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CORE LABORATORIES

MINERALOGTM ANALYSIS

FOR

SHELL WESTERN EXPLORATION AND PRODUCTION

NORTH EAST DRINKARD UNIT NO. 514
NORTH EAST DRINKARD UNIT FIELD
LEA COUNTY, NEW MEXICO

REC

AUG 15 1991

REC

NOV 15 1991



CORE LABORATORIES

August 2, 1991

ATTN: Mark Kittridge

Shell Western Exploration and Production
200 N. Dairy Ashford Road
Houston, Texas 77079

Subject: MineralogTM Analysis
North East Drinkard Unit No. 514
North East Drinkard Unit Field
Lea County, New Mexico
File No.: 57151-16890

Dear Mr. Kittridge:

MineralogTM was performed on 301 samples from the subject well. The data is provided in weight percent in tabular and graphical form. The tabular data is contained on pages 1 thru 14 and on the enclosed floppy disk. Three graphs, one for each 100 foot interval, are provided at the end of the report.

The MineralogTM analytical technique is based on the infrared absorption of the samples which were finely ground and dispersed in a potassium bromide matrix. Infrared spectrometry detected the frequency of molecular vibrations which occur in the mid infrared region. The sample spectra were interpreted to identify the rock forming minerals and measure the weight percent of those minerals.

It has been a pleasure performing this analysis for Shell Western Exploration and Production. If you have any further questions or comments on this data, or on any future projects, please do not hesitate to call us.

Sincerely,

CORE LABORATORIES
Gulf Coast Advanced Technology Center


Lu Vandermark
MineralogTM Supervisor


Lynn Antwine
Rock Properties Lab Supervisor

0-28-1-1

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SHELL WESTERN E & P
NORTH EAST DRINKARD UNIT NO. 514
NORTH EAST DRINKARD UNIT FIELD
LEA COUNTY, NEW MEXICO

File No.: 16890
Date: 1-AUG-91
Analysts: LV/BA/DI
Page: 1

MINERALOG (TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
44	5620' 9"	2.82	4	0	3	0	0	86	0	0	0	7	0	0	7
45	5621' 5.5"	2.84	0	0	0	0	0	83	0	13	0	4	0	0	4
46	5622' 2.5"	2.86	0	0	0	0	0	97	0	3	0	0	0	0	0
47	5623' 7"	2.83	3	0	0	0	0	92	0	1	4	0	0	0	0
48	5624' 5"	2.87	0	0	0	0	0	76	0	24	0	0	0	0	0
49	5625' 6"	2.84	2	0	0	0	0	95	0	0	3	0	0	0	0
50	5626' 7"	2.90	0	0	0	0	0	58	0	42	0	0	0	0	0
51	5627' 5"	2.87	0	0	0	0	0	94	0	6	0	0	0	0	0
52	5629' 7"	2.87	0	0	0	0	3	90	0	6	1	0	0	0	0
53	5630' 4"	2.85	3	0	0	0	0	95	0	0	2	0	0	0	0
54	5631' 6"	2.80	13	0	0	7	2	69	0	4	0	5	0	0	5
55	5632' 6"	2.68	45	0	12	12	0	6	4	0	0	21	0	0	21
56	5633' 4"	2.76	25	0	4	4	0	63	0	0	0	4	0	0	4
57	5634' 5"	2.77	20	0	3	4	0	67	0	0	0	6	0	0	6
58	5635' 6.5"	2.81	11	0	3	0	0	81	0	0	0	5	0	0	5
59	5636' 5"	2.82	6	0	3	0	0	85	0	3	0	3	0	0	3
60	5637' 5"	2.85	3	0	0	0	3	91	0	0	0	3	0	0	3
61	5638' 7"	2.66	49	0	9	13	0	15	0	0	0	14	0	0	14
62	5639' 6"	2.69	34	0	8	13	0	29	0	0	0	16	0	0	16
63	5640' 5"	2.74	31	0	6	6	0	53	0	0	0	4	0	0	4
64	5641' 7"	2.75	27	0	4	5	0	59	0	0	0	5	0	0	5
65	5642' 7"	2.84	5	0	2	0	0	90	0	0	0	3	0	0	3
66	5643' 10"	2.85	3	0	0	0	4	88	0	5	0	0	0	0	0

SHELL WESTERN E & P
NORTH EAST DRINKARD UNIT NO. 514
NORTH EAST DRINKARD UNIT FIELD
LEA COUNTY, NEW MEXICO

File No.: 16890
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Analysts: LV/BA/DI
Page: 2

