

Petroleum Potential for Kavango Basin - ReconAfrica -

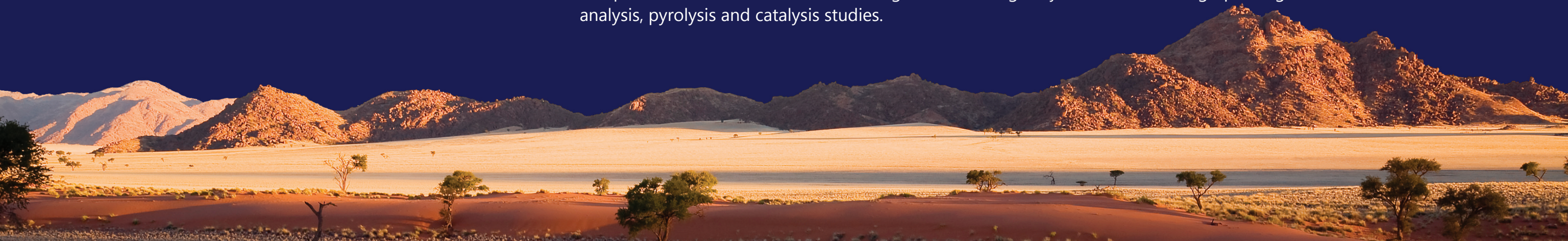
BY DAN JARVIE, WORLDWIDE GEOCHEMISTRY, LLC



Daniel Jarvie
GEOCHEMIST

Mr. Daniel Jarvie is globally recognized as a leading analytical and interpretive organic geochemist, having evaluated conventional and unconventional petroleum systems around the World. Most notably, he completed the geochemical analysis for Mitchell Energy, in their development of the Barnett Shale of the Fort Worth Basin, in Texas. In 2010, he was awarded "Hart Energy's Most Influential People for the Petroleum Industry in the Next Decade."

Mr. Jarvie is retired Chief Geochemist for EOG Resources, the largest producer of shale oil resource plays in North America. He is the President of Worldwide Geochemistry, LLC, working as a consultant to industry, focused on unconventional shale resource plays and prospects, and has also established a research lab to evaluate various aspects of unconventional shale-gas and shale-oil petroleum systems as well as conventional petroleum systems. His specialties include source rock characterization, especially for resource assessments, and also detailed source rock characterization for conventional petroleum systems analysis, including bulk and compositional kinetic determinations, high resolution light hydrocarbon and fingerprinting analysis, pyrolysis and catalysis studies.



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Certain information in this Presentation may constitute "forward - looking information" within the meaning of Canadian securities legislation. Forward-looking information can be identified by the use of forward-looking terminology such as "expects", "plans", "anticipates", "believes", "intends", "estimates", "projects", "aims", "potential", "goal", "objective", "prospective" or variations of such words and phrases or statements that certain actions, events or conditions "will", "would", "may", "can", "could" or "should" occur. All statements other than statements of historical facts included in this Presentation constitute forward-looking information, including, but not limited to, statements with respect to the treatment of Reconnaissance Energy Africa Ltd. ("Reconnaissance" or the "Company") under the regulatory regimes and laws of the jurisdictions in which Reconnaissance conducts its business; drilling and completion of wells; facilities costs and the timing and method of funding thereof; expected timing of development of undeveloped reserves; Reconnaissance's potential future oil and natural gas production levels; the future performance and characteristics of Reconnaissance's oil and natural gas properties; the estimated size of Reconnaissance's potential oil and natural gas reserves; projections of market prices and costs; projections of supply and demand for oil and natural gas; expectations regarding the ability to raise capital and to continually add to reserves through acquisitions, anticipated exploration and development activities; future capital expenditure programs and the timing and method of financing thereof.

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Except as required by the securities disclosure laws and regulations applicable to the Company, the Company undertakes no obligation to update this forward-looking information if management's beliefs, estimates or opinions, or other factors, should change.

