



**Cored Intervals and Sample Analysis:**

TOP ft	BASE ft	WHOLE CORE		TOP ft	BASE ft	SWS CORE	
		ft	ROUTINE SCAL			#REC	ROUTINE SCAL
3147	3169	18	19	1323	3730	87	62
3169	3181	5	4	3775	7460	79	35
3231	3253	17	1				
7481	7491	10					

**Log Discussion:**

The Raven 1 well was drilled and logged with water-based drilling fluid containing Barite weighting material to total depth. All borehole sections required environmental corrections for hole size, temperature, pressure, and mud weight additives.

**Environmental Corrections:**

The Schlumberger 2000 Edition chartbook was used to correct the logs for borehole size, temperature, pressure, and drilling mud additives. The Gamma Ray log was corrected using chart GR-1. Compensated Neutron log was corrected using Por-14c and Por -14d. Dual Laterolog Resistivity logs were corrected using Rcor-2c and invasion corrected using Rint-9b. Dual Induction logs were corrected using Rcor-4a and invasion corrected using Rint-10.

Significant caliper enlargements were observed in deeper sections of the well, in cases where the borehole caliper readings were above the correction charts, the maximum chart correction was applied, however these corrections under estimate the true formation measurement.

The bulk density measurement was the most environmentally affected log in the dataset, where the density log readings measured drilling fluid when the caliper reading exceed 16 inches. Repair of the density log utilized a Gardner et al. (1974) sonic to density transform.

**Observations Logged Interval 1**

Observed some high caliper readings throughout the entire well and density log required editing using the Gardner<sup>1</sup> density transform. Sonic log data was compared to the Faust<sup>4</sup> velocity transform to correct anomalies in borehole washouts. Logged intervals where the bulk density was not present the delta-t sonic was used as the porosity model input to the final computed results.

**References**

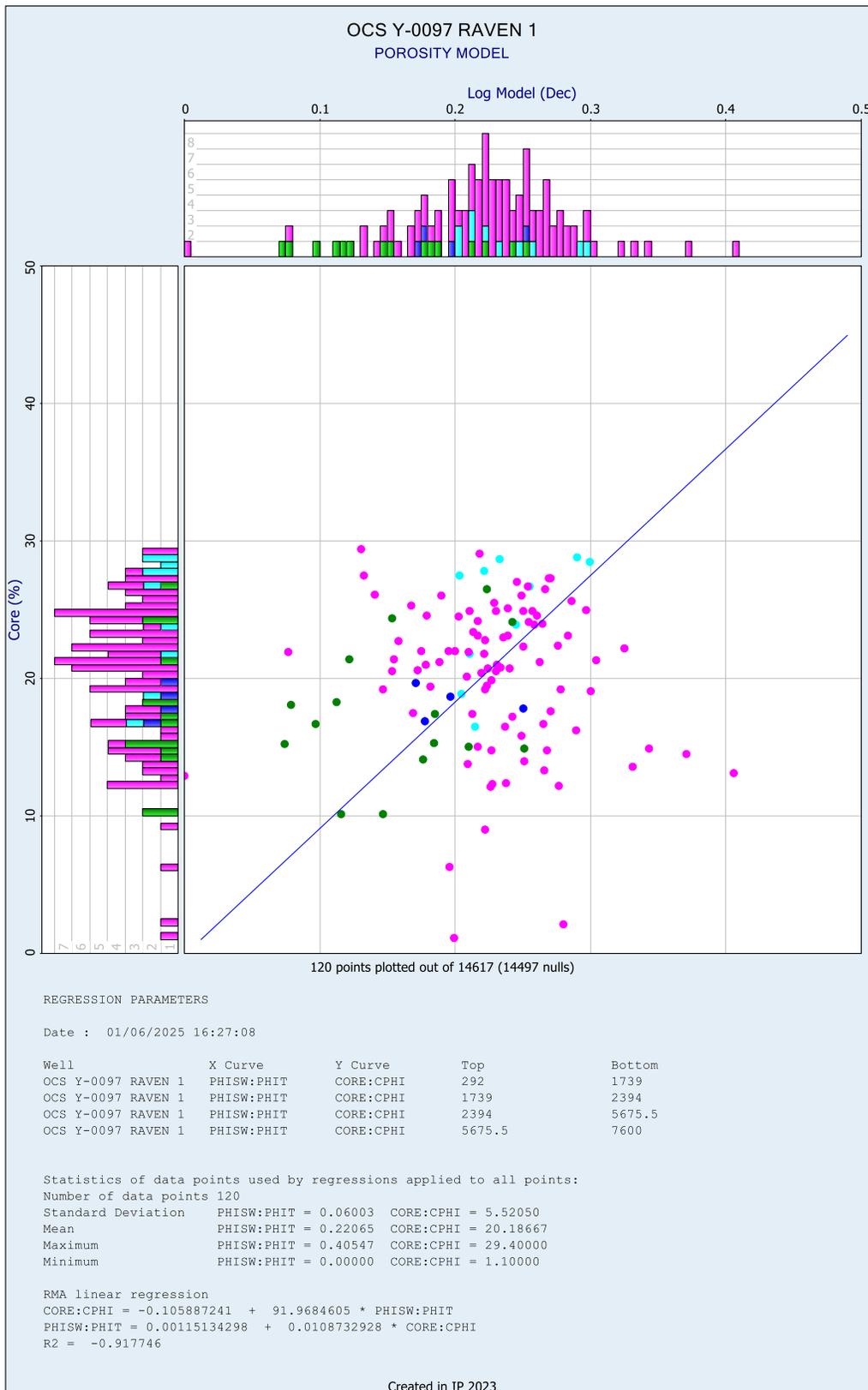
1. Gardner et al., 1974, Formation velocity and density—the diagnostic basics for stratigraphic traps Geophysics, 39 (6) (1974), pp. 770-780
2. Graton, L. C., and H. J. Fraser, 1935, Systematic packing of spheres with particular reference to porosity and permeability: Journal of Geology, v. 43, p. 785–909, DOI: 10.1086/jg.1935.43.issue-8
3. Carmichael, R.S. ed. 1982. Handbook of Physical Properties of Rocks, Vol. 2, 1-228. Boca Raton, Florida: CRC Press Inc.
4. L. Y. Faust, “A Velocity Function Including Lithologic Variation,” Geophysics, Vol. 18, No. 2, 1953, pp. 271-288.

**Summation Report:**

RESERVOIR SUMMARY											
Zone	Zone Name	Top	Bottom	Gross	Net	N/G	Av Phi	Av Sw	Av Vcl	Phi*H	PhiSo*H
1	ORIGINAL BOREHOLE	234	14984	14750	188.5	0.013	0.304	0.669	0.365	57.27	18.96

Reservoir summary cut off values used were porosity greater than 20% (PHIE > 0.2), shale volume less than 40% (VSHALE < 0.4), and water saturation less than 50% (SW < 0.5).

**Core versus Log Porosity Crossplot:**



Summary Plot:

