

Well Identification:

API#	AREA	BLOCK	OPERATOR	WELL NAME	
55367000060100	ST GEORGE EAST	631	ARCO Alaska Inc.	OCS Y-0510 SEGULA 1A	ST01BP00
LATITUDE	LONGITUDE	KB	WATER DEPTH	GEO DATUM	ZONE
56° 20' 38.7"	-167° 19' 53.3"	85	-390	NAD83	5

Overview

The Segula 1A was a sidetrack as an exploratory well on January 2nd, 1985 and located in the Bering Sea of the St. George Basin. The operator reported no commercial hydrocarbons were discovered at this location, the well was plugged and abandoned. The analytical data collection program included well logging and drill cutting samples collected by EXLOG. Collected samples were analyzed by Core Laboratories, AGAT Consultants, and MicroPaleo Consultants for lithology, fluid saturation, pore volume, and hydrocarbon source generation.

Geologic Intervals used for Analysis:

Age/Period	Stratigraphy	Top	Source	Comments
Miocene		5611		MWD Gamma Ray and Resistivity logs only for sidetrack well.
Oligocene		7840		
Eocene		12070	Segula-1 and -1A Dry Hole Analysis.pdf	

Logging Runs and Parameters:

LOGGED INTERVAL	TOP ft	BASE ft	TEMP degF	BITSIZE in	MWIN ppg	RM ohmm	LWD RUNS		
1	5620	13084	110	12.25	9.2	0.323	1	X	X

Cored Intervals and Sample Analysis:

No core or samples reported.

Log Discussion:

The Segula 1A well was drilled and logged with water-based drilling fluid containing Barite weighting material from 5611 feet measured depth to total depth. All borehole sections required environmental corrections for hole size, temperature, pressure, and mud weight additives, however no recorded caliper or correction charts for the LWD tool were available.

Environmental Corrections:

No environmental corrections were applied to the Segula 1A. The gamma ray was histogram normalized using the Segula 1 corrected gamma ray.

Observations Logged Interval 1

Sonic log travel-time was estimated using to the Faust⁴ velocity transform and petrophysical properties were estimated using the original Segula 1 well as a guide.

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	5611	13937	8326	0	0	---	---	---	---	---	

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).

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