Estimated Petroleum Generation: Conventional and Unconventional

BASED ON PREDICTED SOURCE ROCK PROPERTIES AND VARIOUS THICKNESSES

“Given the nature of this basin and the tremendous thickness, this is pretty much a no-brainer... It will be productive and I’m expecting high quality oil”
- Dan Jarvie, Worldwide Geochemistry LLC -

Total Petroleum Generation per section/640 acres (Expelled and Retained)						
Conversion	Thickness in Feet					
	200 (mmboe/section)	300 (mmboe/section)	328* (mmboe/section)	400 (mmboe/section)	443** (mmboe/section)	500 (mmboe/section)
50% Kerogen Conversion	24	37	40	49	54	61
75% Kerogen Conversion	37	55	60	73	81	92

* net thickness from geological data
** net thickness from Shell's Permian source rock section, Karoo basin, South Africa
50% Kerogen Conversion = ~ 0.84 vitrinite reflectance
75% Kerogen Conversion = ~ 1.10 vitrinite reflectance

Total Petroleum Generation Potential over ReconAfrica's Kavango Basin Acreage (8.75 million acres)						
Conversion	Thickness in Feet					
	200	300	328	400	443	500
	1641 sections* (billion boe)**	1641 sections* (billion boe)**	1641 sections* (billion boe)**	1641 sections* (billion boe)**	1641 sections* (billion boe)**	1641 sections* (billion boe)**
50% Kerogen Conversion	40	60	66	80	89	100
75% Kerogen Conversion	60	90	99	120	133	150

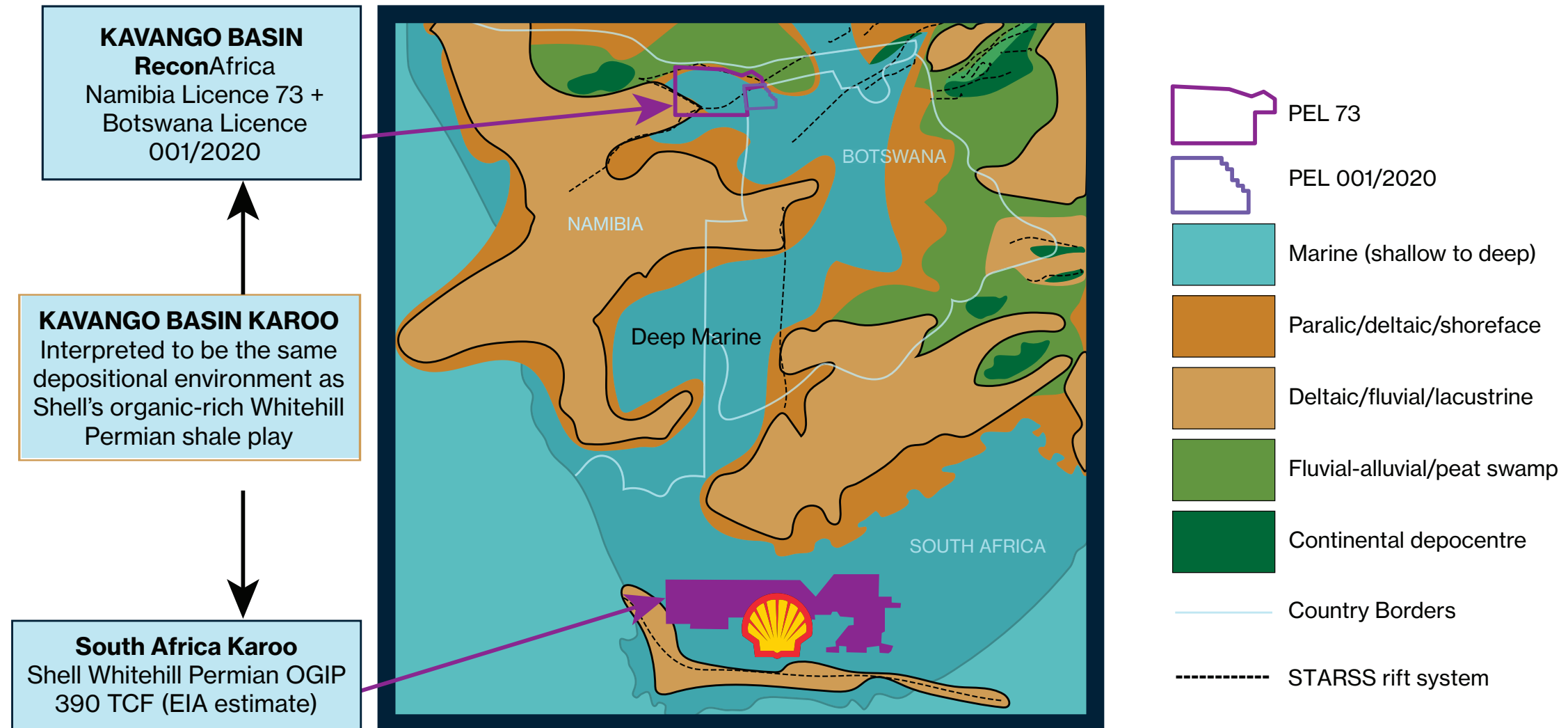
* 1641 sections represents 12% of ReconAfrica total holdings of 13,671 sections
** boe = barrels of oil equivalent
50% Kerogen Conversion = ~ 0.84 vitrinite reflectance
75% Kerogen Conversion = ~ 1.10 vitrinite reflectance

