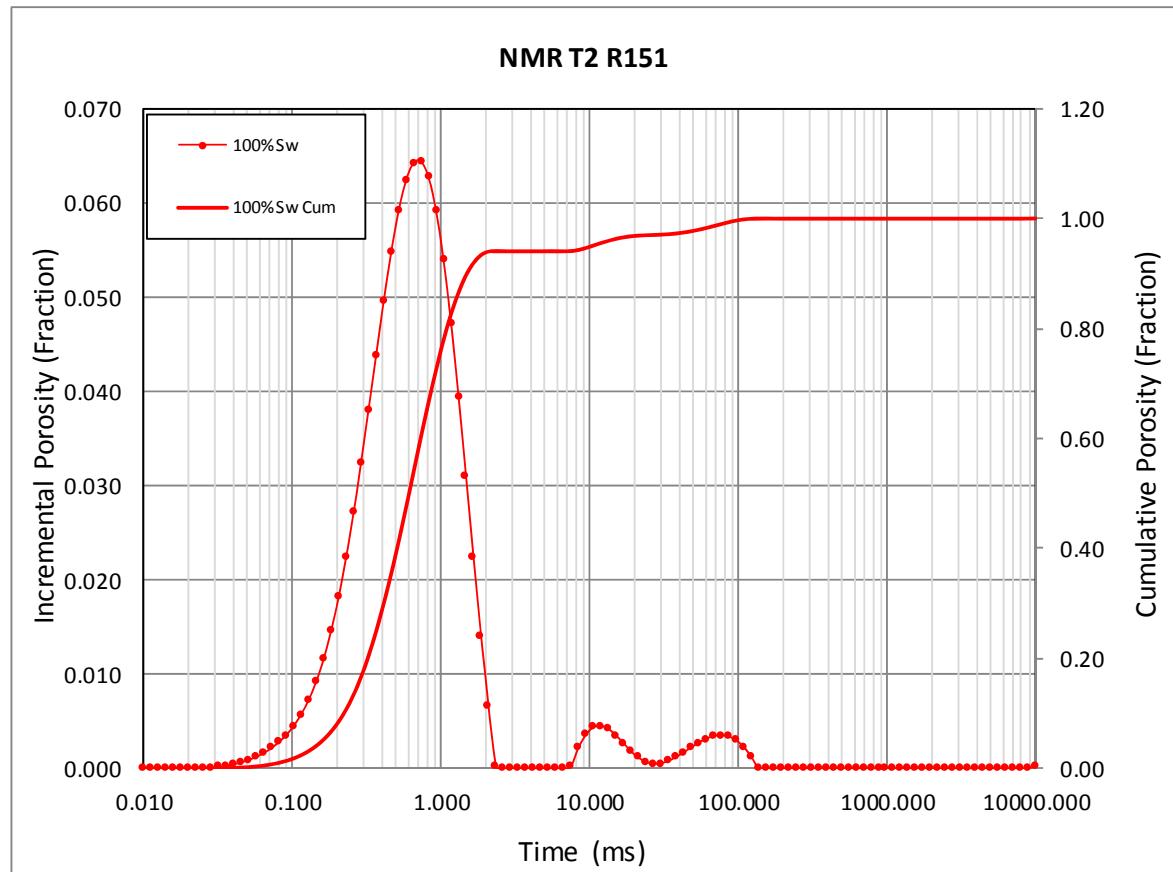
Sample ID	R139
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	2990.58
Caliper Bulk Volume (cc)	55.72
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	4.70
<b>NMR Data</b>	
Total Porosity (% of BV)	6.8
Clay Bound Water (% of BV)	3.3
Effective Porosity (% of BV)	3.5
Saturation (mL) @ Sw=100%	3.78
T2 log mean @ Sw=100%	1.24
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

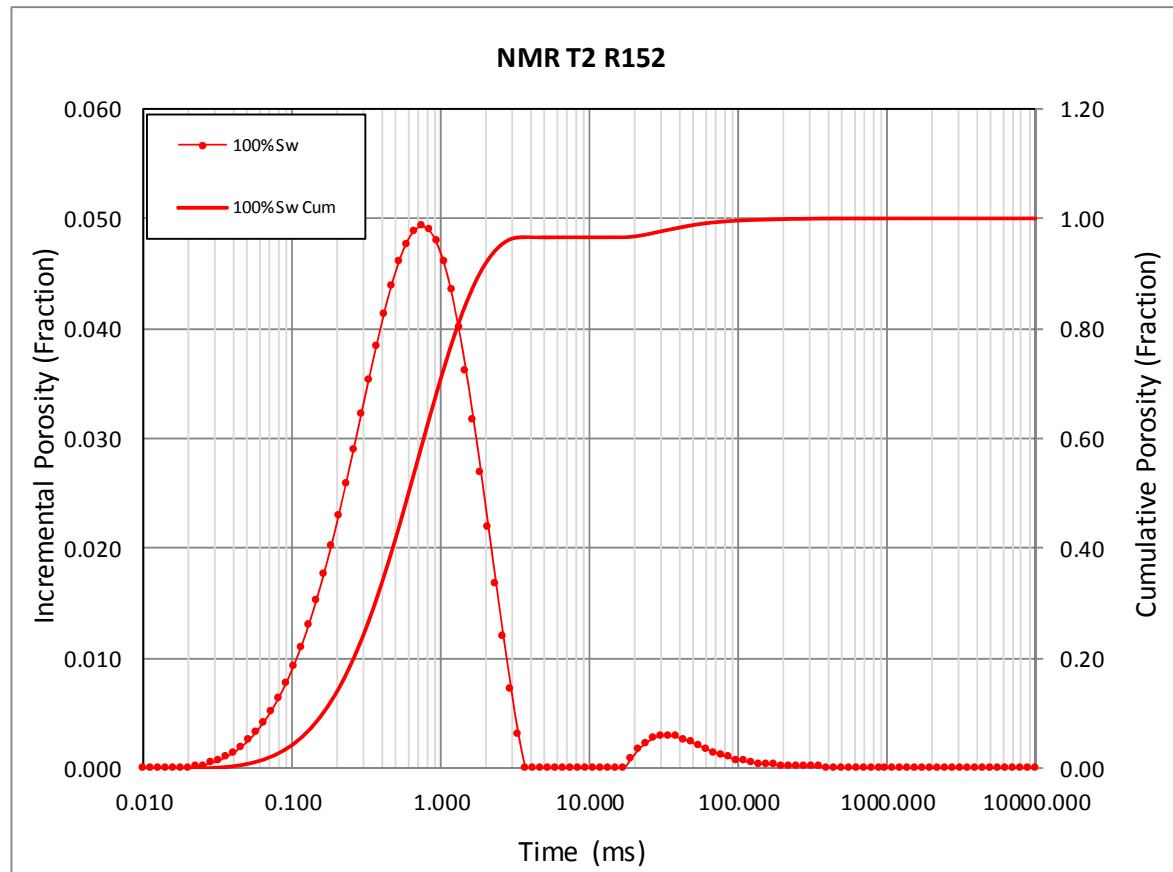
Sample ID	R151
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	3005.55
Caliper Bulk Volume (cc)	55.71
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	5.49
<b>NMR Data</b>	
Total Porosity (% of BV)	9.9
Clay Bound Water (% of BV)	7.8
Effective Porosity (% of BV)	2.2
Saturation (mL) @ Sw=100%	5.54
T2 log mean @ Sw=100%	0.72
Clay Bound Water Cutoff (ms)	1.04



**2MHz - NMR T2**  
**Plugs at 100% Sw**

Client: QGC - A BG Group Business  
 Well: Magnetic-1  
 File: AB-76967 0.1 Te 100% Sw

Sample ID	R152
<b>Core Data</b>	
Sample Type	Plugs
Depth (meter)	3005.60
Caliper Bulk Volume (cc)	55.84
Net Confining Stress (Psi)	Ambient
Sample Temperature	Ambient
Helium Porosity (%)	6.19
<b>NMR Data</b>	
Total Porosity (% of BV)	10.7
Clay Bound Water (% of BV)	7.8
Effective Porosity (% of BV)	2.9
Saturation (mL) @ Sw=100%	5.97
T2 log mean @ Sw=100%	0.66
Clay Bound Water Cutoff (ms)	1.04





**QGC – A BG GROUP BUSINESS  
MAGNETIC-1**

**Resistivity Index Test Results**

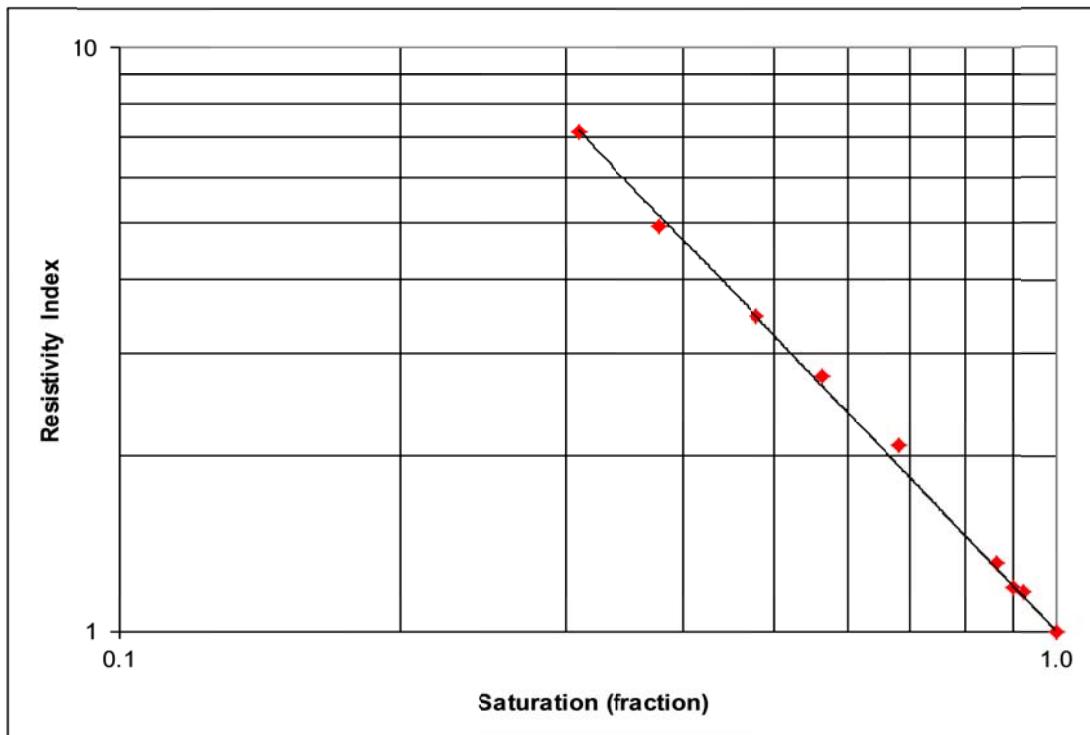
# RESISTIVITY INDEX



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden

Sample Number	Depth (metres)	Ambient Permeability to Air (milliDarcy's)	Effective Porosity (percent)	Formation Factor FF	Brine Saturation (fraction)	Resistivity Index RI	Saturation Exponent n
R2	2936.60	0.57	10.8	96.3	1.000	1.00	
					0.924	1.17	
					0.899	1.19	
					0.865	1.31	
					0.680	2.08	
					0.562	2.73	
					0.478	3.45	
					0.377	4.93	
					0.309	7.15	1.68

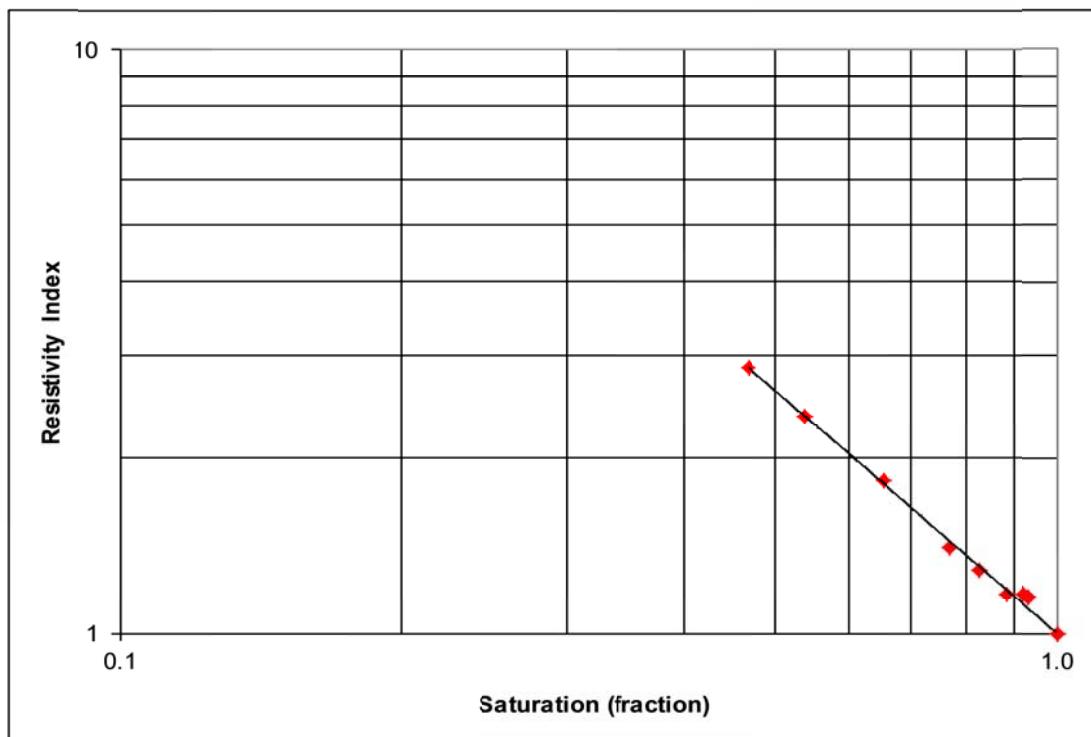


# RESISTIVITY INDEX



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden

Sample Number	Depth (metres)	Ambient Permeability to Air (milliDarcy's)	Effective Porosity (percent)	Formation Factor FF	Brine Saturation (fraction)	Resistivity Index RI	Saturation Exponent n
R27	2945.53	0.080	7.8	124	1.000	1.00	
					0.931	1.15	
					0.919	1.17	
					0.884	1.17	
					0.827	1.29	
					0.769	1.41	
					0.653	1.83	
					0.537	2.36	
					0.468	2.85	1.38

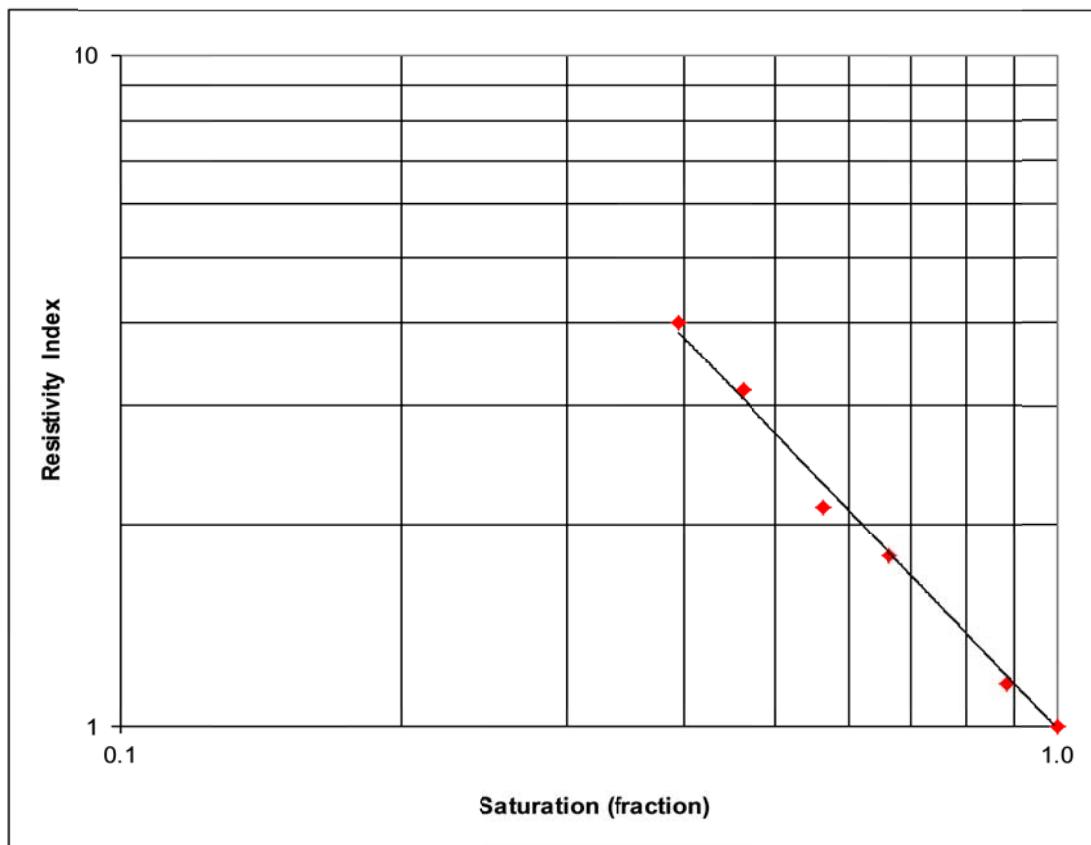


# RESISTIVITY INDEX



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden

Sample Number	Depth (metres)	Ambient Permeability to Air (milliDarcy's)	Effective Porosity (percent)	Formation Factor FF	Brine Saturation (fraction)	Resistivity Index RI	Saturation Exponent n
R38	2949.30	0.25	10.7	98.0	1.000	1.00	
					0.882	1.16	
					0.663	1.80	
					0.562	2.13	
					0.461	3.17	
					0.394	4.01	1.45



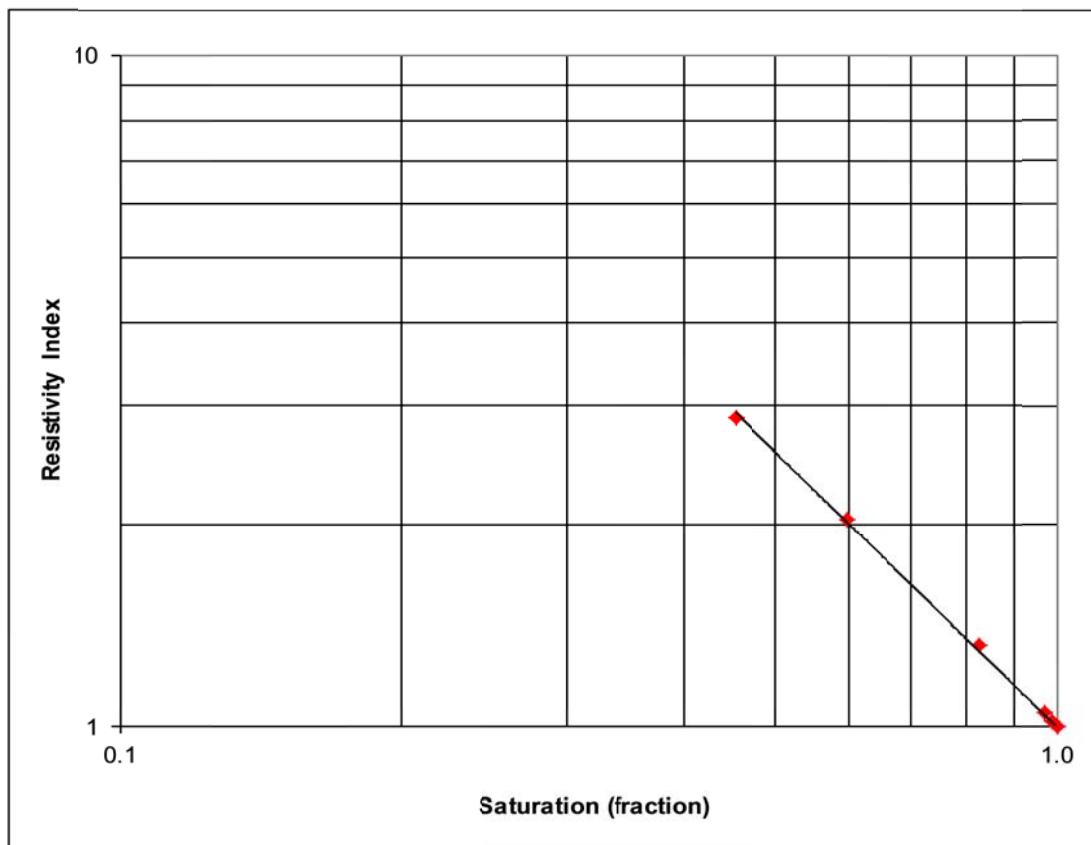
# RESISTIVITY INDEX



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden

Sample Number	Depth (metres)	Ambient Permeability to Air (milliDarcy's)	Effective Porosity (percent)	Formation Factor FF	Brine Saturation (fraction)	Resistivity Index RI	Saturation Exponent n
R54	2954.60	0.18	8.8	87.8	1.000	1.00	
					0.990	1.02	
					0.969	1.05	
					0.825	1.33	
					0.598	2.04	
					0.454	2.89	1.36

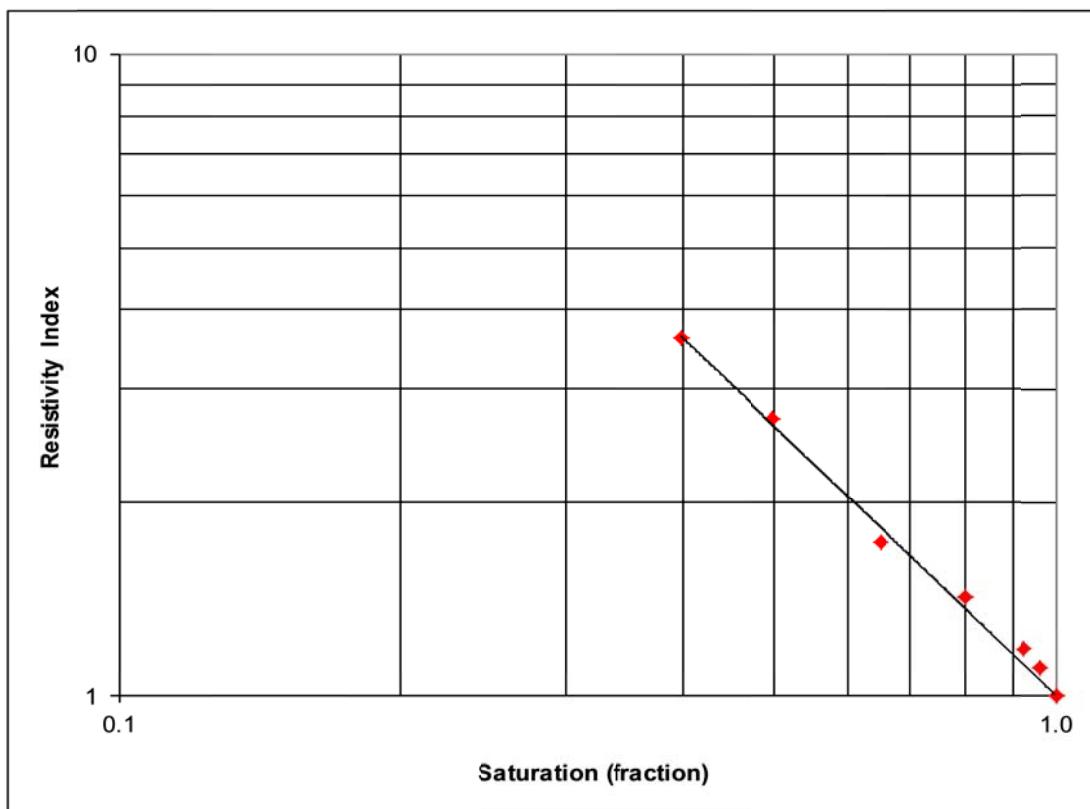


# RESISTIVITY INDEX



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden

Sample Number	Depth (metres)	Ambient Permeability to Air (milliDarcy's)	Effective Porosity (percent)	Formation Factor FF	Brine Saturation (fraction)	Resistivity Index RI	Saturation Exponent n
R91	2967.60	0.52	7.2	164	1.000	1.00	
					0.962	1.11	
					0.925	1.19	
					0.799	1.43	
					0.649	1.74	
					0.498	2.70	
					0.398	3.60	1.40

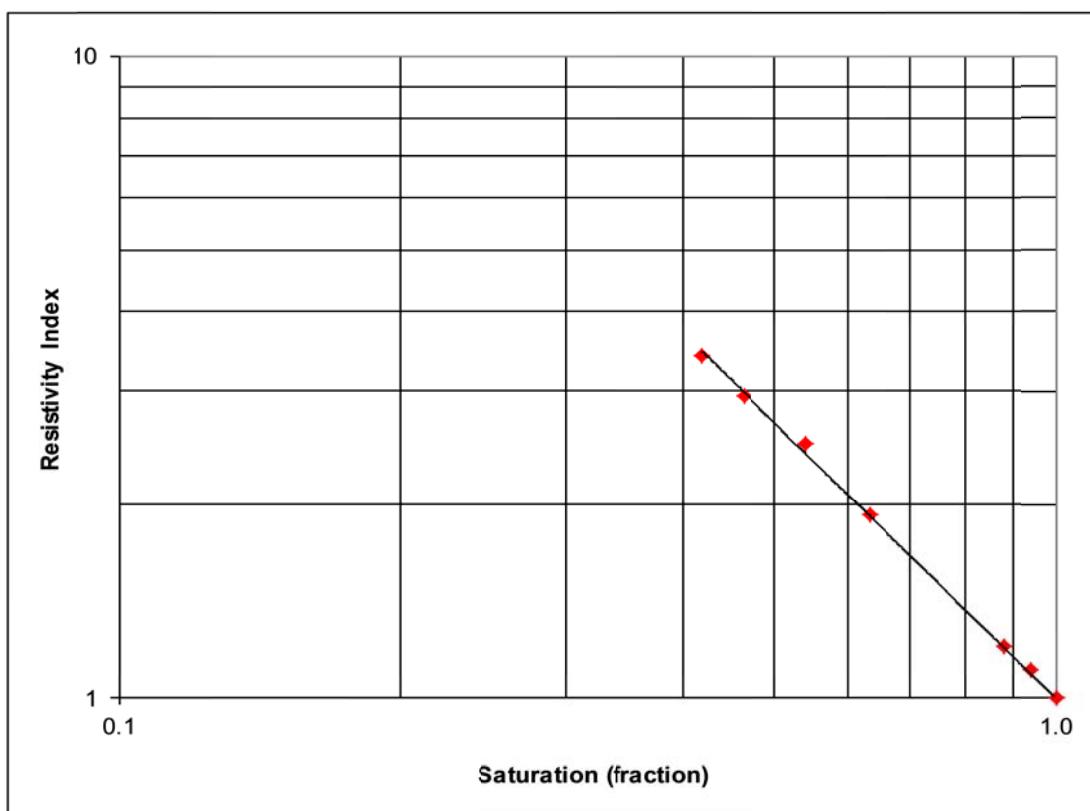


# RESISTIVITY INDEX



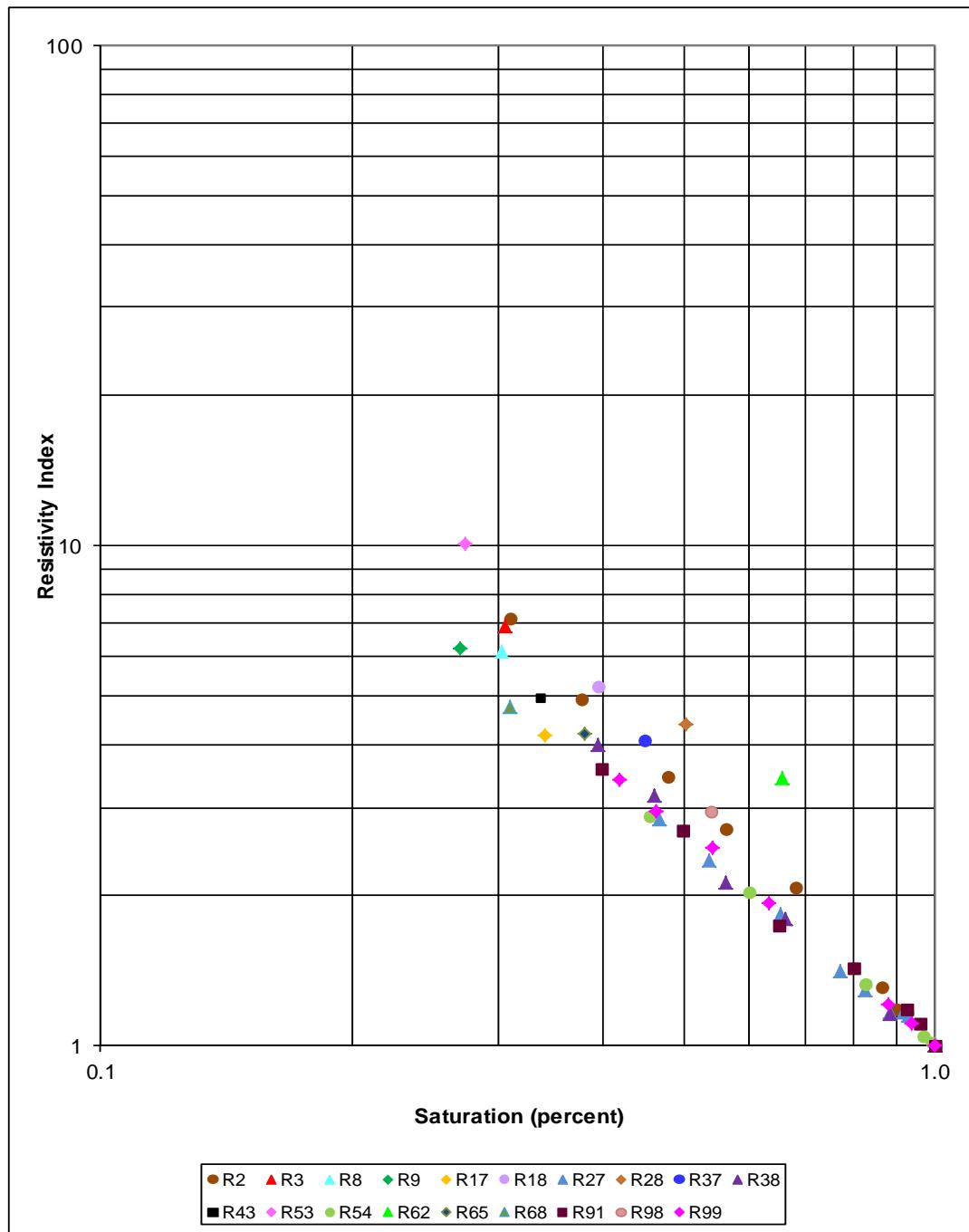
**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden

Sample Number	Depth (metres)	Ambient Permeability to Air (milliDarcy's)	Effective Porosity (percent)	Formation Factor FF	Brine Saturation (fraction)	Resistivity Index RI	Saturation Exponent n
R99	2971.30	0.73	7.2	150	1.000	1.00	
					0.939	1.11	
					0.878	1.21	
					0.633	1.93	
					0.541	2.49	
					0.464	2.95	
					0.419	3.40	1.43



## ***RESISTIVITY INDEX***

**Client** QGC - A BG Group Business  
**Well** Moa-2  
**Rw of Saturant** 0.22 at 25°C  
**Method** Air/Brine Porous Plate @ Overburden



## ELECTRICAL PROPERTIES SUMMARY



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

<b>Rw of Saturant</b>	0.22 at 25°C
<b>Overburden</b>	Various
<b>Date</b>	26/04/2016

Sample Number	Depth (metres)	Ambient 400 psi				Overburden 1500 psi				Overburden 2500 psi				Overburden 4000 psi						
		Ambient		Formation Factor FF	Cementation Exponent m	Porosity (%)	Formation		Cementation Exponent m	Porosity (%)	Formation		Cementation Exponent m	Porosity (%)	Formation		Cementation Exponent m	Residual Saturation (%)	Resistivity Index RI	Saturation Exponent n
		Effective Porosity	Formation Factor FF				Cementation Exponent m	Porosity (%)			Cementation Exponent m	Porosity (%)			Cementation Exponent m	Porosity (%)				
R2	2936.60	11.7	66.4	1.96	11.1	78.3	1.98	10.9	87.5	2.02	10.8	96.3	2.06	30.9	7.15	1.68				
R3	2936.91	11.7	61.8	1.92	11.3	74.2	1.98	11.1	79.9	2.00	11.0	86.1	2.02	30.5	6.91	1.63				
R8	2939.22	11.5	61.7	1.91	11.1	72.2	1.95	10.9	77.9	1.96	10.7	90.3	2.01	30.3	6.16	1.52				
R9	2939.61	10.8	58.2	1.82	10.2	77.0	1.90	10.0	84.6	1.93	9.9	99.1	1.99	27.0	6.24	1.40				
R17	2942.30	11.1	55.3	1.83	10.6	67.6	1.88	10.4	75.2	1.91	10.2	89.5	1.97	34.0	4.19	1.33				
R18	2942.60	11.3	55.0	1.84	10.9	67.2	1.90	10.6	76.5	1.93	10.4	84.9	1.97	39.4	5.23	1.78				
R27	2945.53	8.4	77.0	1.75	8.0	94.4	1.80	7.9	108	1.84	7.8	124	1.89	46.8	2.85	1.38				
R28	2945.80	9.0	70.0	1.76	8.4	93.4	1.83	8.2	103	1.85	8.0	110	1.86	50.3	4.40	2.16				
R37	2948.89	7.8	58.9	1.60	7.2	84.1	1.68	7.0	92.8	1.71	6.9	98.4	1.72	44.8	4.09	1.75				
R38	2949.30	11.6	66.1	1.94	11.0	76.4	1.97	10.9	90.0	2.03	10.7	98.0	2.05	39.4	4.01	1.45				
R43	2950.88	8.2	83.5	1.77	7.9	125	1.90	7.7	184	2.03	7.6	192	2.04	33.8	4.96	1.48				
R53	2954.30	11.6	58.2	1.89	11.0	81.3	1.99	10.8	89.5	2.02	10.7	94.5	2.04	27.4	10.10	1.79				
R54	2954.60	9.5	60.9	1.75	9.1	72.0	1.78	8.9	76.0	1.79	8.8	87.8	1.84	45.4	2.89	1.36				
R62	2958.30	4.3	185	1.66	3.9	236	1.69	3.7	290	1.72	3.6	294	1.72	65.5	3.44	2.92				
R65	2959.19	8.4	84.6	1.80	8.0	104	1.84	7.8	117	1.87	7.7	140	1.92	38.0	4.21	1.49				
R68	2959.90	10.4	71.9	1.89	9.8	89.6	1.94	9.7	101	1.98	9.6	115	2.02	31.0	4.78	1.34				
R91	2967.60	7.9	104	1.83	7.4	129	1.86	7.3	143	1.90	7.2	164	1.93	39.8	3.60	1.40				
R98	2970.89	6.0	140	1.75	5.5	166	1.77	5.4	188	1.79	5.3	197	1.80	54.0	2.94	1.75				
R99	2971.30	8.4	89.3	1.81	7.5	113	1.82	7.3	119	1.83	7.2	150	1.90	41.9	3.40	1.43				

‡ Ambient porosity data measured by helium porosimetry on humidity dried plug samples

All residual saturations to be confirmed on completion of NMR analysis

## **BRINE PERMEABILITY AND POROSITY SQUEEZOUT**

**Client** : QGC - A BG Group Business  
**Well** : Magnetic-1

**Date** 25/02/2016  
**File** AB-76967

<sup>†</sup> Ambient porosity data measured by helium porosimetry on humidity dried plug samples



**QGC – A BG GROUP BUSINESS  
MAGNETIC-1**

**Capillary Pressure Test Results**

**CAPILLARY PRESSURE**  
*Overburden*



**Client Well** QGC - A BG Group Business  
Magnetic-1

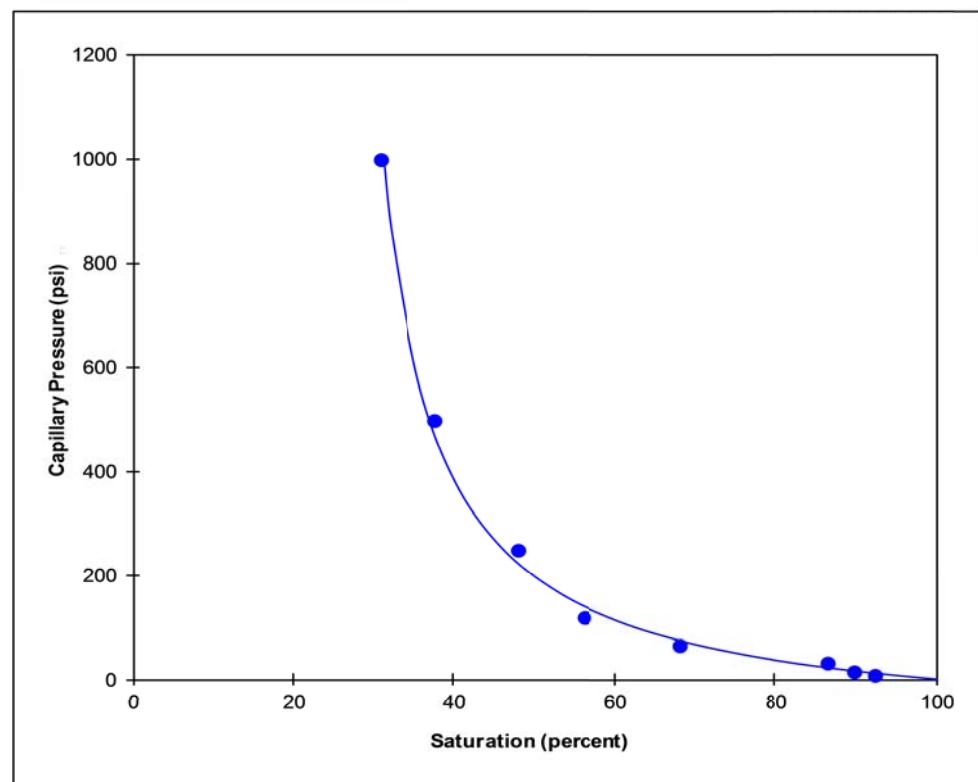
**Air Permeability**  
**Effective Porosity**

0.57 milliDarcy's  
10.8 percent

**Sample Depth** R2  
2936.60 metres

**Test Method Overburden** Air/Brine Porous Plate @ Overburden  
4000 psi

Capillary Pressure (psi)	Brine Saturation (percent)
8.0	92.4
16	89.9
32	86.5
64	68.0
120	56.2
250	47.8
500	37.7
1000	30.9



**CAPILLARY PRESSURE**  
*Overburden*



**Client Well** QGC - A BG Group Business  
Magnetic-1

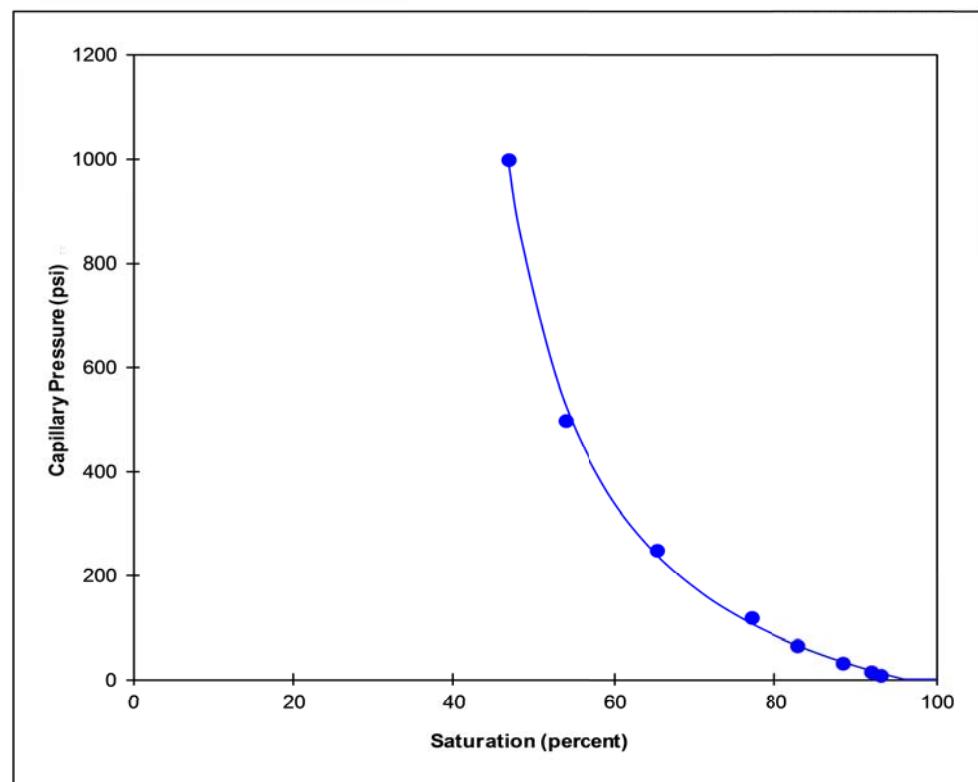
**Air Permeability**  
**Effective Porosity**

0.080 millDarcy's  
7.8 percent

**Sample Depth** R27  
2945.53 metres

**Test Method Overburden** Air/Brine Porous Plate @ Overburden  
4000 psi

Capillary Pressure (psi)	Brine Saturation (percent)
8.0	93.1
16	91.9
32	88.4
64	82.7
120	76.9
250	65.3
500	53.7
1000	46.8



**CAPILLARY PRESSURE**  
*Overburden*



**Client Well** QGC - A BG Group Business  
Magnetic-1

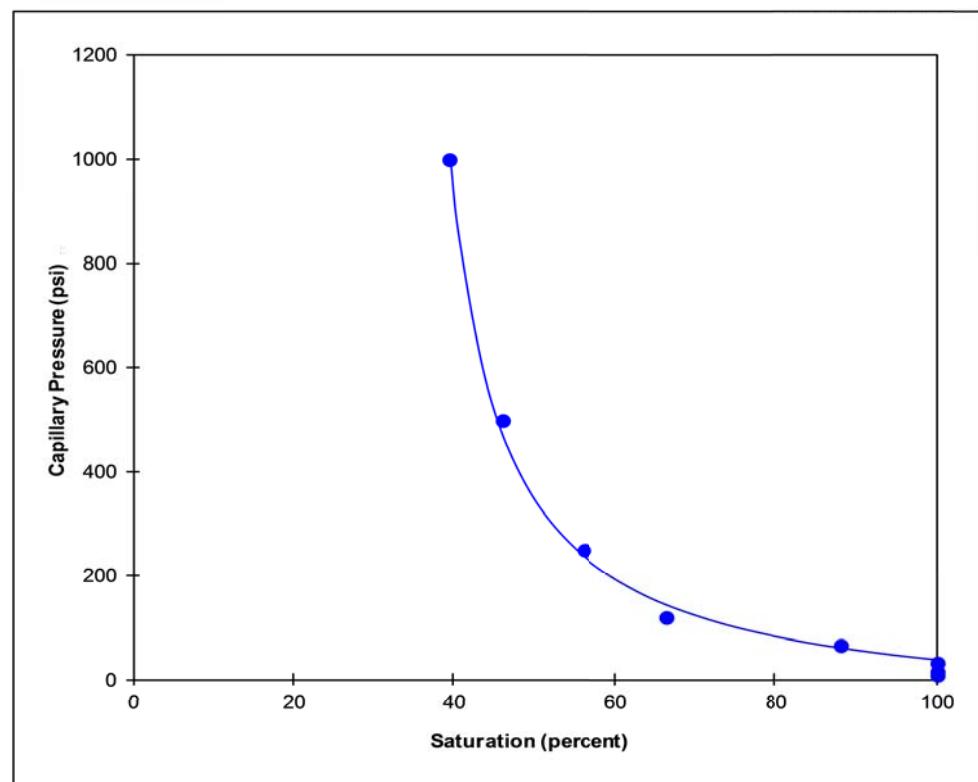
**Air Permeability**  
**Effective Porosity**

0.25 milliDarcy's  
10.7 percent

**Sample Depth** R38  
2949.30 metres

**Test Method Overburden** Air/Brine Porous Plate @ Overburden  
4000 psi

Capillary Pressure (psi)	Brine Saturation (percent)
8.0	100.0
16	100.0
32	100.0
64	88.2
120	66.3
250	56.2
500	46.1
1000	39.4



**CAPILLARY PRESSURE**  
*Overburden*



**Client Well** QGC - A BG Group Business  
Magnetic-1

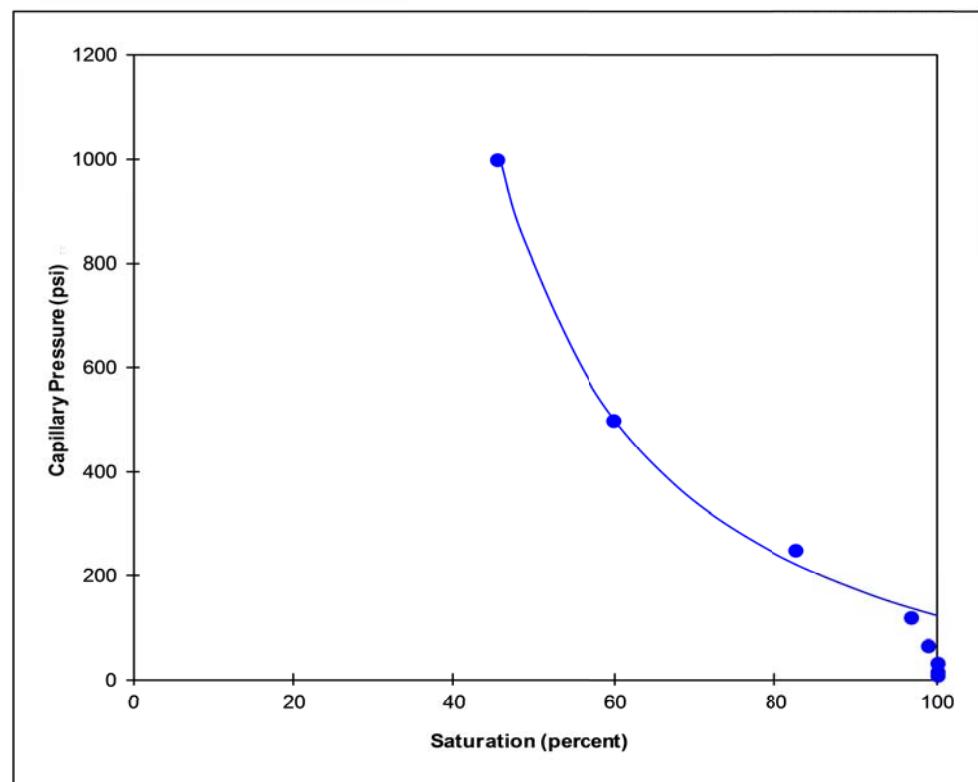
**Air Permeability**  
**Effective Porosity**

0.18 milliDarcy's  
8.8 percent

**Sample Depth** R54  
2954.60 metres

**Test Method Overburden** Air/Brine Porous Plate @ Overburden  
4000 psi

Capillary Pressure (psi)	Brine Saturation (percent)
8.0	100.0
16	100.0
32	100.0
64	99.0
120	96.9
250	82.5
500	59.8
1000	45.4



**CAPILLARY PRESSURE**  
*Overburden*



**Client Well** QGC - A BG Group Business  
Magnetic-1

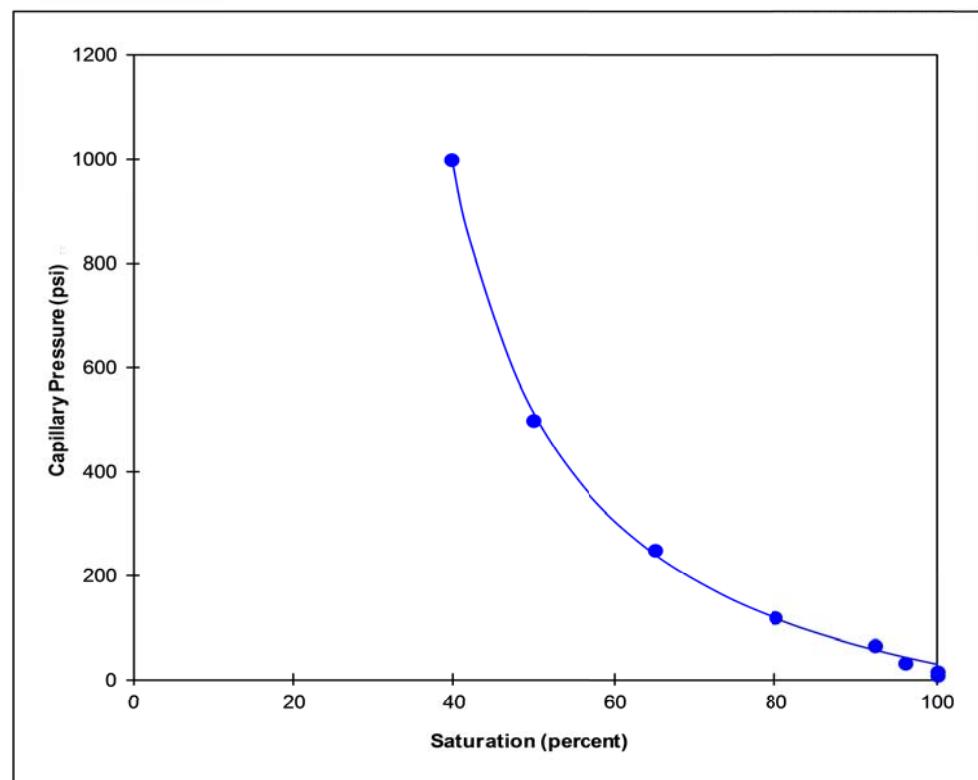
**Air Permeability**  
**Effective Porosity**

0.52 milliDarcy's  
7.2 percent

**Sample Depth** R91  
2967.60 metres

**Test Method Overburden** Air/Brine Porous Plate @ Overburden  
4000 psi

Capillary Pressure (psi)	Brine Saturation (percent)
8.0	100.0
16	100.0
32	96.2
64	92.5
120	79.9
250	64.9
500	49.8
1000	39.8



**CAPILLARY PRESSURE**  
*Overburden*



**Client Well** QGC - A BG Group Business  
Magnetic-1

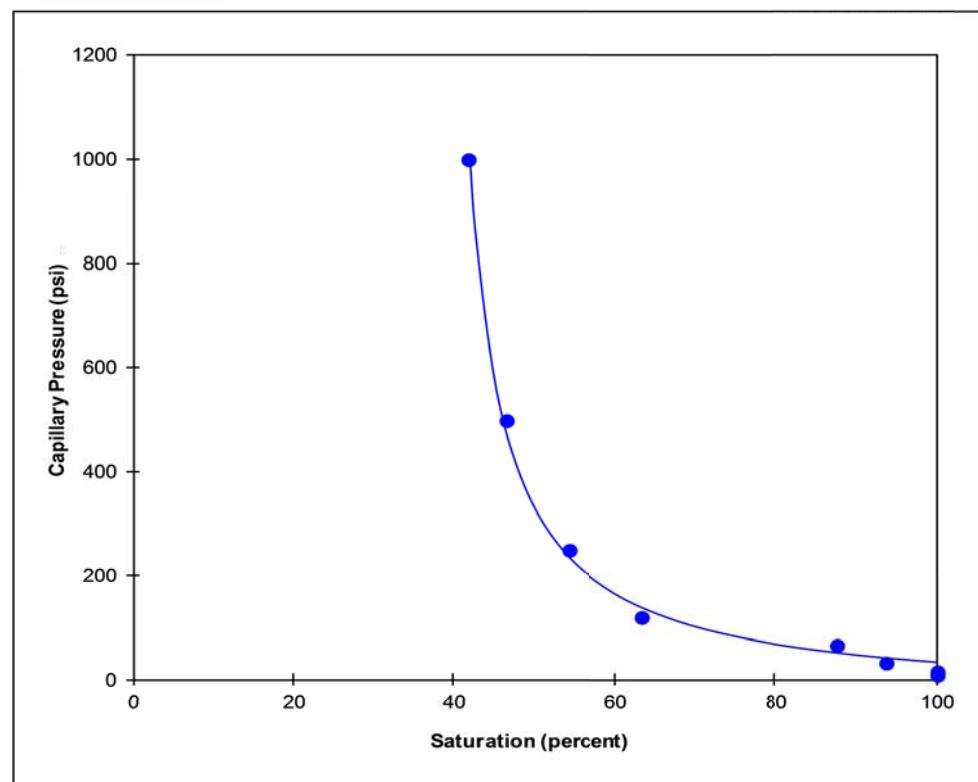
**Air Permeability**  
**Effective Porosity**

0.73 milliDarcy's  
7.2 percent

**Sample Depth** R99  
2971.30 metres

**Test Method Overburden** Air/Brine Porous Plate @ Overburden  
4000 psi

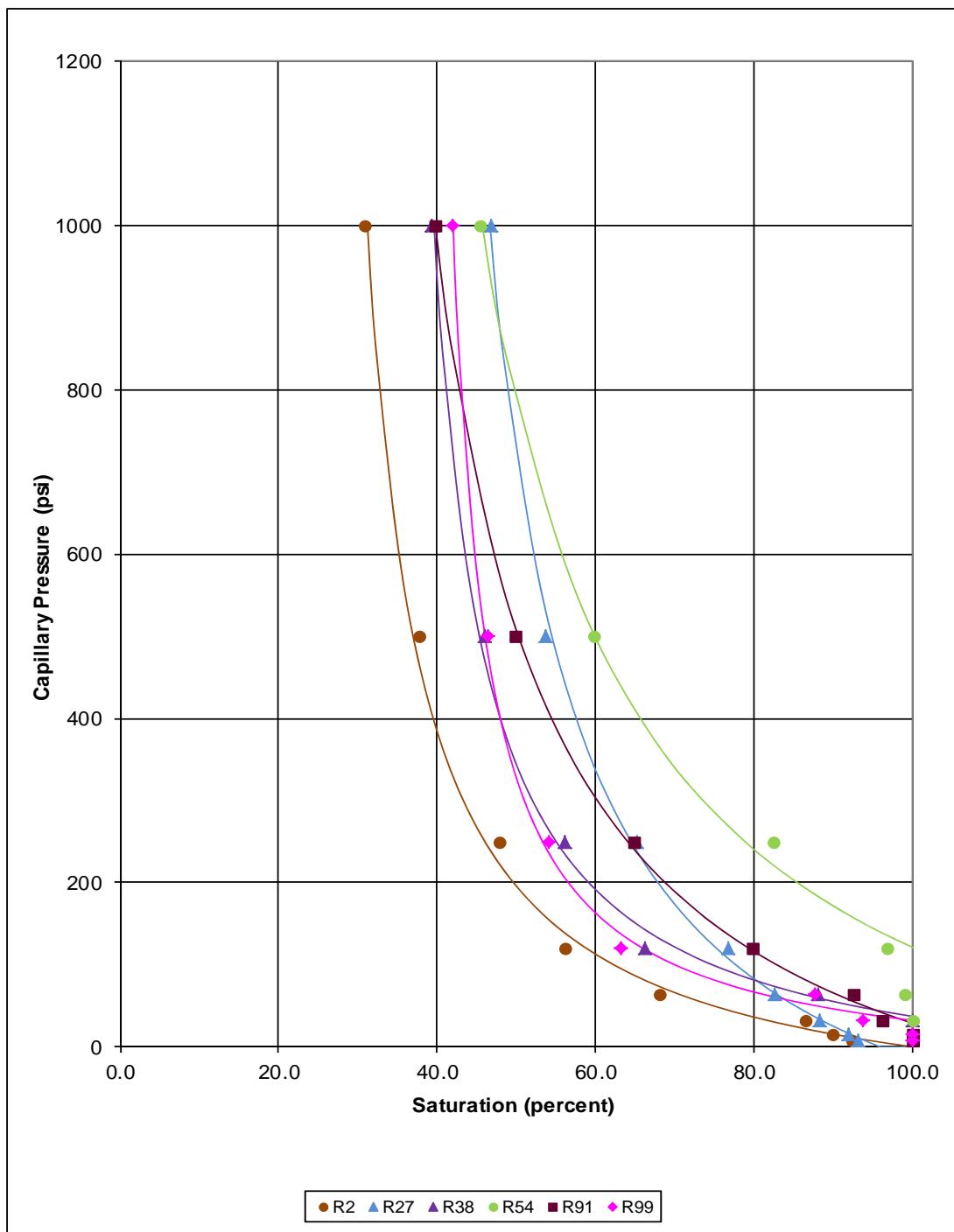
Capillary Pressure (psi)	Brine Saturation (percent)
8.0	100.0
16	100.0
32	93.9
64	87.8
120	63.3
250	54.1
500	46.4
1000	41.9



## CAPILLARY PRESSURE

**Client** QGC - A BG Group Business  
**Well** Magnetic-1

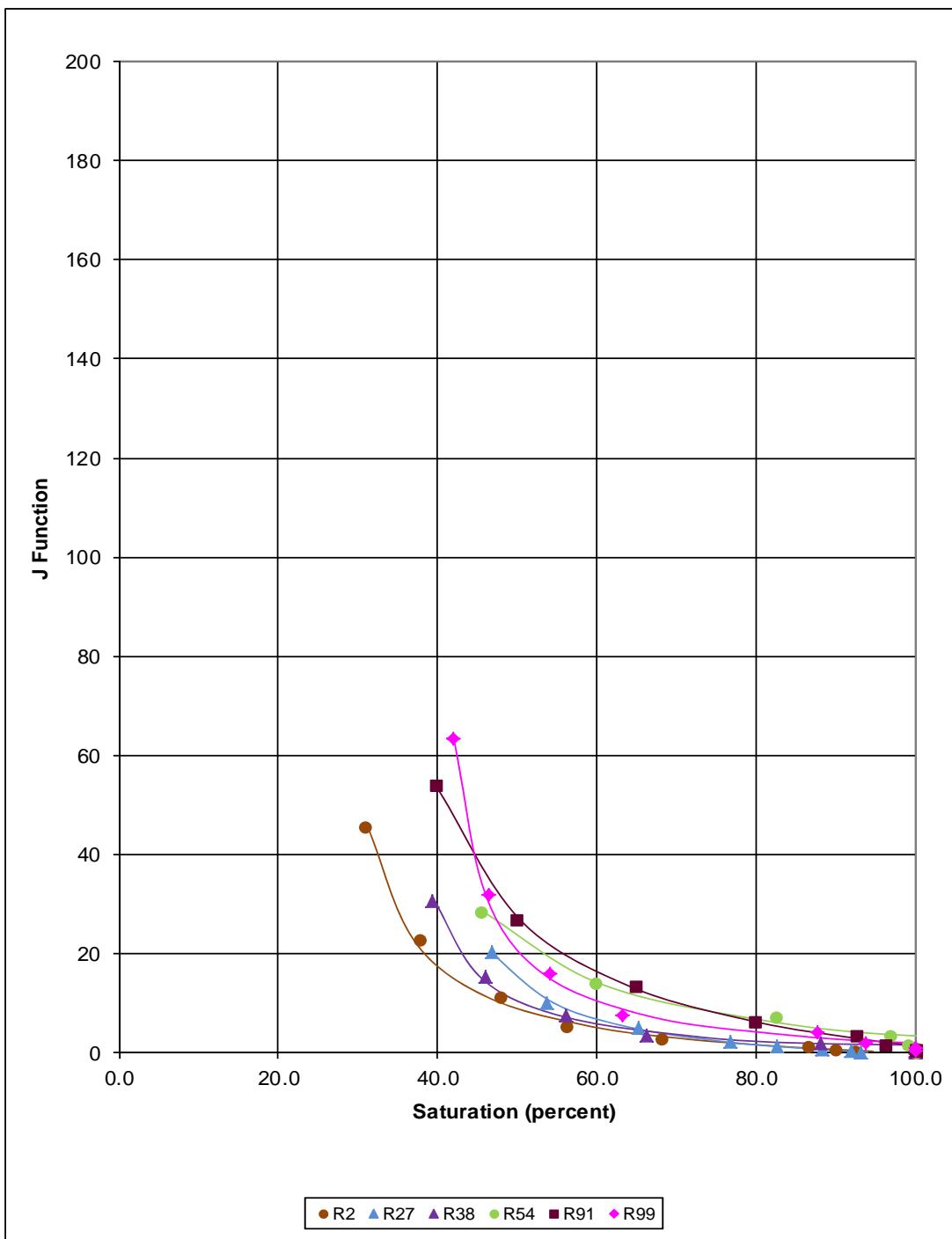
**Method** Air/Brine Porous Plate @ Overburden



## ***J FUNCTION***

**Client** QGC - A BG Group Business  
**Well** Magnetic-1

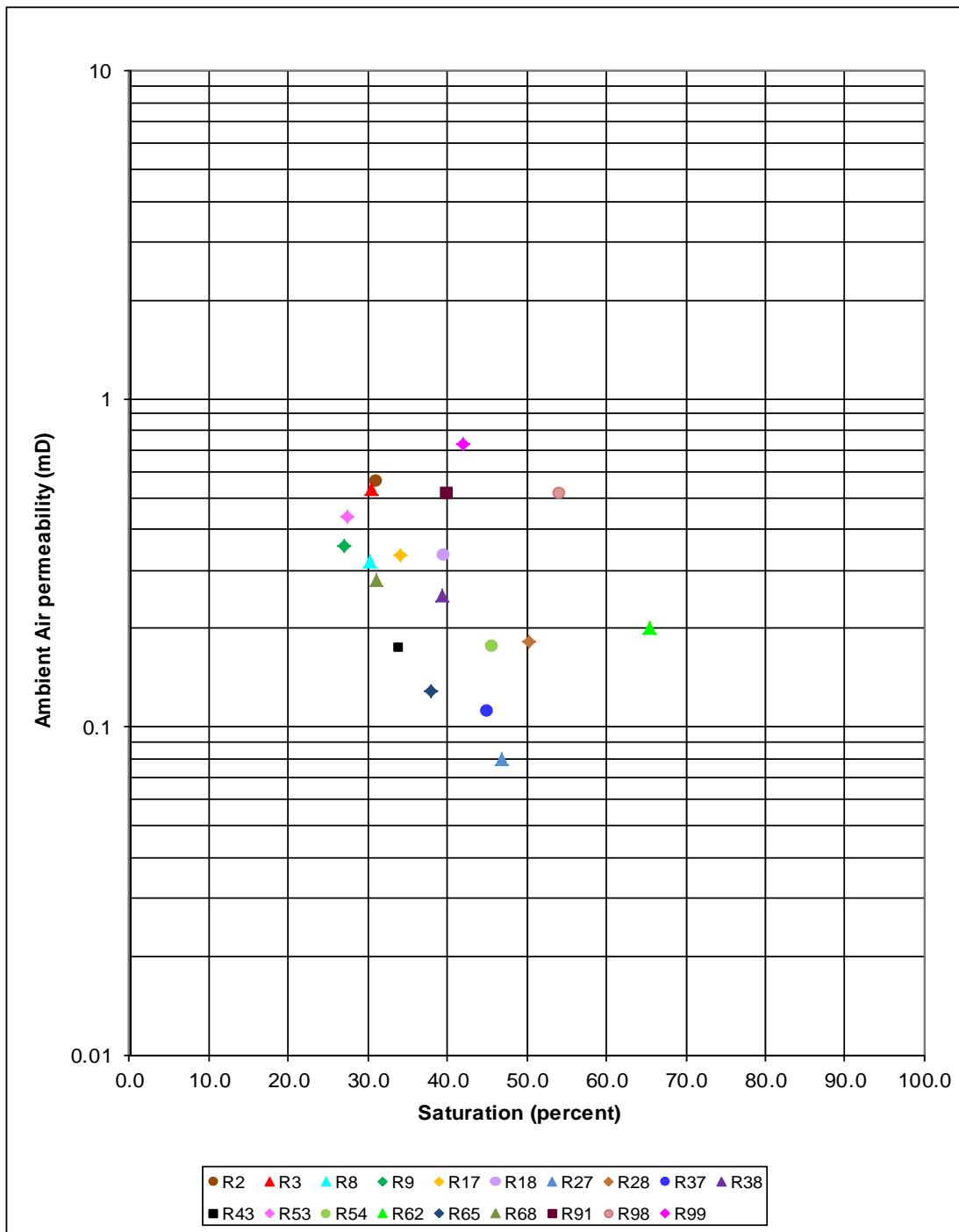
**Method** Air/Brine Porous Plate @ Overburden



## RESIDUAL SATURATION

**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Method** Air/Brine Porous Plate @ Overburden



## **MERCURY INJECTION CAPILLARY PRESSURE**

Sample off-cuts of sufficient volume to fill the sample chamber (circa 2 cm<sup>3</sup>) were utilised for capillary pressure determinations by the mercury injection technique. The mercury injection apparatus used was semi-automatic Micromeritics Autopore IV 9520, which can operate up to a pressure of 60,000 psia, and can measure intrusions as small as 0.0001 cm<sup>3</sup>.

The Micromeritics Autopore records mercury intrusion by measuring the capacitance change between the capillary of mercury contained in the penetrometers and an outer metal sheath as mercury invades the samples. For pressures up to 24 psia, air pressure was used. Hydraulic oil was used to achieve the higher pressures. No volume corrections for pressure effects were made, since below 24 psia they are negligible, whilst for higher pressures, the penetrometers experiences equal external and internal pressures and mercury compression is offset by penetrometers compression.

All samples were dried in a humidity oven and placed into calibrated glass penetrometers. These consist of a sample chamber and attached precision bore capillary. Once the samples were placed into the penetrometers, a vacuum was applied until less than 50 micrometres of mercury had been achieved. Mercury was then introduced into the penetrometers and the run commenced along predefined pressure points on a logarithmic scale. After equilibration at each pressure point, a capacitance reading was taken which was then converted into an equivalent intrusion volume.

The results of saturation as a function of pressure are presented ‘unconformed’ and ‘conformed’. The conformance correction aims to back out the effects of surface conformance of the mercury into sample surface features, which, if left unconformed, is seen as actual sample penetration. Mercury-Air displacement pressures were estimated by extrapolation of curve plateaus (Schowalter 1979).

Pore throat diameter for intrusion pressure can be calculated as such:

$$D = \frac{4T \cos\theta C}{P_c}$$

where     $D$         =    pore throat diameter (microns)  
             $T$         =    interfacial tension (dynes/cm)  
             $\theta$         =    contact angle (degrees)  
             $P_c$       =    capillary pressure (psi)  
             $C$         =    conversion constant  
                         $145 \times 10^{-3}$

Any apparent inconsistencies between the reported values of Intrusion (percent) and Saturation (percent) are a rounding effect. All intrusion however, cumulates to 100% saturation at maximum pressure.

Calculation of the hydrocarbon column that a given rock pore system can seal is accomplished by using the equation of Smith (1966):

$$H = \frac{(PdB - PdR)}{(\rho_w - \rho_h) \times 0.433}$$

<i>where H</i>	=	<i>maximum vertical hydrocarbon column in feet above the 100% water level that can be sealed</i>
<i>PdB</i>	=	<i>subsurface hydrocarbon-water displacement pressure (psi) of the boundary or sealing bed</i>
<i>PdR</i>	=	<i>subsurface hydrocarbon-water displacement pressure (psi) of the reservoir rock</i>
$\rho_w$	=	<i>subsurface density (g/cc) of water</i>
$\rho_h$	=	<i>subsurface density (g/cc) of hydrocarbon</i>
<i>0.433</i>	=	<i>unit's conversion factor</i>

The parameters used to calculate the hydrocarbon column heights all listed in the data report tables.

Definitions:

- Entry pressure is the first pressure interpreted as actual mercury penetration of the sample.
- Displacement pressure as defined by Leverett (1940) is the minimum pressure required for the non-wetting fluid, (oil or gas) to begin displacing the wetting fluid (water) from the largest pores.
- Threshold pressure is deemed where the mercury presents a continuous phase and is interpreted as 10% Hg Saturation.



**QGC – A BG GROUP BUSINESS  
MAGNETIC-1**

**Mercury Injection Capillary Pressure Test Results**

**MERCURY INJECTION CAPILLARY PRESSURE**  
**Summary**



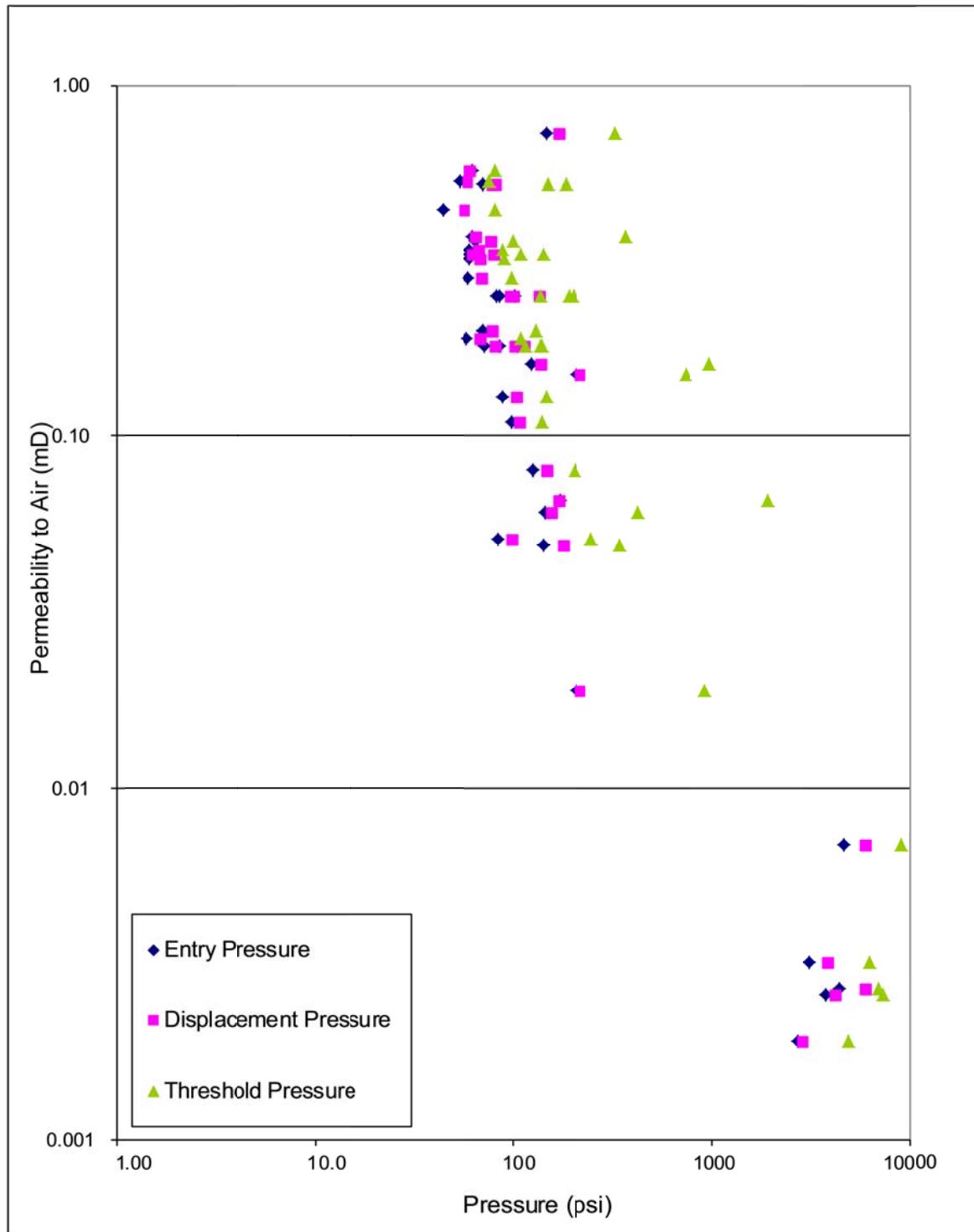
**Client** QGC - A BG Group Business  
**Well** Magnetic-1

Sample	Depth (metres)	Ambient Porosity (%)	Ambient Permeability (mD)	Pore Radius (μm)	Air-Mercury		
					Entry Pressure (psi)	Displacement Pressure (psi)	Threshold Pressure (psi)
R2	2936.60	11.7	0.57	1.70	62.6	59.7	81.4
R3	2936.91	11.7	0.53	2.00	53.2	58.0	76.0
R8	2939.22	11.5	0.32	1.78	59.8	67.9	89.3
R9	2939.61	10.8	0.36	1.64	64.9	76.8	99.3
R17	2942.30	11.1	0.33	1.72	61.9	79.2	108
R18	2942.60	11.3	0.34	1.77	60.1	66.8	87.7
R27	2945.53	8.4	0.080	0.848	126	147	204
R28	2945.80	9.0	0.18	1.26	84.5	101	137
R37	2948.89	7.8	0.11	1.08	98.5	107	139
R38	2949.30	11.6	0.25	1.05	101	133	199
R43	2950.88	8.2	0.18	1.49	71.4	80.2	114
R44	2951.29	8.7	0.33	1.76	60.5	62.4	140
R53	2954.30	11.6	0.44	2.40	44.3	55.9	81.1
R54	2954.60	9.5	0.18	1.01	105	112	138
R62	2958.30	4.3	0.20	1.52	70.0	78.2	130
R63	2958.60	2.6	0.051	1.28	83.1	98.5	248
R65	2959.19	8.4	0.13	1.21	88.0	103	147
R68	2959.90	10.4	0.28	1.79	59.5	69.0	97.2
R77	2962.91	9.3	0.19	1.83	58.2	68.3	109
R80	2963.92	9.4	0.25	1.29	82.5	96.9	136
R86	2965.90	6.8	0.25	1.24	85.8	99.8	191
R91	2967.60	7.9	0.52	1.51	70.5	78.5	183
R98	2970.89	6.0	0.52	1.52	70.0	80.7	149
R99	2971.30	8.4	0.73	0.736	145	169	324
R107	2973.91	7.9	0.16	0.875	122	136	972
R109	2974.61	4.4	0.049	0.754	141	178	345
R118	2977.55	3.0	0.37	1.72	61.9	64.4	370
R120	2978.30	4.3	0.15	0.517	206	214	736
R121	2978.61	3.4	0.061	0.739	144	153	423
R122	2978.91	2.6	0.019	0.517	206	213	925
R124	2979.60	2.9	0.066	0.617	172	168	1909
R128	2980.93	0.9	0.0019	0.039	2729	2868	4939
R138	2990.53	4.5	0.0026	0.028	3801	4186	7346
R139	2990.58	4.7	0.0027	0.024	4435	5950	6897
R151	3005.55	5.5	0.0069	0.023	4627	5983	9052
R152	3005.60	6.2	0.0032	0.034	3130	3852	6297

**MERCURY INJECTION CAPILLARY PRESSURE  
Summary Plot**



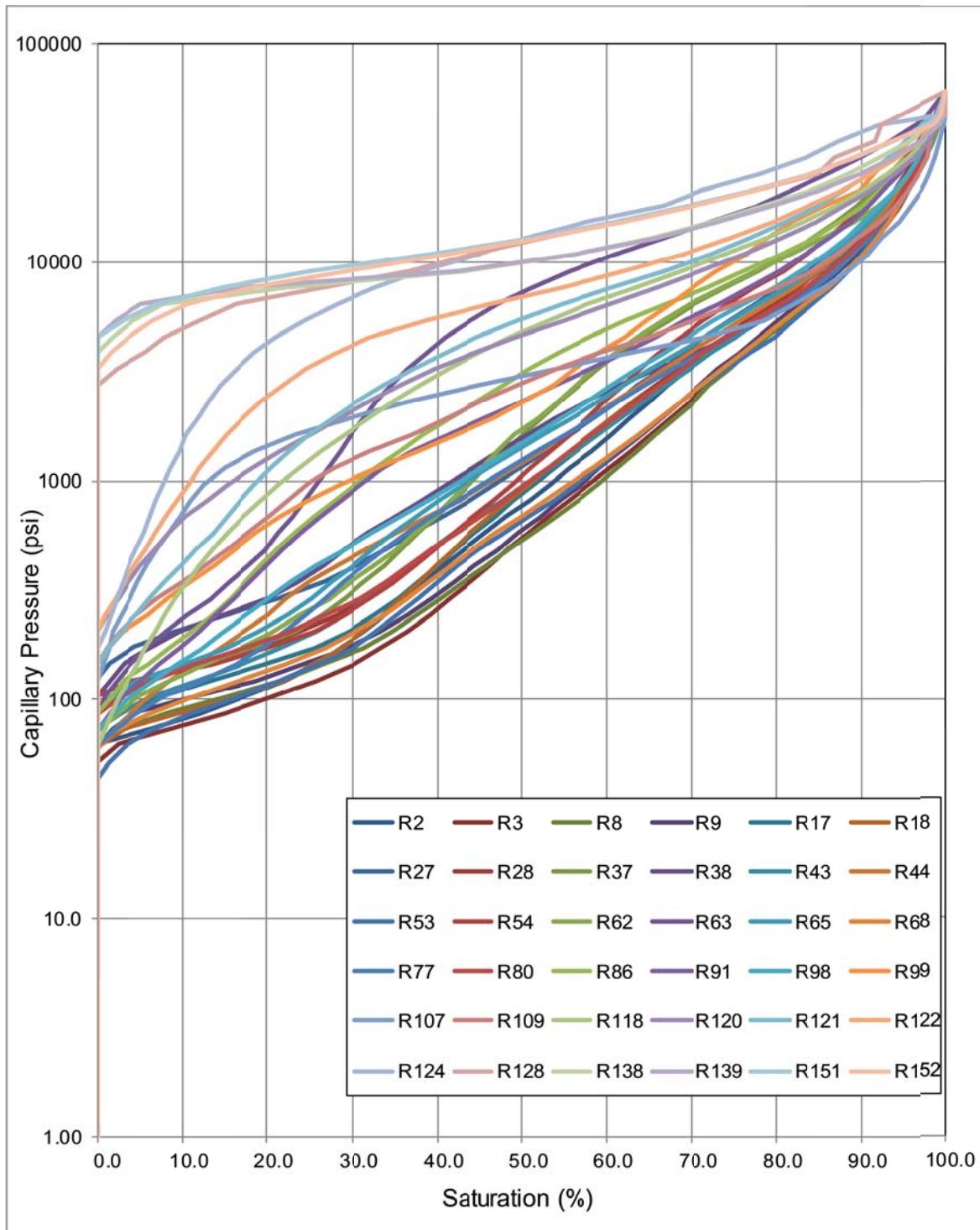
**Client** QGC - A BG Group Business  
**Well** Magnetic-1



**MERCURY INJECTION CAPILLARY PRESSURE  
Composite Pc Plot**



**Client** QGC - A BG Group Business  
**Well** Magnetic-1



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R2  
**Depth** 2936.60 m  
**Ambient Permeability** 0.57 mD  
**Ambient Porosity** 11.7 %  
**Pore radius** 1.70 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		62.6	-	59.7	-	81.4
G-W		12.3	8.53	11.7	8.11	16.0
O-W		7.16	4.44	6.83	4.24	9.31
						5.78

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.7	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.9	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.3	1.2	0.0	0.0	91.5	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.2	1.4	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.6	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.8	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.9	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	2.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.4	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	2.6	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.9	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	3.1	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	3.4	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	3.7	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	4.0	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	4.5	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.7	5.2	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.1	0.3	5.4	0.0	0.0	6.04	6.89	4.78	4.02	2.49	6.90	4.29
42.7	0.3	5.7	0.0	0.0	4.96	8.38	5.82	4.89	3.03	8.40	5.22
51.9	1.1	6.8	0.0	0.0	4.09	10.2	7.08	5.94	3.68	10.2	6.35
62.4	1.3	8.1	0.0	0.0	3.40	12.2	8.47	7.14	4.42	12.2	7.59
73.3	5.9	14.0	6.4	6.4	2.89	14.4	10.0	8.39	5.19	14.4	8.96
85.6	5.1	19.1	5.5	11.9	2.48	16.8	11.7	9.80	6.07	16.8	10.5
103	5.1	24.2	5.6	17.5	2.05	20.2	14.0	11.8	7.30	20.2	12.6
122	4.1	28.3	4.4	22.0	1.73	23.9	16.6	14.0	8.67	24.0	14.9
145	3.5	31.8	3.8	25.8	1.46	28.4	19.7	16.6	10.3	28.5	17.7
171	2.6	34.4	2.8	28.6	1.24	33.5	23.3	19.6	12.1	33.5	20.9
205	2.6	37.0	2.8	31.4	1.03	40.2	27.9	23.5	14.5	40.2	25.0
242	2.2	39.1	2.3	33.8	0.874	47.5	33.0	27.7	17.1	47.4	29.6
290	2.1	41.2	2.3	36.0	0.731	56.9	39.5	33.2	20.6	57.1	35.4
343	2.1	43.3	2.3	38.3	0.618	67.3	46.7	39.3	24.3	67.3	41.9
408	2.2	45.5	2.3	40.7	0.520	80.0	55.6	46.7	28.9	80.1	49.8
485	2.3	47.8	2.5	43.2	0.437	95.1	66.0	55.5	34.4	95.3	59.2
576	2.3	50.1	2.5	45.7	0.368	113	78.5	65.9	40.8	113	70.4
686	2.3	52.4	2.5	48.2	0.309	135	93.8	78.5	48.6	135	84.1
814	2.3	54.7	2.5	50.8	0.260	160	111	93.2	57.7	160	99.5
968	2.3	57.0	2.5	53.3	0.219	190	132	111	68.7	190	118
1149	2.3	59.3	2.5	55.7	0.184	225	156	131	81.1	225	140
1364	2.3	61.6	2.5	58.2	0.155	268	186	156	96.6	268	167
1621	2.1	63.7	2.3	60.5	0.131	318	221	186	115	319	198
1927	2.0	65.7	2.2	62.7	0.110	378	263	221	137	380	236
2287	2.1	67.8	2.3	65.0	0.0927	449	312	262	162	449	280
2716	1.9	69.7	2.1	67.1	0.0781	533	370	311	193	535	332
3226	2.2	71.9	2.4	69.5	0.0657	633	440	369	228	632	394
3832	2.4	74.3	2.6	72.1	0.0553	752	522	439	272	754	468
4550	2.7	77.0	2.9	75.0	0.0466	893	620	521	323	895	556
5402	3.0	80.1	3.3	78.3	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	3.5	83.6	3.8	82.1	0.0330	1259	874	734	454	1258	784
7622	2.9	86.4	3.1	85.2	0.0278	1495	1038	872	540	1496	931
9052	2.1	88.6	2.3	87.5	0.0234	1776	1233	1036	641	1776	1105
10750	1.9	90.5	2.1	89.6	0.0197	2109	1465	1230	761	2109	1313
12752	1.4	91.8	1.5	91.1	0.0166	2502	1738	1459	903	2502	1558
15162	1.4	93.2	1.5	92.7	0.0140	2975	2066	1735	1074	2976	1852
18001	1.1	94.3	1.2	93.8	0.0118	3532	2453	2060	1275	3533	2199
21375	1.0	95.4	1.1	95.0	0.0099	4193	2912	2446	1514	4195	2611
25393	0.9	96.3	1.0	96.0	0.0083	4982	3460	2906	1799	4985	3102
30160	0.9	97.2	0.9	96.9	0.0070	5917	4109	3452	2137	5921	3684
35814	0.7	97.9	0.8	97.7	0.0059	7026	4879	4099	2537	7030	4374
42519	0.9	98.8	1.0	98.7	0.0050	8342	5793	4866	3012	8346	5193
46871	0.5	99.3	0.5	99.2	0.0045	9195	6385	5364	3321	9202	5724
59947	0.7	100.0	0.8	100.0	0.0035	11761	8167	6860	4247	11768	7321

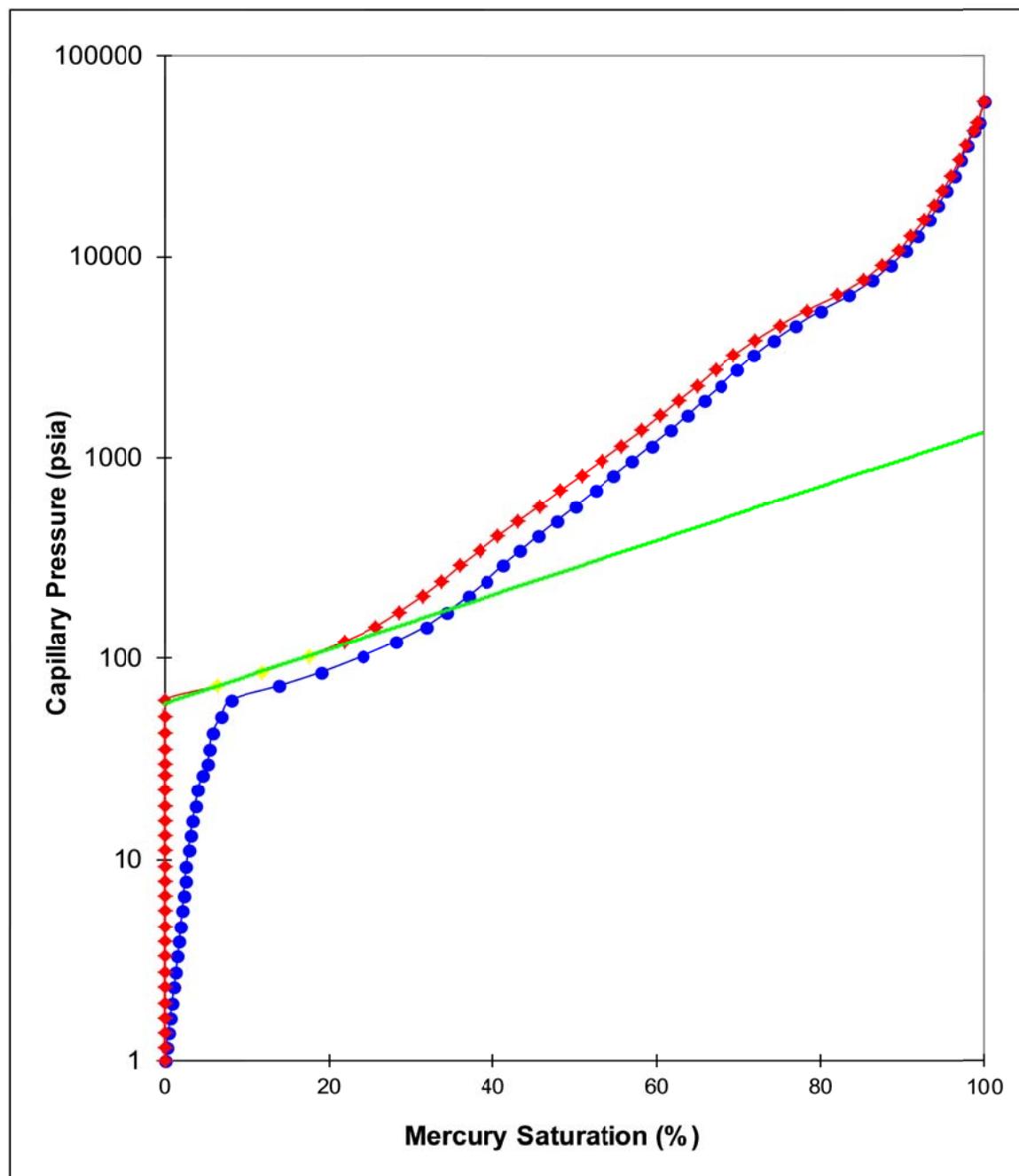
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R2  
2936.60 m      **Ambient Permeability** 0.57 mD  
                 **Ambient Porosity** 11.7 %



