

TABLE 2.3-21

SUMMARY OF COAL ANALYSIS OF ROTARY BOREHOLES FOR 2006, 2007, AND 2010 DRILLING

Hole Number	Depth		Seam Thickness (feet)	Seam Name	COAL QUALITY							
	From (feet)	To (feet)			Total Moisture (%)	As-Received Basis			Sodium (%)	Dry Basis		
						Ash (%)	Sulfur (%)	BTU (Btu/lb)		Ash (%)	Sulfur (%)	BTU (Btu/lb)
SHOB-01R	55	75	20	D	43.3	18.1	0.78	4,622	5.5	31.4	1.33	8,205
SHOB-03R	60	75	15	D	42.8	10.5	0.94	5,687	7.7	18.4	1.62	9,940
SHOB-04R	40	55	15	D	42.1	9.8	0.72	5,810	6.9	16.9	1.24	10,048
SHOB-05R	45	65	20	D	41.8	16.6	0.65	4,998	5.1	28.8	1.13	8,564
SHOB-06B	50	65	15	D	39.2	37.6	1.11	2,458	2.2	61.6	1.83	4,091
SHOB-07R	45	65	20	D	44.3	15.3	0.54	4,880	4.7	27.9	0.97	8,712
SHOB-08R	70	85	15	D	37.9	22.9	1.03	4,670	3.8	36.8	1.67	7,540
SHOB-09R	80	95	15	D	49.2	17.5	0.89	3,982	4.3	33.6	1.80	7,949
SHOB-11R	65	80	15	D	47.7	11.0	0.64	5,000	6.4	21.1	1.23	9,570
SHOB-13R	35	45	10	D	40.6	12.3	0.57	5,676	5.0	20.7	0.96	9,562
SHOB-17R	105	120	15	D	50.9	14.7	0.66	4,228	4.0	29.7	1.34	8,626
SHOB-18R	95	115	20	D	54.1	17.2	0.91	3,447	5.7	37.1	2.01	7,570
SHOB-19R	45	55	10	D	41.4	11.0	0.75	5,829	7.7	18.7	1.28	9,959
SHOB-20R	40	55	15	D	39.7	15.8	1.25	5,428	5.6	25.7	2.04	9,064
SHOB-22R	40	55	15	D	40.2	14.7	0.67	5,415	2.9	24.4	1.12	9,079
SHOB-23R	75	90	15	D	50.2	13.1	1.19	4,462	3.6	26.0	2.47	9,001
SHOB-24R	65	80	15	D	50.8	12.5	0.72	4,490	2.9	24.9	1.49	9,175
SHOB-26R	60	75	15	D	34.2	28.1	0.97	4,413	2.4	42.4	1.45	6,745
SHOB-27R	60	75	15	D	42.4	18.7	0.40	4,664	3.4	32.2	0.72	8,125
SHOB-28R	75	90	15	D	51.5	15.7	0.86	3,941	1.9	31.5	1.75	8,240
SHOB-29R	55	70	15	D	44.3	16.3	0.61	4,793	2.3	27.3	1.18	8,872
SHOB-31R	120	135	15	D	37.6	14.7	0.72	5,767	4.8	23.4	1.15	9,256
SHOB-32R	125	145	20	D	36.5	27.4	0.63	4,290	2.9	42.9	0.99	6,792
SHOB-33R	45	60	15	D	39.3	14.4	1.11	5,725	5.1	23.6	1.81	9,437
SHOB-35R	45	70	25	D	50.4	17.5	0.62	3,844	3.6	34.6	1.22	7,866
SHOB-36R	80	95	15	D	32.0	29.9	0.53	4,501	2.9	43.9	0.78	6,636
SHOB-37R	65	80	15	D	37.6	19.0	0.45	5,228	4.2	30.3	0.73	8,395
SHOB-38R	45	55	10	D	40.6	12.2	0.78	5,665	2.6	20.5	1.32	9,546
SHOB-39R	55	70	15	D	48.1	13.9	0.96	4,631	3.7	26.8	1.77	8,902
SHOB-40R	25	35	10	D	42.0	10.8	0.79	5,650	4.6	18.6	1.36	9,739
SHOB-42R	35	55	20	D	49.5	14.2	1.26	4,405	3.8	27.2	2.42	8,851
SHOB-43R	70	90	20	D	42.5	34.1	1.40	2,786	2.5	59.0	2.44	4,874
SHOB-45R	40	55	15	D	43.7	18.0	1.30	4,667	2.7	30.6	2.37	8,465
SHOB-46R	65	85	20	D	46.7	30.6	0.91	2,592	2.5	56.7	1.72	4,933
SHOB-48R	120	135	15	D	52.6	13.3	1.11	4,115	3.9	28.1	2.36	8,689
SHOB-101	80	85	5	D	55.9	12.6	1.88	4,201	4.8	27.4	4.08	9,111
SHOB-102	35	50	15	D	54.8	10.1	1.06	4,337	5.2	22.1	2.30	9,653
SHOB-103	75	90	15	D	55.3	10.7	0.71	4,140	5.8	23.9	1.58	9,267
SHOB-104	90	100	10	D	55.9	10.9	0.48	4,089	3.5	24.6	1.08	9,267
SHOB-105	80	95	15	D	56.6	10.1	0.76	4,122	5.7	23.0	1.75	9,522
SHOB-106	75	90	15	D	56.6	9.9	0.62	4,157	5.5	22.7	1.44	9,589
SHOB-107	90	105	15	D	56.8	7.8	0.54	4,337	7.1	18.1	1.26	10,034
SHOB-108	65	85	20	D	55.4	13.2	1.01	3,829	5.2	28.4	2.13	8,736
SHOB-109	70	85	15	D	48.4	25.7	0.88	3,096	1.6	49.6	1.65	6,026
SHOB-110	75	90	15	D	56.1	10.4	0.49	4,108	5.8	23.5	1.13	9,365
SHOB-111	40	55	15	D	57.3	9.5	0.57	4,053	6.7	22.1	1.34	9,515
SHOB-112	90	110	20	D	54.4	14.1	1.06	3,888	1.4	31.0	2.32	8,533
SHOB-113	95	110	15	D	57.5	10.2	0.52	3,974	5.8	23.9	1.23	9,363
SHOB-114	45	60	15	D	55.1	12.4	0.77	3,787	3.0	27.7	1.73	8,401
SHOB-115	60	75	15	D	54.7	12.8	0.56	3,960	2.5	27.7	1.25	8,801
SHOB-116	40	55	15	D	32.7	57.9	0.17	938	1.0	86.0	0.25	1,404
SHOB-117	50	65	15	D	53.3	15.1	0.57	3,842	2.5	32.5	1.23	8,226
SHOB-118	50	70	20	D	53.4	15.2	0.94	3,843	4.2	32.3	2.07	8,284
SHOB-119	110	120	10	D	53.2	13.4	0.78	4,087	5.0	28.4	1.65	8,742
SHOB-120	65	80	15	D	42.7	26.3	1.03	3,734	1.9	45.9	2.11	6,536
SHOB-121	50	70	20	D	43.4	47.6	0.87	1,001	1.3	84.1	1.54	1,771
SHOB-122	30	50	20	D	44.8	31.8	0.48	2,802	1.2	57.2	0.89	5,141
SHOB-123	50	65	15	D	55.6	12.9	0.57	3,744	3.3	28.8	1.31	8,480
SHOB-124	45	65	20	D	53.9	14.5	1.09	3,966	3.2	31.1	2.37	8,649
SHOB-125	105	120	15	D	51.3	20.2	0.66	3,490	3.4	39.9	1.33	7,382
SHOB-126	120	130	10	D	51.3	20.5	0.91	3,480	3.1	41.0	1.80	7,248
SHOB-130	25	40	15	D	29.5	58.8	0.97	1,231	1.0	83.2	1.38	1,760
SHOB-132	60	75	15	D	54.5	13.9	0.55	3,741	3.1	30.4	1.19	8,252
SHOB-133	45	65	20	D	52.6	24.0	0.41	2,714	1.4	49.5	0.90	5,894
SHOB-135	25	40	15	D	25.6	65.7	0.49	556	1.1	88.3	0.66	749
SHOB-136	40	60	20	D	54.5	25.8	0.37	2,314	2.0	56.6	0.81	5,100
SHOB-137	35	50	15	D	61.7	12.2	0.43	3,161	1.0	31.6	1.12	8,286
SHOB-141	85	95	10	D	53.3	19.1	1.09	3,377	2.5	40.2	2.34	7,312
SHOB-143	65	80	15	D	51.4	16.2	0.46	3,875	3.1	33.2	0.94	7,998
SHOB-201	130	135	5	D	47.1	28.8	3.00	2,972	2.9	54.5	5.67	5,619
SHOB-201	135	140	5	D	47.6	27.9	4.06	2,768	2.7	53.3	7.75	5,284
SHOB-201	140	145	5	D	48.5	30.0	2.82	2,524	2.5	58.3	5.48	4,903
SHOB-202	80	85	5	D	47.3	27.7	0.94	2,992	3.5	52.6	1.78	5,676
SHOB-202	85	90	5	D	51.2	19.6	1.98	3,515	3.6	40.1	4.05	7,196
SHOB-202	90	95	5	D	54.5	10.5	0.47	4,217	5.7	23.1	1.03	9,275
MIN	D SEAM				25.6	7.8	0.2	556	1.0	16.9	0.3	749
MAX					61.7	65.7	4.1	5,829	7.7	88.3	7.8	10,048
MEAN					47.6	19.4	0.9	3,970	3.7	35.7	1.7	7,752
MEDIAN					49.2	15.2	0.8	4,087	3.5	30.4	1.4	8,465
SHOB-08R	250	260	10	HT Butte	42.7	36.1	1.26	2,395	2.5	62.4	2.24	4,275
MIN	HT BUTTE SEAM				42.7	36.1	1.26	2,395	2.5	62.4	2.24	4,275
MAX					42.7	36.1	1.26	2,395	2.5	62.4	2.24	4,275
MEAN					42.7	36.1	1.26	2,395	2.5	62.4	2.24	4,275
MEDIAN					42.7	36.1	1.26	2,395	2.5	62.4	2.24	4,275
SHOB-103	10	12.5	2.5	E	53.4	12.4	1.48	3,202	4.1	26.7	3.18	6,873
SHOB-104	10	15	5	E	45.3	10.3	1.06	4,526	4.7	18.8	1.94	8,276
SHOB-105	7.5	10	2.5	E	57.3	10.4	1.17	3,013	2.2	24.3	2.74	7,048
SHOB-107	12.5	17.5	5	E	47.0	21.8	0.81	2,902	3.2	39.8	1.51	5,611
SHOB-113	12.5	15	2.5	E	55.3	11.1	0.99	3,631	6.8	24.9	2.21	8,120
SHOB-201	60	65	5	E	47.0	30.5	4.52	2,588	2.2	57.5	8.53	4,887
MIN	E SEAM				45.3	10.3	0.8	2588.0	2.2	18.8	1.5	4887.0
MAX					57.3	30.5	4.52	4525.50	6.76	57.50	8.53	8276.00
MEAN					50.9	16.1	1.7	3310.2	3.9	32.0	3.4	6802.4
MEDIAN					50.2	11.8	1.1	3107.5	3.7	25.8	2.5	6960.5

BTU/lb = British Thermal Unit per pound