TECHNICAL APPENDIX

Assumptions for Geochemical Calculations

- Geological assessments suggests marine and terrigenous organic matter will be present in source rocks
- Geochemical data from highly mature Permian section in Karoo Basin, South Africa, was used to estimate minimum TOC and Hydrogen contents
- Thickness of net source rock intervals
- Geological data from Namibia and Botswana was used to predict net thickness of source rocks (328 ft)
- Data from Claire Geel et al. (2013) was used for an alternate thickness at 443 ft
- One hundred foot intervals from 200 to 500 ft in addition to above
- Source rock was constructed to be composed of a marine shale and terrigenous but slightly oil prone organic matter based on a total South African Karoo basin data suggesting a minimum hydrogen index (HI) of 358 mg kerogen/g TOC
- Terrigenous shale: TOC=2.5%, Hydrogen Index = 335 mg/g
- Marine Shale: TOC=5.0%, Hydrogen Index = 380 mg/g
- Average TOC=3.75%, HI = 358 mg/g
- A simple arbitrary low heating rate of 2oC/Ma from 15oC to 300oC was utilized for a constant heating rate model
- Conversion of organic matter is shown for 50% and 75% conversion of the source rock organic matter
- Of ReconAfrica's 13,672 sections, calculations are based on 12% of that acreage or 1,641 sections only

Depositional Systems: Mixed Marine and Terrigenous Shales

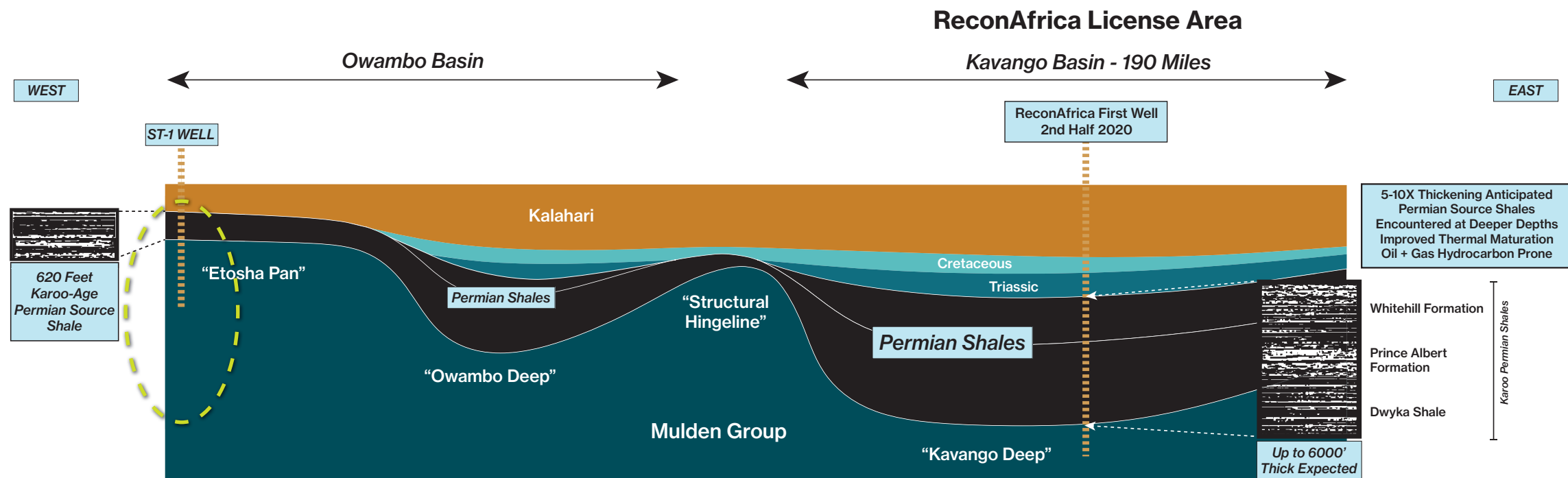


Namibian Kavango Basin has Deeper, Thicker Permian Section than the Owambo Basin

PERMIAN PETROLEUM SYSTEM

- Confirmed by ST1 Well
- Continuous with Shell SA Permian Unconventional

Note: Deeper, thicker system in ReconAfrica lease block - mature for oil

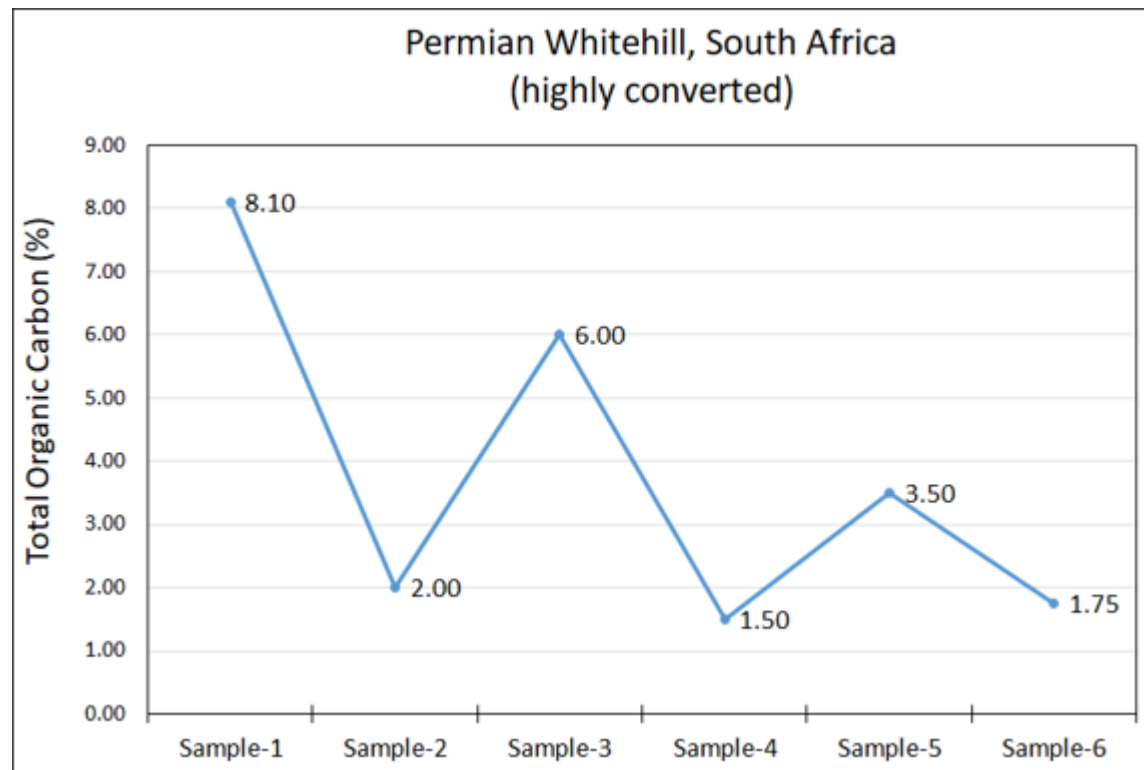


Greater Permian thickness and maturity in Kavango Basin than the Owambo basin to the West

Permian Whitehill Shale TOC, Present-Day and Restored

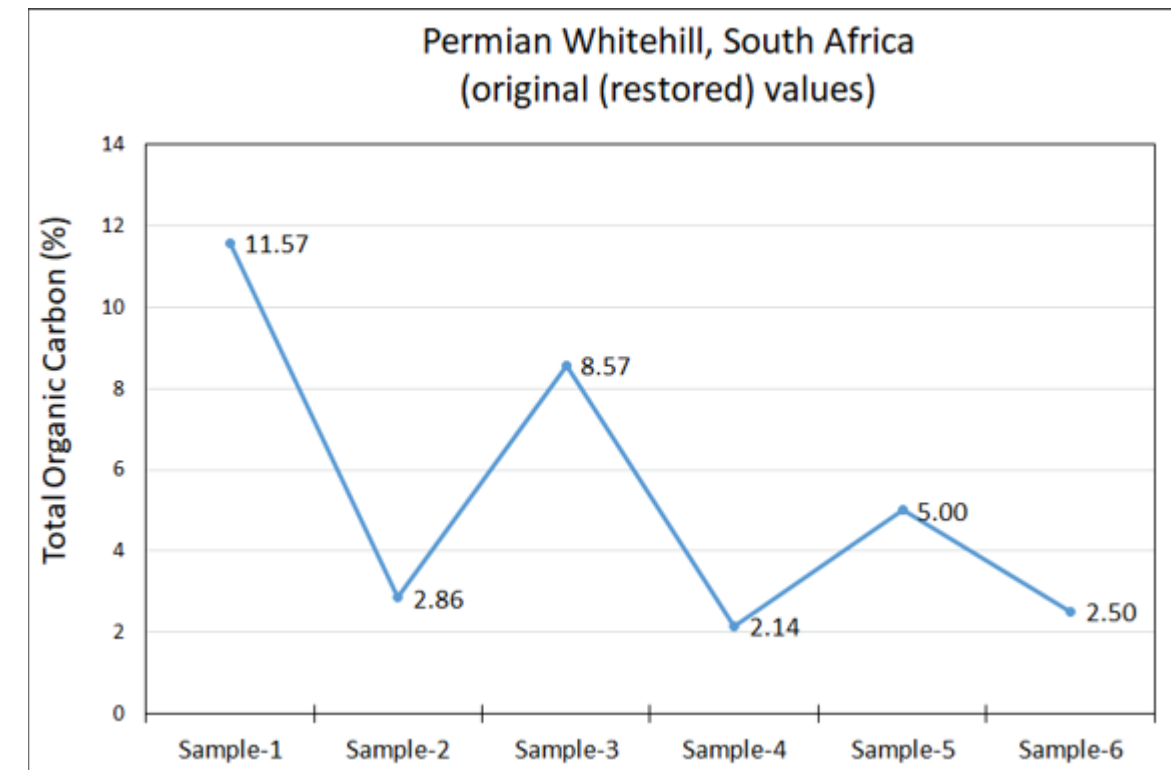
(ONE OF THREE SOURCE ROCK INTERVALS)

Present-day as reported in Geel et al., 2013



Average TOC at high conversion: 3.81%

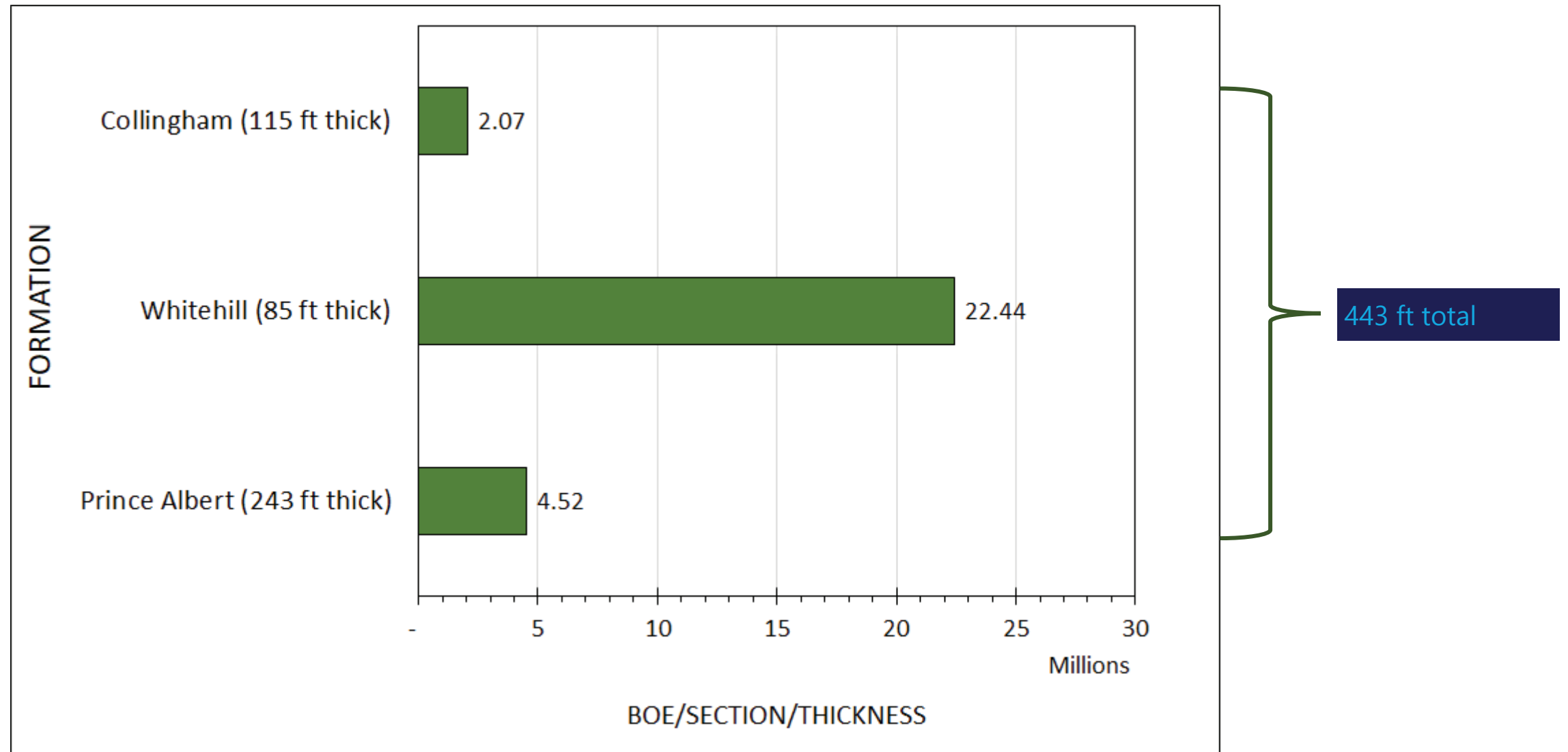
Restored Original TOC using HI original of 358 mg/g



Average original TOC: 5.44%

Difference in TOC (TOC_o – TOC_{pd}) is 1.63 % or converted to petroleum 460 boe/af
At 100 ft only of thickness, this is 29.5 mmbœ/section/100 ft

Permian Data from Karoo Basin, South Africa Converted to Petroleum Yields



Ref: Geel et al., 2013

Very Conservative Mixed Source Rock Parameters

- (1) SOURCE ROCK CHARACTER IS DETERMINED FROM REGIONAL PALEO-GEOGRAPHIC ASSESSMENT
- (2) CONSERVATIVE BASED ON SOURCE ROCK DATA FROM KAROO BASIN, SOUTH AFRICA)

Source Rock 1

Hydrogen Index (HI) = 335 mg/g
TOC = 2.5%
Petroleum Potential = 307 boe/af

Source Rock 2

Hydrogen Index (HI) = 380 mg/g
TOC = 5.0%
Petroleum Potential = 456 boe/af

The screenshot shows the KINEX 4.9 software interface. The window title is "Untitled:1 - KINEX 4.9". The menu bar includes "File", "Edit", "Options", "View", and "Help". The toolbar contains various icons for file operations and analysis. The main window is divided into several sections:

- My Kerogens:** A list of source rock types with checkboxes. The selected options are "D/E-Terrigenous terrestrial wax/resin" and "F-Terrigenous terrestrial lignin-rich".
- Thermal History Settings:** Radio buttons for "Linear" (selected), "Isothermal", and "Imported". Input fields for "Initial Temperature (C)" (15), "Final Temperature (C)" (300), and "Heating Rate (C/my)" (2).
- Buttons:** "Save Excel File" and "Update plots".
- Table:** A table with columns: name, HI mg/g, TOC %, GOGI, TI mg/g, Thickness (ft).

name	HI mg/g	TOC %	GOGI	TI mg/g	Thickness (ft)
D/E-Terrigenous terrestrial wax/r...	300	2.5	0.37	6	50
F-Terrigenous terrestrial lignin-rich	415	5	0.30	4	50

Thermal history is constant at a conservative heating rate

Average:
HI: 358 mg/g
TOC: 3.75%