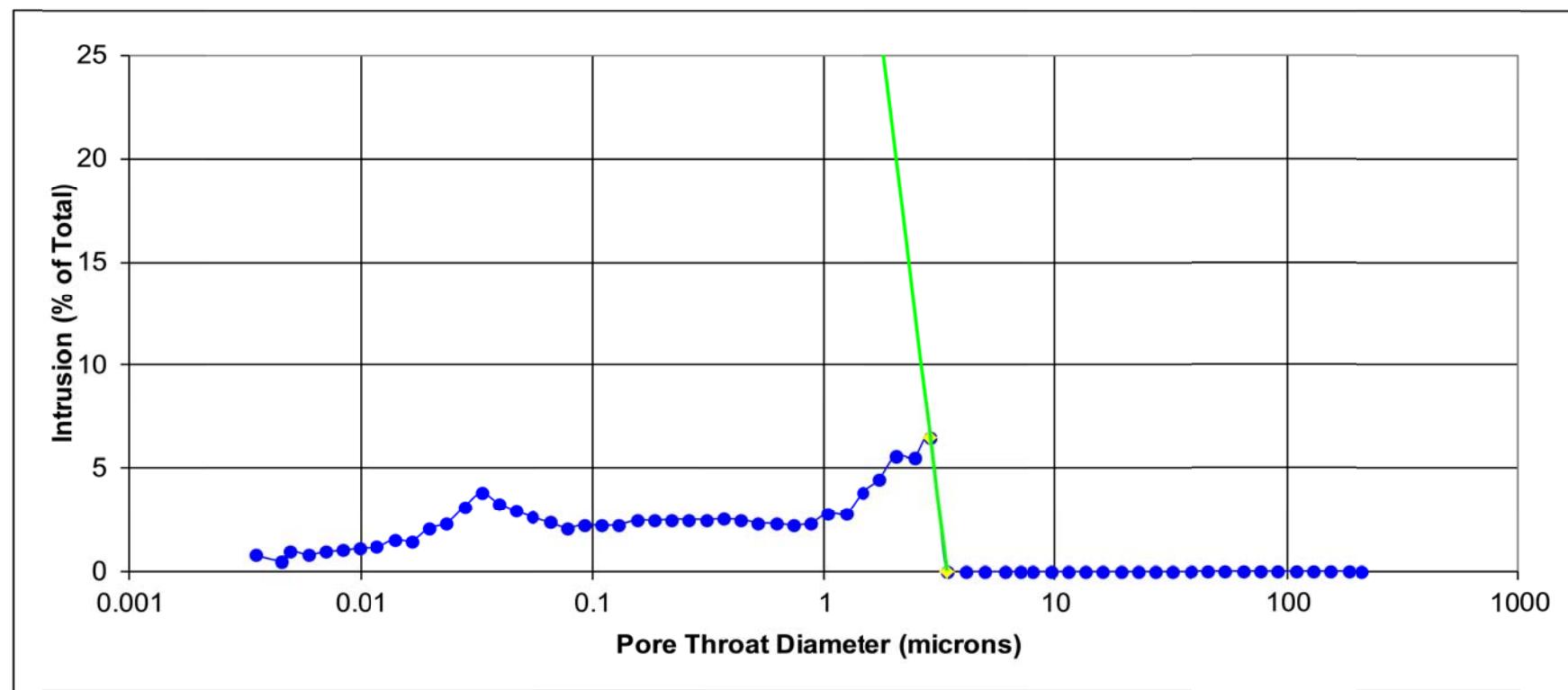
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R2  
2936.60 m      **Ambient Permeability** 0.57 mD  
                 **Ambient Porosity** 11.7 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R3  
**Depth** 2936.91 m  
**Ambient Permeability** 0.53 mD  
**Ambient Porosity** 11.7 %  
**Pore radius** 2.00  $\mu\text{m}$

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		53.2	-	58.0	-	76.0
G-W		10.4	7.25	11.3	7.88	14.8
O-W		6.09	3.77	6.64	4.11	8.70
						5.39

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter ( $\mu\text{m}$ )	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.6	0.6	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	1.0	1.6	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.9	2.5	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.6	3.1	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.5	3.6	0.0	0.0	91.5	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.3	3.8	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	4.1	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	4.3	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	4.5	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	4.6	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	4.8	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	4.9	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	5.1	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	5.2	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	5.4	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	5.6	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	6.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.4	6.4	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	6.9	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.7	7.5	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
34.0	0.3	7.8	0.0	0.0	6.23	6.67	4.63	3.89	2.41	6.68	4.15
42.6	0.9	8.7	0.0	0.0	4.98	8.36	5.81	4.88	3.02	8.37	5.21
51.7	1.4	10.1	0.0	0.0	4.10	10.1	7.01	5.92	3.66	10.1	6.28
62.2	2.1	12.3	2.4	2.4	3.41	12.2	8.47	7.12	4.41	12.2	7.59
73.1	5.7	17.9	6.3	8.7	2.90	14.3	9.93	8.37	5.18	14.4	8.90
85.5	5.5	23.4	6.1	14.8	2.48	16.8	11.7	9.78	6.05	16.8	10.5
103	5.5	29.0	6.1	20.9	2.05	20.2	14.0	11.8	7.30	20.2	12.6
122	4.3	33.3	4.8	25.7	1.74	23.9	16.6	14.0	8.67	24.0	14.9
145	4.0	37.3	4.5	30.2	1.47	28.4	19.7	16.6	10.3	28.5	17.7
171	2.8	40.1	3.2	33.3	1.24	33.5	23.3	19.6	12.1	33.5	20.9
205	2.9	43.0	3.2	36.5	1.03	40.2	27.9	23.5	14.5	40.2	25.0
242	2.3	45.3	2.5	39.1	0.875	47.5	33.0	27.7	17.1	47.4	29.6
290	2.2	47.4	2.4	41.5	0.731	56.9	39.5	33.2	20.6	57.1	35.4
343	2.1	49.6	2.4	43.9	0.618	67.3	46.7	39.3	24.3	67.3	41.9
407	2.1	51.6	2.3	46.2	0.520	79.8	55.4	46.6	28.8	79.8	49.7
485	2.0	53.7	2.3	48.4	0.437	95.1	66.0	55.5	34.4	95.3	59.2
576	2.1	55.8	2.3	50.8	0.368	113	78.5	65.9	40.8	113	70.4
686	2.1	57.9	2.3	53.1	0.309	135	93.8	78.5	48.6	135	84.1
814	2.1	60.0	2.4	55.5	0.260	160	111	93.2	57.7	160	99.5
968	2.2	62.1	2.4	57.9	0.219	190	132	111	68.7	190	118
1149	2.2	64.3	2.4	60.3	0.184	225	156	131	81.1	225	140
1364	2.2	66.6	2.5	62.8	0.155	268	186	156	96.6	268	167
1621	2.1	68.6	2.3	65.1	0.131	318	221	186	115	319	198
1926	2.0	70.7	2.3	67.4	0.110	378	263	220	136	377	236
2287	2.1	72.7	2.3	69.7	0.0927	449	312	262	162	449	280
2716	1.9	74.6	2.1	71.8	0.0781	533	370	311	193	535	332
3226	2.0	76.6	2.2	74.0	0.0657	633	440	369	228	632	394
3832	2.1	78.7	2.3	76.3	0.0553	752	522	439	272	754	468
4550	2.2	80.9	2.4	78.8	0.0466	893	620	521	323	895	556
5402	2.3	83.3	2.6	81.4	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	2.5	85.7	2.7	84.1	0.0330	1259	874	734	454	1258	784
7622	2.2	87.9	2.4	86.5	0.0278	1495	1038	872	540	1496	931
9051	1.8	89.7	2.0	88.5	0.0234	1776	1233	1036	641	1776	1105
10750	1.8	91.4	2.0	90.4	0.0197	2109	1465	1230	761	2109	1313
12752	1.3	92.7	1.4	91.8	0.0166	2502	1738	1459	903	2502	1558
15162	1.3	94.0	1.4	93.3	0.0140	2975	2066	1735	1074	2976	1852
18001	1.0	95.0	1.1	94.4	0.0118	3532	2453	2060	1275	3533	2199
21375	1.0	95.9	1.1	95.5	0.0099	4193	2912	2446	1514	4195	2611
25393	0.9	96.8	1.0	96.5	0.0083	4982	3460	2906	1799	4985	3102
30160	0.8	97.7	0.9	97.4	0.0070	5917	4109	3452	2137	5921	3684
35814	0.8	98.4	0.9	98.3	0.0059	7026	4879	4099	2537	7030	4374
42519	0.6	99.0	0.7	98.9	0.0050	8342	5793	4866	3012	8346	5193
46870	0.4	99.5	0.5	99.4	0.0045	9195	6385	5364	3321	9202	5724
59947	0.5	100.0	0.6	100.0	0.0035	11761	8167	6860	4247	11768	7321

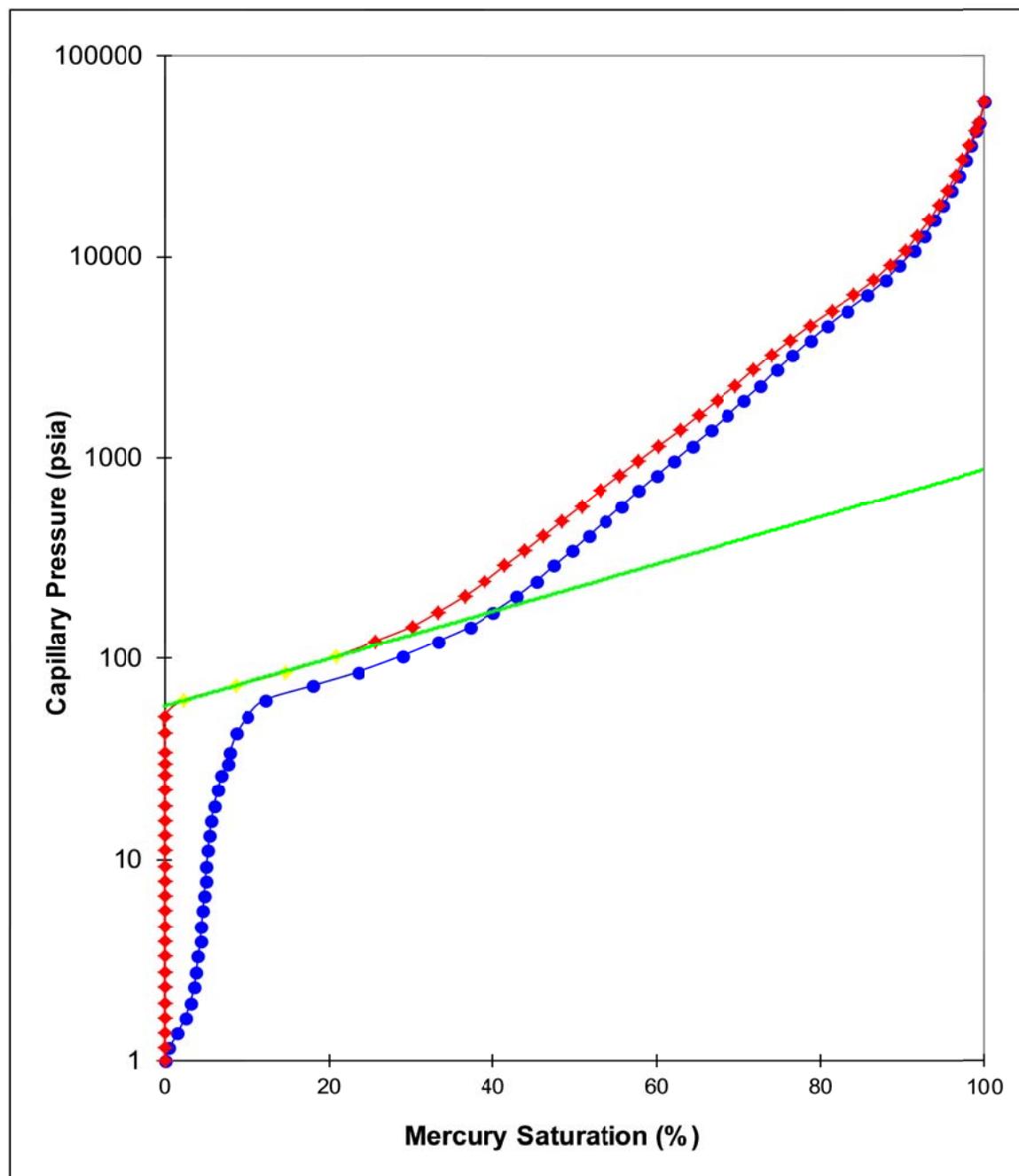
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R3  
2936.91 m      **Ambient Permeability** 0.53 mD  
                 **Ambient Porosity** 11.7 %



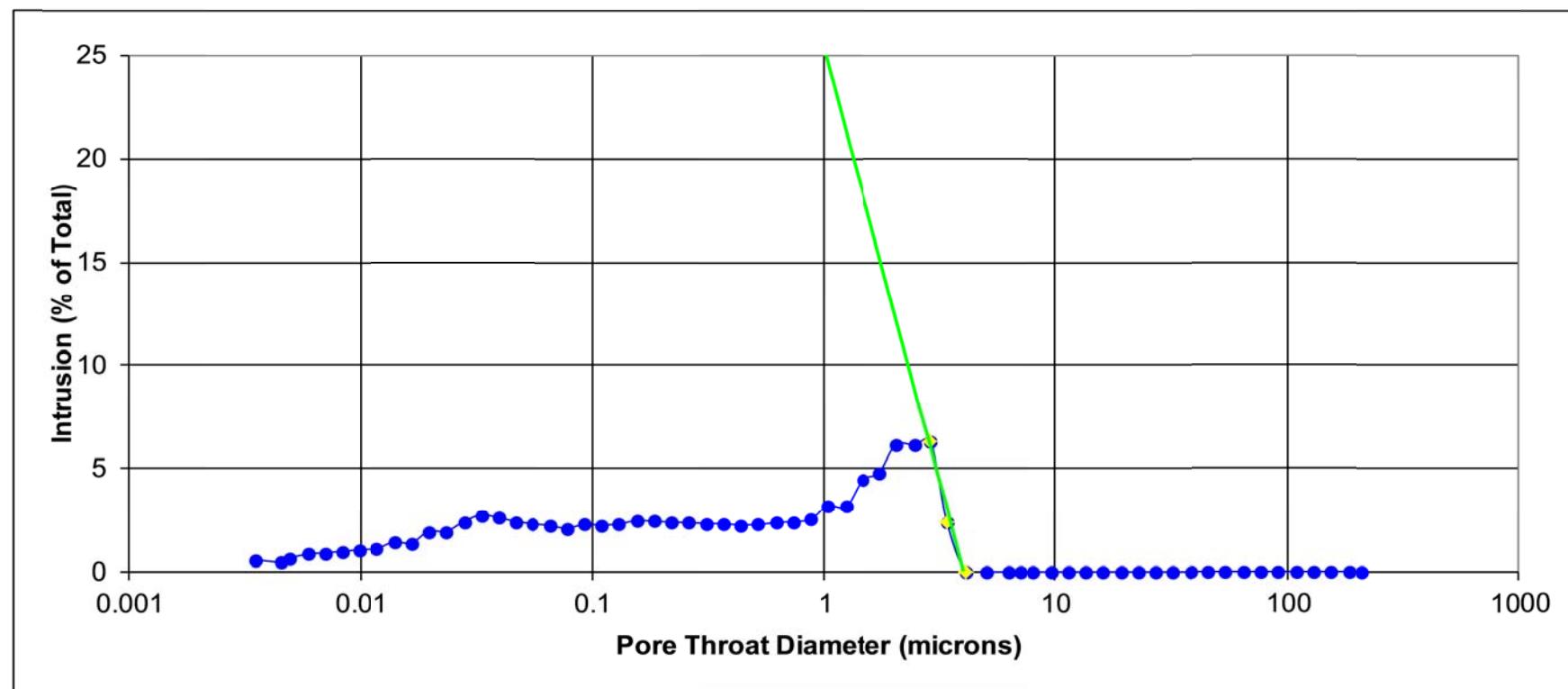
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R3  
2936.91 m      **Ambient Permeability** 0.53 mD  
                 **Ambient Porosity** 11.7 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R8  
**Depth** 2939.22 m  
**Ambient Permeability** 0.32 mD  
**Ambient Porosity** 11.5 %  
**Pore radius** 1.78 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		59.8	-	67.9	-	89.3
G-W		11.7	8.15	13.3	9.26	17.5
O-W		6.84	4.24	7.77	4.82	10.2
						6.33

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.9	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.1	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.3	0.0	0.0	76.8	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.5	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.7	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.8	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	2.0	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	2.1	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.2	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.3	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	2.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.9	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

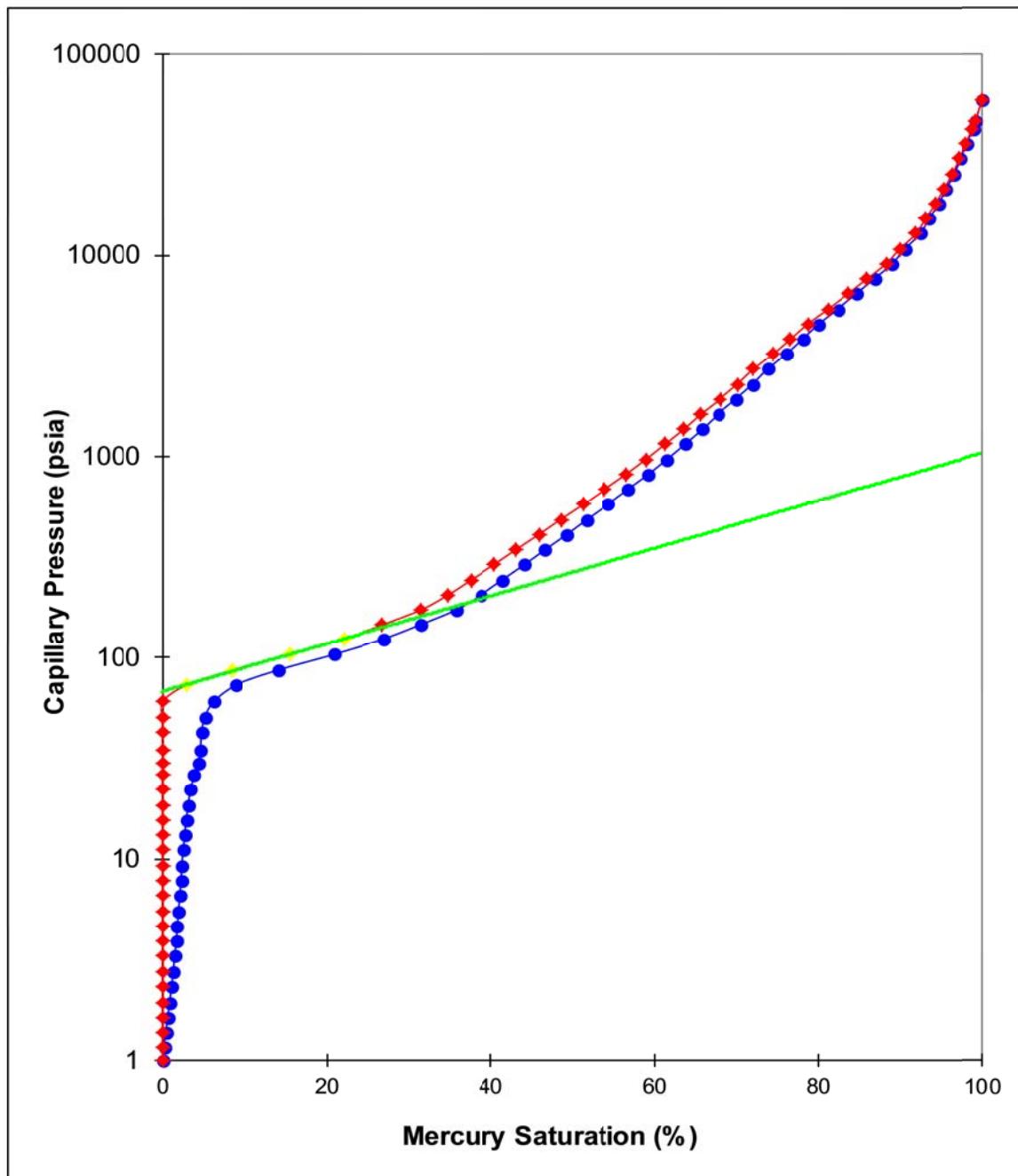
Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	3.1	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	3.4	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	3.8	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.5	4.3	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.0	0.3	4.6	0.0	0.0	6.06	6.87	4.77	4.01	2.48	6.87	4.28
42.5	0.1	4.7	0.0	0.0	4.99	8.34	5.79	4.86	3.01	8.34	5.19
50.8	0.4	5.1	0.0	0.0	4.17	9.97	6.92	5.81	3.60	9.98	6.20
60.5	1.1	6.2	0.0	0.0	3.51	11.9	8.26	6.92	4.28	11.9	7.40
72.9	2.7	8.9	2.9	2.9	2.91	14.3	9.93	8.34	5.16	14.3	8.90
86.7	5.2	14.1	5.6	8.4	2.45	17.0	11.8	9.92	6.14	17.0	10.6
104	6.8	20.9	7.2	15.6	2.04	20.4	14.2	11.9	7.37	20.4	12.7
124	6.0	26.9	6.4	22.1	1.71	24.3	16.9	14.2	8.79	24.4	15.2
146	4.5	31.4	4.8	26.9	1.45	28.6	19.9	16.7	10.3	28.5	17.8
173	4.4	35.8	4.7	31.5	1.22	33.9	23.5	19.8	12.3	34.1	21.1
204	3.0	38.8	3.2	34.7	1.04	40.0	27.8	23.3	14.4	39.9	24.9
244	2.7	41.5	2.9	37.6	0.870	47.9	33.3	27.9	17.3	47.9	29.9
290	2.7	44.1	2.8	40.4	0.732	56.9	39.5	33.2	20.6	57.1	35.4
344	2.5	46.6	2.7	43.1	0.617	67.5	46.9	39.4	24.4	67.6	42.0
408	2.6	49.2	2.7	45.9	0.519	80.0	55.6	46.7	28.9	80.1	49.8
486	2.5	51.7	2.7	48.5	0.436	95.3	66.2	55.6	34.4	95.3	59.3
577	2.6	54.3	2.7	51.3	0.368	113	78.5	66.0	40.9	113	70.4
685	2.5	56.7	2.6	53.9	0.309	134	93.1	78.4	48.5	134	83.5
814	2.5	59.2	2.6	56.5	0.260	160	111	93.2	57.7	160	99.5
968	2.3	61.5	2.4	59.0	0.219	190	132	111	68.7	190	118
1150	2.2	63.7	2.3	61.3	0.184	226	157	132	81.7	226	141
1365	2.1	65.8	2.3	63.5	0.155	268	186	156	96.6	268	167
1623	2.0	67.8	2.1	65.6	0.131	318	221	186	115	319	198
1925	2.2	69.9	2.3	68.0	0.110	378	263	220	136	377	236
2288	2.1	72.0	2.2	70.2	0.0926	449	312	262	162	449	280
2717	1.9	73.9	2.0	72.1	0.0780	533	370	311	193	535	332
3227	2.2	76.1	2.4	74.5	0.0657	633	440	369	228	632	394
3832	2.0	78.1	2.1	76.6	0.0553	752	522	439	272	754	468
4549	2.0	80.0	2.1	78.7	0.0466	892	619	521	323	895	555
5403	2.3	82.4	2.5	81.2	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	2.2	84.6	2.4	83.6	0.0330	1259	874	734	454	1258	784
7621	2.2	86.8	2.4	86.0	0.0278	1495	1038	872	540	1496	931
9052	2.2	89.0	2.3	88.3	0.0234	1776	1233	1036	641	1776	1105
10751	1.6	90.6	1.7	90.0	0.0197	2109	1465	1230	761	2109	1313
12767	1.8	92.4	1.9	91.9	0.0166	2505	1740	1461	904	2505	1560
15157	1.1	93.5	1.2	93.1	0.0140	2974	2065	1735	1074	2976	1851
17992	1.1	94.6	1.2	94.2	0.0118	3530	2451	2059	1275	3533	2197
21375	1.0	95.6	1.1	95.3	0.0099	4193	2912	2446	1514	4195	2611
25394	0.9	96.5	1.0	96.3	0.0083	4982	3460	2906	1799	4985	3102
30160	0.8	97.4	0.9	97.2	0.0070	5917	4109	3452	2137	5921	3684
35817	0.8	98.1	0.8	98.0	0.0059	7027	4880	4099	2537	7030	4375
42525	0.8	98.9	0.8	98.8	0.0050	8343	5794	4867	3013	8349	5194
46873	0.4	99.3	0.4	99.2	0.0045	9196	6386	5364	3321	9202	5725
59952	0.7	100.0	0.8	100.0	0.0035	11762	8168	6861	4247	11768	7322

## CAPILLARY PRESSURE



<b>Client</b>	QGC - A BG Group Business
<b>Well</b>	Magnetic-1
<b>Test Method</b>	Air/Mercury Capillary Pressure Drainage
<b>Sample Depth</b>	R8 2939.22 m
	<b>Ambient Permeability</b> 0.32 mD
	<b>Ambient Porosity</b> 11.5 %



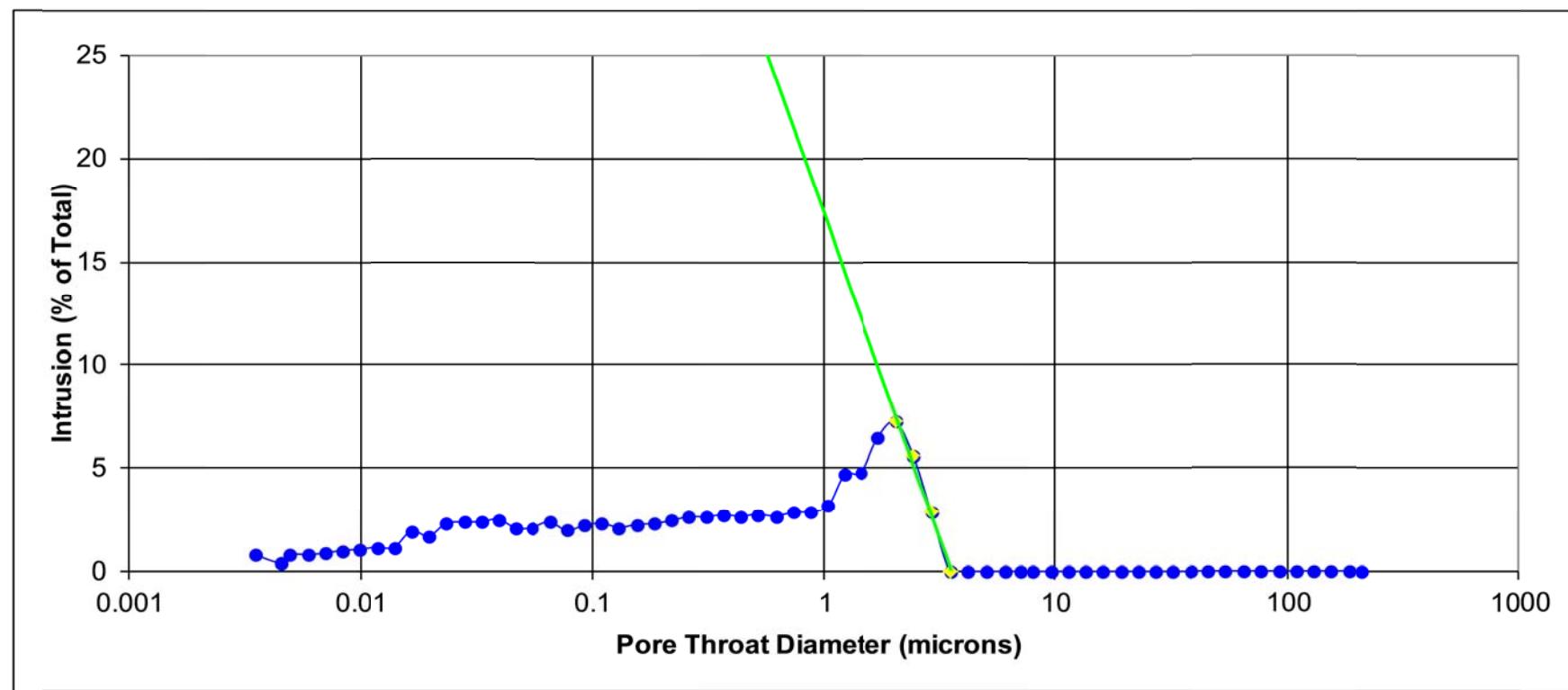
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R8  
2939.22 m      **Ambient Permeability** 0.32 mD  
                 **Ambient Porosity** 11.5 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R9  
**Depth** 2939.61 m  
**Ambient Permeability** 0.36 mD  
**Ambient Porosity** 10.8 %  
**Pore radius** 1.64 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		64.9	-	76.8	-	99.3
G-W		12.7	8.84	15.0	10.4	19.4
O-W		7.43	4.60	8.79	5.44	11.4
						7.06

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.3	0.8	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.3	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.5	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.7	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.9	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.1	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.3	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.5	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.7	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.8	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	3.0	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	3.4	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	3.7	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	4.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.6	4.6	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.6	5.2	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.5	5.7	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.9	0.1	5.8	0.0	0.0	5.90	7.04	4.89	4.11	2.54	7.04	4.38
43.5	0.4	6.1	0.0	0.0	4.88	8.53	5.92	4.98	3.08	8.53	5.31
49.6	0.2	6.4	0.0	0.0	4.28	9.73	6.76	5.68	3.52	9.75	6.06
60.8	0.7	7.1	0.0	0.0	3.49	11.9	8.26	6.96	4.31	11.9	7.40
72.8	1.6	8.7	1.8	1.8	2.91	14.3	9.93	8.33	5.16	14.3	8.90
86.7	2.6	11.3	2.7	4.5	2.45	17.0	11.8	9.92	6.14	17.0	10.6
103	6.6	17.9	7.1	11.6	2.05	20.2	14.0	11.8	7.30	20.2	12.6
122	6.5	24.4	7.0	18.7	1.73	23.9	16.6	14.0	8.67	24.0	14.9
146	5.4	29.9	5.9	24.5	1.45	28.6	19.9	16.7	10.3	28.5	17.8
173	4.6	34.5	5.0	29.5	1.23	33.9	23.5	19.8	12.3	34.1	21.1
204	3.5	38.1	3.8	33.3	1.04	40.0	27.8	23.3	14.4	39.9	24.9
244	3.0	41.1	3.2	36.6	0.869	47.9	33.3	27.9	17.3	47.9	29.9
290	2.6	43.7	2.8	39.4	0.730	56.9	39.5	33.2	20.6	57.1	35.4
344	2.5	46.2	2.7	42.1	0.616	67.5	46.9	39.4	24.4	67.6	42.0
407	2.3	48.5	2.5	44.5	0.521	79.8	55.4	46.6	28.8	79.8	49.7
484	2.4	50.9	2.6	47.1	0.438	95.0	66.0	55.4	34.3	95.0	59.2
578	2.3	53.2	2.5	49.6	0.367	113	78.5	66.1	40.9	113	70.4
684	2.2	55.4	2.4	52.0	0.310	134	93.1	78.3	48.5	134	83.5
816	2.3	57.8	2.5	54.5	0.260	160	111	93.4	57.8	160	99.5
968	2.2	60.0	2.4	57.0	0.219	190	132	111	68.7	190	118
1151	2.1	62.1	2.3	59.2	0.184	226	157	132	81.7	226	141
1364	2.2	64.3	2.3	61.6	0.155	268	186	156	96.6	268	167
1621	2.3	66.6	2.5	64.1	0.131	318	221	186	115	319	198
1926	2.1	68.7	2.3	66.4	0.110	378	263	220	136	377	236
2289	2.2	70.9	2.3	68.7	0.0926	449	312	262	162	449	280
2719	2.1	73.0	2.2	70.9	0.0780	533	370	311	193	535	332
3226	2.1	75.1	2.2	73.1	0.0657	633	440	369	228	632	394
3830	2.2	77.2	2.3	75.5	0.0553	751	522	438	271	751	468
4551	2.1	79.3	2.3	77.8	0.0466	893	620	521	323	895	556
5404	2.3	81.6	2.4	80.2	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.4	84.0	2.6	82.7	0.0330	1259	874	734	454	1258	784
7622	2.3	86.3	2.5	85.2	0.0278	1495	1038	872	540	1496	931
9054	1.9	88.2	2.1	87.3	0.0234	1776	1233	1036	641	1776	1105
10751	1.7	89.9	1.9	89.1	0.0197	2109	1465	1230	761	2109	1313
12767	1.5	91.3	1.6	90.7	0.0166	2505	1740	1461	904	2505	1560
15163	1.3	92.7	1.4	92.1	0.0140	2975	2066	1735	1074	2976	1852
18006	1.2	93.9	1.3	93.4	0.0118	3533	2453	2061	1276	3536	2199
21387	1.8	95.7	1.9	95.4	0.0099	4196	2914	2448	1515	4198	2612
25394	0.9	96.6	1.0	96.3	0.0083	4982	3460	2906	1799	4985	3102
30160	0.9	97.4	0.9	97.3	0.0070	5917	4109	3452	2137	5921	3684
35816	0.8	98.2	0.8	98.1	0.0059	7027	4880	4099	2537	7030	4375
42518	0.8	99.0	0.8	98.9	0.0050	8341	5792	4866	3012	8346	5192
46872	0.3	99.3	0.3	99.3	0.0045	9196	6386	5364	3321	9202	5725
59945	0.7	100.0	0.7	100.0	0.0035	11760	8167	6860	4247	11768	7321

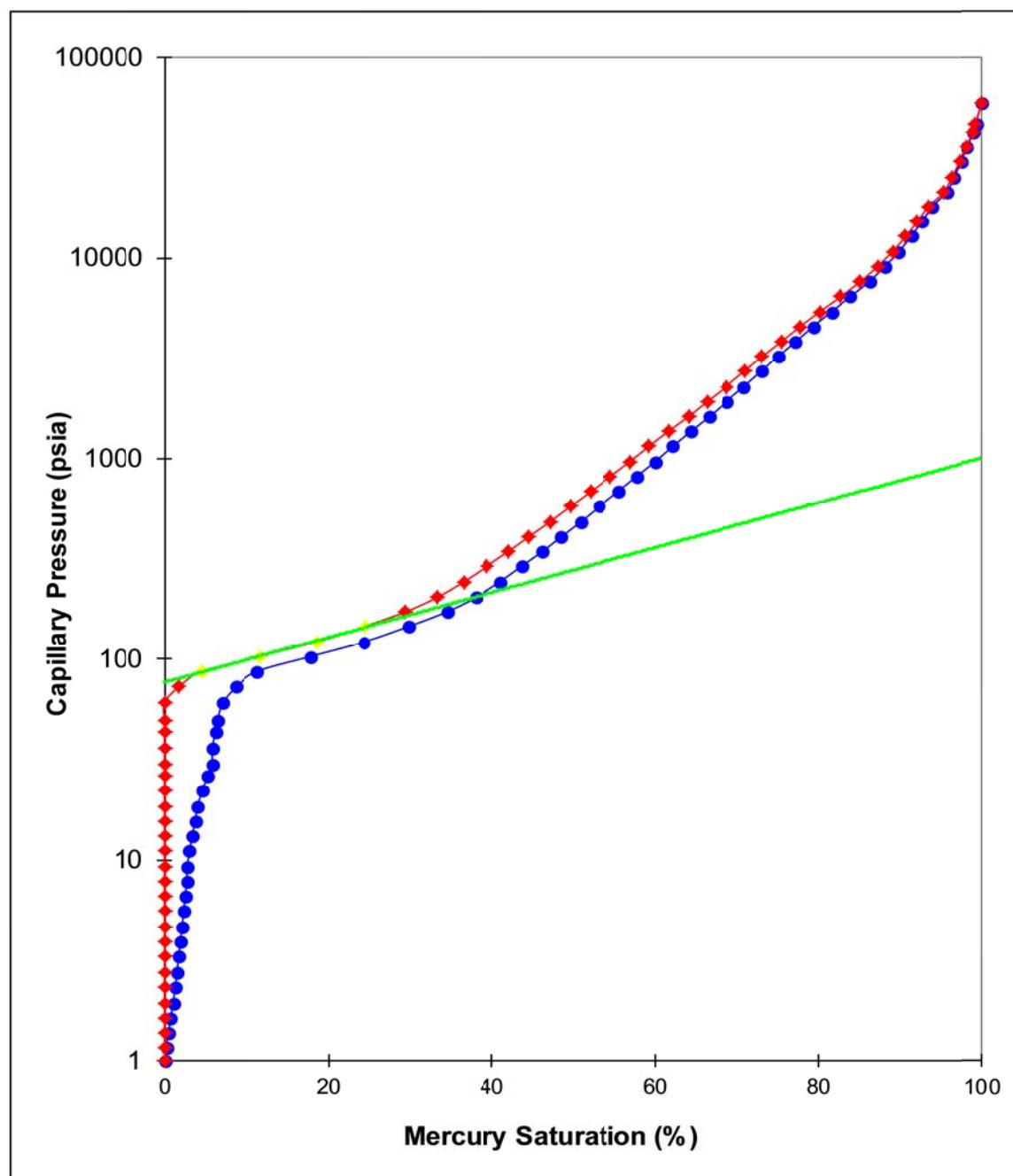
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R9  
2939.61 m      **Ambient Permeability** 0.36 mD  
                 **Ambient Porosity** 10.8 %



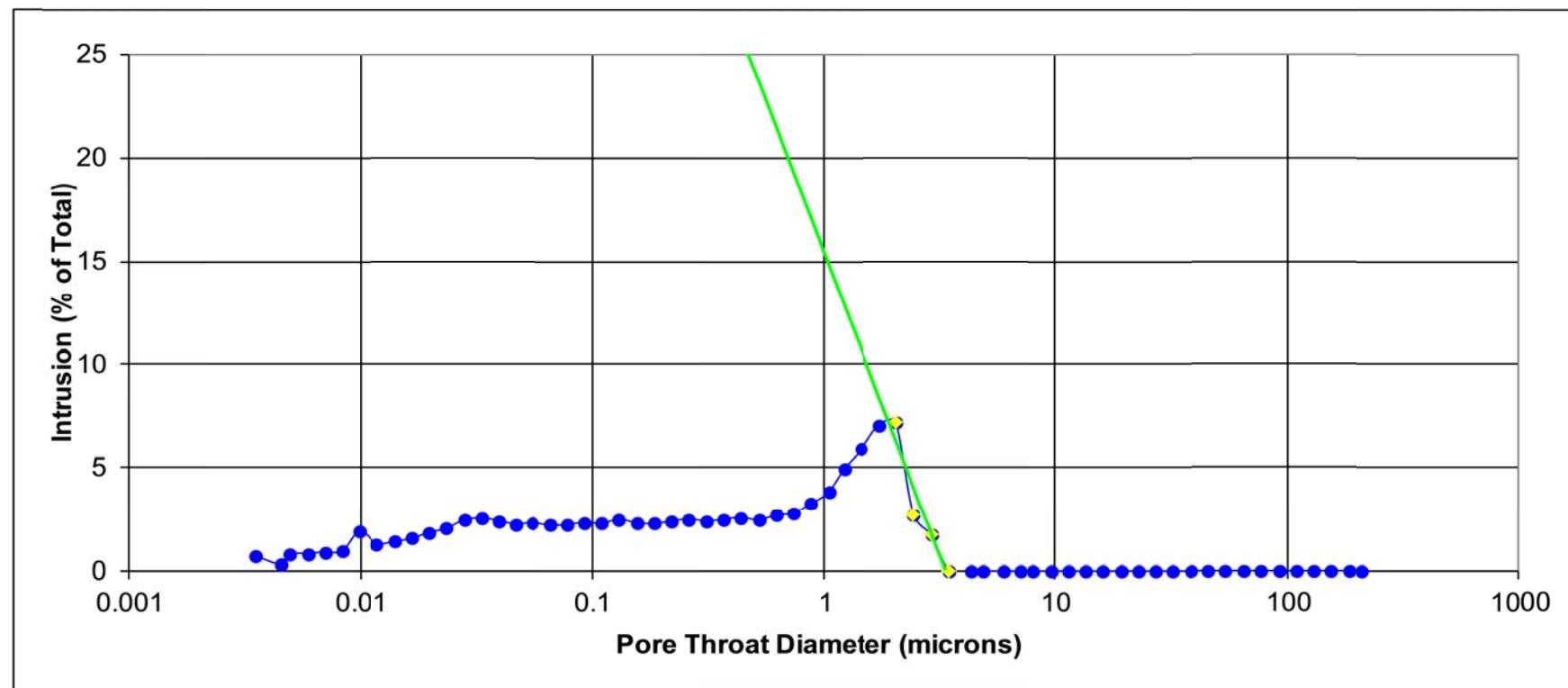
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R9  
2939.61 m      **Ambient Permeability** 0.36 mD  
                 **Ambient Porosity** 10.8 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R17  
**Depth** 2942.30 m  
**Ambient Permeability** 0.33 mD  
**Ambient Porosity** 11.1 %  
**Pore radius** 1.72  $\mu\text{m}$

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		61.9	-	79.2	-	108
G-W		12.1	8.43	15.5	10.8	21.1
O-W		7.08	4.38	9.06	5.60	12.4
						7.66

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter ( $\mu\text{m}$ )	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.7	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.2	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.4	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.6	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.8	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.0	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	2.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	2.4	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	2.6	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.8	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	3.1	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	3.3	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	3.6	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.4	4.0	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.4	4.4	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.4	4.8	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.9	0.0	4.8	0.0	0.0	5.91	7.04	4.89	4.11	2.54	7.04	4.38
42.4	0.2	5.0	0.0	0.0	5.00	8.32	5.78	4.85	3.00	8.31	5.18
50.0	0.1	5.1	0.0	0.0	4.24	9.81	6.81	5.72	3.54	9.81	6.10
60.3	0.7	5.8	0.0	0.0	3.52	11.8	8.19	6.90	4.27	11.8	7.34
72.2	1.6	7.4	1.7	1.7	2.94	14.2	9.86	8.26	5.11	14.2	8.84
86.0	2.1	9.5	2.2	3.9	2.46	16.9	11.7	9.84	6.09	16.9	10.5
102	3.2	12.7	3.4	7.3	2.08	20.0	13.9	11.7	7.24	20.1	12.5
121	5.6	18.3	5.9	13.2	1.75	23.7	16.5	13.8	8.54	23.7	14.8
144	6.1	24.3	6.4	19.6	1.47	28.3	19.7	16.5	10.2	28.3	17.7
171	5.5	29.9	5.9	25.5	1.24	33.5	23.3	19.6	12.1	33.5	20.9
204	4.0	33.8	4.2	29.7	1.04	40.0	27.8	23.3	14.4	39.9	24.9
242	2.7	36.5	2.9	32.6	0.877	47.5	33.0	27.7	17.1	47.4	29.6
289	2.6	39.1	2.8	35.4	0.733	56.7	39.4	33.1	20.5	56.8	35.3
342	2.2	41.4	2.4	37.7	0.620	67.1	46.6	39.1	24.2	67.1	41.8
407	2.1	43.5	2.2	40.0	0.520	79.8	55.4	46.6	28.8	79.8	49.7
485	2.1	45.6	2.2	42.2	0.437	95.1	66.0	55.5	34.4	95.3	59.2
576	2.1	47.6	2.2	44.4	0.368	113	78.5	65.9	40.8	113	70.4
684	2.1	49.8	2.3	46.7	0.310	134	93.1	78.3	48.5	134	83.5
814	2.1	51.9	2.2	48.9	0.261	160	111	93.2	57.7	160	99.5
966	2.3	54.2	2.4	51.3	0.219	190	132	111	68.7	190	118
1149	2.3	56.5	2.4	53.8	0.185	225	156	131	81.1	225	140
1363	2.5	58.9	2.6	56.4	0.155	267	185	156	96.6	268	166
1622	2.4	61.3	2.5	58.9	0.131	318	221	186	115	319	198
1927	2.3	63.6	2.4	61.4	0.110	378	263	221	137	380	236
2287	2.4	66.0	2.6	64.0	0.0927	449	312	262	162	449	280
2715	2.4	68.4	2.5	66.5	0.0781	533	370	311	193	535	332
3226	2.6	71.0	2.7	69.2	0.0657	633	440	369	228	632	394
3832	2.7	73.7	2.8	72.0	0.0553	752	522	439	272	754	468
4547	2.7	76.4	2.9	74.9	0.0466	892	619	520	322	892	555
5403	2.7	79.1	2.9	77.8	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.9	82.1	3.1	81.0	0.0330	1259	874	734	454	1258	784
7621	2.4	84.5	2.6	83.6	0.0278	1495	1038	872	540	1496	931
9053	2.3	86.8	2.4	86.0	0.0234	1776	1233	1036	641	1776	1105
10750	2.1	88.9	2.2	88.2	0.0197	2109	1465	1230	761	2109	1313
12769	1.9	90.8	2.0	90.2	0.0166	2505	1740	1461	904	2505	1560
15162	1.8	92.6	2.0	92.2	0.0140	2975	2066	1735	1074	2976	1852
18004	1.2	93.9	1.3	93.5	0.0118	3532	2453	2060	1275	3533	2199
21375	1.2	95.0	1.2	94.7	0.0099	4193	2912	2446	1514	4195	2611
25397	1.0	96.0	1.0	95.8	0.0083	4983	3460	2906	1799	4985	3102
30159	1.1	97.1	1.2	96.9	0.0070	5917	4109	3451	2136	5919	3684
35816	0.9	98.0	1.0	97.9	0.0059	7027	4880	4099	2537	7030	4375
42524	0.8	98.8	0.8	98.7	0.0050	8343	5794	4867	3013	8349	5194
46874	0.4	99.2	0.4	99.1	0.0045	9196	6386	5364	3321	9202	5725
59952	0.8	100.0	0.9	100.0	0.0035	11762	8168	6861	4247	11768	7322

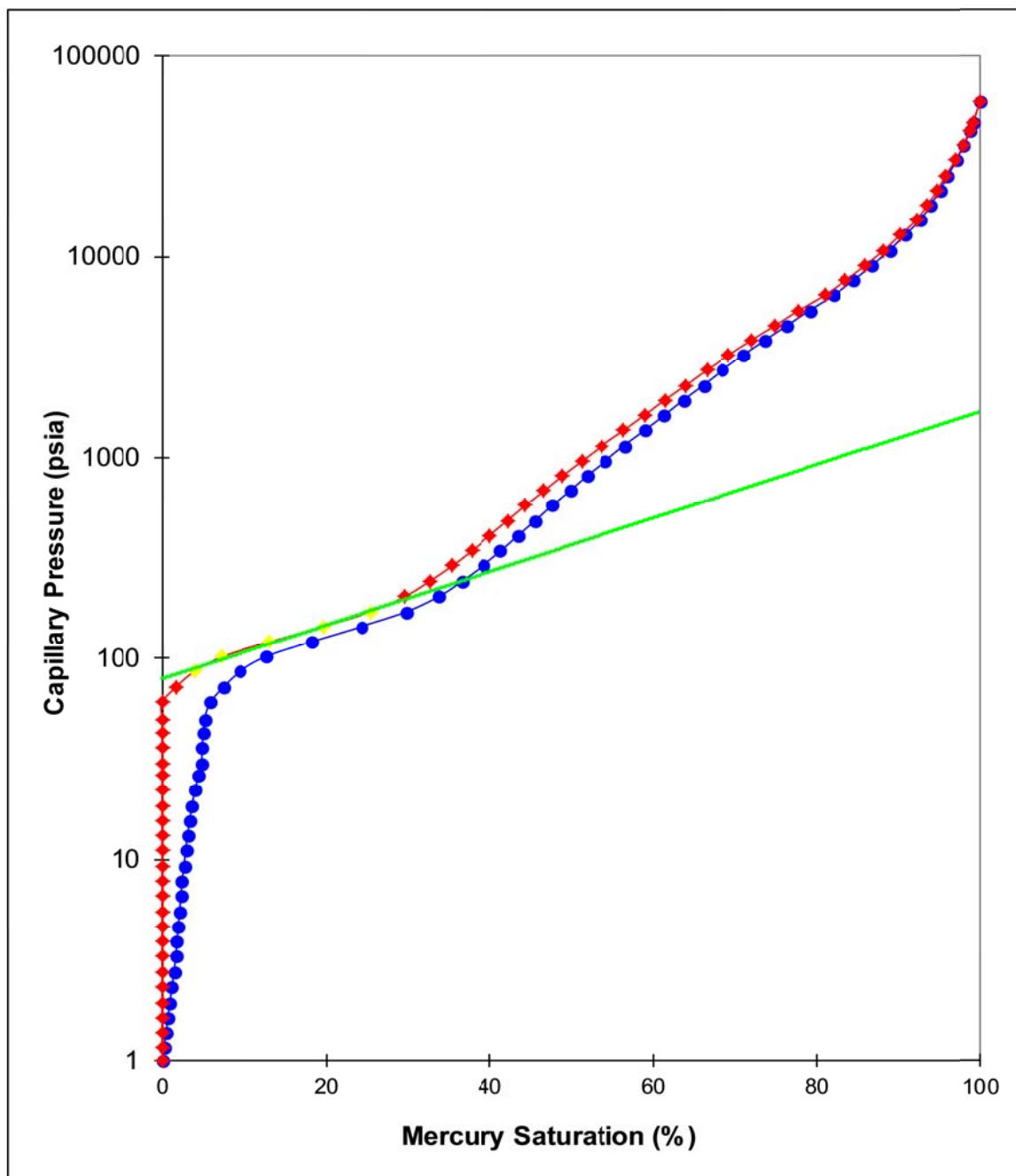
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R17  
2942.30 m      **Ambient Permeability** 0.33 mD  
                 **Ambient Porosity** 11.1 %



## PORE SIZE DISTRIBUTION

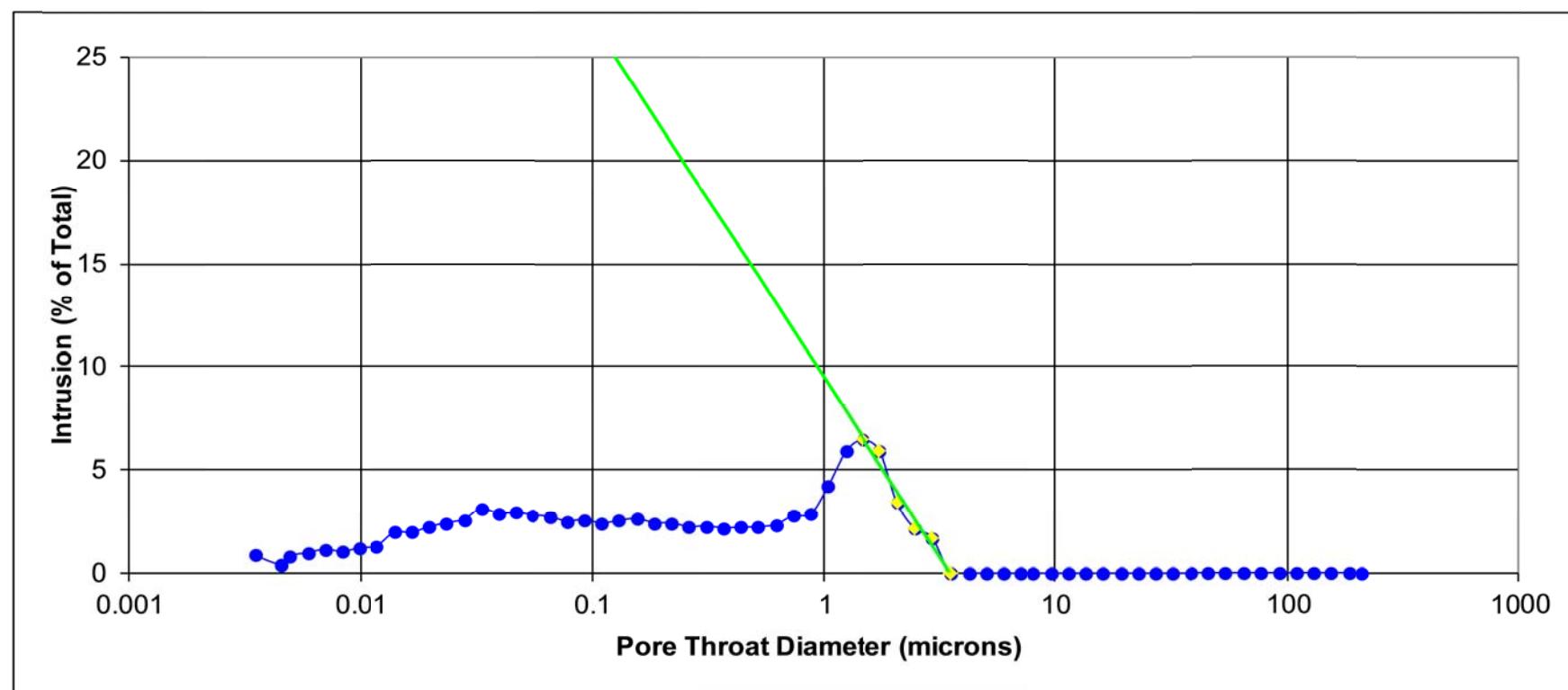


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R17  
2942.30 m

**Ambient Permeability** 0.33 mD  
**Ambient Porosity** 11.1 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R18  
**Depth** 2942.60 m  
**Ambient Permeability** 0.34 mD  
**Ambient Porosity** 11.3 %  
**Pore radius** 1.77  $\mu\text{m}$

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
<b>A-Hg</b>		60.1	-	66.8	-	87.7
<b>G-W</b>		11.8	8.19	13.1	9.09	17.2
<b>O-W</b>		6.88	4.26	7.65	4.74	10.0
						6.20

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter ( $\mu\text{m}$ )	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	0.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.0	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.2	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.4	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.6	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.7	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.9	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	2.0	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.2	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.3	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	2.4	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	2.6	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.8	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	3.1	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	3.3	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	3.6	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	3.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
36.0	0.0	3.9	0.0	0.0	5.90	7.06	4.90	4.12	2.55	7.07	4.39
43.5	0.2	4.1	0.0	0.0	4.88	8.53	5.92	4.98	3.08	8.53	5.31
49.6	0.1	4.2	0.0	0.0	4.27	9.73	6.76	5.68	3.52	9.75	6.06
60.8	1.2	5.3	0.0	0.0	3.49	11.9	8.26	6.96	4.31	11.9	7.40
72.8	2.9	8.2	3.1	3.1	2.91	14.3	9.93	8.33	5.16	14.3	8.90
86.5	6.0	14.2	6.3	9.4	2.45	17.0	11.8	9.90	6.13	17.0	10.6
103	6.9	21.1	7.3	16.7	2.06	20.2	14.0	11.8	7.30	20.2	12.6
122	4.8	25.9	5.1	21.8	1.74	23.9	16.6	14.0	8.67	24.0	14.9
146	3.7	29.6	3.9	25.6	1.45	28.6	19.9	16.7	10.3	28.5	17.8
173	2.9	32.6	3.1	28.8	1.23	33.9	23.5	19.8	12.3	34.1	21.1
204	2.4	35.0	2.6	31.3	1.04	40.0	27.8	23.3	14.4	39.9	24.9
244	2.3	37.3	2.4	33.7	0.869	47.9	33.3	27.9	17.3	47.9	29.9
290	2.0	39.3	2.2	35.9	0.730	56.9	39.5	33.2	20.6	57.1	35.4
344	1.9	41.2	2.0	37.9	0.616	67.5	46.9	39.4	24.4	67.6	42.0
407	2.0	43.1	2.1	39.9	0.521	79.8	55.4	46.6	28.8	79.8	49.7
484	1.9	45.0	2.0	41.9	0.438	95.0	66.0	55.4	34.3	95.0	59.2
578	1.9	46.9	2.0	43.9	0.367	113	78.5	66.1	40.9	113	70.4
684	2.1	49.0	2.2	46.1	0.310	134	93.1	78.3	48.5	134	83.5
816	2.2	51.3	2.4	48.5	0.260	160	111	93.4	57.8	160	99.5
968	2.2	53.4	2.3	50.8	0.219	190	132	111	68.7	190	118
1151	2.2	55.6	2.3	53.1	0.184	226	157	132	81.7	226	141
1364	2.3	58.0	2.5	55.6	0.155	268	186	156	96.6	268	167
1620	2.3	60.3	2.5	58.1	0.131	318	221	185	115	319	198
1926	2.3	62.6	2.4	60.5	0.110	378	263	220	136	377	236
2289	2.4	65.0	2.6	63.1	0.0926	449	312	262	162	449	280
2719	2.4	67.5	2.6	65.6	0.0780	533	370	311	193	535	332
3226	2.5	70.0	2.7	68.3	0.0657	633	440	369	228	632	394
3830	2.8	72.8	3.0	71.3	0.0553	751	522	438	271	751	468
4550	2.7	75.6	2.9	74.2	0.0466	893	620	521	323	895	556
5404	2.8	78.4	3.0	77.2	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.7	81.1	2.9	80.0	0.0330	1259	874	734	454	1258	784
7622	2.5	83.6	2.7	82.7	0.0278	1495	1038	872	540	1496	931
9053	2.2	85.8	2.3	85.0	0.0234	1776	1233	1036	641	1776	1105
10751	2.1	87.9	2.2	87.2	0.0197	2109	1465	1230	761	2109	1313
12767	1.9	89.8	2.0	89.2	0.0166	2505	1740	1461	904	2505	1560
15162	1.7	91.4	1.7	91.0	0.0140	2975	2066	1735	1074	2976	1852
18006	1.5	92.9	1.6	92.5	0.0118	3533	2453	2061	1276	3536	2199
21386	2.0	94.9	2.1	94.6	0.0099	4196	2914	2447	1515	4198	2612
25394	1.1	96.0	1.1	95.7	0.0083	4982	3460	2906	1799	4985	3102
30159	1.0	97.0	1.1	96.8	0.0070	5917	4109	3451	2136	5919	3684
35815	0.9	97.9	0.9	97.7	0.0059	7026	4879	4099	2537	7030	4374
42518	0.8	98.6	0.8	98.5	0.0050	8341	5792	4866	3012	8346	5192
46871	0.6	99.2	0.6	99.1	0.0045	9195	6385	5364	3321	9202	5724
59944	0.8	100.0	0.9	100.0	0.0035	11760	8167	6860	4247	11768	7321

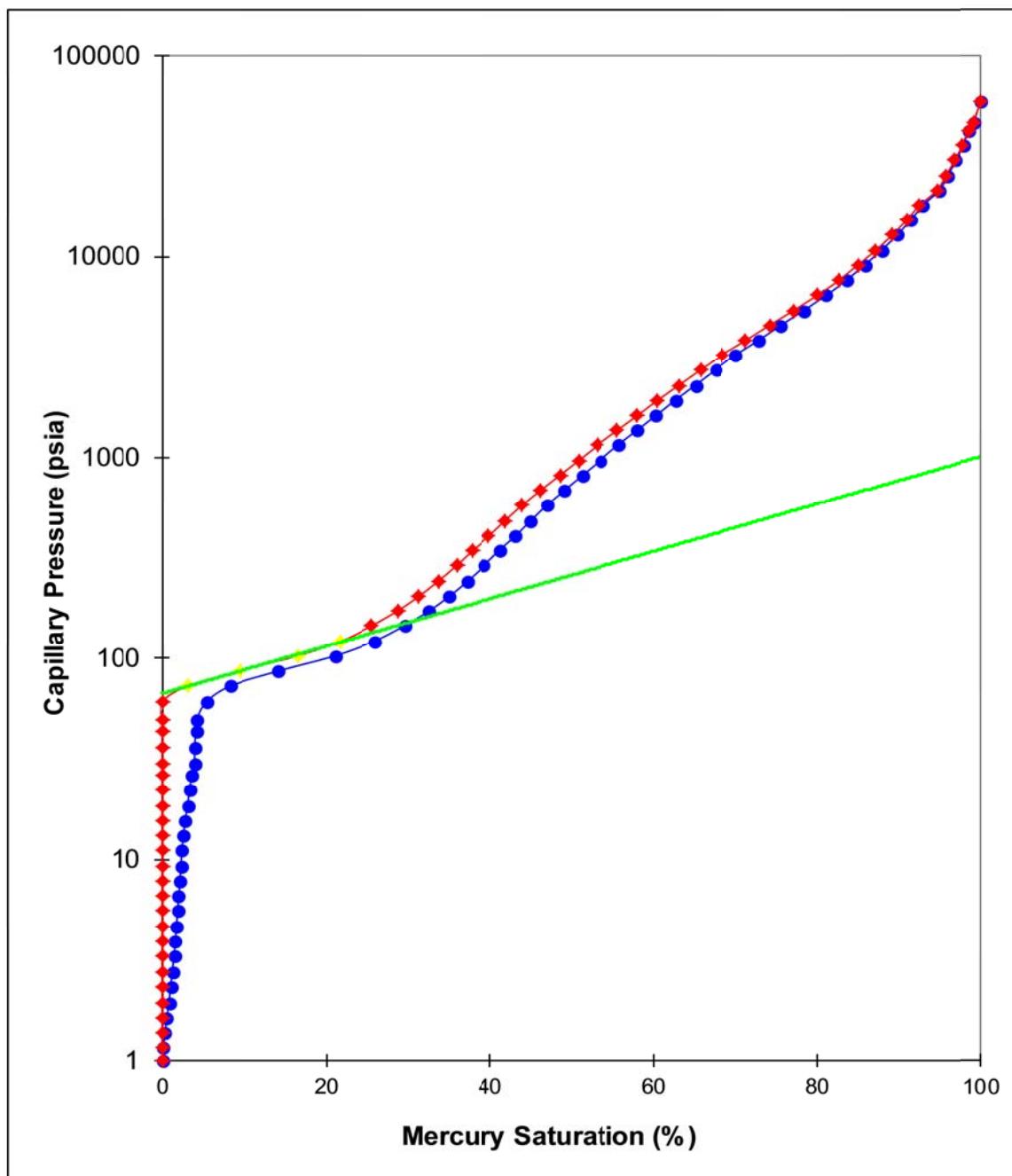
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R18  
2942.60 m      **Ambient Permeability** 0.34 mD  
                 **Ambient Porosity** 11.3 %



## PORE SIZE DISTRIBUTION

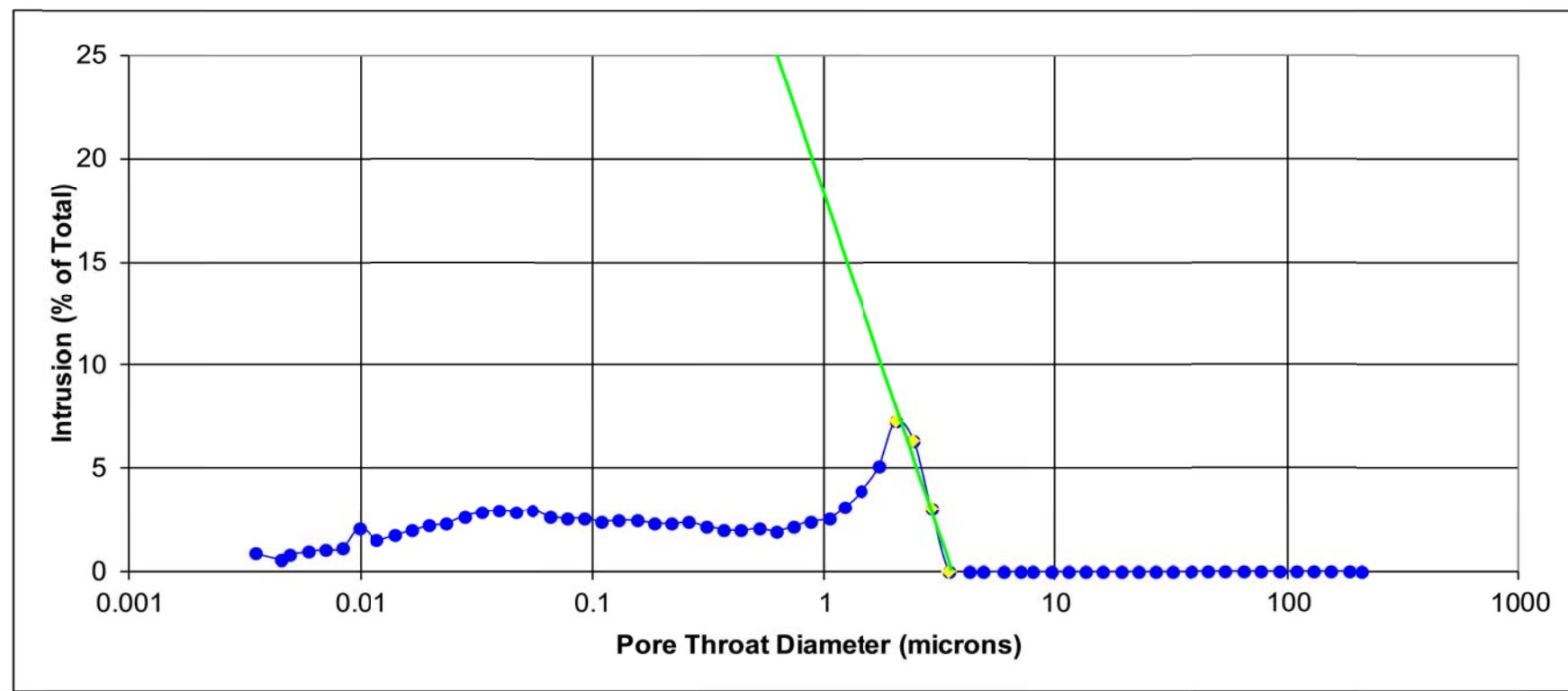


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R18  
2942.60 m

**Ambient Permeability** 0.34 mD  
**Ambient Porosity** 11.3 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R27  
**Depth** 2945.53 m  
**Ambient Permeability** 0.080 mD  
**Ambient Porosity** 8.4 %  
**Pore radius** 0.85 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		126	-	147	-	204
G-W		24.6	17.1	28.7	20.0	39.8
O-W		14.4	8.89	16.8	10.4	23.3
						14.4

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.5	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.7	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	0.9	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.1	0.0	0.0	76.8	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.2	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.4	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.5	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.6	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.7	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.8	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	1.9	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	2.1	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	2.2	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	2.3	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.1	2.4	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	2.6	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	2.8	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	2.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.0	0.0	3.0	0.0	0.0	6.05	6.87	4.77	4.01	2.48	6.87	4.28
42.5	0.1	3.1	0.0	0.0	4.99	8.34	5.79	4.86	3.01	8.34	5.19
50.9	0.1	3.2	0.0	0.0	4.17	9.99	6.94	5.83	3.61	10.0	6.22
60.6	0.2	3.4	0.0	0.0	3.50	11.9	8.26	6.94	4.30	11.9	7.40
73.0	0.2	3.6	0.0	0.0	2.90	14.3	9.93	8.35	5.17	14.3	8.90
87.4	0.3	3.9	0.0	0.0	2.42	17.1	11.9	10.0	6.19	17.2	10.7
104	0.5	4.5	0.0	0.0	2.03	20.4	14.2	11.9	7.37	20.4	12.7
125	1.4	5.8	0.0	0.0	1.70	24.5	17.0	14.3	8.85	24.5	15.2
147	1.3	7.2	1.4	1.4	1.45	28.8	20.0	16.8	10.4	28.8	17.9
174	2.7	9.9	2.9	4.3	1.22	34.1	23.7	19.9	12.3	34.1	21.2
205	4.6	14.5	4.9	9.2	1.03	40.2	27.9	23.5	14.5	40.2	25.0
244	5.5	20.0	5.8	15.1	0.867	47.9	33.3	27.9	17.3	47.9	29.9
290	5.9	25.9	6.2	21.3	0.730	56.9	39.5	33.2	20.6	57.1	35.4
344	4.9	30.8	5.2	26.6	0.616	67.5	46.9	39.4	24.4	67.6	42.0
409	3.9	34.7	4.1	30.6	0.519	80.2	55.7	46.8	29.0	80.4	49.9
486	3.2	37.9	3.4	34.0	0.436	95.3	66.2	55.6	34.4	95.3	59.3
577	3.1	41.0	3.3	37.3	0.367	113	78.5	66.0	40.9	113	70.4
685	3.0	43.9	3.2	40.5	0.309	134	93.1	78.4	48.5	134	83.5
814	3.0	47.0	3.2	43.7	0.260	160	111	93.2	57.7	160	99.5
969	2.9	49.8	3.1	46.7	0.219	190	132	111	68.7	190	118
1150	2.8	52.7	3.0	49.8	0.184	226	157	132	81.7	226	141
1365	2.9	55.6	3.0	52.8	0.155	268	186	156	96.6	268	167
1623	2.6	58.2	2.8	55.6	0.131	318	221	186	115	319	198
1925	2.7	60.9	2.9	58.5	0.110	378	263	220	136	377	236
2288	2.5	63.5	2.7	61.2	0.0926	449	312	262	162	449	280
2717	2.3	65.7	2.4	63.6	0.0780	533	370	311	193	535	332
3227	2.7	68.5	2.9	66.5	0.0657	633	440	369	228	632	394
3832	2.4	70.9	2.6	69.1	0.0553	752	522	439	272	754	468
4548	2.4	73.3	2.5	71.6	0.0466	892	619	520	322	892	555
5403	2.8	76.1	3.0	74.6	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	2.7	78.8	2.9	77.5	0.0330	1259	874	734	454	1258	784
7621	2.9	81.7	3.1	80.6	0.0278	1495	1038	872	540	1496	931
9051	3.0	84.7	3.2	83.8	0.0234	1776	1233	1036	641	1776	1105
10750	2.3	87.0	2.4	86.2	0.0197	2109	1465	1230	761	2109	1313
12767	2.6	89.6	2.8	89.0	0.0166	2505	1740	1461	904	2505	1560
15157	1.6	91.2	1.7	90.7	0.0140	2974	2065	1735	1074	2976	1851
17991	1.7	92.9	1.8	92.5	0.0118	3530	2451	2059	1275	3533	2197
21375	1.5	94.4	1.6	94.1	0.0099	4193	2912	2446	1514	4195	2611
25393	1.4	95.8	1.4	95.5	0.0083	4982	3460	2906	1799	4985	3102
30159	1.2	97.0	1.3	96.8	0.0070	5917	4109	3451	2136	5919	3684
35816	1.1	98.0	1.1	97.9	0.0059	7027	4880	4099	2537	7030	4375
42525	0.9	99.0	1.0	98.9	0.0050	8343	5794	4867	3013	8349	5194
46872	0.4	99.4	0.4	99.3	0.0045	9196	6386	5364	3321	9202	5725
59951	0.6	100.0	0.7	100.0	0.0035	11762	8168	6861	4247	11768	7322

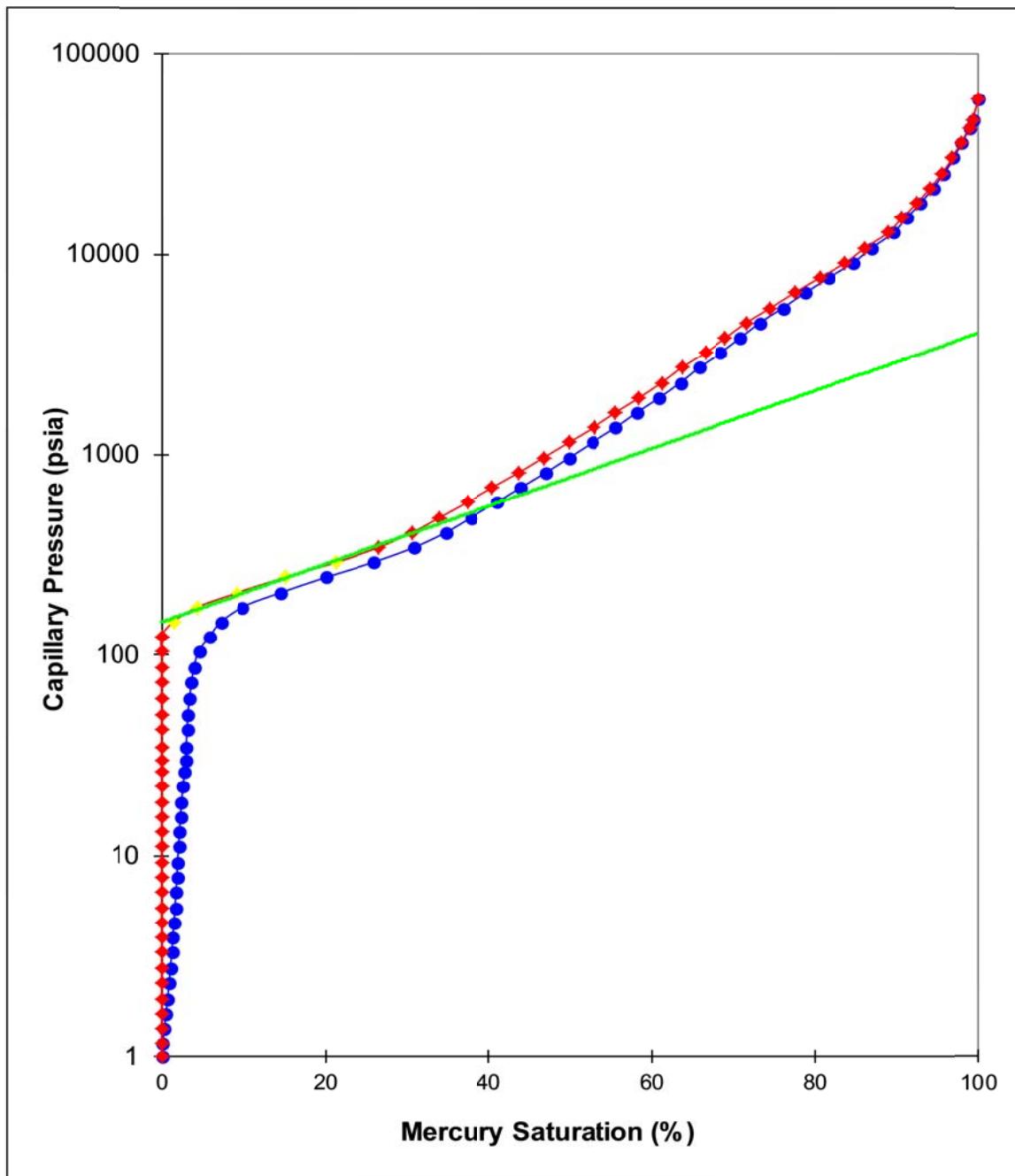
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R27  
2945.53 m      **Ambient Permeability** 0.080 mD  
                 **Ambient Porosity** 8.4 %



## PORE SIZE DISTRIBUTION

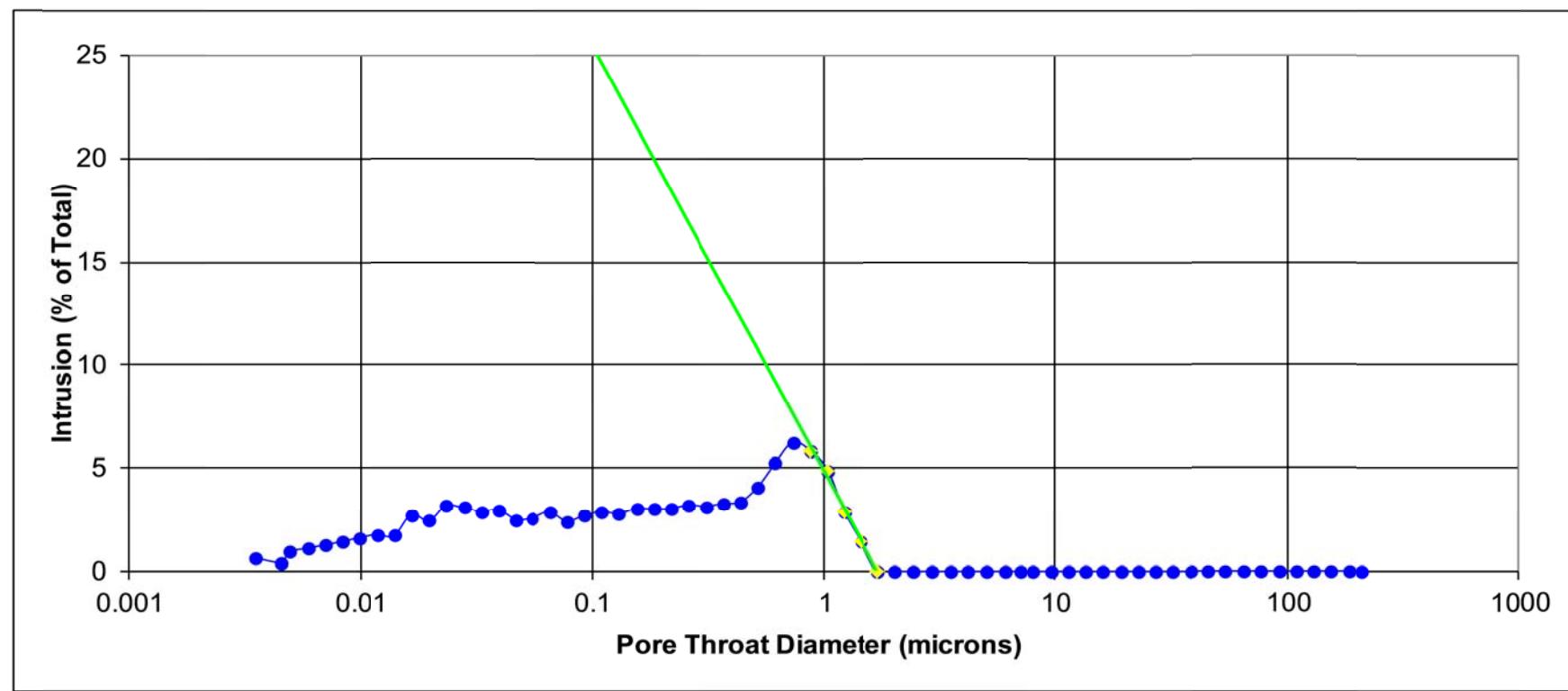


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R27  
2945.53 m

**Ambient Permeability** 0.080 mD  
**Ambient Porosity** 8.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R28  
**Depth** 2945.80 m  
**Ambient Permeability** 0.18 mD  
**Ambient Porosity** 9.0 %  
**Pore radius** 1.26 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		84.5	-	101	-	137
G-W		16.6	11.5	19.8	13.7	26.9
O-W		9.67	5.98	11.6	7.17	15.7
						9.70

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.1	0.1	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.5	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.7	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.2	0.9	0.0	0.0	91.6	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.2	1.1	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.2	1.3	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.1	1.4	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.5	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.6	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.8	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.83	0.1	1.9	0.0	0.0	27.1	1.54	1.07	0.90	0.56	1.54	0.96
9.30	0.1	2.0	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	2.1	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	2.3	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.4	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	2.6	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	2.8	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	3.0	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	3.2	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.4	- 0.1	3.1	0.0	0.0	5.99	6.94	4.82	4.05	2.51	6.95	4.32
43.6	0.0	3.1	0.0	0.0	4.86	8.55	5.94	4.99	3.09	8.56	5.33
51.5	0.0	3.1	0.0	0.0	4.12	10.1	7.01	5.89	3.65	10.1	6.28
61.1	0.8	3.9	0.0	0.0	3.47	12.0	8.33	6.99	4.33	12.0	7.47
71.8	0.8	4.7	0.0	0.0	2.95	14.1	9.79	8.22	5.09	14.1	8.78
86.2	1.4	6.1	0.0	0.0	2.46	16.9	11.7	9.86	6.10	16.9	10.5
103	2.4	8.5	2.6	2.6	2.06	20.2	14.0	11.8	7.30	20.2	12.6
123	3.2	11.7	3.4	6.0	1.72	24.1	16.7	14.1	8.73	24.2	15.0
146	5.7	17.5	6.1	12.1	1.45	28.6	19.9	16.7	10.3	28.5	17.8
173	6.2	23.6	6.6	18.7	1.23	33.9	23.5	19.8	12.3	34.1	21.1
205	4.8	28.4	5.1	23.8	1.03	40.2	27.9	23.5	14.5	40.2	25.0
243	4.3	32.7	4.5	28.3	0.873	47.7	33.1	27.8	17.2	47.7	29.7
289	2.8	35.5	3.0	31.3	0.734	56.7	39.4	33.1	20.5	56.8	35.3
344	2.6	38.1	2.8	34.1	0.616	67.5	46.9	39.4	24.4	67.6	42.0
409	2.5	40.6	2.7	36.8	0.518	80.2	55.7	46.8	29.0	80.4	49.9
486	2.5	43.2	2.7	39.5	0.436	95.3	66.2	55.6	34.4	95.3	59.3
578	2.5	45.7	2.7	42.2	0.367	113	78.5	66.1	40.9	113	70.4
686	2.6	48.3	2.8	45.0	0.309	135	93.8	78.5	48.6	135	84.1
815	2.6	50.8	2.7	47.7	0.260	160	111	93.3	57.8	160	99.5
968	2.6	53.4	2.7	50.4	0.219	190	132	111	68.7	190	118
1149	2.6	56.0	2.7	53.1	0.184	225	156	131	81.1	225	140
1363	2.5	58.4	2.6	55.8	0.156	267	185	156	96.6	268	166
1624	2.5	60.9	2.6	58.4	0.131	319	222	186	115	319	199
1925	2.4	63.3	2.5	60.9	0.110	378	263	220	136	377	236
2287	2.3	65.6	2.4	63.4	0.0927	449	312	262	162	449	280
2717	2.4	68.0	2.5	65.9	0.0780	533	370	311	193	535	332
3226	2.4	70.4	2.6	68.5	0.0657	633	440	369	228	632	394
3834	2.4	72.8	2.6	71.1	0.0553	752	522	439	272	754	468
4550	2.7	75.5	2.9	73.9	0.0466	893	620	521	323	895	556
5404	2.5	78.0	2.7	76.6	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.8	80.8	3.0	79.6	0.0330	1259	874	734	454	1258	784
7621	2.8	83.6	2.9	82.5	0.0278	1495	1038	872	540	1496	931
9052	2.5	86.1	2.7	85.2	0.0234	1776	1233	1036	641	1776	1105
10750	2.1	88.2	2.2	87.5	0.0197	2109	1465	1230	761	2109	1313
12766	1.8	90.1	2.0	89.4	0.0166	2505	1740	1461	904	2505	1560
15147	1.6	91.6	1.7	91.1	0.0140	2972	2064	1733	1073	2973	1850
18005	1.5	93.1	1.6	92.7	0.0118	3532	2453	2061	1276	3536	2199
21377	1.3	94.4	1.3	94.0	0.0099	4194	2913	2446	1514	4195	2611
25394	1.1	95.5	1.2	95.2	0.0083	4982	3460	2906	1799	4985	3102
30160	1.1	96.6	1.1	96.4	0.0070	5917	4109	3452	2137	5921	3684
35815	0.9	97.5	1.0	97.3	0.0059	7026	4879	4099	2537	7030	4374
42523	0.8	98.3	0.9	98.2	0.0050	8342	5793	4866	3012	8346	5193
46889	0.9	99.2	0.9	99.1	0.0045	9199	6388	5366	3322	9205	5727
59953	0.8	100.0	0.9	100.0	0.0035	11762	8168	6861	4247	11768	7322

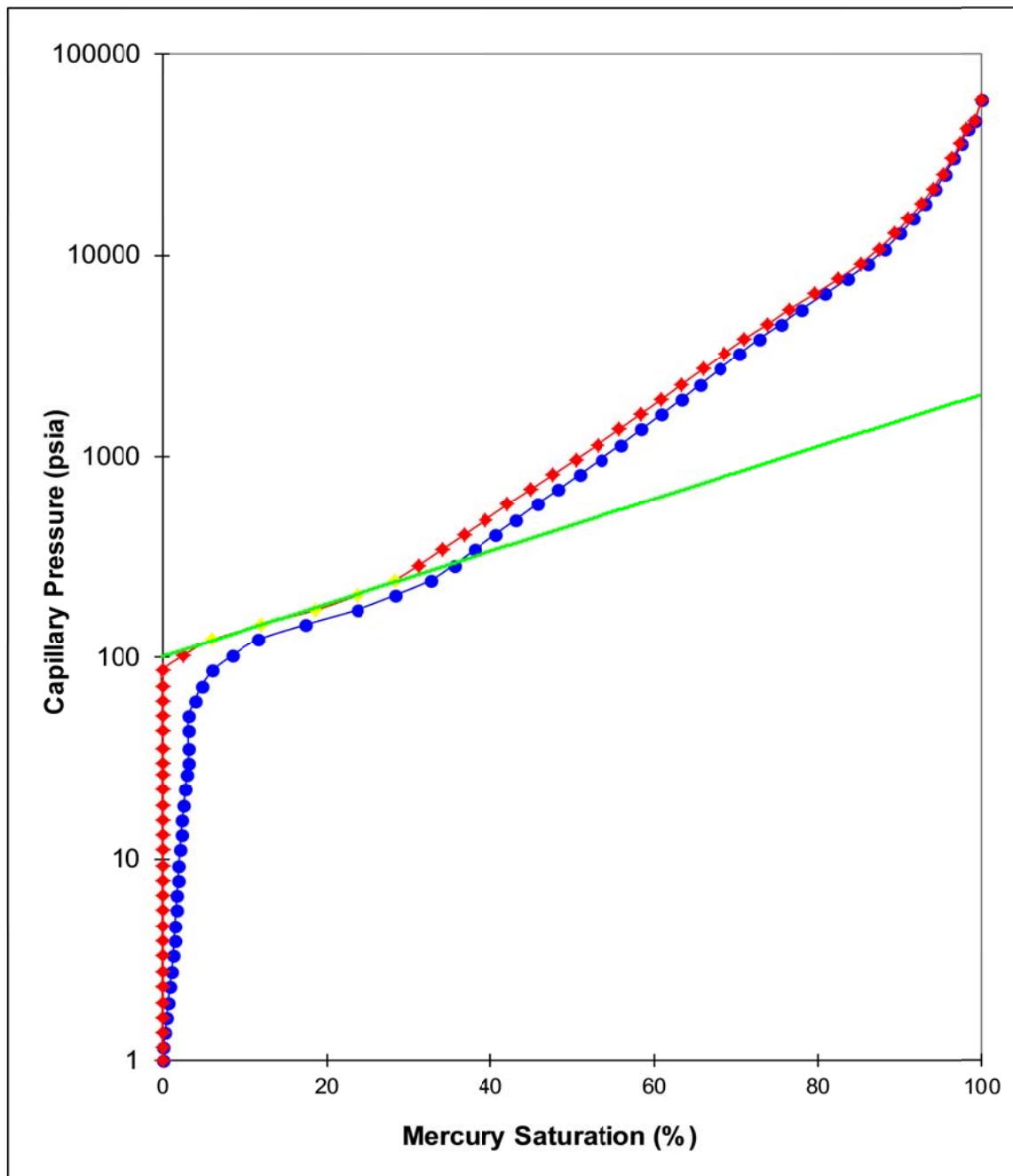
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R28  
2945.80 m      **Ambient Permeability** 0.18 mD  
                 **Ambient Porosity** 9.0 %



## PORE SIZE DISTRIBUTION

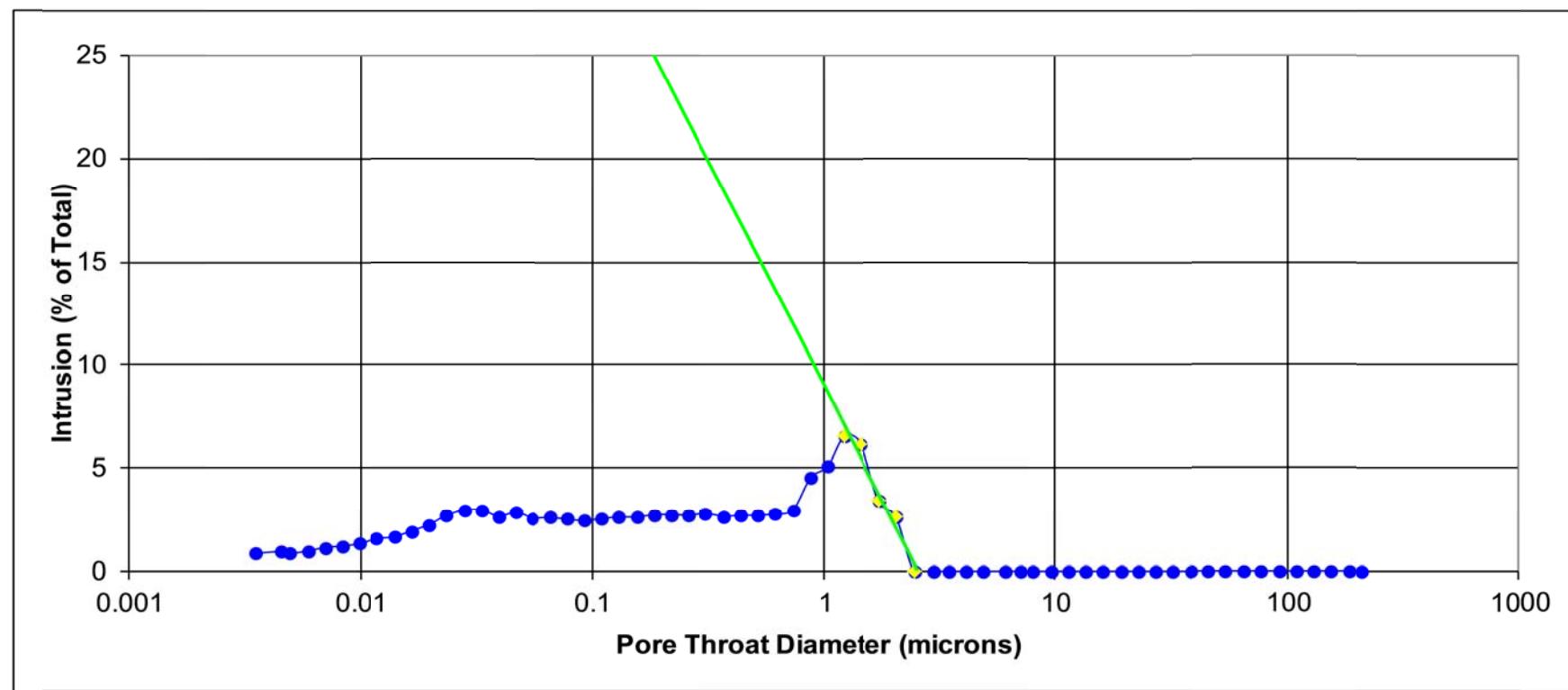


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R28  
2945.80 m

**Ambient Permeability** 0.18 mD  
**Ambient Porosity** 9.0 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R37  
**Depth** 2948.89 m  
**Ambient Permeability** 0.11 mD  
**Ambient Porosity** 7.8 %  
**Pore radius** 1.08 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		98.5	-	107	-	139
G-W		19.3	13.4	21.0	14.6	27.3
O-W		11.3	6.98	12.3	7.60	16.0
						9.89

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.3	0.7	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.2	1.2	0.0	0.0	91.6	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.2	1.5	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.7	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.9	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.1	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.3	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.4	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.83	0.2	2.6	0.0	0.0	27.1	1.54	1.07	0.90	0.56	1.54	0.96
9.30	0.1	2.8	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.9	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	3.1	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	3.3	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	3.5	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	3.8	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	4.1	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	4.4	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.1	0.0	4.4	0.0	0.0	6.03	6.89	4.78	4.02	2.49	6.90	4.29
42.2	0.0	4.4	0.0	0.0	5.03	8.28	5.75	4.83	2.99	8.29	5.15
48.9	0.1	4.5	0.0	0.0	4.34	9.59	6.66	5.60	3.47	9.62	5.97
60.1	0.6	5.1	0.0	0.0	3.53	11.8	8.19	6.88	4.26	11.8	7.34
72.9	0.6	5.7	0.0	0.0	2.91	14.3	9.93	8.34	5.16	14.3	8.90
86.4	1.1	6.8	0.0	0.0	2.45	17.0	11.8	9.89	6.12	17.0	10.6
103	1.4	8.3	1.5	1.5	2.05	20.2	14.0	11.8	7.30	20.2	12.6
122	2.9	11.2	3.2	4.7	1.74	23.9	16.6	14.0	8.67	24.0	14.9
145	7.1	18.3	7.6	12.3	1.46	28.4	19.7	16.6	10.3	28.5	17.7
174	6.0	24.2	6.4	18.7	1.22	34.1	23.7	19.9	12.3	34.1	21.2
205	4.3	28.5	4.6	23.3	1.04	40.2	27.9	23.5	14.5	40.2	25.0
244	3.0	31.5	3.2	26.5	0.867	47.9	33.3	27.9	17.3	47.9	29.9
288	2.5	34.0	2.7	29.2	0.736	56.5	39.2	33.0	20.4	56.5	35.1
342	2.2	36.2	2.3	31.5	0.621	67.1	46.6	39.1	24.2	67.1	41.8
410	2.1	38.3	2.3	33.8	0.517	80.4	55.8	46.9	29.0	80.4	50.0
484	1.8	40.1	2.0	35.7	0.438	95.0	66.0	55.4	34.3	95.0	59.2
576	1.9	42.0	2.0	37.8	0.368	113	78.5	65.9	40.8	113	70.4
684	1.8	43.8	2.0	39.7	0.310	134	93.1	78.3	48.5	134	83.5
815	1.9	45.8	2.1	41.8	0.260	160	111	93.3	57.8	160	99.5
968	1.9	47.7	2.0	43.8	0.219	190	132	111	68.7	190	118
1149	1.9	49.5	2.0	45.8	0.184	225	156	131	81.1	225	140
1364	2.0	51.5	2.1	48.0	0.155	268	186	156	96.6	268	167
1622	2.0	53.5	2.1	50.1	0.131	318	221	186	115	319	198
1926	2.0	55.5	2.2	52.3	0.110	378	263	220	136	377	236
2288	2.0	57.5	2.1	54.4	0.0927	449	312	262	162	449	280
2716	2.1	59.6	2.3	56.7	0.0781	533	370	311	193	535	332
3228	2.0	61.7	2.2	58.9	0.0657	633	440	369	228	632	394
3834	2.4	64.0	2.5	61.4	0.0553	752	522	439	272	754	468
4550	2.6	66.6	2.7	64.1	0.0466	893	620	521	323	895	556
5403	2.8	69.4	3.0	67.2	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.9	72.3	3.2	70.3	0.0330	1259	874	734	454	1258	784
7622	3.3	75.7	3.6	73.9	0.0278	1495	1038	872	540	1496	931
9051	3.7	79.4	4.0	77.9	0.0234	1776	1233	1036	641	1776	1105
10751	3.1	82.5	3.3	81.3	0.0197	2109	1465	1230	761	2109	1313
12767	2.8	85.3	3.0	84.2	0.0166	2505	1740	1461	904	2505	1560
15160	2.5	87.9	2.7	87.0	0.0140	2974	2065	1735	1074	2976	1851
18002	2.2	90.1	2.4	89.3	0.0118	3532	2453	2060	1275	3533	2199
21384	2.0	92.1	2.2	91.5	0.0099	4195	2913	2447	1515	4198	2611
25395	1.6	93.7	1.7	93.2	0.0083	4982	3460	2906	1799	4985	3102
30162	1.9	95.5	2.0	95.2	0.0070	5917	4109	3452	2137	5921	3684
35818	1.5	97.0	1.6	96.8	0.0059	7027	4880	4099	2537	7030	4375
42525	1.2	98.2	1.3	98.1	0.0050	8343	5794	4867	3013	8349	5194
46879	0.7	98.9	0.8	98.9	0.0045	9197	6387	5365	3321	9202	5726
59961	1.1	100.0	1.1	100.0	0.0035	11763	8169	6862	4248	11771	7323

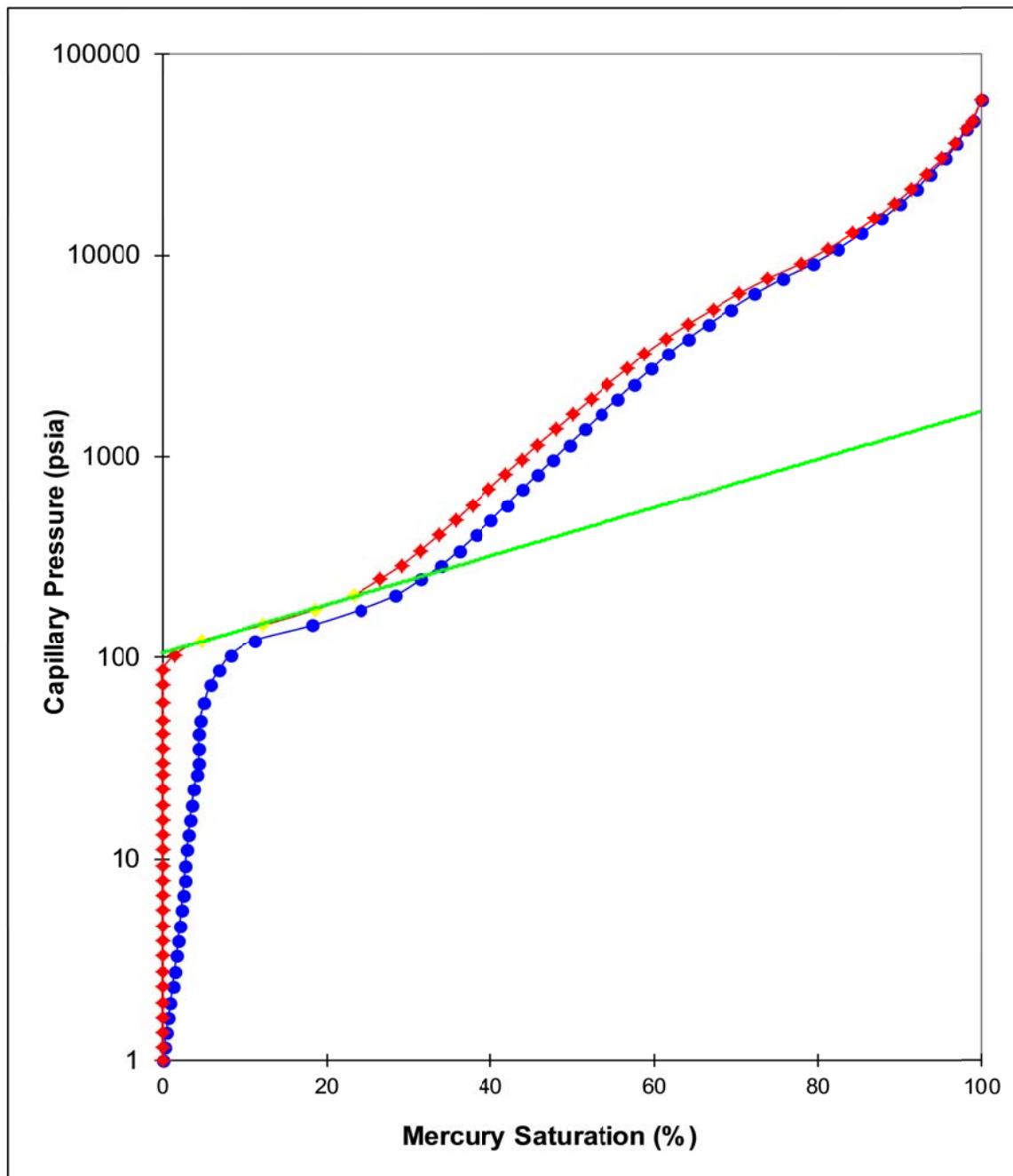
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R37  
2948.89 m      **Ambient Permeability** 0.11 mD  
                 **Ambient Porosity** 7.8 %



## PORE SIZE DISTRIBUTION

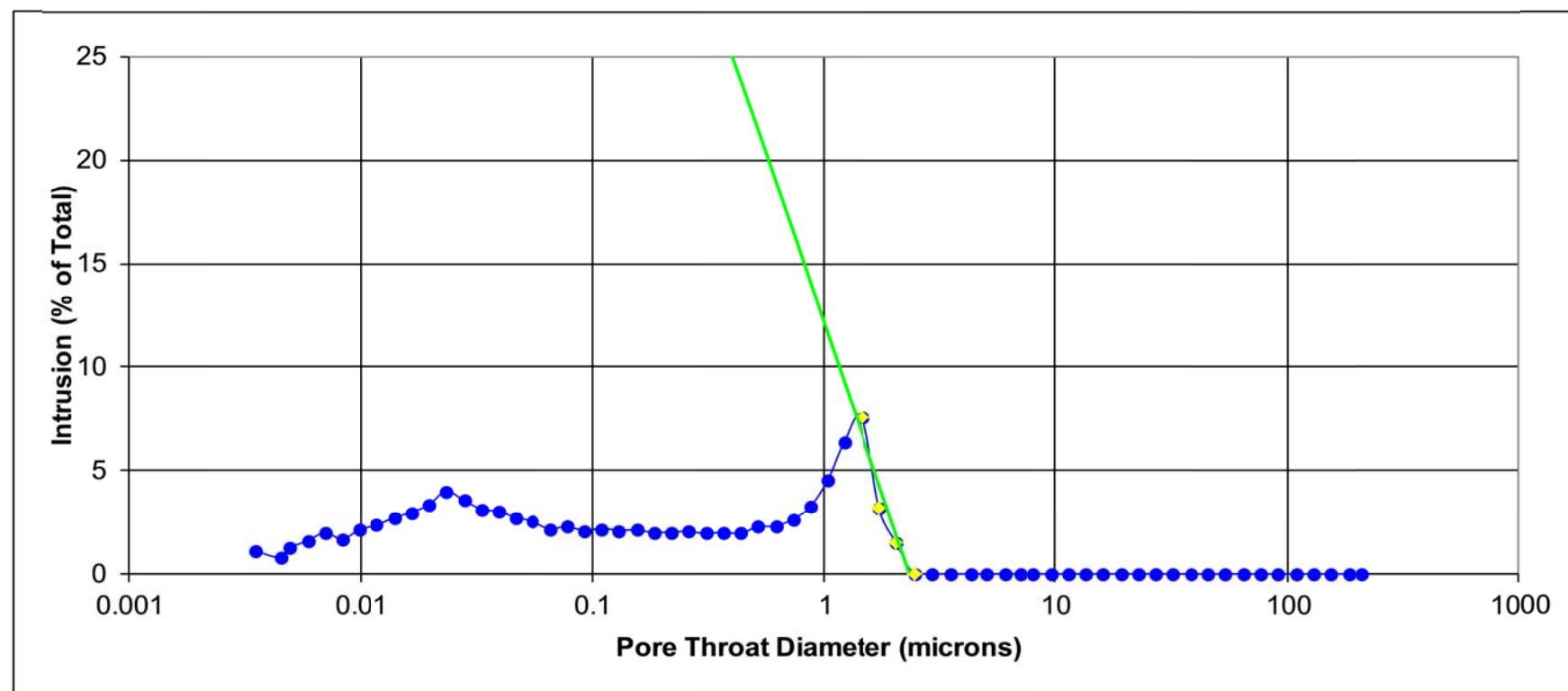


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R37  
2948.89 m

**Ambient Permeability** 0.11 mD  
**Ambient Porosity** 7.8 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R38  
**Depth** 2949.30 m  
**Ambient Permeability** 0.25 mD  
**Ambient Porosity** 11.6 %  
**Pore radius** 1.05 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		101	-	133	-	199
G-W		19.9	13.8	26.2	18.2	39.2
O-W		11.6	7.18	15.3	9.47	22.9
						14.2

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.0	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.2	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.1	1.3	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.4	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.6	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.7	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.8	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.9	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.0	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	2.1	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	2.3	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.5	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	2.7	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	2.9	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	3.1	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	3.4	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.3	0.0	3.4	0.0	0.0	6.01	6.93	4.81	4.04	2.50	6.93	4.31
42.3	0.0	3.4	0.0	0.0	5.01	8.30	5.76	4.84	3.00	8.31	5.16
50.6	0.1	3.5	0.0	0.0	4.19	9.93	6.90	5.79	3.58	9.92	6.19
61.5	0.3	3.8	0.0	0.0	3.45	12.1	8.40	7.04	4.36	12.1	7.53
72.7	0.4	4.2	0.0	0.0	2.92	14.3	9.93	8.32	5.15	14.3	8.90
86.1	0.6	4.9	0.0	0.0	2.46	16.9	11.7	9.85	6.10	16.9	10.5
103	1.1	6.0	0.0	0.0	2.05	20.2	14.0	11.8	7.30	20.2	12.6
124	1.5	7.5	1.6	1.6	1.71	24.3	16.9	14.2	8.79	24.4	15.2
146	1.5	9.0	1.6	3.2	1.46	28.6	19.9	16.7	10.3	28.5	17.8
173	2.8	11.8	3.0	6.2	1.22	33.9	23.5	19.8	12.3	34.1	21.1
205	3.3	15.1	3.5	9.7	1.03	40.2	27.9	23.5	14.5	40.2	25.0
242	4.8	19.8	5.1	14.8	0.874	47.5	33.0	27.7	17.1	47.4	29.6
289	5.1	24.9	5.4	20.1	0.732	56.7	39.4	33.1	20.5	56.8	35.3
344	3.3	28.2	3.5	23.7	0.617	67.5	46.9	39.4	24.4	67.6	42.0
408	2.8	31.0	3.0	26.6	0.520	80.0	55.6	46.7	28.9	80.1	49.8
485	2.5	33.5	2.6	29.2	0.437	95.1	66.0	55.5	34.4	95.3	59.2
577	2.6	36.1	2.8	32.0	0.367	113	78.5	66.0	40.9	113	70.4
685	2.8	38.9	3.0	35.0	0.309	134	93.1	78.4	48.5	134	83.5
814	2.9	41.8	3.1	38.1	0.260	160	111	93.2	57.7	160	99.5
968	2.8	44.6	3.0	41.1	0.219	190	132	111	68.7	190	118
1149	3.0	47.6	3.2	44.3	0.184	225	156	131	81.1	225	140
1365	2.9	50.6	3.1	47.4	0.155	268	186	156	96.6	268	167
1620	3.0	53.6	3.2	50.6	0.131	318	221	185	115	319	198
1926	3.1	56.7	3.3	53.9	0.110	378	263	220	136	377	236
2287	3.4	60.0	3.6	57.5	0.0927	449	312	262	162	449	280
2715	3.8	63.8	4.0	61.5	0.0781	533	370	311	193	535	332
3227	4.1	67.9	4.4	65.9	0.0657	633	440	369	228	632	394
3831	4.1	72.1	4.4	70.3	0.0553	752	522	438	271	751	468
4548	3.9	76.0	4.2	74.5	0.0466	892	619	520	322	892	555
5402	3.6	79.6	3.8	78.3	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	3.1	82.7	3.3	81.6	0.0330	1259	874	734	454	1258	784
7621	2.6	85.2	2.7	84.3	0.0278	1495	1038	872	540	1496	931
9051	2.1	87.3	2.2	86.5	0.0234	1776	1233	1036	641	1776	1105
10750	1.8	89.2	1.9	88.5	0.0197	2109	1465	1230	761	2109	1313
12767	1.5	90.7	1.6	90.1	0.0166	2505	1740	1461	904	2505	1560
15156	1.3	92.0	1.4	91.5	0.0140	2973	2065	1734	1073	2973	1851
18007	1.8	93.7	1.9	93.3	0.0118	3533	2453	2061	1276	3536	2199
21373	1.1	94.8	1.1	94.5	0.0099	4193	2912	2446	1514	4195	2611
25394	1.1	95.9	1.1	95.6	0.0083	4982	3460	2906	1799	4985	3102
30159	1.0	96.9	1.1	96.7	0.0070	5917	4109	3451	2136	5919	3684
35816	1.0	97.9	1.0	97.7	0.0059	7027	4880	4099	2537	7030	4375
42522	0.9	98.7	0.9	98.7	0.0050	8342	5793	4866	3012	8346	5193
46873	0.4	99.2	0.5	99.1	0.0045	9196	6386	5364	3321	9202	5725
59947	0.8	100.0	0.9	100.0	0.0035	11761	8167	6860	4247	11768	7321

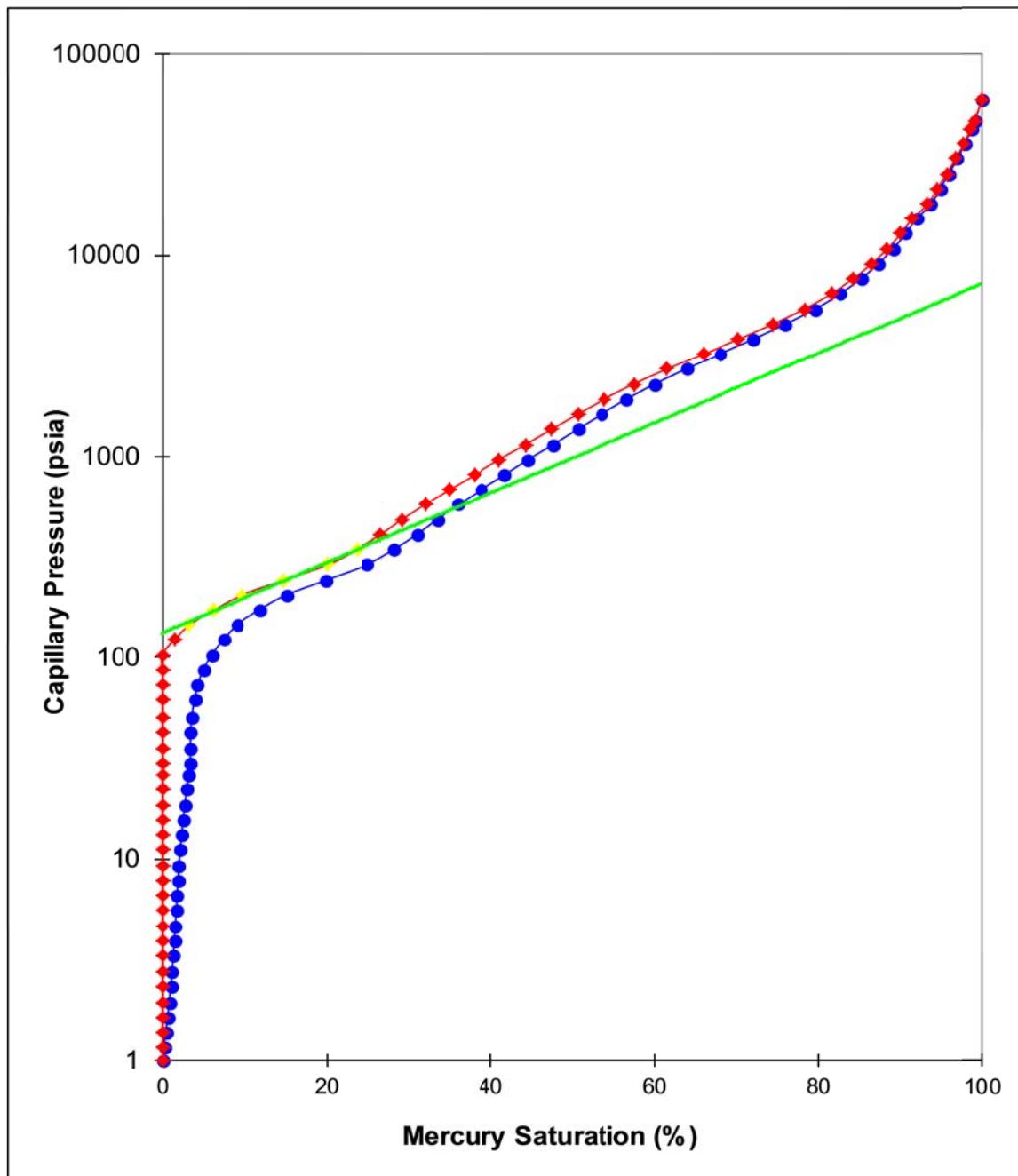
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R38  
2949.30 m      **Ambient Permeability** 0.25 mD  
                 **Ambient Porosity** 11.6 %



## PORE SIZE DISTRIBUTION

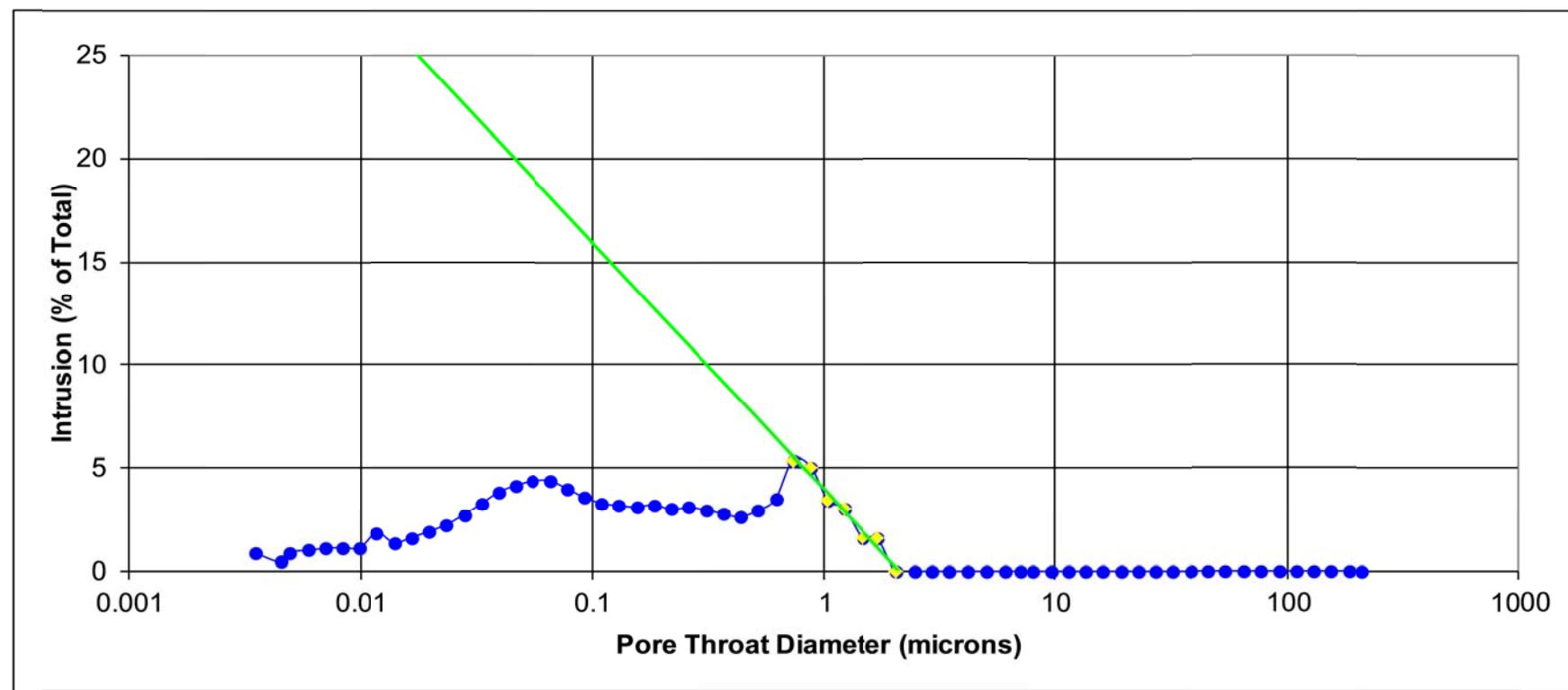


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R38  
2949.30 m

**Ambient Permeability** 0.25 mD  
**Ambient Porosity** 11.6 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R43  
**Depth** 2950.88 m  
**Ambient Permeability** 0.18 mD  
**Ambient Porosity** 8.2 %  
**Pore radius** 1.49 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System	Lab	Resv	Lab	Resv	Lab	Resv
A-Hg	71.4	-	80.2	-	114	-
G-W	14.0	9.73	15.7	10.9	22.3	15.5
O-W	8.17	5.06	9.18	5.69	13.0	8.06

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.15	0.3	0.3	0.0	0.0	184	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.5	0.8	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.3	1.2	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.5	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.8	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	2.0	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.2	2.2	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.2	2.4	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.5	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.7	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.9	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.3	3.1	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	3.3	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	3.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	3.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	4.0	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	4.2	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.6	4.8	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.6	5.4	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.6	5.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.4	0.1	6.0	0.0	0.0	5.99	6.94	4.82	4.05	2.51	6.95	4.32
43.0	0.1	6.1	0.0	0.0	4.93	8.44	5.86	4.92	3.05	8.45	5.25
51.3	0.2	6.3	0.0	0.0	4.14	10.1	7.01	5.87	3.63	10.1	6.28
60.2	0.3	6.6	0.0	0.0	3.52	11.8	8.19	6.89	4.27	11.8	7.34
72.8	1.9	8.5	0.0	0.0	2.91	14.3	9.93	8.33	5.16	14.3	8.90
86.2	2.4	10.9	2.7	2.7	2.46	16.9	11.7	9.86	6.10	16.9	10.5
102	3.2	14.1	3.5	6.1	2.08	20.0	13.9	11.7	7.24	20.1	12.5
121	5.0	19.2	5.5	11.6	1.75	23.7	16.5	13.8	8.54	23.7	14.8
144	4.9	24.1	5.4	17.0	1.47	28.3	19.7	16.5	10.2	28.3	17.7
173	4.2	28.3	4.6	21.6	1.23	33.9	23.5	19.8	12.3	34.1	21.1
204	3.9	32.1	4.2	25.8	1.04	40.0	27.8	23.3	14.4	39.9	24.9
244	3.1	35.2	3.4	29.2	0.869	47.9	33.3	27.9	17.3	47.9	29.9
289	2.4	37.7	2.7	31.9	0.735	56.7	39.4	33.1	20.5	56.8	35.3
344	2.4	40.1	2.6	34.5	0.617	67.5	46.9	39.4	24.4	67.6	42.0
409	2.3	42.3	2.5	37.0	0.519	80.2	55.7	46.8	29.0	80.4	49.9
485	2.3	44.6	2.5	39.4	0.437	95.1	66.0	55.5	34.4	95.3	59.2
576	2.5	47.1	2.7	42.1	0.368	113	78.5	65.9	40.8	113	70.4
686	2.6	49.6	2.8	44.9	0.309	135	93.8	78.5	48.6	135	84.1
814	2.5	52.1	2.7	47.7	0.260	160	111	93.2	57.7	160	99.5
966	2.4	54.6	2.7	50.4	0.219	190	132	111	68.7	190	118
1147	2.7	57.2	2.9	53.3	0.185	225	156	131	81.1	225	140
1365	2.6	59.8	2.8	56.1	0.155	268	186	156	96.6	268	167
1620	2.6	62.4	2.8	58.9	0.131	318	221	185	115	319	198
1926	2.5	64.9	2.8	61.6	0.110	378	263	220	136	377	236
2288	2.5	67.4	2.7	64.3	0.0926	449	312	262	162	449	280
2716	2.5	69.9	2.7	67.0	0.0780	533	370	311	193	535	332
3226	2.5	72.4	2.7	69.8	0.0657	633	440	369	228	632	394
3832	2.4	74.8	2.6	72.4	0.0553	752	522	439	272	754	468
4549	2.5	77.3	2.7	75.2	0.0466	892	619	521	323	895	555
5404	2.4	79.7	2.7	77.8	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.5	82.2	2.7	80.5	0.0330	1259	874	734	454	1258	784
7620	2.8	85.0	3.1	83.6	0.0278	1495	1038	872	540	1496	931
9052	2.6	87.6	2.8	86.4	0.0234	1776	1233	1036	641	1776	1105
10750	2.2	89.8	2.4	88.9	0.0197	2109	1465	1230	761	2109	1313
12768	2.0	91.8	2.2	91.0	0.0166	2505	1740	1461	904	2505	1560
15161	1.6	93.4	1.8	92.8	0.0140	2974	2065	1735	1074	2976	1851
18004	1.3	94.7	1.4	94.3	0.0118	3532	2453	2060	1275	3533	2199
21379	1.1	95.9	1.2	95.5	0.0099	4194	2913	2447	1515	4198	2611
25394	1.0	96.9	1.1	96.6	0.0083	4982	3460	2906	1799	4985	3102
30160	0.9	97.8	1.0	97.6	0.0070	5917	4109	3452	2137	5921	3684
35818	0.8	98.6	0.9	98.5	0.0059	7027	4880	4099	2537	7030	4375
42524	0.7	99.2	0.7	99.2	0.0050	8343	5794	4867	3013	8349	5194
46879	0.3	99.6	0.3	99.5	0.0045	9197	6387	5365	3321	9202	5726
59960	0.4	100.0	0.5	100.0	0.0035	11763	8169	6862	4248	11771	7323

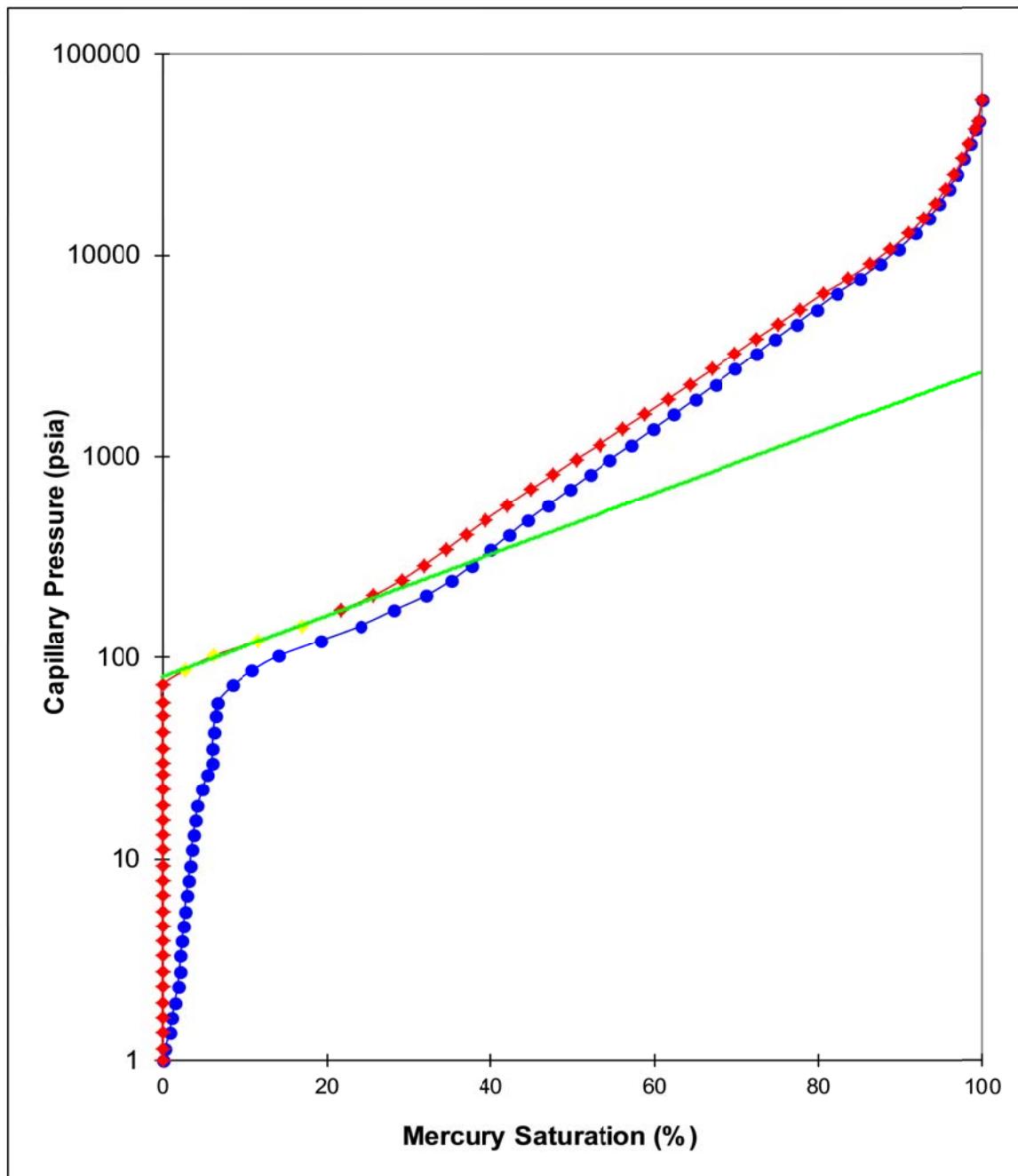
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R43  
2950.88 m      **Ambient Permeability** 0.18 mD  
                 **Ambient Porosity** 8.2 %



## PORE SIZE DISTRIBUTION

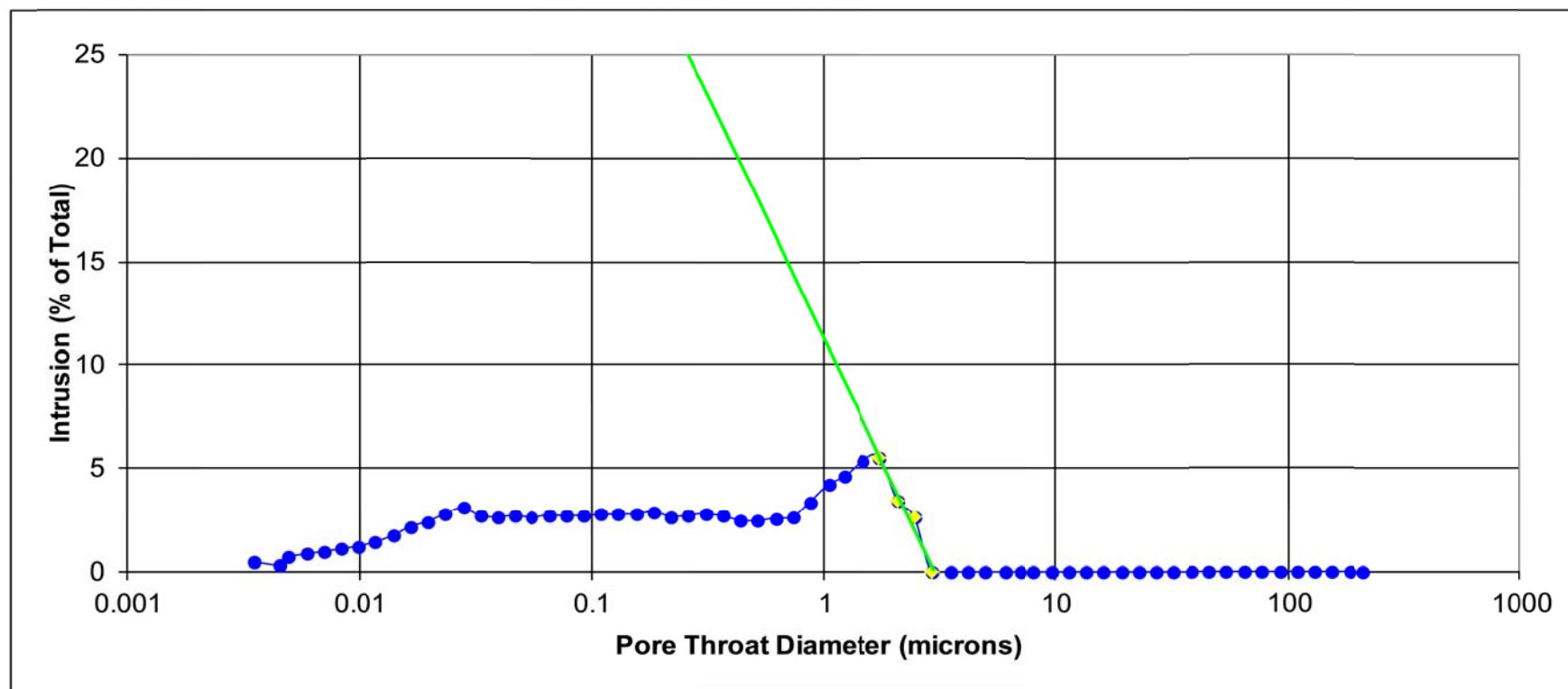


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R43  
2950.88 m

**Ambient Permeability** 0.18 mD  
**Ambient Porosity** 8.2 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R44  
**Depth** 2951.29 m  
**Ambient Permeability** 0.33 mD  
**Ambient Porosity** 8.7 %  
**Pore radius** 1.76  $\mu\text{m}$

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		60.5	-	62.4	-	140
G-W		11.9	8.24	12.3	8.52	27.6
O-W		6.92	4.28	7.14	4.42	16.0
						9.90

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter ( $\mu\text{m}$ )	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.15	0.2	0.2	0.0	0.0	184	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.7	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.9	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.2	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.4	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.2	1.6	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.2	1.8	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.0	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.5	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	2.6	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.8	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	3.0	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	3.2	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	3.5	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.4	3.9	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	4.4	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.6	5.0	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.4	0.2	5.1	0.0	0.0	5.99	6.94	4.82	4.05	2.51	6.95	4.32
42.9	0.6	5.7	0.0	0.0	4.94	8.42	5.85	4.91	3.04	8.42	5.24
51.2	0.7	6.5	0.0	0.0	4.14	10.0	6.94	5.86	3.63	10.1	6.22
60.1	0.7	7.2	0.0	0.0	3.53	11.8	8.19	6.88	4.26	11.8	7.34
72.7	1.8	9.1	2.0	2.0	2.92	14.3	9.93	8.32	5.15	14.3	8.90
86.2	1.8	10.9	1.9	3.9	2.46	16.9	11.7	9.86	6.10	16.9	10.5
102	1.9	12.7	2.0	5.9	2.09	20.0	13.9	11.7	7.24	20.1	12.5
121	2.3	15.0	2.4	8.4	1.75	23.7	16.5	13.8	8.54	23.7	14.8
144	3.0	17.9	3.2	11.5	1.47	28.3	19.7	16.5	10.2	28.3	17.7
173	2.7	20.7	3.0	14.5	1.22	33.9	23.5	19.8	12.3	34.1	21.1
204	2.5	23.2	2.7	17.2	1.04	40.0	27.8	23.3	14.4	39.9	24.9
244	2.6	25.8	2.8	20.1	0.868	47.9	33.3	27.9	17.3	47.9	29.9
289	2.0	27.8	2.2	22.2	0.734	56.7	39.4	33.1	20.5	56.8	35.3
344	2.4	30.3	2.6	24.8	0.616	67.5	46.9	39.4	24.4	67.6	42.0
409	3.2	33.5	3.4	28.3	0.518	80.2	55.7	46.8	29.0	80.4	49.9
486	3.3	36.7	3.5	31.8	0.436	95.3	66.2	55.6	34.4	95.3	59.3
576	3.3	40.0	3.6	35.3	0.368	113	78.5	65.9	40.8	113	70.4
686	3.4	43.4	3.6	39.0	0.309	135	93.8	78.5	48.6	135	84.1
814	3.3	46.6	3.5	42.5	0.260	160	111	93.2	57.7	160	99.5
966	3.1	49.7	3.3	45.8	0.219	190	132	111	68.7	190	118
1147	3.1	52.8	3.3	49.1	0.185	225	156	131	81.1	225	140
1365	2.9	55.7	3.1	52.2	0.155	268	186	156	96.6	268	167
1621	2.8	58.4	3.0	55.2	0.131	318	221	186	115	319	198
1926	2.7	61.1	2.9	58.1	0.110	378	263	220	136	377	236
2289	2.7	63.8	2.9	61.0	0.0926	449	312	262	162	449	280
2717	2.7	66.5	2.9	63.9	0.0780	533	370	311	193	535	332
3226	2.7	69.2	2.9	66.8	0.0657	633	440	369	228	632	394
3832	2.8	71.9	3.0	69.7	0.0553	752	522	439	272	754	468
4550	2.8	74.7	3.0	72.7	0.0466	893	620	521	323	895	556
5404	2.8	77.5	3.0	75.8	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	3.0	80.5	3.2	78.9	0.0330	1259	874	734	454	1258	784
7621	3.0	83.5	3.3	82.2	0.0278	1495	1038	872	540	1496	931
9052	2.5	86.0	2.7	85.0	0.0234	1776	1233	1036	641	1776	1105
10750	2.2	88.3	2.4	87.4	0.0197	2109	1465	1230	761	2109	1313
12768	2.1	90.3	2.2	89.6	0.0166	2505	1740	1461	904	2505	1560
15162	1.8	92.1	1.9	91.5	0.0140	2975	2066	1735	1074	2976	1852
18005	1.5	93.6	1.6	93.1	0.0118	3532	2453	2061	1276	3536	2199
21380	1.4	95.0	1.5	94.6	0.0099	4194	2913	2447	1515	4198	2611
25394	1.2	96.2	1.3	95.9	0.0083	4982	3460	2906	1799	4985	3102
30160	1.1	97.3	1.2	97.1	0.0070	5917	4109	3452	2137	5921	3684
35818	1.0	98.2	1.0	98.1	0.0059	7027	4880	4099	2537	7030	4375
42525	0.8	99.1	0.9	99.0	0.0050	8343	5794	4867	3013	8349	5194
46879	0.3	99.4	0.3	99.3	0.0045	9197	6387	5365	3321	9202	5726
59960	0.6	100.0	0.7	100.0	0.0035	11763	8169	6862	4248	11771	7323

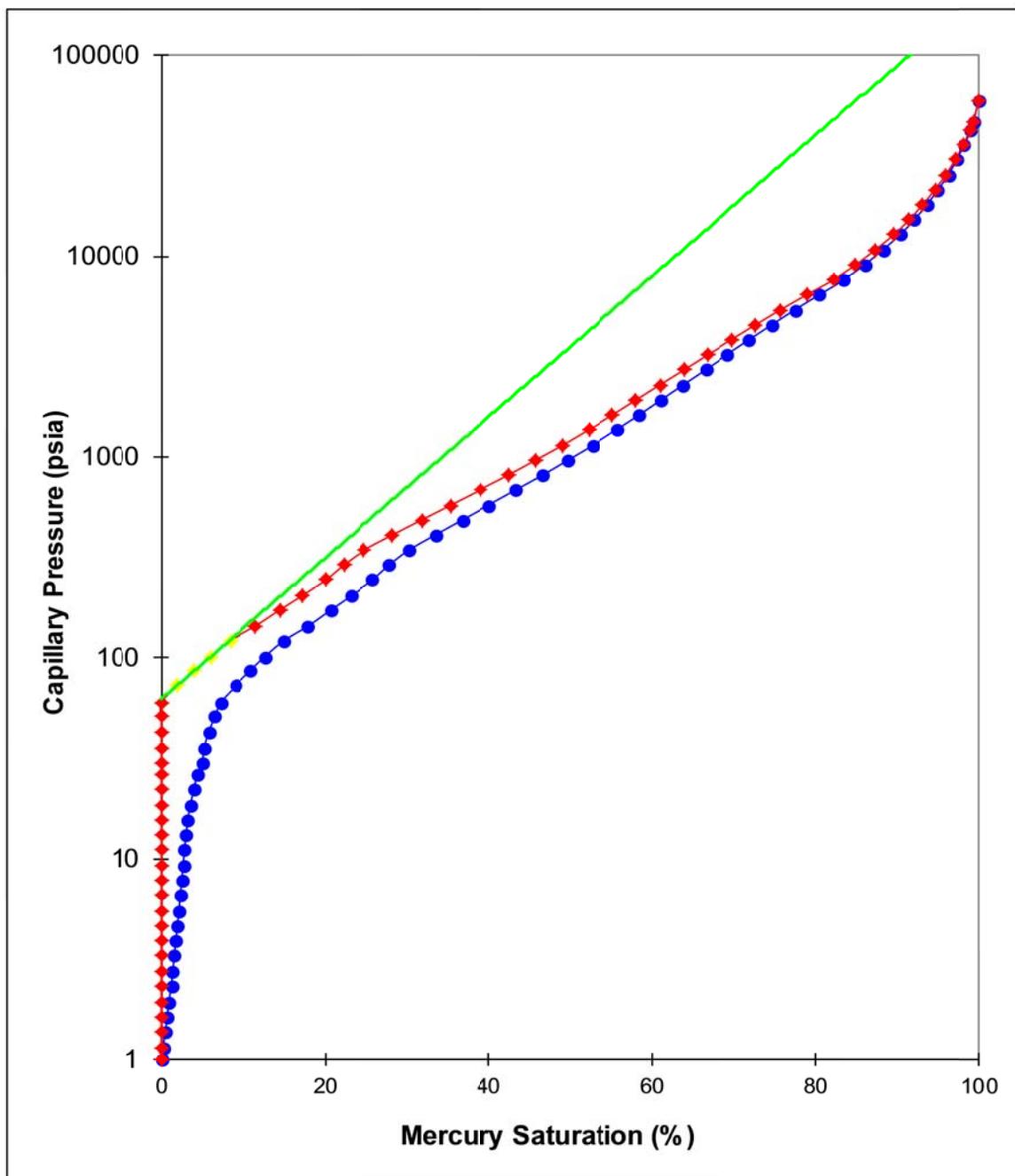
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R44  
2951.29 m      **Ambient Permeability** 0.33 mD  
                 **Ambient Porosity** 8.7 %



## PORE SIZE DISTRIBUTION

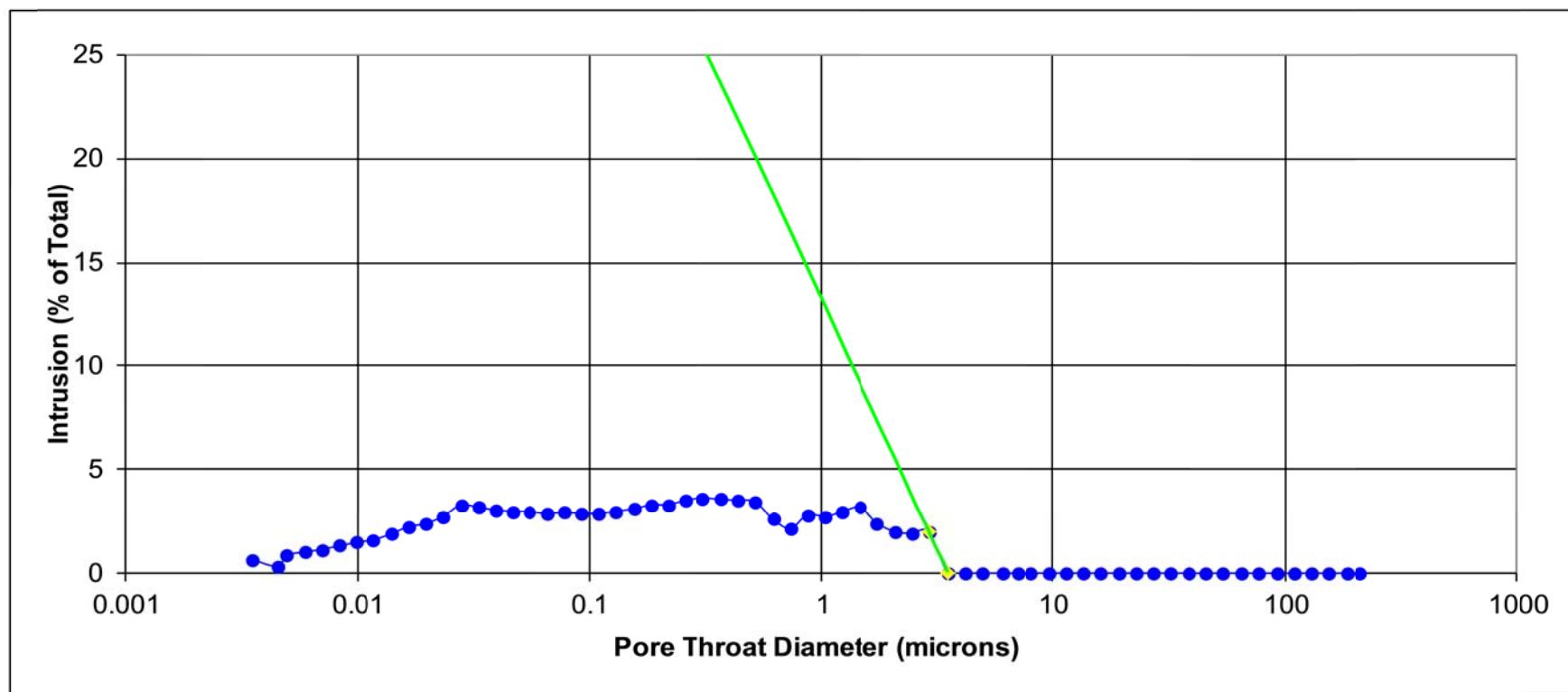


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R44  
2951.29 m

**Ambient Permeability** 0.33 mD  
**Ambient Porosity** 8.7 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R53  
**Depth** 2954.30 m  
**Ambient Permeability** 0.44 mD  
**Ambient Porosity** 11.6 %  
**Pore radius** 2.40  $\mu\text{m}$

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		44.3	-	55.9	-	81.1
G-W		8.70	6.04	11.0	7.64	16.0
O-W		5.08	3.14	6.41	3.96	9.30
						5.75

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter ( $\mu\text{m}$ )	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.7	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.2	1.2	0.0	0.0	91.6	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.3	1.5	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.2	1.7	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.1	1.8	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.0	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.83	0.2	2.5	0.0	0.0	27.1	1.54	1.07	0.90	0.56	1.54	0.96
9.30	0.2	2.7	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.9	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	3.1	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	3.4	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	3.7	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	3.9	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	4.2	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	4.5	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.3	0.3	4.8	0.0	0.0	6.00	6.93	4.81	4.04	2.50	6.93	4.31
43.5	0.8	5.7	0.0	0.0	4.88	8.53	5.92	4.98	3.08	8.53	5.31
51.3	1.1	6.7	1.2	1.2	4.13	10.1	7.01	5.87	3.63	10.1	6.28
60.9	1.9	8.6	2.0	3.1	3.48	11.9	8.26	6.97	4.31	11.9	7.40
71.5	2.7	11.3	2.9	6.0	2.96	14.0	9.72	8.18	5.06	14.0	8.71
85.8	4.6	15.9	4.8	10.9	2.47	16.8	11.7	9.82	6.08	16.8	10.5
102	5.2	21.2	5.5	16.4	2.07	20.0	13.9	11.7	7.24	20.1	12.5
122	4.7	25.8	4.9	21.4	1.73	23.9	16.6	14.0	8.67	24.0	14.9
146	4.6	30.4	4.9	26.3	1.45	28.6	19.9	16.7	10.3	28.5	17.8
173	3.6	34.0	3.8	30.1	1.23	33.9	23.5	19.8	12.3	34.1	21.1
205	2.7	36.7	2.8	32.9	1.04	40.2	27.9	23.5	14.5	40.2	25.0
243	2.3	39.0	2.5	35.3	0.874	47.7	33.1	27.8	17.2	47.7	29.7
289	2.2	41.2	2.3	37.7	0.734	56.7	39.4	33.1	20.5	56.8	35.3
344	2.2	43.4	2.3	40.0	0.616	67.5	46.9	39.4	24.4	67.6	42.0
409	2.3	45.7	2.5	42.4	0.519	80.2	55.7	46.8	29.0	80.4	49.9
486	2.6	48.2	2.7	45.1	0.436	95.3	66.2	55.6	34.4	95.3	59.3
578	2.7	50.9	2.8	48.0	0.367	113	78.5	66.1	40.9	113	70.4
686	2.8	53.7	2.9	50.9	0.309	135	93.8	78.5	48.6	135	84.1
815	2.6	56.2	2.7	53.6	0.260	160	111	93.3	57.8	160	99.5
968	2.5	58.7	2.7	56.3	0.219	190	132	111	68.7	190	118
1149	2.4	61.2	2.6	58.9	0.184	225	156	131	81.1	225	140
1363	2.3	63.5	2.5	61.3	0.156	267	185	156	96.6	268	166
1624	2.4	65.9	2.5	63.9	0.131	319	222	186	115	319	199
1925	2.3	68.2	2.5	66.3	0.110	378	263	220	136	377	236
2287	2.3	70.5	2.4	68.7	0.0927	449	312	262	162	449	280
2717	2.5	73.0	2.7	71.4	0.0780	533	370	311	193	535	332
3226	2.6	75.7	2.8	74.2	0.0657	633	440	369	228	632	394
3834	2.6	78.3	2.7	77.0	0.0553	752	522	439	272	754	468
4550	2.7	81.0	2.8	79.8	0.0466	893	620	521	323	895	556
5403	2.1	83.0	2.2	82.0	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6416	2.1	85.2	2.3	84.3	0.0330	1259	874	734	454	1258	784
7621	2.1	87.2	2.2	86.5	0.0278	1495	1038	872	540	1496	931
9052	1.9	89.1	2.0	88.5	0.0234	1776	1233	1036	641	1776	1105
10751	1.6	90.7	1.7	90.1	0.0197	2109	1465	1230	761	2109	1313
12766	1.3	92.0	1.4	91.5	0.0166	2505	1740	1461	904	2505	1560
15147	1.0	93.0	1.1	92.6	0.0140	2972	2064	1733	1073	2973	1850
18005	1.1	94.1	1.2	93.8	0.0118	3532	2453	2061	1276	3536	2199
21377	0.9	95.1	1.0	94.8	0.0099	4194	2913	2446	1514	4195	2611
25394	0.9	96.0	1.0	95.7	0.0083	4982	3460	2906	1799	4985	3102
30160	0.9	96.8	0.9	96.6	0.0070	5917	4109	3452	2137	5921	3684
35815	0.7	97.6	0.8	97.4	0.0059	7026	4879	4099	2537	7030	4374
42523	0.7	98.3	0.8	98.2	0.0050	8342	5793	4866	3012	8346	5193
46890	0.9	99.2	1.0	99.2	0.0045	9199	6388	5366	3322	9205	5727
59953	0.8	100.0	0.8	100.0	0.0035	11762	8168	6861	4247	11768	7322

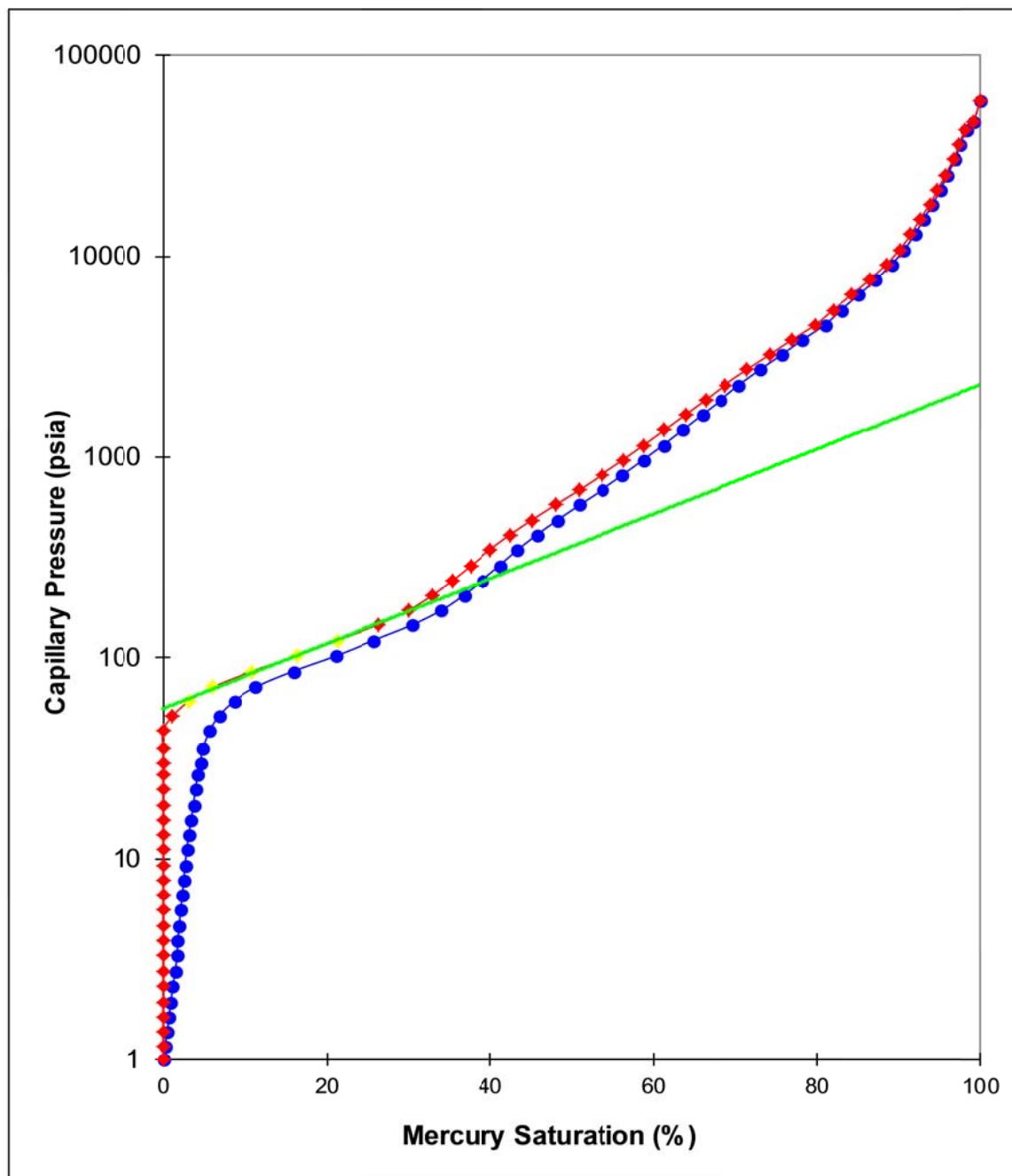
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R53  
2954.30 m      **Ambient Permeability** 0.44 mD  
                 **Ambient Porosity** 11.6 %



## PORE SIZE DISTRIBUTION

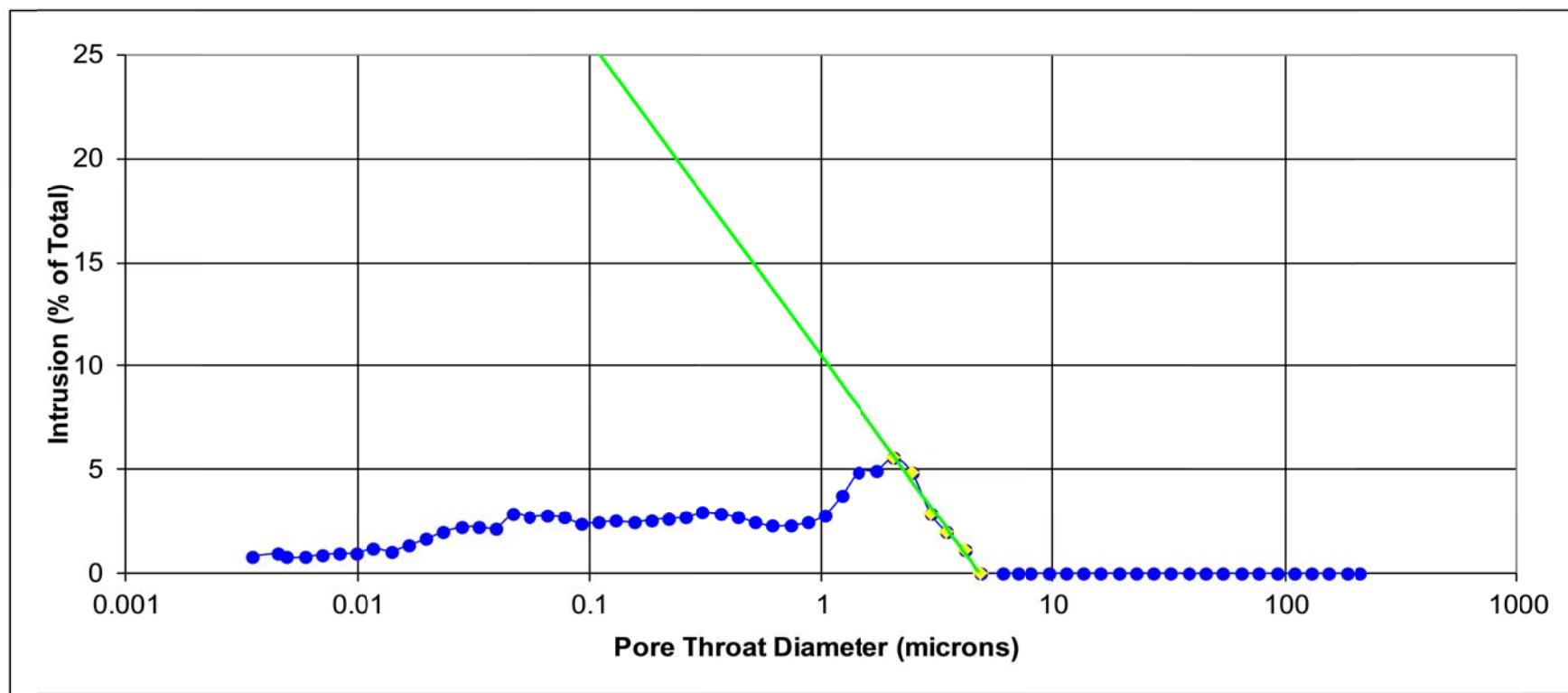


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R53  
2954.30 m

**Ambient Permeability** 0.44 mD  
**Ambient Porosity** 11.6 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R54  
**Depth** 2954.60 m  
**Ambient Permeability** 0.18 mD  
**Ambient Porosity** 9.5 %  
**Pore radius** 1.01 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		105	-	112	-	138
G-W		20.7	14.4	22.1	15.4	27.2
O-W		12.1	7.47	12.9	7.96	15.9
						9.81

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.2	1.0	0.0	0.0	91.6	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.2	1.2	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.4	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.5	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.7	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	1.8	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.9	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.83	0.2	2.1	0.0	0.0	27.1	1.54	1.07	0.90	0.56	1.54	0.96
9.30	0.1	2.2	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.4	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	2.5	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	2.7	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	2.9	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	3.1	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	3.4	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	3.6	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.2	0.0	3.6	0.0	0.0	6.03	6.91	4.80	4.03	2.49	6.90	4.30
42.2	0.0	3.6	0.0	0.0	5.03	8.28	5.75	4.83	2.99	8.29	5.15
49.1	0.1	3.7	0.0	0.0	4.32	9.63	6.69	5.62	3.48	9.64	6.00
60.1	0.2	4.0	0.0	0.0	3.53	11.8	8.19	6.88	4.26	11.8	7.34
72.9	0.4	4.3	0.0	0.0	2.91	14.3	9.93	8.34	5.16	14.3	8.90
86.4	0.6	4.9	0.0	0.0	2.45	17.0	11.8	9.89	6.12	17.0	10.6
103	1.5	6.4	0.0	0.0	2.05	20.2	14.0	11.8	7.30	20.2	12.6
122	3.5	9.9	3.8	3.8	1.74	23.9	16.6	14.0	8.67	24.0	14.9
145	9.0	18.9	9.6	13.4	1.46	28.4	19.7	16.6	10.3	28.5	17.7
174	6.6	25.5	7.1	20.4	1.22	34.1	23.7	19.9	12.3	34.1	21.2
205	4.7	30.3	5.1	25.5	1.04	40.2	27.9	23.5	14.5	40.2	25.0
244	3.5	33.7	3.7	29.2	0.868	47.9	33.3	27.9	17.3	47.9	29.9
288	2.8	36.5	3.0	32.2	0.737	56.5	39.2	33.0	20.4	56.5	35.1
341	2.4	38.9	2.6	34.8	0.621	66.9	46.5	39.0	24.1	66.8	41.7
410	2.4	41.4	2.6	37.4	0.517	80.4	55.8	46.9	29.0	80.4	50.0
483	2.1	43.5	2.3	39.6	0.439	94.8	65.8	55.3	34.2	94.8	59.0
576	2.2	45.7	2.3	42.0	0.368	113	78.5	65.9	40.8	113	70.4
684	2.1	47.8	2.3	44.2	0.310	134	93.1	78.3	48.5	134	83.5
815	2.2	50.0	2.4	46.6	0.260	160	111	93.3	57.8	160	99.5
967	2.2	52.2	2.3	48.9	0.219	190	132	111	68.7	190	118
1149	2.1	54.3	2.2	51.1	0.184	225	156	131	81.1	225	140
1363	2.1	56.4	2.3	53.4	0.156	267	185	156	96.6	268	166
1622	2.0	58.4	2.1	55.6	0.131	318	221	186	115	319	198
1925	2.0	60.4	2.1	57.7	0.110	378	263	220	136	377	236
2288	1.9	62.3	2.0	59.7	0.0927	449	312	262	162	449	280
2715	2.0	64.3	2.2	61.9	0.0781	533	370	311	193	535	332
3227	1.9	66.3	2.1	64.0	0.0657	633	440	369	228	632	394
3834	2.1	68.4	2.3	66.2	0.0553	752	522	439	272	754	468
4550	2.4	70.7	2.5	68.7	0.0466	893	620	521	323	895	556
5403	2.5	73.2	2.7	71.4	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6416	2.7	75.9	2.9	74.3	0.0330	1259	874	734	454	1258	784
7621	3.0	78.9	3.2	77.4	0.0278	1495	1038	872	540	1496	931
9051	3.2	82.1	3.4	80.8	0.0234	1776	1233	1036	641	1776	1105
10751	2.6	84.6	2.7	83.6	0.0197	2109	1465	1230	761	2109	1313
12767	2.3	86.9	2.5	86.0	0.0166	2505	1740	1461	904	2505	1560
15160	2.1	89.0	2.3	88.3	0.0140	2974	2065	1735	1074	2976	1851
18002	1.9	90.9	2.0	90.2	0.0118	3532	2453	2060	1275	3533	2199
21383	1.8	92.7	1.9	92.2	0.0099	4195	2913	2447	1515	4198	2611
25394	1.6	94.2	1.7	93.8	0.0083	4982	3460	2906	1799	4985	3102
30162	1.5	95.7	1.6	95.4	0.0070	5917	4109	3452	2137	5921	3684
35818	1.3	97.0	1.4	96.8	0.0059	7027	4880	4099	2537	7030	4375
42525	1.2	98.2	1.3	98.1	0.0050	8343	5794	4867	3013	8349	5194
46879	0.6	98.9	0.7	98.8	0.0045	9197	6387	5365	3321	9202	5726
59961	1.1	100.0	1.2	100.0	0.0035	11763	8169	6862	4248	11771	7323

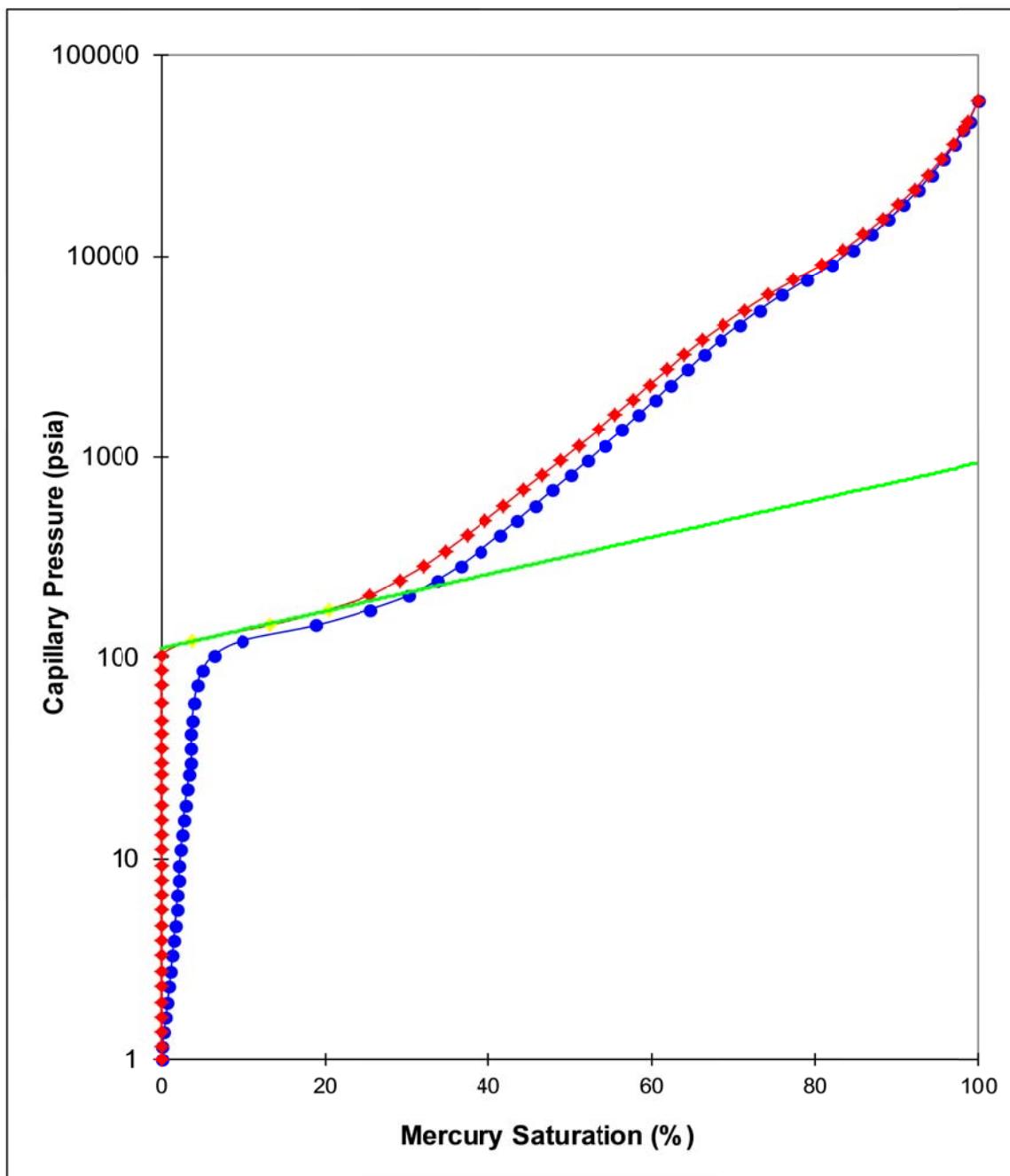
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R54  
2954.60 m      **Ambient Permeability** 0.18 mD  
                 **Ambient Porosity** 9.5 %



## PORE SIZE DISTRIBUTION

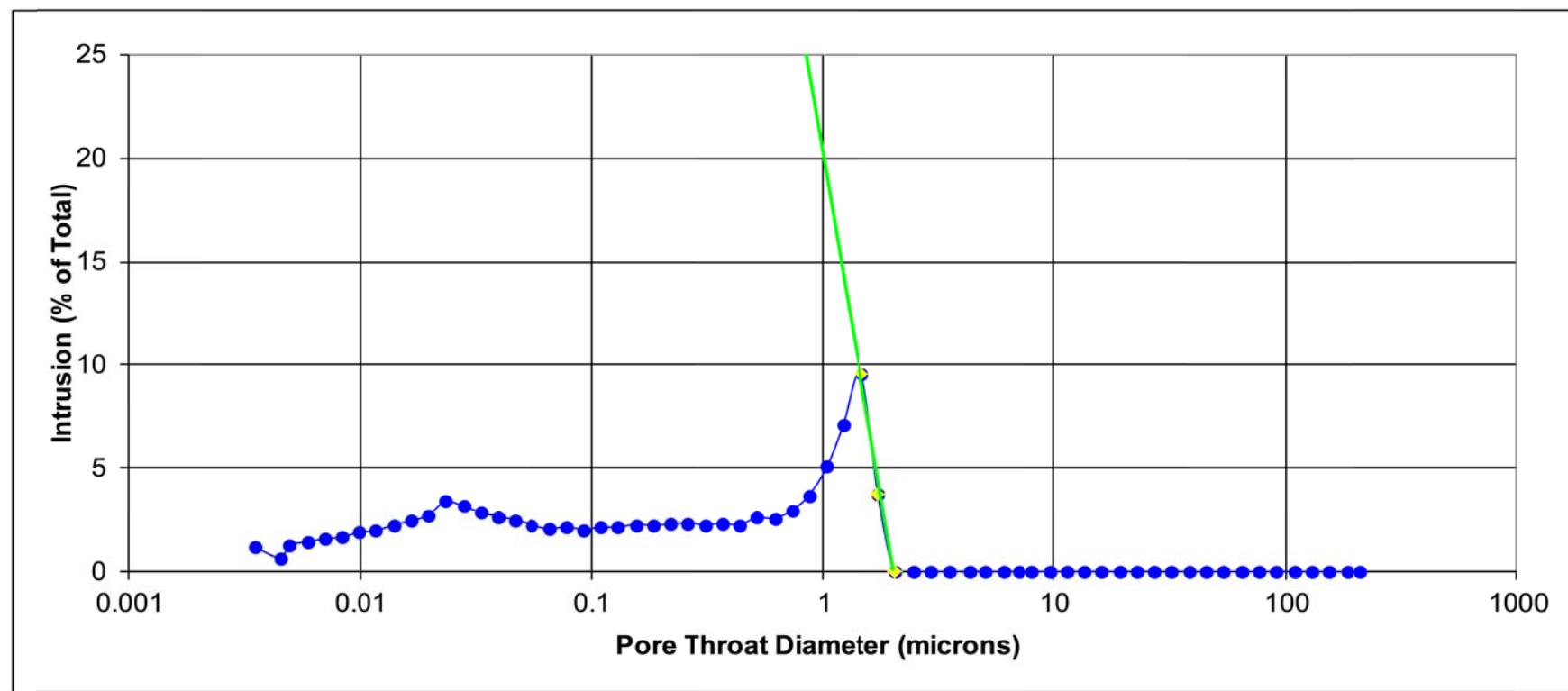


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R54  
2954.60 m

**Ambient Permeability** 0.18 mD  
**Ambient Porosity** 9.5 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R62  
**Depth** 2958.30 m  
**Ambient Permeability** 0.20 mD  
**Ambient Porosity** 4.3 %  
**Pore radius** 1.52 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		70.0	-	78.2	-	130
G-W		13.7	9.54	15.3	10.7	25.4
O-W		8.01	4.96	8.95	5.54	14.9
						9.22

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.3	0.3	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.37	0.5	0.8	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.5	1.3	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.5	1.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	2.2	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.5	2.6	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.4	3.1	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.5	3.5	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.4	3.9	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.4	4.3	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.4	4.7	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.3	5.0	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.4	5.4	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	5.7	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.4	6.2	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.4	6.6	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.5	7.1	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.5	7.6	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.7	8.3	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.6	8.8	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.6	0.4	9.3	0.0	0.0	5.96	6.98	4.85	4.07	2.52	6.98	4.35
43.5	1.5	10.7	0.0	0.0	4.87	8.53	5.92	4.98	3.08	8.53	5.31
51.3	1.1	11.8	0.0	0.0	4.13	10.1	7.01	5.87	3.63	10.1	6.28
59.0	1.0	12.8	0.0	0.0	3.59	11.6	8.06	6.75	4.18	11.6	7.23
70.7	0.7	13.5	0.0	0.0	3.00	13.9	9.65	8.09	5.01	13.9	8.65
85.2	1.8	15.4	2.1	2.1	2.49	16.7	11.6	9.75	6.04	16.7	10.4
103	2.5	17.8	2.9	5.0	2.07	20.2	14.0	11.8	7.30	20.2	12.6
122	2.9	20.8	3.4	8.4	1.73	23.9	16.6	14.0	8.67	24.0	14.9
144	3.5	24.3	4.1	12.5	1.47	28.3	19.7	16.5	10.2	28.3	17.7
171	3.9	28.2	4.5	17.0	1.24	33.5	23.3	19.6	12.1	33.5	20.9
203	3.0	31.2	3.4	20.4	1.04	39.8	27.6	23.2	14.4	39.9	24.7
243	2.9	34.1	3.4	23.8	0.873	47.7	33.1	27.8	17.2	47.7	29.7
287	3.0	37.1	3.4	27.2	0.738	56.3	39.1	32.8	20.3	56.2	35.1
342	2.3	39.4	2.7	29.9	0.621	67.1	46.6	39.1	24.2	67.1	41.8
407	2.4	41.8	2.8	32.7	0.521	79.8	55.4	46.6	28.8	79.8	49.7
484	2.1	43.9	2.5	35.2	0.438	95.0	66.0	55.4	34.3	95.0	59.2
577	1.9	45.9	2.2	37.4	0.368	113	78.5	66.0	40.9	113	70.4
685	1.8	47.7	2.1	39.5	0.310	134	93.1	78.4	48.5	134	83.5
815	1.8	49.4	2.0	41.5	0.260	160	111	93.3	57.8	160	99.5
967	1.6	51.1	1.9	43.4	0.219	190	132	111	68.7	190	118
1149	1.6	52.7	1.8	45.3	0.184	225	156	131	81.1	225	140
1363	1.6	54.3	1.9	47.2	0.156	267	185	156	96.6	268	166
1621	1.6	55.9	1.9	49.0	0.131	318	221	186	115	319	198
1926	2.5	58.4	2.8	51.9	0.110	378	263	220	136	377	236
2285	2.0	60.4	2.3	54.2	0.0928	448	311	261	162	449	279
2714	1.9	62.3	2.2	56.4	0.0781	532	369	311	193	535	331
3223	1.8	64.1	2.1	58.5	0.0658	632	439	369	228	632	394
3827	2.1	66.2	2.4	60.9	0.0554	751	522	438	271	751	468
4541	2.2	68.4	2.6	63.5	0.0467	891	619	520	322	892	555
5396	2.6	71.0	3.0	66.5	0.0393	1059	735	618	383	1061	659

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6411	2.8	73.8	3.3	69.8	0.0331	1258	874	734	454	1258	784
7618	3.3	77.1	3.8	73.6	0.0278	1495	1038	872	540	1496	931
9047	3.4	80.6	4.0	77.5	0.0234	1775	1233	1035	641	1776	1105
10743	3.5	84.1	4.0	81.6	0.0197	2108	1464	1229	761	2109	1312
12760	3.3	87.4	3.8	85.4	0.0166	2503	1738	1460	904	2505	1558
15158	3.2	90.6	3.7	89.1	0.0140	2974	2065	1735	1074	2976	1851
18001	2.4	93.0	2.8	91.9	0.0118	3532	2453	2060	1275	3533	2199
21376	1.9	94.9	2.3	94.1	0.0099	4194	2913	2446	1514	4195	2611
25394	1.6	96.6	1.9	96.0	0.0083	4982	3460	2906	1799	4985	3102
30159	1.2	97.8	1.4	97.5	0.0070	5917	4109	3451	2136	5919	3684
35818	0.9	98.7	1.0	98.4	0.0059	7027	4880	4099	2537	7030	4375
42527	0.6	99.3	0.7	99.2	0.0050	8343	5794	4867	3013	8349	5194
46877	0.2	99.5	0.2	99.4	0.0045	9197	6387	5365	3321	9202	5726
59954	0.5	100.0	0.6	100.0	0.0035	11762	8168	6861	4247	11768	7322

