OMNI Laboratories, Inc.

OMNI LABORATORIES, INC.
X-RAY DIFFRACTION (BULK)
(WEIGHT %)

Client: EOG Denver
Well: Multiple Wells **Sample Set 3**
Area: Big Horn Basin
Sample: Cuttings

File No: G-35188
Date: 05/22/06
Analyst: G. Walker

Well Name	Sample Depth (ft)	CARBONATES			OTHER MINERALS						TOTALS		
		Calcite[1]	Dolomite	Siderite	Quartz	K-spar	Plag.	Pyrite	Apatite	Barite	Clays	Carb.	Other
Ridge Unit No. 1-21	17570-17700	2	2	Tr	52	4	5	2	0	0	33	4	63
Ridge Unit No. 1-21	17750-17940	3	3	Tr	44	3	4	2	0	0	41	6	53
Schuster Flat No. 26-1	13200-13400	1	1	Tr	62	4	7	3	0	0	22	2	76
Crooked Draw Fed No. 35-44	11100-11280	1	2	Tr	57	3	6	4	0	0	27	3	70
Crooked Draw Fed No. 35-44	11300-11500	2	1	Tr	47	4	6	3	0	0	37	3	60
USA No. 13-13	7800-7950	2	3	Tr	53	3	4	3	0	0	32	5	63
USA No. 13-13	7960-8100	1	2	Tr	50	3	4	2	0	0	38	3	59
Tatman Mtn Federal No. 1-20	15200-15350	2	1	Tr	58	4	7	2	0	0	26	3	71
R Gary Emblem Bench No. 1	17850-18000	1	1	Tr	53	5	8	3	0	0	29	2	69
Predicamint No. 1-31-30	12000-12200	2	2	Tr	55	5	8	3	0	0	25	4	71
Michaels No. 1-16 4D	13830-14060	2	1	Tr	60	5	8	2	0	0	22	3	75
Otto Federal No. 1 NE	11660-11860	2	1	Tr	48	5	8	3	0	0	33	3	64
Fitz Fed No. 16-28	12540-12680	2	1	Tr	58	5	8	2	0	0	24	3	73
Fitz Fed No. 16-28	12700-12900	1	1	Tr	51	5	8	3	0	0	31	2	67
	AVERAGE	2	1	Tr	53	4	7	3	0	0	30	3	67

[1]May include the Fe-rich variety.

EOG Resources, Big Horn Basin Project, Sample Set # 3

Well name	Bottom depth	#	S1	S2	S3	LECO-TOC	Tmax	S2/S3	HI	OI	PP	PI
Ridge Unit #1-21	17700	1	0.33	0.54	0.99	1.06	464	0.55	51	93	0.90	0.38
Ridge Unit #1-21	17940	2	0.37	0.73	1.11	1.38	462	0.66	53	80	1.10	0.34
Schuster Flat #26-1	13400	3	0.68	1.57	1.44	1.55	450	1.09	101	93	2.20	0.30
Schuster Flat #26-1	13580	4	0.53	1.14	2.83	1.63	312	0.40	70	174	1.70	0.32
Crooked Draw Fed #35-44	11280	5	0.55	1.95	0.77	1.51	442	2.53	129	51	2.50	0.22
Crooked Draw Fed #35-44	11500	6	0.25	0.93	0.79	1.07	440	1.18	87	74	1.20	0.21
Yager Unit #1	10630	7	0.21	1.51	0.71	1.48	436	2.13	102	48	1.70	0.12
USA #13-13	7950	8	0.26	2.86	0.80	1.46	434	3.57	196	55	3.10	0.08
USA #13-13	8100	9	0.23	2.68	1.02	1.69	434	2.63	159	60	2.90	0.08
Tatman Mtn Federal #1-20	15350	10	0.19	0.30	0.93	1.15	452	0.32	26	81	0.50	0.39
Tatman Mtn Federal #1-20	15610	11	0.13	0.21	0.80	0.93	454	0.26	23	86	0.30	0.38
R Gary Emblem Bench #1	18000	12	0.44	0.38	0.58	1.29	482	0.66	29	45	0.80	0.54
Predicamint #1-31-30	12200	13	1.07	1.80	0.59	1.44	442	3.05	125	41	2.90	0.37
Predicamint #1-31-30	12350	14	1.36	1.37	0.83	1.04	443	1.65	132	80	2.70	0.50
Michaels #1-16 4D	14060	15	1.27	1.31	0.94	1.19	444	1.39	110	79	2.60	0.49
Michaels #1-16 4D	14200	16	1.28	1.45	1.06	1.26	436	1.37	115	84	2.70	0.47
Otto Federal #1 NE	11860	17	0.38	0.99	0.93	1.36	447	1.06	73	68	1.40	0.28
Fritz Fed #16-28	12680	18	0.48	0.79	0.76	1.21	450	1.04	65	63	1.30	0.38
Fritz Fed #16-28	12900	19	0.54	0.93	0.69	1.28	453	1.35	73	54	1.50	0.37

Big Horn Basin Project
Tatman Mtn Federal#1-20
Project: 06/0030

Minerals End, Inc.

