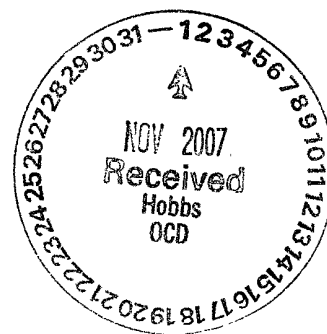


PATTERSON PETROLEUM, LLC
PADDY '19' STATE # 2
LEA COUNTY, NEW MEXICO
U.S.A.
File: 070828-1



FULL DIAMETER CORE ANALYSIS REPORT
FOR
PATTERSON PETROLEUM, LLC
PADDY '19' STATE # 2
LEA COUNTY, NEW MEXICO

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**CORE ANALYSIS PROCEDURES
FOR**

PATTERSON PETROLEUM, LLC

PADDY '19' STATE # 2

LEA COUNTY, NEW MEXICO

The cores were picked up at wellsite and transported to OMNI Laboratories, Inc.

A brief Lithological Description of the Core was recorded.

A description of the Fluorescence of the Core was recorded.

Ultraviolet Light Photographs were taken of the Whole Core for a permanent record.

Natural Light Photographs were taken of the Core Slabs for a permanent record.

Full Diameter Core Analysis was performed on selected samples.

The samples were extracted utilizing the Dean Stark method.

The fluids were measured by the Dean Stark method.

Porosities were measured in a Boyle's Law Porosimeter utilizing Helium.

Horizontal Permeabilities (Kmax and K90) were measured in a Hassler Sleeve Permeameter utilizing Nitrogen at 300 psi confining pressure.

Vertical Permeabilities were measured in a Hassler Sleeve Permeameter utilizing Nitrogen at 300 psi confining pressure.

Test samples of a known permeability were measured before and after the Sidewall permeabilities were measured.

The core was slabbed and boxed. The remnants and slabs will be stored at OMNI Laboratories for 30 days at no cost.





FULL DIAMETER CORE ANALYSIS

PATTERSON PETROLEUM, LLC
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ANALYSTS : WH, SB, PK, JR

MODIFIED DEAN STARK EXTRACTION

SMPL NO.	DEPTH (ft)	PERMEABILITY			G DEN (G/CC)	POR (%)	Sw (%)	So (%)	FLUORESCENCE %	LITHOLOGY	
Kmax	K90	Kvert									
Core # 1 5,866' - 5,896' 30' Cut, 29' Recovered											
1	5,866 - 5,867	94.56	40.01	159.49	2.81	12.0	15.4	11.6	90	Brt yl-grn-bl	Dol tn-brn-gy lam sslyt abd ppp frac
2	5,867 - 5,868	15.10	14.41	4.90	2.81	8.0	12.7	17.7	80	Brt yl-grn-bl	Dol tn-brn-gy lam sslyt abd ppp frac sty
3	5,868 - 5,869	26.61	25.77	7.38	2.81	8.2	11.1	16.7	80	Brt yl-grn-bl	Dol tn-brn-gy lam sslyt abd ppp frac sty
4	5,869 - 5,870	4.61	4.52	0.01	2.78	5.4	63.8	Tr	Tr	Brt yl-grn-bl	Dol gy-brn mott mod slty tr ppp sc slty lam
5	5,870 - 5,871	12.34	9.08	0.52	2.82	8.3	24.8	29.1	70	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp frac
6	5,871 - 5,872	35.65	17.81	43.88	2.81	10.1	25.2	20.7	80	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp frac sty
7	5,872 - 5,873	65.63	56.05	21.46	2.81	10.3	20.8	18.5	90	Brt yl-grn-bl	Dol tn-brn-dk gy mott sslyt abd ppp org mat
8	5,873 - 5,874	2.55	Kplug	0.06	2.82	5.9	17.5	22.1	50	Brt yl-grn-bl	Dol tn-brn-dk gy mott sslyt abd ppp org mat frac
9	5,874 - 5,875	40.69	30.65	4.70	2.80	8.7	19.1	21.9	60	Brt yl-grn-bl	Dol tn-brn-dk gy mott sslyt abd ppp org mat frac
10	5,875 - 5,876	29.27	0.37	115.30	2.81	1.7	96.4	Tr	10	Brt yl-grn-bl	Dol tn-brn-dk gy mott sslyt tr ppp tr A/I org mat frac
11	5,876 - 5,877	48.20	48.03	6.90	2.82	10.6	20.4	18.5	90	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp tr A/I frac sty
12	5,877 - 5,878	47.79	7.72	8.60	2.81	7.2	22.9	25.5	80	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp tr A/I frac sty
13	5,878 - 5,879	2.15	1.49	0.02	2.81	1.4	80.1	Tr	10	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp frac
14	5,879 - 5,880	45.95	17.62	23.15	2.80	7.7	26.1	17.3	60	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp org mat frac
15	5,880 - 5,881	115.59	oneway	42.08	2.79	4.5	34.4	19.4	70	Brt yl-grn-bl	Dol tn-brn sslyt sc ppp org mat frac
16	5,881 - 5,882	80.06	52.77	12.70	2.83	12.5	27.2	18.5	80	Brt yl-dl yl	Dol tn-brn sslyt sc ppp tr A/I frac
17	5,882 - 5,883	18.19	2.22	32.54	2.83	9.4	24.5	19.1	40	Brt yl-dl yl	Dol tn-brn sslyt sc ppp org mat frac
18	5,883 - 5,884	87.12	40.53	103.36	2.84	13.7	23.5	16.6	70	Brt yl-dl yl	Dol tn-brn sslyt sc ppp org mat frac
19	5,884 - 5,885	78.63	49.37	71.97	2.83	14.4	19.1	17.5	70	Brt yl frac	Dol tn-brn sslyt sc ppp org mat frac
20	5,885 - 5,886	0.09	Kplug	0.14	2.83	6.1	70.4	Tr	Tr	Brt yl frac	Dol tn-brn sslyt tr ppp tr A/I frac



FULL DIAMETER CORE ANALYSIS

PATTERSON PETROLEUM, LLC
PADDY '19' STATE # 2
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FILE NO. : 070828-1
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ANALYSTS : WH, SB, PK, JR

MODIFIED DEAN STARK EXTRACTION

SMPL NO.	DEPTH (ft)		PERMEABILITY			G DEN (G/CC)	POR (%)	Sw (%)	So (%)	FLUORESCENCE %			LITHOLOGY
			Kmax	K90	Kvert								
21	5,886	- 5,887	16.37	5.98	12.26	2.82	4.7	39.7	7.5	20	Brt yl frac		Dol tn-brn ssly tr ppp tr A/I frac
22	5,887	- 5,888	7.54	6.16	8.25	2.82	2.0	52.9	Tr	10	Brt yl frac		Dol tn-brn ssly tr ppp tr A/I frac sty
23	5,888	- 5,889	43.42	8.89	23.74	2.82	3.0	39.9	15.7	20	Brt yl frac		Dol tn-brn ssly tr ppp tr A/I frac sty
24	5,889	- 5,890	30.87	22.33	150.80	2.83	12.8	18.8	19.5	70	Brt yl		Dol tn-brn ssly tr ppp sc A/I frac sty
25	5,890	- 5,891	6.16	5.61	4.33	2.76	6.4	30.1	13.6	30	Brt yl		Dol tn-brn ssly tr ppp tr A/I org mat frac
26	5,891	- 5,892	45.01	25.84	55.64	2.83	6.7	19.6	16.5	80	Brt yl frac		Dol tn-brn ssly tr ppp tr A/I frac sty
27	5,892	- 5,893	63.80	17.54	33.79	2.81	7.6	23.5	17.7	70	Brt yl-dl yl		Dol tn-brn ssly tr ppp tr A/I org mat frac
28	5,893	- 5,894	30.51	15.40	31.28	2.82	7.6	23.5	19.5	60	DI yl-brt yl		Dol tn-brn ssly tr ppp tr A/I frac sty
29	5,894	- 5,895	16.04	4.32	18.85	2.82	7.9	19.4	18.9	50	DI yl-brt yl		Dol tn-brn ssly tr ppp tr A/I org mat frac sty
	5,895	- 5,896	Not Recovered										
	5,896	- 5,984	Drilled										
	Core # 2 5,984' - 6,014' 30' Cut, 30' Recovered												
30	5,984	- 5,985	0.90	0.62	0.44	2.82	4.6	26.9	14.7	60	Brt-dl yl-grn		Dol tn-brn ssly tr ppp sc slty lam sty
31	5,985	- 5,986	0.17	0.13	0.02	2.83	2.7	44.8	27.7	40	Brt-dl yl-grn		Dol tn-brn ssly tr ppp sc slty lam sty
32	5,986	- 5,987	0.20	0.16	0.03	2.83	2.6	54.7	13.6	30	Brt-dl yl-grn		Dol tn-brn ssly tr ppp sc slty lam sty
33	5,987	- 5,988	0.52	0.39	0.01	2.82	2.1	72.1	0.0	0			Dol tn-brn ssly tr ppp sc slty lam sty
34	5,988	- 5,989	0.49	0.47	0.01	2.83	1.7	70.6	0.0	0			Dol tn-brn-gy ssly tr ppp sc slty lam sty
35	5,989	- 5,990	0.18	0.12	0.00	2.79	3.3	72.6	0.0	0			Dol tn-brn-gy ssly tr ppp sc slty lam sty
36	5,990	- 5,991	0.11	0.10	0.01	2.80	2.6	80.1	0.0	0			Dol tn-brn-gy ssly tr ppp sc slty lam sty
37	5,991	- 5,992	1.81	0.48	0.06	2.83	2.4	25.3	28.8	40	Brt-dl yl-grn		Dol tn-brn-gy ssly tr ppp sc slty lam sty
38	5,992	- 5,993	0.43	0.11	0.01	2.83	3.6	12.8	16.0	60	Brt-dl yl-grn		Dol tn-brn-gy ssly sc ppp sc slty lam frac sty