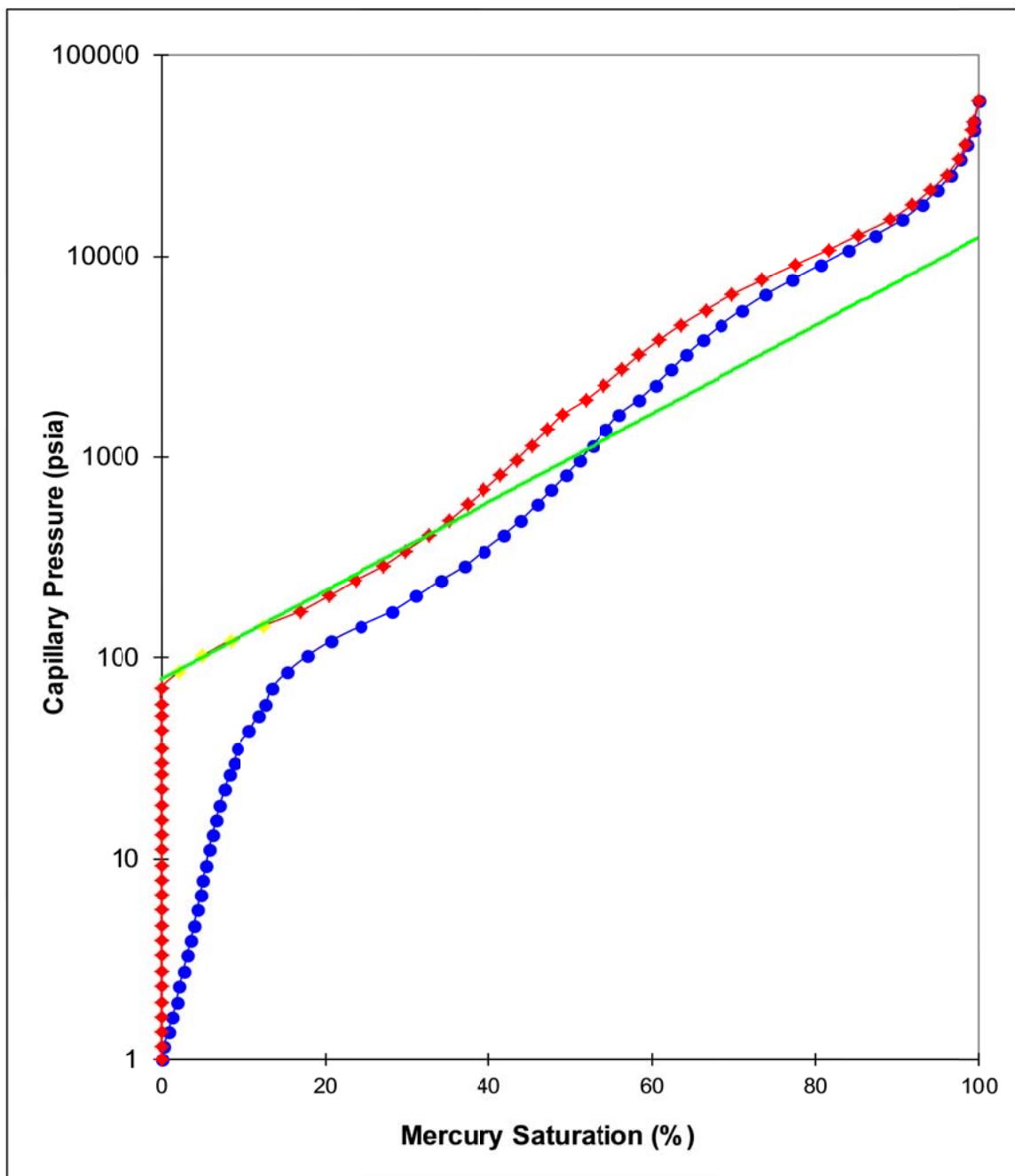
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R62  
2958.30 m      **Ambient Permeability** 0.20 mD  
                 **Ambient Porosity** 4.3 %



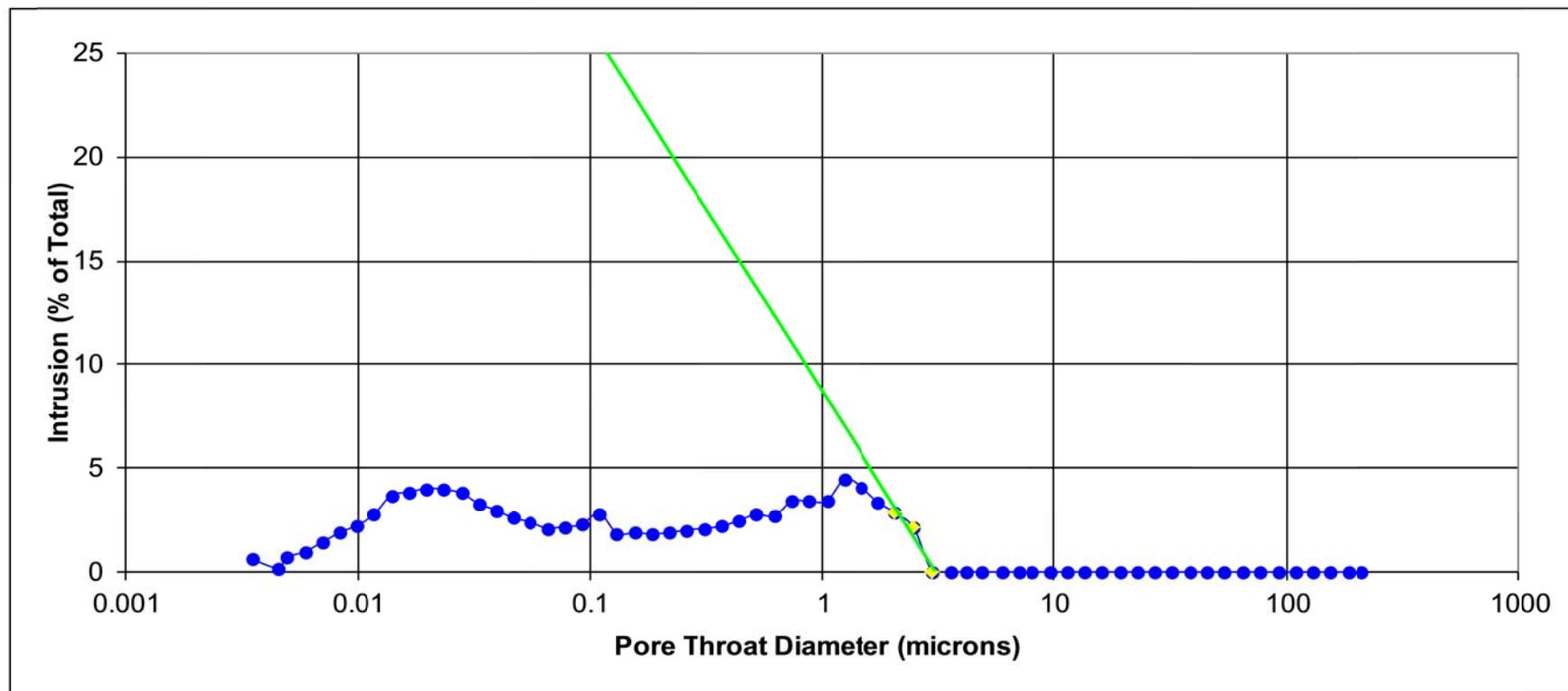
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R62 0.20 mD  
2958.30 m **Ambient Permeability** 0.20 mD  
**Ambient Porosity** 4.3 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R63  
**Depth** 2958.60 m  
**Ambient Permeability** 0.051 mD  
**Ambient Porosity** 2.6 %  
**Pore radius** 1.28 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		83.1	-	98.5	-	248
G-W		16.3	11.3	19.3	13.4	48.6
O-W		9.52	5.89	11.3	6.99	28.5
						17.6

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.3	0.3	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.37	0.3	0.6	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.4	1.0	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.3	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.7	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.3	2.0	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.3	2.3	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.3	2.6	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.3	2.8	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.3	3.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.3	3.4	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	3.6	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.3	3.9	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	4.1	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	4.4	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	4.7	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	5.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	5.3	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	5.6	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.4	6.0	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.7	0.1	6.1	0.0	0.0	5.94	7.00	4.86	4.09	2.53	7.01	4.36
43.7	0.1	6.2	0.0	0.0	4.86	8.57	5.95	5.00	3.10	8.59	5.33
51.4	0.0	6.2	0.0	0.0	4.12	10.1	7.01	5.88	3.64	10.1	6.28
59.3	0.3	6.4	0.0	0.0	3.58	11.6	8.06	6.79	4.20	11.6	7.23
70.9	0.5	6.9	0.0	0.0	2.99	13.9	9.65	8.11	5.02	13.9	8.65
85.4	1.3	8.2	0.0	0.0	2.48	16.8	11.7	9.77	6.05	16.8	10.5
103	0.8	9.0	0.9	0.9	2.06	20.2	14.0	11.8	7.30	20.2	12.6
122	1.2	10.2	1.3	2.2	1.73	23.9	16.6	14.0	8.67	24.0	14.9
145	1.5	11.7	1.6	3.8	1.47	28.4	19.7	16.6	10.3	28.5	17.7
171	1.9	13.5	2.0	5.8	1.24	33.5	23.3	19.6	12.1	33.5	20.9
204	2.1	15.7	2.3	8.1	1.04	40.0	27.8	23.3	14.4	39.9	24.9
243	2.2	17.9	2.4	10.6	0.873	47.7	33.1	27.8	17.2	47.7	29.7
287	2.5	20.4	2.7	13.3	0.738	56.3	39.1	32.8	20.3	56.2	35.1
342	2.1	22.5	2.3	15.6	0.620	67.1	46.6	39.1	24.2	67.1	41.8
407	2.0	24.5	2.2	17.8	0.520	79.8	55.4	46.6	28.8	79.8	49.7
484	1.8	26.2	1.9	19.7	0.438	95.0	66.0	55.4	34.3	95.0	59.2
577	1.6	27.8	1.7	21.4	0.367	113	78.5	66.0	40.9	113	70.4
685	1.4	29.2	1.5	22.9	0.309	134	93.1	78.4	48.5	134	83.5
815	1.3	30.5	1.5	24.4	0.260	160	111	93.3	57.8	160	99.5
967	1.3	31.9	1.4	25.8	0.219	190	132	111	68.7	190	118
1149	1.3	33.1	1.4	27.2	0.184	225	156	131	81.1	225	140
1363	1.3	34.4	1.4	28.6	0.156	267	185	156	96.6	268	166
1622	1.3	35.7	1.4	29.9	0.131	318	221	186	115	319	198
1926	1.4	37.1	1.5	31.5	0.110	378	263	220	136	377	236
2285	1.3	38.4	1.5	32.9	0.0928	448	311	261	162	449	279
2714	1.5	39.9	1.6	34.6	0.0781	532	369	311	193	535	331
3223	1.7	41.7	1.9	36.5	0.0658	632	439	369	228	632	394
3828	2.0	43.6	2.1	38.6	0.0554	751	522	438	271	751	468
4541	2.2	45.9	2.4	41.0	0.0467	891	619	520	322	892	555
5396	2.6	48.5	2.9	43.9	0.0393	1059	735	618	383	1061	659

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6411	3.0	51.5	3.2	47.1	0.0331	1258	874	734	454	1258	784
7618	3.7	55.2	4.0	51.2	0.0278	1495	1038	872	540	1496	931
9047	4.1	59.3	4.5	55.7	0.0234	1775	1233	1035	641	1776	1105
10743	4.9	64.1	5.3	60.9	0.0197	2108	1464	1229	761	2109	1312
12760	5.2	69.3	5.6	66.6	0.0166	2503	1738	1460	904	2505	1558
15158	5.2	74.6	5.7	72.3	0.0140	2974	2065	1735	1074	2976	1851
18001	4.8	79.4	5.2	77.5	0.0118	3532	2453	2060	1275	3533	2199
21376	3.9	83.3	4.3	81.8	0.0099	4194	2913	2446	1514	4195	2611
25394	3.8	87.1	4.2	86.0	0.0083	4982	3460	2906	1799	4985	3102
30159	3.6	90.7	3.9	89.9	0.0070	5917	4109	3451	2136	5919	3684
35818	3.2	93.9	3.5	93.4	0.0059	7027	4880	4099	2537	7030	4375
42526	2.8	96.7	3.0	96.4	0.0050	8343	5794	4867	3013	8349	5194
46877	1.4	98.1	1.5	97.9	0.0045	9197	6387	5365	3321	9202	5726
59954	1.9	100.0	2.1	100.0	0.0035	11762	8168	6861	4247	11768	7322

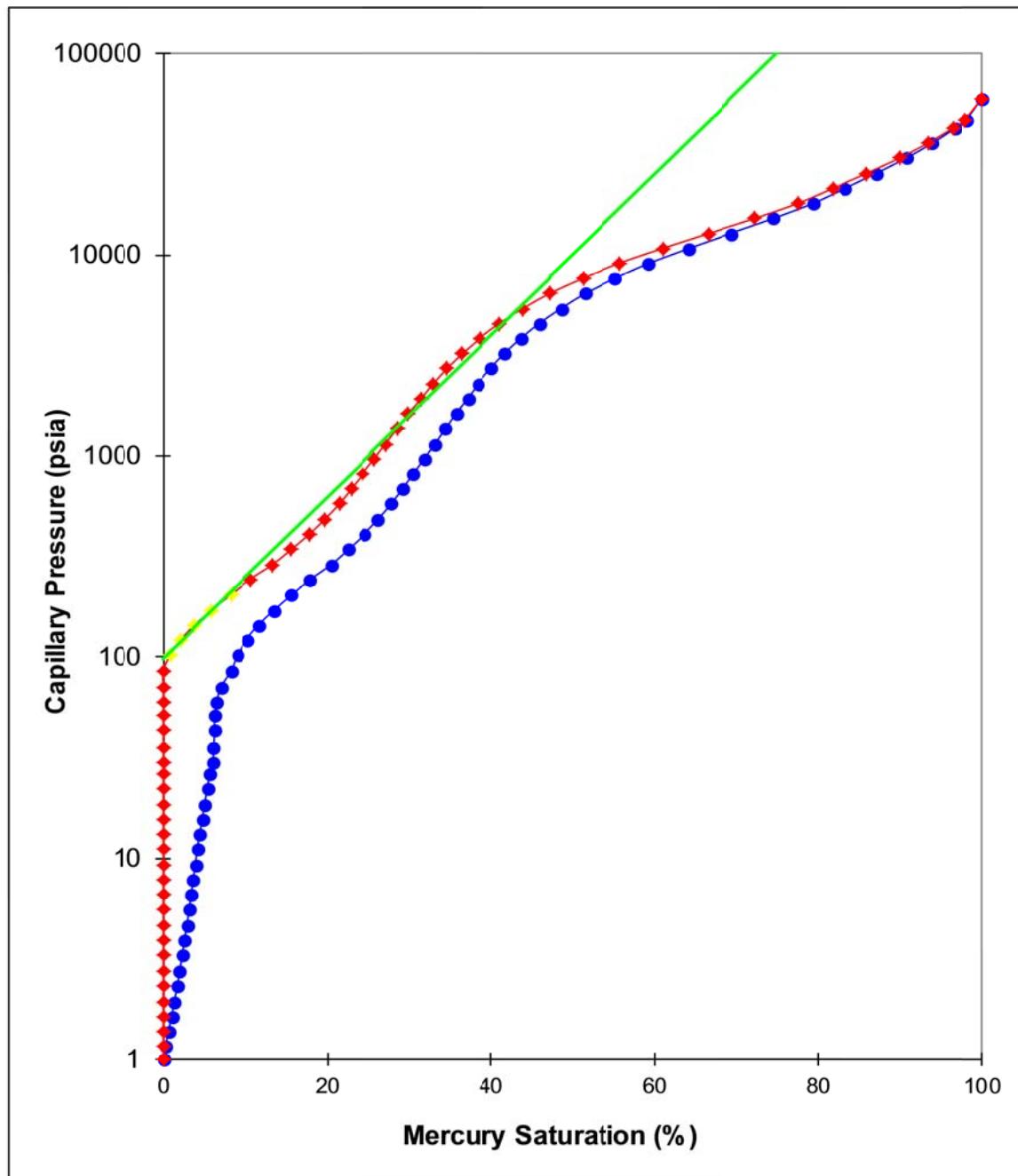
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R63  
2958.60 m      **Ambient Permeability** 0.051 mD  
                 **Ambient Porosity** 2.6 %



## PORE SIZE DISTRIBUTION

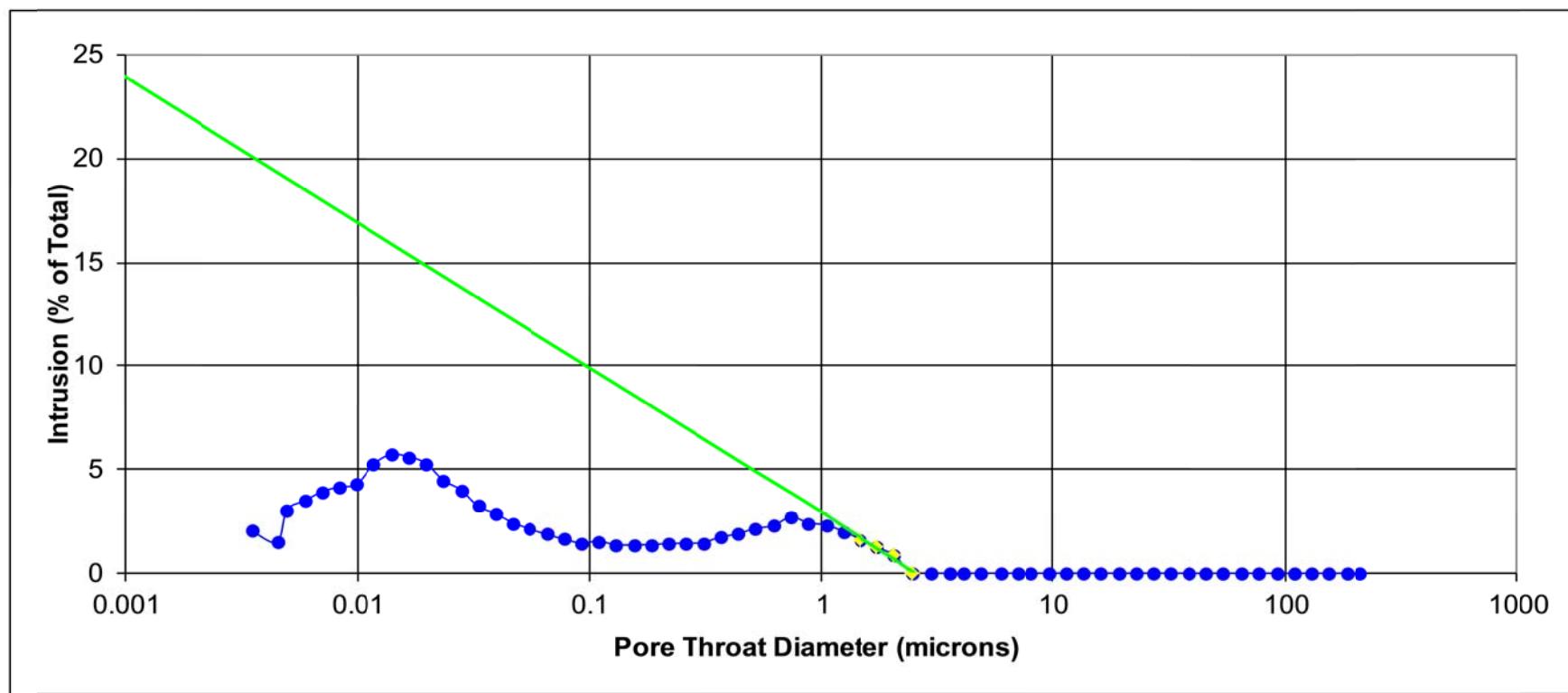


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R63  
2958.60 m

**Ambient Permeability** 0.051 mD  
**Ambient Porosity** 2.6 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R65  
**Depth** 2959.19 m  
**Ambient Permeability** 0.13 mD  
**Ambient Porosity** 8.4 %  
**Pore radius** 1.21 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
<b>A-Hg</b>		88.0	-	103	-	147
<b>G-W</b>		17.3	12.0	20.2	14.0	28.8
<b>O-W</b>		10.1	6.23	11.8	7.28	16.8
						10.4

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.0	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.2	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.3	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.5	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.7	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.8	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.9	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	2.0	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.1	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	2.3	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	2.4	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	2.5	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	2.7	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	2.8	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	3.1	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	3.3	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.8	0.0	3.3	0.0	0.0	5.93	7.02	4.88	4.10	2.54	7.04	4.37
41.9	0.1	3.5	0.0	0.0	5.06	8.22	5.71	4.80	2.97	8.23	5.12
49.9	0.2	3.7	0.0	0.0	4.25	9.79	6.80	5.71	3.53	9.78	6.10
60.9	0.6	4.3	0.0	0.0	3.48	11.9	8.26	6.97	4.31	11.9	7.40
71.5	0.8	5.0	0.0	0.0	2.97	14.0	9.72	8.18	5.06	14.0	8.71
86.3	1.2	6.3	0.0	0.0	2.46	16.9	11.7	9.88	6.12	17.0	10.5
102	1.7	7.9	1.8	1.8	2.08	20.0	13.9	11.7	7.24	20.1	12.5
122	2.5	10.5	2.7	4.5	1.73	23.9	16.6	14.0	8.67	24.0	14.9
145	5.1	15.6	5.5	10.0	1.46	28.4	19.7	16.6	10.3	28.5	17.7
173	4.9	20.5	5.2	15.1	1.23	33.9	23.5	19.8	12.3	34.1	21.1
205	3.6	24.1	3.9	19.0	1.03	40.2	27.9	23.5	14.5	40.2	25.0
244	3.2	27.3	3.4	22.4	0.870	47.9	33.3	27.9	17.3	47.9	29.9
289	2.6	29.9	2.8	25.2	0.734	56.7	39.4	33.1	20.5	56.8	35.3
344	2.3	32.2	2.4	27.6	0.615	67.5	46.9	39.4	24.4	67.6	42.0
408	2.3	34.4	2.4	30.1	0.520	80.0	55.6	46.7	28.9	80.1	49.8
486	2.3	36.7	2.4	32.5	0.436	95.3	66.2	55.6	34.4	95.3	59.3
577	2.3	39.0	2.4	34.9	0.367	113	78.5	66.0	40.9	113	70.4
685	2.4	41.4	2.6	37.5	0.309	134	93.1	78.4	48.5	134	83.5
814	2.5	43.9	2.7	40.1	0.260	160	111	93.2	57.7	160	99.5
968	2.6	46.5	2.8	43.0	0.219	190	132	111	68.7	190	118
1149	2.9	49.4	3.1	46.0	0.184	225	156	131	81.1	225	140
1365	3.0	52.4	3.2	49.2	0.155	268	186	156	96.6	268	167
1621	3.1	55.5	3.3	52.5	0.131	318	221	186	115	319	198
1927	3.1	58.5	3.3	55.8	0.110	378	263	221	137	380	236
2287	2.9	61.5	3.1	58.9	0.0927	449	312	262	162	449	280
2718	2.9	64.4	3.1	62.0	0.0780	533	370	311	193	535	332
3226	3.0	67.3	3.2	65.2	0.0657	633	440	369	228	632	394
3831	2.9	70.2	3.1	68.2	0.0553	752	522	438	271	751	468
4548	3.0	73.3	3.2	71.5	0.0466	892	619	520	322	892	555
5403	3.0	76.2	3.2	74.7	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	3.0	79.3	3.2	77.9	0.0330	1259	874	734	454	1258	784
7622	3.2	82.4	3.4	81.2	0.0278	1495	1038	872	540	1496	931
9052	2.8	85.2	3.0	84.2	0.0234	1776	1233	1036	641	1776	1105
10751	2.3	87.5	2.4	86.6	0.0197	2109	1465	1230	761	2109	1313
12767	2.1	89.6	2.3	88.9	0.0166	2505	1740	1461	904	2505	1560
15162	1.9	91.5	2.0	90.9	0.0140	2975	2066	1735	1074	2976	1852
17990	1.6	93.1	1.7	92.6	0.0118	3529	2451	2059	1275	3533	2197
21381	1.3	94.4	1.4	94.0	0.0099	4195	2913	2447	1515	4198	2611
25398	1.4	95.8	1.5	95.5	0.0083	4983	3460	2907	1800	4988	3102
30162	1.2	97.0	1.3	96.8	0.0070	5917	4109	3452	2137	5921	3684
35819	1.1	98.1	1.2	98.0	0.0059	7027	4880	4099	2537	7030	4375
42526	0.9	99.0	0.9	98.9	0.0050	8343	5794	4867	3013	8349	5194
46879	0.5	99.4	0.5	99.4	0.0045	9197	6387	5365	3321	9202	5726
59955	0.6	100.0	0.6	100.0	0.0035	11762	8168	6861	4247	11768	7322

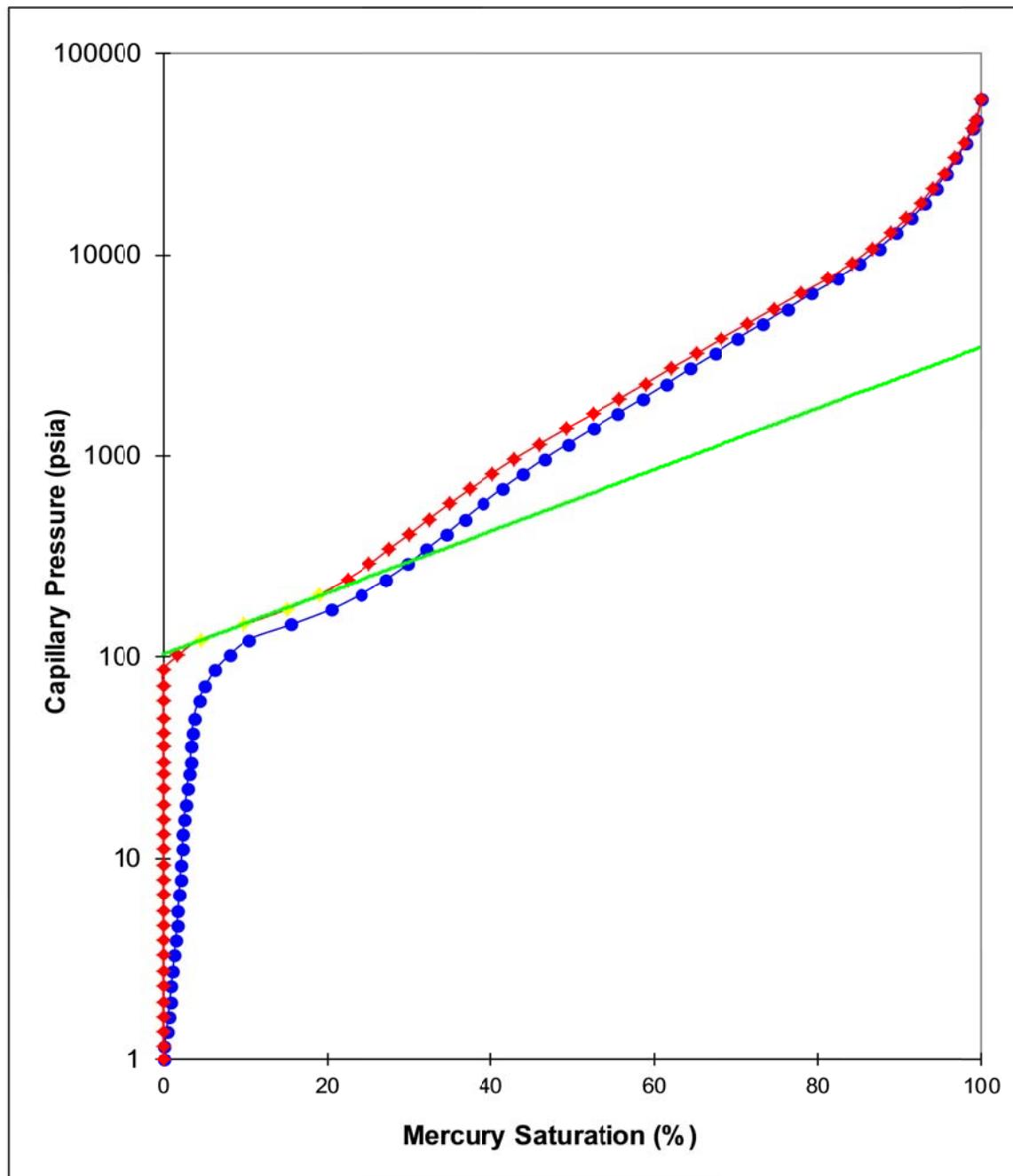
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R65  
2959.19 m      **Ambient Permeability** 0.13 mD  
                 **Ambient Porosity** 8.4 %



## PORE SIZE DISTRIBUTION

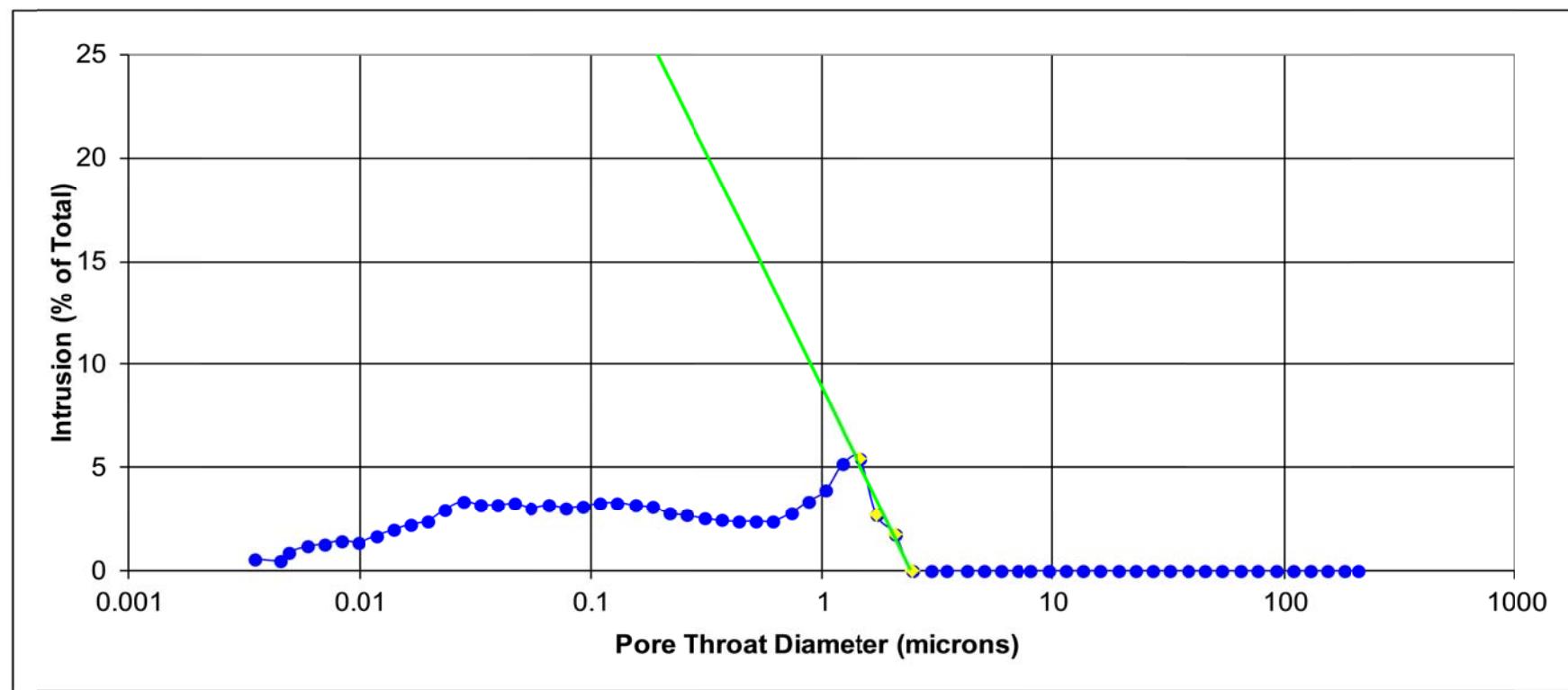


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R65  
2959.19 m

**Ambient Permeability** 0.13 mD  
**Ambient Porosity** 8.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R68  
**Depth** 2959.90 m  
**Ambient Permeability** 0.28 mD  
**Ambient Porosity** 10.4 %  
**Pore radius** 1.79  $\mu\text{m}$

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
<b>A-Hg</b>		59.5	-	69.0	-	97.2
<b>G-W</b>		11.7	8.10	13.6	9.42	19.2
<b>O-W</b>		6.80	4.21	7.89	4.88	11.1
						6.87

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter ( $\mu\text{m}$ )	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.3	0.8	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.3	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.5	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.3	1.8	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	2.0	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.2	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.4	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.6	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.8	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	3.0	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	3.3	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	3.6	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.4	4.0	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.4	4.4	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.5	4.8	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	5.4	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.4	5.8	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.7	0.2	6.0	0.0	0.0	5.94	7.00	4.86	4.09	2.53	7.01	4.36
41.8	0.3	6.2	0.0	0.0	5.07	8.20	5.69	4.78	2.96	8.20	5.10
49.8	0.4	6.7	0.0	0.0	4.26	9.77	6.78	5.70	3.53	9.78	6.08
60.8	1.1	7.8	0.0	0.0	3.49	11.9	8.26	6.96	4.31	11.9	7.40
71.3	1.6	9.4	1.8	1.8	2.97	14.0	9.72	8.16	5.05	14.0	8.71
86.0	4.0	13.3	4.3	6.1	2.46	16.9	11.7	9.84	6.09	16.9	10.5
101	4.1	17.4	4.4	10.5	2.09	19.8	13.8	11.6	7.18	19.9	12.4
122	5.6	23.0	6.0	16.5	1.74	23.9	16.6	14.0	8.67	24.0	14.9
144	5.1	28.1	5.6	22.0	1.47	28.3	19.7	16.5	10.2	28.3	17.7
172	4.4	32.5	4.8	26.8	1.23	33.7	23.4	19.7	12.2	33.8	21.0
205	3.3	35.8	3.6	30.4	1.04	40.2	27.9	23.5	14.5	40.2	25.0
243	3.1	38.9	3.4	33.8	0.872	47.7	33.1	27.8	17.2	47.7	29.7
289	2.6	41.5	2.8	36.5	0.735	56.7	39.4	33.1	20.5	56.8	35.3
344	2.3	43.8	2.5	39.0	0.616	67.5	46.9	39.4	24.4	67.6	42.0
407	2.4	46.1	2.6	41.6	0.521	79.8	55.4	46.6	28.8	79.8	49.7
486	2.5	48.6	2.7	44.3	0.436	95.3	66.2	55.6	34.4	95.3	59.3
577	2.5	51.1	2.8	47.0	0.367	113	78.5	66.0	40.9	113	70.4
685	2.6	53.7	2.8	49.8	0.310	134	93.1	78.4	48.5	134	83.5
813	2.7	56.4	2.9	52.7	0.261	159	110	93.0	57.6	160	98.6
967	2.6	59.0	2.8	55.5	0.219	190	132	111	68.7	190	118
1149	2.6	61.6	2.8	58.4	0.185	225	156	131	81.1	225	140
1364	2.5	64.1	2.7	61.1	0.155	268	186	156	96.6	268	167
1621	2.4	66.5	2.6	63.7	0.131	318	221	186	115	319	198
1927	2.3	68.9	2.5	66.3	0.110	378	263	221	137	380	236
2287	2.2	71.1	2.4	68.7	0.0927	449	312	262	162	449	280
2718	2.2	73.3	2.4	71.1	0.0780	533	370	311	193	535	332
3226	2.3	75.6	2.5	73.6	0.0657	633	440	369	228	632	394
3831	2.2	77.8	2.4	75.9	0.0553	752	522	438	271	751	468
4548	2.3	80.1	2.5	78.4	0.0466	892	619	520	322	892	555
5402	2.3	82.4	2.5	80.9	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.4	84.7	2.6	83.4	0.0330	1259	874	734	454	1258	784
7622	2.4	87.1	2.6	86.1	0.0278	1495	1038	872	540	1496	931
9052	2.1	89.2	2.3	88.3	0.0234	1776	1233	1036	641	1776	1105
10750	1.7	91.0	1.9	90.2	0.0197	2109	1465	1230	761	2109	1313
12767	1.5	92.5	1.6	91.8	0.0166	2505	1740	1461	904	2505	1560
15162	1.3	93.7	1.4	93.2	0.0140	2975	2066	1735	1074	2976	1852
17990	1.0	94.7	1.1	94.3	0.0118	3529	2451	2059	1275	3533	2197
21381	1.0	95.7	1.0	95.3	0.0099	4195	2913	2447	1515	4198	2611
25398	1.0	96.7	1.0	96.4	0.0083	4983	3460	2907	1800	4988	3102
30162	0.8	97.4	0.8	97.2	0.0070	5917	4109	3452	2137	5921	3684
35819	0.9	98.3	1.0	98.2	0.0059	7027	4880	4099	2537	7030	4375
42526	0.7	99.0	0.8	98.9	0.0050	8343	5794	4867	3013	8349	5194
46879	0.4	99.4	0.4	99.3	0.0045	9197	6387	5365	3321	9202	5726
59955	0.6	100.0	0.7	100.0	0.0035	11762	8168	6861	4247	11768	7322

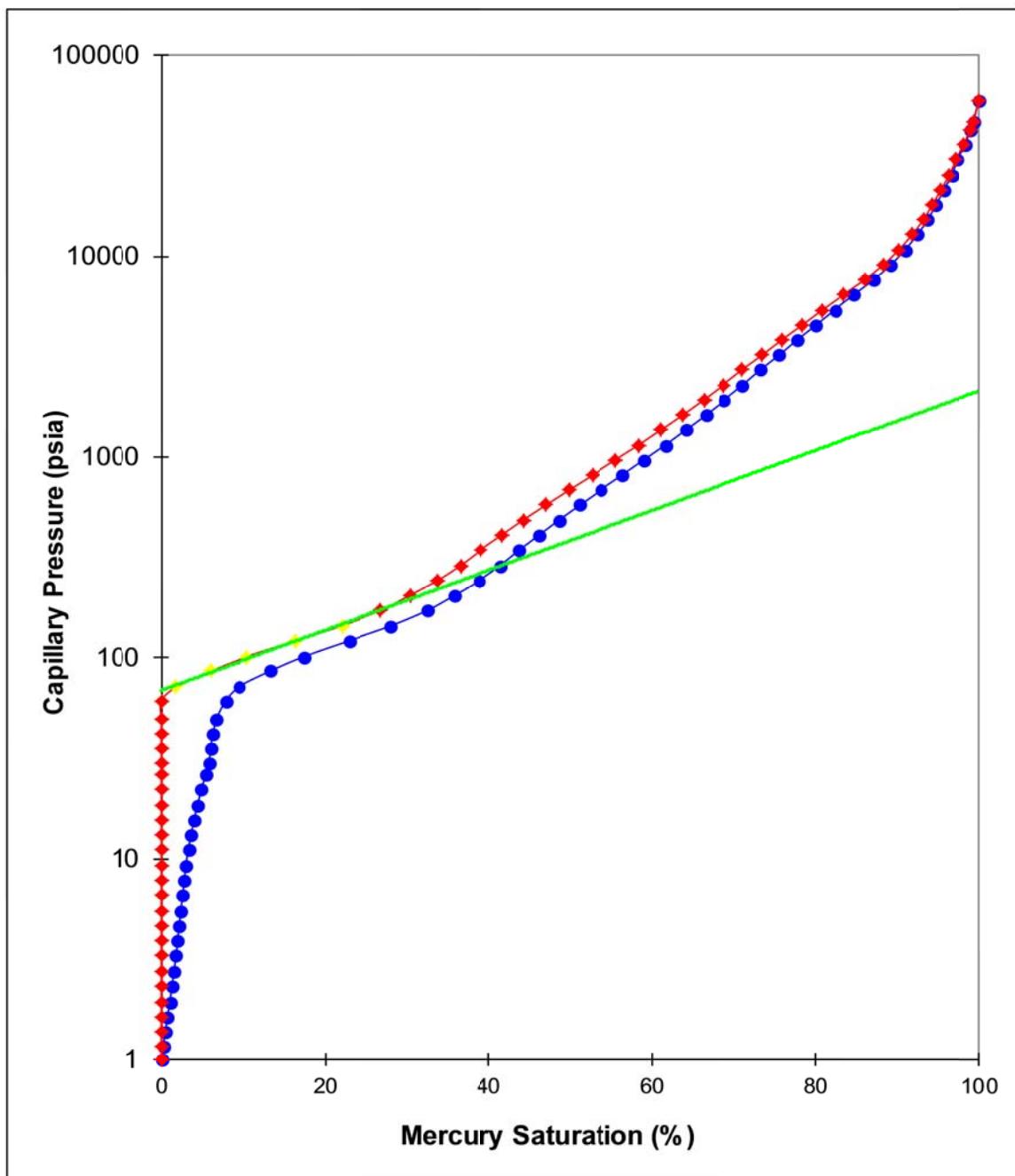
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R68  
2959.90 m      **Ambient Permeability** 0.28 mD  
                 **Ambient Porosity** 10.4 %



## PORE SIZE DISTRIBUTION

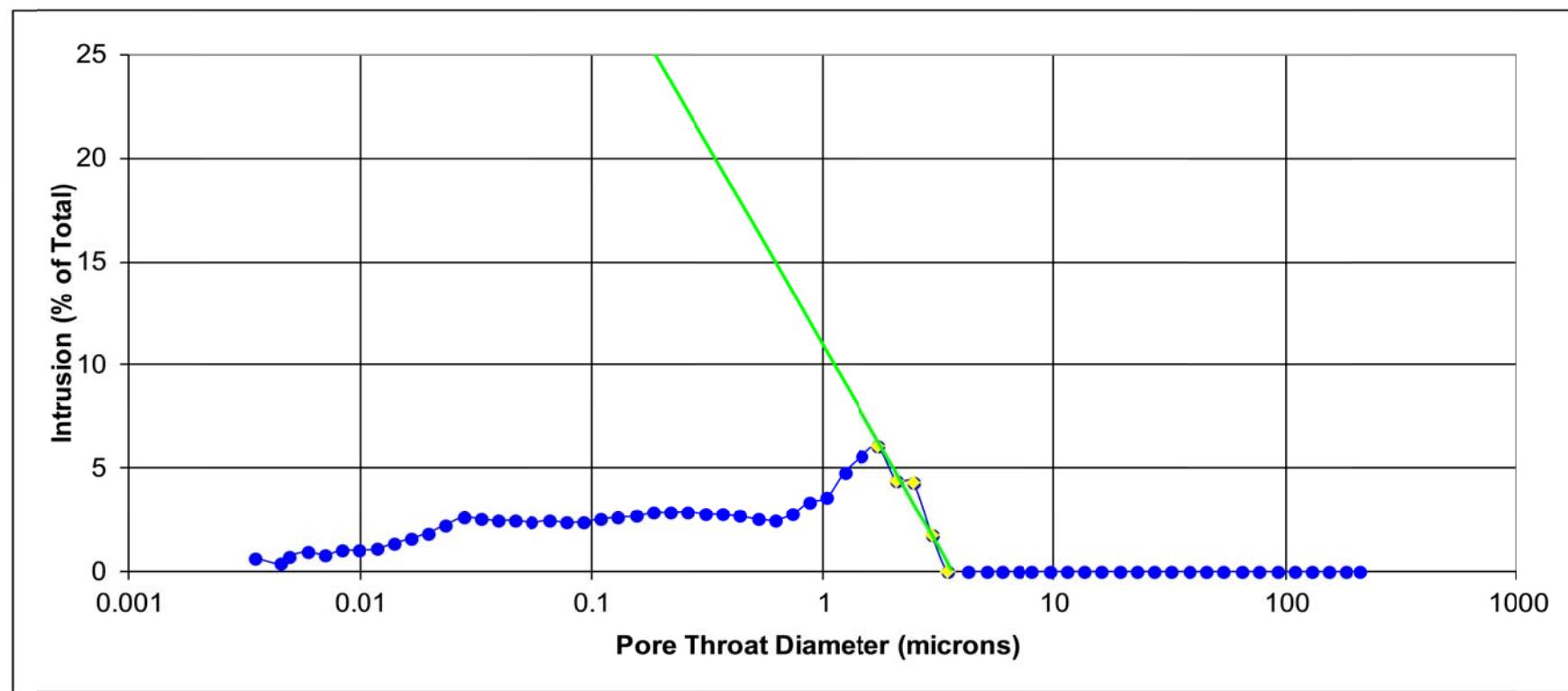


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R68  
2959.90 m

**Ambient Permeability** 0.28 mD  
**Ambient Porosity** 10.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R77  
**Depth** 2962.91 m  
**Ambient Permeability** 0.19 mD  
**Ambient Porosity** 9.3 %  
**Pore radius** 1.83 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		58.2	-	68.3	-	109
G-W		11.4	7.92	13.4	9.31	21.4
O-W		6.66	4.12	7.82	4.84	12.5
						7.74

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	0.9	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.2	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.4	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.5	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.7	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.9	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.4	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.6	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.7	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	2.9	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	3.1	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

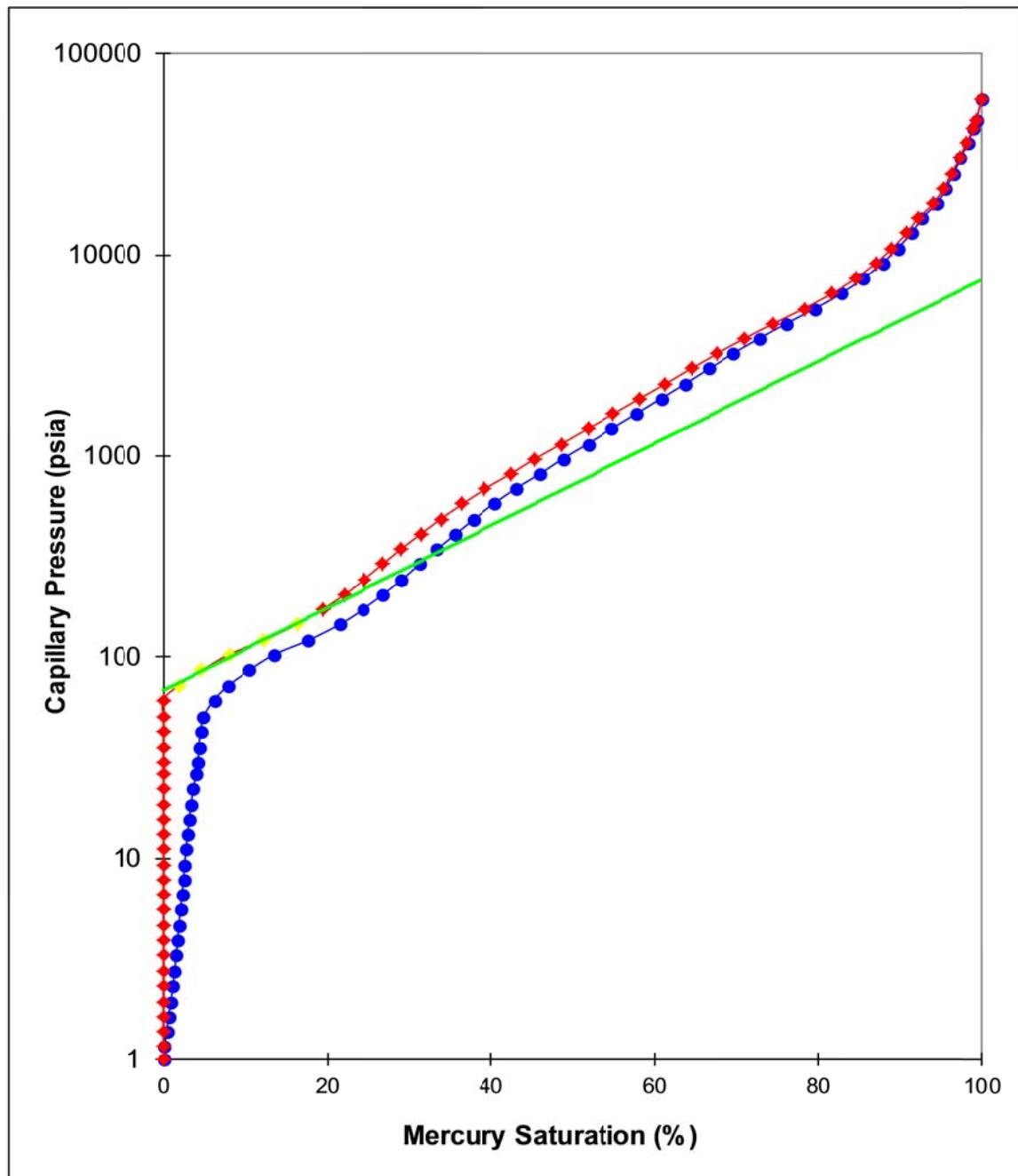
Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	3.4	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	3.6	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	4.0	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	4.2	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.3	0.0	4.3	0.0	0.0	6.01	6.93	4.81	4.04	2.50	6.93	4.31
42.3	0.2	4.5	0.0	0.0	5.01	8.30	5.76	4.84	3.00	8.31	5.16
50.6	0.4	4.9	0.0	0.0	4.19	9.93	6.90	5.79	3.58	9.92	6.19
61.4	1.3	6.1	0.0	0.0	3.45	12.0	8.33	7.03	4.35	12.1	7.47
72.6	1.8	7.9	1.9	1.9	2.92	14.2	9.86	8.31	5.14	14.2	8.84
86.0	2.6	10.5	2.7	4.6	2.47	16.9	11.7	9.84	6.09	16.9	10.5
103	3.1	13.6	3.3	8.0	2.06	20.2	14.0	11.8	7.30	20.2	12.6
121	4.0	17.6	4.3	12.2	1.75	23.7	16.5	13.8	8.54	23.7	14.8
145	3.8	21.4	4.1	16.3	1.46	28.4	19.7	16.6	10.3	28.5	17.7
173	2.9	24.4	3.1	19.4	1.23	33.9	23.5	19.8	12.3	34.1	21.1
205	2.5	26.9	2.7	22.1	1.03	40.2	27.9	23.5	14.5	40.2	25.0
242	2.3	29.1	2.4	24.5	0.875	47.5	33.0	27.7	17.1	47.4	29.6
289	2.2	31.3	2.3	26.8	0.733	56.7	39.4	33.1	20.5	56.8	35.3
344	2.1	33.4	2.2	29.0	0.617	67.5	46.9	39.4	24.4	67.6	42.0
408	2.2	35.6	2.4	31.4	0.520	80.0	55.6	46.7	28.9	80.1	49.8
485	2.3	37.9	2.4	33.8	0.437	95.1	66.0	55.5	34.4	95.3	59.2
577	2.5	40.4	2.6	36.5	0.367	113	78.5	66.0	40.9	113	70.4
686	2.7	43.0	2.8	39.3	0.309	135	93.8	78.5	48.6	135	84.1
814	3.0	46.0	3.1	42.4	0.260	160	111	93.2	57.7	160	99.5
968	2.8	48.8	3.0	45.4	0.219	190	132	111	68.7	190	118
1149	3.0	51.8	3.2	48.6	0.184	225	156	131	81.1	225	140
1365	3.0	54.8	3.2	51.8	0.155	268	186	156	96.6	268	167
1620	3.0	57.8	3.2	55.0	0.131	318	221	185	115	319	198
1926	3.0	60.8	3.2	58.2	0.110	378	263	220	136	377	236
2287	3.0	63.7	3.2	61.3	0.0927	449	312	262	162	449	280
2716	2.9	66.6	3.1	64.4	0.0781	533	370	311	193	535	332
3227	3.0	69.6	3.2	67.6	0.0657	633	440	369	228	632	394
3831	3.2	72.8	3.4	71.0	0.0553	752	522	438	271	751	468
4549	3.3	76.1	3.6	74.6	0.0466	892	619	521	323	895	555
5403	3.5	79.6	3.7	78.3	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	3.2	82.8	3.4	81.7	0.0330	1259	874	734	454	1258	784
7622	2.8	85.6	2.9	84.6	0.0278	1495	1038	872	540	1496	931
9051	2.3	87.9	2.4	87.1	0.0234	1776	1233	1036	641	1776	1105
10750	1.8	89.7	2.0	89.0	0.0197	2109	1465	1230	761	2109	1313
12767	1.7	91.4	1.8	90.8	0.0166	2505	1740	1461	904	2505	1560
15157	1.3	92.7	1.4	92.2	0.0140	2974	2065	1735	1074	2976	1851
18007	1.8	94.5	1.9	94.1	0.0118	3533	2453	2061	1276	3536	2199
21373	1.1	95.6	1.2	95.3	0.0099	4193	2912	2446	1514	4195	2611
25394	0.9	96.5	1.0	96.3	0.0083	4982	3460	2906	1799	4985	3102
30159	1.0	97.4	1.0	97.3	0.0070	5917	4109	3451	2136	5919	3684
35816	0.9	98.3	0.9	98.2	0.0059	7027	4880	4099	2537	7030	4375
42523	0.7	99.0	0.8	99.0	0.0050	8342	5793	4866	3012	8346	5193
46874	0.3	99.4	0.4	99.3	0.0045	9196	6386	5364	3321	9202	5725
59947	0.6	100.0	0.7	100.0	0.0035	11761	8167	6860	4247	11768	7321

## CAPILLARY PRESSURE



<b>Client</b>	QGC - A BG Group Business
<b>Well</b>	Magnetic-1
<b>Test Method</b>	Air/Mercury Capillary Pressure Drainage
<b>Sample Depth</b>	R77 2962.91 m
	<b>Ambient Permeability</b> 0.19 mD
	<b>Ambient Porosity</b> 9.3 %



## PORE SIZE DISTRIBUTION

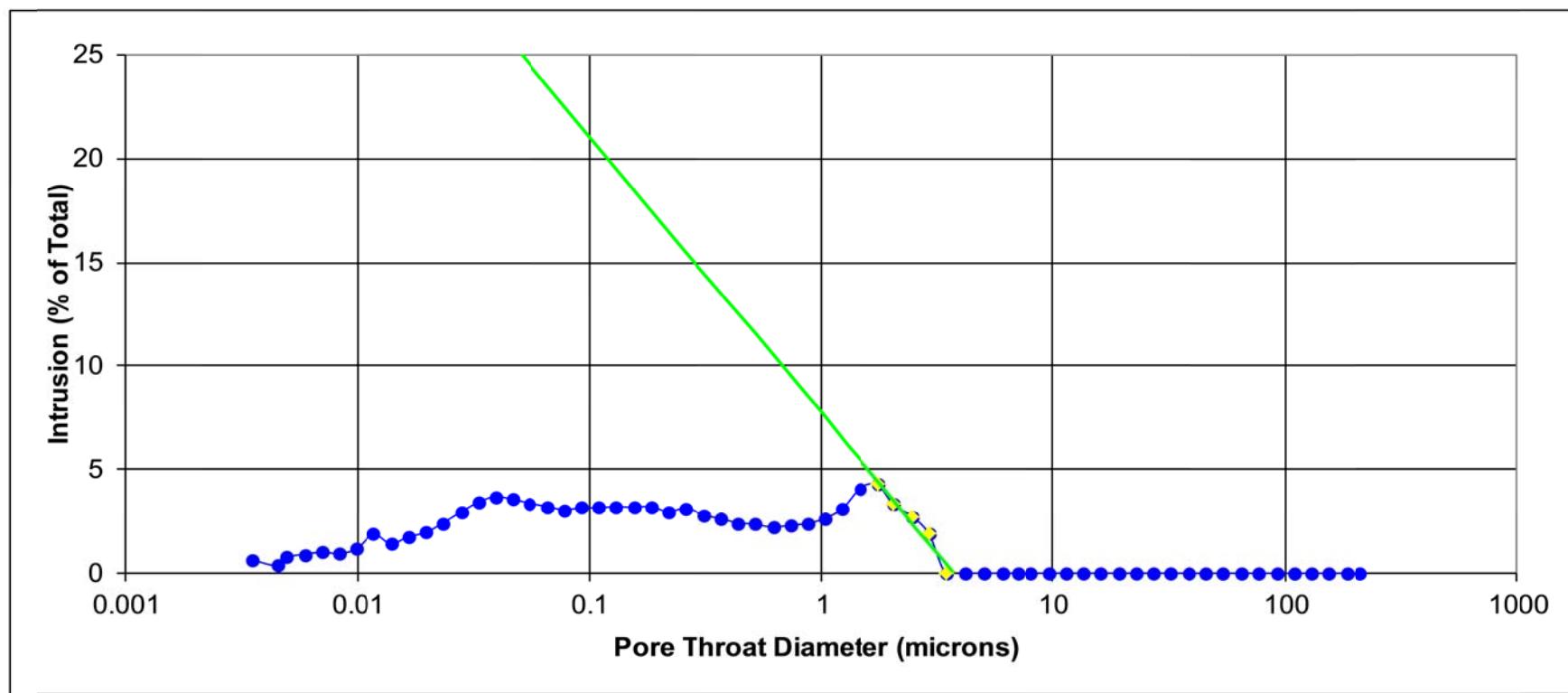


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R77  
2962.91 m

**Ambient Permeability** 0.19 mD  
**Ambient Porosity** 9.3 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R80  
**Depth** 2963.92 m  
**Ambient Permeability** 0.25 mD  
**Ambient Porosity** 9.4 %  
**Pore radius** 1.29 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		82.5	-	96.9	-	136
G-W		16.2	11.2	19.0	13.1	26.7
O-W		9.44	5.84	11.1	6.87	15.6
						9.66

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.7	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.2	0.9	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.1	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.3	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.5	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.6	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.8	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.0	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	2.1	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.2	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.3	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	2.6	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.8	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	3.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	3.2	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	3.8	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.4	4.2	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.7	0.4	4.6	0.0	0.0	5.94	7.00	4.86	4.09	2.53	7.01	4.36
43.3	0.6	5.2	0.0	0.0	4.90	8.49	5.90	4.96	3.07	8.51	5.29
49.0	0.3	5.4	0.0	0.0	4.32	9.61	6.67	5.61	3.47	9.62	5.98
60.2	0.8	6.2	0.0	0.0	3.52	11.8	8.19	6.89	4.27	11.8	7.34
72.1	0.9	7.2	0.0	0.0	2.94	14.1	9.79	8.25	5.11	14.2	8.78
86.5	1.4	8.6	0.0	0.0	2.45	17.0	11.8	9.90	6.13	17.0	10.6
102	2.4	10.9	2.6	2.6	2.07	20.0	13.9	11.7	7.24	20.1	12.5
122	3.4	14.3	3.7	6.3	1.73	23.9	16.6	14.0	8.67	24.0	14.9
145	4.6	19.0	5.1	11.3	1.46	28.4	19.7	16.6	10.3	28.5	17.7
172	5.5	24.4	6.0	17.3	1.23	33.7	23.4	19.7	12.2	33.8	21.0
205	4.9	29.3	5.4	22.7	1.03	40.2	27.9	23.5	14.5	40.2	25.0
244	3.8	33.2	4.2	26.9	0.870	47.9	33.3	27.9	17.3	47.9	29.9
289	3.7	36.9	4.1	31.0	0.733	56.7	39.4	33.1	20.5	56.8	35.3
343	2.8	39.7	3.0	34.0	0.619	67.3	46.7	39.3	24.3	67.3	41.9
411	2.5	42.2	2.7	36.7	0.516	80.6	56.0	47.0	29.1	80.6	50.2
485	2.5	44.6	2.7	39.4	0.437	95.1	66.0	55.5	34.4	95.3	59.2
578	2.6	47.2	2.8	42.3	0.367	113	78.5	66.1	40.9	113	70.4
685	2.5	49.7	2.7	45.0	0.309	134	93.1	78.4	48.5	134	83.5
814	2.5	52.3	2.8	47.8	0.260	160	111	93.2	57.7	160	99.5
966	2.4	54.7	2.6	50.4	0.219	190	132	111	68.7	190	118
1150	2.4	57.1	2.6	53.1	0.184	226	157	132	81.7	226	141
1365	2.4	59.5	2.7	55.7	0.155	268	186	156	96.6	268	167
1621	2.4	61.9	2.6	58.3	0.131	318	221	186	115	319	198
1926	2.4	64.3	2.6	60.9	0.110	378	263	220	136	377	236
2288	2.4	66.7	2.7	63.6	0.0926	449	312	262	162	449	280
2715	2.4	69.1	2.6	66.2	0.0781	533	370	311	193	535	332
3226	2.4	71.5	2.6	68.8	0.0657	633	440	369	228	632	394
3832	2.4	73.9	2.7	71.4	0.0553	752	522	439	272	754	468
4549	2.6	76.5	2.8	74.2	0.0466	892	619	521	323	895	555
5403	2.8	79.3	3.1	77.3	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	3.0	82.3	3.3	80.6	0.0330	1259	874	734	454	1258	784
7621	2.7	85.0	3.0	83.6	0.0278	1495	1038	872	540	1496	931
9052	2.3	87.4	2.5	86.2	0.0234	1776	1233	1036	641	1776	1105
10751	2.1	89.4	2.3	88.4	0.0197	2109	1465	1230	761	2109	1313
12767	1.9	91.3	2.1	90.5	0.0166	2505	1740	1461	904	2505	1560
15162	1.6	92.9	1.8	92.3	0.0140	2975	2066	1735	1074	2976	1852
18005	1.4	94.3	1.5	93.8	0.0118	3532	2453	2061	1276	3536	2199
21375	1.1	95.4	1.2	94.9	0.0099	4193	2912	2446	1514	4195	2611
25394	1.2	96.5	1.3	96.2	0.0083	4982	3460	2906	1799	4985	3102
30159	1.0	97.5	1.0	97.2	0.0070	5917	4109	3451	2136	5919	3684
35817	0.9	98.3	0.9	98.2	0.0059	7027	4880	4099	2537	7030	4375
42525	0.7	99.1	0.8	99.0	0.0050	8343	5794	4867	3013	8349	5194
46876	0.4	99.4	0.4	99.4	0.0045	9196	6386	5365	3321	9202	5725
59958	0.6	100.0	0.6	100.0	0.0035	11763	8169	6862	4248	11771	7323

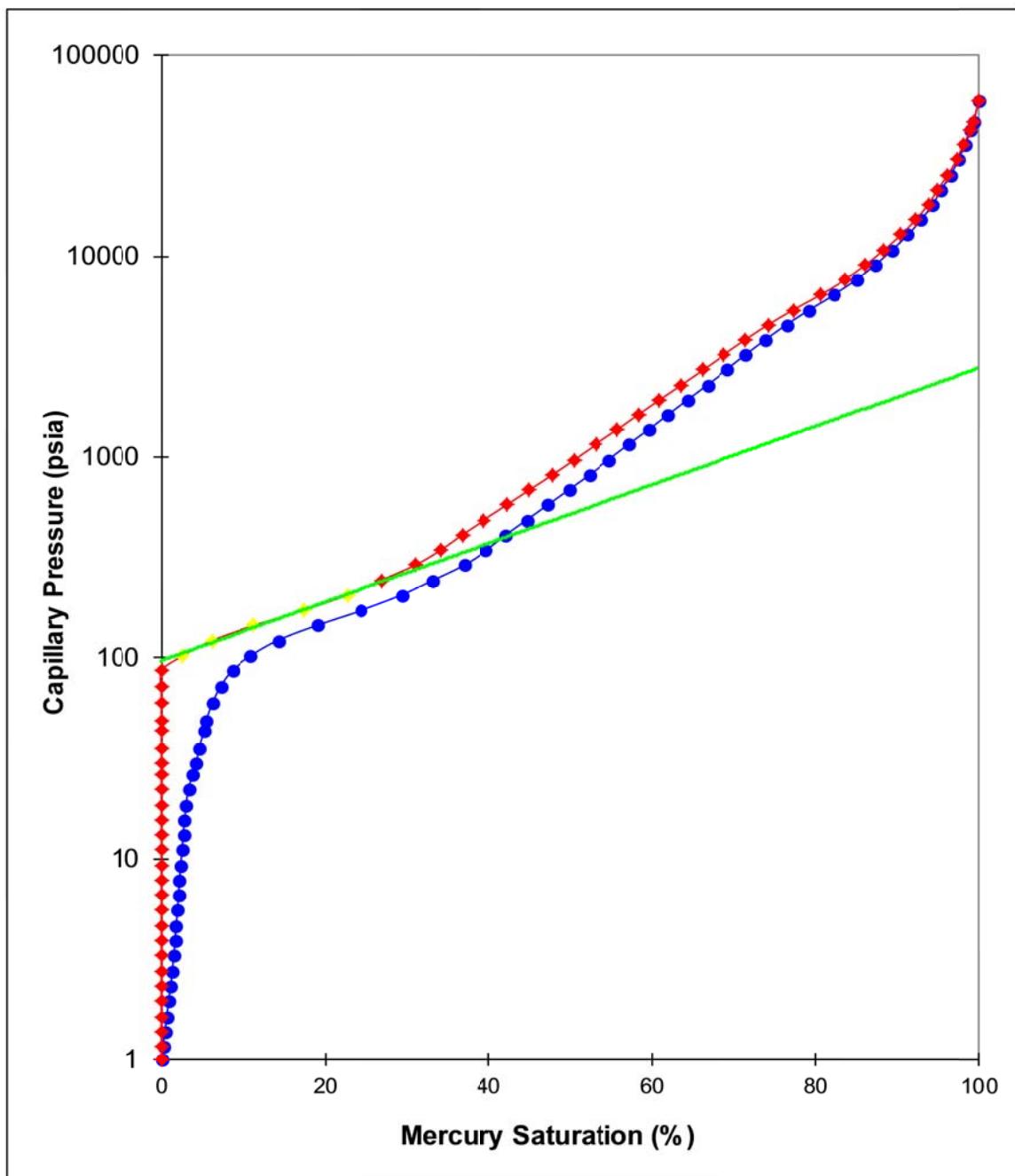
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R80  
2963.92 m      **Ambient Permeability** 0.25 mD  
                 **Ambient Porosity** 9.4 %



## PORE SIZE DISTRIBUTION

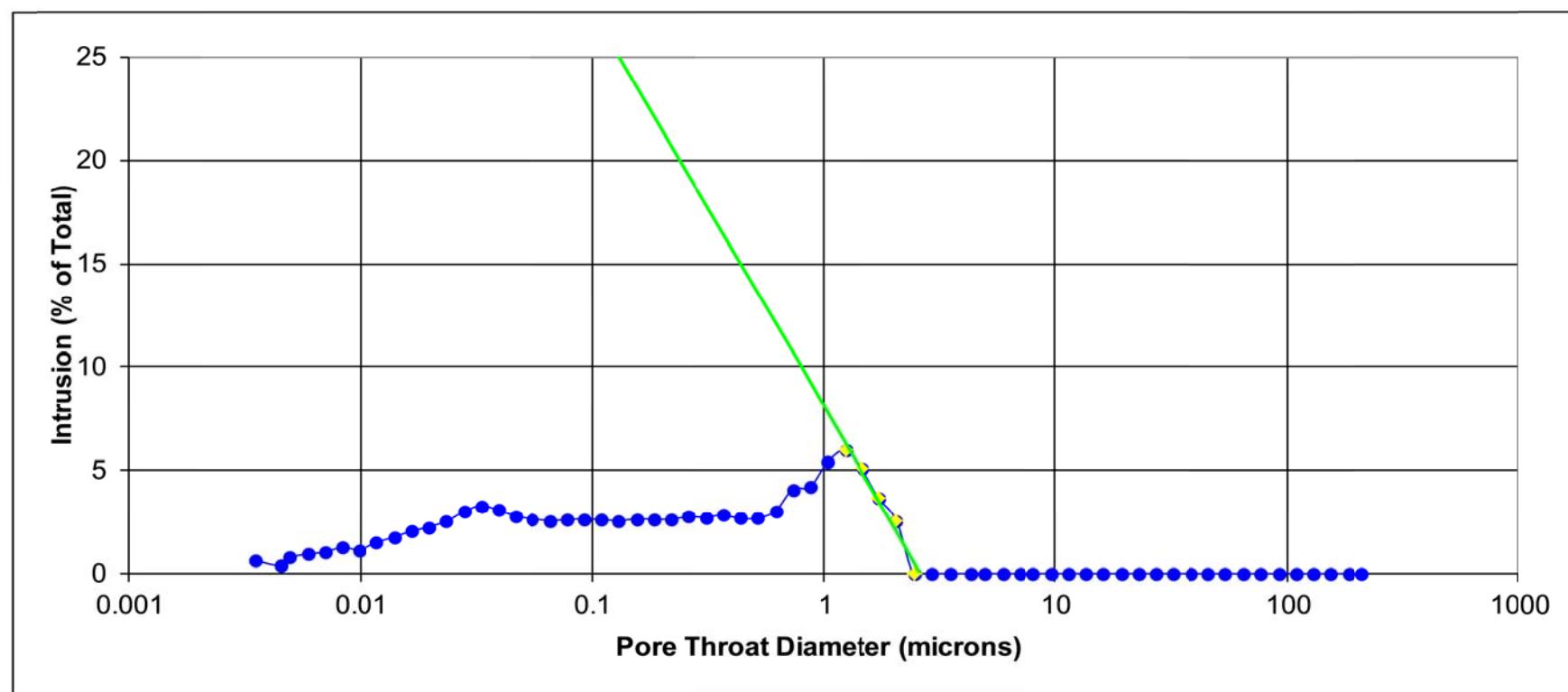


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R80  
2963.92 m

**Ambient Permeability** 0.25 mD  
**Ambient Porosity** 9.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R86  
**Depth** 2965.90 m  
**Ambient Permeability** 0.25 mD  
**Ambient Porosity** 6.8 %  
**Pore radius** 1.24 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		85.8	-	99.8	-	191
G-W		16.8	11.7	19.5	13.6	37.3
O-W		9.82	6.08	11.4	7.06	21.8
						13.5

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.6	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.2	0.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.0	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.2	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.3	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.5	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.6	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	1.8	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.9	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.1	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	2.2	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.4	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	2.6	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.8	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	3.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	3.2	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	3.5	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	3.8	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.7	0.2	4.0	0.0	0.0	5.94	7.00	4.86	4.09	2.53	7.01	4.36
43.4	0.0	4.1	0.0	0.0	4.89	8.51	5.91	4.97	3.08	8.53	5.30
49.1	0.2	4.3	0.0	0.0	4.32	9.63	6.69	5.62	3.48	9.64	6.00
60.2	0.4	4.7	0.0	0.0	3.52	11.8	8.19	6.89	4.27	11.8	7.34
72.1	0.6	5.3	0.0	0.0	2.94	14.1	9.79	8.25	5.11	14.2	8.78
86.6	1.0	6.4	0.0	0.0	2.45	17.0	11.8	9.91	6.13	17.0	10.6
102	1.4	7.8	1.5	1.5	2.07	20.0	13.9	11.7	7.24	20.1	12.5
123	1.5	9.3	1.6	3.1	1.73	24.1	16.7	14.1	8.73	24.2	15.0
145	2.6	11.9	2.8	5.9	1.46	28.4	19.7	16.6	10.3	28.5	17.7
173	2.4	14.3	2.6	8.5	1.23	33.9	23.5	19.8	12.3	34.1	21.1
206	2.4	16.7	2.6	11.1	1.03	40.4	28.1	23.6	14.6	40.5	25.2
244	2.3	19.0	2.4	13.5	0.868	47.9	33.3	27.9	17.3	47.9	29.9
290	2.1	21.1	2.2	15.7	0.731	56.9	39.5	33.2	20.6	57.1	35.4
343	1.6	22.7	1.7	17.4	0.618	67.3	46.7	39.3	24.3	67.3	41.9
411	1.7	24.4	1.8	19.2	0.516	80.6	56.0	47.0	29.1	80.6	50.2
485	1.8	26.2	1.9	21.2	0.437	95.1	66.0	55.5	34.4	95.3	59.2
578	2.0	28.2	2.2	23.3	0.367	113	78.5	66.1	40.9	113	70.4
686	2.1	30.3	2.2	25.6	0.309	135	93.8	78.5	48.6	135	84.1
815	2.2	32.5	2.3	27.9	0.260	160	111	93.3	57.8	160	99.5
967	2.3	34.8	2.5	30.4	0.219	190	132	111	68.7	190	118
1150	2.4	37.2	2.5	32.9	0.184	226	157	132	81.7	226	141
1365	2.5	39.7	2.7	35.6	0.155	268	186	156	96.6	268	167
1621	2.6	42.3	2.8	38.3	0.131	318	221	186	115	319	198
1926	2.9	45.2	3.1	41.5	0.110	378	263	220	136	377	236
2289	3.0	48.2	3.2	44.6	0.0926	449	312	262	162	449	280
2716	2.9	51.1	3.1	47.8	0.0781	533	370	311	193	535	332
3226	2.9	54.0	3.1	50.9	0.0657	633	440	369	228	632	394
3833	3.2	57.2	3.4	54.3	0.0553	752	522	439	272	754	468
4550	3.4	60.6	3.6	57.9	0.0466	893	620	521	323	895	556
5403	3.9	64.5	4.2	62.1	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6419	4.5	69.0	4.8	66.9	0.0330	1259	874	735	455	1261	784
7622	4.6	73.5	4.9	71.8	0.0278	1495	1038	872	540	1496	931
9052	4.1	77.6	4.3	76.1	0.0234	1776	1233	1036	641	1776	1105
10751	4.2	81.8	4.4	80.5	0.0197	2109	1465	1230	761	2109	1313
12767	3.6	85.3	3.8	84.4	0.0166	2505	1740	1461	904	2505	1560
15162	2.9	88.2	3.1	87.4	0.0140	2975	2066	1735	1074	2976	1852
18005	2.4	90.6	2.6	90.0	0.0118	3532	2453	2061	1276	3536	2199
21375	2.0	92.6	2.1	92.1	0.0099	4193	2912	2446	1514	4195	2611
25394	1.9	94.5	2.0	94.1	0.0083	4982	3460	2906	1799	4985	3102
30159	1.6	96.1	1.7	95.9	0.0070	5917	4109	3451	2136	5919	3684
35817	1.5	97.6	1.6	97.4	0.0059	7027	4880	4099	2537	7030	4375
42525	1.3	98.8	1.3	98.7	0.0050	8343	5794	4867	3013	8349	5194
46876	0.6	99.4	0.6	99.4	0.0045	9196	6386	5365	3321	9202	5725
59958	0.6	100.0	0.6	100.0	0.0035	11763	8169	6862	4248	11771	7323

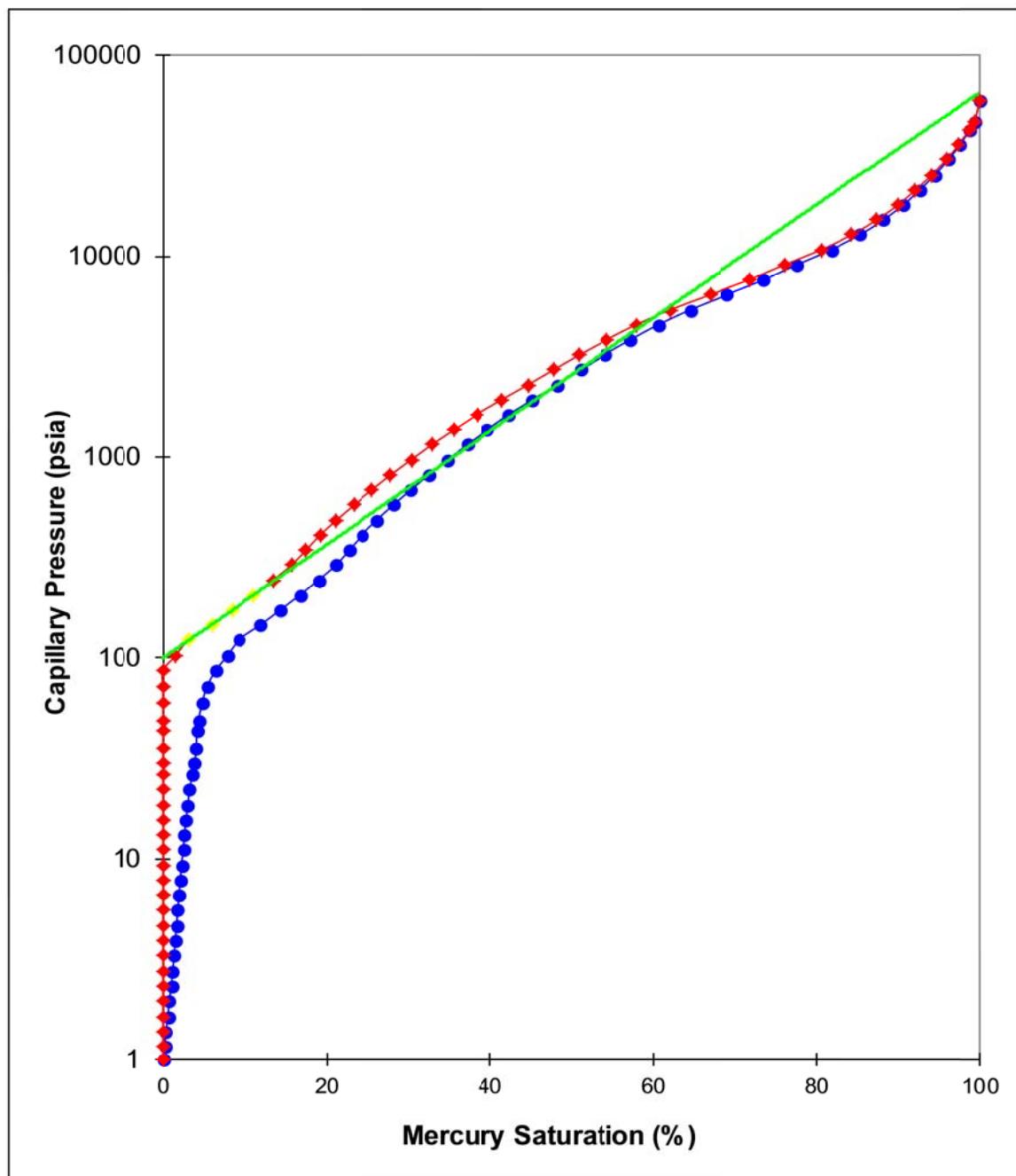
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R86  
2965.90 m      **Ambient Permeability** 0.25 mD  
                 **Ambient Porosity** 6.8 %



## PORE SIZE DISTRIBUTION

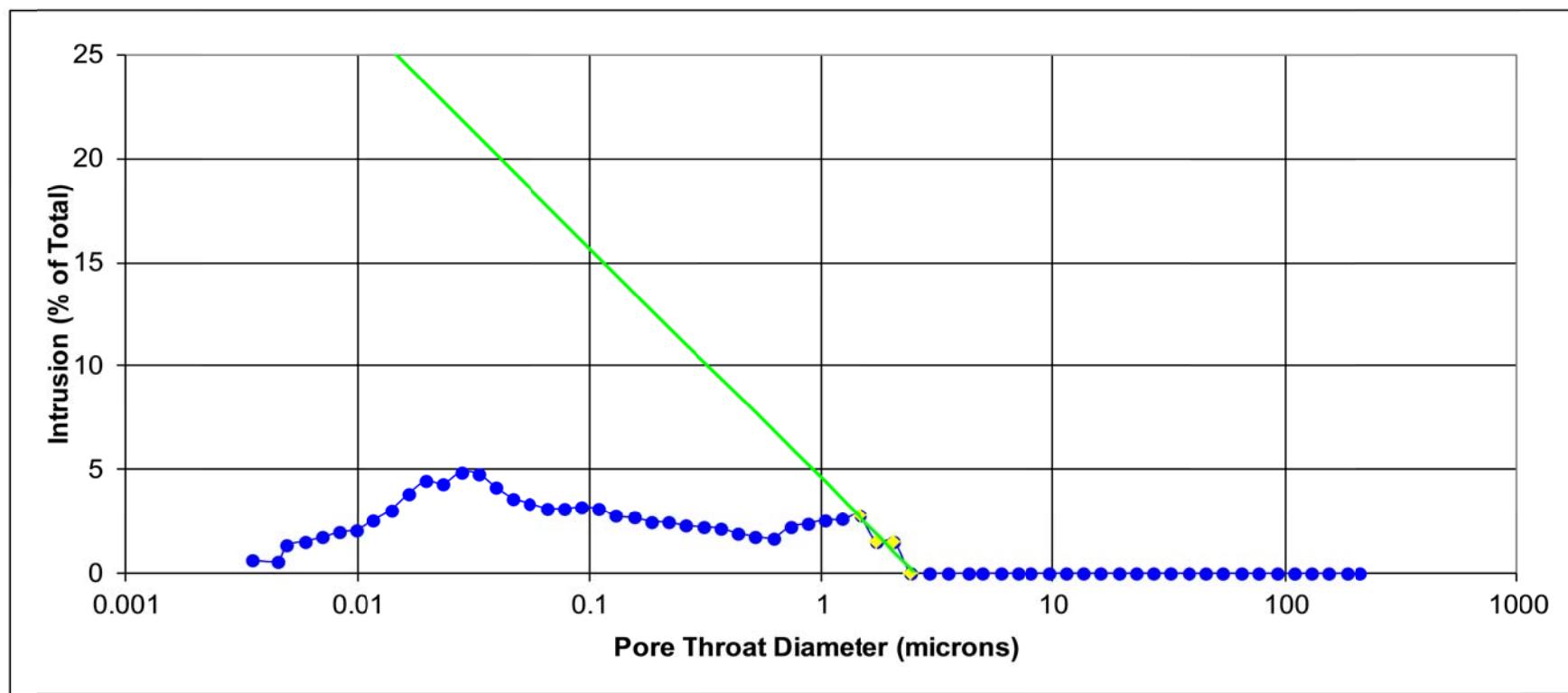


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R86  
2965.90 m

**Ambient Permeability** 0.25 mD  
**Ambient Porosity** 6.8 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R91  
**Depth** 2967.60 m  
**Ambient Permeability** 0.52 mD  
**Ambient Porosity** 7.9 %  
**Pore radius** 1.51 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		70.5	-	78.5	-	183
G-W		13.8	9.60	15.4	10.7	35.9
O-W		8.07	4.99	8.99	5.56	21.0
						13.0

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.4	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.7	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.9	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	1.1	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.3	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.5	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.6	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.8	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.9	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	2.0	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	2.2	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	2.4	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.2	2.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	2.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.2	2.9	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	3.1	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	3.4	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	3.7	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	3.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.9	0.1	4.0	0.0	0.0	5.90	7.04	4.89	4.11	2.54	7.04	4.38
42.4	0.3	4.3	0.0	0.0	4.99	8.32	5.78	4.85	3.00	8.31	5.18
50.0	0.2	4.5	0.0	0.0	4.24	9.81	6.81	5.72	3.54	9.81	6.10
60.3	0.6	5.0	0.0	0.0	3.51	11.8	8.19	6.90	4.27	11.8	7.34
72.2	1.5	6.5	0.0	0.0	2.94	14.2	9.86	8.26	5.11	14.2	8.84
86.1	1.3	7.8	1.3	1.3	2.46	16.9	11.7	9.85	6.10	16.9	10.5
102	1.4	9.1	1.5	2.8	2.07	20.0	13.9	11.7	7.24	20.1	12.5
122	2.1	11.3	2.3	5.1	1.74	23.9	16.6	14.0	8.67	24.0	14.9
145	2.1	13.4	2.3	7.3	1.46	28.4	19.7	16.6	10.3	28.5	17.7
172	2.2	15.5	2.3	9.6	1.24	33.7	23.4	19.7	12.2	33.8	21.0
205	2.1	17.6	2.2	11.9	1.03	40.2	27.9	23.5	14.5	40.2	25.0
242	1.9	19.5	2.0	13.9	0.875	47.5	33.0	27.7	17.1	47.4	29.6
290	2.0	21.5	2.2	16.1	0.732	56.9	39.5	33.2	20.6	57.1	35.4
342	1.8	23.3	1.9	18.0	0.619	67.1	46.6	39.1	24.2	67.1	41.8
408	1.8	25.1	1.9	19.9	0.519	80.0	55.6	46.7	28.9	80.1	49.8
485	1.9	27.0	2.0	21.9	0.437	95.1	66.0	55.5	34.4	95.3	59.2
577	1.9	28.9	2.0	24.0	0.367	113	78.5	66.0	40.9	113	70.4
685	2.1	31.0	2.2	26.2	0.310	134	93.1	78.4	48.5	134	83.5
814	2.2	33.2	2.4	28.6	0.260	160	111	93.2	57.7	160	99.5
967	2.3	35.5	2.5	31.1	0.219	190	132	111	68.7	190	118
1149	2.5	38.0	2.7	33.7	0.184	225	156	131	81.1	225	140
1364	3.2	41.2	3.4	37.1	0.155	268	186	156	96.6	268	167
1623	3.9	45.1	4.2	41.3	0.131	318	221	186	115	319	198
1928	4.0	49.1	4.3	45.6	0.110	378	263	221	137	380	236
2287	4.1	53.2	4.4	50.0	0.0927	449	312	262	162	449	280
2716	3.7	56.9	4.0	53.9	0.0781	533	370	311	193	535	332
3227	3.9	60.9	4.2	58.1	0.0657	633	440	369	228	632	394
3832	3.7	64.6	4.0	62.1	0.0553	752	522	439	272	754	468
4547	3.3	67.9	3.6	65.7	0.0466	892	619	520	322	892	555
5403	3.2	71.1	3.4	69.1	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	3.8	74.9	4.1	73.2	0.0330	1259	874	734	454	1258	784
7622	3.4	78.3	3.6	76.8	0.0278	1495	1038	872	540	1496	931
9053	3.3	81.6	3.5	80.3	0.0234	1776	1233	1036	641	1776	1105
10750	2.8	84.4	3.0	83.3	0.0197	2109	1465	1230	761	2109	1313
12769	2.6	87.0	2.8	86.1	0.0166	2505	1740	1461	904	2505	1560
15162	2.6	89.6	2.8	88.9	0.0140	2975	2066	1735	1074	2976	1852
18004	1.8	91.4	1.9	90.8	0.0118	3532	2453	2060	1275	3533	2199
21375	1.7	93.1	1.8	92.6	0.0099	4193	2912	2446	1514	4195	2611
25397	1.7	94.8	1.9	94.4	0.0083	4983	3460	2906	1799	4985	3102
30159	1.3	96.2	1.4	95.9	0.0070	5917	4109	3451	2136	5919	3684
35816	1.3	97.5	1.4	97.3	0.0059	7027	4880	4099	2537	7030	4375
42524	1.1	98.6	1.2	98.5	0.0050	8343	5794	4867	3013	8349	5194
46874	0.5	99.1	0.6	99.0	0.0045	9196	6386	5364	3321	9202	5725
59952	0.9	100.0	1.0	100.0	0.0035	11762	8168	6861	4247	11768	7322

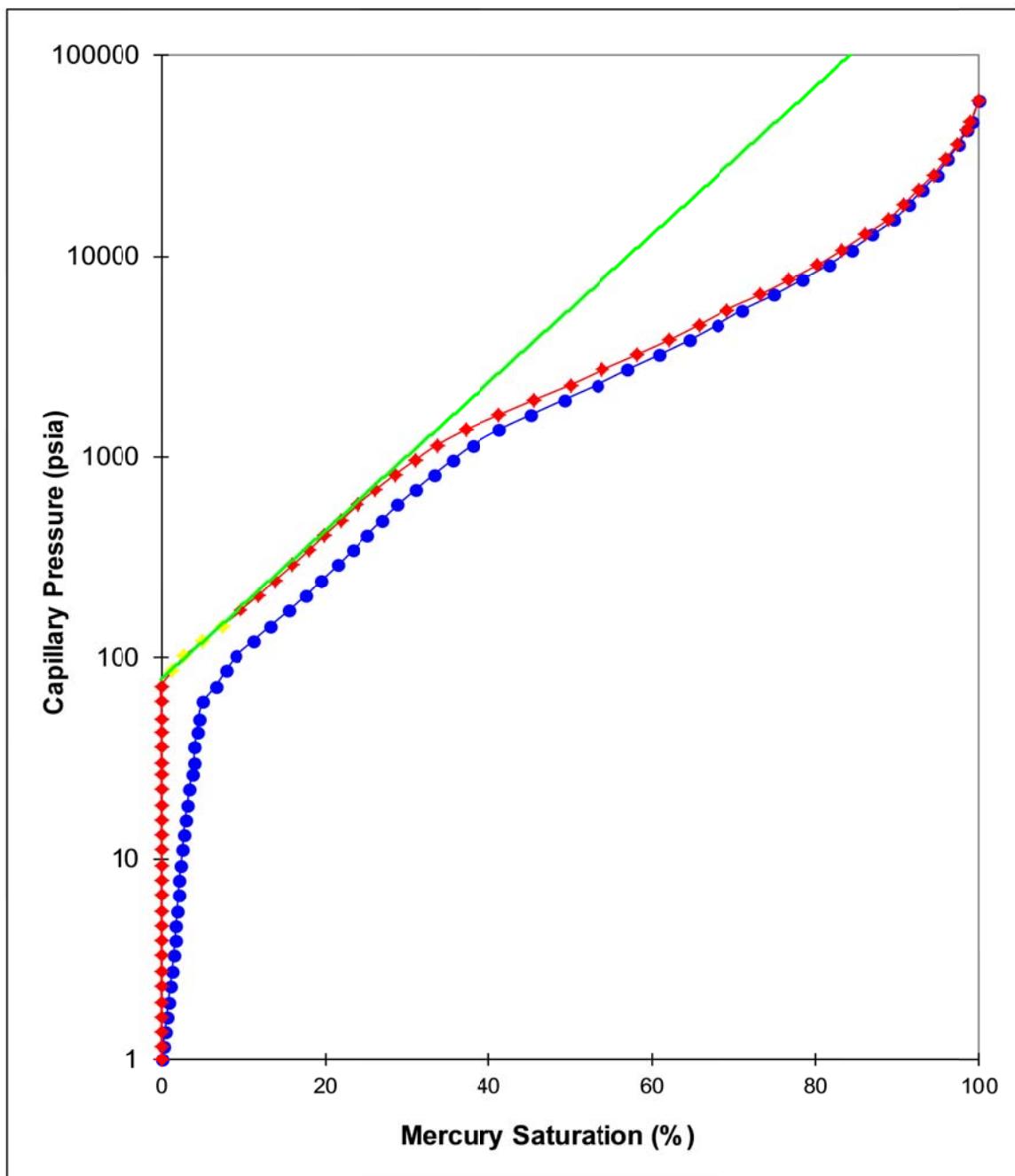
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R91  
2967.60 m      **Ambient Permeability** 0.52 mD  
                 **Ambient Porosity** 7.9 %



## PORE SIZE DISTRIBUTION

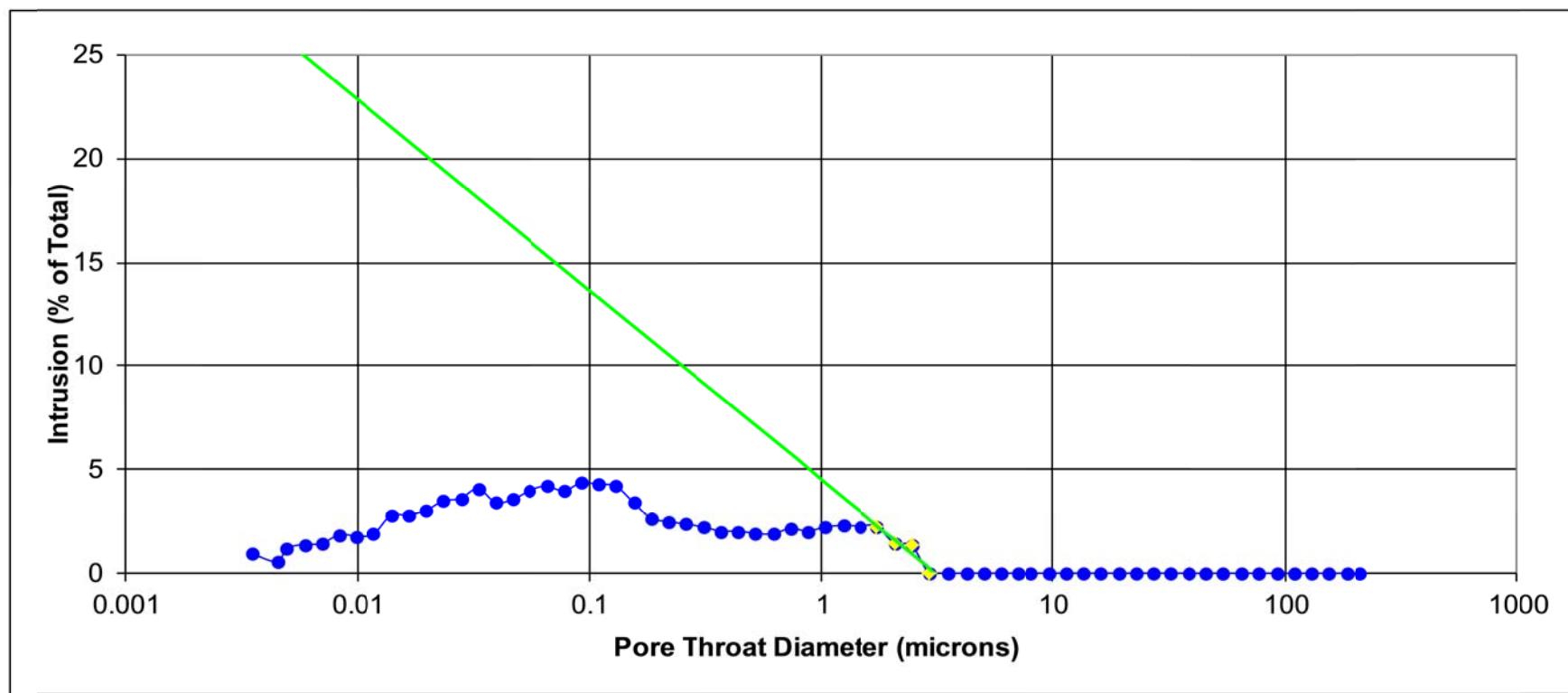


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R91  
2967.60 m

**Ambient Permeability** 0.52 mD  
**Ambient Porosity** 7.9 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R98  
**Depth** 2970.89 m  
**Ambient Permeability** 0.52 mD  
**Ambient Porosity** 6.0 %  
**Pore radius** 1.52 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System	Lab	Resv	Lab	Resv	Lab	Resv
A-Hg	70.0	-	80.7	-	149	-
G-W	13.7	9.54	15.8	11.0	29.2	20.3
O-W	8.01	4.96	9.23	5.72	17.0	10.5

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.3	0.7	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.3	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.3	1.6	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.4	2.0	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.6	2.5	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.4	2.9	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.3	3.2	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.3	3.5	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.3	3.8	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	4.1	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	4.3	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	4.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	4.9	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	5.2	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.6	5.8	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	6.3	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.4	6.7	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
33.6	0.1	6.9	0.0	0.0	6.31	6.59	4.58	3.85	2.38	6.59	4.11
40.5	0.1	7.0	0.0	0.0	5.24	7.95	5.52	4.63	2.87	7.95	4.95
49.2	0.4	7.4	0.0	0.0	4.31	9.65	6.70	5.63	3.49	9.67	6.01
59.2	0.5	7.9	0.0	0.0	3.58	11.6	8.06	6.77	4.19	11.6	7.23
72.0	1.7	9.6	0.0	0.0	2.95	14.1	9.79	8.24	5.10	14.1	8.78
83.6	1.2	10.8	1.4	1.4	2.53	16.4	11.4	9.57	5.92	16.4	10.2
99.3	1.9	12.7	2.1	3.4	2.14	19.5	13.5	11.4	7.06	19.6	12.1
120	2.6	15.4	2.9	6.3	1.77	23.5	16.3	13.7	8.48	23.5	14.6
144	2.8	18.1	3.1	9.4	1.47	28.3	19.7	16.5	10.2	28.3	17.7
170	2.5	20.6	2.7	12.1	1.25	33.4	23.2	19.5	12.1	33.5	20.8
203	2.2	22.8	2.5	14.6	1.04	39.8	27.6	23.2	14.4	39.9	24.7
241	2.3	25.1	2.6	17.2	0.881	47.3	32.8	27.6	17.1	47.4	29.4
287	2.5	27.6	2.8	19.9	0.739	56.3	39.1	32.8	20.3	56.2	35.1
342	2.6	30.2	2.9	22.8	0.619	67.1	46.6	39.1	24.2	67.1	41.8
408	2.7	33.0	3.0	25.8	0.520	80.0	55.6	46.7	28.9	80.1	49.8
484	2.9	35.8	3.2	29.0	0.438	95.0	66.0	55.4	34.3	95.0	59.2
574	2.9	38.7	3.2	32.2	0.369	113	78.5	65.7	40.7	113	70.4
682	2.9	41.6	3.2	35.4	0.311	134	93.1	78.0	48.3	134	83.5
813	3.1	44.7	3.4	38.9	0.261	159	110	93.0	57.6	160	98.6
966	2.9	47.7	3.2	42.1	0.219	190	132	111	68.7	190	118
1146	2.9	50.6	3.2	45.3	0.185	225	156	131	81.1	225	140
1362	2.8	53.4	3.1	48.5	0.156	267	185	156	96.6	268	166
1618	2.8	56.3	3.1	51.6	0.131	317	220	185	115	319	197
1921	2.8	59.0	3.1	54.6	0.110	377	262	220	136	377	235
2285	2.8	61.9	3.2	57.8	0.0928	448	311	261	162	449	279
2711	2.5	64.4	2.8	60.6	0.0782	532	369	310	192	532	331
3223	2.7	67.1	3.0	63.6	0.0658	632	439	369	228	632	394
3829	2.6	69.7	2.9	66.5	0.0554	751	522	438	271	751	468
4546	2.7	72.4	3.0	69.5	0.0466	892	619	520	322	892	555
5400	2.8	75.2	3.1	72.6	0.0393	1059	735	618	383	1061	659

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6415	3.1	78.4	3.5	76.1	0.0330	1259	874	734	454	1258	784
7620	3.4	81.8	3.8	79.8	0.0278	1495	1038	872	540	1496	931
9050	2.8	84.5	3.1	82.9	0.0234	1775	1233	1036	641	1776	1105
10748	2.6	87.1	2.9	85.8	0.0197	2109	1465	1230	761	2109	1313
12766	2.3	89.4	2.5	88.3	0.0166	2505	1740	1461	904	2505	1560
15161	1.8	91.2	2.0	90.3	0.0140	2974	2065	1735	1074	2976	1851
18006	1.8	93.0	1.9	92.2	0.0118	3533	2453	2061	1276	3536	2199
21385	1.5	94.4	1.6	93.9	0.0099	4195	2913	2447	1515	4198	2611
25397	1.5	96.0	1.7	95.5	0.0083	4983	3460	2906	1799	4985	3102
30163	1.1	97.1	1.2	96.7	0.0070	5918	4110	3452	2137	5921	3684
35820	1.0	98.1	1.1	97.9	0.0059	7027	4880	4099	2537	7030	4375
42536	1.1	99.1	1.2	99.1	0.0050	8345	5795	4868	3014	8352	5195
46882	0.4	99.6	0.5	99.5	0.0045	9198	6388	5365	3321	9202	5727
59953	0.4	100.0	0.5	100.0	0.0035	11762	8168	6861	4247	11768	7322

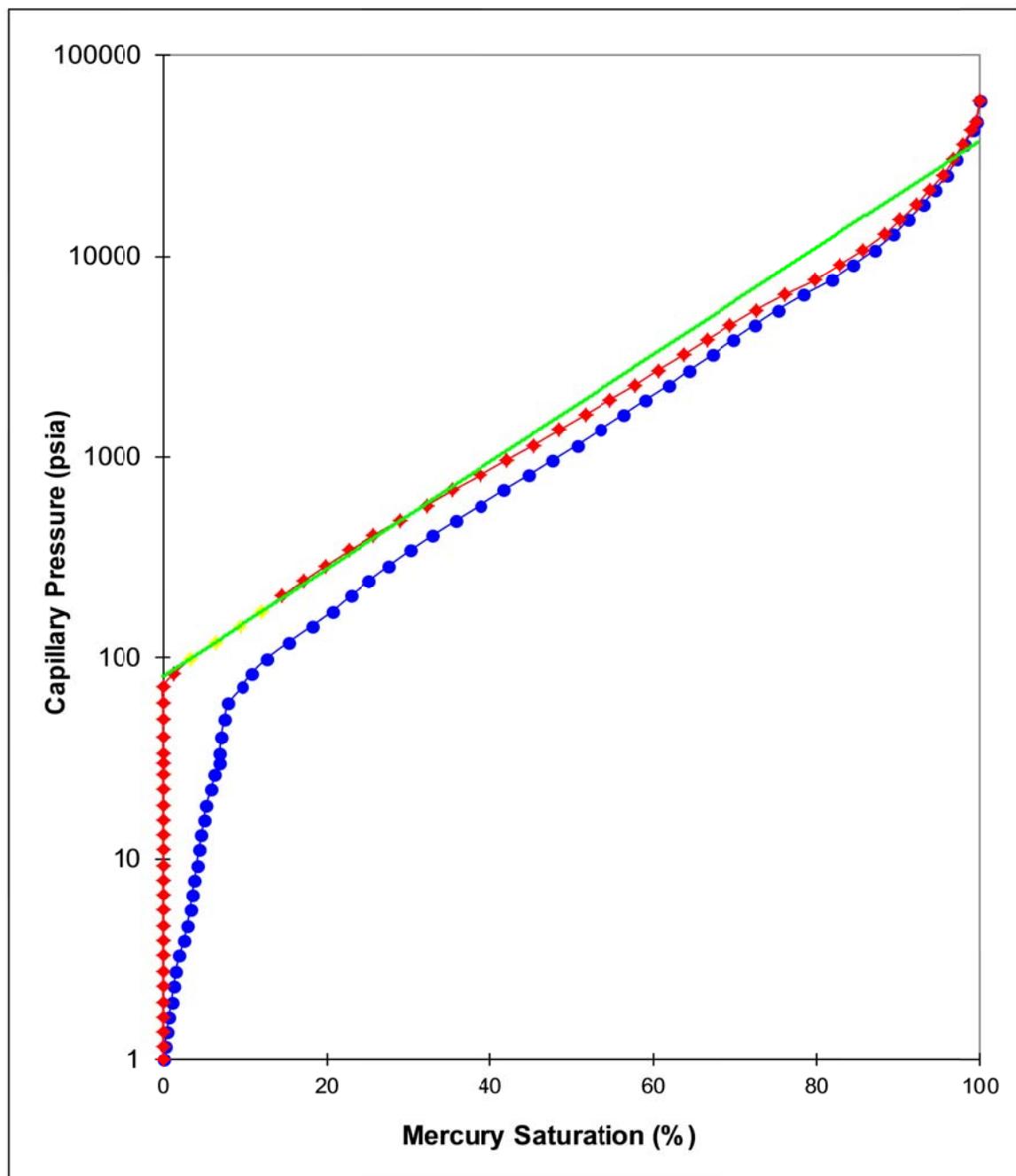
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R98  
2970.89 m      **Ambient Permeability** 0.52 mD  
                 **Ambient Porosity** 6.0 %



## PORE SIZE DISTRIBUTION

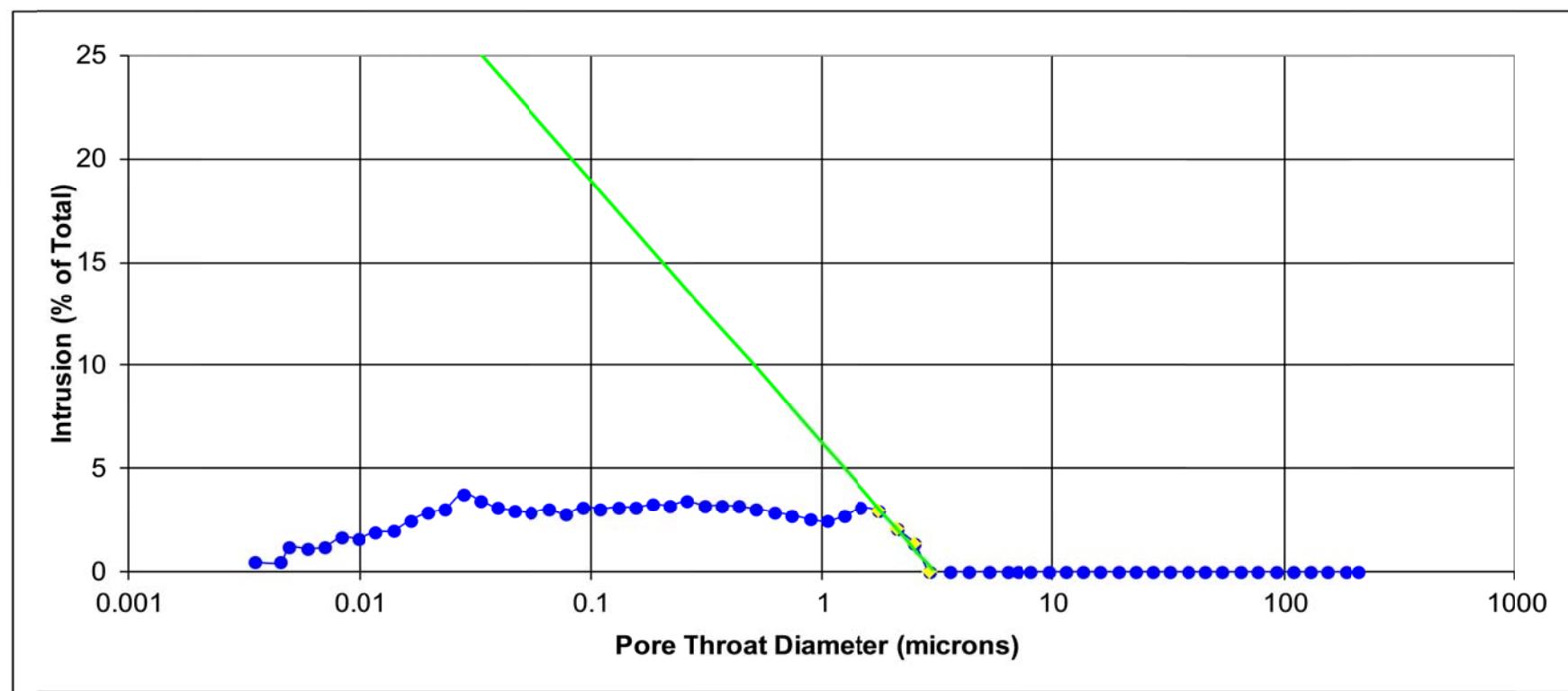


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R98  
2970.89 m

**Ambient Permeability** 0.52 mD  
**Ambient Porosity** 6.0 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R99  
**Depth** 2971.30 m  
**Ambient Permeability** 0.73 mD  
**Ambient Porosity** 8.4 %  
**Pore radius** 0.74 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		145	-	169	-	324
G-W		28.4	19.7	33.1	23.0	63.5
O-W		16.5	10.2	19.2	11.9	36.8
						44.1
						22.8

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.4	0.4	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.7	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.3	0.9	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.3	1.2	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.5	0.0	0.0	91.7	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.7	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.3	2.0	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.3	2.3	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.4	2.7	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.3	3.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	3.2	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.3	3.6	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.3	3.8	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	4.1	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.2	4.3	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	4.6	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	4.9	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	5.2	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.5	5.7	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.1	5.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.2	0.5	6.4	0.0	0.0	6.03	6.91	4.80	4.03	2.49	6.90	4.30
41.9	0.3	6.7	0.0	0.0	5.07	8.22	5.71	4.80	2.97	8.23	5.12
48.8	0.1	6.7	0.0	0.0	4.34	9.57	6.65	5.58	3.45	9.56	5.96
59.0	0.2	6.9	0.0	0.0	3.59	11.6	8.06	6.75	4.18	11.6	7.23
71.0	0.4	7.4	0.0	0.0	2.98	13.9	9.65	8.13	5.03	13.9	8.65
85.5	0.6	8.0	0.0	0.0	2.48	16.8	11.7	9.78	6.05	16.8	10.5
102	0.8	8.8	0.0	0.0	2.09	20.0	13.9	11.7	7.24	20.1	12.5
121	0.8	9.6	0.0	0.0	1.75	23.7	16.5	13.8	8.54	23.7	14.8
145	0.9	10.5	0.0	0.0	1.47	28.4	19.7	16.6	10.3	28.5	17.7
171	1.1	11.6	1.2	1.2	1.24	33.5	23.3	19.6	12.1	33.5	20.9
205	1.5	13.1	1.7	2.9	1.03	40.2	27.9	23.5	14.5	40.2	25.0
245	2.7	15.9	3.0	5.9	0.866	48.1	33.4	28.0	17.3	47.9	29.9
291	2.0	17.8	2.2	8.2	0.730	57.1	39.7	33.3	20.6	57.1	35.6
345	2.4	20.3	2.7	10.9	0.615	67.7	47.0	39.5	24.5	67.9	42.1
409	2.5	22.8	2.8	13.7	0.518	80.2	55.7	46.8	29.0	80.4	49.9
485	2.3	25.1	2.5	16.2	0.437	95.1	66.0	55.5	34.4	95.3	59.2
577	2.2	27.2	2.4	18.7	0.367	113	78.5	66.0	40.9	113	70.4
685	2.4	29.7	2.7	21.4	0.309	134	93.1	78.4	48.5	134	83.5
814	2.9	32.6	3.3	24.7	0.260	160	111	93.2	57.7	160	99.5
968	3.5	36.1	3.9	28.6	0.219	190	132	111	68.7	190	118
1149	3.9	40.0	4.4	33.0	0.184	225	156	131	81.1	225	140
1365	4.2	44.3	4.7	37.7	0.155	268	186	156	96.6	268	167
1624	4.1	48.3	4.5	42.2	0.131	319	222	186	115	319	199
1927	3.9	52.2	4.4	46.6	0.110	378	263	221	137	380	236
2288	3.2	55.4	3.5	50.1	0.0927	449	312	262	162	449	280
2717	3.1	58.5	3.5	53.6	0.0780	533	370	311	193	535	332
3226	2.4	60.9	2.6	56.2	0.0657	633	440	369	228	632	394
3836	2.7	63.5	3.0	59.2	0.0553	753	523	439	272	754	469
4551	2.6	66.1	2.9	62.1	0.0466	893	620	521	323	895	556
5405	2.4	68.4	2.6	64.7	0.0392	1060	736	619	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	2.5	70.9	2.8	67.5	0.0330	1259	874	734	454	1258	784
7621	2.4	73.3	2.7	70.1	0.0278	1495	1038	872	540	1496	931
9053	2.6	75.9	2.9	73.0	0.0234	1776	1233	1036	641	1776	1105
10750	3.1	79.0	3.5	76.5	0.0197	2109	1465	1230	761	2109	1313
12766	2.2	81.1	2.4	78.9	0.0166	2505	1740	1461	904	2505	1560
15163	2.6	83.7	2.9	81.7	0.0140	2975	2066	1735	1074	2976	1852
18007	3.7	87.3	4.1	85.8	0.0118	3533	2453	2061	1276	3536	2199
21385	3.6	90.9	4.0	89.8	0.0099	4195	2913	2447	1515	4198	2611
25397	1.5	92.4	1.7	91.5	0.0083	4983	3460	2906	1799	4985	3102
30162	1.6	94.0	1.8	93.3	0.0070	5917	4109	3452	2137	5921	3684
35820	2.2	96.3	2.5	95.8	0.0059	7027	4880	4099	2537	7030	4375
42537	2.3	98.6	2.6	98.4	0.0050	8345	5795	4868	3014	8352	5195
46886	0.9	99.5	1.0	99.4	0.0045	9198	6388	5366	3322	9205	5727
59965	0.5	100.0	0.6	100.0	0.0035	11764	8169	6862	4248	11771	7323

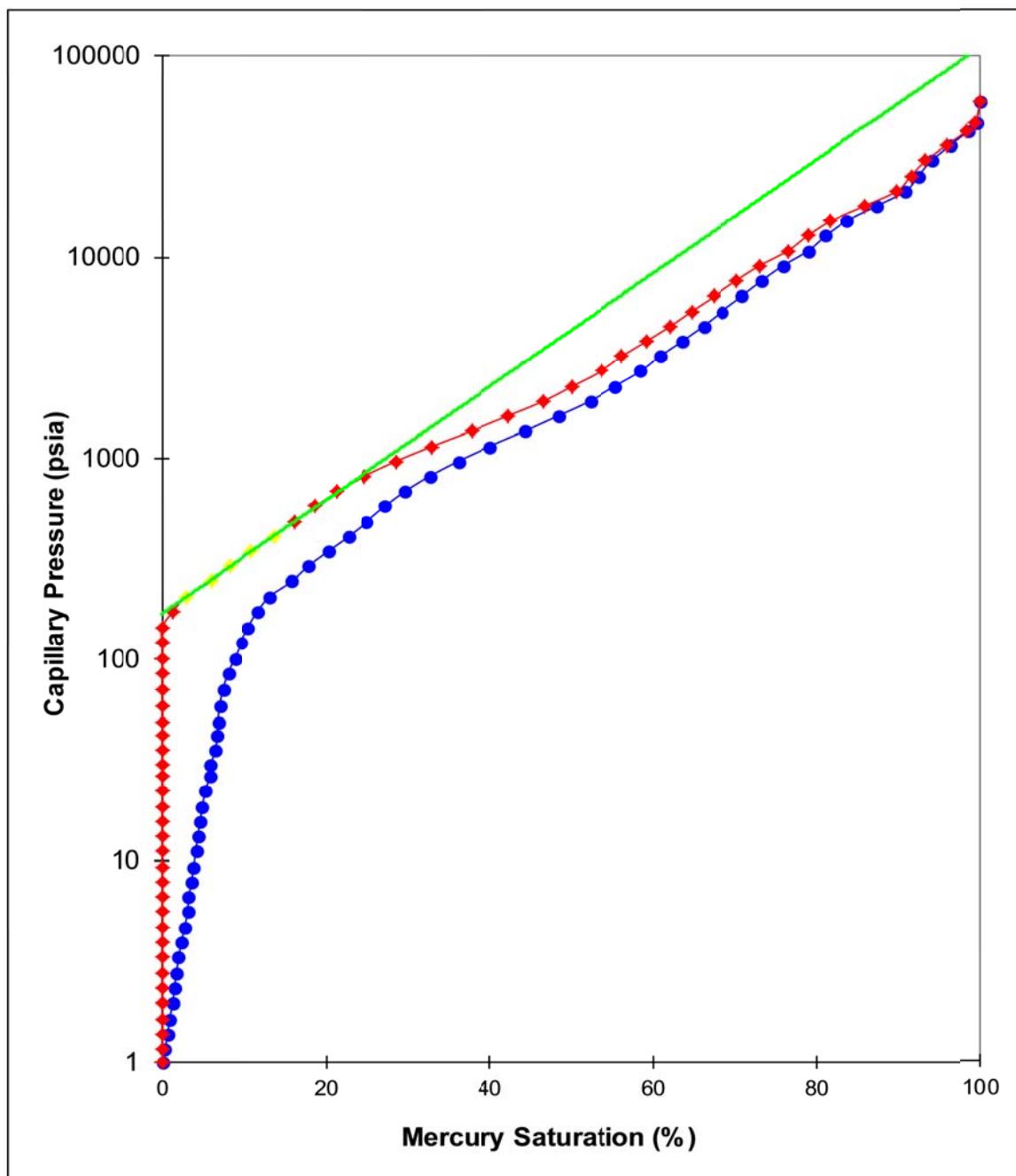
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R99  
2971.30 m      **Ambient Permeability** 0.73 mD  
                 **Ambient Porosity** 8.4 %



## PORE SIZE DISTRIBUTION

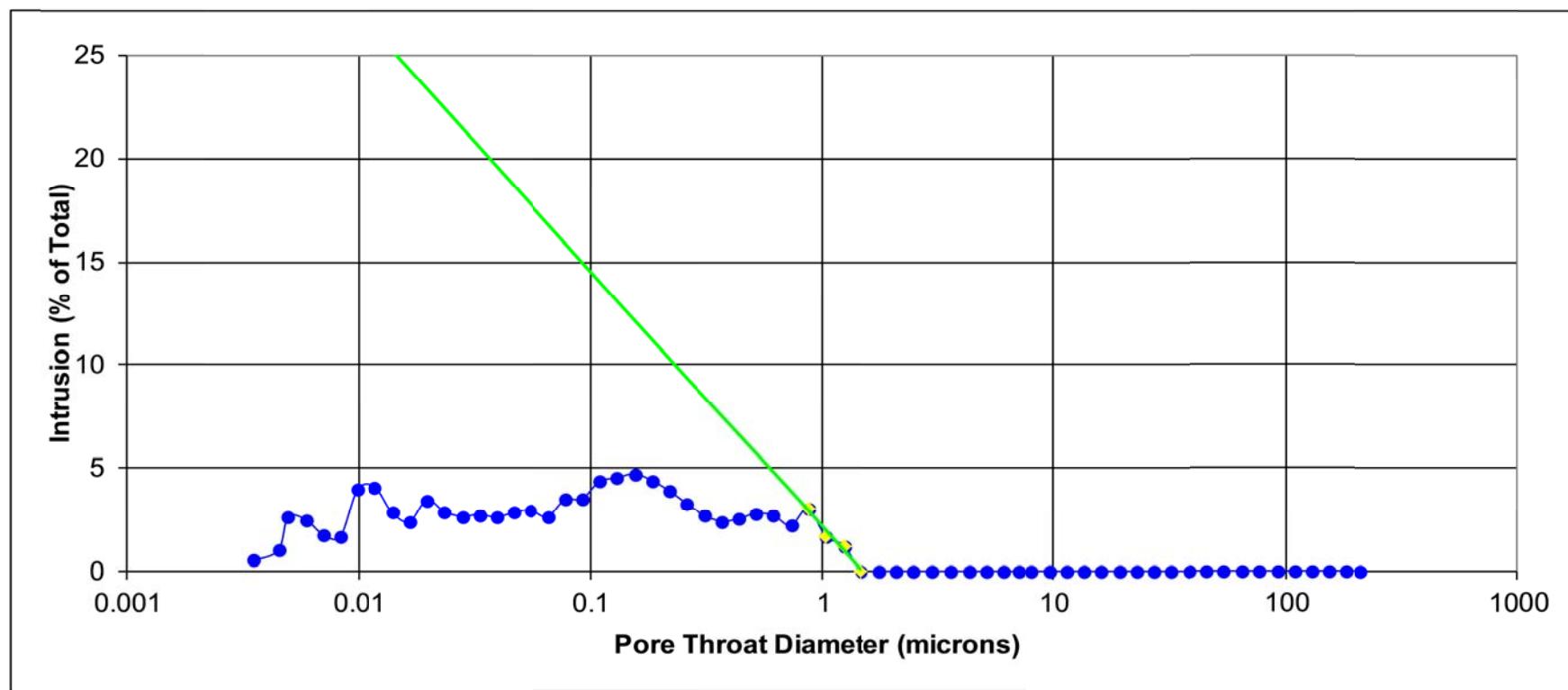


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R99  
2971.30 m

**Ambient Permeability** 0.73 mD  
**Ambient Porosity** 8.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R107  
**Depth** 2973.91 m  
**Ambient Permeability** 0.16 mD  
**Ambient Porosity** 7.9 %  
**Pore radius** 0.88 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		122	-	136	-	972
G-W		23.9	16.6	26.6	18.5	190
O-W		13.9	8.62	15.5	9.61	111
						68.8

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.1	0.1	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.1	0.4	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.1	0.5	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.1	0.6	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.1	0.7	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.1	0.9	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.0	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.0	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.1	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.2	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.3	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	1.4	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	1.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	1.6	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	1.7	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	1.9	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.1	2.0	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	2.2	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.1	2.3	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.5	0.1	2.4	0.0	0.0	5.97	6.96	4.83	4.06	2.51	6.95	4.33
42.4	0.1	2.5	0.0	0.0	5.00	8.32	5.78	4.85	3.00	8.31	5.18
51.9	0.2	2.7	0.0	0.0	4.09	10.2	7.08	5.94	3.68	10.2	6.35
60.8	0.0	2.7	0.0	0.0	3.49	11.9	8.26	6.96	4.31	11.9	7.40
73.2	0.1	2.8	0.0	0.0	2.90	14.4	10.0	8.38	5.19	14.4	8.96
87.3	0.2	3.0	0.0	0.0	2.43	17.1	11.9	9.99	6.18	17.1	10.7
104	0.2	3.2	0.0	0.0	2.05	20.4	14.2	11.9	7.37	20.4	12.7
121	0.3	3.5	0.0	0.0	1.75	23.7	16.5	13.8	8.54	23.7	14.8
146	0.6	4.1	0.6	0.6	1.45	28.6	19.9	16.7	10.3	28.5	17.8
174	0.6	4.7	0.7	1.3	1.22	34.1	23.7	19.9	12.3	34.1	21.2
204	0.5	5.3	0.5	1.8	1.04	40.0	27.8	23.3	14.4	39.9	24.9
245	1.0	6.2	1.0	2.8	0.866	48.1	33.4	28.0	17.3	47.9	29.9
291	0.9	7.1	0.9	3.8	0.727	57.1	39.7	33.3	20.6	57.1	35.6
346	0.9	8.0	0.9	4.7	0.613	67.9	47.2	39.6	24.5	67.9	42.3
408	1.1	9.1	1.1	5.8	0.519	80.0	55.6	46.7	28.9	80.1	49.8
488	1.3	10.4	1.3	7.1	0.435	95.7	66.5	55.8	34.5	95.6	59.6
576	1.3	11.6	1.3	8.4	0.368	113	78.5	65.9	40.8	113	70.4
685	1.2	12.8	1.2	9.7	0.309	134	93.1	78.4	48.5	134	83.5
815	1.3	14.1	1.3	11.0	0.260	160	111	93.3	57.8	160	99.5
967	1.4	15.5	1.5	12.5	0.219	190	132	111	68.7	190	118
1150	2.4	17.9	2.4	14.9	0.184	226	157	132	81.7	226	141
1366	3.5	21.3	3.6	18.5	0.155	268	186	156	96.6	268	167
1622	4.6	26.0	4.8	23.3	0.131	318	221	186	115	319	198
1927	6.1	32.0	6.3	29.6	0.110	378	263	221	137	380	236
2288	6.8	38.8	7.1	36.6	0.0927	449	312	262	162	449	280
2716	7.8	46.7	8.1	44.8	0.0780	533	370	311	193	535	332
3229	9.0	55.7	9.3	54.1	0.0656	633	440	370	229	635	394
3833	8.8	64.4	9.1	63.1	0.0553	752	522	439	272	754	468
4549	8.3	72.7	8.6	71.7	0.0466	892	619	521	323	895	555
5403	6.6	79.3	6.9	78.6	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	3.5	82.8	3.6	82.2	0.0330	1259	874	734	454	1258	784
7621	3.3	86.1	3.4	85.6	0.0278	1495	1038	872	540	1496	931
9052	2.7	88.9	2.8	88.5	0.0234	1776	1233	1036	641	1776	1105
10750	2.1	91.0	2.2	90.7	0.0197	2109	1465	1230	761	2109	1313
12767	1.7	92.7	1.8	92.4	0.0166	2505	1740	1461	904	2505	1560
15163	1.9	94.6	1.9	94.4	0.0140	2975	2066	1735	1074	2976	1852
18008	1.5	96.0	1.5	95.9	0.0118	3533	2453	2061	1276	3536	2199
21385	1.2	97.2	1.2	97.1	0.0099	4195	2913	2447	1515	4198	2611
25397	0.9	98.1	0.9	98.0	0.0083	4983	3460	2906	1799	4985	3102
30160	0.7	98.7	0.7	98.7	0.0070	5917	4109	3452	2137	5921	3684
35818	0.6	99.3	0.6	99.3	0.0059	7027	4880	4099	2537	7030	4375
42525	0.4	99.8	0.4	99.8	0.0050	8343	5794	4867	3013	8349	5194
46875	0.2	99.9	0.2	99.9	0.0045	9196	6386	5364	3321	9202	5725
59949	0.1	100.0	0.1	100.0	0.0035	11761	8167	6861	4247	11768	7321

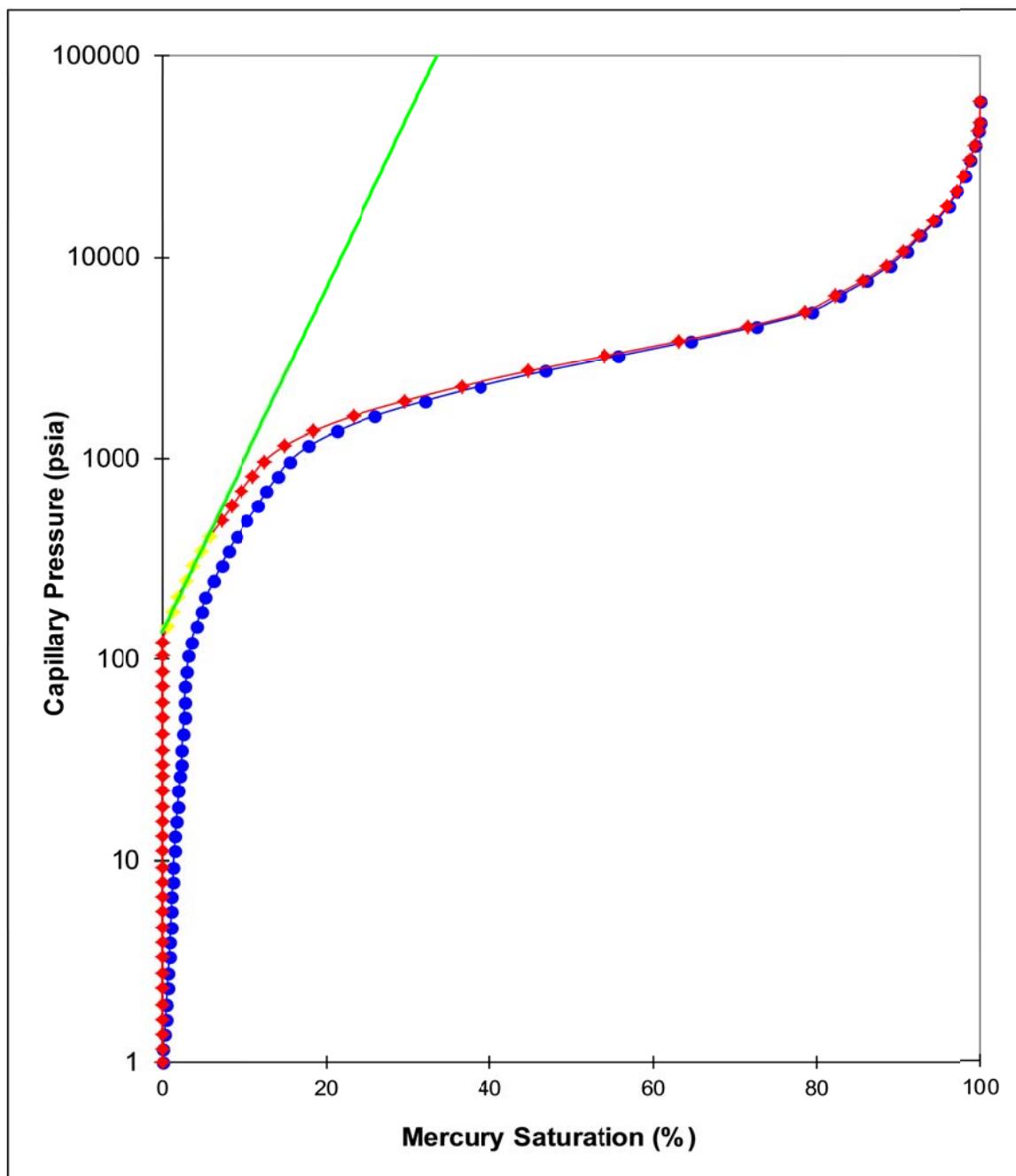
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R107  
2973.91 m      **Ambient Permeability** 0.16 mD  
                 **Ambient Porosity** 7.9 %



## PORE SIZE DISTRIBUTION

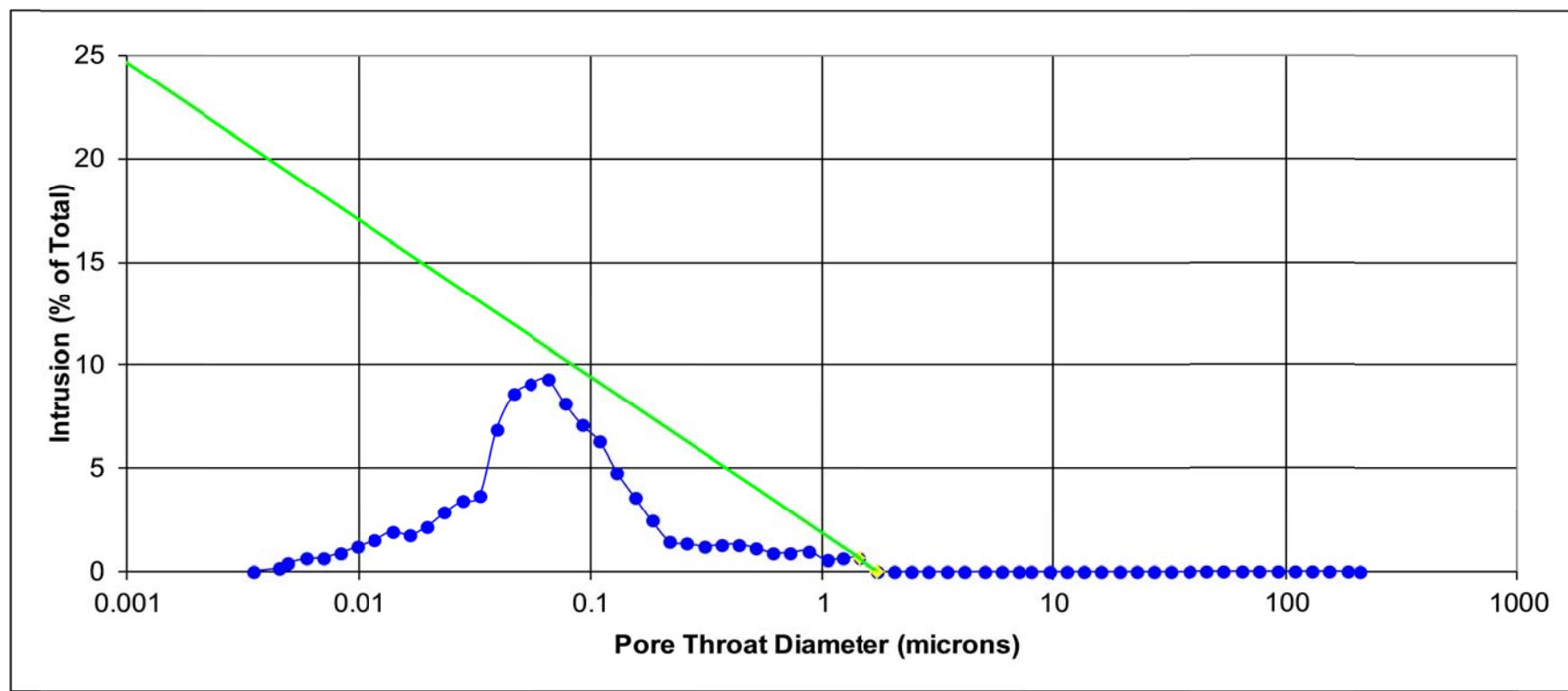


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R107  
2973.91 m

**Ambient Permeability** 0.16 mD  
**Ambient Porosity** 7.9 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R109  
**Depth** 2974.61 m  
**Ambient Permeability** 0.049 mD  
**Ambient Porosity** 4.4 %  
**Pore radius** 0.75 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		141	-	178	-	345
G-W		27.7	19.2	35.0	24.3	67.8
O-W		16.2	10.0	20.5	12.7	39.7
						24.6

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.4	0.4	0.0	0.0	182	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.4	0.9	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.5	1.3	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.5	1.8	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.5	2.3	0.0	0.0	91.7	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.4	2.8	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.5	3.2	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.5	3.7	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.4	4.1	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.3	4.4	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.3	4.7	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.3	5.0	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.3	5.3	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	5.6	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.4	6.0	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.4	6.4	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	6.7	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.6	7.3	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.4	7.7	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.5	8.1	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.5	0.4	8.5	0.0	0.0	5.96	6.96	4.83	4.06	2.51	6.95	4.33
43.5	0.2	8.7	0.0	0.0	4.87	8.53	5.92	4.98	3.08	8.53	5.31
50.2	0.0	8.8	0.0	0.0	4.22	9.85	6.84	5.74	3.55	9.84	6.13
61.3	0.0	8.8	0.0	0.0	3.46	12.0	8.33	7.02	4.35	12.1	7.47
72.3	0.1	8.8	0.0	0.0	2.93	14.2	9.86	8.27	5.12	14.2	8.84
86.5	0.3	9.1	0.0	0.0	2.45	17.0	11.8	9.90	6.13	17.0	10.6
103	0.4	9.5	0.0	0.0	2.05	20.2	14.0	11.8	7.30	20.2	12.6
122	0.6	10.1	0.0	0.0	1.74	23.9	16.6	14.0	8.67	24.0	14.9
146	0.7	10.8	0.0	0.0	1.46	28.6	19.9	16.7	10.3	28.5	17.8
174	1.0	11.8	1.2	1.2	1.22	34.1	23.7	19.9	12.3	34.1	21.2
206	1.3	13.1	1.4	2.6	1.03	40.4	28.1	23.6	14.6	40.5	25.2
244	1.7	14.8	1.9	4.5	0.869	47.9	33.3	27.9	17.3	47.9	29.9
291	2.4	17.2	2.7	7.1	0.730	57.1	39.7	33.3	20.6	57.1	35.6
346	2.6	19.8	2.9	10.0	0.613	67.9	47.2	39.6	24.5	67.9	42.3
409	2.4	22.2	2.7	12.7	0.519	80.2	55.7	46.8	29.0	80.4	49.9
487	2.4	24.6	2.7	15.4	0.435	95.5	66.3	55.7	34.5	95.6	59.4
578	2.2	26.8	2.5	17.9	0.367	113	78.5	66.1	40.9	113	70.4
686	2.0	28.8	2.2	20.2	0.309	135	93.8	78.5	48.6	135	84.1
816	2.1	30.9	2.4	22.5	0.260	160	111	93.4	57.8	160	99.5
970	2.1	33.0	2.4	24.9	0.219	190	132	111	68.7	190	118
1151	2.6	35.6	2.9	27.8	0.184	226	157	132	81.7	226	141
1368	3.8	39.4	4.3	32.1	0.155	268	186	157	97.2	269	167
1624	4.4	43.8	4.9	37.0	0.131	319	222	186	115	319	199
1928	3.7	47.5	4.2	41.2	0.110	378	263	221	137	380	236
2289	3.4	50.9	3.8	45.0	0.0926	449	312	262	162	449	280
2718	4.0	54.9	4.5	49.4	0.0780	533	370	311	193	535	332
3229	4.1	59.0	4.6	54.1	0.0657	633	440	370	229	635	394
3834	4.7	63.7	5.2	59.3	0.0553	752	522	439	272	754	468
4551	5.0	68.7	5.6	64.9	0.0466	893	620	521	323	895	556
5406	4.6	73.3	5.1	70.1	0.0392	1061	737	619	383	1061	661

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6420	4.6	77.9	5.2	75.2	0.0330	1260	875	735	455	1261	784
7625	4.4	82.3	5.0	80.2	0.0278	1496	1039	873	540	1496	931
9055	3.6	86.0	4.1	84.3	0.0234	1776	1233	1036	641	1776	1105
10749	2.5	88.5	2.8	87.1	0.0197	2109	1465	1230	761	2109	1313
12756	2.3	90.8	2.5	89.6	0.0166	2503	1738	1460	904	2505	1558
15150	2.2	93.0	2.5	92.1	0.0140	2972	2064	1734	1073	2973	1850
17992	1.7	94.6	1.9	94.0	0.0118	3530	2451	2059	1275	3533	2197
21378	1.4	96.1	1.6	95.6	0.0099	4194	2913	2447	1515	4198	2611
25396	1.1	97.2	1.3	96.8	0.0083	4982	3460	2906	1799	4985	3102
30162	0.8	98.0	0.9	97.8	0.0070	5917	4109	3452	2137	5921	3684
35819	0.4	98.4	0.5	98.2	0.0059	7027	4880	4099	2537	7030	4375
42525	0.1	98.5	0.1	98.4	0.0050	8343	5794	4867	3013	8349	5194
46876	0.7	99.3	0.8	99.2	0.0045	9196	6386	5365	3321	9202	5725
59954	0.7	100.0	0.8	100.0	0.0035	11762	8168	6861	4247	11768	7322

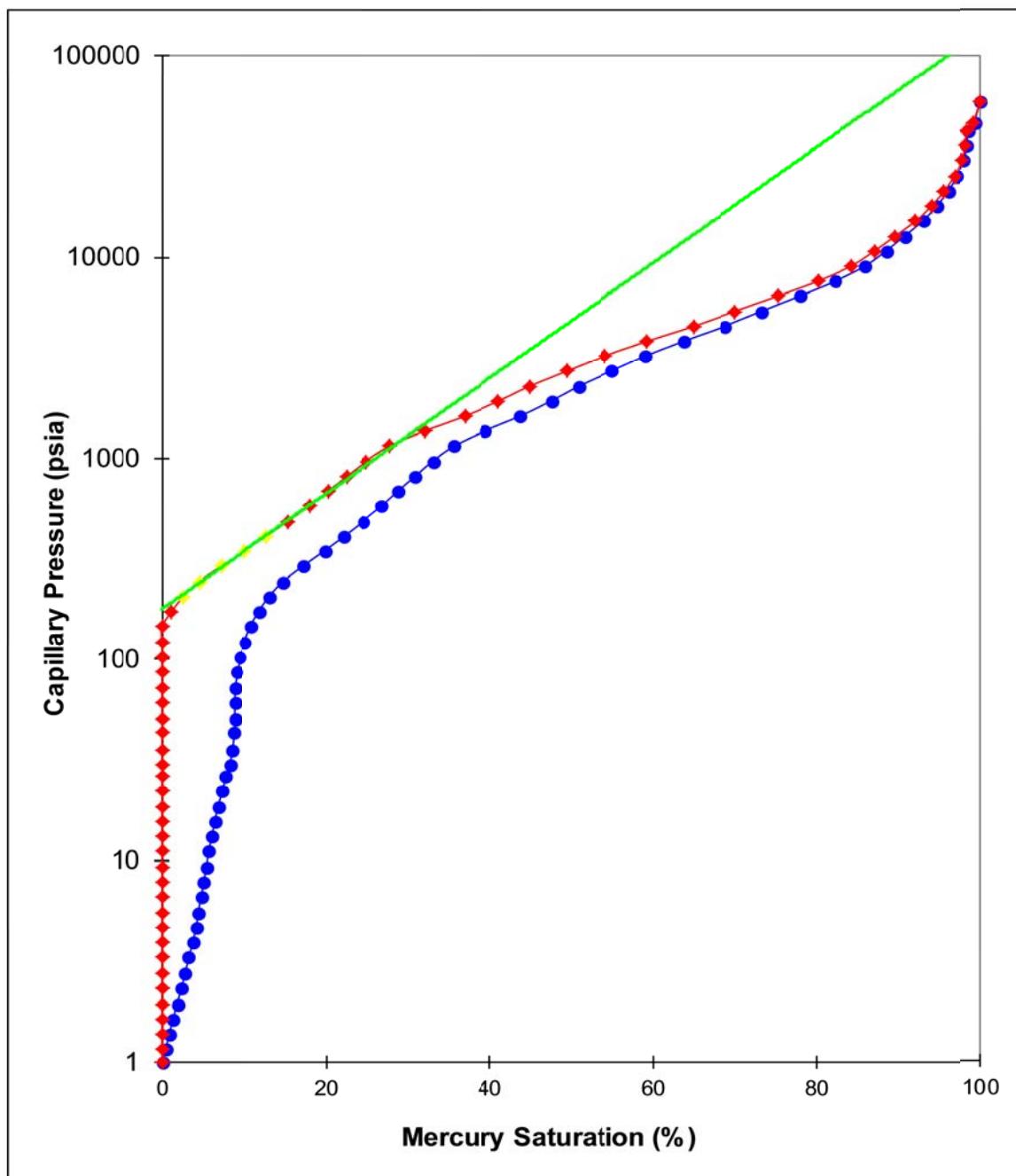
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R109  
2974.61 m      **Ambient Permeability** 0.049 mD  
                 **Ambient Porosity** 4.4 %



## PORE SIZE DISTRIBUTION

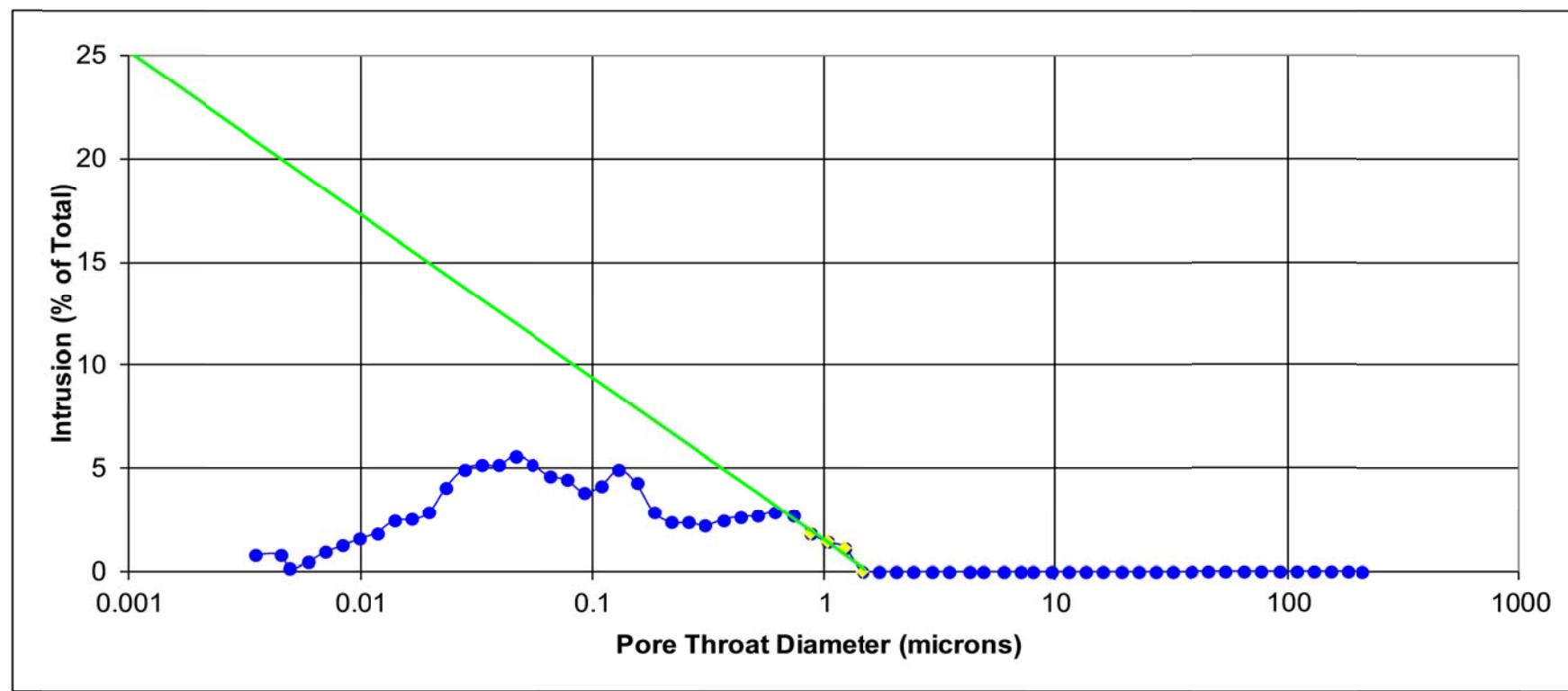


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R109  
2974.61 m

**Ambient Permeability** 0.049 mD  
**Ambient Porosity** 4.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R118  
**Depth** 2977.55 m  
**Ambient Permeability** 0.37 mD  
**Ambient Porosity** 3.0 %  
**Pore radius** 1.72 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		61.9	-	64.4	-	370
G-W		12.1	8.43	12.6	8.78	72.4
O-W		7.08	4.38	7.37	4.56	42.3
						26.2

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.1	0.1	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.2	0.5	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.2	0.7	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.2	0.9	0.0	0.0	91.7	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.1	0.0	0.0	76.8	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.3	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	1.4	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	1.6	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.7	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.9	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	2.0	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	2.2	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.4	2.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.7	3.3	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	3.6	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.9	4.5	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.4	4.9	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.4	5.3	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.3	5.6	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.4	0.2	5.9	0.0	0.0	5.98	6.94	4.82	4.05	2.51	6.95	4.32
43.1	0.1	6.0	0.0	0.0	4.92	8.46	5.88	4.93	3.05	8.45	5.27
52.4	0.1	6.1	0.0	0.0	4.05	10.3	7.15	6.00	3.71	10.3	6.41
61.6	0.5	6.5	0.0	0.0	3.44	12.1	8.40	7.05	4.36	12.1	7.53
73.1	0.7	7.3	0.8	0.8	2.90	14.3	9.93	8.37	5.18	14.4	8.90
86.0	0.8	8.0	0.8	1.6	2.47	16.9	11.7	9.84	6.09	16.9	10.5
102	0.8	8.9	0.9	2.5	2.08	20.0	13.9	11.7	7.24	20.1	12.5
124	1.1	10.0	1.2	3.7	1.71	24.3	16.9	14.2	8.79	24.4	15.2
144	0.9	10.9	1.0	4.7	1.47	28.3	19.7	16.5	10.2	28.3	17.7
172	0.9	11.8	1.0	5.7	1.23	33.7	23.4	19.7	12.2	33.8	21.0
206	1.1	12.9	1.2	6.9	1.03	40.4	28.1	23.6	14.6	40.5	25.2
244	1.0	14.0	1.1	8.0	0.870	47.9	33.3	27.9	17.3	47.9	29.9
289	1.2	15.1	1.2	9.2	0.734	56.7	39.4	33.1	20.5	56.8	35.3
345	1.3	16.4	1.4	10.6	0.615	67.7	47.0	39.5	24.5	67.9	42.1
408	1.2	17.7	1.3	11.9	0.520	80.0	55.6	46.7	28.9	80.1	49.8
486	1.5	19.1	1.6	13.5	0.437	95.3	66.2	55.6	34.4	95.3	59.3
577	1.7	20.9	1.8	15.4	0.367	113	78.5	66.0	40.9	113	70.4
687	1.7	22.6	1.8	17.2	0.308	135	93.8	78.6	48.7	135	84.1
815	1.9	24.5	2.0	19.2	0.260	160	111	93.3	57.8	160	99.5
969	2.0	26.4	2.1	21.3	0.219	190	132	111	68.7	190	118
1151	2.3	28.7	2.4	23.8	0.184	226	157	132	81.7	226	141
1365	2.3	31.1	2.5	26.3	0.155	268	186	156	96.6	268	167
1621	2.6	33.7	2.8	29.1	0.131	318	221	186	115	319	198
1925	2.6	36.3	2.8	31.9	0.110	378	263	220	136	377	236
2286	2.8	39.1	3.0	34.8	0.0927	448	311	262	162	449	279
2714	2.9	42.0	3.1	38.0	0.0781	532	369	311	193	535	331
3224	3.1	45.1	3.3	41.3	0.0658	633	440	369	228	632	394
3826	3.2	48.3	3.5	44.7	0.0554	751	522	438	271	751	468
4540	3.6	52.0	3.9	48.6	0.0467	891	619	520	322	892	555
5394	4.2	56.2	4.5	53.1	0.0393	1058	735	617	382	1058	659

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6406	4.4	60.5	4.7	57.8	0.0331	1257	873	733	454	1258	783
7613	5.2	65.8	5.6	63.4	0.0278	1494	1038	871	539	1494	931
9039	4.9	70.7	5.3	68.7	0.0235	1773	1231	1034	640	1773	1104
10737	4.8	75.5	5.2	73.8	0.0197	2106	1463	1229	761	2109	1312
12752	4.5	80.0	4.8	78.7	0.0166	2502	1738	1459	903	2502	1558
15147	4.2	84.2	4.5	83.1	0.0140	2972	2064	1733	1073	2973	1850
17991	3.5	87.7	3.8	86.9	0.0118	3530	2451	2059	1275	3533	2197
21374	3.1	90.8	3.3	90.2	0.0099	4193	2912	2446	1514	4195	2611
25393	2.7	93.5	2.8	93.0	0.0083	4982	3460	2906	1799	4985	3102
30158	2.3	95.8	2.4	95.5	0.0070	5917	4109	3451	2136	5919	3684
35814	1.9	97.7	2.1	97.5	0.0059	7026	4879	4099	2537	7030	4374
42520	1.4	99.1	1.5	99.0	0.0050	8342	5793	4866	3012	8346	5193
46873	0.6	99.7	0.6	99.6	0.0045	9196	6386	5364	3321	9202	5725
59947	0.3	100.0	0.4	100.0	0.0035	11761	8167	6860	4247	11768	7321

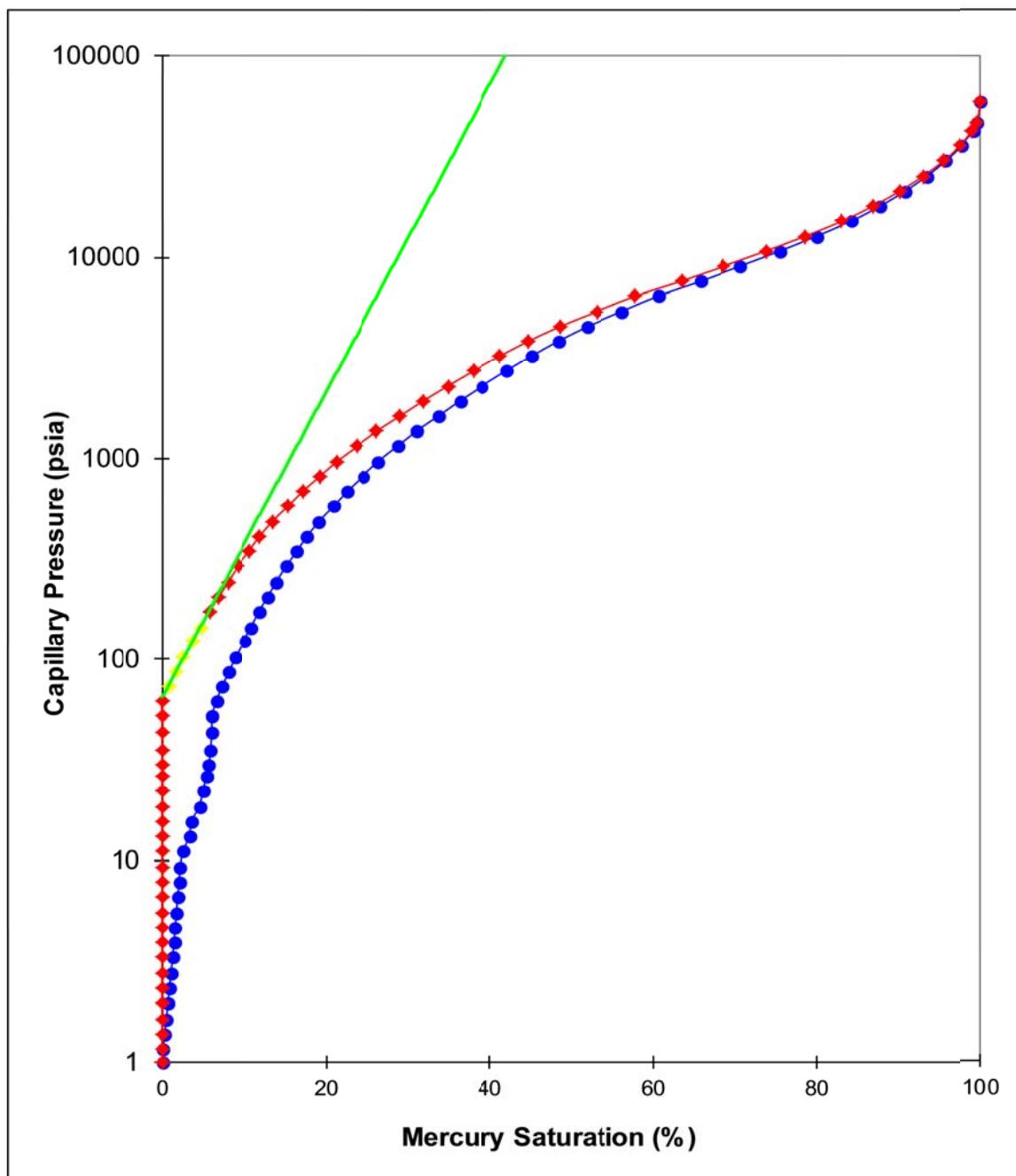
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R118  
2977.55 m      **Ambient Permeability** 0.37 mD  
                 **Ambient Porosity** 3.0 %



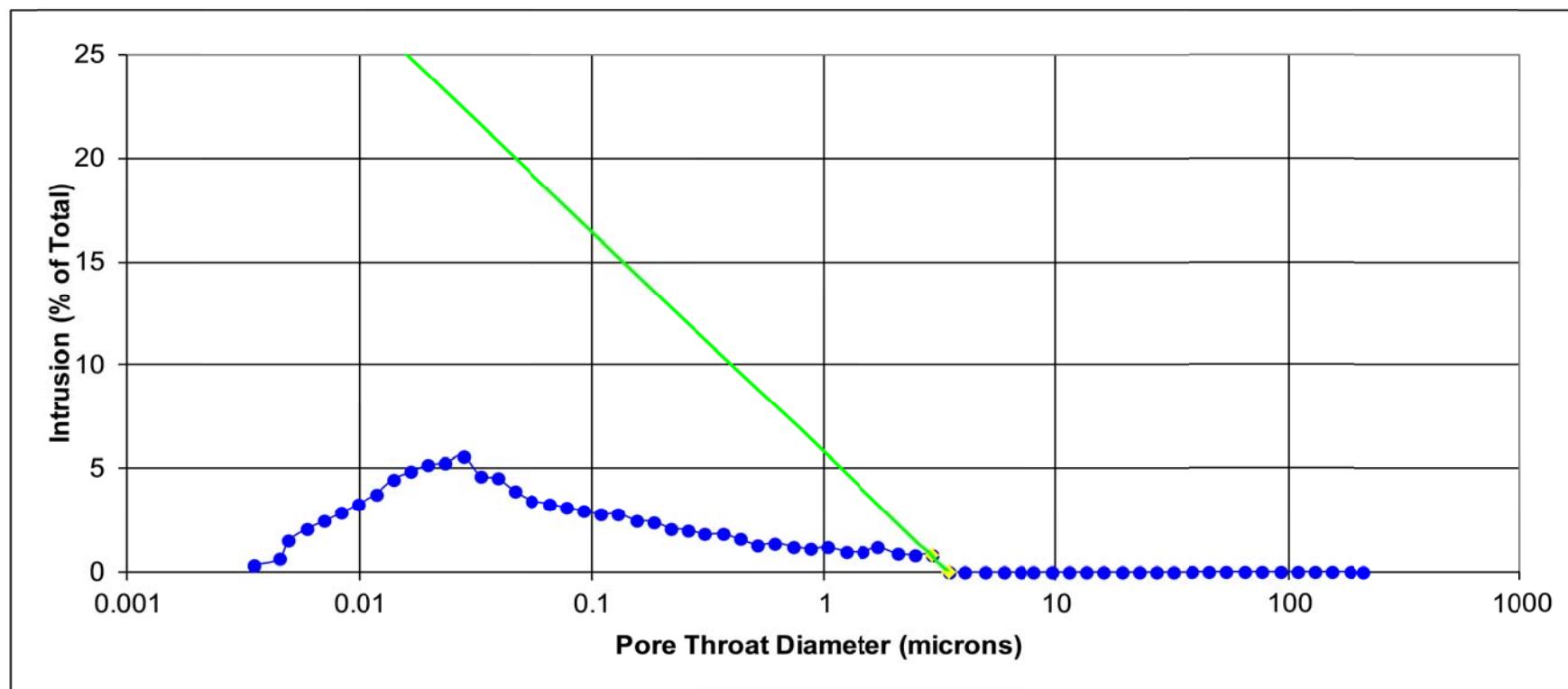
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R118 0.37 mD  
2977.55 m 3.0 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R120  
**Depth** 2978.30 m  
**Ambient Permeability** 0.15 mD  
**Ambient Porosity** 4.3 %  
**Pore radius** 0.52 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		206	-	214	-	736
G-W		40.4	28.0	42.0	29.1	144
O-W		23.6	14.6	24.5	15.2	84.3
						52.3

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	153	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.3	0.7	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.3	1.0	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.3	1.3	0.0	0.0	91.6	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.3	1.6	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.3	1.9	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.3	2.2	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.3	2.5	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.3	2.8	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.4	3.2	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.4	3.6	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.3	3.9	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.4	4.3	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.4	4.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.5	5.2	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.4	5.6	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.4	6.0	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.4	6.3	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.5	6.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.6	0.3	7.2	0.0	0.0	5.96	6.98	4.85	4.07	2.52	6.98	4.35
40.9	0.4	7.6	0.0	0.0	5.18	8.02	5.57	4.68	2.90	8.04	4.99
48.2	0.5	8.1	0.0	0.0	4.40	9.46	6.57	5.52	3.42	9.48	5.89
59.3	0.3	8.4	0.0	0.0	3.57	11.6	8.06	6.79	4.20	11.6	7.23
70.9	0.4	8.9	0.0	0.0	2.99	13.9	9.65	8.11	5.02	13.9	8.65
86.1	0.5	9.4	0.0	0.0	2.46	16.9	11.7	9.85	6.10	16.9	10.5
102	0.5	10.0	0.0	0.0	2.08	20.0	13.9	11.7	7.24	20.1	12.5
119	0.8	10.7	0.0	0.0	1.78	23.3	16.2	13.6	8.42	23.3	14.5
143	0.9	11.6	0.0	0.0	1.48	28.1	19.5	16.4	10.2	28.3	17.5
173	0.9	12.5	0.0	0.0	1.23	33.9	23.5	19.8	12.3	34.1	21.1
205	0.9	13.4	0.0	0.0	1.03	40.2	27.9	23.5	14.5	40.2	25.0
243	1.0	14.4	1.1	1.1	0.872	47.7	33.1	27.8	17.2	47.7	29.7
289	1.1	15.5	1.2	2.4	0.734	56.7	39.4	33.1	20.5	56.8	35.3
342	1.1	16.6	1.3	3.7	0.620	67.1	46.6	39.1	24.2	67.1	41.8
408	1.3	17.9	1.5	5.1	0.520	80.0	55.6	46.7	28.9	80.1	49.8
484	1.4	19.2	1.6	6.7	0.438	95.0	66.0	55.4	34.3	95.0	59.2
576	1.6	20.8	1.8	8.5	0.368	113	78.5	65.9	40.8	113	70.4
686	1.6	22.5	1.9	10.4	0.309	135	93.8	78.5	48.6	135	84.1
813	2.2	24.6	2.5	12.9	0.261	159	110	93.0	57.6	160	98.6
964	2.2	26.8	2.5	15.4	0.220	189	131	110	68.1	189	117
1147	2.5	29.3	2.9	18.3	0.185	225	156	131	81.1	225	140
1364	2.9	32.2	3.3	21.6	0.155	268	186	156	96.6	268	167
1619	2.9	35.1	3.4	25.0	0.131	318	221	185	115	319	198
1923	3.0	38.1	3.4	28.4	0.110	377	262	220	136	377	235
2286	3.1	41.1	3.6	32.0	0.0927	448	311	262	162	449	279
2717	3.2	44.4	3.7	35.7	0.0780	533	370	311	193	535	332
3225	3.5	47.9	4.0	39.8	0.0657	633	440	369	228	632	394
3831	3.9	51.7	4.5	44.2	0.0553	752	522	438	271	751	468
4548	4.3	56.0	5.0	49.2	0.0466	892	619	520	322	892	555
5404	4.9	60.9	5.6	54.9	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	4.7	65.6	5.4	60.3	0.0330	1259	874	734	454	1258	784
7621	4.9	70.5	5.6	65.9	0.0278	1495	1038	872	540	1496	931
9052	4.3	74.8	5.0	70.9	0.0234	1776	1233	1036	641	1776	1105
10749	4.4	79.3	5.1	76.1	0.0197	2109	1465	1230	761	2109	1313
12768	3.9	83.2	4.6	80.6	0.0166	2505	1740	1461	904	2505	1560
15161	3.5	86.8	4.1	84.7	0.0140	2974	2065	1735	1074	2976	1851
18004	2.6	89.3	3.0	87.7	0.0118	3532	2453	2060	1275	3533	2199
21384	3.1	92.4	3.5	91.2	0.0099	4195	2913	2447	1515	4198	2611
25398	2.3	94.7	2.7	93.9	0.0083	4983	3460	2907	1800	4988	3102
30163	2.0	96.7	2.3	96.2	0.0070	5918	4110	3452	2137	5921	3684
35820	1.6	98.3	1.9	98.1	0.0059	7027	4880	4099	2537	7030	4375
42525	0.9	99.2	1.0	99.1	0.0050	8343	5794	4867	3013	8349	5194
46885	0.6	99.9	0.7	99.8	0.0045	9198	6388	5366	3322	9205	5727
59949	0.1	100.0	0.2	100.0	0.0035	11761	8167	6861	4247	11768	7321

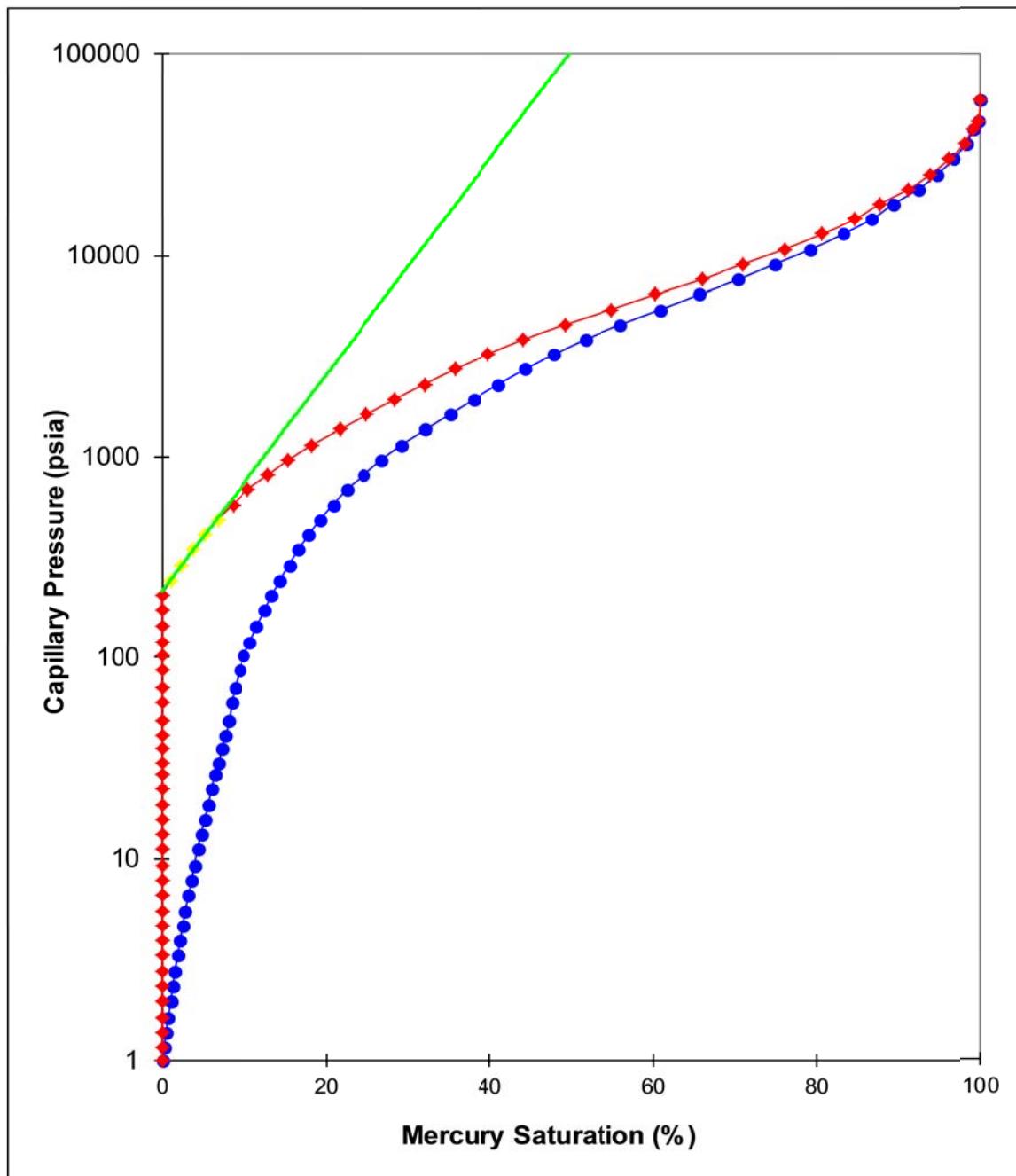
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R120  
2978.30 m      **Ambient Permeability** 0.15 mD  
                 **Ambient Porosity** 4.3 %



## PORE SIZE DISTRIBUTION

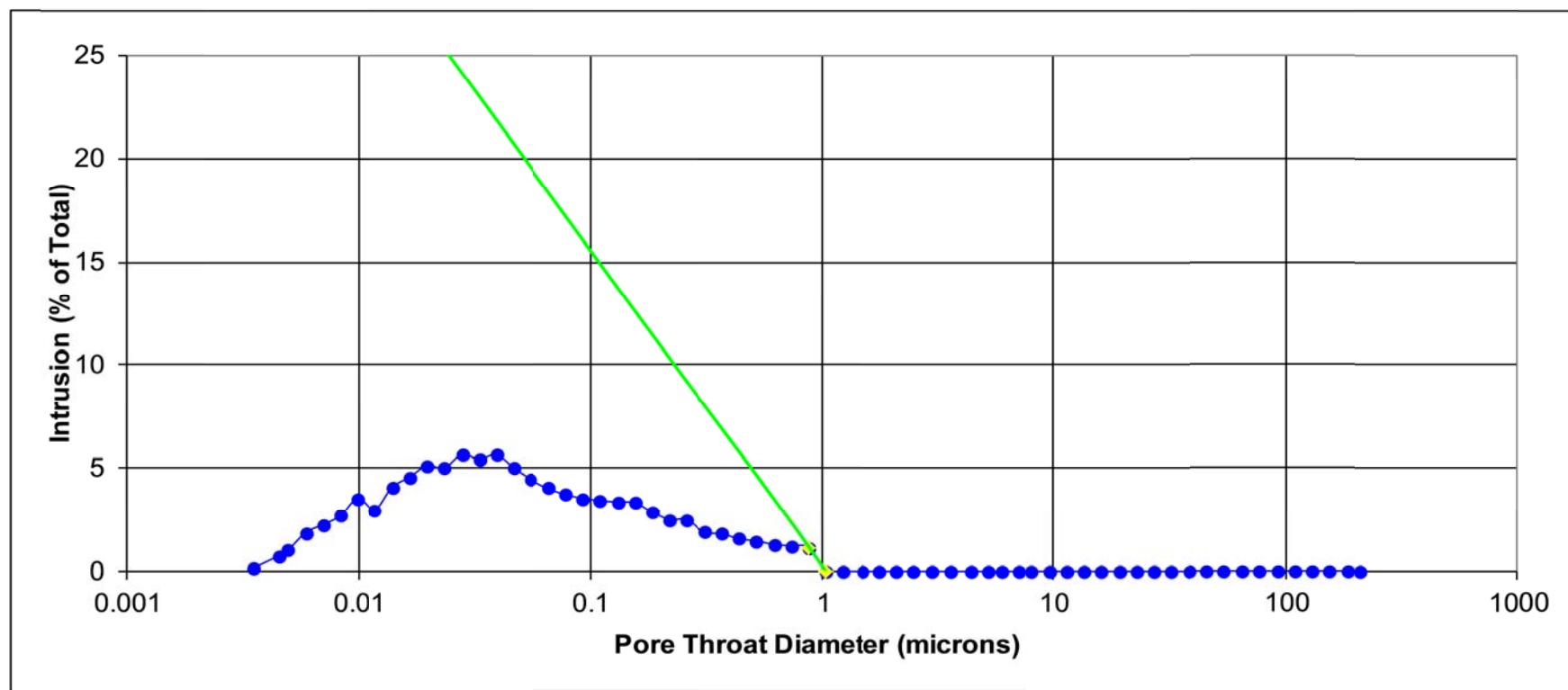


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R120  
2978.30 m

**Ambient Permeability** 0.15 mD  
**Ambient Porosity** 4.3 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R121  
**Depth** 2978.61 m  
**Ambient Permeability** 0.061 mD  
**Ambient Porosity** 3.4 %  
**Pore radius** 0.74 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		144	-	153	-	423
G-W		28.3	19.6	30.1	20.8	83.2
O-W		16.5	10.2	17.5	10.8	48.4
						29.9

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.15	0.6	0.6	0.0	0.0	184	0.23	0.16	0.13	0.08	0.23	0.14
1.37	0.7	1.3	0.0	0.0	155	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.6	1.9	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.6	2.5	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.5	3.0	0.0	0.0	91.7	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.4	3.5	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.4	3.9	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.5	4.4	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.5	4.8	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.4	5.2	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.4	5.6	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.5	6.1	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.5	6.6	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.4	7.0	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.4	7.4	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.6	8.0	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.4	8.4	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.7	9.1	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.6	9.7	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.7	10.4	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
34.9	0.1	10.4	0.0	0.0	6.07	6.85	4.76	3.99	2.47	6.84	4.27
42.2	0.1	10.5	0.0	0.0	5.02	8.28	5.75	4.83	2.99	8.29	5.15
49.1	0.2	10.6	0.0	0.0	4.32	9.63	6.69	5.62	3.48	9.64	6.00
58.1	0.2	10.9	0.0	0.0	3.65	11.4	7.92	6.65	4.12	11.4	7.10
69.1	0.6	11.5	0.0	0.0	3.07	13.6	9.44	7.91	4.90	13.6	8.46
84.3	0.7	12.1	0.0	0.0	2.51	16.5	11.5	9.65	5.97	16.5	10.3
101	0.6	12.7	0.0	0.0	2.10	19.8	13.8	11.6	7.18	19.9	12.4
120	0.7	13.4	0.0	0.0	1.77	23.5	16.3	13.7	8.48	23.5	14.6
145	0.9	14.3	0.0	0.0	1.46	28.4	19.7	16.6	10.3	28.5	17.7
172	1.0	15.4	1.2	1.2	1.24	33.7	23.4	19.7	12.2	33.8	21.0
204	1.3	16.7	1.5	2.8	1.04	40.0	27.8	23.3	14.4	39.9	24.9
243	1.5	18.2	1.7	4.5	0.872	47.7	33.1	27.8	17.2	47.7	29.7
289	1.5	19.7	1.8	6.2	0.734	56.7	39.4	33.1	20.5	56.8	35.3
343	1.5	21.2	1.8	8.0	0.619	67.3	46.7	39.3	24.3	67.3	41.9
409	1.6	22.8	1.9	9.9	0.519	80.2	55.7	46.8	29.0	80.4	49.9
486	1.6	24.4	1.9	11.7	0.437	95.3	66.2	55.6	34.4	95.3	59.3
575	1.5	25.8	1.7	13.5	0.369	113	78.5	65.8	40.7	113	70.4
685	1.4	27.2	1.6	15.1	0.310	134	93.1	78.4	48.5	134	83.5
813	1.5	28.7	1.7	16.8	0.261	159	110	93.0	57.6	160	98.6
967	1.5	30.3	1.8	18.6	0.219	190	132	111	68.7	190	118
1149	1.6	31.9	1.9	20.5	0.184	225	156	131	81.1	225	140
1364	1.8	33.7	2.1	22.6	0.155	268	186	156	96.6	268	167
1619	1.9	35.6	2.2	24.8	0.131	318	221	185	115	319	198
1925	2.5	38.0	2.9	27.7	0.110	378	263	220	136	377	236
2288	2.5	40.5	2.9	30.6	0.0927	449	312	262	162	449	280
2716	2.7	43.2	3.1	33.7	0.0780	533	370	311	193	535	332
3227	3.0	46.2	3.5	37.2	0.0657	633	440	369	228	632	394
3831	3.1	49.2	3.6	40.8	0.0553	752	522	438	271	751	468
4549	3.4	52.6	4.0	44.7	0.0466	892	619	521	323	895	555
5403	4.0	56.7	4.7	49.4	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	4.5	61.2	5.3	54.7	0.0330	1259	874	734	454	1258	784
7621	5.1	66.3	5.9	60.6	0.0278	1495	1038	872	540	1496	931
9052	5.2	71.4	6.0	66.7	0.0234	1776	1233	1036	641	1776	1105
10749	4.9	76.3	5.7	72.3	0.0197	2109	1465	1230	761	2109	1313
12764	3.8	80.1	4.5	76.8	0.0166	2504	1739	1461	904	2505	1559
15162	3.7	83.8	4.3	81.1	0.0140	2975	2066	1735	1074	2976	1852
18007	3.5	87.3	4.0	85.2	0.0118	3533	2453	2061	1276	3536	2199
21375	2.4	89.7	2.8	88.0	0.0099	4193	2912	2446	1514	4195	2611
25398	2.5	92.2	2.9	90.9	0.0083	4983	3460	2907	1800	4988	3102
30162	2.0	94.2	2.4	93.3	0.0070	5917	4109	3452	2137	5921	3684
35816	1.6	95.8	1.8	95.1	0.0059	7027	4880	4099	2537	7030	4375
42527	1.7	97.5	2.0	97.1	0.0050	8343	5794	4867	3013	8349	5194
46891	1.5	99.1	1.8	98.9	0.0045	9199	6388	5366	3322	9205	5727
59954	0.9	100.0	1.1	100.0	0.0035	11762	8168	6861	4247	11768	7322

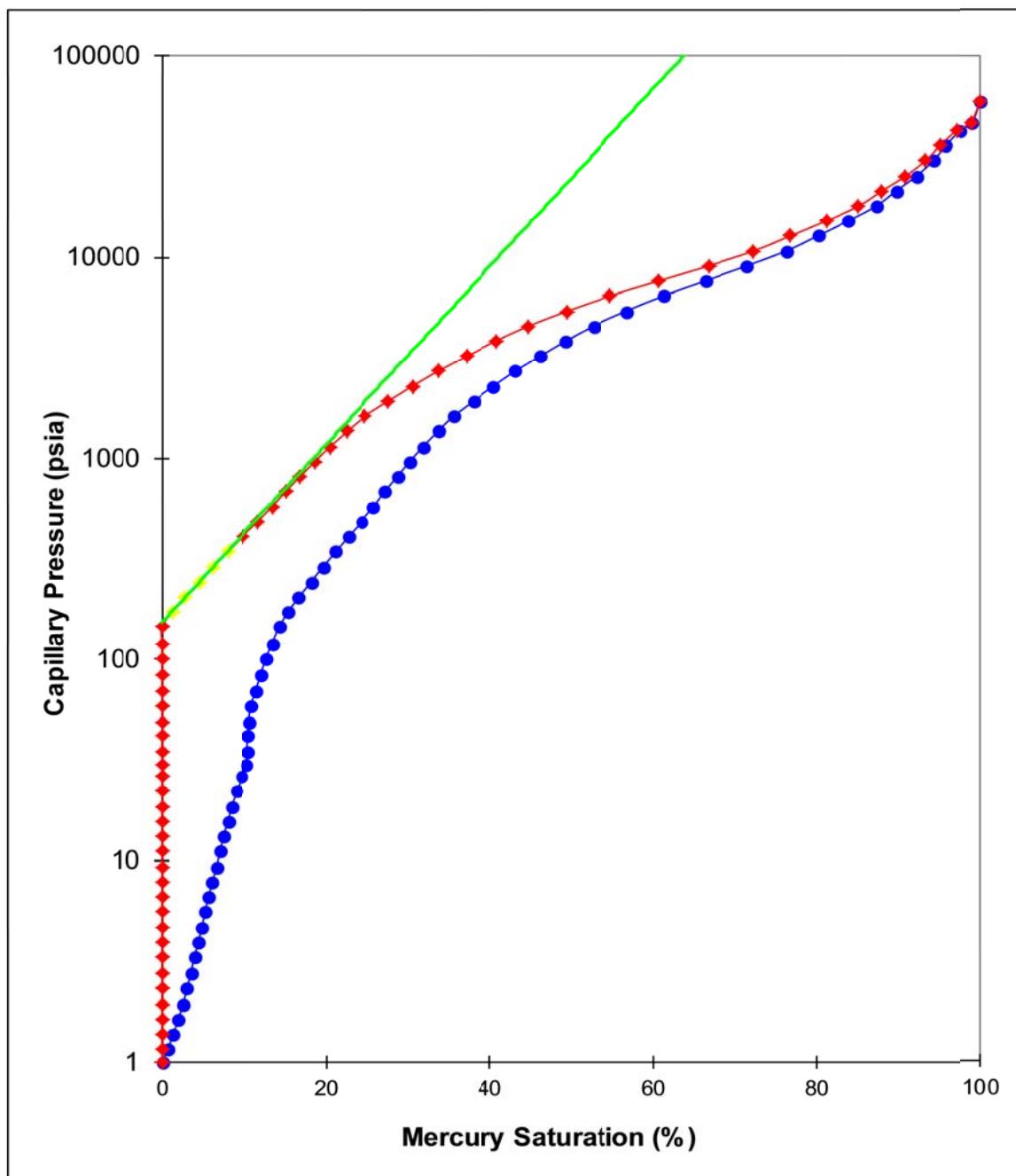
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R121  
2978.61 m      **Ambient Permeability** 0.061 mD  
                 **Ambient Porosity** 3.4 %



## PORE SIZE DISTRIBUTION

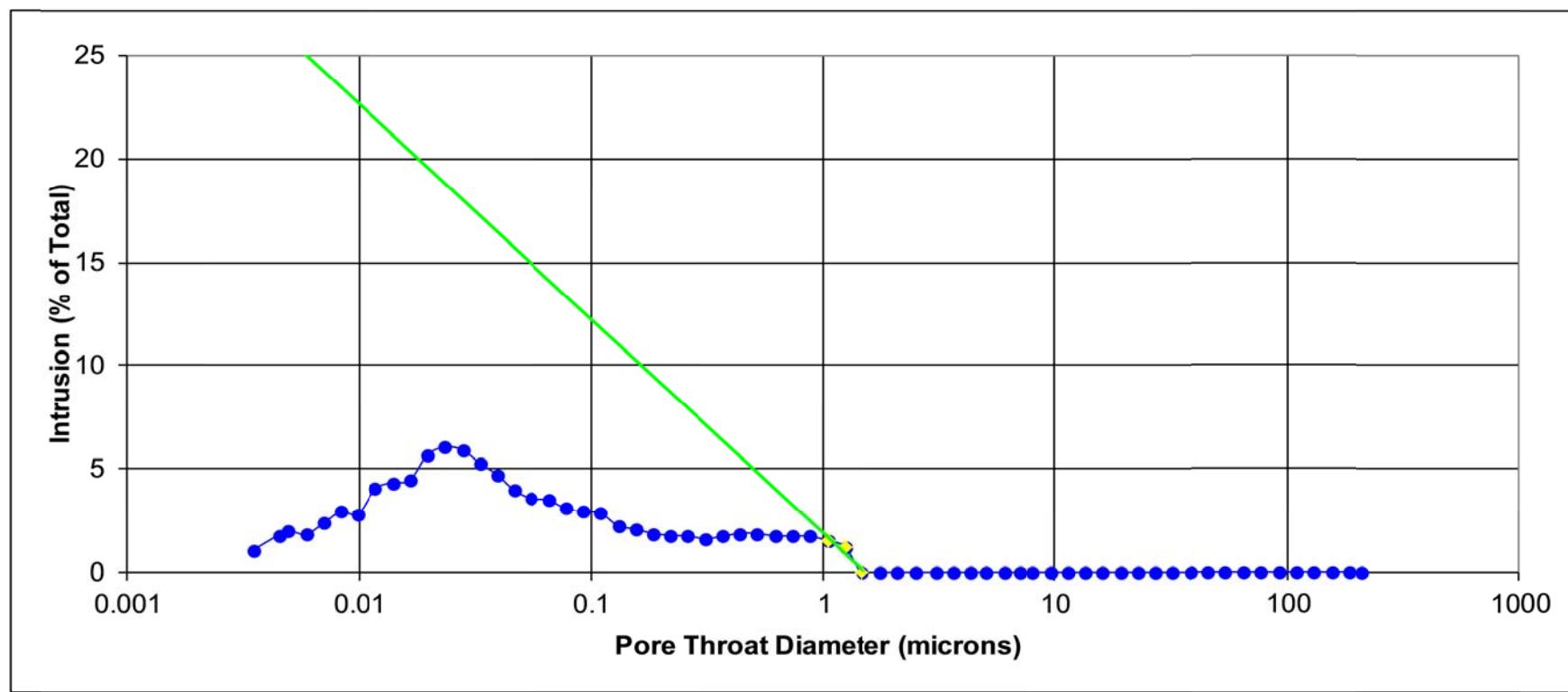


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R121  
2978.61 m

**Ambient Permeability** 0.061 mD  
**Ambient Porosity** 3.4 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R122  
**Depth** 2978.91 m  
**Ambient Permeability** 0.019 mD  
**Ambient Porosity** 2.6 %  
**Pore radius** 0.52 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		206	-	213	-	925
G-W		40.4	28.0	41.8	29.0	182
O-W		23.6	14.6	24.4	15.1	106
						65.6

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.3	0.3	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.3	0.5	0.0	0.0	153	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.3	0.8	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.95	0.3	1.1	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.2	1.3	0.0	0.0	91.6	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.2	1.5	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.7	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	2.0	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.2	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.2	2.4	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.2	2.6	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.9	3.5	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.4	3.9	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.5	4.4	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	4.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	5.0	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	5.3	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	5.6	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.4	6.0	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.6	6.6	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.6	0.6	7.2	0.0	0.0	5.95	6.98	4.85	4.07	2.52	6.98	4.35
41.0	0.3	7.5	0.0	0.0	5.17	8.04	5.58	4.69	2.90	8.04	5.00
48.2	0.7	8.2	0.0	0.0	4.39	9.46	6.57	5.52	3.42	9.48	5.89
59.4	0.4	8.6	0.0	0.0	3.57	11.7	8.13	6.80	4.21	11.7	7.29
70.9	0.3	8.9	0.0	0.0	2.99	13.9	9.65	8.11	5.02	13.9	8.65
86.1	0.5	9.4	0.0	0.0	2.46	16.9	11.7	9.85	6.10	16.9	10.5
102	0.4	9.8	0.0	0.0	2.08	20.0	13.9	11.7	7.24	20.1	12.5
119	0.5	10.3	0.0	0.0	1.78	23.3	16.2	13.6	8.42	23.3	14.5
143	0.5	10.8	0.0	0.0	1.48	28.1	19.5	16.4	10.2	28.3	17.5
173	0.7	11.5	0.0	0.0	1.22	33.9	23.5	19.8	12.3	34.1	21.1
205	0.9	12.4	0.0	0.0	1.03	40.2	27.9	23.5	14.5	40.2	25.0
243	0.8	13.2	0.9	0.9	0.872	47.7	33.1	27.8	17.2	47.7	29.7
289	1.0	14.2	1.1	2.1	0.734	56.7	39.4	33.1	20.5	56.8	35.3
342	1.0	15.1	1.1	3.2	0.620	67.1	46.6	39.1	24.2	67.1	41.8
408	1.1	16.3	1.3	4.4	0.520	80.0	55.6	46.7	28.9	80.1	49.8
484	1.0	17.3	1.1	5.6	0.438	95.0	66.0	55.4	34.3	95.0	59.2
576	1.1	18.4	1.3	6.9	0.368	113	78.5	65.9	40.8	113	70.4
686	1.1	19.4	1.2	8.1	0.309	135	93.8	78.5	48.6	135	84.1
813	1.0	20.5	1.2	9.3	0.261	159	110	93.0	57.6	160	98.6
964	1.2	21.7	1.4	10.7	0.220	189	131	110	68.1	189	117
1147	1.2	22.9	1.4	12.0	0.185	225	156	131	81.1	225	140
1364	1.3	24.2	1.5	13.5	0.155	268	186	156	96.6	268	167
1619	1.4	25.6	1.6	15.1	0.131	318	221	185	115	319	198
1924	1.7	27.3	2.0	17.1	0.110	377	262	220	136	377	235
2287	1.9	29.3	2.2	19.3	0.0927	449	312	262	162	449	280
2717	2.2	31.4	2.5	21.8	0.0780	533	370	311	193	535	332
3226	2.5	33.9	2.8	24.6	0.0657	633	440	369	228	632	394
3831	2.8	36.7	3.2	27.8	0.0553	752	522	438	271	751	468
4549	3.8	40.5	4.3	32.1	0.0466	892	619	521	323	895	555
5405	5.7	46.2	6.5	38.7	0.0392	1060	736	619	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	6.6	52.9	7.6	46.2	0.0330	1259	874	734	454	1258	784
7622	7.4	60.3	8.4	54.7	0.0278	1495	1038	872	540	1496	931
9053	6.4	66.7	7.3	62.0	0.0234	1776	1233	1036	641	1776	1105
10750	6.0	72.7	6.8	68.8	0.0197	2109	1465	1230	761	2109	1313
12768	5.1	77.8	5.8	74.6	0.0166	2505	1740	1461	904	2505	1560
15161	4.5	82.2	5.1	79.7	0.0140	2974	2065	1735	1074	2976	1851
18004	3.3	85.5	3.8	83.5	0.0118	3532	2453	2060	1275	3533	2199
21385	3.7	89.3	4.2	87.7	0.0099	4195	2913	2447	1515	4198	2611
25398	3.1	92.3	3.5	91.2	0.0083	4983	3460	2907	1800	4988	3102
30163	2.7	95.0	3.1	94.3	0.0070	5918	4110	3452	2137	5921	3684
35820	2.3	97.3	2.6	96.9	0.0059	7027	4880	4099	2537	7030	4375
42526	1.4	98.7	1.6	98.6	0.0050	8343	5794	4867	3013	8349	5194
46886	1.2	99.9	1.4	99.9	0.0045	9198	6388	5366	3322	9205	5727
59949	0.1	100.0	0.1	100.0	0.0035	11761	8167	6861	4247	11768	7321

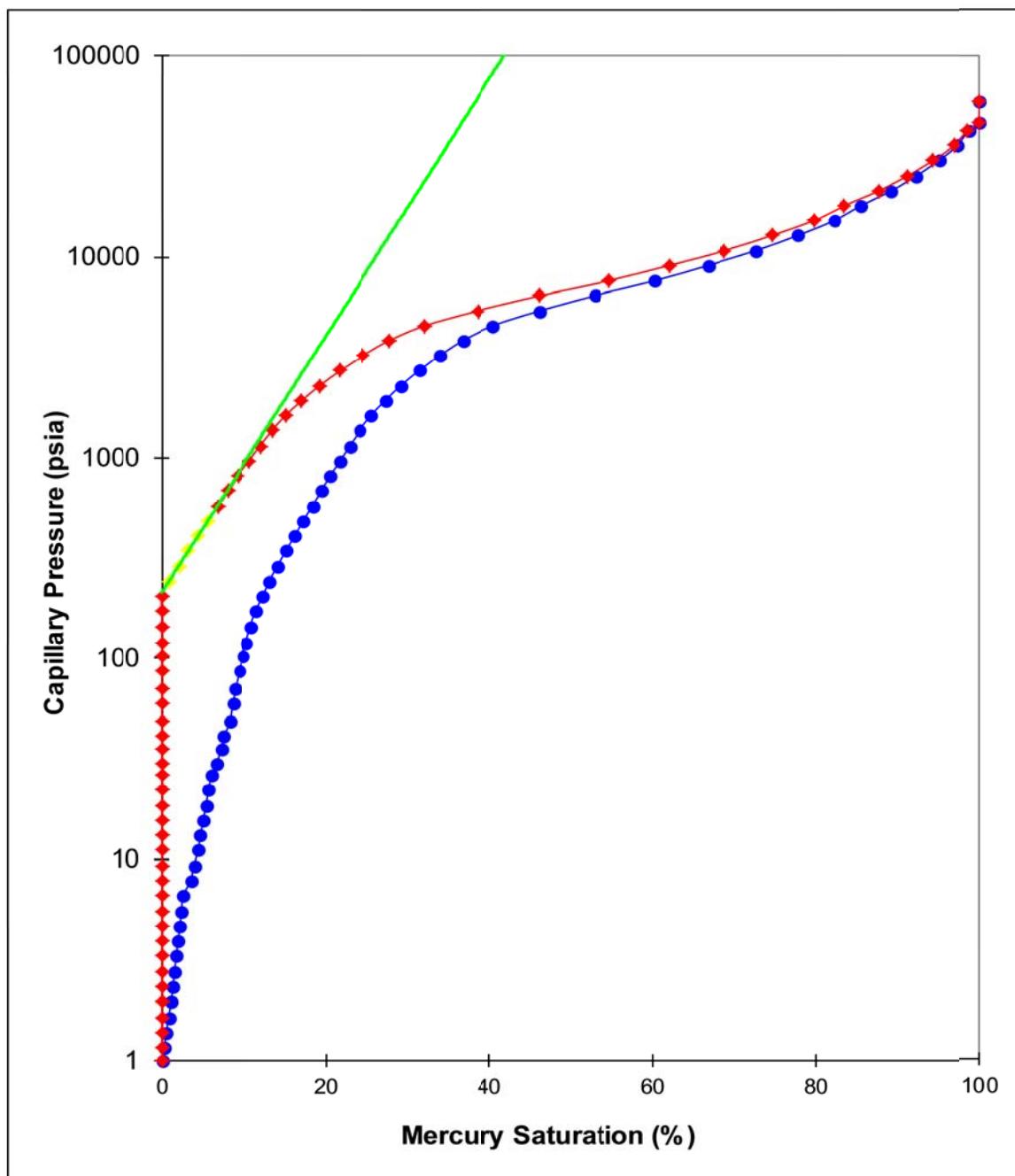
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R122  
2978.91 m      **Ambient Permeability** 0.019 mD  
                 **Ambient Porosity** 2.6 %



## PORE SIZE DISTRIBUTION

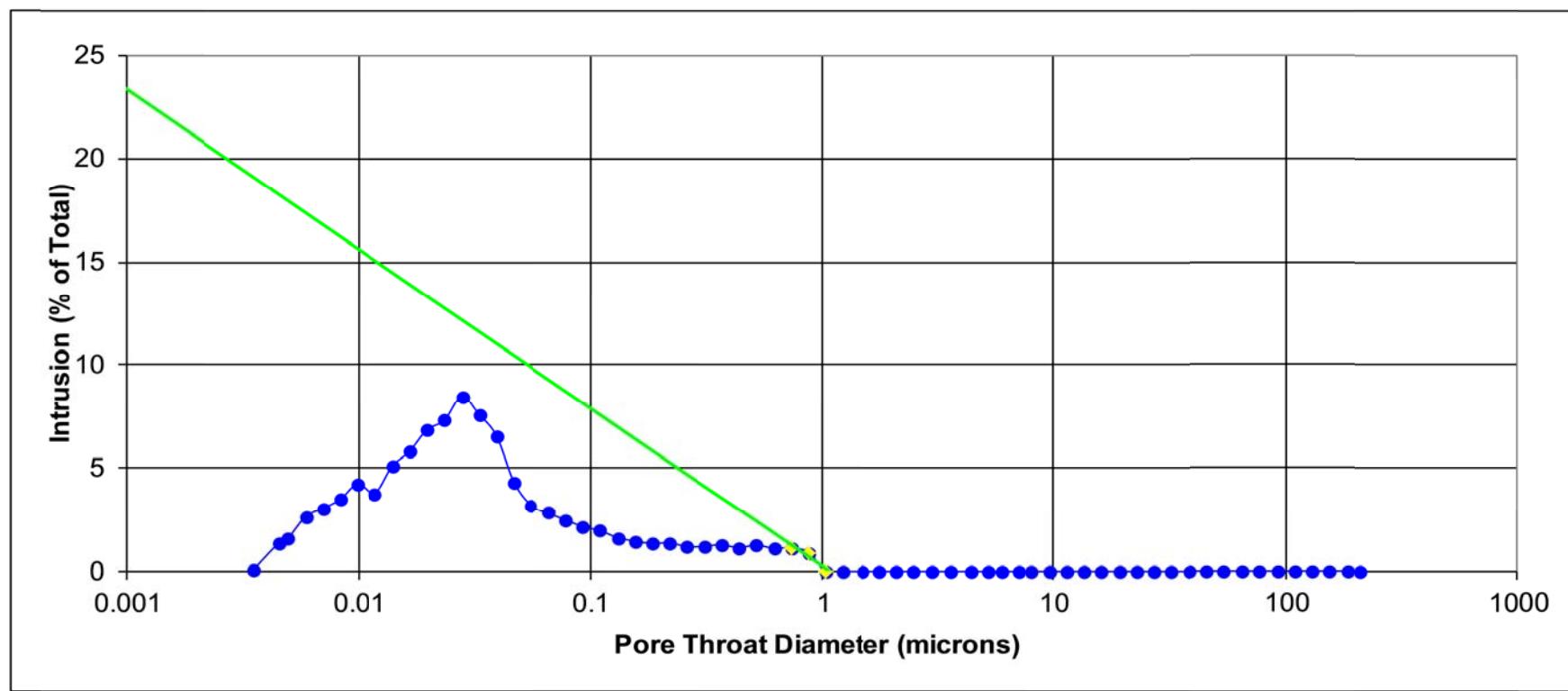


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R122  
2978.91 m

**Ambient Permeability** 0.019 mD  
**Ambient Porosity** 2.6 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R124  
**Depth** 2979.60 m  
**Ambient Permeability** 0.066 mD  
**Ambient Porosity** 2.9 %  
**Pore radius** 0.62 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		172	-	168	-	1909
G-W		33.8	23.5	33.0	22.9	375
O-W		19.7	12.2	19.2	11.9	218
						135

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.15	0.2	0.2	0.0	0.0	184	0.23	0.16	0.13	0.08	0.23	0.14
1.37	0.2	0.5	0.0	0.0	155	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.3	0.8	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.3	1.1	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.3	1.4	0.0	0.0	91.7	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.2	1.7	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.2	1.9	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.2	2.1	0.0	0.0	54.3	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.2	2.3	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.3	2.6	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	2.7	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.2	3.0	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.2	3.2	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.3	3.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	3.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.3	4.0	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.3	4.3	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.3	4.6	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.7	5.3	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.7	5.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
35.1	0.0	6.0	0.0	0.0	6.04	6.89	4.78	4.02	2.49	6.90	4.29
42.4	0.1	6.1	0.0	0.0	5.00	8.32	5.78	4.85	3.00	8.31	5.18
49.3	0.2	6.3	0.0	0.0	4.30	9.67	6.72	5.64	3.49	9.67	6.02
58.3	0.1	6.4	0.0	0.0	3.64	11.4	7.92	6.67	4.13	11.4	7.10
69.3	0.5	6.8	0.0	0.0	3.06	13.6	9.44	7.93	4.91	13.6	8.46
84.6	0.4	7.2	0.0	0.0	2.51	16.6	11.5	9.68	5.99	16.6	10.3
101	0.3	7.6	0.0	0.0	2.10	19.8	13.8	11.6	7.18	19.9	12.4
120	0.3	7.9	0.0	0.0	1.76	23.5	16.3	13.7	8.48	23.5	14.6
145	0.3	8.2	0.0	0.0	1.46	28.4	19.7	16.6	10.3	28.5	17.7
172	0.4	8.6	0.0	0.0	1.23	33.7	23.4	19.7	12.2	33.8	21.0
204	0.8	9.4	0.8	0.8	1.04	40.0	27.8	23.3	14.4	39.9	24.9
243	0.6	10.0	0.7	1.5	0.871	47.7	33.1	27.8	17.2	47.7	29.7
289	0.6	10.7	0.7	2.2	0.733	56.7	39.4	33.1	20.5	56.8	35.3
343	0.7	11.3	0.7	2.9	0.618	67.3	46.7	39.3	24.3	67.3	41.9
409	0.7	12.0	0.7	3.7	0.518	80.2	55.7	46.8	29.0	80.4	49.9
486	0.8	12.9	0.9	4.6	0.436	95.3	66.2	55.6	34.4	95.3	59.3
575	0.7	13.5	0.8	5.4	0.369	113	78.5	65.8	40.7	113	70.4
685	0.7	14.2	0.7	6.1	0.309	134	93.1	78.4	48.5	134	83.5
814	0.7	14.9	0.8	6.9	0.260	160	111	93.2	57.7	160	99.5
967	0.8	15.7	0.9	7.8	0.219	190	132	111	68.7	190	118
1150	0.8	16.5	0.9	8.6	0.184	226	157	132	81.7	226	141
1365	0.9	17.4	0.9	9.6	0.155	268	186	156	96.6	268	167
1620	0.8	18.2	0.9	10.4	0.131	318	221	185	115	319	198
1926	1.2	19.4	1.4	11.8	0.110	378	263	220	136	377	236
2289	1.2	20.6	1.3	13.1	0.0926	449	312	262	162	449	280
2717	1.3	21.9	1.4	14.5	0.0780	533	370	311	193	535	332
3228	1.8	23.7	1.9	16.4	0.0657	633	440	369	228	632	394
3832	1.9	25.6	2.1	18.6	0.0553	752	522	439	272	754	468
4550	2.2	27.8	2.4	21.0	0.0466	893	620	521	323	895	556
5404	3.1	30.9	3.4	24.4	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6418	3.6	34.5	3.9	28.3	0.0330	1259	874	734	454	1258	784
7622	4.0	38.5	4.4	32.7	0.0278	1495	1038	872	540	1496	931
9053	4.9	43.4	5.3	38.0	0.0234	1776	1233	1036	641	1776	1105
10751	6.2	49.6	6.8	44.8	0.0197	2109	1465	1230	761	2109	1313
12766	5.1	54.7	5.6	50.4	0.0166	2505	1740	1461	904	2505	1560
15163	6.6	61.2	7.2	57.6	0.0140	2975	2066	1735	1074	2976	1852
18008	8.3	69.6	9.1	66.7	0.0118	3533	2453	2061	1276	3536	2199
21377	4.1	73.7	4.5	71.2	0.0099	4194	2913	2446	1514	4195	2611
25399	6.3	80.0	6.9	78.1	0.0083	4983	3460	2907	1800	4988	3102
30163	5.0	85.0	5.5	83.6	0.0070	5918	4110	3452	2137	5921	3684
35817	3.5	88.5	3.9	87.5	0.0059	7027	4880	4099	2537	7030	4375
42528	4.2	92.8	4.6	92.1	0.0050	8343	5794	4867	3013	8349	5194
46892	6.2	99.0	6.8	98.9	0.0045	9200	6389	5366	3322	9205	5728
59955	1.0	100.0	1.1	100.0	0.0035	11762	8168	6861	4247	11768	7322

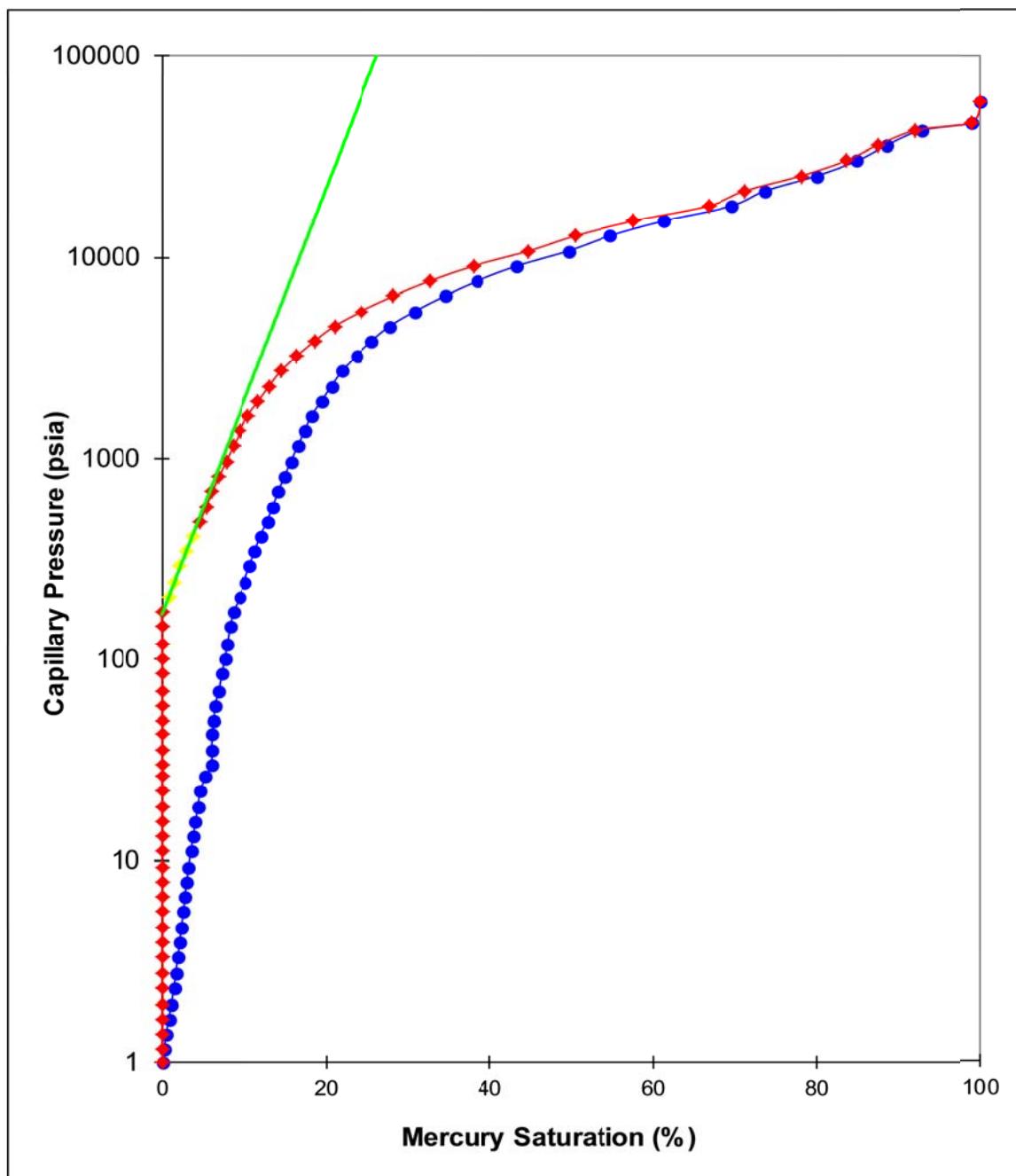
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R124  
2979.60 m      **Ambient Permeability** 0.066 mD  
                 **Ambient Porosity** 2.9 %



## PORE SIZE DISTRIBUTION

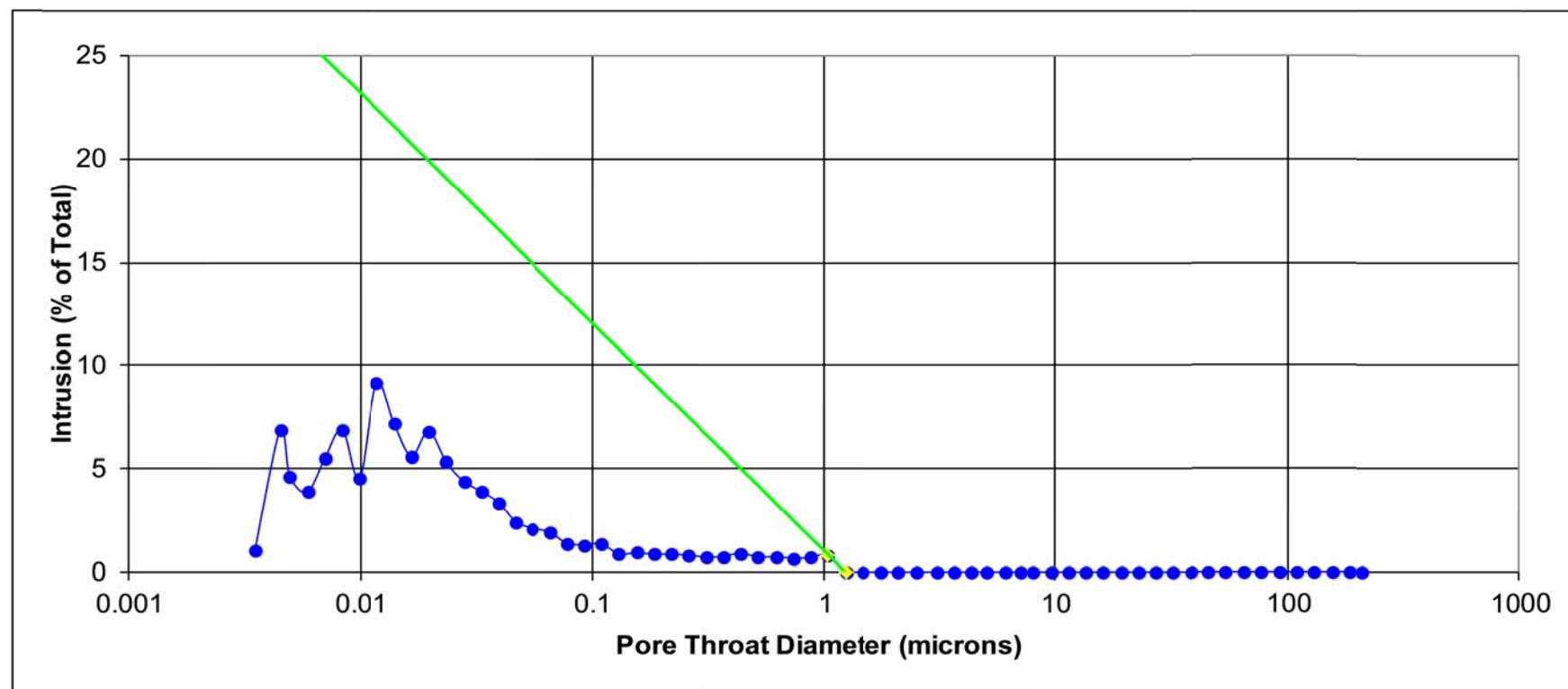


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R124  
2979.60 m

**Ambient Permeability** 0.066 mD  
**Ambient Porosity** 2.9 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R128  
**Depth** 2980.93 m  
**Ambient Permeability** 0.0019 mD  
**Ambient Porosity** 0.9 %  
**Pore radius** 0.04 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		2729	-	2868	-	4939
G-W		535	372	562	391	968
O-W		312	193	328	203	565
						350

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	1.1	1.1	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	1.1	2.2	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	1.0	3.2	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	1.0	4.2	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	1.0	5.2	0.0	0.0	91.5	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.8	5.9	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.8	6.7	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.8	7.5	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.8	8.2	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.6	8.8	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.8	9.6	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.5	10.1	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.6	10.7	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.8	11.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.8	12.3	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.8	13.0	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.9	13.9	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	1.3	15.2	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	1.4	16.6	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	1.5	18.0	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
33.9	0.6	18.6	0.0	0.0	6.26	6.65	4.62	3.88	2.40	6.65	4.14
41.5	1.6	20.2	0.0	0.0	5.11	8.14	5.65	4.75	2.94	8.15	5.07
48.8	1.3	21.5	0.0	0.0	4.35	9.57	6.65	5.58	3.45	9.56	5.96
58.6	0.2	21.6	0.0	0.0	3.62	11.5	7.99	6.71	4.15	11.5	7.16
70.0	0.3	21.9	0.0	0.0	3.03	13.7	9.51	8.01	4.96	13.7	8.53
83.7	0.4	22.3	0.0	0.0	2.53	16.4	11.4	9.58	5.93	16.4	10.2
101	0.5	22.8	0.0	0.0	2.09	19.8	13.8	11.6	7.18	19.9	12.4
120	0.5	23.2	0.0	0.0	1.77	23.5	16.3	13.7	8.48	23.5	14.6
144	0.7	23.9	0.0	0.0	1.48	28.3	19.7	16.5	10.2	28.3	17.7
170	0.7	24.6	0.0	0.0	1.25	33.4	23.2	19.5	12.1	33.5	20.8
203	0.7	25.3	0.0	0.0	1.04	39.8	27.6	23.2	14.4	39.9	24.7
241	0.7	26.0	0.0	0.0	0.880	47.3	32.8	27.6	17.1	47.4	29.4
287	0.8	26.8	0.0	0.0	0.738	56.3	39.1	32.8	20.3	56.2	35.1
342	1.0	27.8	0.0	0.0	0.619	67.1	46.6	39.1	24.2	67.1	41.8
408	0.8	28.5	0.0	0.0	0.520	80.0	55.6	46.7	28.9	80.1	49.8
484	0.7	29.2	0.0	0.0	0.438	95.0	66.0	55.4	34.3	95.0	59.2
577	0.9	30.1	0.0	0.0	0.367	113	78.5	66.0	40.9	113	70.4
683	1.0	31.1	0.0	0.0	0.310	134	93.1	78.2	48.4	134	83.5
812	1.3	32.4	0.0	0.0	0.261	159	110	92.9	57.5	159	98.6
966	1.4	33.8	0.0	0.0	0.220	190	132	111	68.7	190	118
1150	1.5	35.3	0.0	0.0	0.184	226	157	132	81.7	226	141
1364	1.8	37.0	0.0	0.0	0.155	268	186	156	96.6	268	167
1618	1.4	38.4	0.0	0.0	0.131	317	220	185	115	319	197
1923	1.3	39.8	0.0	0.0	0.110	377	262	220	136	377	235
2285	1.4	41.1	0.0	0.0	0.0928	448	311	261	162	449	279
2715	1.5	42.6	0.0	0.0	0.0781	533	370	311	193	535	332
3224	1.3	43.9	2.2	2.2	0.0658	633	440	369	228	632	394
3834	2.0	45.9	3.5	5.7	0.0553	752	522	439	272	754	468
4545	1.3	47.1	2.2	7.9	0.0466	892	619	520	322	892	555
5402	2.3	49.4	4.0	11.9	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.5	51.9	4.3	16.2	0.0330	1259	874	734	454	1258	784
7621	5.9	57.9	10.3	26.5	0.0278	1495	1038	872	540	1496	931
9053	5.8	63.7	10.1	36.7	0.0234	1776	1233	1036	641	1776	1105
10752	4.2	67.9	7.4	44.0	0.0197	2109	1465	1230	761	2109	1313
12769	4.7	72.6	8.1	52.2	0.0166	2505	1740	1461	904	2505	1560
15165	5.2	77.7	9.0	61.2	0.0140	2975	2066	1736	1075	2979	1852
18010	5.3	83.0	9.2	70.4	0.0118	3533	2453	2061	1276	3536	2199
21386	4.1	87.1	7.1	77.5	0.0099	4196	2914	2447	1515	4198	2612
25401	4.3	91.4	7.4	84.9	0.0083	4983	3460	2907	1800	4988	3102
30163	1.1	92.4	1.9	86.8	0.0070	5918	4110	3452	2137	5921	3684
35822	2.8	95.2	4.8	91.6	0.0059	7028	4881	4100	2538	7033	4376
42531	0.4	95.6	0.6	92.3	0.0050	8344	5794	4867	3013	8349	5194
46874	1.3	96.9	2.3	94.5	0.0045	9196	6386	5364	3321	9202	5725
59950	3.1	100.0	5.5	100.0	0.0035	11761	8167	6861	4247	11768	7321

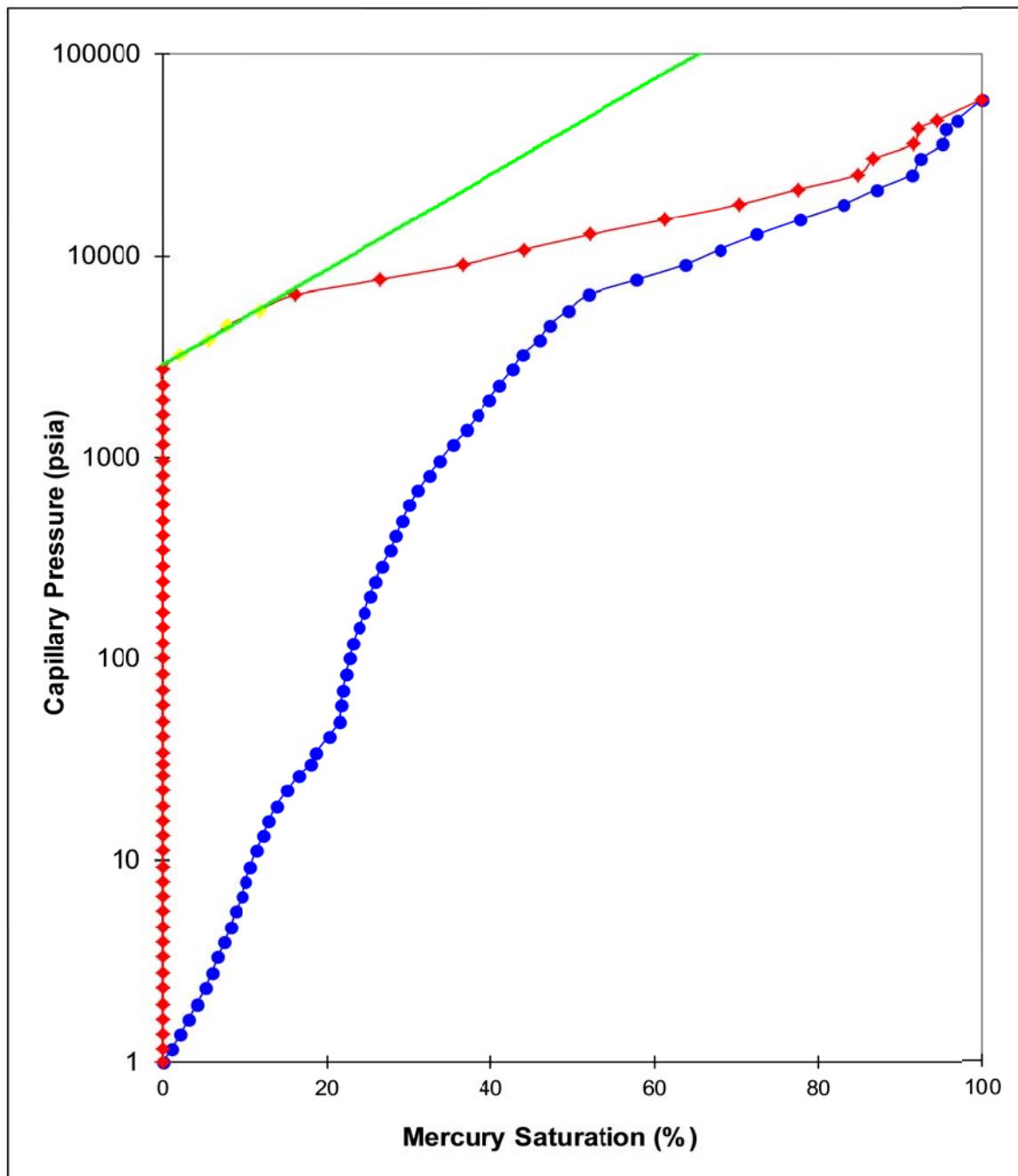
## CAPILLARY PRESSURE



**Client Well** QGC - A BG Group Business  
Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R128  
2980.93 m      **Ambient Permeability** 0.0019 mD  
**Ambient Porosity** 0.9 %



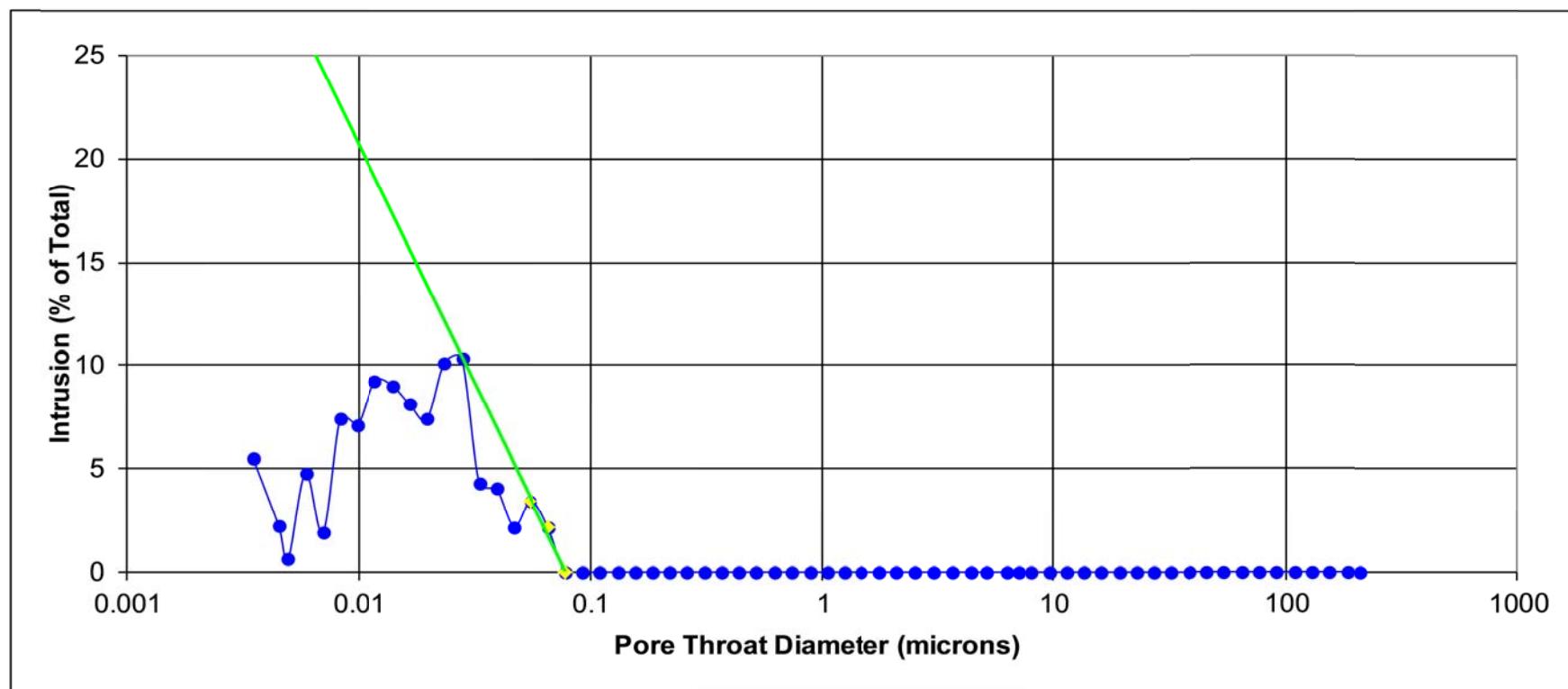
## PORE SIZE DISTRIBUTION



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

<b>Sample Depth</b>	R128	<b>Ambient Permeability</b>	0.0019 mD
	2980.93 m	<b>Ambient Porosity</b>	0.9 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R138  
**Depth** 2990.53 m  
**Ambient Permeability** 0.0026 mD  
**Ambient Porosity** 4.5 %  
**Pore radius** 0.03 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		3801	-	4186	-	7346
G-W		746	518	822	571	1443
O-W		435	269	479	296	841
						520

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.15	0.1	0.1	0.0	0.0	184	0.23	0.16	0.13	0.08	0.23	0.14
1.37	0.2	0.3	0.0	0.0	155	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.1	0.4	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.2	0.6	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.1	0.7	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.1	0.8	0.0	0.0	76.8	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.1	0.9	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.1	1.0	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.2	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.3	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.4	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.5	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	1.5	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	1.6	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	1.8	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	1.9	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.1	2.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.1	2.1	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	2.3	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	2.5	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
33.6	0.2	2.7	0.0	0.0	6.31	6.59	4.58	3.85	2.38	6.59	4.11
40.8	0.1	2.8	0.0	0.0	5.19	8.00	5.56	4.67	2.89	8.01	4.98
49.1	0.0	2.8	0.0	0.0	4.31	9.63	6.69	5.62	3.48	9.64	6.00
60.0	0.0	2.8	0.0	0.0	3.53	11.8	8.19	6.87	4.25	11.8	7.34
70.9	0.0	2.8	0.0	0.0	2.99	13.9	9.65	8.11	5.02	13.9	8.65
84.9	0.1	2.9	0.0	0.0	2.50	16.7	11.6	9.72	6.02	16.7	10.4
101	0.1	2.9	0.0	0.0	2.09	19.8	13.8	11.6	7.18	19.9	12.4
121	0.1	3.0	0.0	0.0	1.76	23.7	16.5	13.8	8.54	23.7	14.8
143	0.1	3.1	0.0	0.0	1.48	28.1	19.5	16.4	10.2	28.3	17.5
171	0.1	3.3	0.0	0.0	1.24	33.5	23.3	19.6	12.1	33.5	20.9
203	0.2	3.4	0.0	0.0	1.05	39.8	27.6	23.2	14.4	39.9	24.7
241	0.2	3.6	0.0	0.0	0.879	47.3	32.8	27.6	17.1	47.4	29.4
288	0.2	3.9	0.0	0.0	0.736	56.5	39.2	33.0	20.4	56.5	35.1
342	0.2	4.1	0.0	0.0	0.620	67.1	46.6	39.1	24.2	67.1	41.8
408	0.3	4.4	0.0	0.0	0.520	80.0	55.6	46.7	28.9	80.1	49.8
484	0.3	4.7	0.0	0.0	0.438	95.0	66.0	55.4	34.3	95.0	59.2
576	0.4	5.1	0.0	0.0	0.368	113	78.5	65.9	40.8	113	70.4
687	0.6	5.6	0.0	0.0	0.309	135	93.8	78.6	48.7	135	84.1
815	0.5	6.1	0.0	0.0	0.260	160	111	93.3	57.8	160	99.5
967	0.5	6.6	0.0	0.0	0.219	190	132	111	68.7	190	118
1148	0.6	7.2	0.0	0.0	0.185	225	156	131	81.1	225	140
1364	0.5	7.8	0.0	0.0	0.155	268	186	156	96.6	268	167
1621	0.6	8.3	0.0	0.0	0.131	318	221	186	115	319	198
1925	0.7	9.0	0.0	0.0	0.110	378	263	220	136	377	236
2288	0.7	9.7	0.0	0.0	0.0927	449	312	262	162	449	280
2714	0.7	10.4	0.0	0.0	0.0781	532	369	311	193	535	331
3225	0.9	11.3	0.0	0.0	0.0657	633	440	369	228	632	394
3832	1.1	12.4	0.0	0.0	0.0553	752	522	439	272	754	468
4549	1.5	13.8	1.7	1.7	0.0466	892	619	521	323	895	555
5403	2.2	16.1	2.5	4.2	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	3.1	19.2	3.5	7.7	0.0330	1259	874	734	454	1258	784
7621	12.8	31.9	14.6	22.3	0.0278	1495	1038	872	540	1496	931
9052	18.3	50.3	20.9	43.3	0.0234	1776	1233	1036	641	1776	1105
10750	11.1	61.4	12.6	55.9	0.0197	2109	1465	1230	761	2109	1313
12766	8.0	69.4	9.2	65.1	0.0166	2505	1740	1461	904	2505	1560
15163	6.4	75.8	7.4	72.4	0.0140	2975	2066	1735	1074	2976	1852
18007	5.5	81.3	6.2	78.6	0.0118	3533	2453	2061	1276	3536	2199
21386	4.7	86.0	5.4	84.0	0.0099	4196	2914	2447	1515	4198	2612
25399	3.9	90.0	4.5	88.5	0.0083	4983	3460	2907	1800	4988	3102
30161	3.2	93.1	3.6	92.2	0.0070	5917	4109	3452	2137	5921	3684
35819	3.1	96.2	3.5	95.7	0.0059	7027	4880	4099	2537	7030	4375
42524	2.1	98.3	2.4	98.1	0.0050	8343	5794	4867	3013	8349	5194
46875	1.0	99.3	1.2	99.2	0.0045	9196	6386	5364	3321	9202	5725
59954	0.7	100.0	0.8	100.0	0.0035	11762	8168	6861	4247	11768	7322

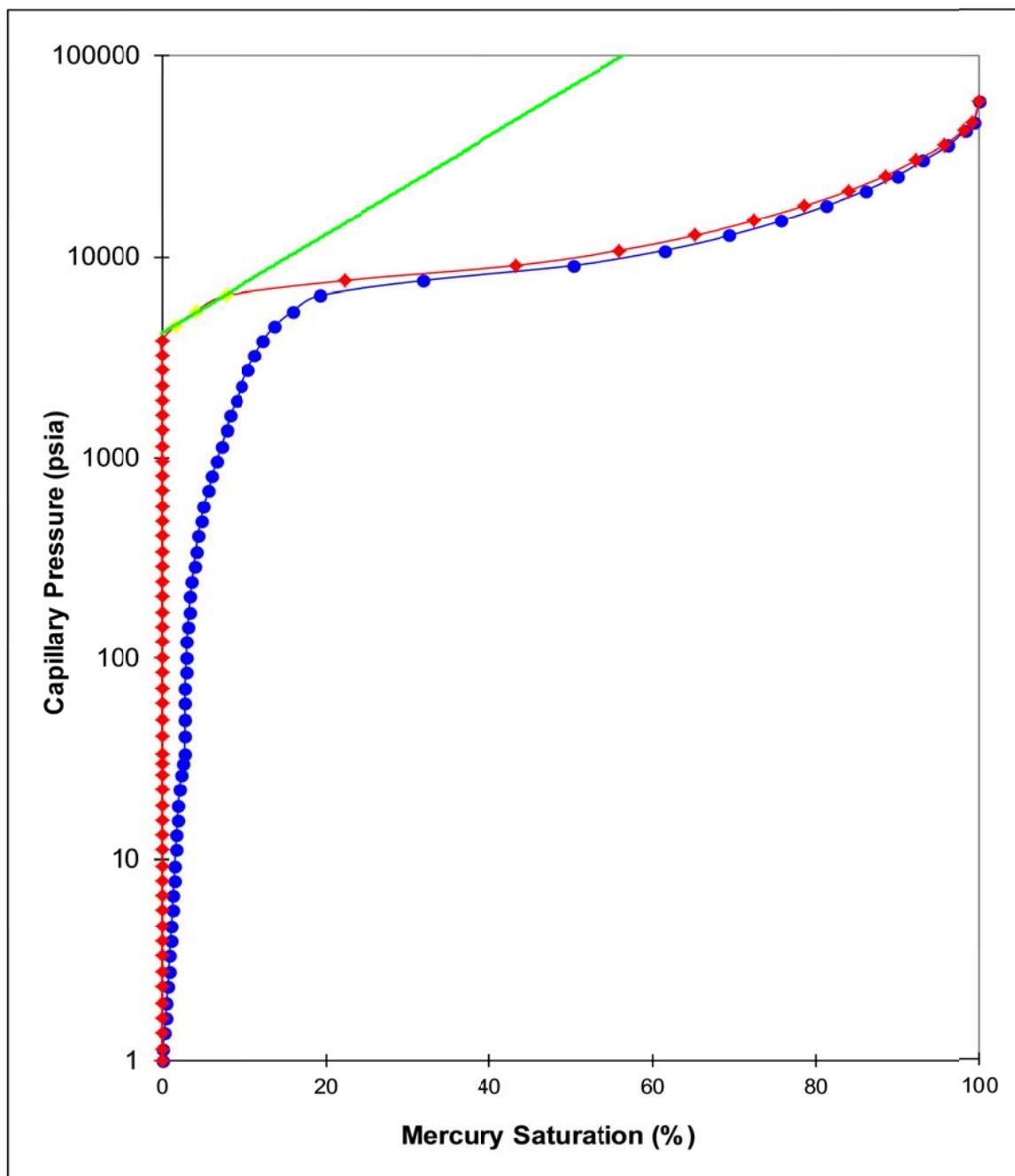
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R138  
2990.53 m      **Ambient Permeability** 0.0026 mD  
                 **Ambient Porosity** 4.5 %



## PORE SIZE DISTRIBUTION

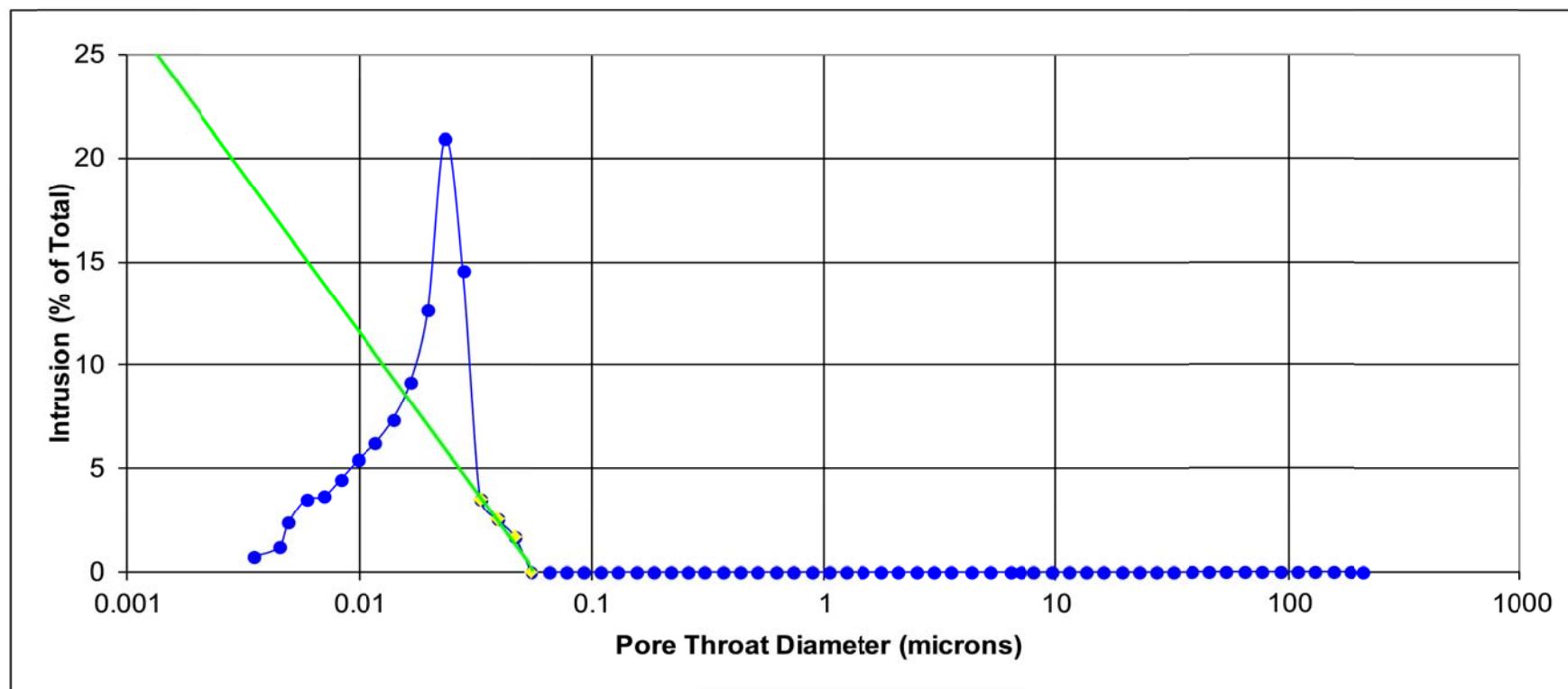


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R138  
2990.53 m

**Ambient Permeability** 0.0026 mD  
**Ambient Porosity** 4.5 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R139  
**Depth** 2990.58 m  
**Ambient Permeability** 0.0027 mD  
**Ambient Porosity** 4.7 %  
**Pore radius** 0.02 µm

Pressure Gradients, psi/foot		Conversion Parameters			
	Typical		air/mercury	air/water	air/oil
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0
	0.330	Laboratory IFT	480	72.0	24.0
	0.100	Reservoir $\Theta$		0.0	30.0
		Reservoir IFT		50.0	30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0
		Reservoir $T_{cos\Theta}$		50.0	42.0
					26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)
System		Lab	Resv	Lab	Resv
<b>A-Hg</b>		4435	-	5950	-
<b>G-W</b>		870	604	1167	810
<b>O-W</b>		508	314	682	422
				6897	-
				1353	939
				791	489

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.2	0.2	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.1	0.4	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.1	0.6	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.32	0.1	0.7	0.0	0.0	91.5	0.46	0.32	0.27	0.17	0.46	0.28
2.76	0.1	0.8	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.29	0.1	0.9	0.0	0.0	64.5	0.65	0.45	0.38	0.23	0.65	0.40
3.91	0.1	1.0	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.2	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.2	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.4	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.5	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	1.6	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	1.7	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	1.8	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	1.9	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.1	2.1	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	2.2	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	2.5	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	2.7	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
33.9	0.0	2.7	0.0	0.0	6.25	6.65	4.62	3.88	2.40	6.65	4.14
41.5	0.0	2.8	0.0	0.0	5.11	8.14	5.65	4.75	2.94	8.15	5.07
48.8	0.0	2.8	0.0	0.0	4.35	9.57	6.65	5.58	3.45	9.56	5.96
58.6	0.0	2.8	0.0	0.0	3.62	11.5	7.99	6.71	4.15	11.5	7.16
70.0	0.1	2.9	0.0	0.0	3.03	13.7	9.51	8.01	4.96	13.7	8.53
83.8	0.1	3.1	0.0	0.0	2.53	16.4	11.4	9.59	5.94	16.5	10.2
101	0.3	3.3	0.0	0.0	2.09	19.8	13.8	11.6	7.18	19.9	12.4
120	0.2	3.5	0.0	0.0	1.77	23.5	16.3	13.7	8.48	23.5	14.6
144	0.2	3.7	0.0	0.0	1.48	28.3	19.7	16.5	10.2	28.3	17.7
170	0.2	3.9	0.0	0.0	1.25	33.4	23.2	19.5	12.1	33.5	20.8
203	0.2	4.1	0.0	0.0	1.04	39.8	27.6	23.2	14.4	39.9	24.7
241	0.2	4.3	0.0	0.0	0.880	47.3	32.8	27.6	17.1	47.4	29.4
287	0.2	4.5	0.0	0.0	0.738	56.3	39.1	32.8	20.3	56.2	35.1
342	0.3	4.8	0.0	0.0	0.619	67.1	46.6	39.1	24.2	67.1	41.8
408	0.3	5.1	0.0	0.0	0.520	80.0	55.6	46.7	28.9	80.1	49.8
484	0.3	5.5	0.0	0.0	0.438	95.0	66.0	55.4	34.3	95.0	59.2
577	0.5	6.0	0.0	0.0	0.367	113	78.5	66.0	40.9	113	70.4
683	0.4	6.4	0.0	0.0	0.310	134	93.1	78.2	48.4	134	83.5
812	0.5	6.9	0.0	0.0	0.261	159	110	92.9	57.5	159	98.6
966	0.5	7.4	0.0	0.0	0.220	190	132	111	68.7	190	118
1150	0.5	7.9	0.0	0.0	0.184	226	157	132	81.7	226	141
1364	0.5	8.5	0.0	0.0	0.155	268	186	156	96.6	268	167
1618	0.5	9.0	0.0	0.0	0.131	317	220	185	115	319	197
1923	0.6	9.6	0.0	0.0	0.110	377	262	220	136	377	235
2285	0.6	10.2	0.0	0.0	0.0928	448	311	261	162	449	279
2715	0.7	10.9	0.0	0.0	0.0781	533	370	311	193	535	332
3224	0.8	11.7	0.0	0.0	0.0658	633	440	369	228	632	394
3834	1.1	12.8	0.0	0.0	0.0553	752	522	439	272	754	468
4545	1.1	13.9	0.0	0.0	0.0466	892	619	520	322	892	555
5401	1.8	15.7	2.1	2.1	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	2.6	18.3	3.0	5.1	0.0330	1259	874	734	454	1258	784
7621	10.0	28.3	11.6	16.8	0.0278	1495	1038	872	540	1496	931
9052	22.0	50.3	25.5	42.3	0.0234	1776	1233	1036	641	1776	1105
10750	11.7	62.0	13.6	55.9	0.0197	2109	1465	1230	761	2109	1313
12767	8.4	70.4	9.7	65.6	0.0166	2505	1740	1461	904	2505	1560
15163	6.5	76.9	7.5	73.1	0.0140	2975	2066	1735	1074	2976	1852
18007	5.6	82.5	6.5	79.7	0.0118	3533	2453	2061	1276	3536	2199
21384	4.7	87.2	5.4	85.1	0.0099	4195	2913	2447	1515	4198	2611
25398	4.2	91.3	4.8	89.9	0.0083	4983	3460	2907	1800	4988	3102
30160	3.3	94.6	3.8	93.7	0.0070	5917	4109	3452	2137	5921	3684
35820	2.8	97.4	3.2	96.9	0.0059	7027	4880	4099	2537	7030	4375
42528	2.0	99.4	2.3	99.3	0.0050	8343	5794	4867	3013	8349	5194
46871	0.5	99.9	0.6	99.8	0.0045	9195	6385	5364	3321	9202	5724
59947	0.1	100.0	0.2	100.0	0.0035	11761	8167	6860	4247	11768	7321

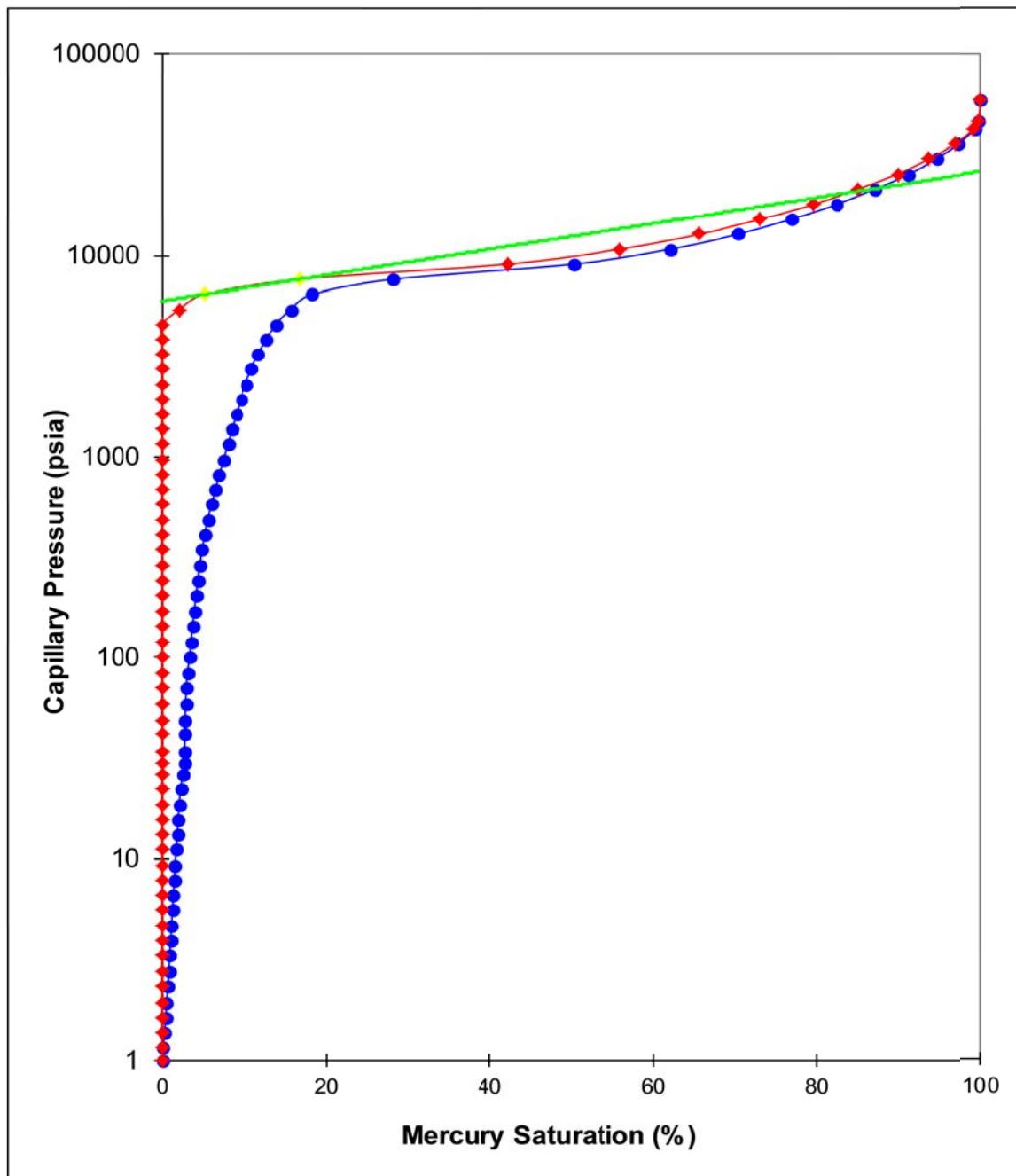
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R139  
2990.58 m      **Ambient Permeability** 0.0027 mD  
                 **Ambient Porosity** 4.7 %



## PORE SIZE DISTRIBUTION

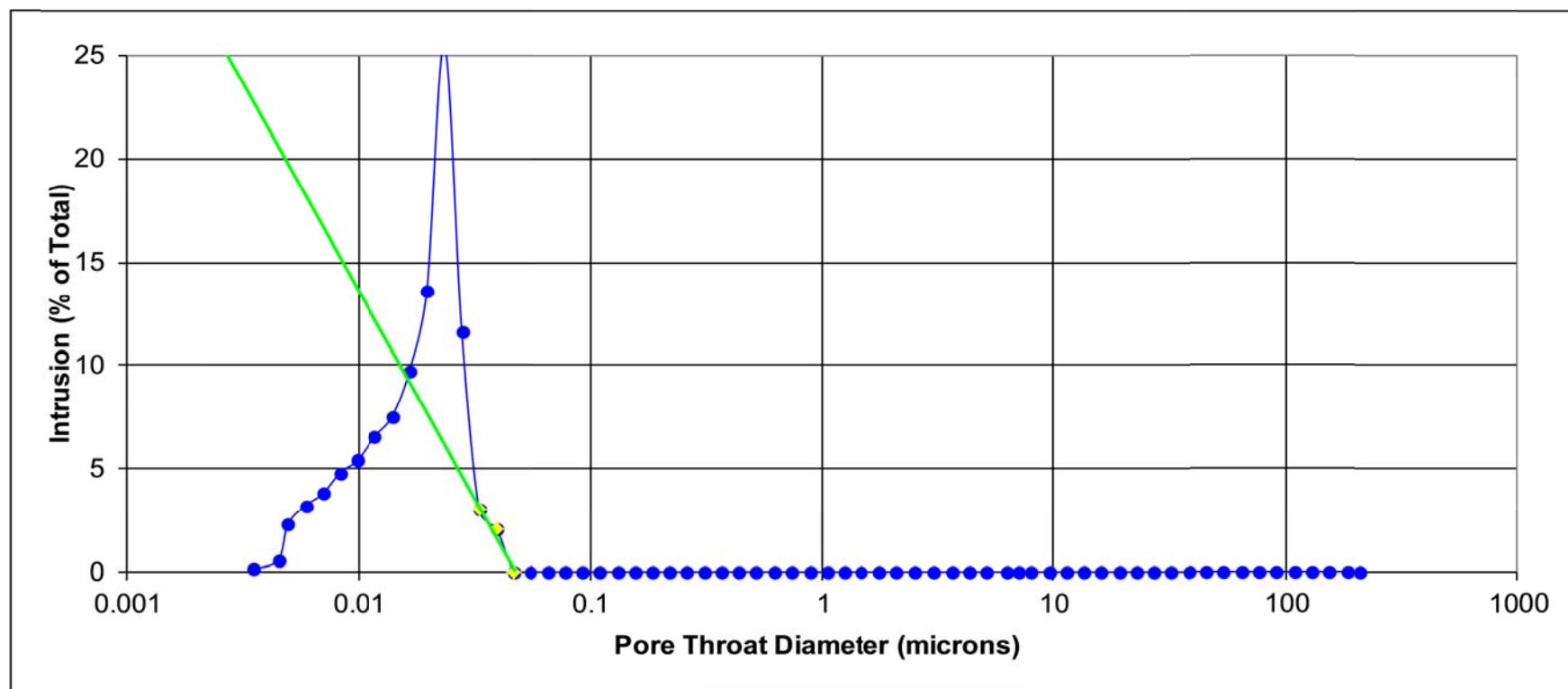


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R139  
2990.58 m

**Ambient Permeability** 0.0027 mD  
**Ambient Porosity** 4.7 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R151  
**Depth** 3005.55 m  
**Ambient Permeability** 0.0069 mD  
**Ambient Porosity** 5.5 %  
**Pore radius** 0.02 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
<b>A-Hg</b>		4627	-	5983	-	9052
<b>G-W</b>		908	630	1174	815	1776
<b>O-W</b>		530	328	685	424	1036
						641

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.16	0.1	0.1	0.0	0.0	183	0.23	0.16	0.13	0.08	0.23	0.14
1.38	0.2	0.3	0.0	0.0	154	0.27	0.19	0.16	0.10	0.27	0.17
1.64	0.1	0.4	0.0	0.0	129	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.1	0.6	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.1	0.7	0.0	0.0	91.6	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.1	0.8	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.1	0.9	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.0	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.1	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.2	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.4	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	1.4	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	1.5	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.3	1.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	1.9	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.2	2.0	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.2	2.2	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.3	2.5	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.4	2.9	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
33.7	0.1	3.0	0.0	0.0	6.28	6.61	4.59	3.86	2.39	6.62	4.11
40.7	- 0.1	2.9	0.0	0.0	5.21	7.98	5.54	4.66	2.88	7.98	4.97
49.4	0.0	2.9	0.0	0.0	4.29	9.69	6.73	5.65	3.50	9.70	6.03
59.4	0.1	3.0	0.0	0.0	3.57	11.7	8.13	6.80	4.21	11.7	7.29
72.2	0.6	3.5	0.0	0.0	2.93	14.2	9.86	8.26	5.11	14.2	8.84
83.9	0.1	3.7	0.0	0.0	2.53	16.5	11.5	9.60	5.94	16.5	10.3
99.6	0.1	3.8	0.0	0.0	2.13	19.5	13.5	11.4	7.06	19.6	12.1
120	0.2	4.0	0.0	0.0	1.76	23.5	16.3	13.7	8.48	23.5	14.6
145	0.3	4.4	0.0	0.0	1.47	28.4	19.7	16.6	10.3	28.5	17.7
171	0.4	4.8	0.0	0.0	1.24	33.5	23.3	19.6	12.1	33.5	20.9
204	0.3	5.1	0.0	0.0	1.04	40.0	27.8	23.3	14.4	39.9	24.9
241	0.3	5.4	0.0	0.0	0.878	47.3	32.8	27.6	17.1	47.4	29.4
288	0.3	5.7	0.0	0.0	0.737	56.5	39.2	33.0	20.4	56.5	35.1
343	0.4	6.1	0.0	0.0	0.618	67.3	46.7	39.3	24.3	67.3	41.9
409	0.4	6.5	0.0	0.0	0.518	80.2	55.7	46.8	29.0	80.4	49.9
485	0.5	7.0	0.0	0.0	0.437	95.1	66.0	55.5	34.4	95.3	59.2
575	0.5	7.6	0.0	0.0	0.369	113	78.5	65.8	40.7	113	70.4
683	0.6	8.2	0.0	0.0	0.310	134	93.1	78.2	48.4	134	83.5
814	0.7	9.0	0.0	0.0	0.260	160	111	93.2	57.7	160	99.5
967	0.6	9.6	0.0	0.0	0.219	190	132	111	68.7	190	118
1147	0.7	10.3	0.0	0.0	0.185	225	156	131	81.1	225	140
1363	0.8	11.1	0.0	0.0	0.155	267	185	156	96.6	268	166
1620	0.8	11.8	0.0	0.0	0.131	318	221	185	115	319	198
1923	0.8	12.7	0.0	0.0	0.110	377	262	220	136	377	235
2287	0.9	13.6	0.0	0.0	0.0927	449	312	262	162	449	280
2713	1.0	14.6	0.0	0.0	0.0781	532	369	310	192	532	331
3225	1.2	15.7	0.0	0.0	0.0657	633	440	369	228	632	394
3832	1.4	17.1	0.0	0.0	0.0553	752	522	439	272	754	468
4548	1.7	18.8	0.0	0.0	0.0466	892	619	520	322	892	555
5402	2.4	21.2	2.9	2.9	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	3.4	24.6	4.2	7.1	0.0330	1259	874	734	454	1258	784
7622	6.0	30.6	7.5	14.6	0.0278	1495	1038	872	540	1496	931
9052	8.5	39.1	10.5	25.1	0.0234	1776	1233	1036	641	1776	1105
10750	11.2	50.4	13.9	38.9	0.0197	2109	1465	1230	761	2109	1313
12767	9.9	60.3	12.2	51.1	0.0166	2505	1740	1461	904	2505	1560
15162	8.1	68.4	9.9	61.0	0.0140	2975	2066	1735	1074	2976	1852
18007	7.1	75.5	8.8	69.8	0.0118	3533	2453	2061	1276	3536	2199
21386	6.0	81.5	7.4	77.2	0.0099	4196	2914	2447	1515	4198	2612
25398	5.5	87.0	6.8	84.0	0.0083	4983	3460	2907	1800	4988	3102
30163	4.3	91.3	5.3	89.3	0.0070	5918	4110	3452	2137	5921	3684
35821	3.6	95.0	4.5	93.8	0.0059	7028	4881	4099	2537	7030	4376
42536	3.2	98.2	4.0	97.8	0.0050	8345	5795	4868	3014	8352	5195
46882	1.2	99.4	1.4	99.2	0.0045	9198	6388	5365	3321	9202	5727
59954	0.6	100.0	0.8	100.0	0.0035	11762	8168	6861	4247	11768	7322

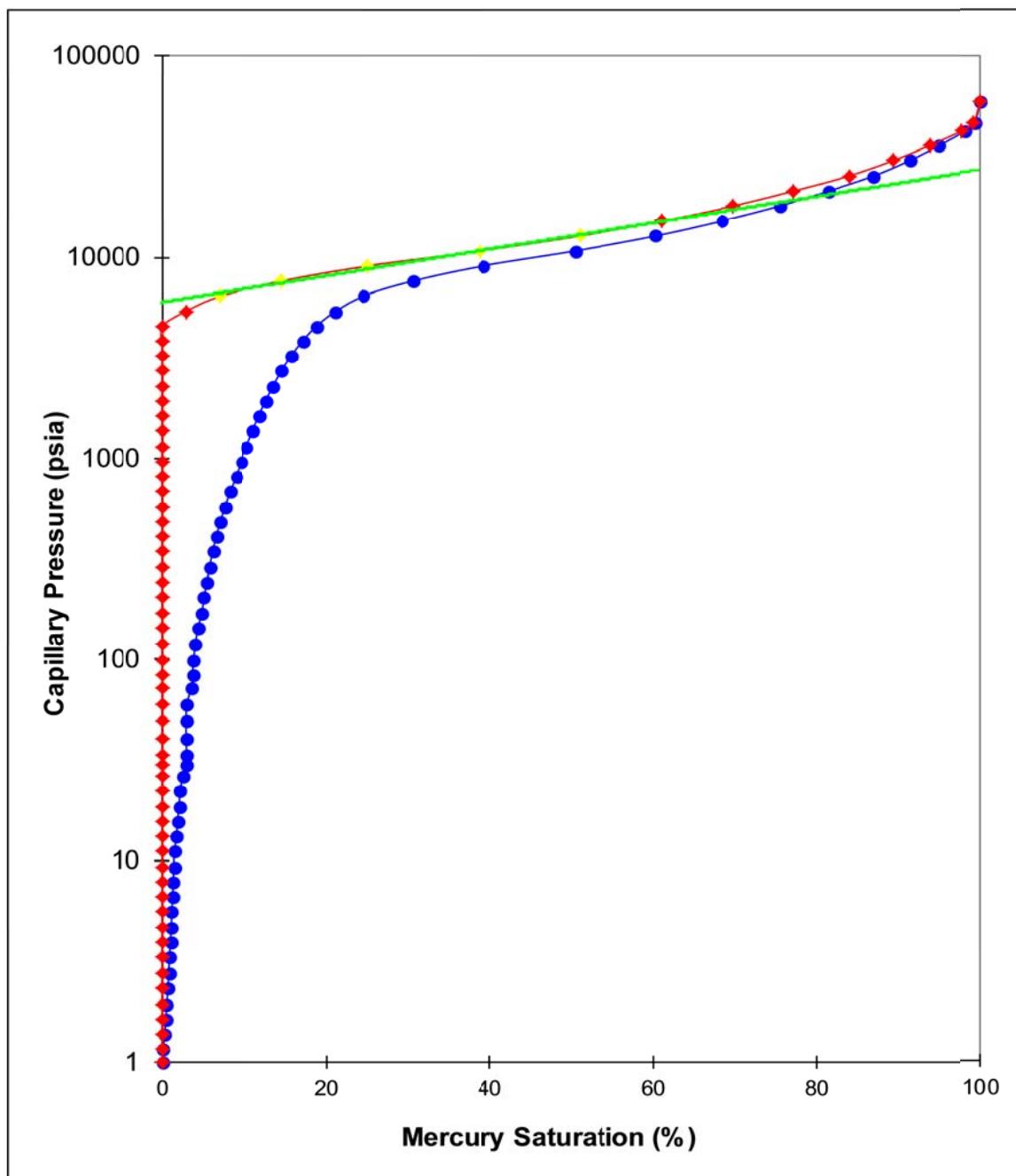
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R151  
3005.55 m      **Ambient Permeability** 0.0069 mD  
                 **Ambient Porosity** 5.5 %



## PORE SIZE DISTRIBUTION

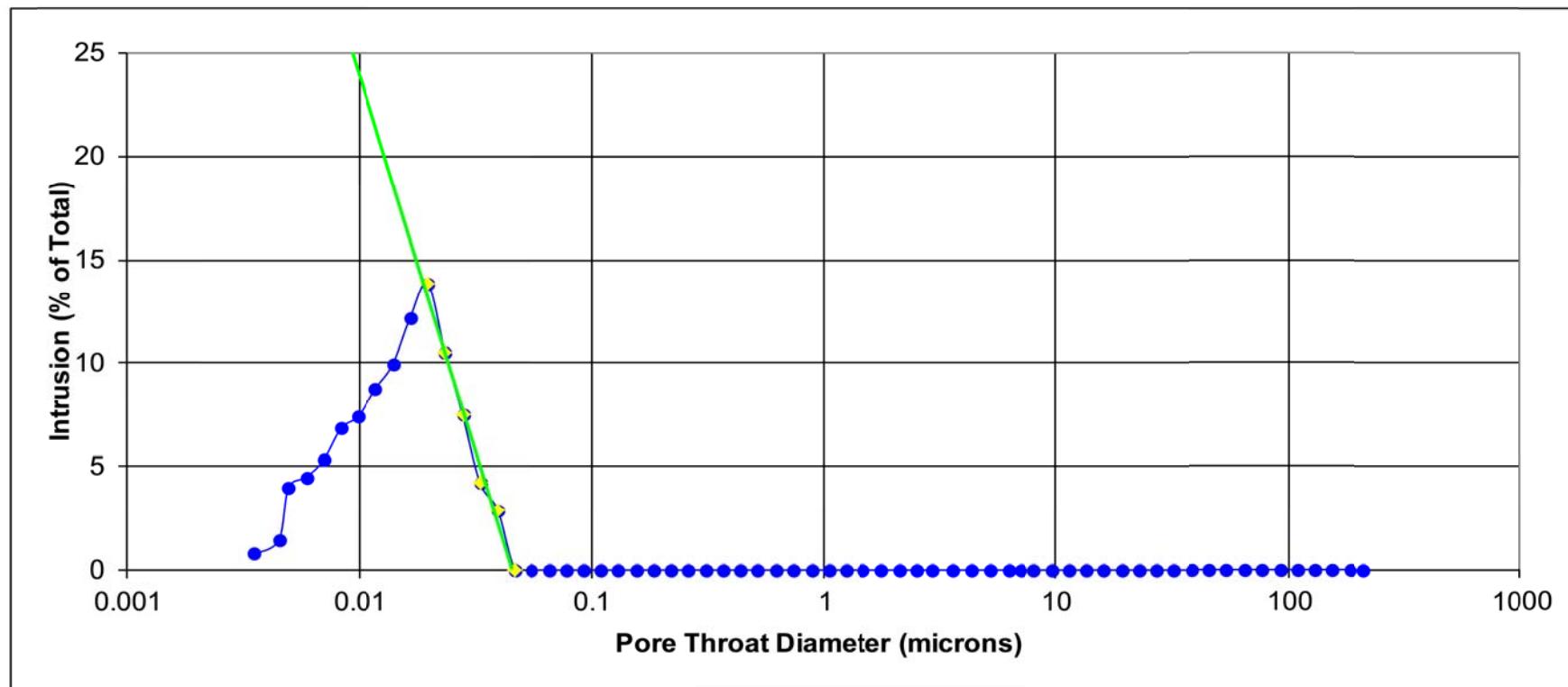


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R151  
3005.55 m

**Ambient Permeability** 0.0069 mD  
**Ambient Porosity** 5.5 %



## INTERPRETED CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1  
**Test Method** Air/Mercury Capillary Pressure Drainage  
**Sample** R152  
**Depth** 3005.60 m  
**Ambient Permeability** 0.0032 mD  
**Ambient Porosity** 6.2 %  
**Pore radius** 0.03 µm

Pressure Gradients, psi/foot		Conversion Parameters				
	Typical		air/mercury	air/water	air/oil	oil/water
Water:	0.440	Laboratory $\Theta$	140	0.0	0.0	30.0
	0.330	Laboratory IFT	480	72.0	24.0	48.0
	0.100	Reservoir $\Theta$		0.0		30.0
		Reservoir IFT		50.0		30.0
		Laboratory $T_{cos\Theta}$	367	72.0	24.0	42.0
		Reservoir $T_{cos\Theta}$		50.0		26.0
		Entry Pressure (psi)	Displacement Pressure (psi)		Threshold Pressure (psi)	
System		Lab	Resv	Lab	Resv	Lab
A-Hg		3130	-	3852	-	6297
G-W		614	426	756	525	1236
O-W		358	222	441	273	721
						446

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
1.00	0.0	0.0	0.0	0.0	212	0.20	0.14	0.11	0.07	0.20	0.12
1.15	0.1	0.1	0.0	0.0	184	0.23	0.16	0.13	0.08	0.23	0.14
1.37	0.2	0.3	0.0	0.0	155	0.27	0.19	0.16	0.10	0.27	0.17
1.63	0.2	0.4	0.0	0.0	130	0.32	0.22	0.19	0.12	0.32	0.20
1.94	0.1	0.6	0.0	0.0	109	0.38	0.27	0.22	0.14	0.38	0.24
2.31	0.1	0.6	0.0	0.0	91.7	0.45	0.32	0.26	0.16	0.45	0.28
2.76	0.1	0.7	0.0	0.0	76.9	0.54	0.38	0.32	0.20	0.54	0.34
3.28	0.1	0.9	0.0	0.0	64.6	0.64	0.45	0.38	0.23	0.64	0.40
3.91	0.1	1.0	0.0	0.0	54.2	0.77	0.53	0.45	0.28	0.77	0.48
4.65	0.1	1.1	0.0	0.0	45.6	0.91	0.63	0.53	0.33	0.91	0.57
5.53	0.1	1.2	0.0	0.0	38.3	1.08	0.75	0.63	0.39	1.09	0.67
6.58	0.1	1.3	0.0	0.0	32.2	1.29	0.90	0.75	0.47	1.29	0.80
7.82	0.1	1.4	0.0	0.0	27.1	1.53	1.06	0.90	0.55	1.54	0.95
9.30	0.1	1.5	0.0	0.0	22.8	1.82	1.26	1.06	0.66	1.82	1.13
11.1	0.1	1.6	0.0	0.0	19.2	2.18	1.51	1.27	0.79	2.18	1.35
13.1	0.1	1.7	0.0	0.0	16.1	2.57	1.78	1.50	0.93	2.57	1.60
15.6	0.1	1.8	0.0	0.0	13.6	3.06	2.13	1.79	1.11	3.08	1.91

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
18.6	0.1	1.9	0.0	0.0	11.4	3.65	2.53	2.13	1.32	3.66	2.27
22.1	0.1	2.1	0.0	0.0	9.61	4.34	3.01	2.53	1.57	4.35	2.70
26.2	0.2	2.2	0.0	0.0	8.09	5.14	3.57	3.00	1.86	5.15	3.20
30.0	0.2	2.4	0.0	0.0	7.07	5.89	4.09	3.43	2.12	5.87	3.67
33.3	0.3	2.7	0.0	0.0	6.37	6.53	4.53	3.81	2.36	6.54	4.06
41.8	0.0	2.7	0.0	0.0	5.07	8.20	5.69	4.78	2.96	8.20	5.10
49.7	0.0	2.7	0.0	0.0	4.27	9.75	6.77	5.69	3.52	9.75	6.07
58.7	0.0	2.8	0.0	0.0	3.61	11.5	7.99	6.72	4.16	11.5	7.16
70.8	0.0	2.8	0.0	0.0	2.99	13.9	9.65	8.10	5.01	13.9	8.65
85.2	0.1	2.9	0.0	0.0	2.49	16.7	11.6	9.75	6.04	16.7	10.4
102	0.2	3.1	0.0	0.0	2.07	20.0	13.9	11.7	7.24	20.1	12.5
121	0.1	3.2	0.0	0.0	1.76	23.7	16.5	13.8	8.54	23.7	14.8
143	0.1	3.3	0.0	0.0	1.48	28.1	19.5	16.4	10.2	28.3	17.5
170	0.1	3.5	0.0	0.0	1.25	33.4	23.2	19.5	12.1	33.5	20.8
204	0.2	3.7	0.0	0.0	1.04	40.0	27.8	23.3	14.4	39.9	24.9
242	0.2	3.9	0.0	0.0	0.877	47.5	33.0	27.7	17.1	47.4	29.6
288	0.2	4.1	0.0	0.0	0.737	56.5	39.2	33.0	20.4	56.5	35.1
343	0.3	4.4	0.0	0.0	0.618	67.3	46.7	39.3	24.3	67.3	41.9
408	0.3	4.7	0.0	0.0	0.519	80.0	55.6	46.7	28.9	80.1	49.8
485	0.4	5.1	0.0	0.0	0.437	95.1	66.0	55.5	34.4	95.3	59.2
576	0.5	5.6	0.0	0.0	0.368	113	78.5	65.9	40.8	113	70.4
686	0.6	6.2	0.0	0.0	0.309	135	93.8	78.5	48.6	135	84.1
815	0.7	6.8	0.0	0.0	0.260	160	111	93.3	57.8	160	99.5
967	0.9	7.7	0.0	0.0	0.219	190	132	111	68.7	190	118
1150	0.9	8.6	0.0	0.0	0.184	226	157	132	81.7	226	141
1364	0.7	9.3	0.0	0.0	0.155	268	186	156	96.6	268	167
1620	0.8	10.1	0.0	0.0	0.131	318	221	185	115	319	198
1925	0.8	11.0	0.0	0.0	0.110	378	263	220	136	377	236
2287	0.9	11.8	0.0	0.0	0.0927	449	312	262	162	449	280
2715	1.1	12.9	0.0	0.0	0.0781	533	370	311	193	535	332
3226	1.2	14.1	0.0	0.0	0.0657	633	440	369	228	632	394
3832	1.4	15.5	1.6	1.6	0.0553	752	522	439	272	754	468
4551	1.7	17.2	2.0	3.6	0.0466	893	620	521	323	895	556
5403	2.5	19.7	2.9	6.5	0.0392	1060	736	618	383	1061	660

Pressure (psi)	Raw Data		Conformance Corrected		Pore Diameter (µm)	Equivalent Air/Brine Lab (psi)	Injection Pressure Air/Brine Res Con (psi)	Oil/Brine Lab Conditions (psi)	Oil/Brine Reservoir Conditions (psi)	Height Above Free Water Oil-Water (metres)	Height Above Free Water Gas-Water (metres)
	Intrusion (%)	Saturation (%)	Intrusion (%)	Saturation (%)							
6417	3.4	23.1	4.0	10.5	0.0330	1259	874	734	454	1258	784
7622	6.5	29.6	7.5	18.1	0.0278	1495	1038	872	540	1496	931
9052	9.6	39.2	11.2	29.3	0.0234	1776	1233	1036	641	1776	1105
10750	10.1	49.3	11.8	41.0	0.0197	2109	1465	1230	761	2109	1313
12767	9.3	58.7	10.8	51.9	0.0166	2505	1740	1461	904	2505	1560
15162	8.7	67.4	10.1	62.0	0.0140	2975	2066	1735	1074	2976	1852
18007	7.2	74.6	8.4	70.4	0.0118	3533	2453	2061	1276	3536	2199
21386	6.1	80.7	7.1	77.5	0.0099	4196	2914	2447	1515	4198	2612
25399	5.9	86.5	6.8	84.3	0.0083	4983	3460	2907	1800	4988	3102
30163	4.1	90.6	4.8	89.1	0.0070	5918	4110	3452	2137	5921	3684
35818	3.9	94.5	4.5	93.6	0.0059	7027	4880	4099	2537	7030	4375
42535	4.2	98.7	4.8	98.5	0.0050	8345	5795	4868	3014	8352	5195
46872	0.8	99.5	1.0	99.4	0.0045	9196	6386	5364	3321	9202	5725
59954	0.5	100.0	0.6	100.0	0.0035	11762	8168	6861	4247	11768	7322

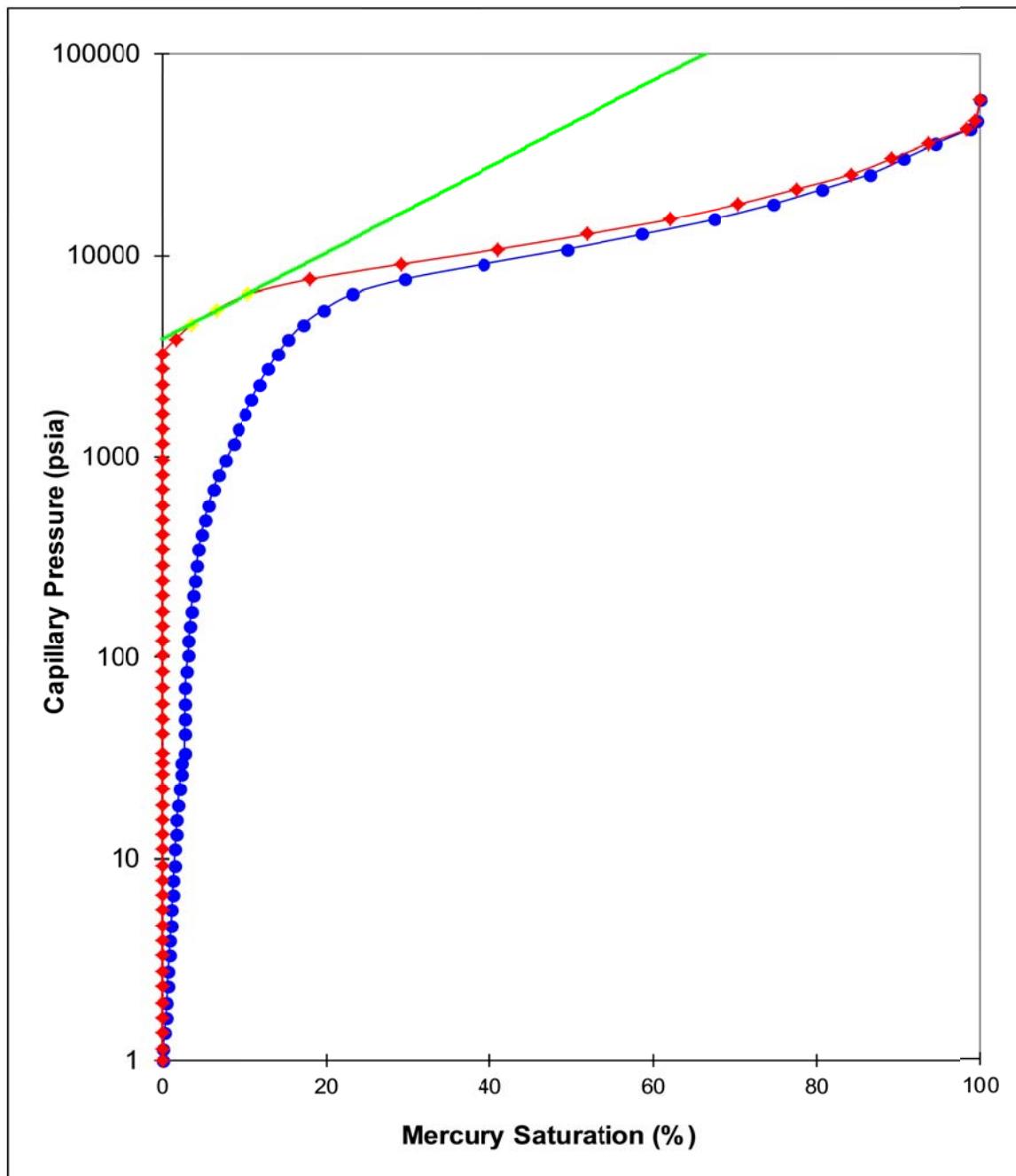
## CAPILLARY PRESSURE



**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R152  
3005.60 m      **Ambient Permeability** 0.0032 mD  
                 **Ambient Porosity** 6.2 %



## PORE SIZE DISTRIBUTION

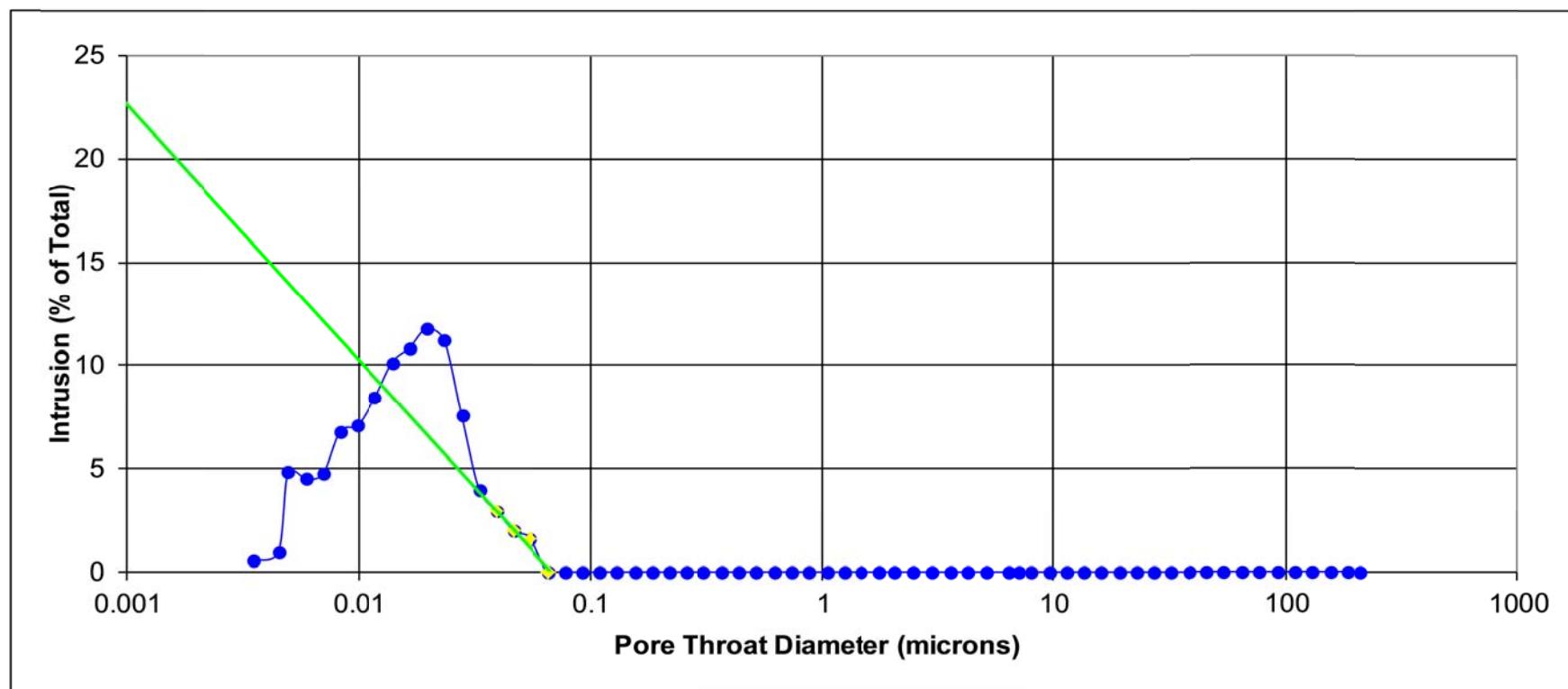


**Client** QGC - A BG Group Business  
**Well** Magnetic-1

**Test Method** Air/Mercury Capillary Pressure Drainage

**Sample Depth** R152  
3005.60 m

**Ambient Permeability** 0.0032 mD  
**Ambient Porosity** 6.2 %





## APPENDIX I

### *QGC – A BG Group Business* **MAGNETIC-1**

#### *Fluid Properties*

## **FLUID PROPERTIES**

26,200 ppm NaCl equivalent

Density = 1.029 g/cm<sup>3</sup> @ 25°C  
Resistivity = 0.22 ohm.m @ 25°C

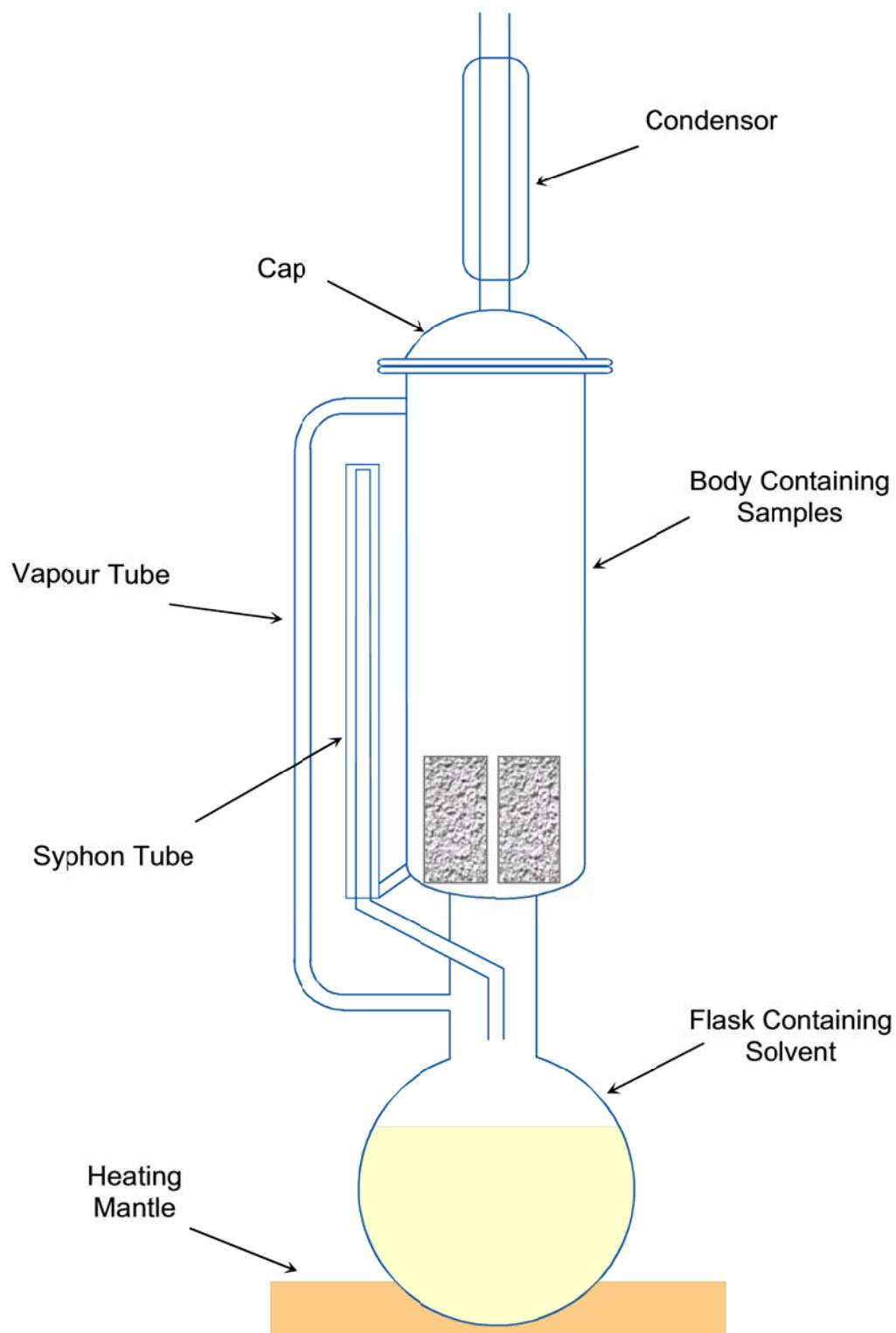


## APPENDIX II

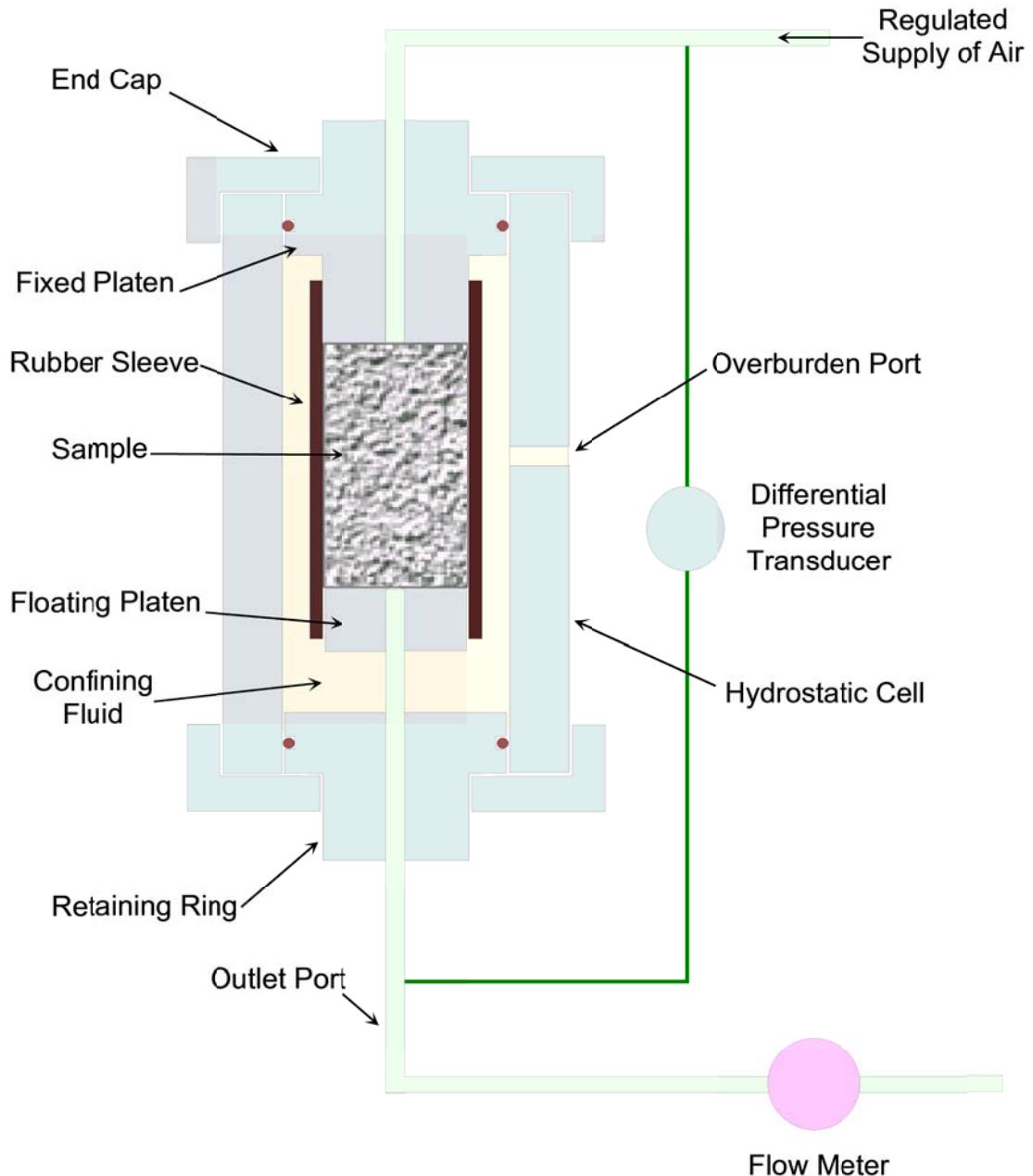
*QGC – A BG Group Business*  
**MAGNETIC-1**

*Equipment Schematics*

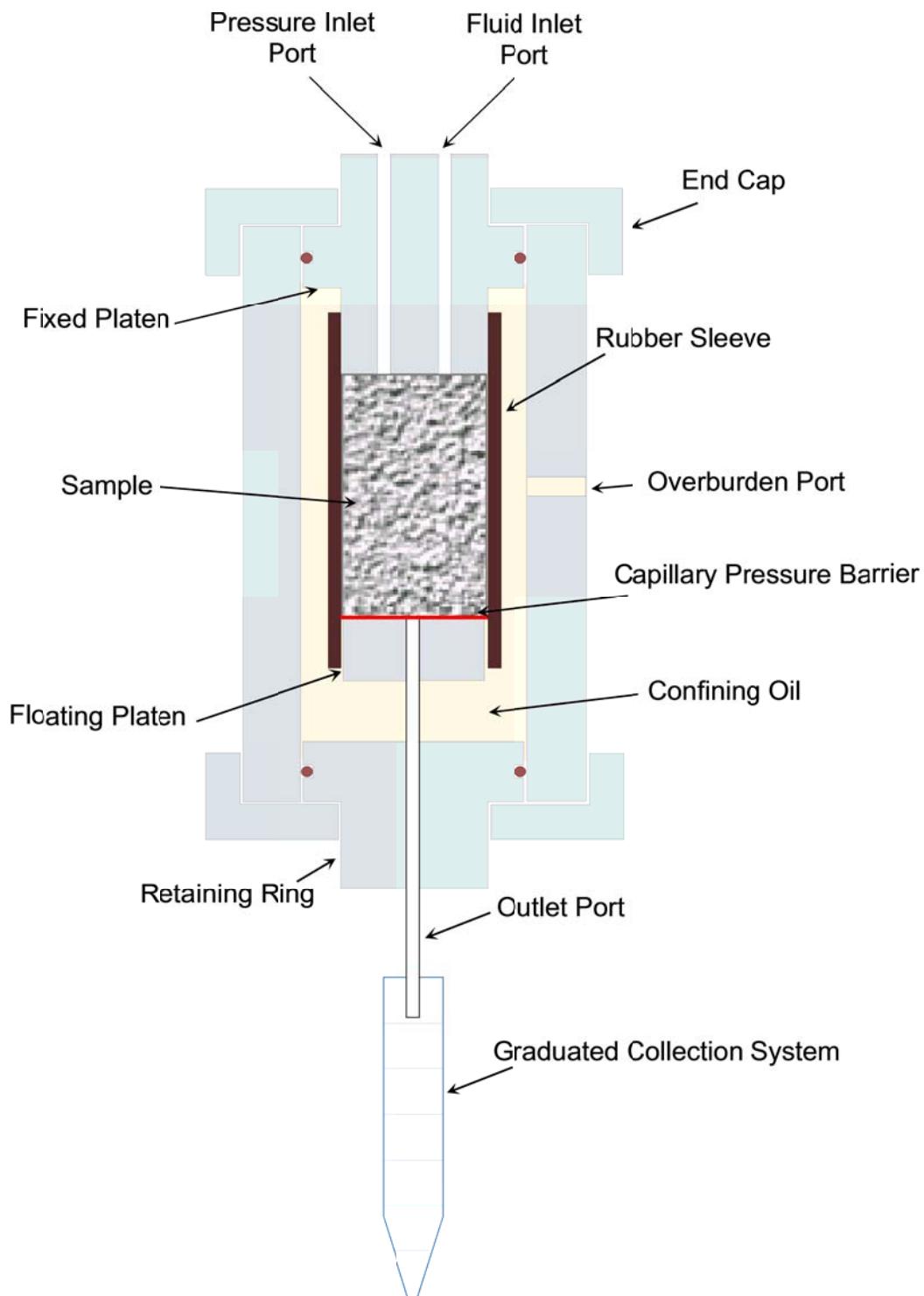
## SOXHLET CLEANING APPARATUS



## GAS PERMEAMETER SCHEMATIC (Hydrostatic)



## HYDROSTATIC CAPILLARY PRESSURE CELL

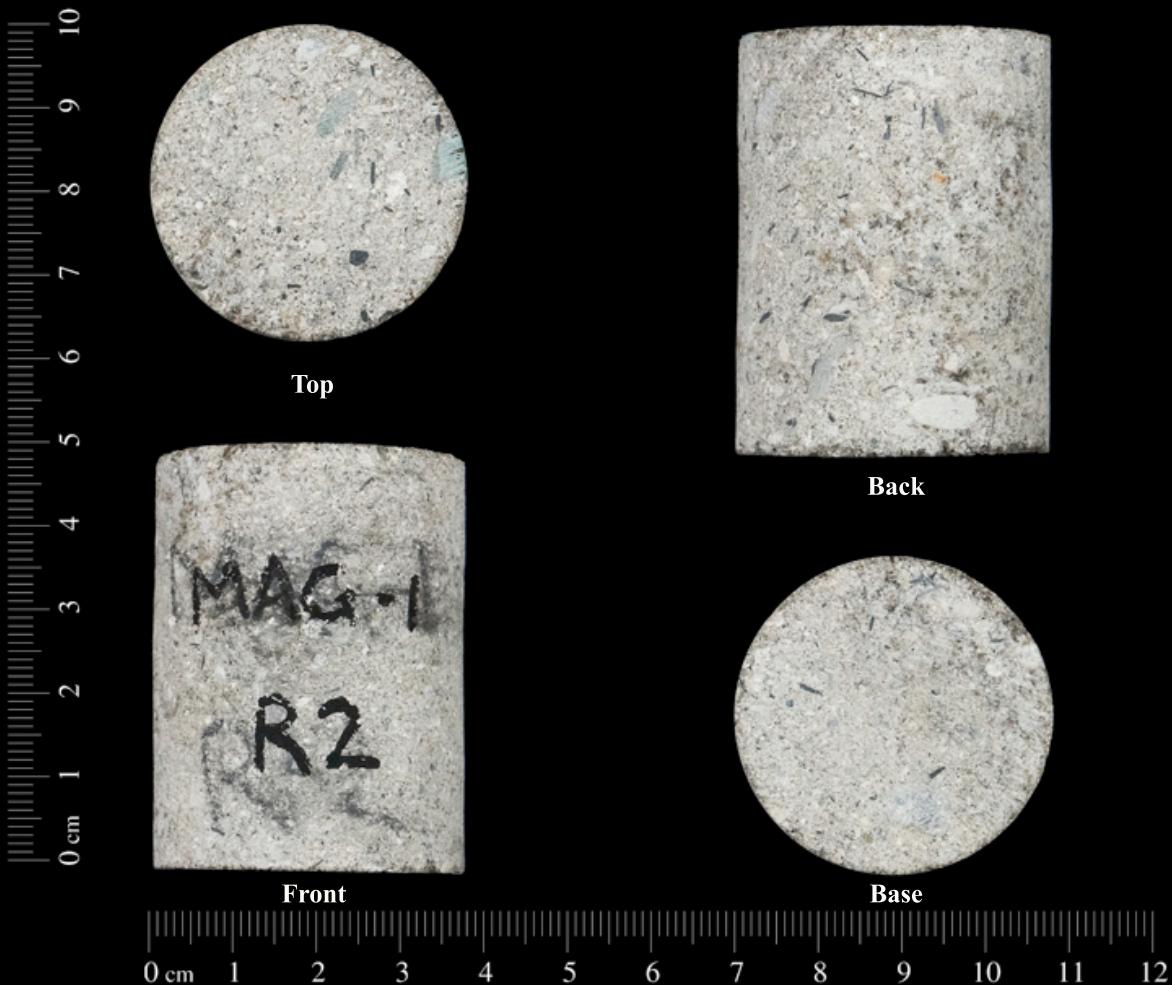




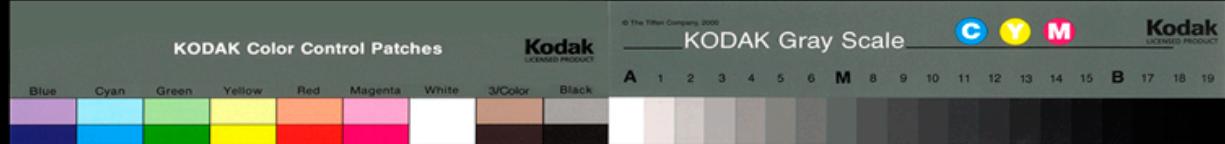
## **APPENDIX III**

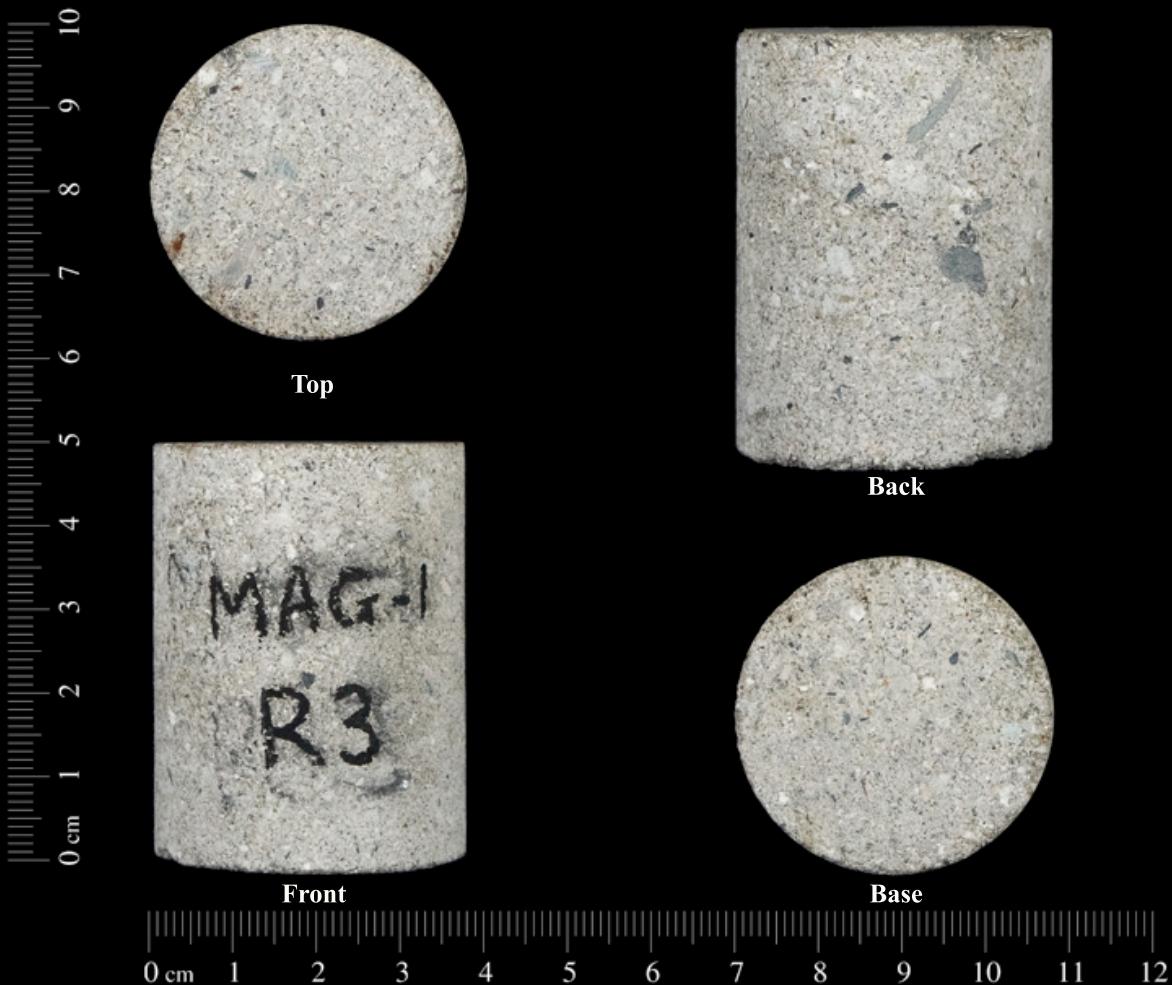
***QGC – A BG Group Business***  
***MAGNETIC-1***

***Plug Photography***

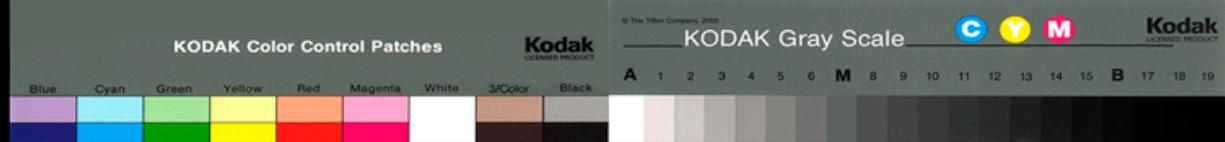


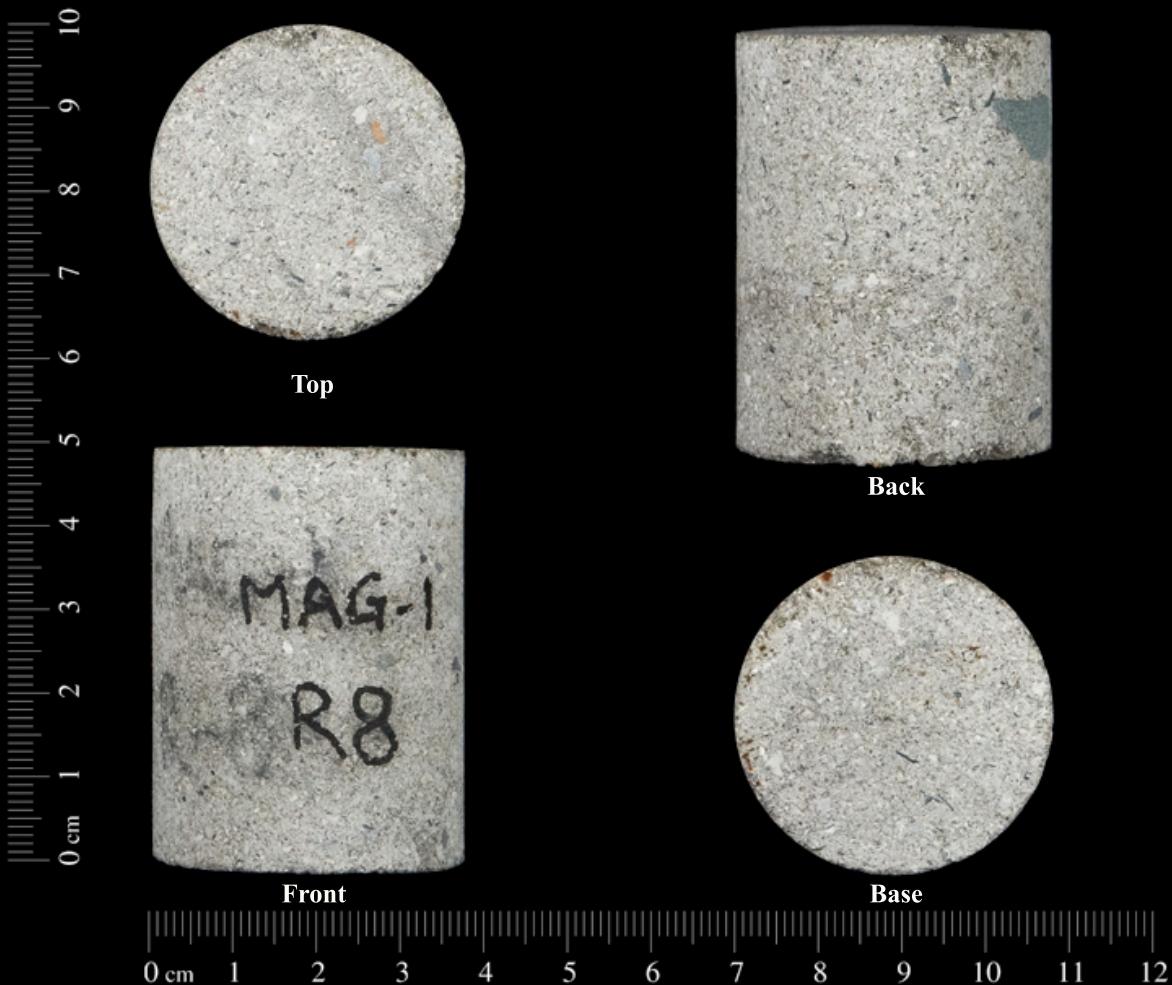
Sample No.:	R2
Depth:	2936.60 m
Permeability:	0.57 mD
Porosity:	11.7 %



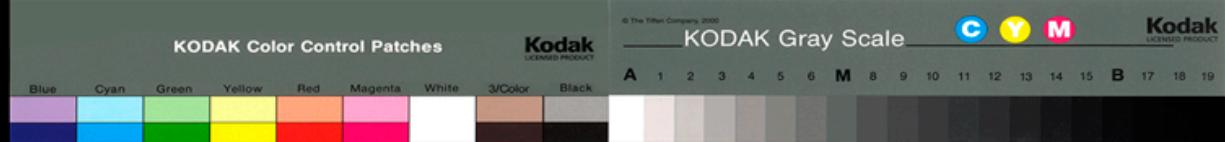


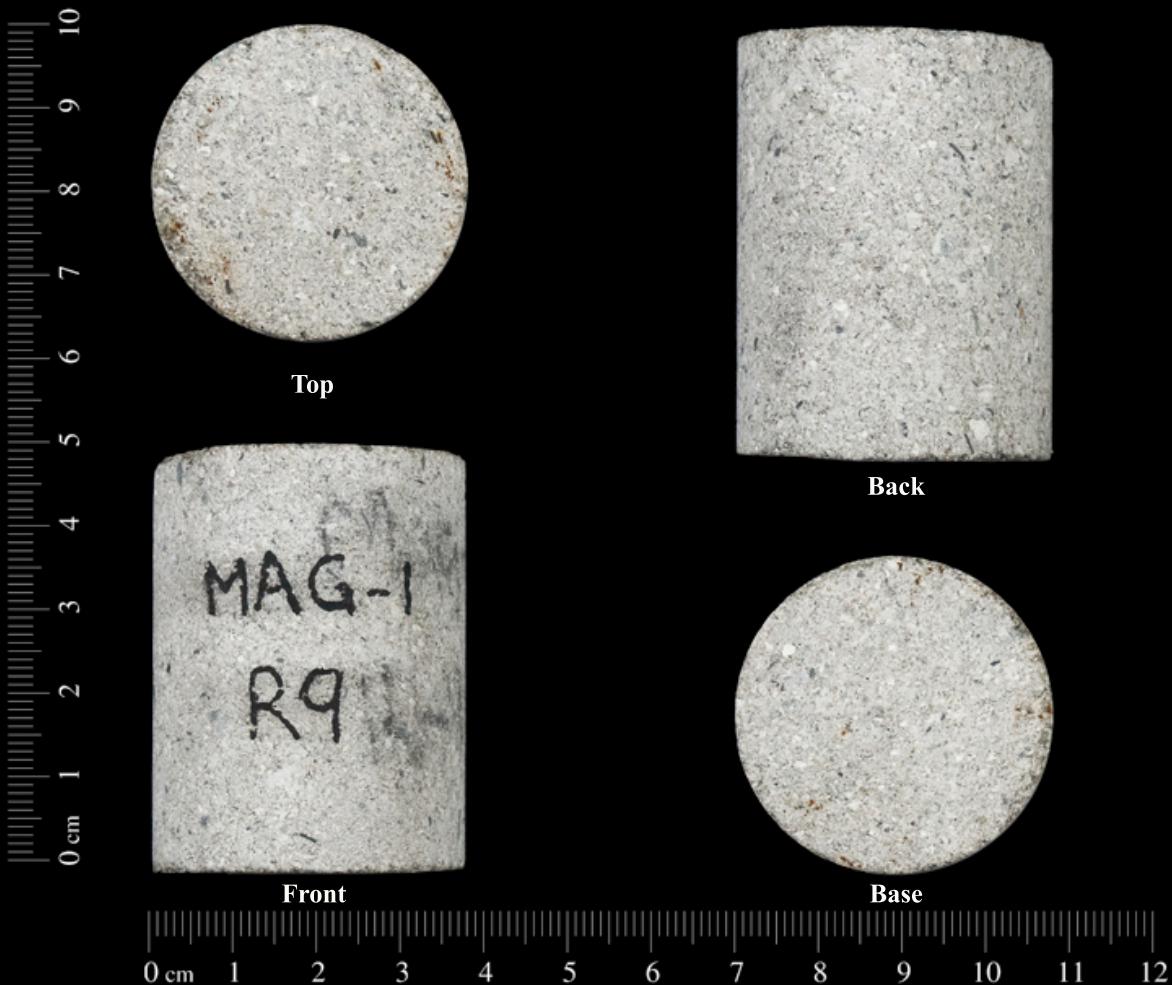
Sample No.:	R3
Depth:	2936.91 m
Permeability:	0.53 mD
Porosity:	11.7 %



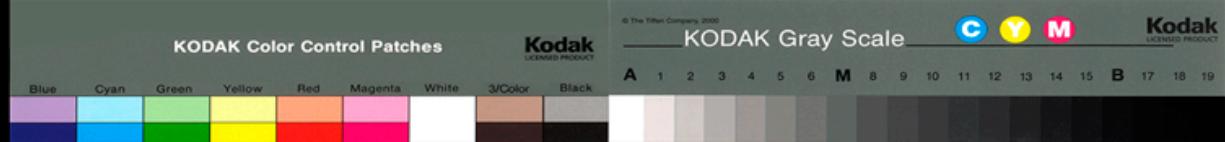


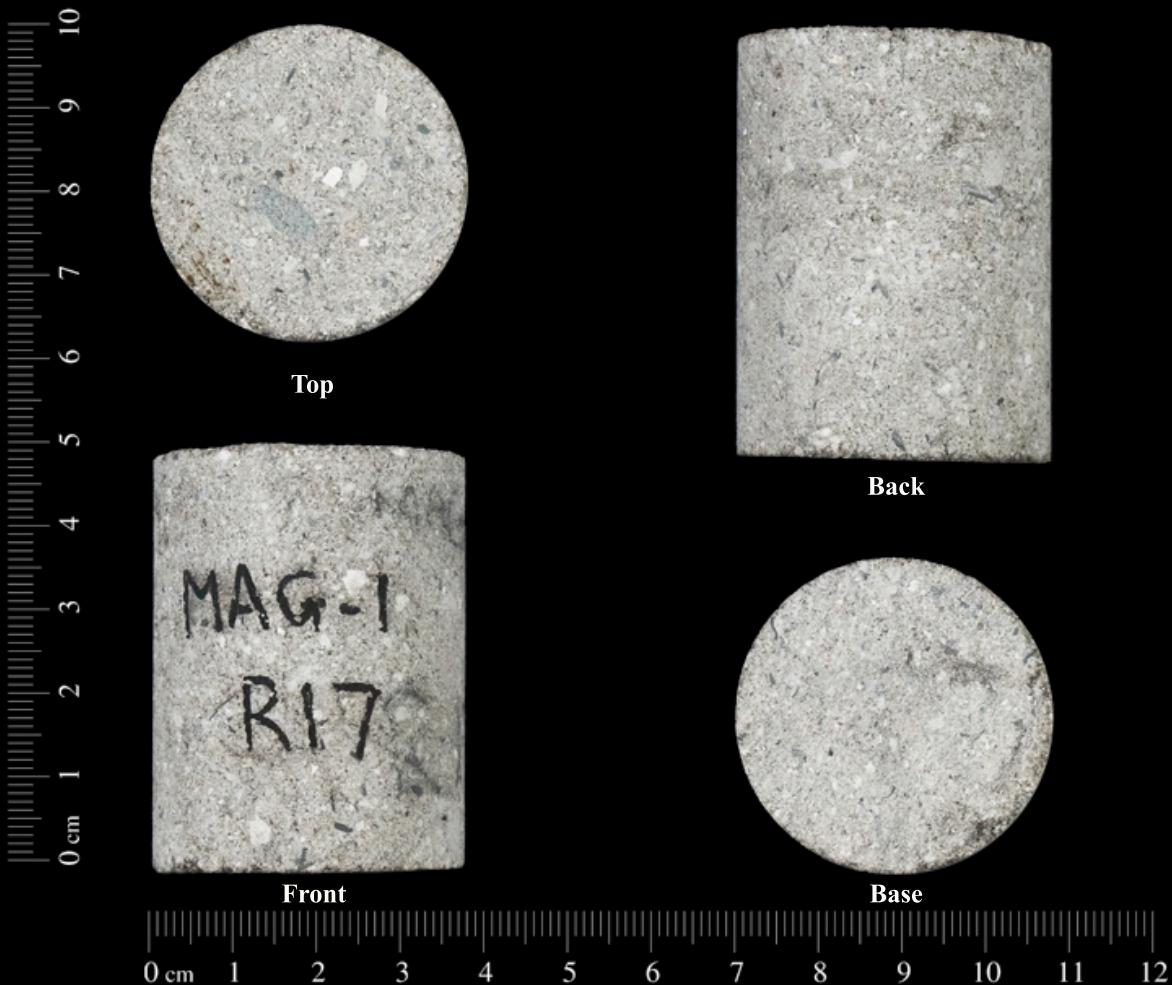
Sample No.:	R8
Depth:	2939.22 m
Permeability:	0.32 mD
Porosity:	11.5 %



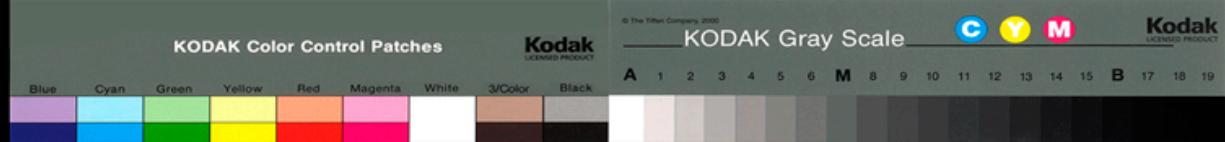


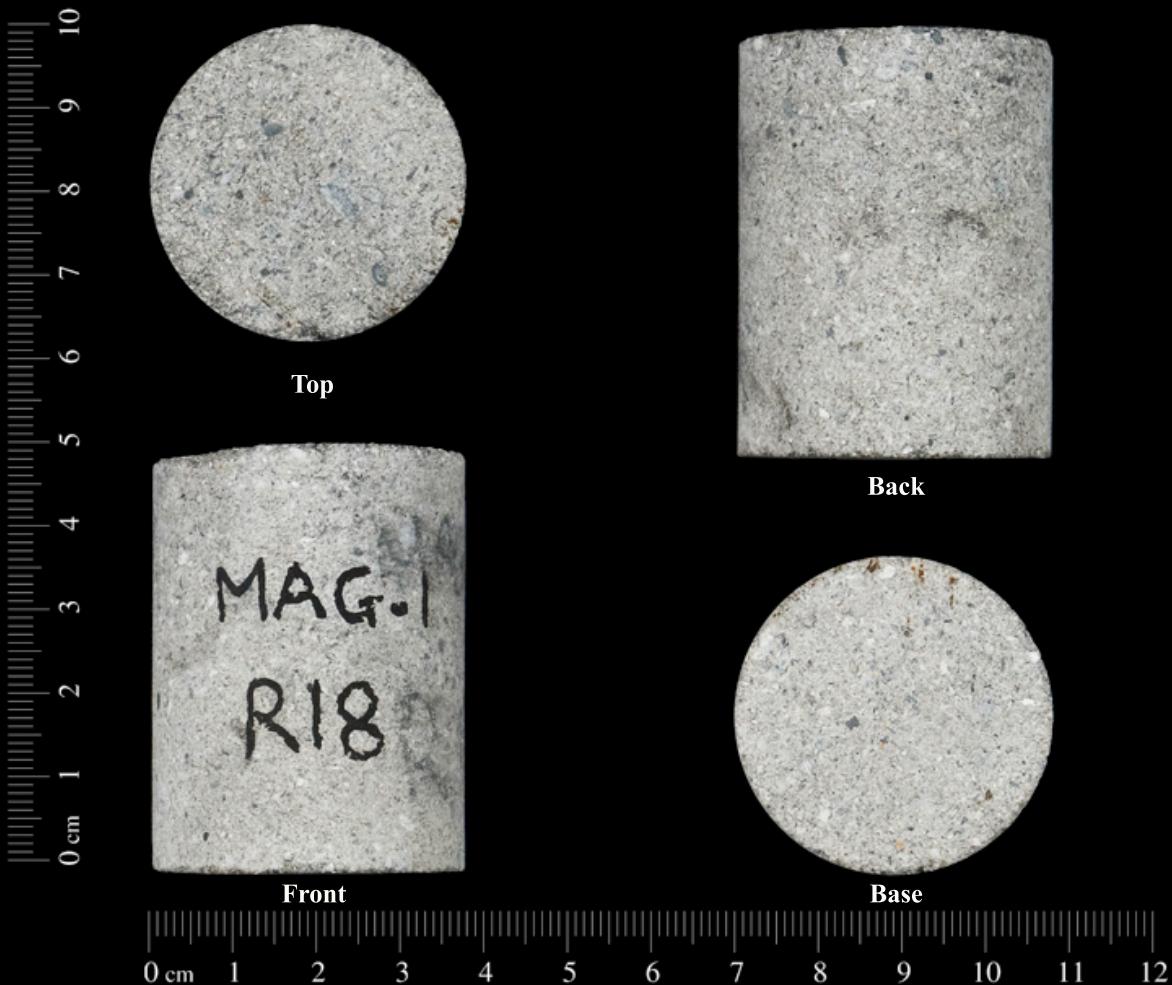
Sample No.:	R9
Depth:	2939.61 m
Permeability:	0.36 mD
Porosity:	10.8 %



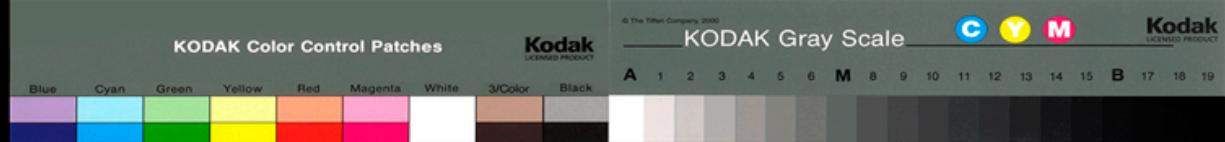


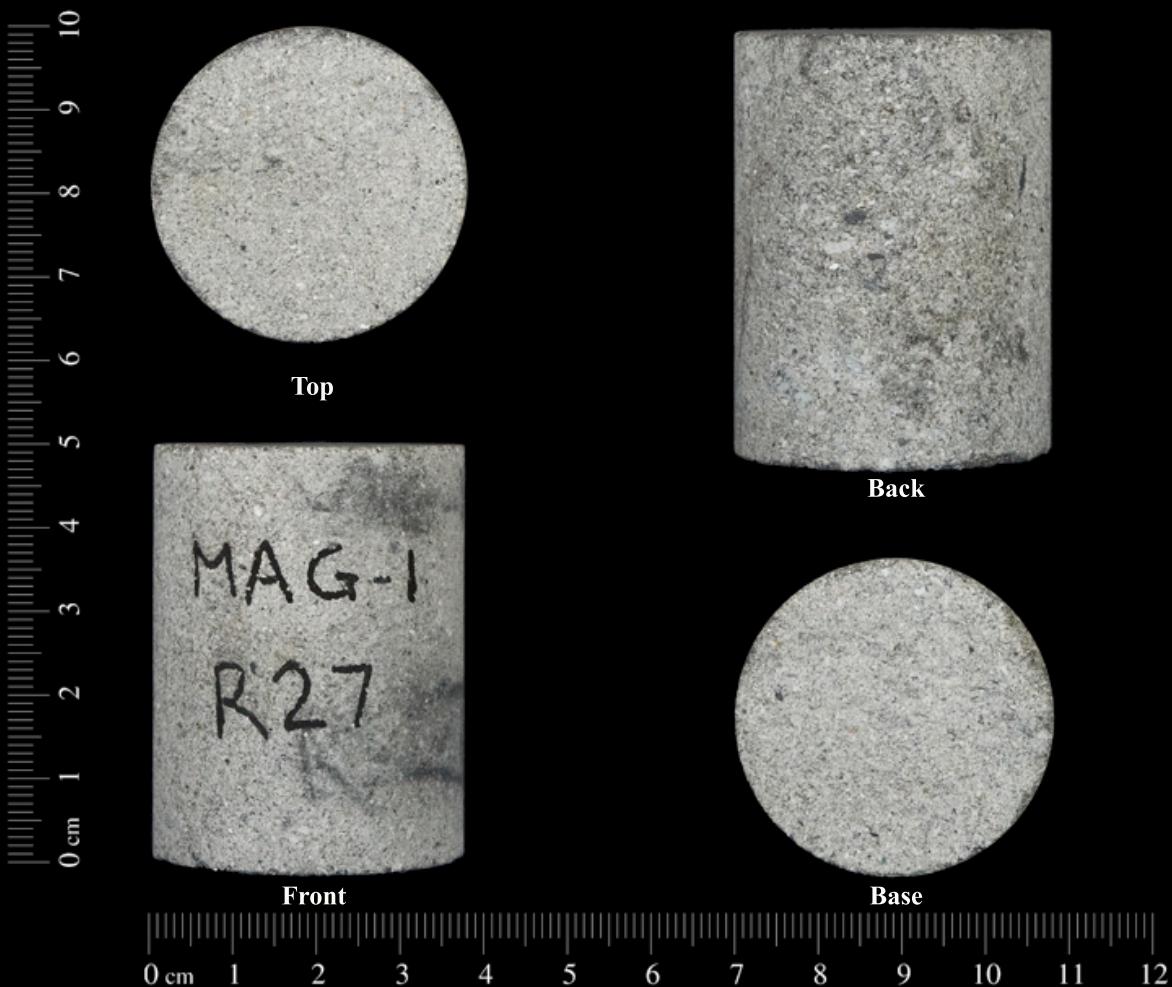
Sample No.:	R17
Depth:	2942.30 m
Permeability:	0.33 mD
Porosity:	11.1 %



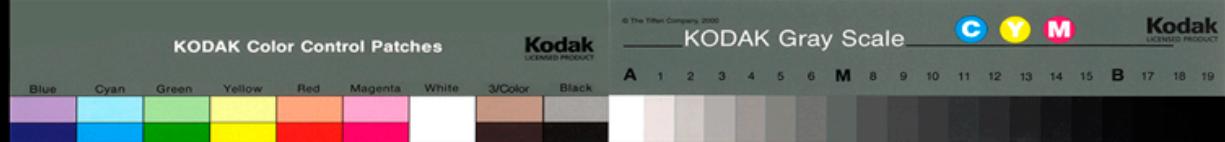


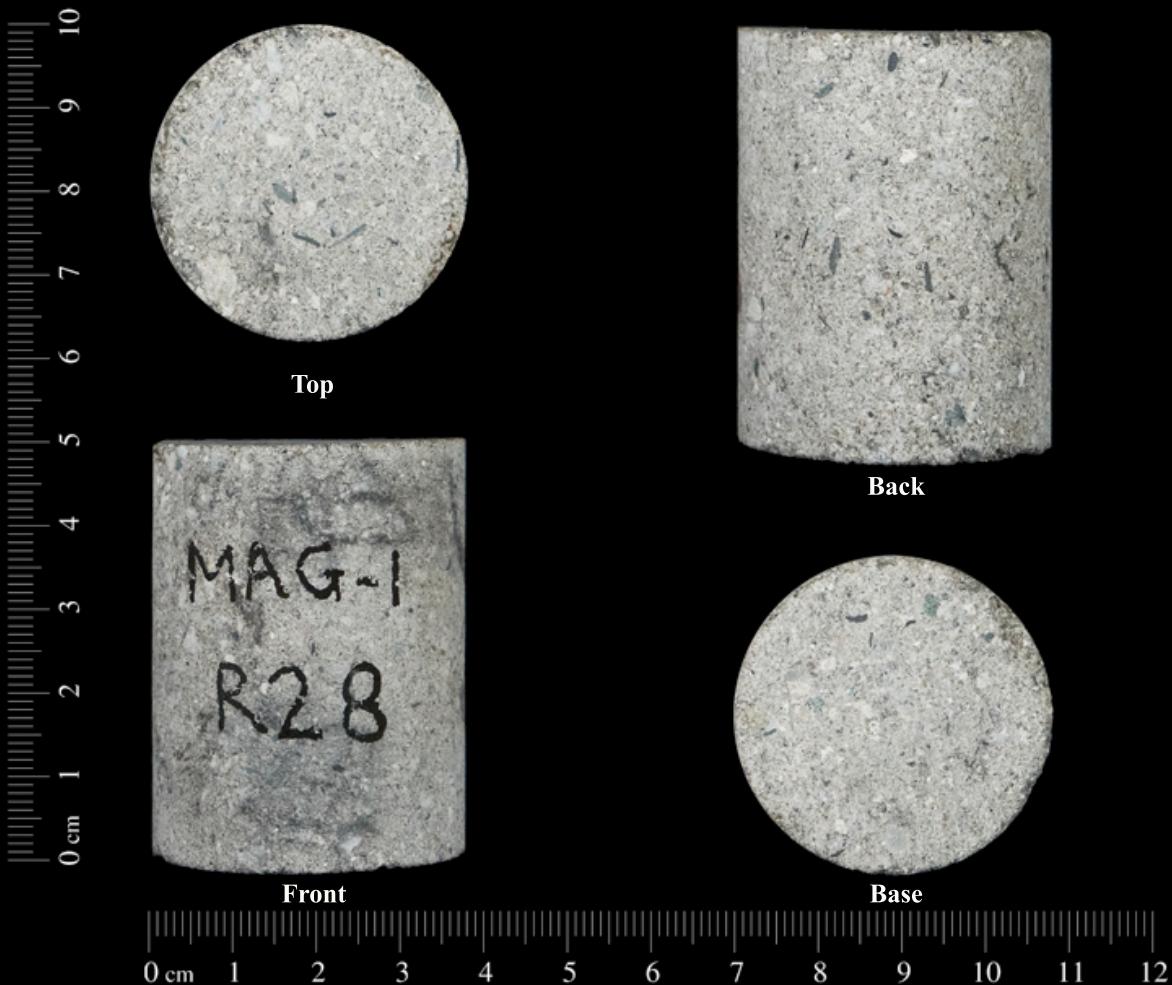
Sample No.:	R18
Depth:	2942.60 m
Permeability:	0.34 mD
Porosity:	11.3 %



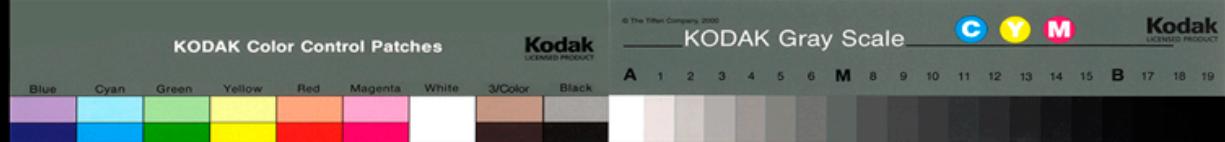


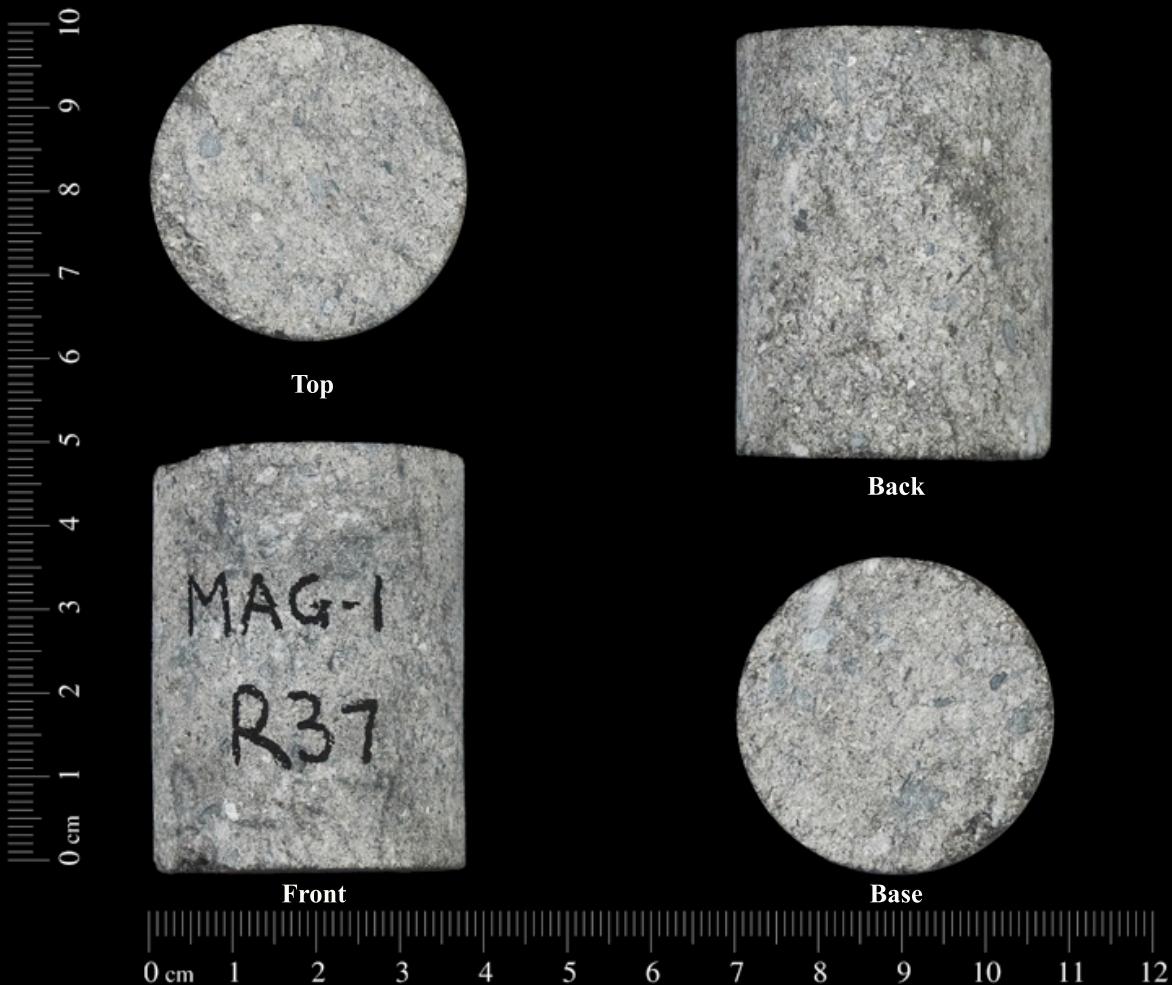
Sample No.:	R27
Depth:	2945.53 m
Permeability:	0.080 mD
Porosity:	8.4 %



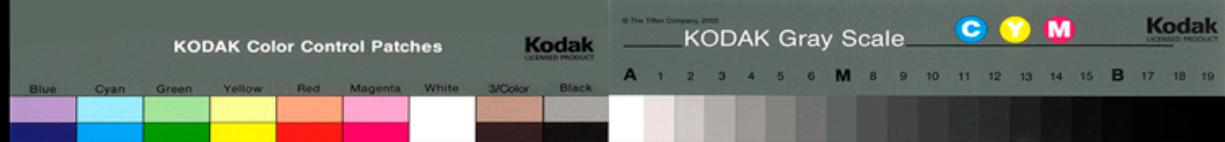


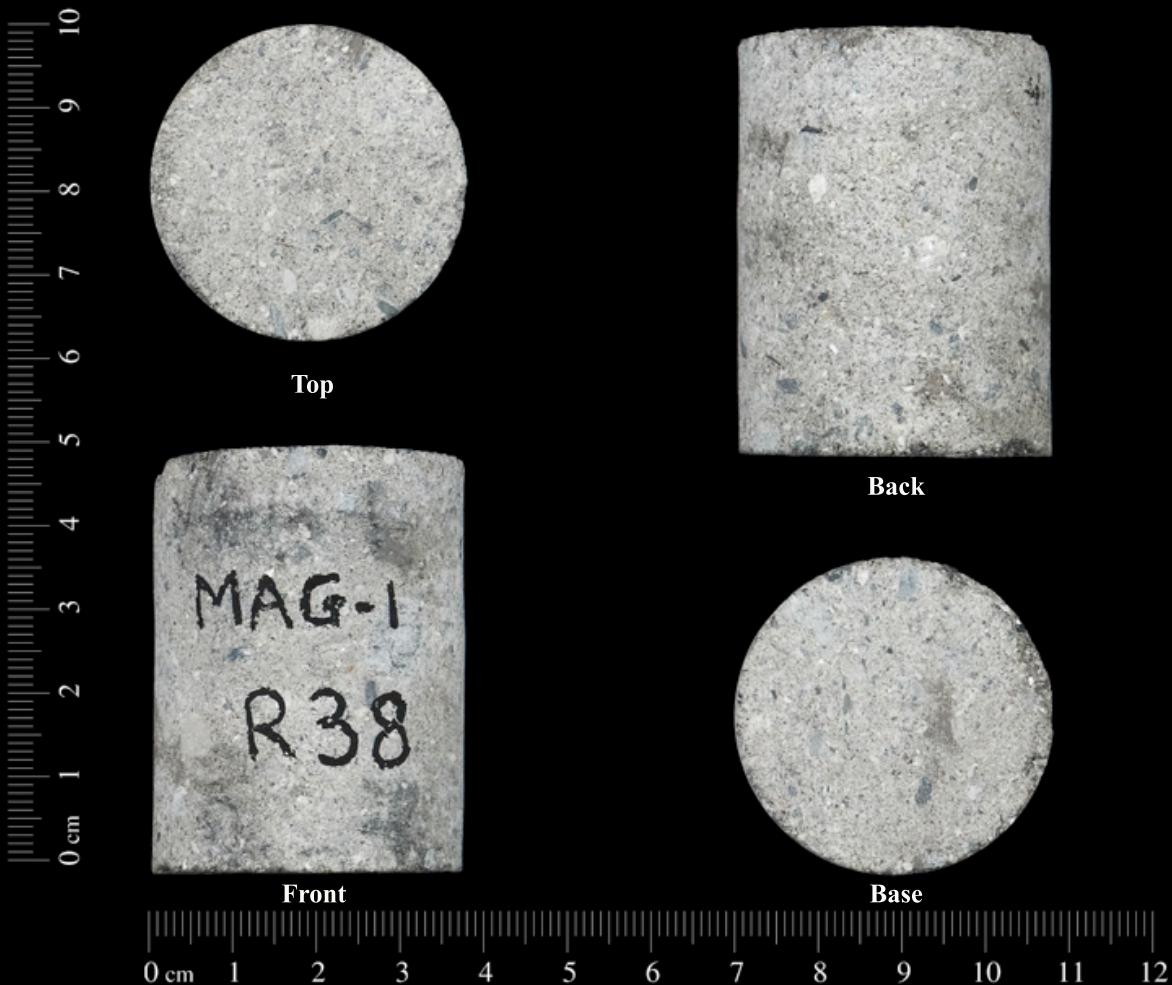
Sample No.:	R28
Depth:	2945.80 m
Permeability:	0.18 mD
Porosity:	9.0 %



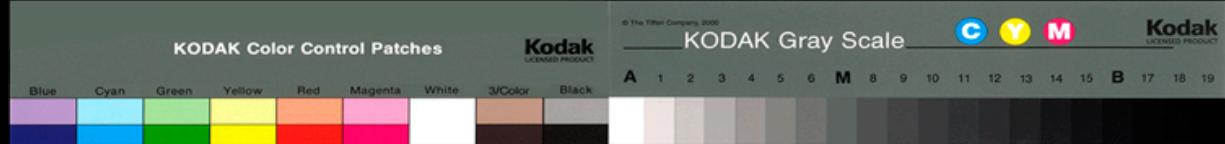


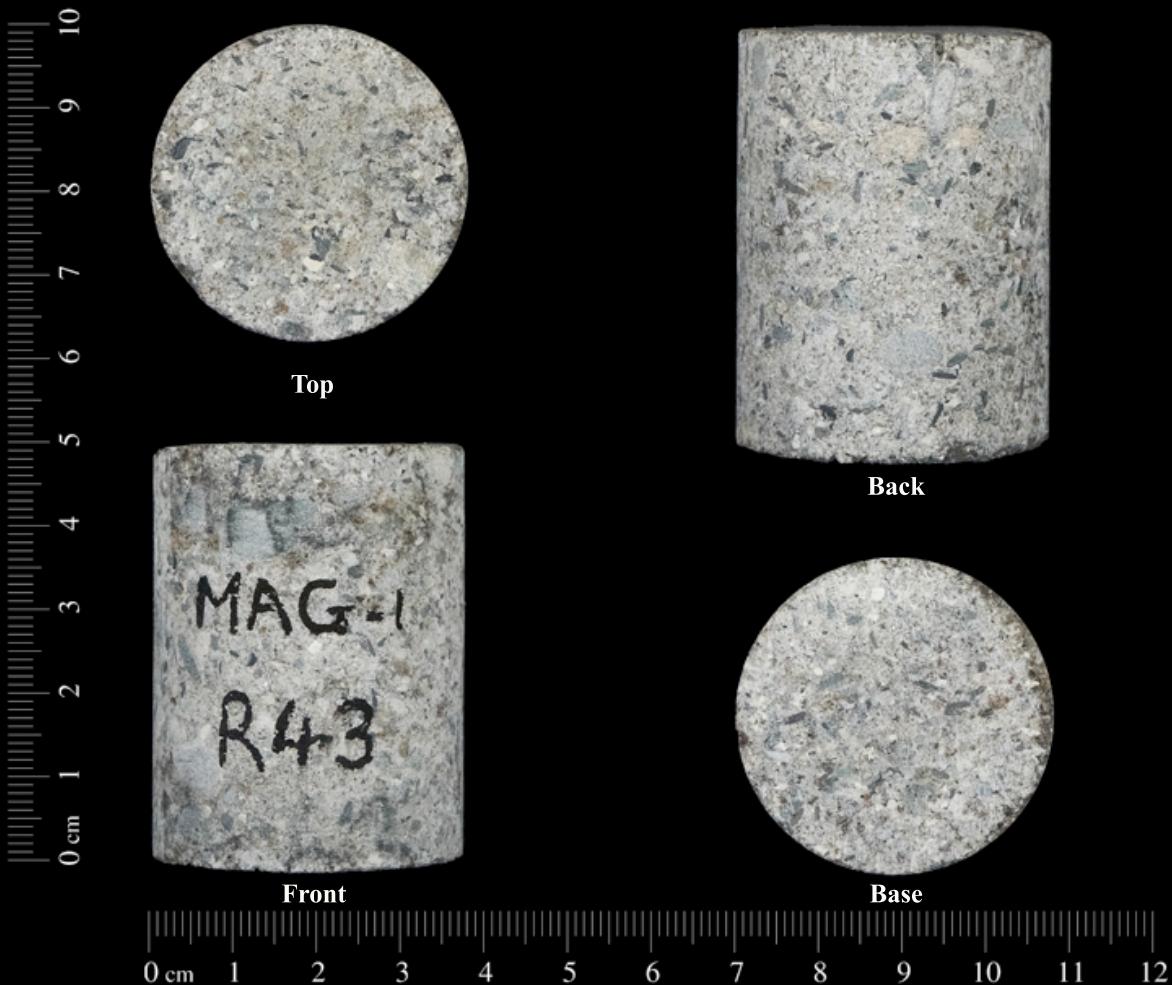
Sample No.:	R37
Depth:	2948.89 m
Permeability:	0.11 mD
Porosity:	7.8 %



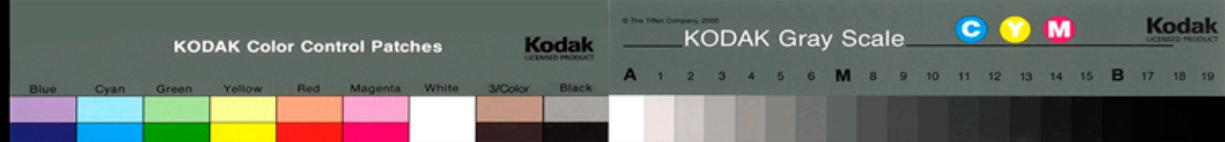


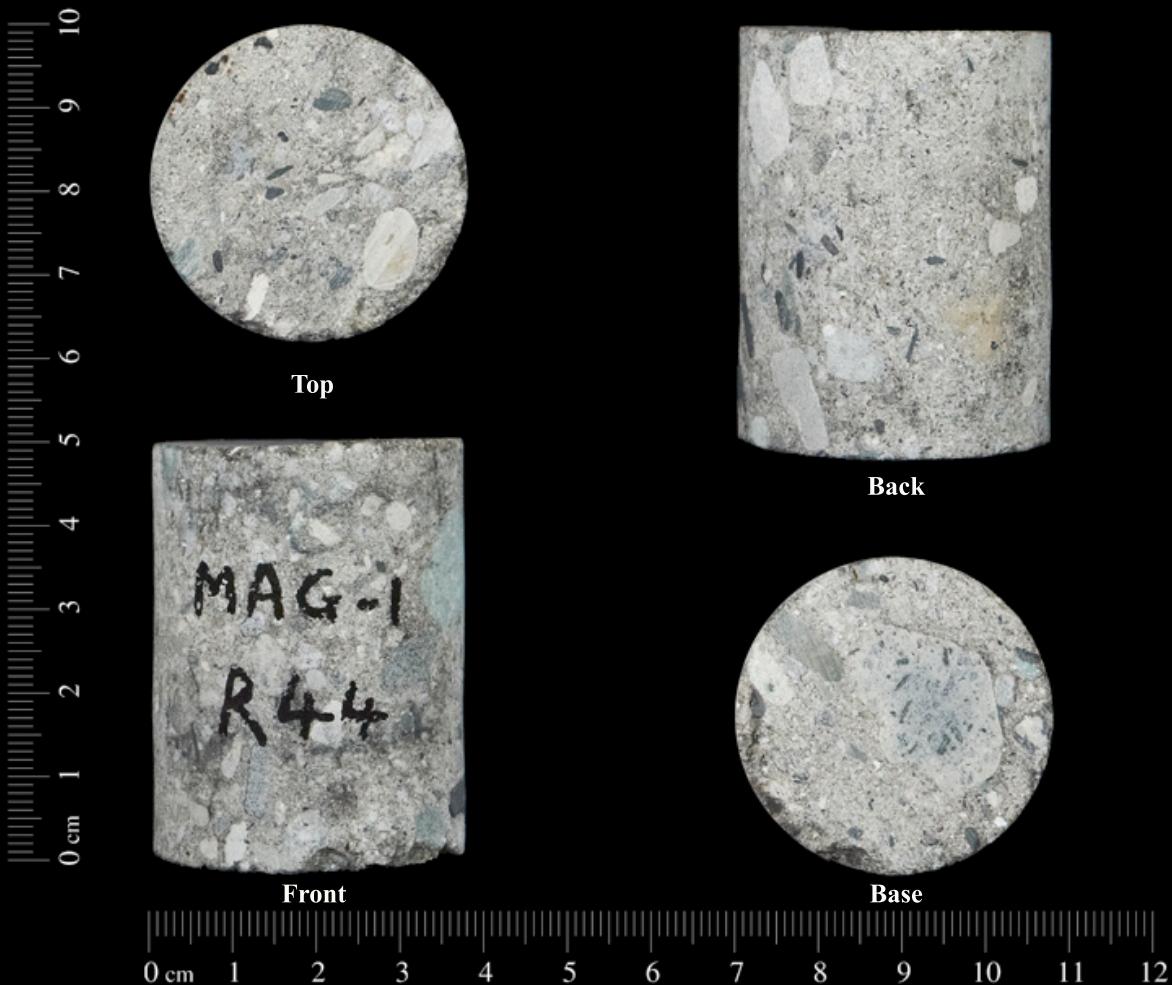
Sample No.:	R38
Depth:	2949.30 m
Permeability:	0.25 mD
Porosity:	11.6 %



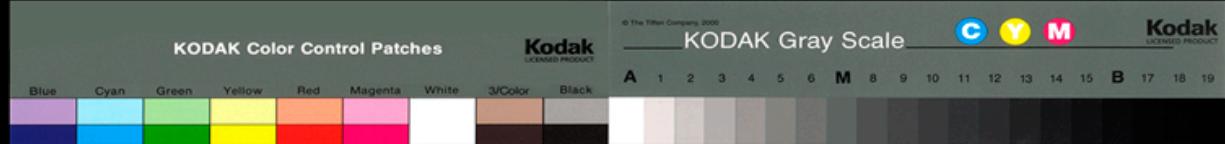


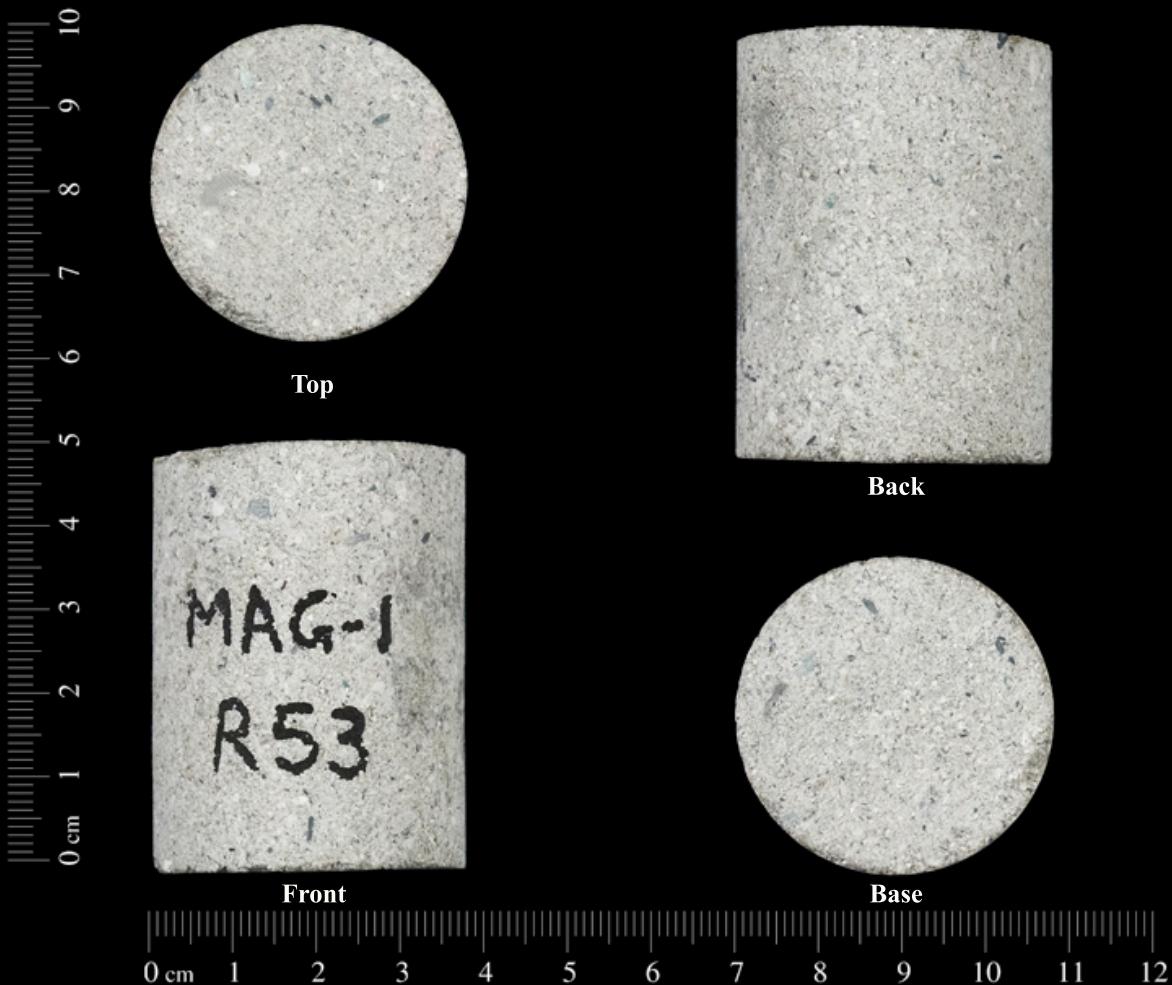
Sample No.:	R43
Depth:	2950.88 m
Permeability:	0.18 mD
Porosity:	8.2 %



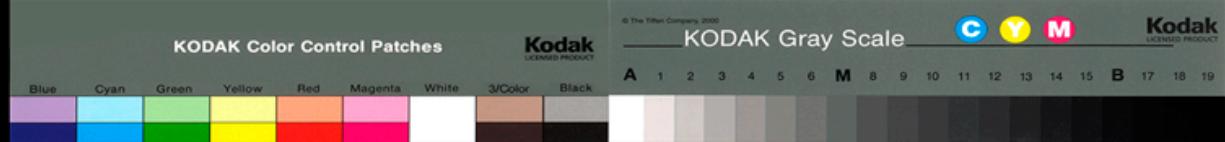


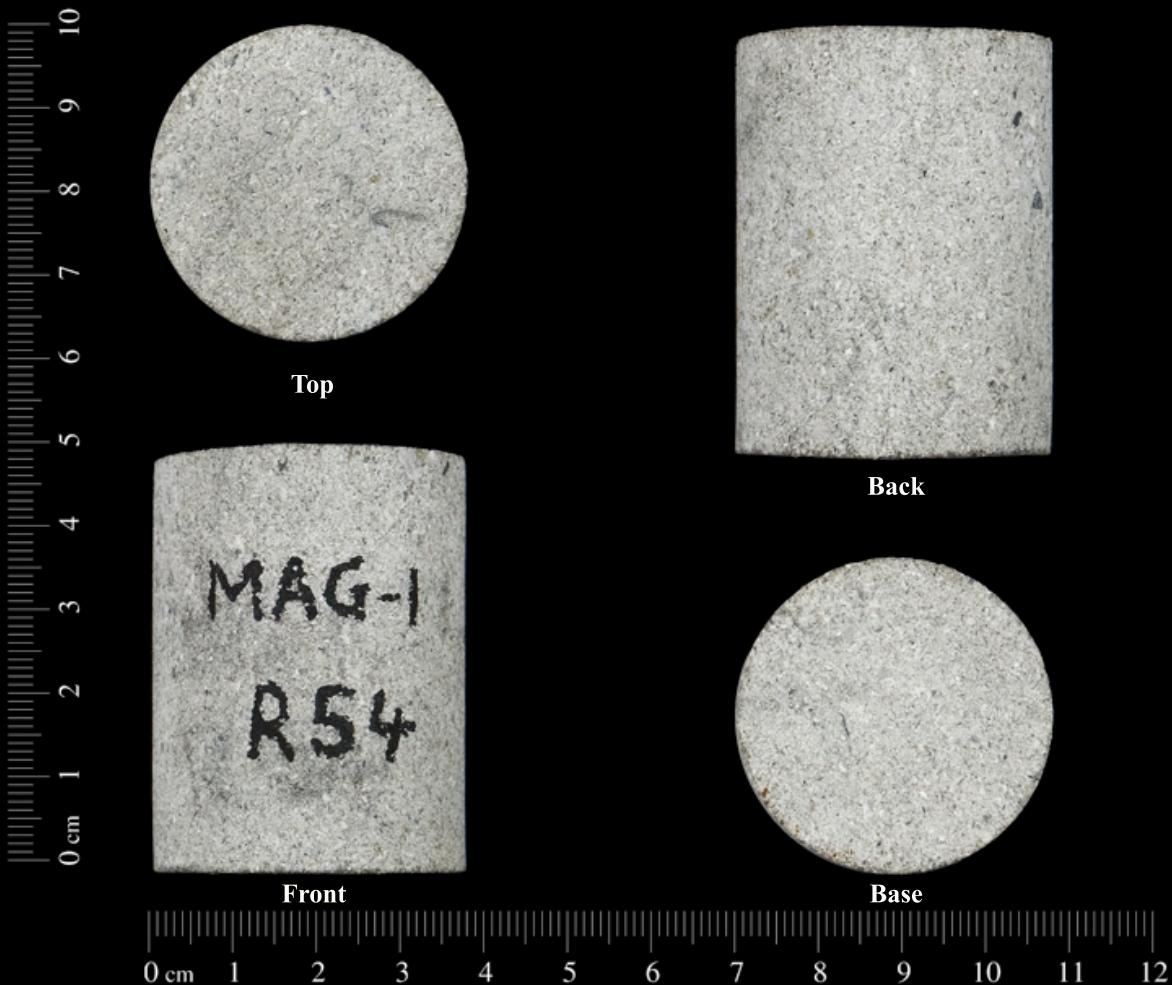
Sample No.:	R44
Depth:	2951.29 m
Permeability:	0.33 mD
Porosity:	8.7 %



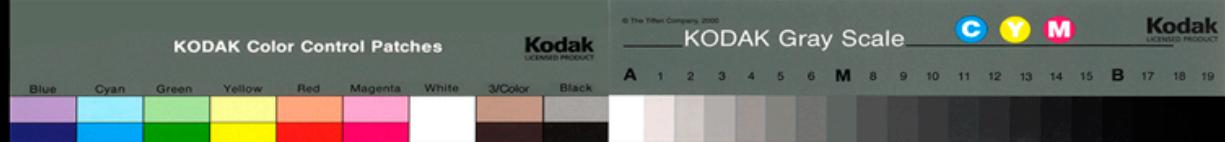


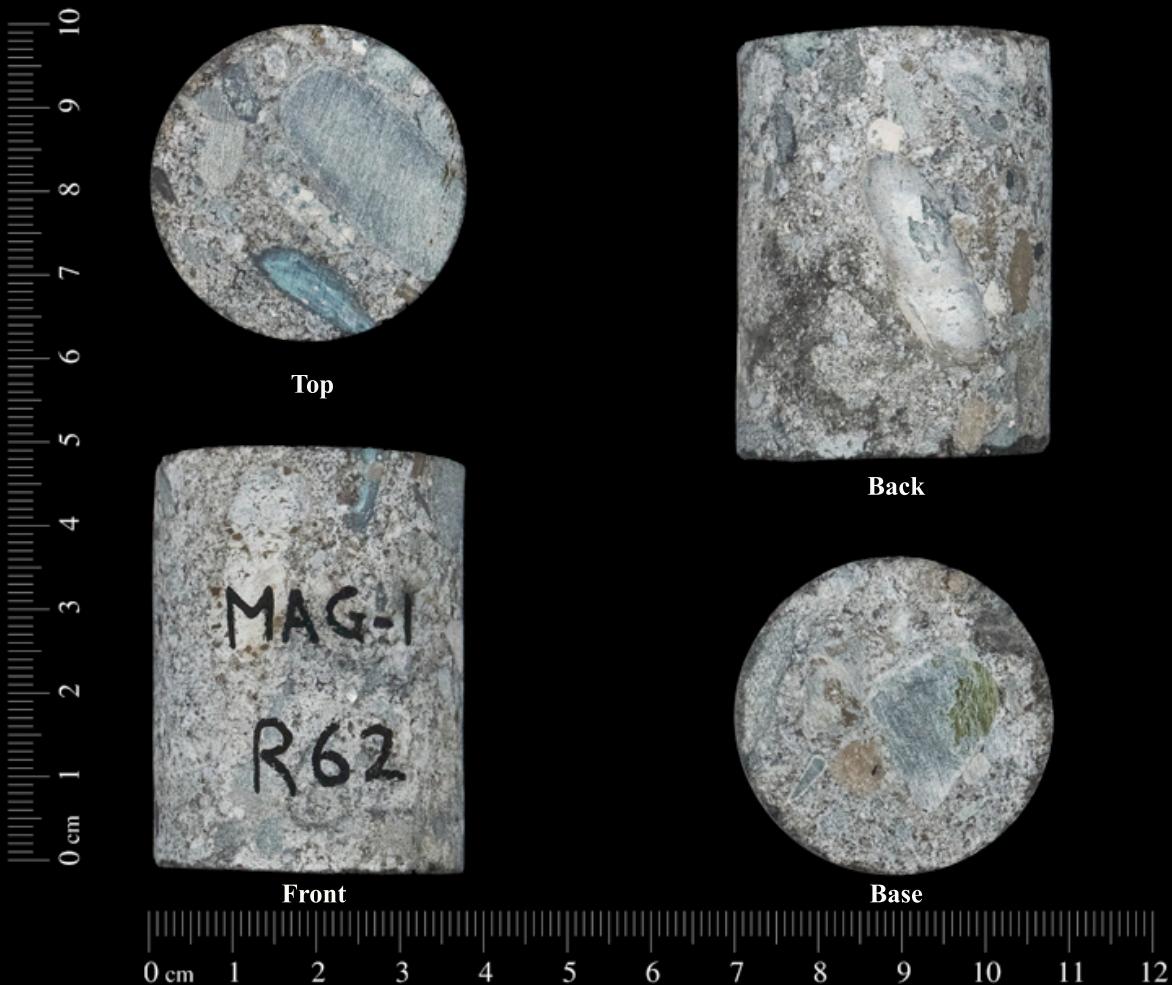
Sample No.:	R53
Depth:	2954.30 m
Permeability:	0.44 mD
Porosity:	11.6 %



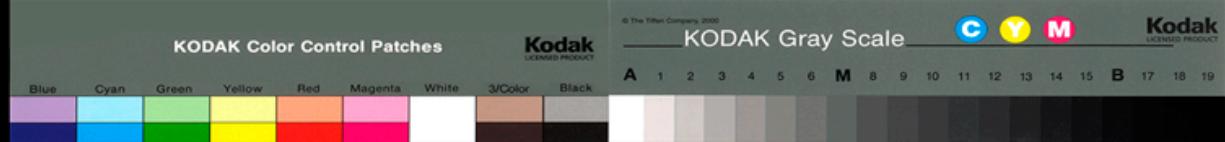


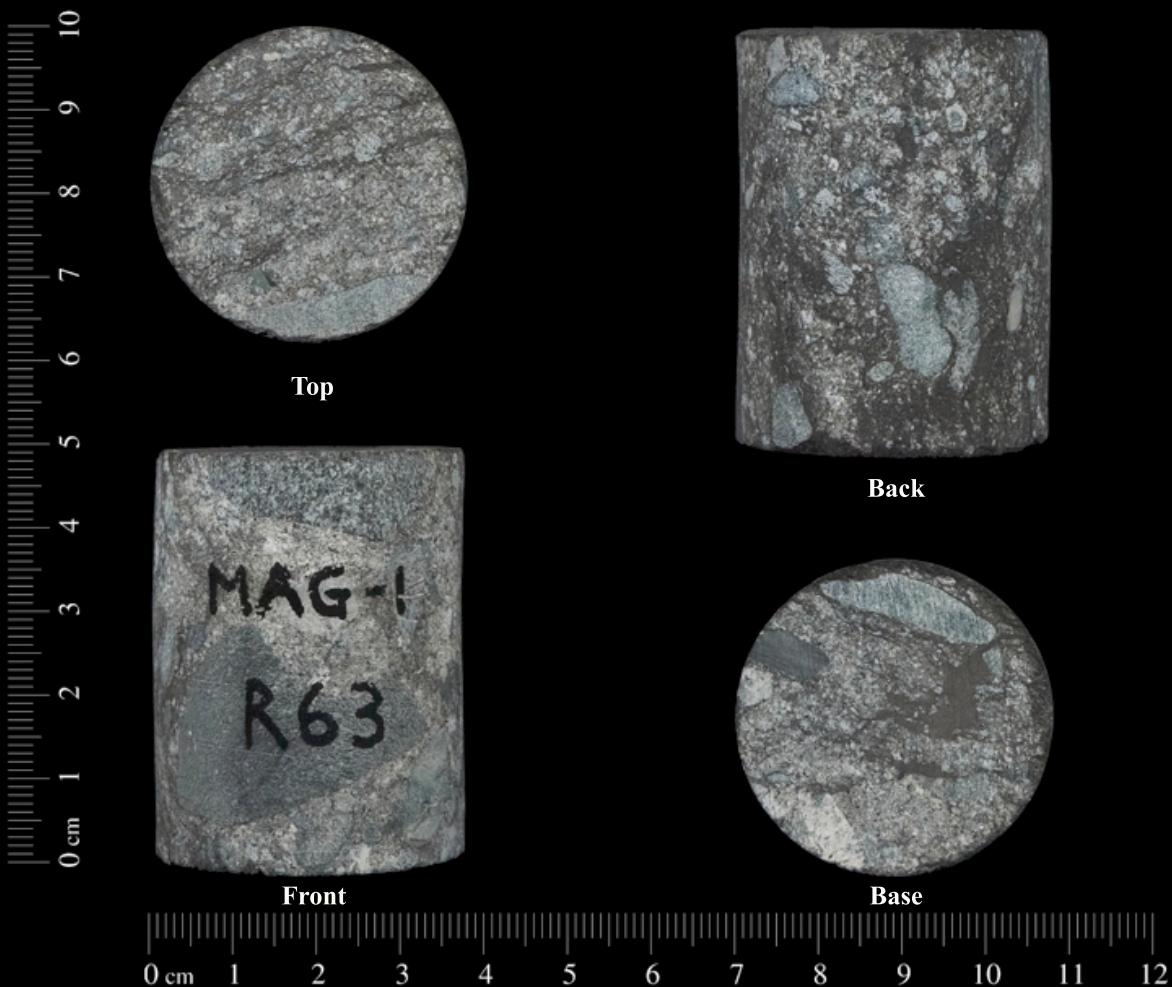
Sample No.:	R54
Depth:	2954.60 m
Permeability:	0.18 mD
Porosity:	9.5 %



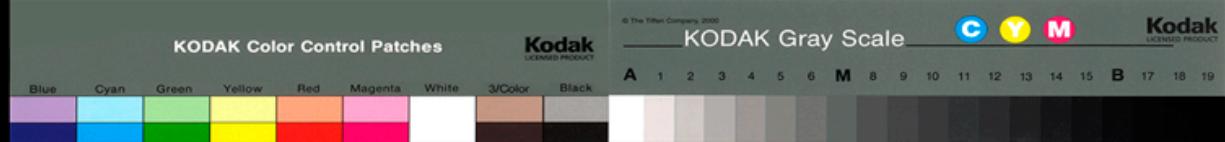


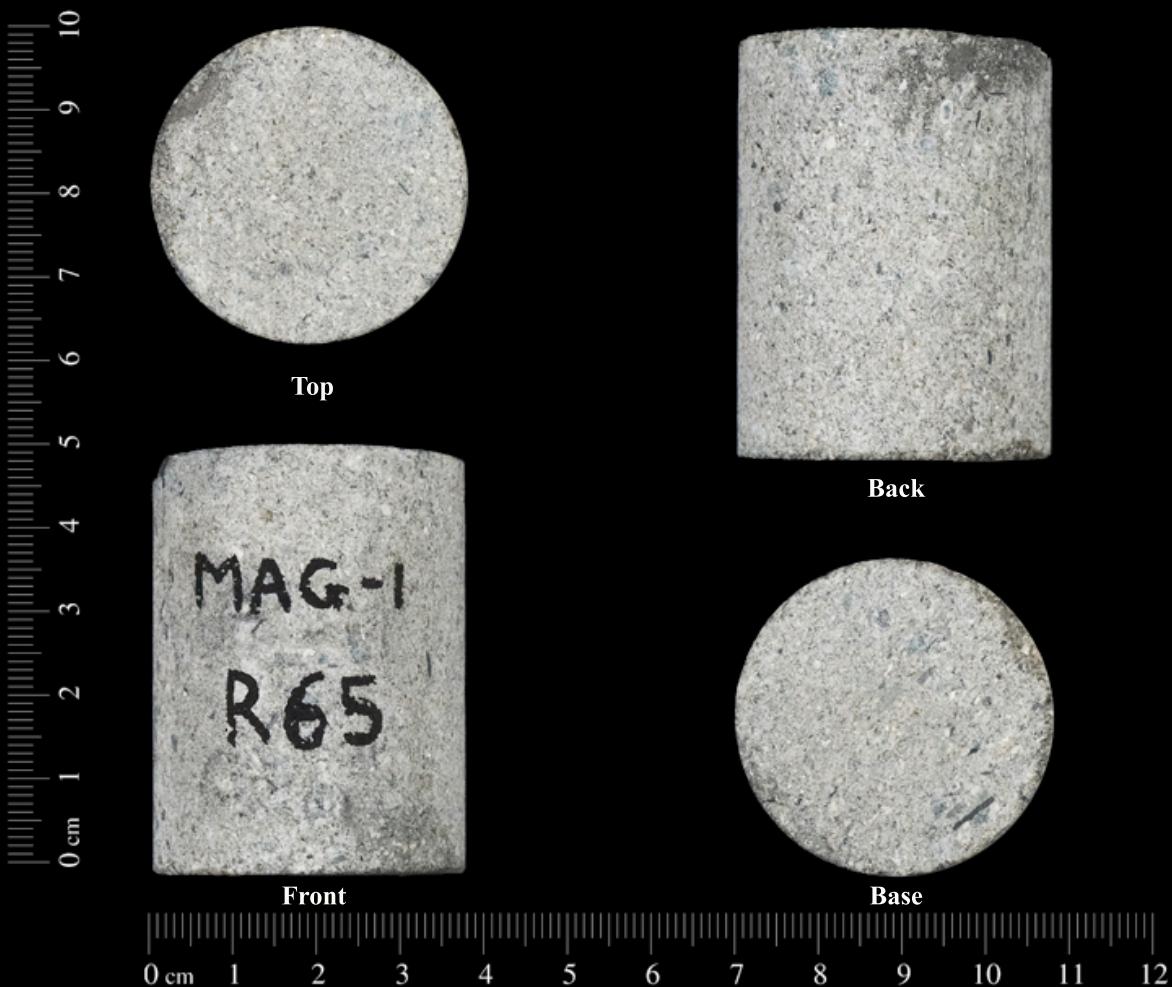
Sample No.:	R62
Depth:	2958.30 m
Permeability:	0.20 mD
Porosity:	4.3 %



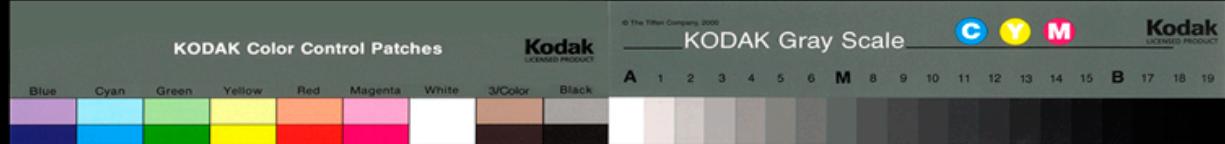


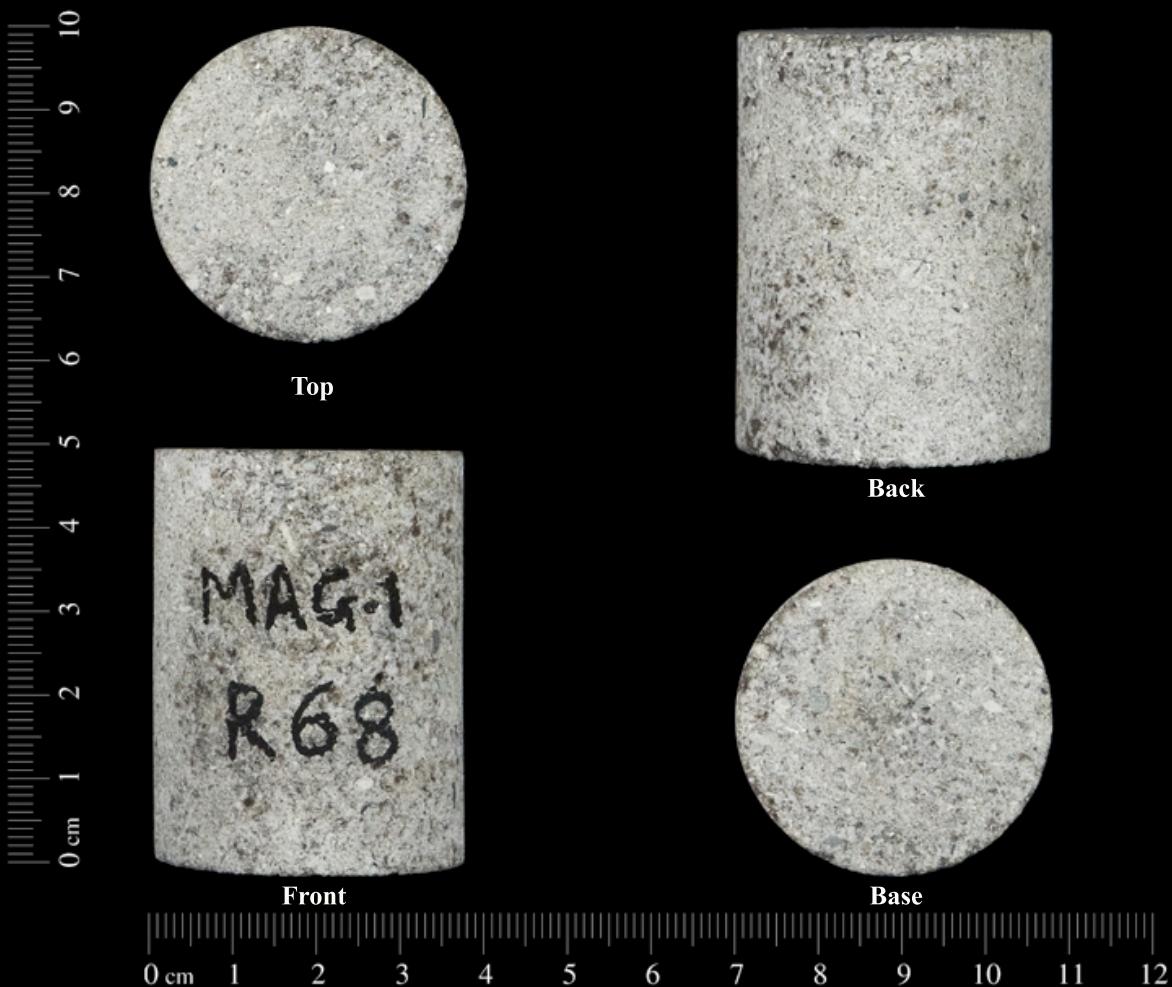
Sample No.:	R63
Depth:	2958.60 m
Permeability:	0.051 mD
Porosity:	2.6 %



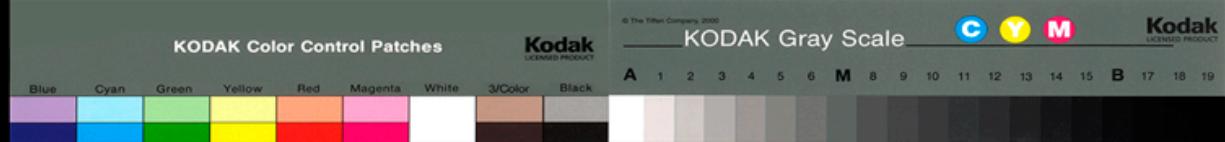


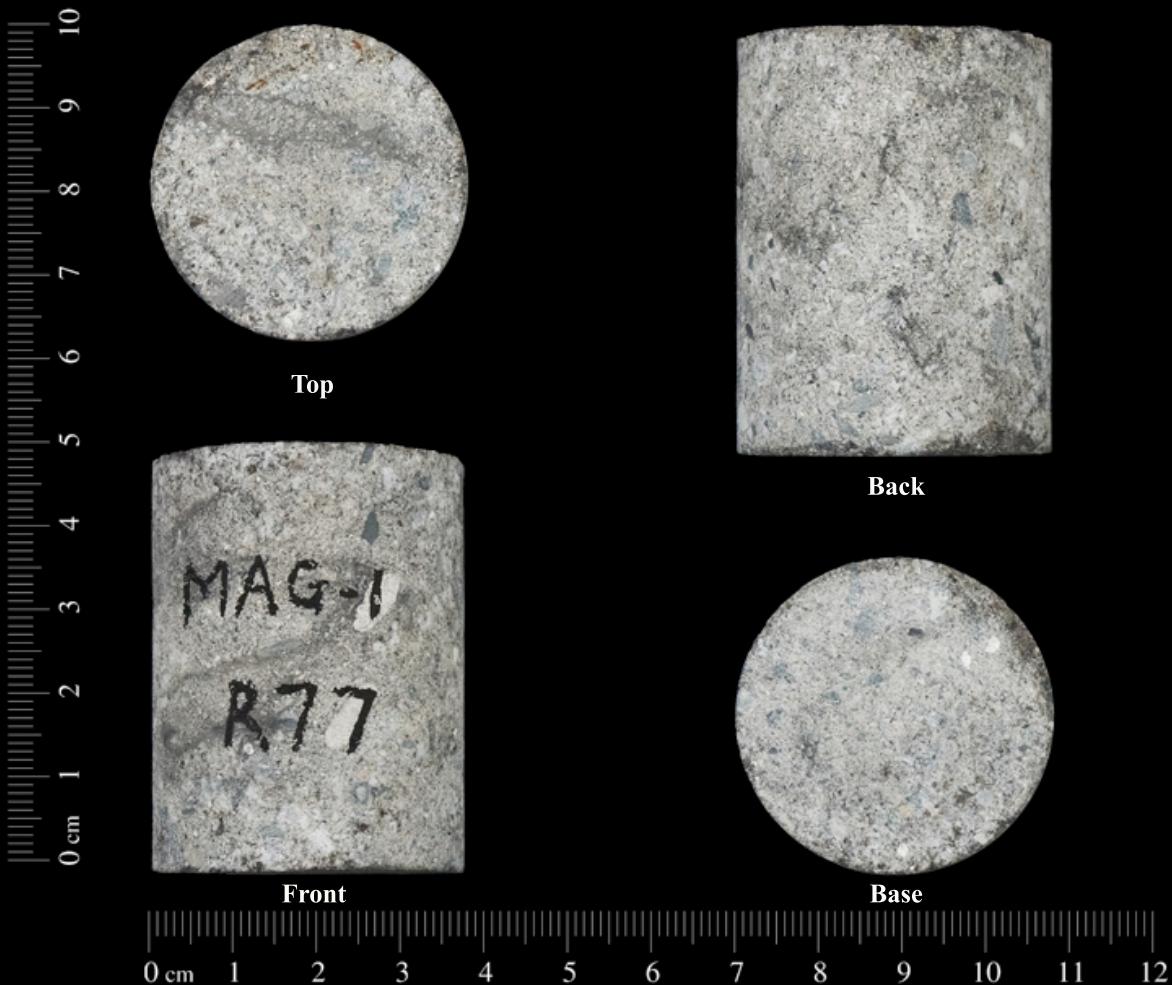
Sample No.:	R65
Depth:	2959.19 m
Permeability:	0.13 mD
Porosity:	8.4 %



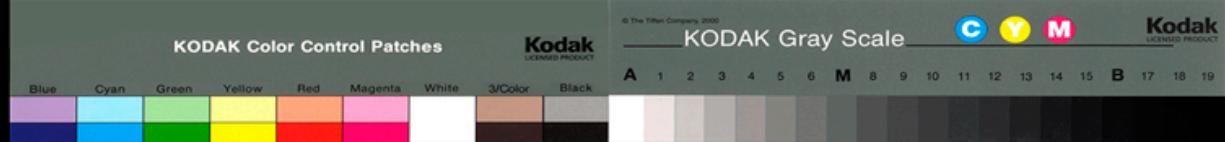


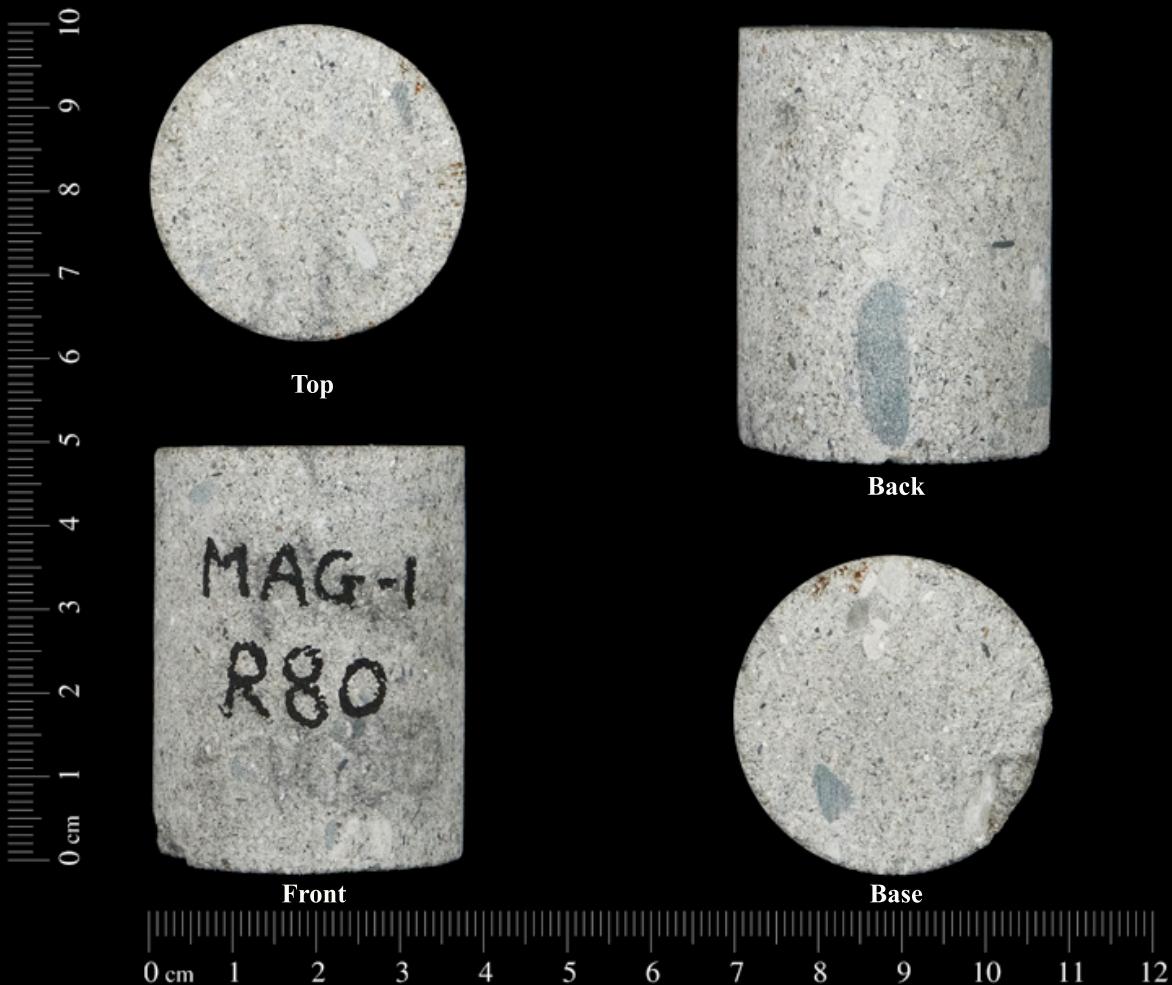
Sample No.:	R68
Depth:	2959.90 m
Permeability:	0.28 mD
Porosity:	10.4 %



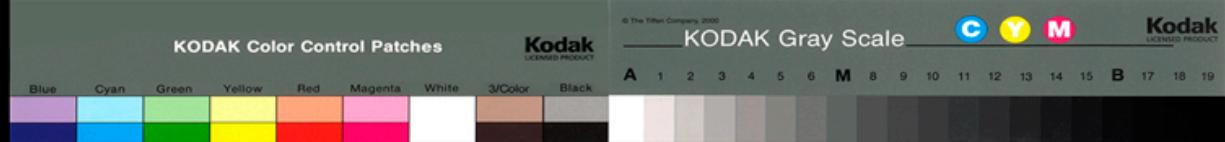


Sample No.:	R77
Depth:	2962.91 m
Permeability:	0.19 mD
Porosity:	9.3 %





Sample No.:	R80
Depth:	2963.92 m
Permeability:	0.25 mD
Porosity:	9.4 %





Top



Back



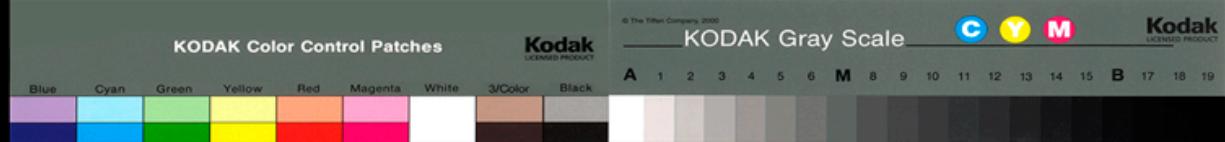
Front

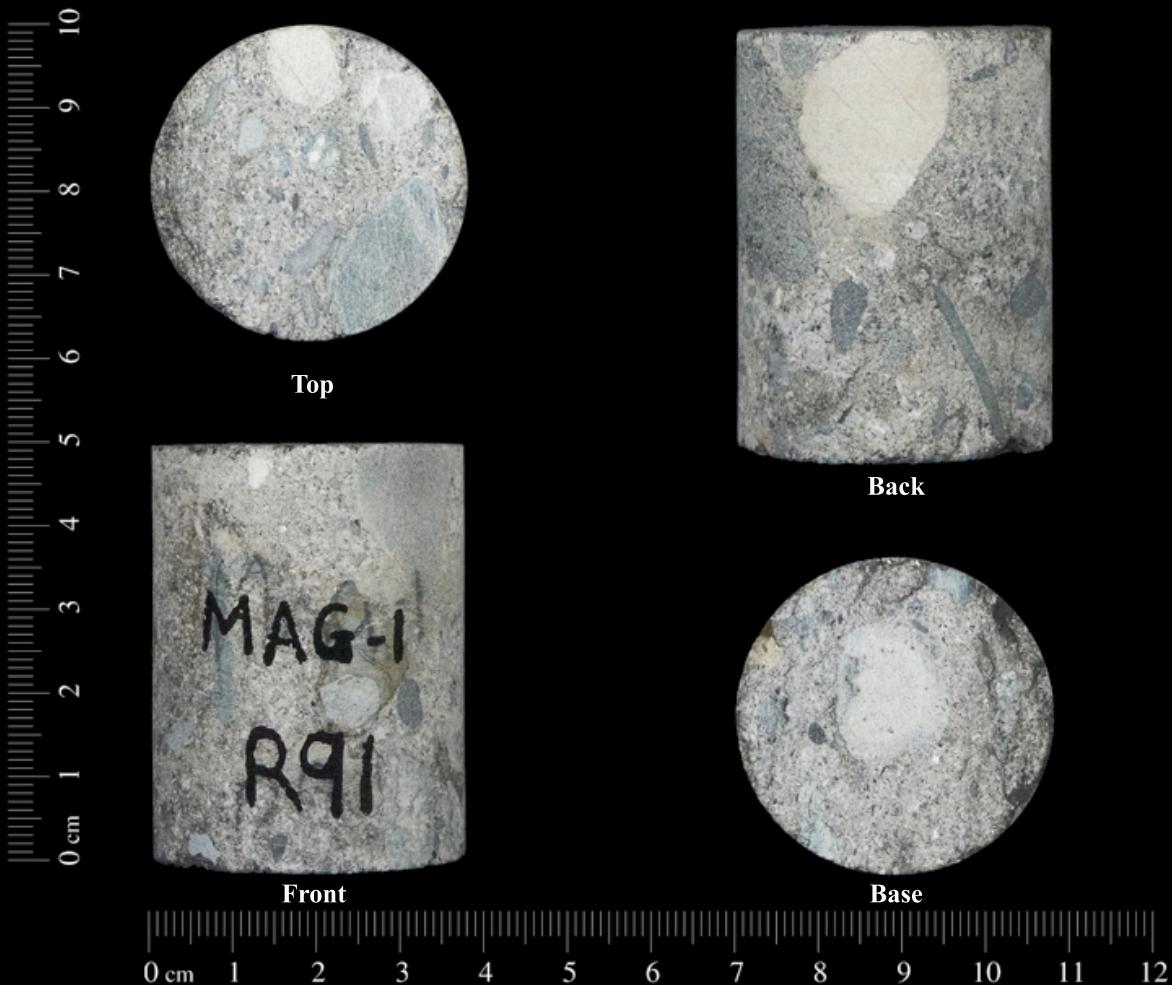


Base

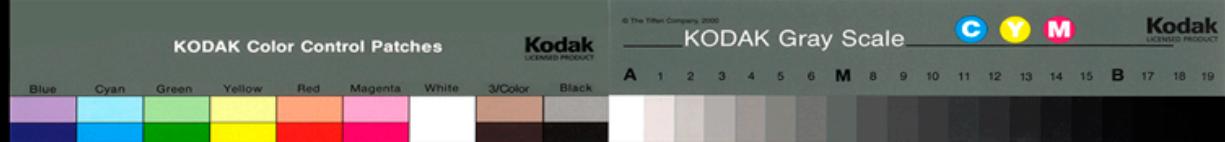


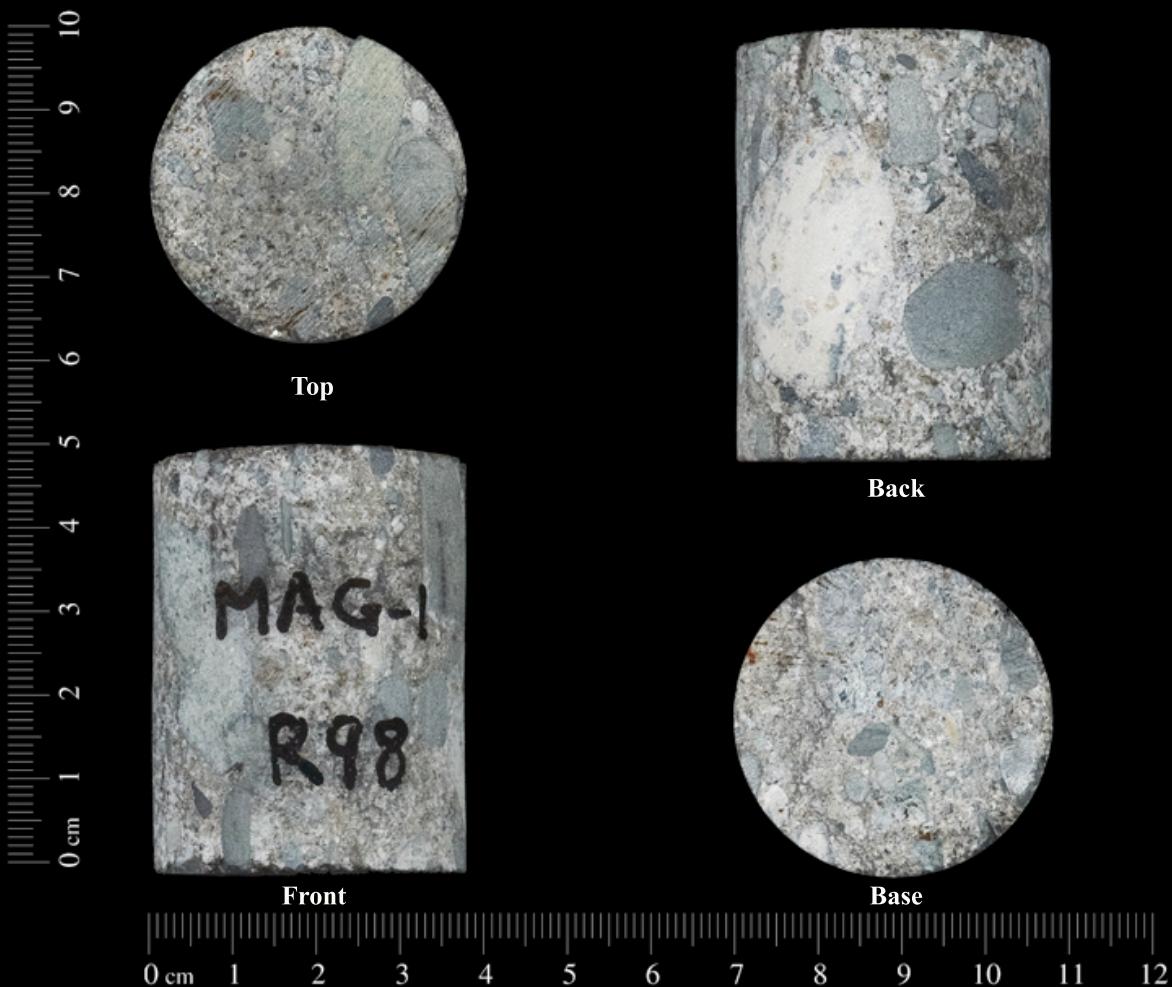
Sample No.:	R86
Depth:	2965.90 m
Permeability:	0.25 mD
Porosity:	6.8 %



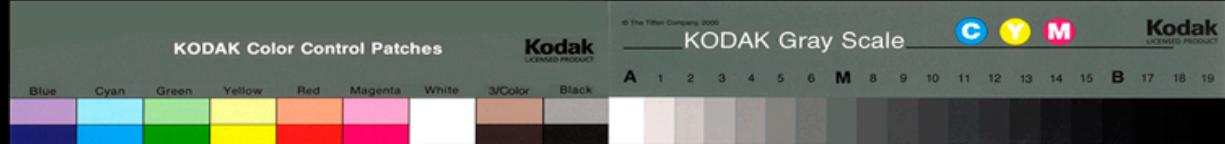


Sample No.:	R91
Depth:	2967.60 m
Permeability:	0.52 mD
Porosity:	7.9 %



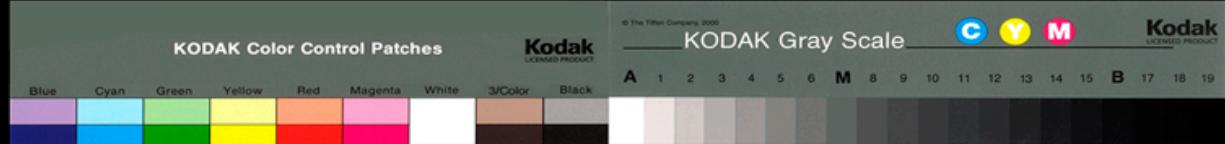


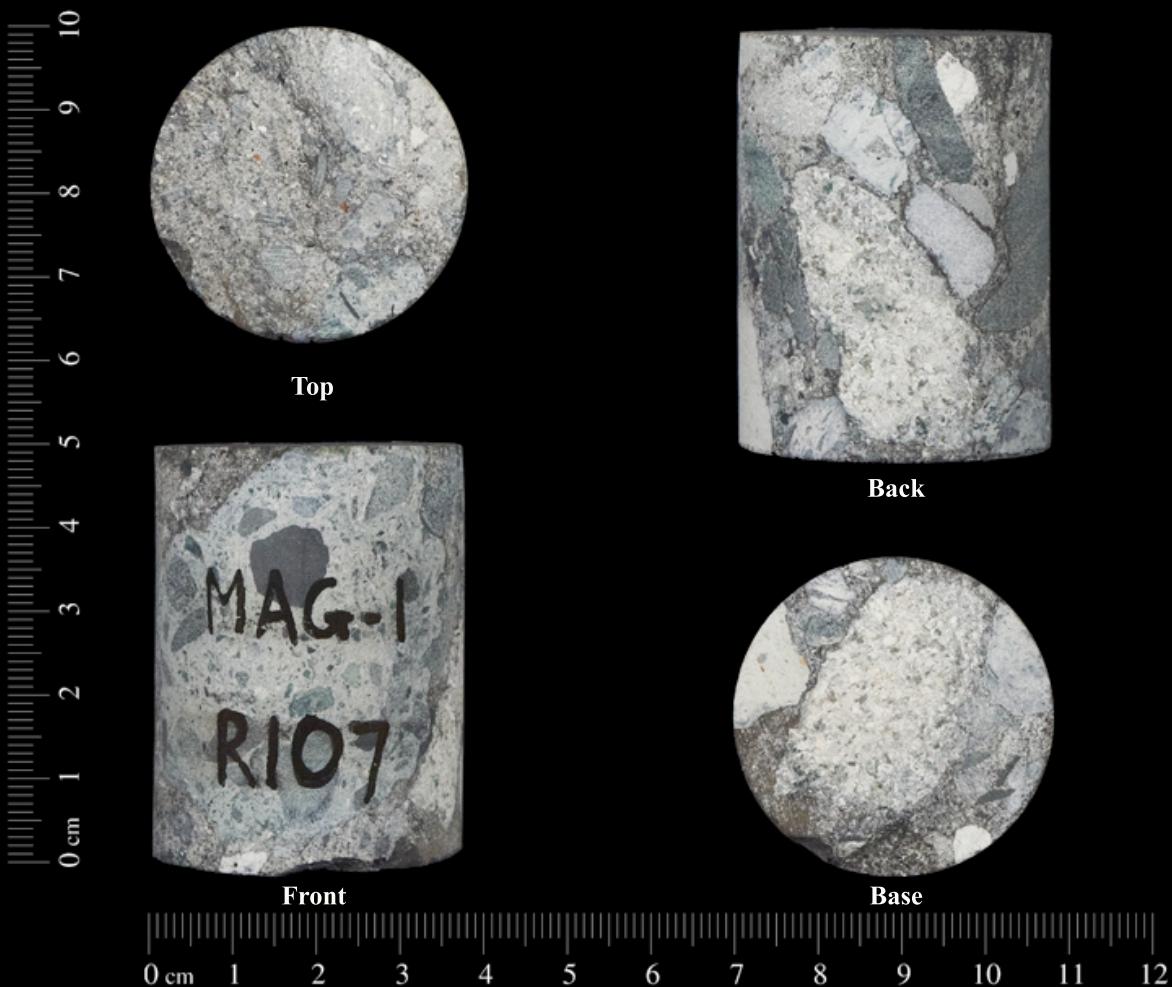
Sample No.:	R98
Depth:	2970.89 m
Permeability:	0.52 mD
Porosity:	6.0 %



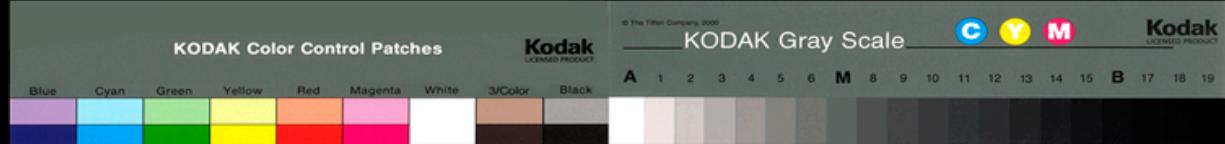


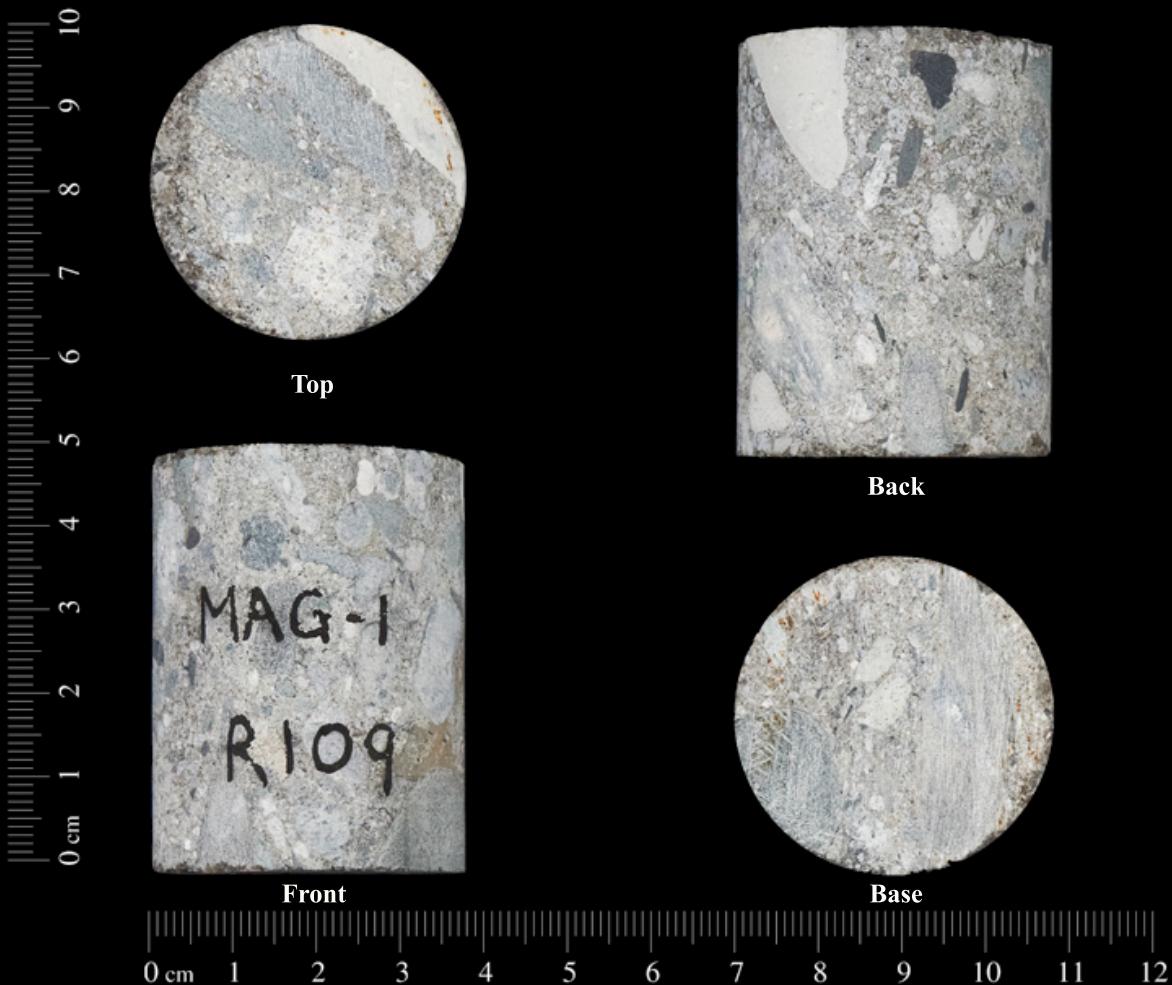
Sample No.:	R99
Depth:	2971.30 m
Permeability:	0.73 mD
Porosity:	8.4 %



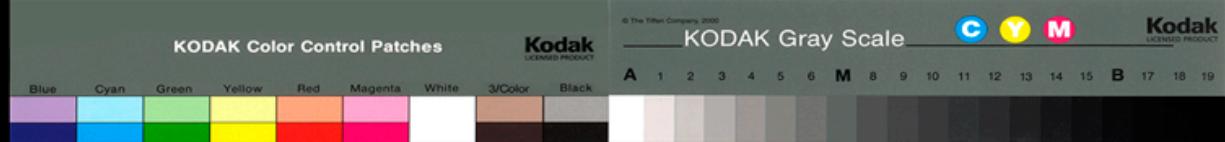


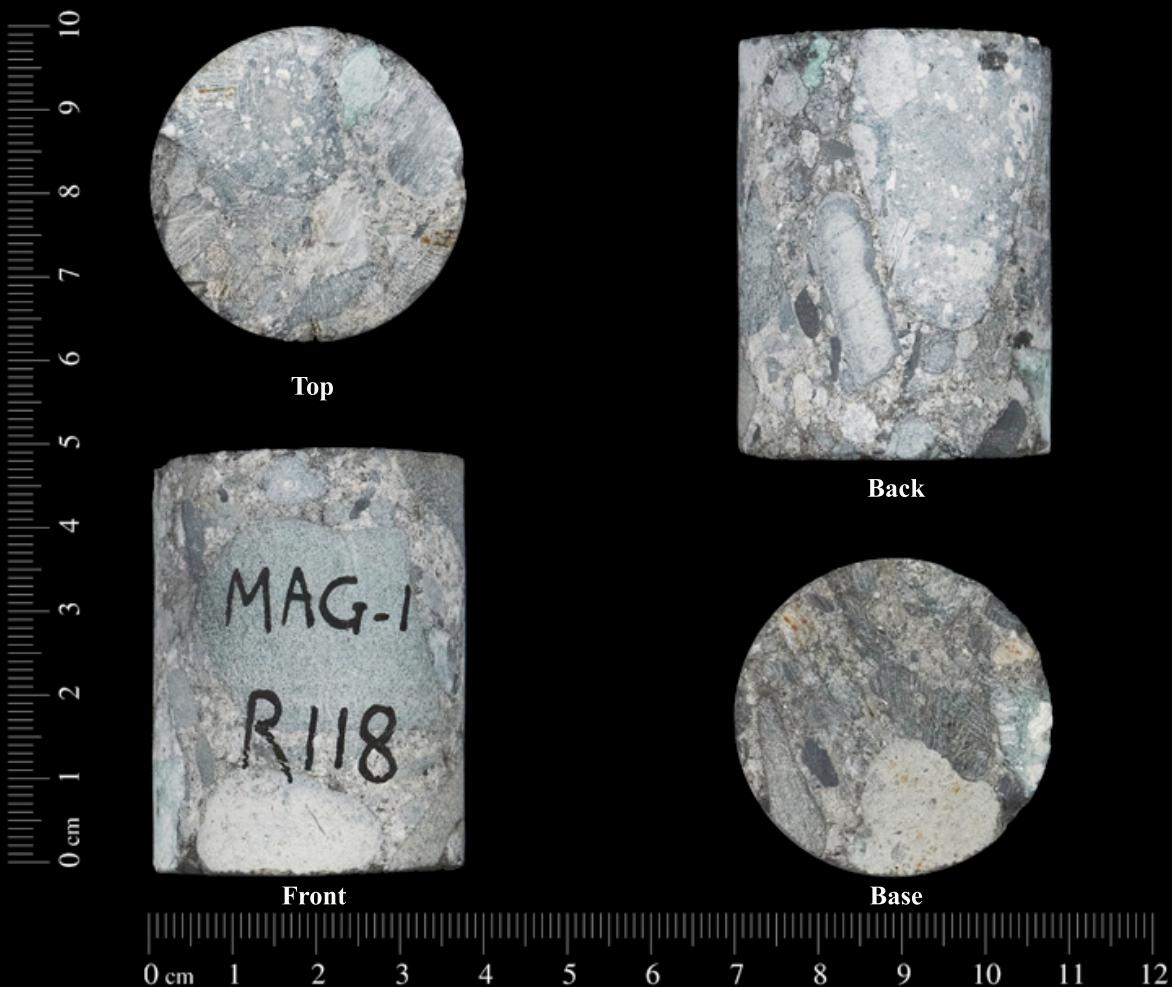
Sample No.:	R107
Depth:	2973.91 m
Permeability:	0.16 mD
Porosity:	7.9 %



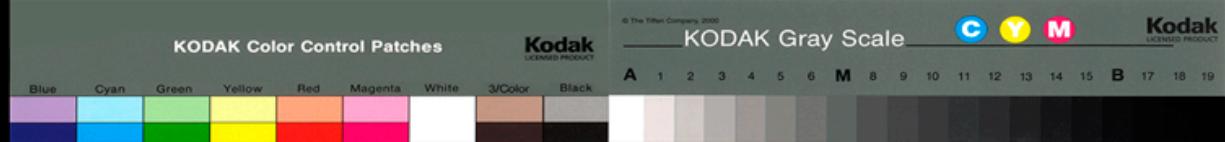


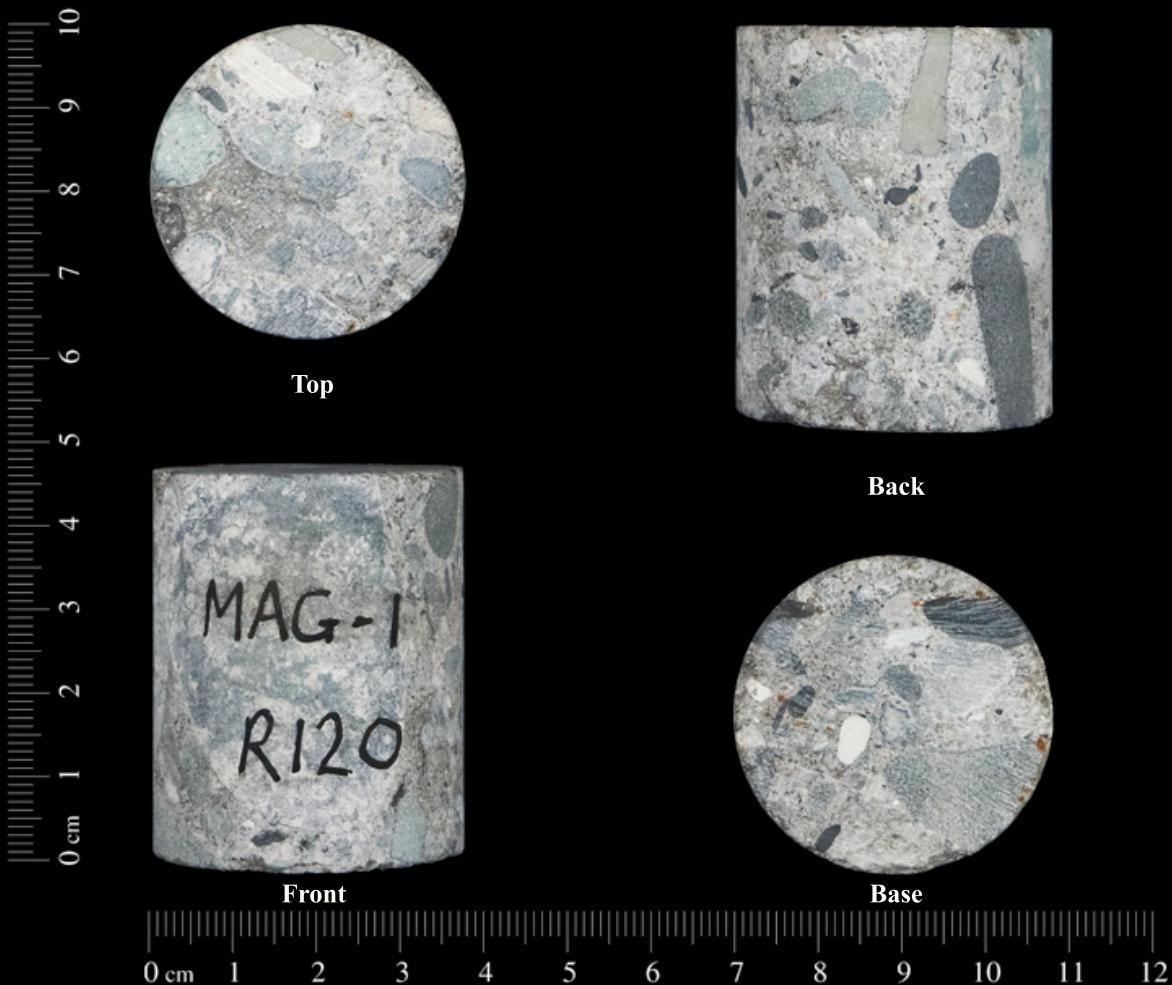
Sample No.:	R109
Depth:	2974.61 m
Permeability:	0.049 mD
Porosity:	4.4 %



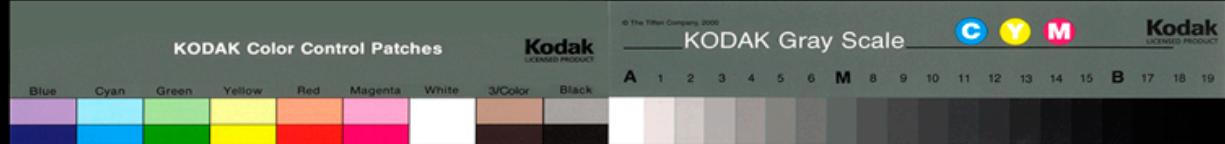


Sample No.:	R118
Depth:	2977.55 m
Permeability:	0.37 mD
Porosity:	3.0 %



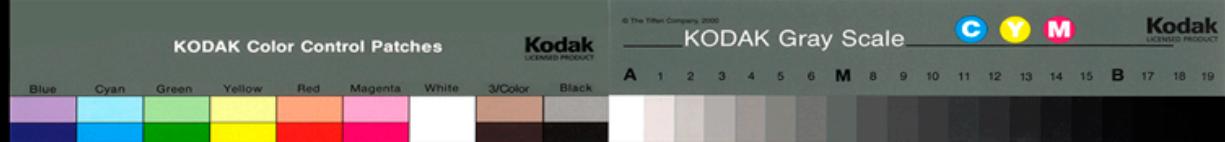


Sample No.:	R120
Depth:	2978.30 m
Permeability:	0.15 mD
Porosity:	4.3 %





Sample No.:	R121
Depth:	2978.61 m
Permeability:	0.061 mD
Porosity:	3.4 %





Top



Back



Front

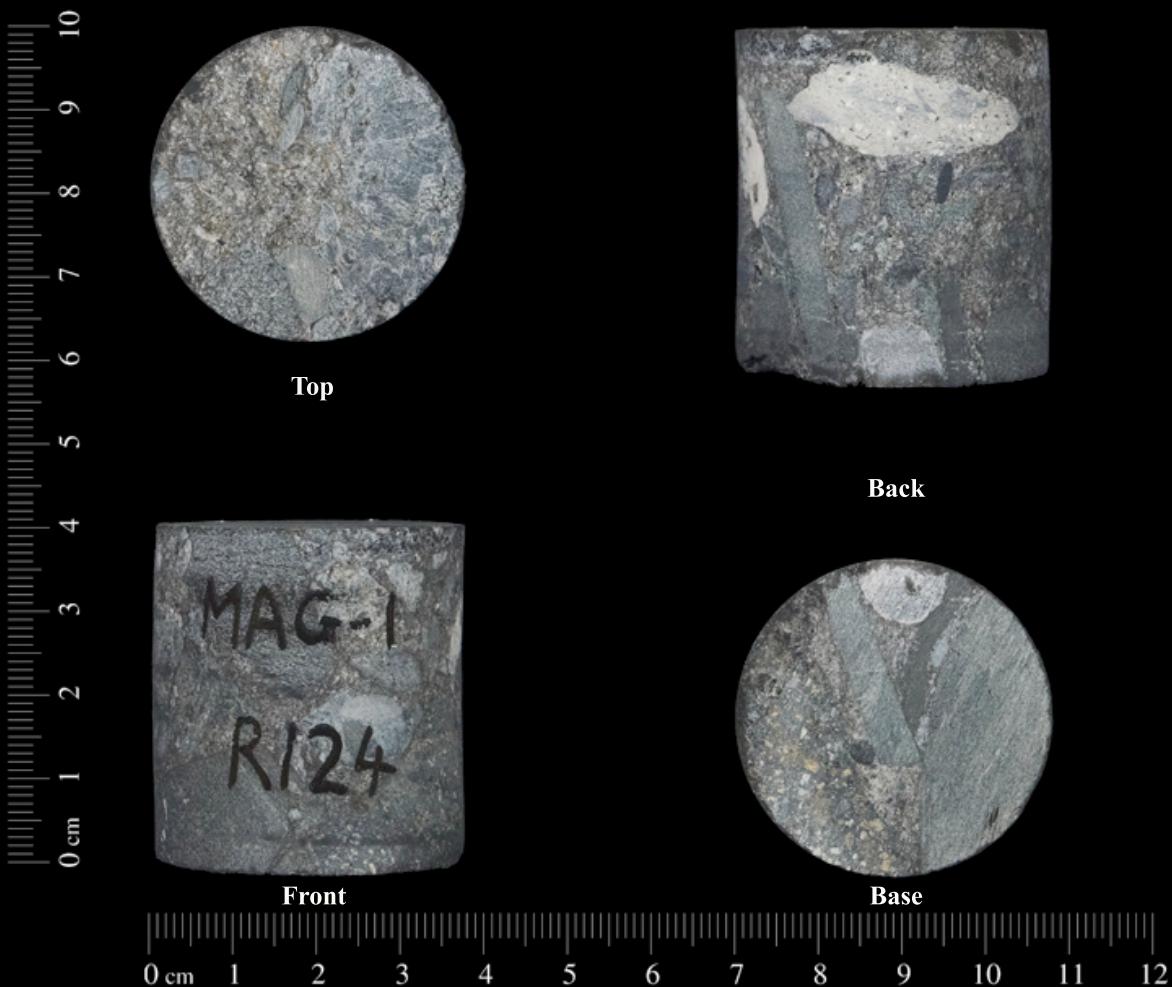


Base

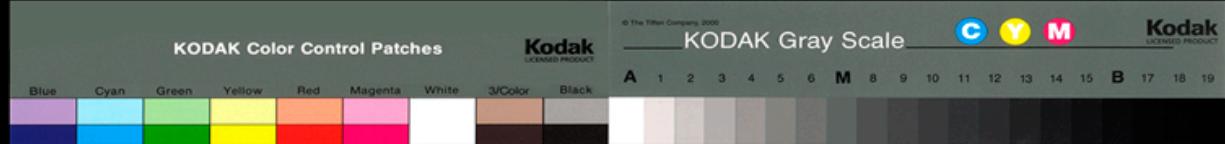


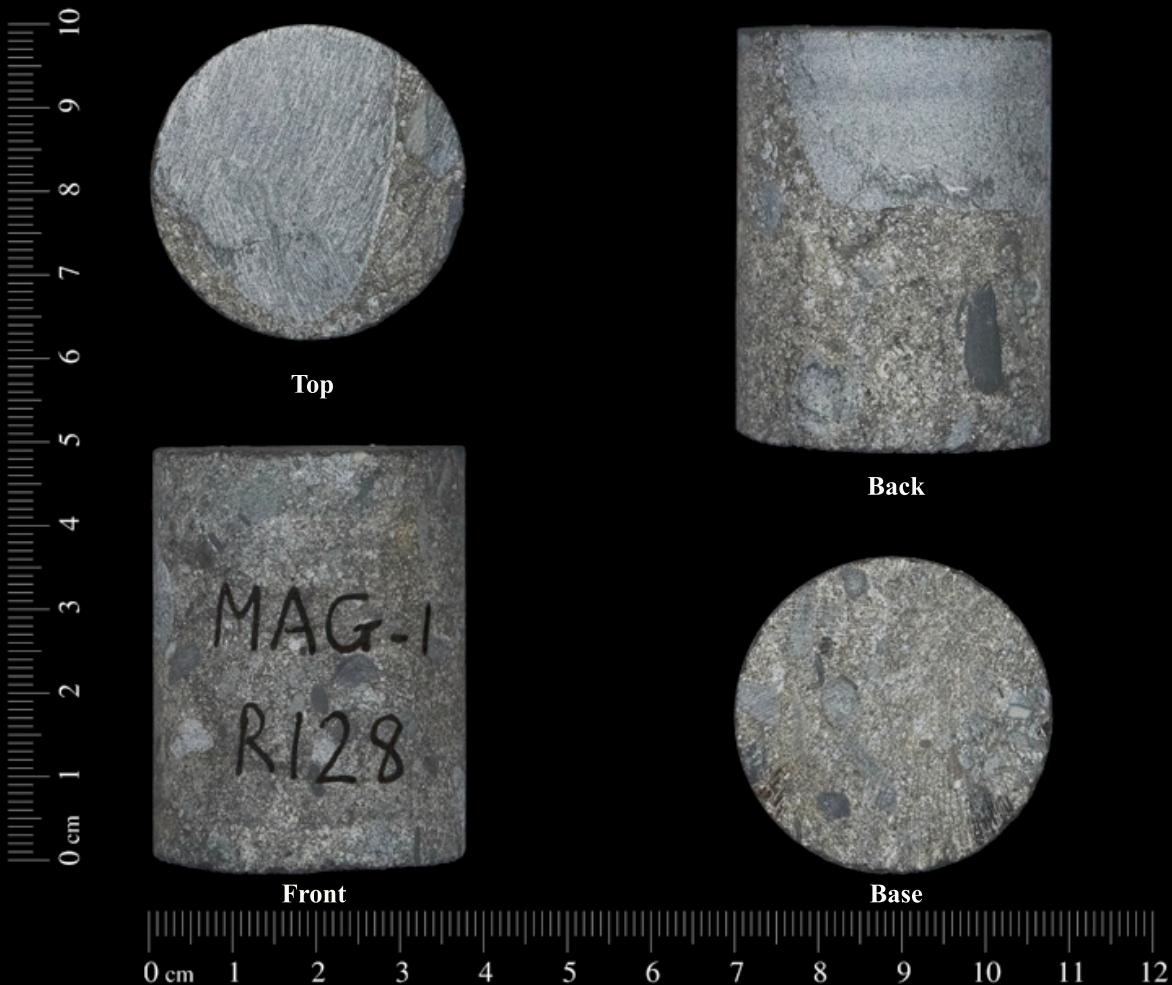
Sample No.:	R122
Depth:	2978.91 m
Permeability:	0.019 mD
Porosity:	2.6 %



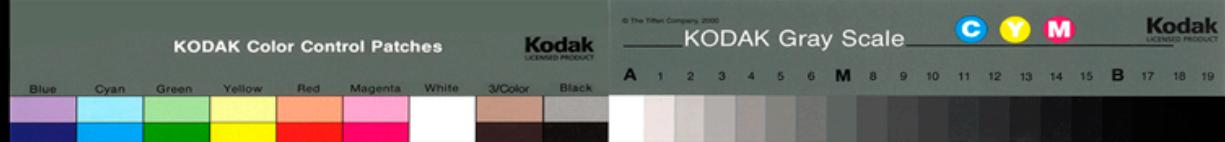


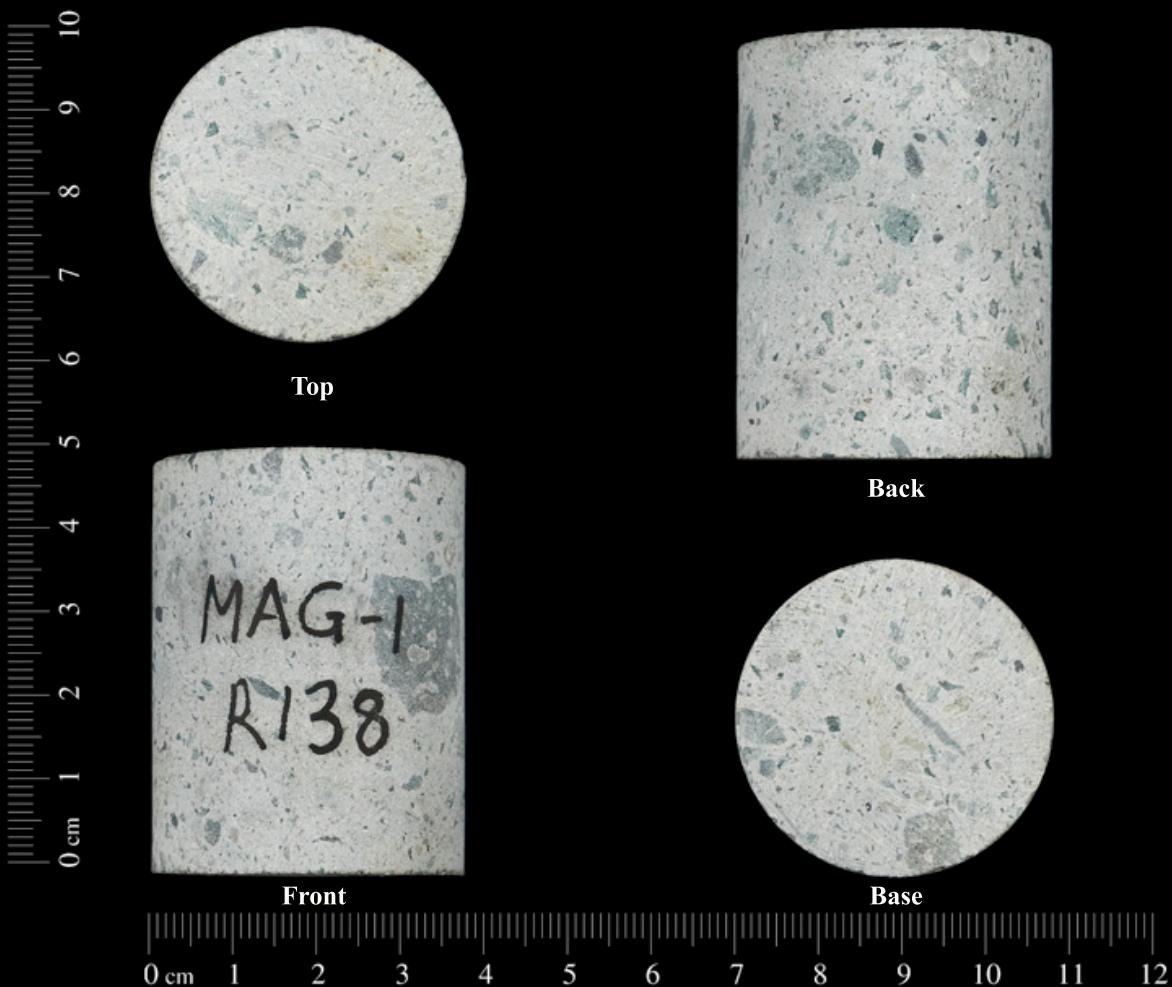
Sample No.:	R124
Depth:	2979.60 m
Permeability:	0.066 mD
Porosity:	2.9 %



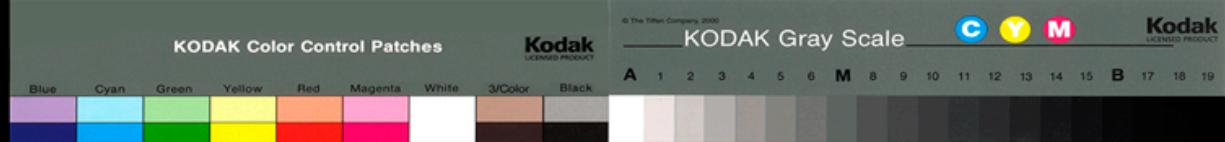


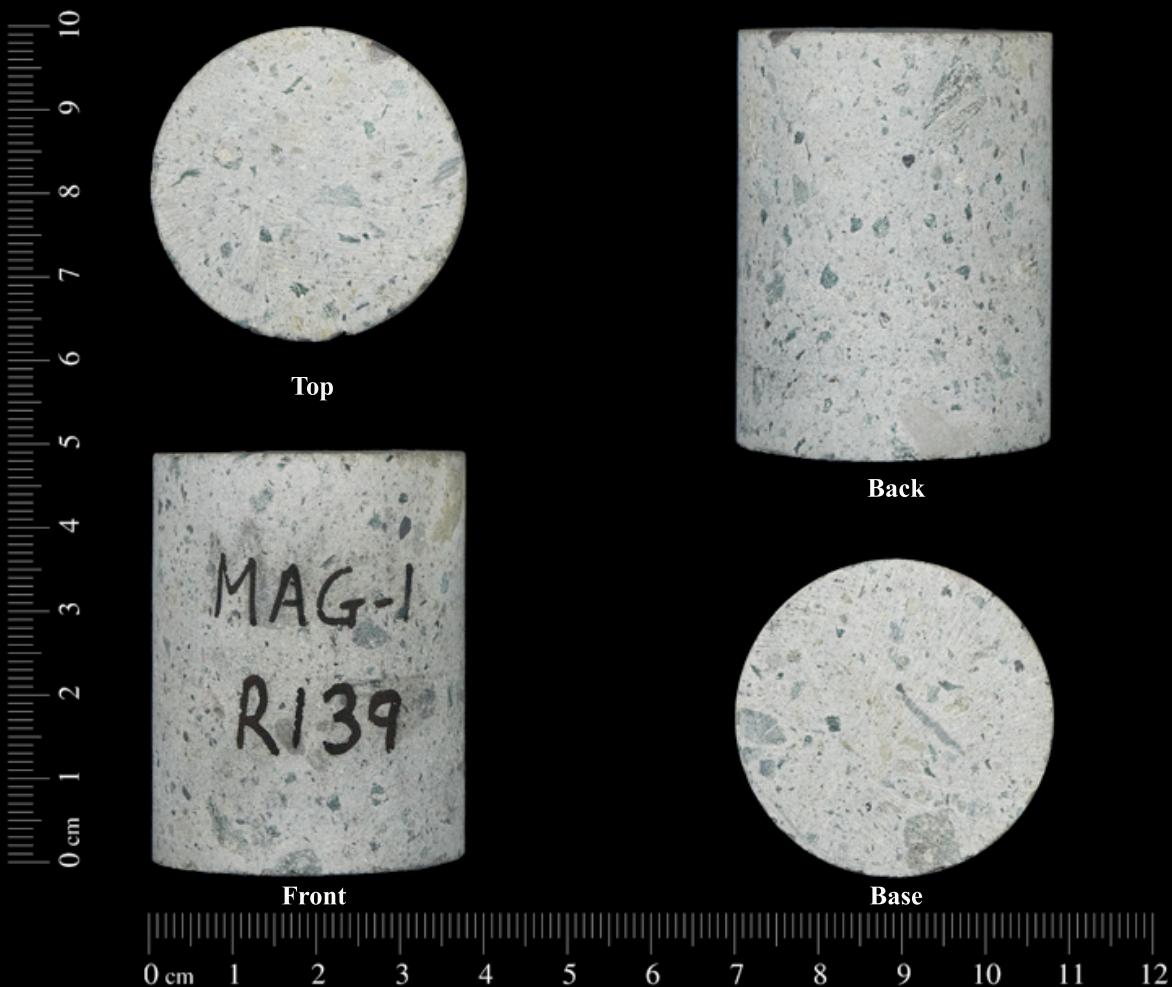
Sample No.:	R128
Depth:	2980.93 m
Permeability:	0.0019 mD
Porosity:	0.9 %



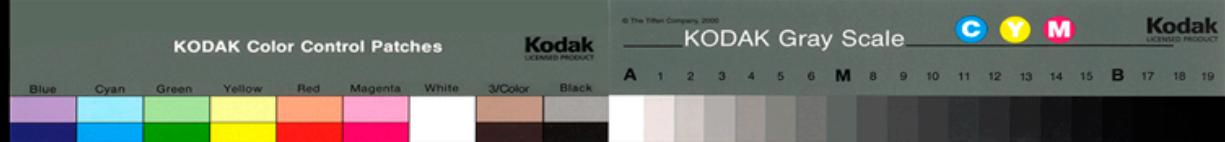


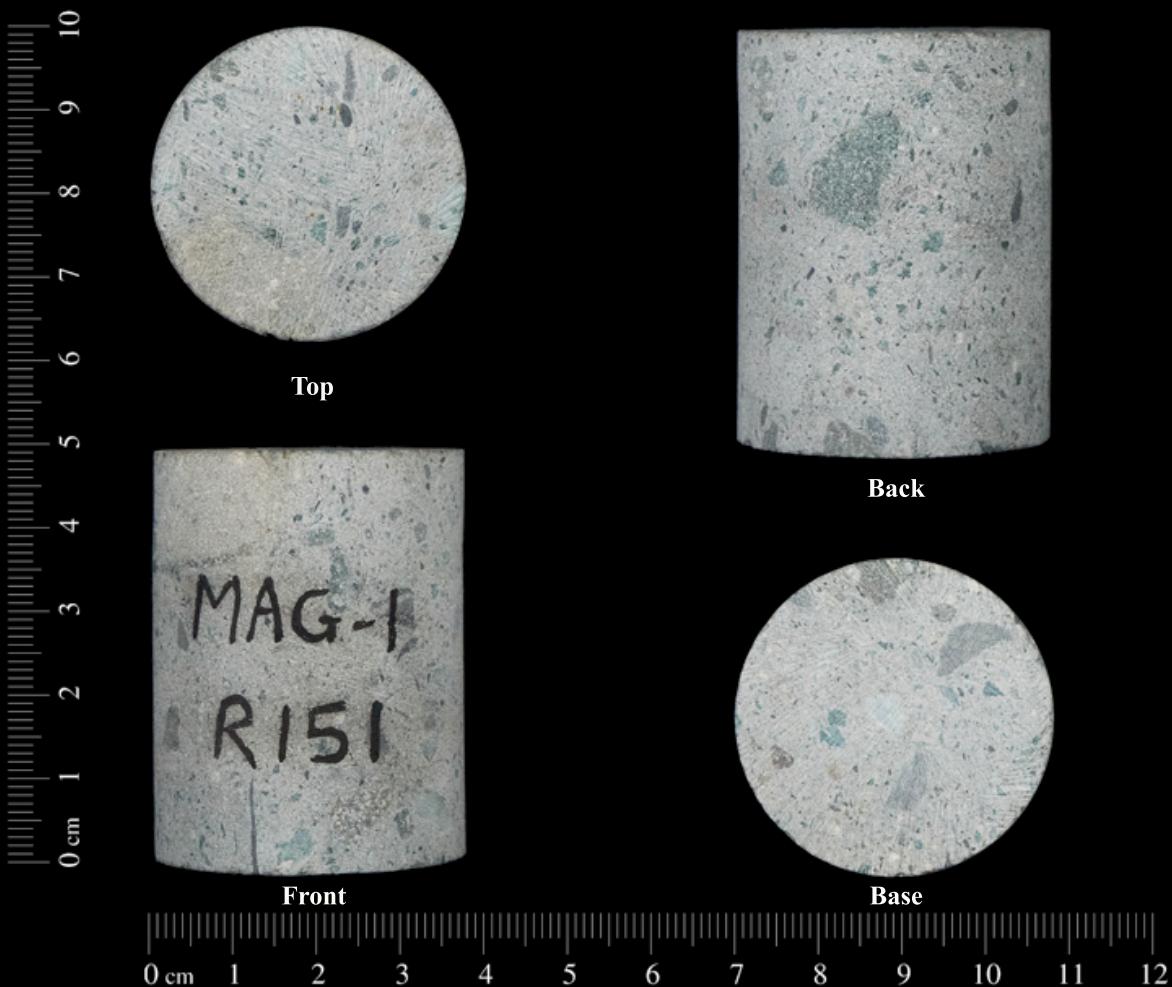
Sample No.:	R138
Depth:	2990.53 m
Permeability:	0.0026 mD
Porosity:	4.5 %



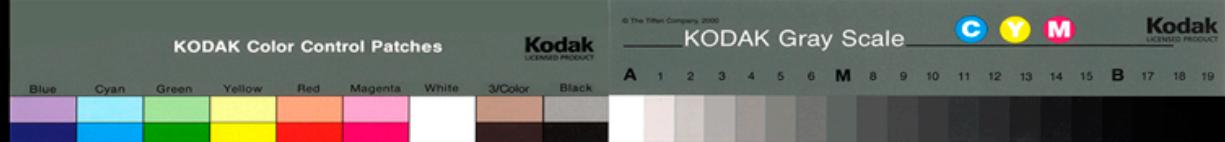


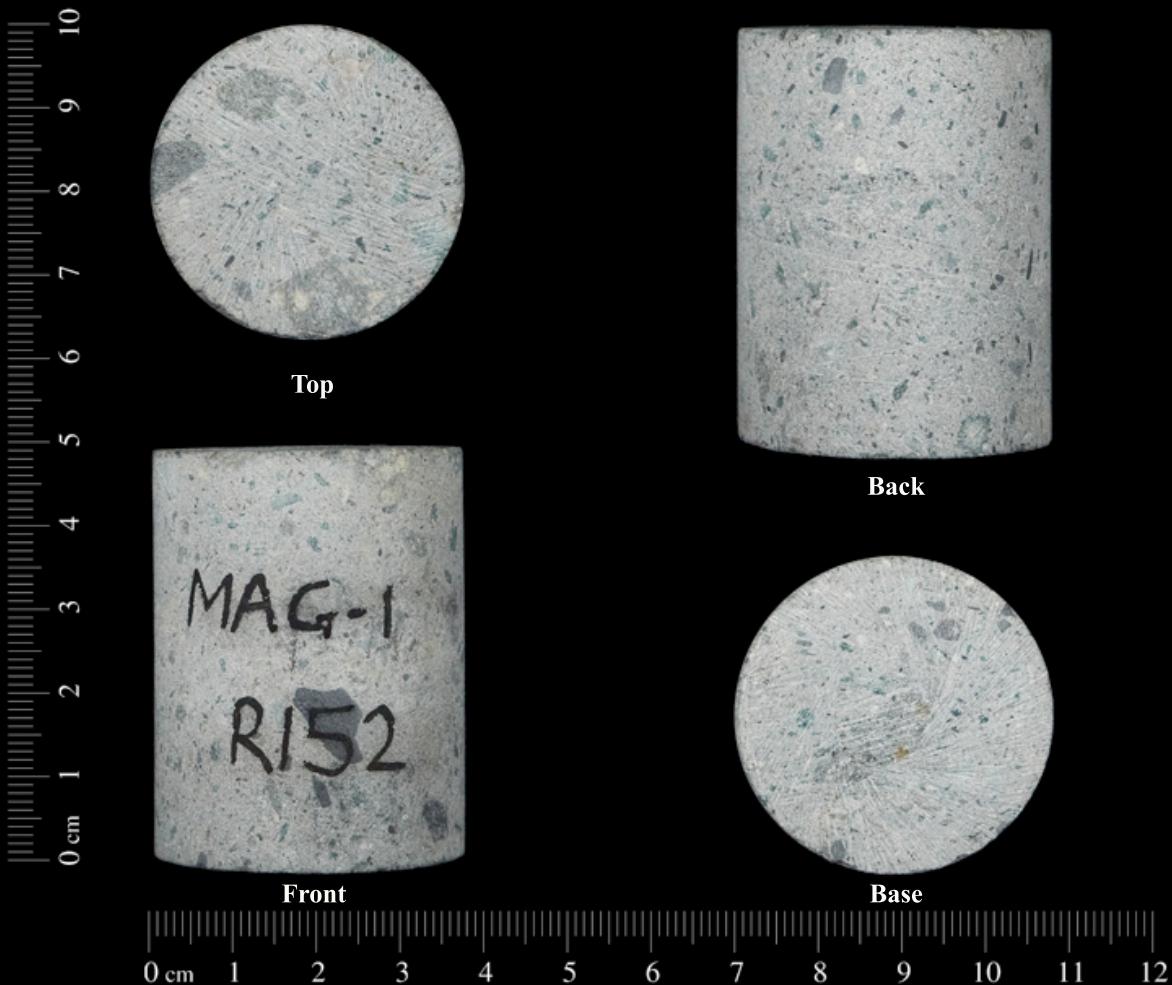
Sample No.:	R139
Depth:	2990.58 m
Permeability:	0.0027 mD
Porosity:	4.7 %





Sample No.:	R151
Depth:	3005.55 m
Permeability:	0.0069 mD
Porosity:	5.5 %





Sample No.:	R152
Depth:	3005.60 m
Permeability:	0.0032 mD
Porosity:	6.2 %

