Total Organic Carbon and Pyrolysis Analyses

Anschutz Exploration Corporation

555 17th St, Suite 2400

Denver, CO 80202

May 3, 2011

API	State	County	Operator	Lease	Formation	Sample Type	Black Shale	Dark Gray Shale	Medium Gray Shale	Light Gray Shale	Green Shale	Red Shale	Carbonate	Siltstone	Sandstone	HCl Reaction	Top Depth	Base Depth	Avg. Depth	Amorphous Kerogen Percentage	Structured Kerogen Percentage	Framboidal Pyrite	Granular Pyrite	Massive Pyrite	Leco TOC	Rock-Eval TOC	S1	S2	S3	Tmax	Tmax %Roe	Tmax Unreliable	VR %Ro	HI	OI	S1+S2	Free Oil S1/TOC * 100	PI	UV Fluorescence Intensity	UV Streaming Cut	UV Reaction Rating	Comments
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Heebner	cuttings		10	20	40			20		10		920	940	930																			very weak	no	1	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Heebner	cuttings		10	10	40			20		20		960	980	970																			very weak	no	1	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Cherokee	cuttings		10	20	40			20		10		1560	1580	1570																			very weak	no	1	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Cherokee	cuttings		30		30			30		10		1580	1600	1590																			medium	no	3	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Cherokee	cuttings	10	40	20				20		10		1600	1620	1610																			medium	no	3	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Cherokee	cuttings		70	10				20				1980	2000	1990																			very strong	no	5	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Cherokee	cuttings		50	20	10			20				2000	2020	2010																			strong	no	4	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Cherokee	cuttings		60	30				10				2020	2040	2030																			medium	no	3	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings	10	10	20	30			20		10	4	2400	2410	2405						0.57													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		30	20	20			20		10	4	2410	2420	2415						0.79													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		10	20				20		50	5	2420	2430	2425						0.38													very weak	no	1	orange sample fluorescence, orange fluid
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20			50		20		10	3	2430	2440	2435						0.63													none	no	0	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30		20		10		20	3	2440	2450	2445						0.79													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30		20		10		20	4	2450	2460	2455						0.49													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30		20		10		20	3	2460	2470	2465						1.06		0.29	0.82	0.50	430.00	0.58			77	47	1.11	27		weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30		20		10		20	3	2470	2480	2475						0.58													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30		20		10		20	3	2480	2490	2485						0.48													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30		20		10		20	4	2490	2500	2495						0.81													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		10	70				20			4	2500	2520	2510						0.54													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		40	40				10		10	3	2510	2520	2515						0.72													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		40	40				10		10	3	2520	2540	2530						0.59													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		40	40				10		10	3	2530	2540	2535						0.59													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		40	30				10		20	4	2540	2550	2545						0.54													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	30	10			20		20	3	2550	2560	2555						0.59													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		10	40	20			20		10	3	2560	2570	2565						0.90													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		40		20			20		20	3	2570	2580	2575						0.62													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	40				20		20	3	2580	2590	2585						0.67													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	40				20		20	3	2590	2600	2595						0.54													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		30	50				20			3	2600	2610	2605						1.08		0.50	0.39	0.61	433.00	0.63			36	56	0.89	46		very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	40	30			10			3	2610	2620	2615						0.58													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		10	60	10			20			2	2620	2630	2625						0.52													medium	no	3	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Chattanooga	cuttings		20	80							2	2630	2640	2635						0.38													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings		20		40			20		20	2	3260	3270	3265						0.25													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings		20		40			20		20	2	3270	3280	3275						0.38													medium	no	3	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings				80			10		10	1	3280	3290	3285						0.24													weak	no	2	orange sample fluorescence, orange fluid
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings				80			10		10	1	3290	3300	3295						0.12													weak	no	2	orange sample fluorescence, orange fluid
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings				80			10		10	1	3300	3310	3305						0.18													weak	no	2	orange sample fluorescence, orange fluid
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings		10		70			20			1	3310	3320	3315						0.38													medium	no	3	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Maquoketa	cuttings		20		70			10			3	3320	3330	3325						0.33													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Decorah	cuttings		10		30			20		40	2	3570	3580	3575						0.38													very weak	no	1	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Platteville	cuttings		30		10			20		40	2	3580	3590	3585						0.29													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Platteville	cuttings		20		20			20		40	3	3590	3600	3595						0.25													very strong	no	5	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Platteville	cuttings		20		20			20		40	3	3600	3610	3605						0.33													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Platteville	cuttings		10	30	50			10			3	3610	3620	3615						0.16													weak	no	2	orange sample fluorescence
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Simpson	cuttings		30	40	20			10			4	3629	3629	3629						0.66													weak	no	2	circulating bottoms up
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Simpson	cuttings		10	20	60			10			5	3630	3640	3635						0.36													weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Simpson	cuttings		10	20	60			10			5	3650	3660	3655						1.23		0.40	7.13	0.10	443.00	0.81			580	8	7.53	33		weak	no	2	
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Basal Simpson	cuttings		10	20	60			10			5	3660	3660	3660						0.31													weak	no	2	circulating bottoms up
15013200140000	Kansas	Brown	Shawnee Petro Corp.	Roush #1	Basal Simpson	cuttings		10	20	60			10			5	3660	3670	3665						0.43													very weak	no	1	
15013200140000	Kansas	Brown	Shawnee Petro Corp	Roush #1	Basal Simpson	cuttings		10	20	60			10			1	3670	3680	3675						0.26													weak	no	2	

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