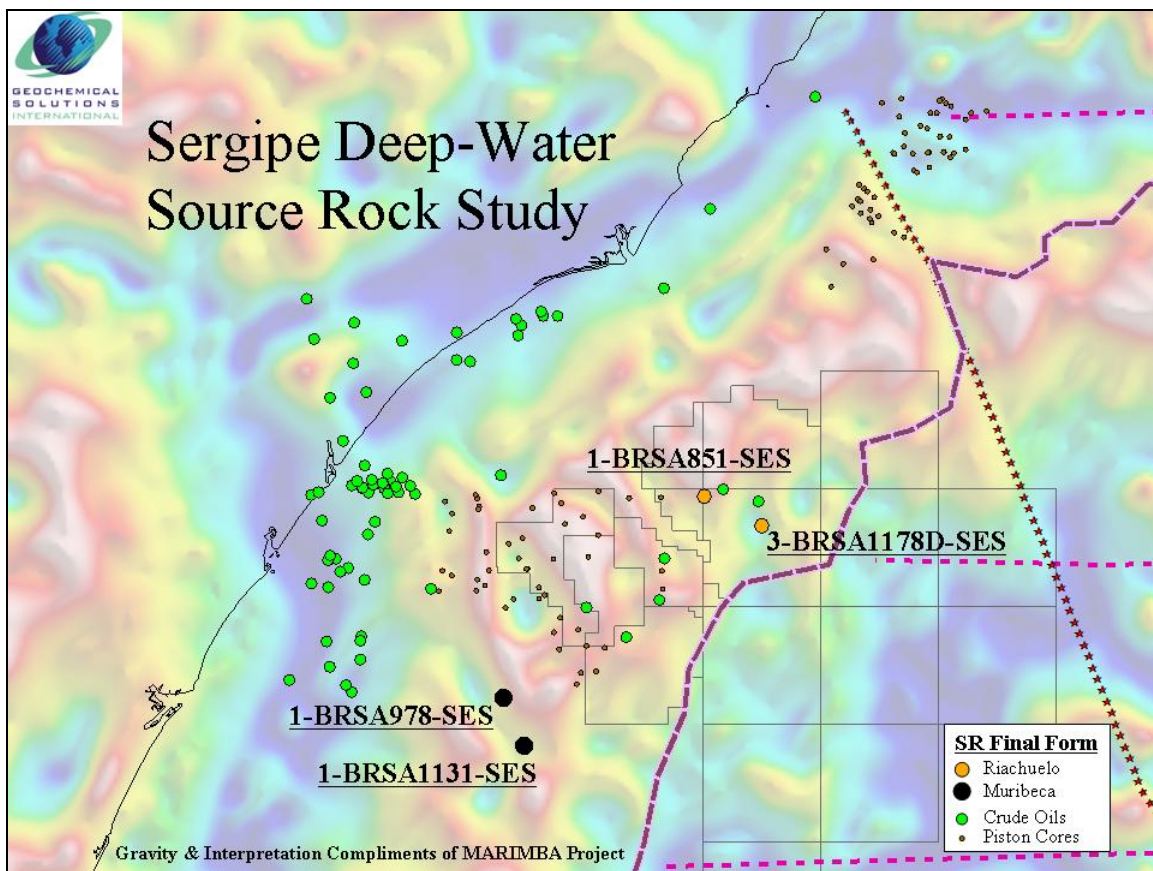


DETAILED GEOCHEMICAL EVALUATION OF DEEP-WATER SOURCE ROCKS FROM THE SERGIPE BASIN, NORTHEASTERN BRAZIL



A New Study from

GEOCHEMICAL SOLUTIONS INTERNATIONAL, INC.

2023

Prospectus

Executive Summary

GEOCHEMICAL SOLUTIONS INTERNATIONAL INC. (GSI) has conducted a geochemical characterization of potential source rock samples from the Sergipe Basin of northeast Brazil. This study, which complements the crude oil study conducted in 2018, was designed to evaluate the organic richness, hydrocarbon-generating potential, oil proneness, and thermal maturity level of potential source rock intervals with a focus on the Middle Cretaceous section. Four (4) wells strategically located in deepwater Sergipe were included in this important study. The sample set includes both cuttings and sidewall core samples representing Continguiba (Coniacian/Turonian) into the Aptian (Muribeca).

Well	Oper. Well Name	Basin	Block	State	TD (m)	Water (m)	Latitude	Longitude	Datum	Final FM
1-BRSA-1131-SES	1SES173	Sergipe	SEAL-M-569	SE	6561	2820	-11.546669	-36.628620	SIRGAS2000	Muribeca
1-BRSA-851-SES	1SES158	Sergipe	SEAL-M-426	SE	6510	2321	-11.017396	-36.246078	SIRGAS2000	Riachuelo
1-BRSA-978-SES	1SES160	Sergipe	SEAL-M-497	SE	6300	2775	-11.445281	-36.672477	SIRGAS2000	Muribeca
3-BRSA-1178D-SES	3SES176D	Sergipe	SEAL-M-426	SE	6261	2476	-11.079652	-36.124116	SIRGAS2000	Riachuelo

Samples were initially screened by total organic carbon content (%TOC) and pyrolysis data and a subset was selected for more detailed bitumen analyses including extraction, liquid chromatography, gas chromatography (GC), stable carbon isotopes and quantitative biomarker analysis (GC/MS). Kerogen maceral analysis, and Vitrinite Reflectance (%Ro) measurements were also performed.

Results were compared and contrasted to crude oil data from nearby deep-water discovery wells. Deliverables include an interpretive report and a brief synthesis of pertinent results on an associated montage. All geochemical data is provided in digital format in a database contained on a CD that includes a proprietary data browser to facilitate access.

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