Sample Number	Sample Id or Depth	Preparation/Sample Type	Visual Kerogen Analysis – ORGANIC MATTER (%) – LIPIDS – UNSTRUCTURED: Undifferentiated	Amorphous	Massive	Micrinized	STRUCTURED: Liptodetrinite	Liptiniate	Type	Type	Solid Bitumen	HUMIC: Inertinite	Vitrinite	OTHER: Recycled Vitrinite	Inertodetrinite	RELATIVE ABUNDANCE: Pyrite Type	Pyrite	Organic Concentration	VITRINITE: Normal	Rough	Lipid-Rich	Oxidized	Coked	LITHOLOGIC DESCRIPTIONS – TYPE I: SHALE: Color	Intensity	QUARTZ: Color	Intensity	Background Intensity	TYPE II: SHALE			QUARTZ			Ro: Vit. Reflectance or Equiv.
9	15350	WR					LD	U						VR	O																					B 0.98
		CTG		85			2	1			tr	nd	tr	8	4																					V 1.14

Comments: *slightly silty, pyritic, mature, fossiliferous, relitively lean shale III, gray massive 30% AOM, dispersed 70% AOM, detrital qtz=biogenic qtz*

Comments:

Comments:

Comments:

Comments:

ANALYST

X Landis

MICROSCOPE

X Zeiss
Jena
Leitz

SAMPLE TYPE/PREP		STRUCTURED LIPIDS		OTHER ORGANIC MATTER		PYRITE		ABUND.		FLUOR. INTENS.		VIT. REFLECT. EQUIVALENCE		FLUOR. COLOR		TAI COLOR VALUES	
CTG	Cuttings	AL	Alginite	E	Exsudatinite	E	Euhedral	N	None	0	None	B	Bitumen	W	White	1-	Straw Yellow
CC	Conv. Core	SB	Suberinite	G	Graptolites	F	Framboid	T	Trace	1	Weak	G	Graptolites	G	Green	1	Pale Yellow
SWC	SideWallCore	C	Cutinite	VL	Lipid-Rich Vitrinite	MA	Massive	-	Small Amt.	2	Moderate	VL	Lipid-Rich Vitrinite	Y	Yellow	1+	Yellow
OC	Outcrop	LD	Liptodetrinite	VC	VitriniteContamination	RI	Replace-infill	M	Mod. Amt.	3	Strong	VC	Vitrinite Contam.	O	Orange	2-	Yellow-Orange
NI	No Inform.	U	Undiffer.	VR	Recycled Vitrinite			+	Large Amt.	4	Intense	VR	Recycled Vitrinite	R	Red	2	Golden
C	Coal	S	Sporinite					++	Abundant					B	Brown	2+	Amber
		R	Resinite											BL	Black	3-	Reddish Brown
K	Kerogen	O	Other													3	Medium Brown
WR	Whole Rock															3+	Dark Brown
														L	Light	4-	Brown-Black
n.d.	Not Determined													D	Dark	4	Black
																4+	Black-Opaque

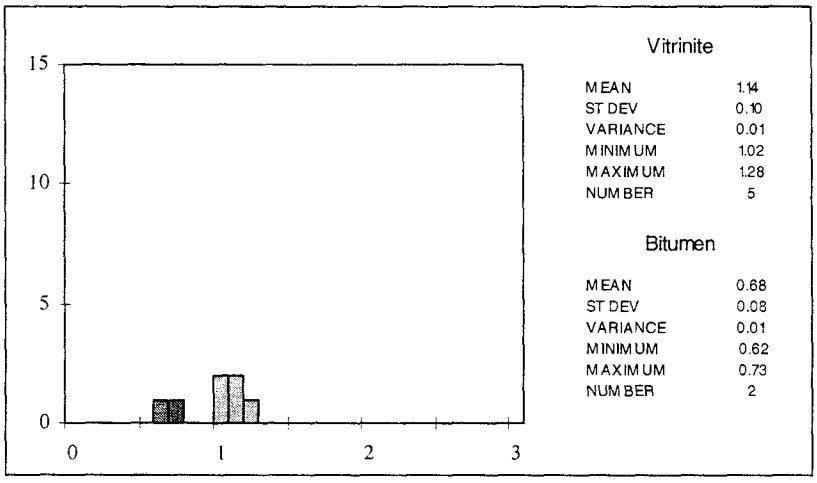
MINERALS END INC.

VITRINITE REFLECTANCE

Big Horn Basin Project
Tatman Mtn Federal#1-20

DGSI Project: 06/0030 Sample No. 9
OTHER ID: 15350

TYPE	WR/CTG
TOC	
TMAX	
HI	
V Ro	1.14
B Ro	0.68
VRE-B	0.98



Vitrinite

MEAN	1.14
ST DEV	0.10
VARIANCE	0.01
MINIMUM	1.02
MAXIMUM	1.28
NUMBER	5

Bitumen

MEAN	0.68
ST DEV	0.08
VARIANCE	0.01
MINIMUM	0.62
MAXIMUM	0.73
NUMBER	2

B 0.62 V 1.17
B 0.73 V 1.28
V 1.02
V 1.08
V 1.16

Visual Kerogen Summary

Unstructured Lipids	85
Structured Lipids	3
Solid Bitumen	tr
Inertinite	nd
Vitrinite	tr
Other	12
TOTAL	100

Background Fluorescence
TAI Unstructured
TAI Structured

COMMENTS: