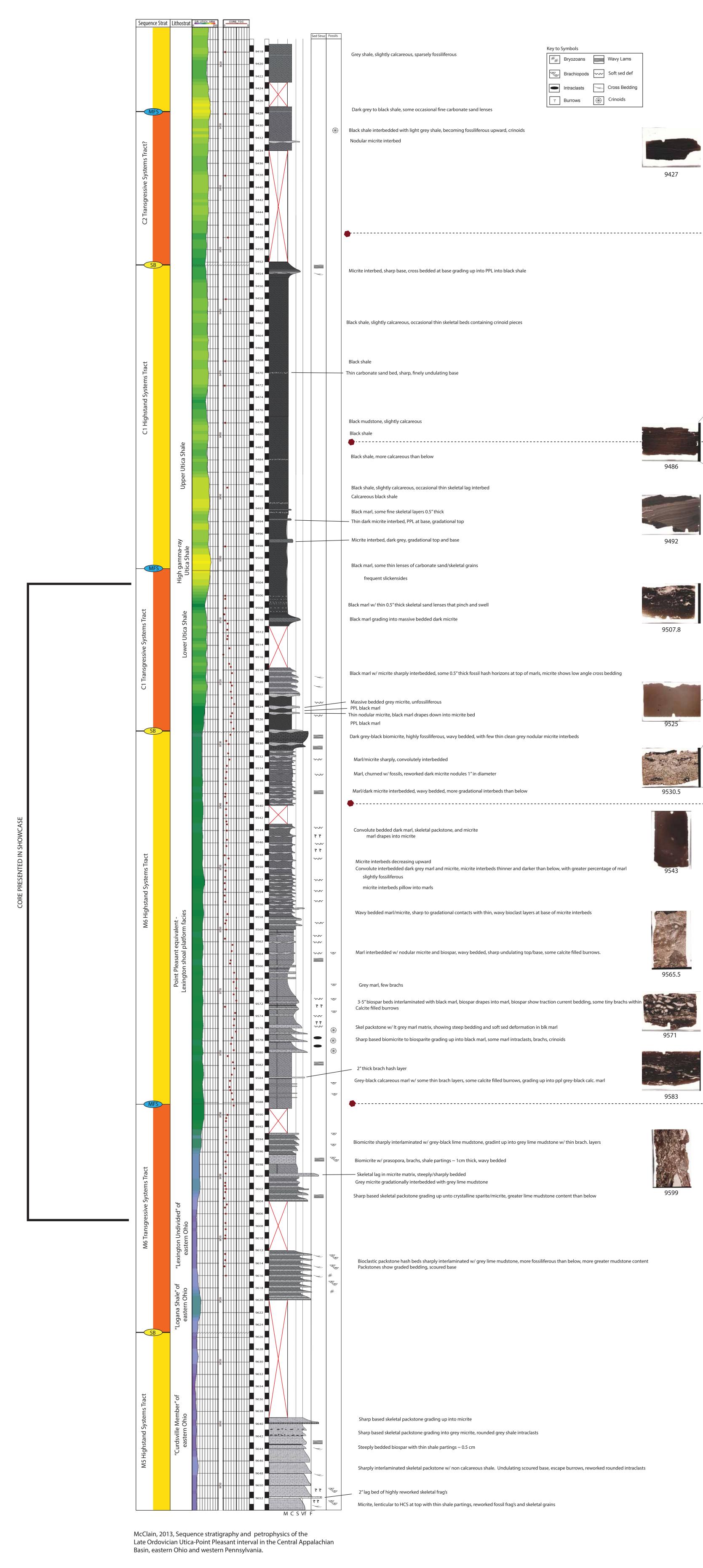
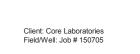
TRENTON/POINT PLEASANT/UTICA



WOOD COUNTY, WV





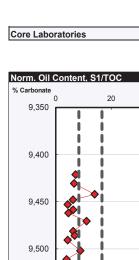


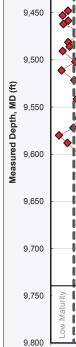
Core Laboratories

% C	arbonate		
	9,350	0	20
	9,400		
	9,450		
	9,500		
Jepth, MD (ft)	9,550		
Measured Depth, I	9,600		
	9,650		
	9,700		8 8 8
	9,750		



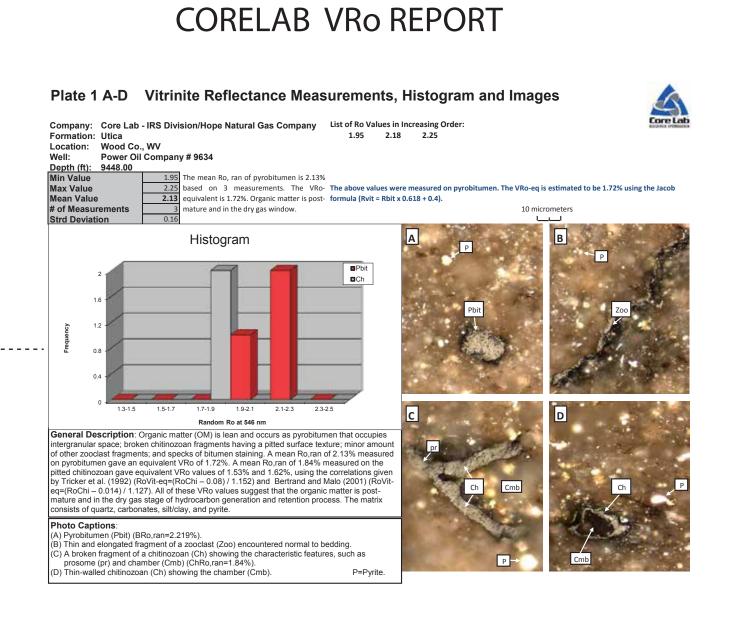
GeoMark Source Rock Services 218 Higgins Street Humble, TX 77338