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MODIFIED DEAN STARK EXTRACTION

SMPL NO.	DEPTH (ft)	PERMEABILITY			G DEN (G/CC)	POR (%)	Sw (%)	So (%)	FLUORESCENCE %	LITHOLOGY
		Kmax	K90	Kvert						
39	5,993 - 5,994	0.13	0.12	0.02	2.77	5.5	40.3	30.5	50	Brt-dl yl-grn Dol tn-brn-gy sslty sc ppp sc slty lam frac sty
40	5,994 - 5,995	0.07	0.06	0.00	2.79	3.4	59.9	0.0	0	Dol tn-brn-gy sslty tr ppp sc slty lam fd frac sty
41	5,995 - 5,996	0.18	0.10	0.24	2.77	4.0	68.3	0.0	0	Dol tn-brn-gy sslty tr ppp sc slty lam fd frac sty
42	5,996 - 5,997	0.28	0.19	0.03	2.75	6.2	73.5	0.0	0	Dol gy-brn sslty tr ppp sc slty lam
43	5,997 - 5,998	0.40	0.23	0.03	2.76	5.2	75.9	0.0	0	Dol gy-brn sslty tr ppp sc slty lam
44	5,998 - 5,999	0.48	0.21	0.01	2.78	4.6	75.1	0.0	0	Dol gy-brn sslty tr ppp sc slty lam
45	5,999 - 6,000	4.05	0.85	0.08	2.83	3.4	22.8	15.7	20	Brt yl-dl yl Dol tn-brn-gy mott sslty tr ppp sc A/I frac sty
46	6,000 - 6,001	0.07	Kplug	2.78	2.84	2.8	21.1	20.7	30	Brt yl-dl yl Dol tn-brn-gy mott sslty tr ppp sc A/I frac sty
47	6,001 - 6,002	2.77	1.75	2.43	2.82	0.5	97.2	Tr	Tr	Brt yl-dl yl Dol tn-brn-gy mott sslty tr ppp sc A/I frac sty
48	6,002 - 6,003	10.41	5.92	1.02	2.83	0.8	60.6	Tr	Tr	Brt yl-dl yl Dol tn-brn-gy mott sslty tr ppp sc A/I frac sty
49	6,003 - 6,004	4.87	3.80	2.23	2.81	3.2	94.3	Tr	20	Brt yl-dl yl Dol tn-brn-gy mott sslty tr ppp sc A/I frac sty
50	6,004 - 6,005	18.22	11.69	7.89	2.82	5.1	19.4	14.5	80	Brt yl-dl yl Dol tn-brn sslty sc ppp tr foss frac sty
51	6,005 - 6,006	1.61	1.10	0.64	2.83	4.4	10.5	7.7	60	Brt yl-dl yl Dol tn-brn sslty sc ppp tr foss frac fd frac sty
52	6,006 - 6,007	0.28	0.25	0.07	2.82	1.6	29.1	11.4	60	Brt yl-dl yl Dol tn-brn sslty sc ppp tr foss sty
53	6,007 - 6,008	1.04	0.94	0.52	2.82	5.5	17.9	9.1	30	Brt yl-dl yl Dol tn-brn sslty sc ppp tr foss sc slty lam
54	6,008 - 6,009	6.26	5.07	3.97	2.83	7.4	20.8	12.7	40	Brt yl-dl yl Dol tn-brn sslty sc ppp tr foss sc slty lam
55	6,009 - 6,010	3.60	1.05	1.03	2.83	5.8	20.4	13.0	50	Brt yl-dl yl Dol tn-brn sslty sc ppp tr foss sc slty lam
56	6,010 - 6,011	5.71	5.66	3.82	2.83	6.6	15.7	12.7	90	DI yl-gld Dol tn-brn sslty sc ppp A/I tr foss sc slty lam
57	6,011 - 6,012	4.15	0.21	0.03	2.93	1.0	33.6	23.7	80	Brt yl-dl yl Anhy bl-wht Dol tn-brn sslty sc ppp tr foss
58	6,012 - 6,013	8.35	6.67	4.97	2.82	8.2	12.0	14.8	70	Brt yl-dl yl Dol tn-brn mott sslty anhyd sc ppp sty
59	6,013 - 6,014	0.74	0.69	0.53	2.82	7.1	22.9	19.8	40	Brt yl-dl yl Dol tn-brn mott sslty anhyd sc ppp sty

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