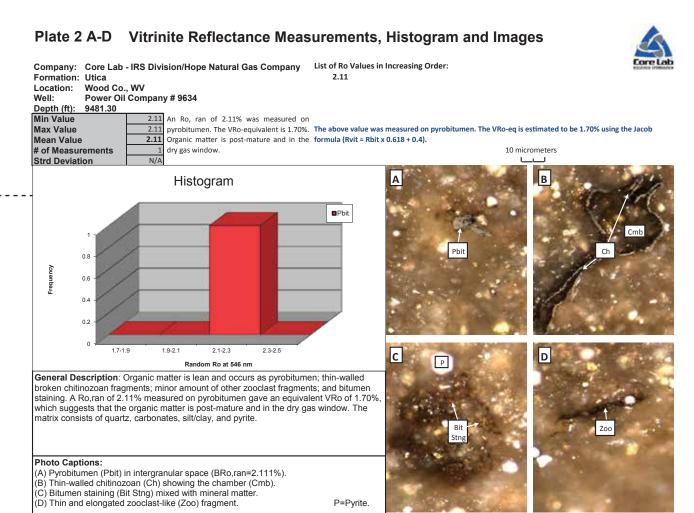


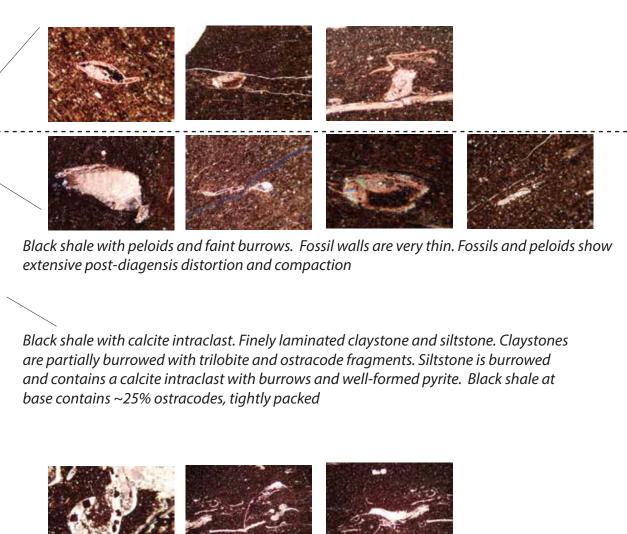


Black shale, fissile and finely laminated. Scattered echinoderm and trilobite fragments. Organic debris is elongated and oriented parallel to bedding.

THIN SECTION DESCRIPTIONS

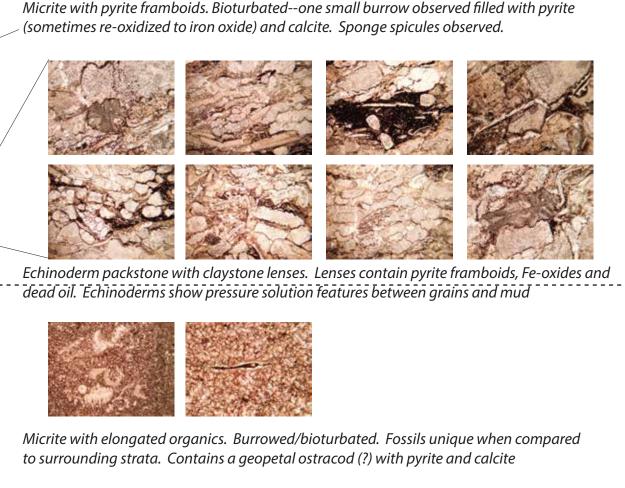


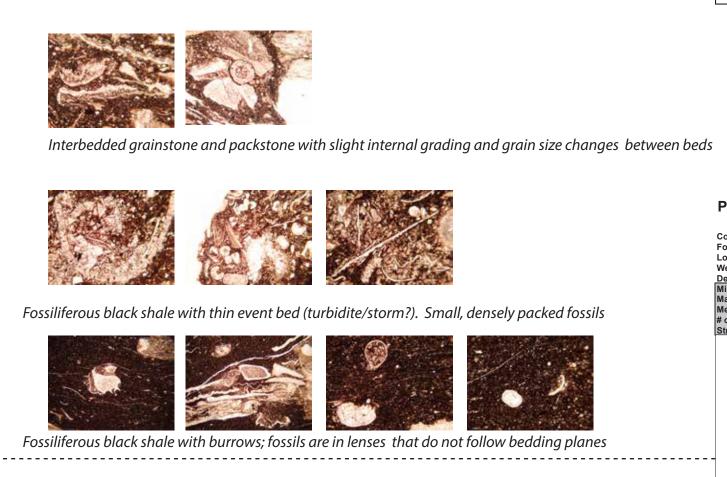




Fossiliferous black shale with high organic content. Pyrite framboids observed; pyrite

replaces some fossil material (e.g. trilobite in first image). Bioturbated with lenses of fossil fragments





Nodular packstone; nodules separated by pressure solution. Some nodules contain large fossil

fragments, while others are clay-rich and largely devoid of fossils

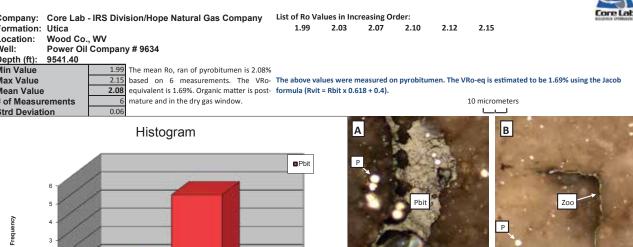
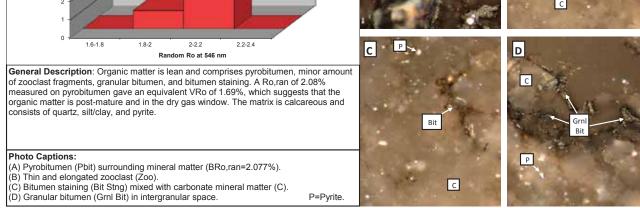
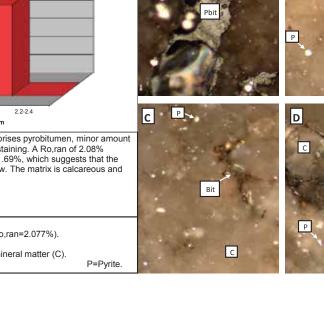
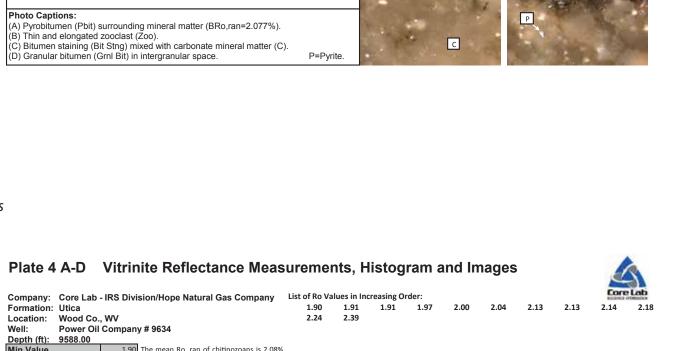


Plate 3 A-D Vitrinite Reflectance Measurements, Histogram and Images



n: Wood Co., WV Power Oil Company # 9634





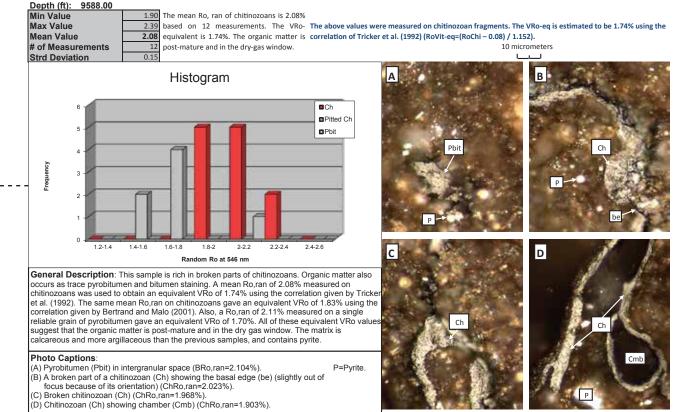
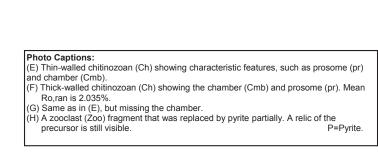
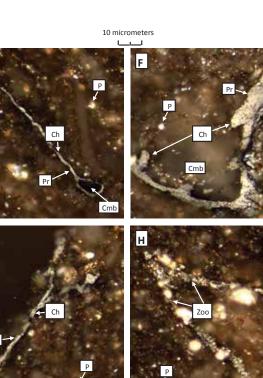
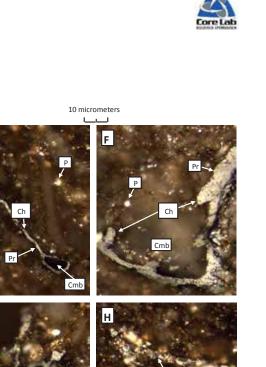
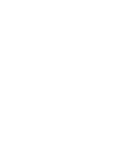


Plate 4 E-H Images and Captions Continued Company: Core Lab - IRS Division/Hope Natural Gas Company Formation: Utica Location: Wood Co., WV Well: Power Oil Company # 9634 Depth (ft): 9588.00



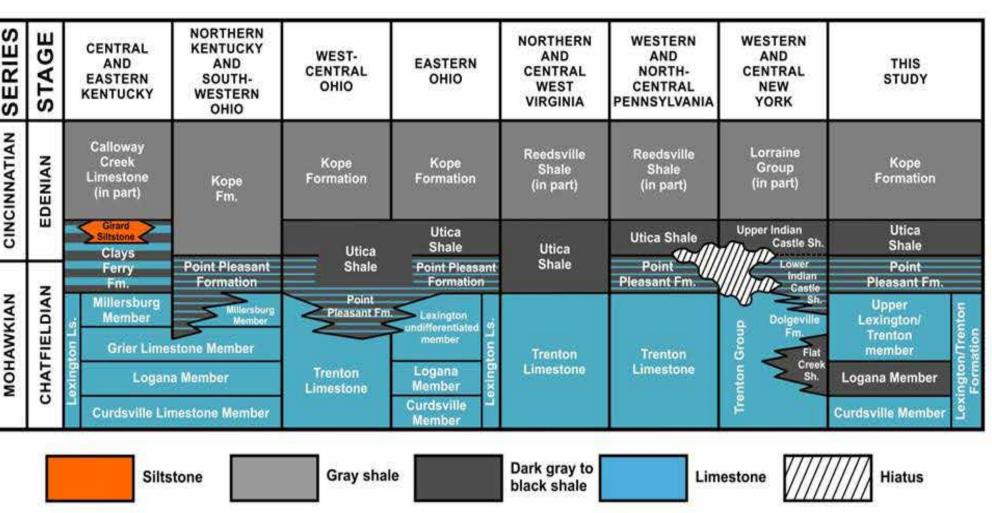




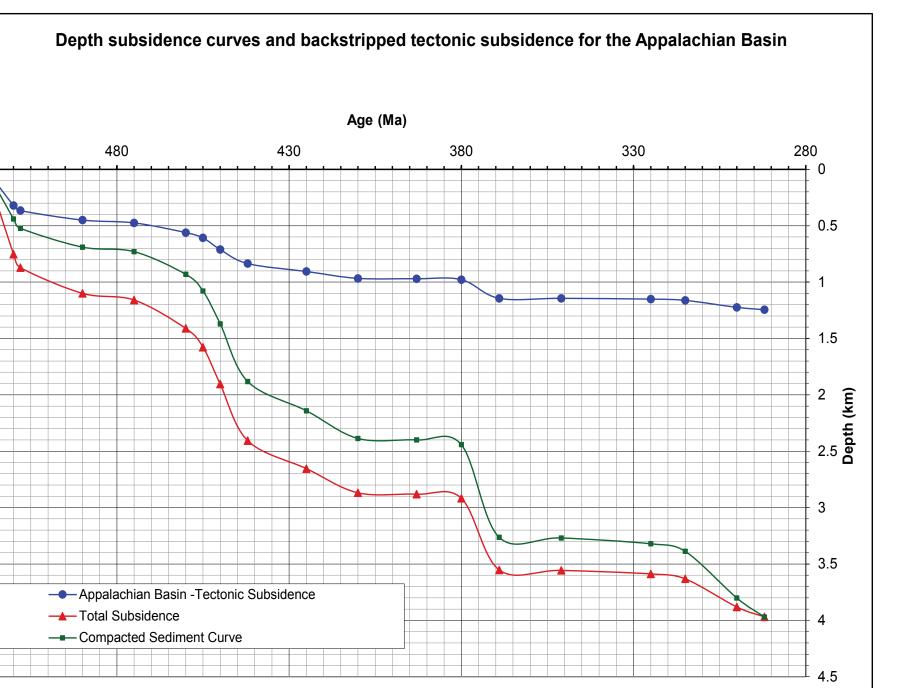




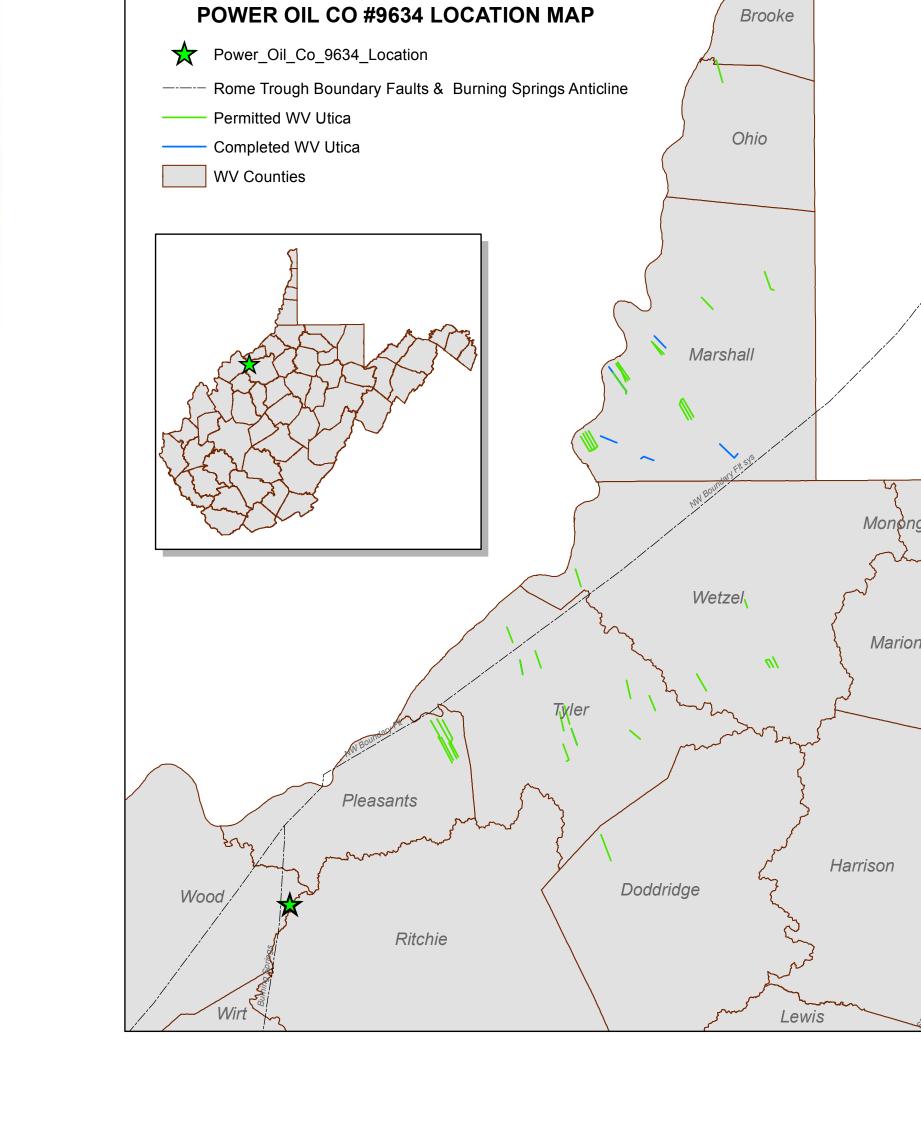
POWER OIL COMPANY #9634



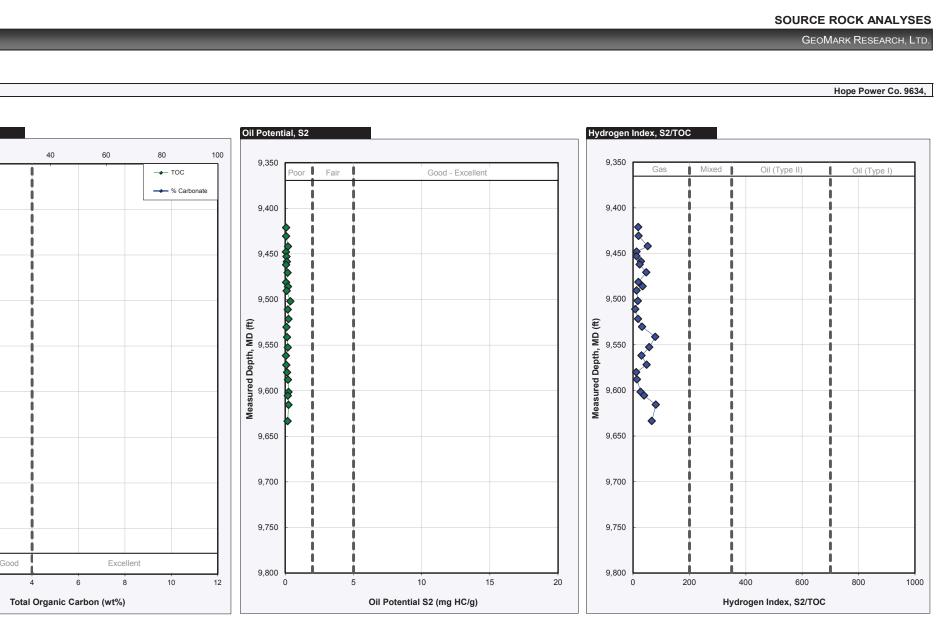
REGIONAL STRATIGRAPHIC NOMENCLATURE



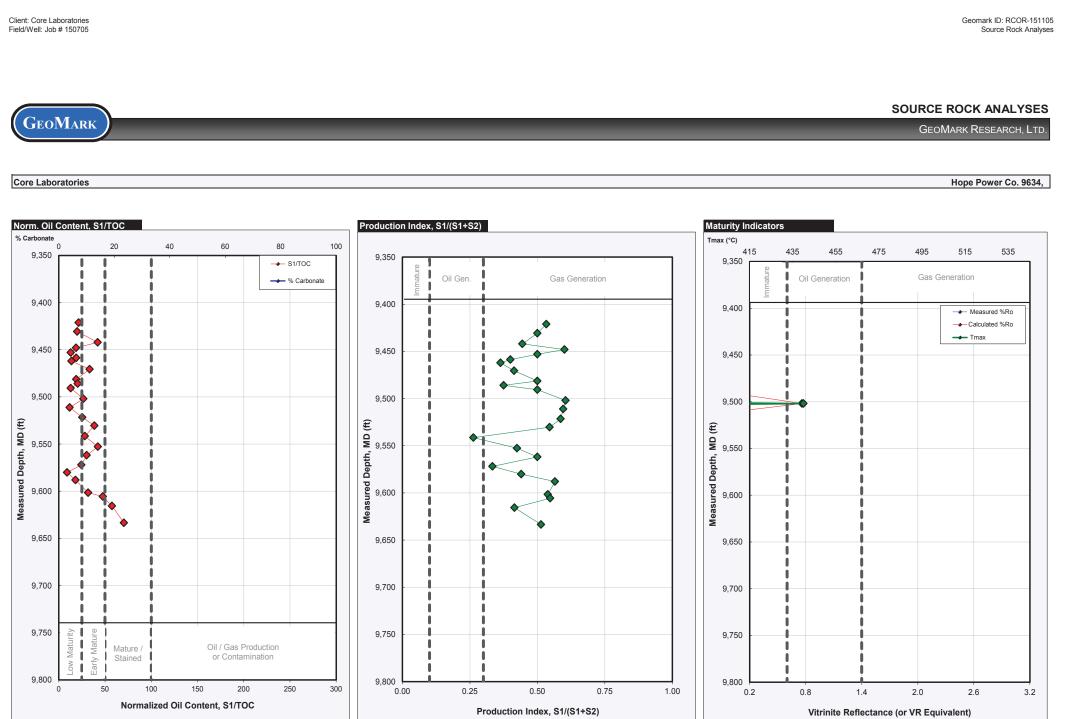
Subsidence curve constructed by University of Cincinnati Basin Dynamics class (2012) using data from the Power Oil Company under the supervision of Dr. Paul Potter and Dr. Carlton Brett

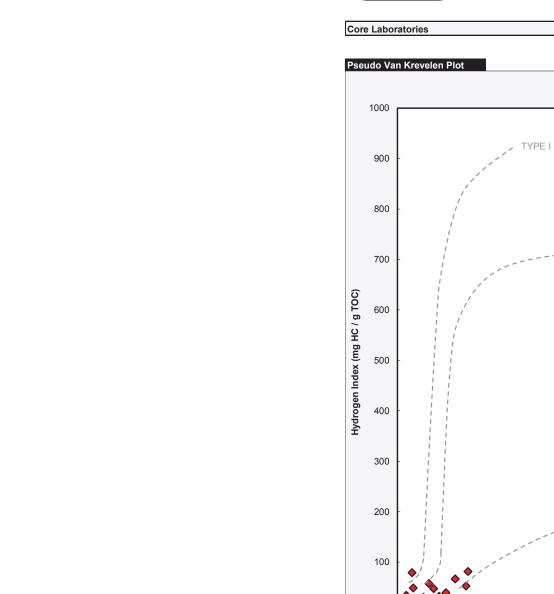


LOCATION MAP

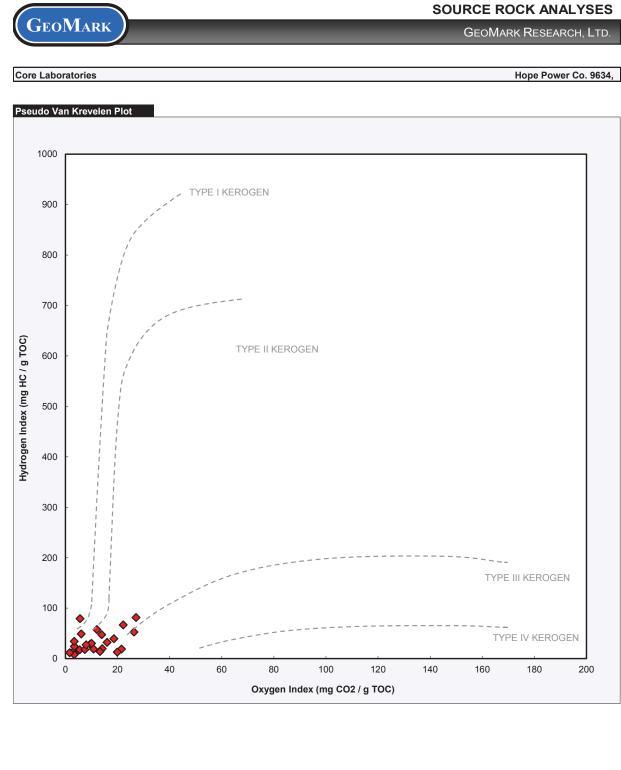


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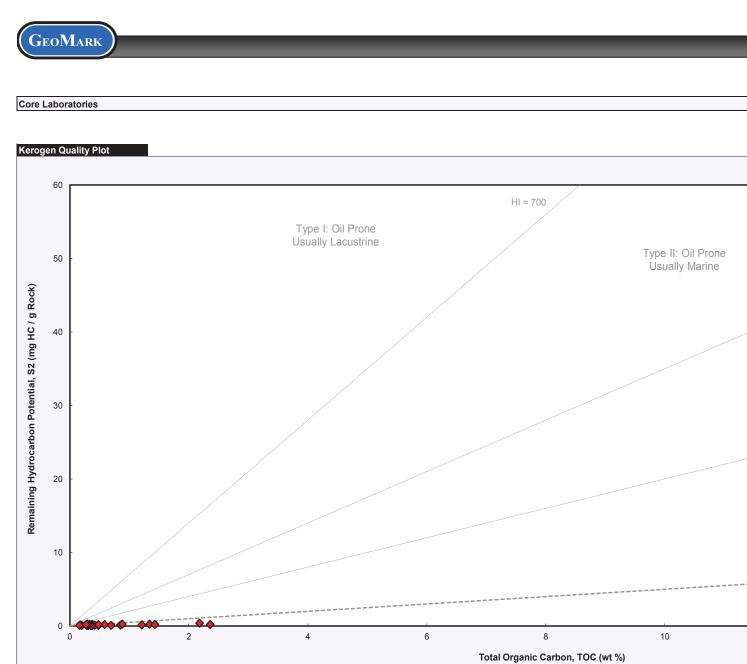


Client: Core Laboratories Field/Well: Job # 150705



TYPE III KEROGEN

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Geomark ID: RCOR-151105 Source Rock Analyses

Client: Core Laboratories Field/Well: Job # 150705

GeoMark Source Rock Services 218 Higgins Street Humble, TX 77338

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API #4710700351



ore Laboratories - IRS Div ower Oil Company #9634		ion Composition Determined by XRD & TOC											File: 150705		
Depth	9421.20	9430.70	9448.00	9458.60	9462.00	9470.60	9481.30	9490.60	9502.00	9511.10	9521.60	9530.40	9541.40	9552.70	
Weight % TOC Weight % Mineralogy (without TOC)	0.37	0.35	0.38	0.42	0.29	0.36	0.37	0.85	2.18	2.36	1.34	0.31	0.18	0.33	
Whole Rock Data															
Quartz	20.1	18.2	19.1	18.8	14.9	16.0	17.9	16.4	23.7	18.2	16.3	5.3	4.4	18.	
Plagioclase	5.9	5.3	5.9	6.9	6.9	4.4	4.8	5.2	8.1	6.3	5.4	1.8	1.7	6.	
Calcite	15.8	29.3	22.6	23.2	31.0	30.9	26.8	34.3	21.3	33.8	34.5	81.5	82.2	18.	
Dolomite & Fe- Dolomite	0.7	0.9	0.7	0.8	1.3	1.7	1.3	0.6	0.6	1.5	1.7	0.0	0.6	5	
Pyrite	1.8	2.2	1.7	2.0	2.1	2.8	3.2	3.5	2.8	3.2	2.0	1.4	1.2	2	
Total Clay	55.8	44.1	49.9	48.3	43.9	44.2	46.1	39.9	43.5	37.2	40.0	10.0	10.0	48	
Relative Clay Data															
Illite/Smectite*	5.8	5.7	5.4	8.0	7.2	6.6	7.3	8.8	6.1	9.4	8.5	13.5	13.7	6	
Illite & Mica	46.2	41.9	47.3	42.9	46.0	45.6	45.0	44.8	51.4	48.2	48.1	48.9	63.3	50	
Chlorite	48.0	52.4	47.3	49.1	46.8	47.8	47.7	46.4	42.5	42.3	43.4	37.6	23.0	42.	
Sum Bulk	100.1	100.0	99.9	100.0	100.1	100.0	100.1	99.9	100.0	100.2	99.9	100.0	100.1	99	
Sum Clay Volume % Mineralogy (includes TOC as Kerogen)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.9	100.0	100.0	100.0	99	
Quartz	20.6	18.8	19.6	19.4	15.3	16.6	18.5	16.8	23.3	17.9	16.4	5.4	4.5	18	
Plagioclase	6.1	5.6	6.1	7.1	7.2	4.6	5.0	5.3	8.0	6.2	5.5	1.9	1.7	7	
Calcite	15.9	29.5	22.7	23.3	31.2	31.3	27.1	34.3	20.6	32.5	33.9	81.4	82.2	18	
Dolomite & Fe- Dolomite	0.6	0.8	0.7	0.8	1.2	1.6	1.2	0.6	0.5	1.3	1.6	0.0	0.5	5	
Pyrite	1.0	1.2	0.9	1.1	1.1	1.5	1.7	1.9	1.5	1.6	1.1	0.8	0.6	1	
Illite/Smectite*	3.4	2.6	2.8	4.0	3.3	3.0	3.5	3.6	2.7	3.5	3.5	1.4	1.4	3	
Illite & Mica	26.3	18.9	24.1	21.1	20.6	20.7	21.3	18.1	21.9	17.5	19.1	4.9	6.4	25	
Chlorite	25.2	21.8	22.2	22.3	19.3	19.9	20.8	17.3	16.6	14.1	15.9	3.5	2.1	19	
Kerogen	0.9	0.8	0.9	1.0	0.7	0.8	0.9	2.0	4.9	5.3	3.1	0.7	0.4	0	
Total	100.0	100.0	100.0	100.1	99.9	100.0	100.0	99.9	100.0	99.9	100.1	100.0	99.8	100	
Vclay	54.9	43.3	49.1	47.4	43.2	43.6	45.6	39.0	41.2	35.1	38.5	9.8	9.9	48	
Calc. G.D. (g/cc)	2.738	2.743	2.733	2.735	2.739	2.749	2.752	2.735	2.674	2.675	2.699	2.716	2.716	2.74	

CORELAB SOURCE ROCK ANALYSES

Geomark ID: RCOR-151105 Source Rock Analyses

SOURCE ROCK ANALYSES

Hope Power Co. 9634,

HI = 350

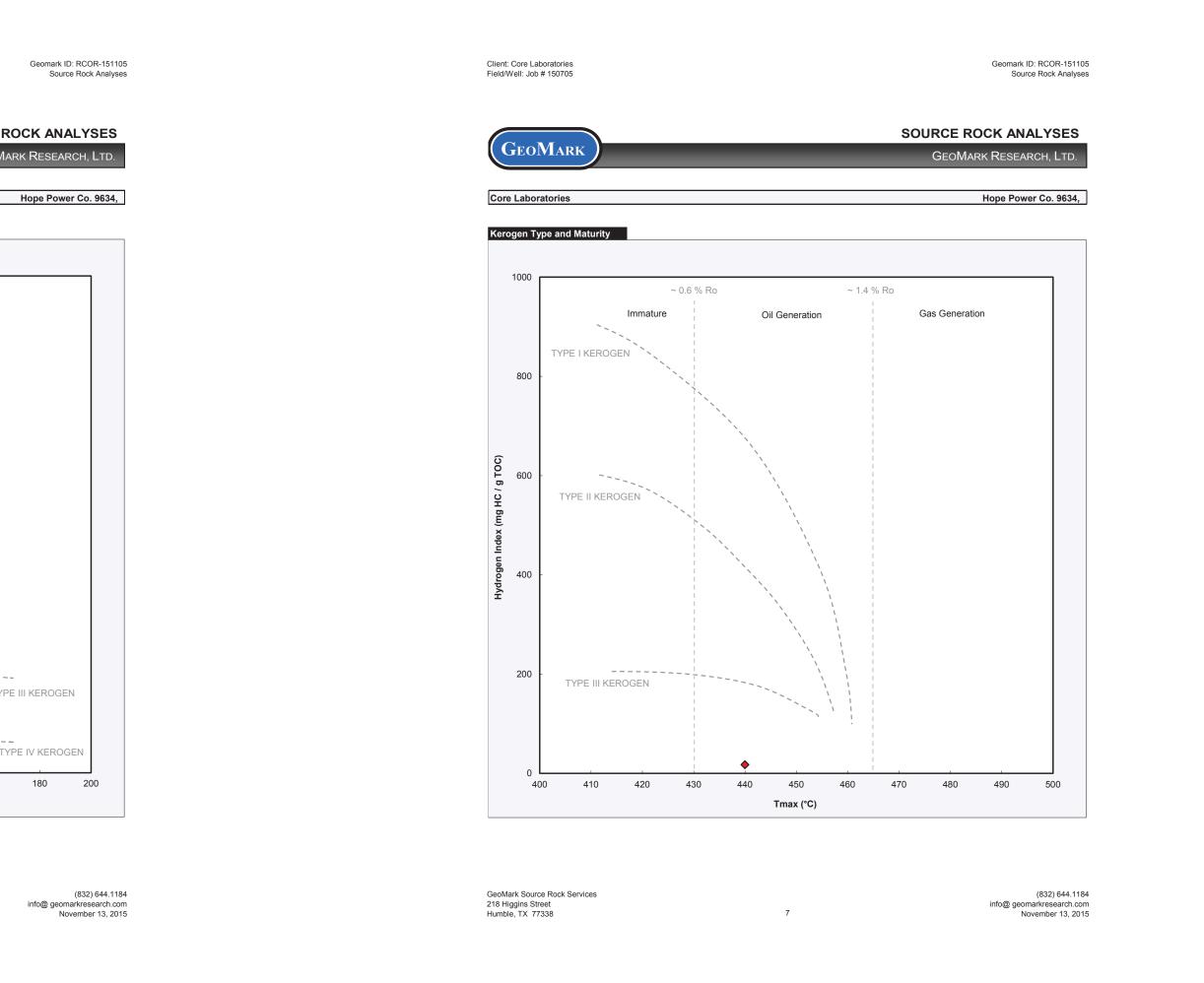
Mixed Type II / III: Oil / Gas Prone

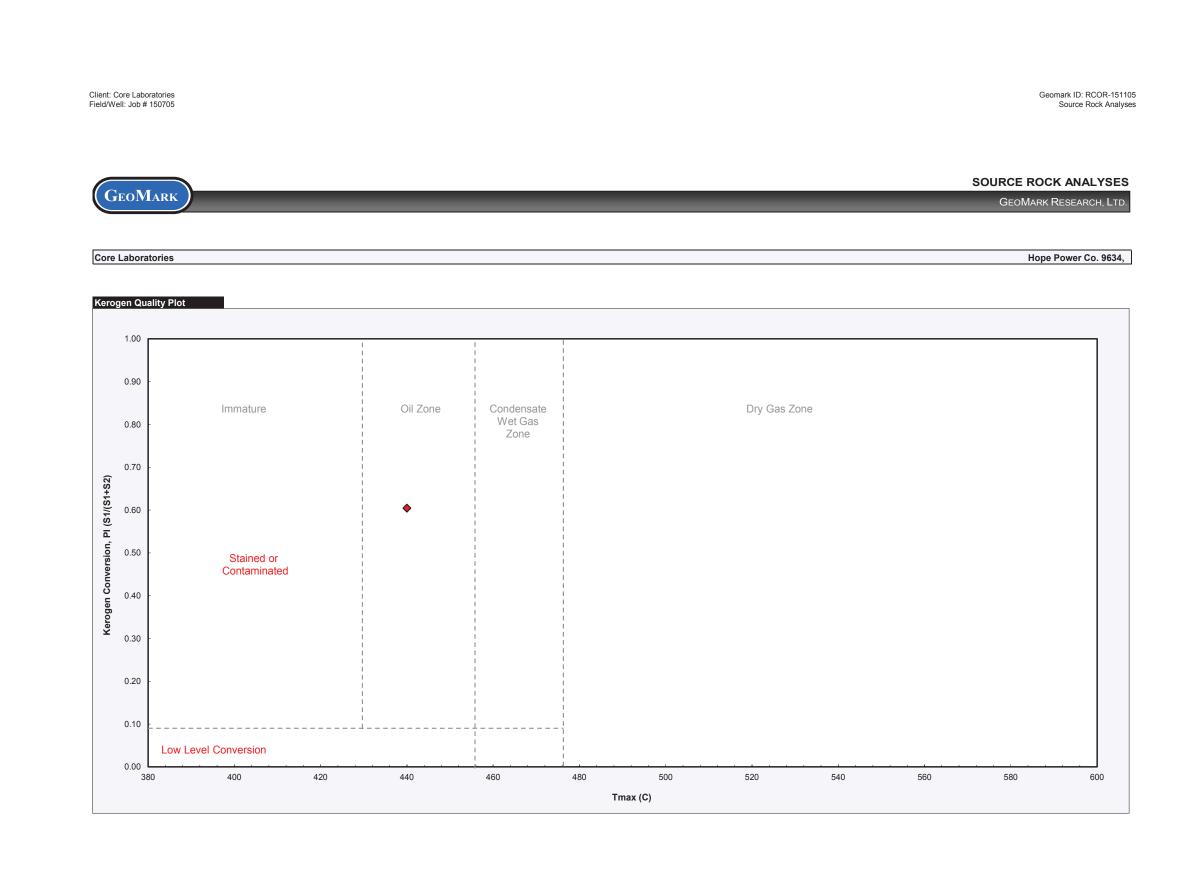
Type III: Gas Prone

Dry Gas Prone

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Core Laboratories Integrated Reservoir Solutions





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