MINERALOG (TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
67	5644'	6"	2.86	0	0	0	0	98	0	2	0	0	0	0	0
68	5645'	6"	2.84	0	0	0	0	60	0	32	8	0	0	0	0
69	5646'	5"	2.87	0	0	0	0	94	0	5	1	0	0	0	0
70	5647'	7"	2.87	0	0	0	0	92	0	7	1	0	0	0	0
71	5648'	4"	2.87	0	0	0	0	94	0	6	0	0	0	0	0
72	5649'	4"	2.83	26	0	0	0	46	0	21	7	0	0	0	0
73	5650'	7"	2.86	0	0	0	0	95	0	5	0	0	0	0	0
74	5651'	5"	2.89	0	0	0	0	63	0	29	8	0	0	0	0
75	5652'	7"	2.87	0	0	0	0	95	0	5	0	0	0	0	0
76	5653'	7"	2.87	0	0	0	0	73	0	20	7	0	0	0	0
77	5654'	6"	2.87	0	0	0	0	86	0	14	0	0	0	0	0
78	5655'	6"	2.87	0	0	0	0	93	0	6	1	0	0	0	0
79	5656'	6"	2.82	0	0	0	0	41	0	46	13	0	0	0	0
80	5657'	5"	2.85	0	0	0	0	75	0	20	5	0	0	0	0
81	5658'	4"	2.87	0	0	0	0	91	0	7	2	0	0	0	0
82	5659'	6"	2.87	1	0	0	0	98	0	1	0	0	0	0	0
83	5660' 6.5"		2.88	0	0	0	0	91	0	9	0	0	0	0	0
84	5661'	6"	2.90	0	0	0	0	59	0	34	7	0	0	0	0
85	5662'	3"	2.87	1	0	0	0	97	0	2	0	0	0	0	0
86	5663' 4.5"		2.88	0	0	0	0	78	0	19	3	0	0	0	0
87	5664'	6"	2.89	0	0	0	0	80	0	14	6	0	0	0	0
88	5665' 7.5"		2.88	2	0	0	0	65	0	27	6	0	0	0	0
89	5666' 4.5"		2.87	0	0	0	0	79	0	17	4	0	0	0	0

SHELL WESTERN E & P
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LEA COUNTY, NEW MEXICO

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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
90	5667' 6"	2.88	0	0	0	0	0	83	0	15	2	0	0	0	0
91	5668' 7"	2.88	0	0	0	0	0	77	0	22	1	0	0	0	0
92	5669' 9.5"	2.88	0	0	0	0	0	78	0	17	5	0	0	0	0
93	5670' 6"	2.89	0	0	0	0	0	65	0	25	10	0	0	0	0
94	5671' 6"	2.88	0	0	0	0	0	76	0	16	8	0	0	0	0
95	5672' 7.5"	2.84	0	0	0	0	6	90	0	4	0	0	0	0	0
96	5673' 6.5"	2.87	0	0	0	0	0	96	0	4	0	0	0	0	0
97	5674' 8"	2.85	2	0	0	0	2	81	0	12	3	0	0	0	0
98	5675' 5.5"	2.87	0	0	0	0	1	84	0	10	5	0	0	0	0
99	5676' 6.5"	2.87	0	0	0	0	0	76	0	20	4	0	0	0	0
100	5677' 4"	2.86	0	0	0	0	0	65	0	30	5	0	0	0	0
101	5678' 5"	2.83	0	0	0	0	0	94	0	6	0	0	0	0	0
102	5679' 5.5"	2.84	0	0	0	0	0	96	0	3	0	1	0	1	0
103	5680' 7.5"	2.87	0	0	0	0	0	68	0	27	5	0	0	0	0
104	5681' 5.5"	2.87	0	0	0	0	0	59	0	37	4	0	0	0	0
105	5682' 6.5"	2.84	0	0	0	0	5	92	0	2	0	1	0	1	0
106	5683' 5.5"	2.85	1	0	0	0	4	91	0	2	0	2	0	2	0
107	5684' 6.5"	2.84	0	0	0	0	4	93	0	2	0	1	0	1	0
108	5685' 7.5"	2.84	3	0	0	0	0	94	0	2	0	1	0	1	0
109	5686' 5.5"	2.84	3	0	0	0	0	92	0	5	0	0	0	0	0
110	5687' 6"	2.87	0	0	0	0	2	81	0	13	4	0	0	0	0
111	5688' 5.5"	2.86	1	0	0	0	4	91	0	4	0	0	0	0	0
112	5689' 4"	2.84	0	3	0	0	5	92	0	0	0	0	0	0	0

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SHELL WESTERN E & P
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LEA COUNTY, NEW MEXICO

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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
113	5690' 4"	2.86	0	0	0	0	3	89	0	7	0	1	0	1	0
114	5691' 10"	2.83	0	0	0	0	0	56	0	35	9	0	0	0	0
115	5692' 8.5"	2.86	0	0	0	0	3	92	0	5	0	0	0	0	0
116	5693' 8.5"	2.84	0	0	0	0	0	88	0	6	2	4	0	0	4
117	5694' 3"	2.86	0	0	0	0	3	90	0	7	0	0	0	0	0
118	5695' 7"	2.85	0	0	0	0	0	92	0	8	0	0	0	0	0
119	5696' 7"	2.86	0	0	0	0	5	86	0	7	2	0	0	0	0
120	5697' 2"	2.86	0	0	0	0	4	95	0	1	0	0	0	0	0
121	5698' 7.5"	2.84	1	0	0	0	0	96	0	3	0	0	0	0	0
122	5699' 5"	2.85	0	0	0	0	4	89	0	3	0	4	0	0	0
123	5700' 2"	2.85	0	0	0	0	0	71	0	23	6	0	0	0	0
124	5701' 4"	2.84	0	0	0	0	6	92	0	2	0	0	0	0	0
125	5702' 3"	2.83	3	0	0	0	10	82	0	2	0	3	0	0	3
126	5703' 11"	2.85	0	0	0	0	4	94	0	0	0	2	0	0	2
127	5704' 9"	2.86	2	0	0	0	2	83	0	10	3	0	0	0	0
128	5705' 3"	2.85	3	0	0	0	7	85	0	5	0	0	0	0	0
129	5706' 2"	2.85	3	0	0	0	5	90	0	2	0	0	0	0	0
130	5707' 1.5"	2.89	0	0	0	0	0	74	0	20	6	0	0	0	0
131	5708' 3"	2.88	19	0	0	0	0	14	0	55	12	0	0	0	0
132	5709' 4"	2.86	0	0	0	0	5	90	0	5	0	0	0	0	0
133	5710' 4"	2.86	0	0	0	0	6	88	0	6	0	0	0	0	0
134	5711' 4"	2.86	0	0	0	0	5	84	0	11	0	0	0	0	0
135	5712' 9.5"	2.84	2	4	0	0	3	91	0	0	0	0	0	0	0

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SHELL WESTERN E & P
NORTH EAST DRINKARD UNIT NO. 514
NORTH EAST DRINKARD UNIT FIELD
LEA COUNTY, NEW MEXICO

File No.: 16890
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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
136	5713' 3"	2.84	2	3	0	0	4	88	0	3	0	0	0	0	0
137	5714' 11"	2.83	3	6	0	0	3	88	0	0	0	0	0	0	0
138	5715' 4"	2.84	3	0	0	0	4	93	0	0	0	0	0	0	0
139	5716' 5"	2.84	2	2	0	0	1	92	0	0	0	3	0	0	3
140	5717' 10"	2.86	1	0	0	0	3	91	0	2	0	3	0	0	3
141	5718' 8"	2.83	0	0	0	0	0	92	0	4	0	4	0	0	4
142	5719' 8"	2.82	2	0	2	0	0	91	0	0	0	5	0	0	5
143	5720' 7.5"	2.85	6	0	3	0	0	86	0	5	0	0	0	0	0
600	6180' 4.5"	2.76	25	0	0	7	2	59	0	0	0	7	0	0	7
601	6181' 7"	2.65	41	0	7	11	0	4	0	0	0	37	0	0	37
602	6182' 6"	2.76	16	0	0	7	5	58	0	0	0	14	0	0	14
603	6183' 3.5"	2.74	24	0	4	5	0	56	0	0	0	11	0	0	11
604	6184' 6.5"	2.68	40	0	6	9	0	22	0	0	0	23	0	0	23
605	6185' 6.5"	2.64	48	0	8	12	0	3	0	0	0	29	0	0	29
606	6186' 5.5"	2.65	41	0	8	10	0	1	0	0	0	40	0	0	40
607	6187' 6"	2.66	55	0	7	15	0	3	0	8	0	12	0	0	12
608	6188' 6"	2.66	55	0	8	13	0	7	0	1	0	16	0	0	16
609	6189' 6"	2.70	39	0	6	8	0	30	0	0	0	17	0	0	17
610	6190' 10"	2.73	26	0	3	6	5	49	0	0	0	11	0	0	11
611	6191' 4.5"	2.73	27	0	4	6	3	48	0	0	0	12	0	0	12
612	6192' 7"	2.72	27	0	3	6	1	45	0	0	0	18	0	0	18
613	6193' 5.5"	2.75	27	0	7	7	0	45	1	0	0	13	0	0	13
614	6194' 8"	2.68	42	0	7	11	0	18	0	0	0	22	0	0	22

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SHELL WESTERN E & P
NORTH EAST DRINKARD UNIT NO. 514
NORTH EAST DRINKARD UNIT FIELD
LEA COUNTY, NEW MEXICO

File No.: 16890
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MINERALOG (TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Clay	Kao	Chl	Ill+Smc
Total															
615	6195' 6"	2.70	38	0	8	9	0	24	1	0	0	20	0	0	20
616	6196' 6.5"	2.69	41	0	7	10	0	20	0	0	0	22	0	0	22
617	6197' 7"	2.71	34	0	6	9	0	36	0	0	0	15	0	0	15
618	6198' 5"	2.72	31	0	5	8	0	40	0	0	0	16	0	0	16
619	6199' 7"	2.68	41	0	7	11	0	19	0	0	0	22	0	0	22
620	6200' 4"	2.68	42	0	7	9	0	25	0	0	0	17	0	0	17
621	6201' 7"	2.68	51	0	9	11	0	19	0	1	0	9	0	0	9
622	6202' 5"	2.66	55	0	7	12	0	15	0	3	0	8	0	0	8
623	6203' 5.5"	2.67	43	0	8	7	2	22	0	0	0	18	0	0	18
624	6204' 5.5"	2.71	38	0	6	8	0	36	0	0	0	12	0	0	12
625	6205' 5"	2.65	54	0	8	12	0	8	2	0	0	16	0	0	16
626	6206' 5.5"	2.75	29	0	8	6	0	35	4	0	0	18	0	0	18
627	6207' 5.5"	2.69	51	0	8	10	0	22	1	0	0	8	0	0	8
628	6208' 6"	2.76	26	0	4	4	0	58	0	0	0	8	0	0	8
629	6209' 5"	2.78	28	0	7	0	0	59	2	0	0	4	0	0	4
630	6210' 3"	2.80	12	0	0	4	2	77	0	0	0	5	0	0	5
631	6211' 7"	2.84	6	0	2	0	0	86	0	0	0	6	0	0	6
632	6212' 4.5"	2.71	37	0	7	6	0	36	0	0	0	14	0	0	14
633	6213' 5"	2.78	14	0	0	0	2	67	0	0	0	17	0	0	17
634	6214' 7.5"	2.78	12	0	0	4	2	68	0	0	0	14	0	0	14
635	6215' 5"	2.79	13	0	0	5	0	68	1	0	0	13	0	0	13
636	6216' 6"	2.76	12	0	0	7	1	62	0	0	0	18	0	0	18
637	6217' 5"	2.79	15	0	0	4	3	73	0	1	0	4	0	0	4

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SHELL WESTERN E & P
NORTH EAST DRINKARD UNIT NO. 514
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LEA COUNTY, NEW MEXICO

File No.: 16890
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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
638	6218' 6"	2.82	15	0	0	7	0	77	0	0	0	1	0	0	1
639	6219' 5.5"	2.65	53	0	7	12	0	16	0	0	0	12	0	0	12
640	6220' 10"	2.69	40	0	9	10	2	25	2	0	0	12	0	0	12
641	6221' 6.5"	2.80	15	0	0	4	0	73	1	0	0	7	0	0	7
642	6222' 7.5"	2.71	46	0	8	7	0	32	1	0	0	6	0	0	6
643	6223' 4.5"	2.73	34	0	5	7	0	48	0	0	0	6	0	0	6
644	6224' 8"	2.75	26	0	4	7	0	50	0	5	0	8	0	0	8
645	6225' 6.5"	2.64	50	0	9	12	0	0	1	0	0	28	0	0	28
646	6226' 5"	2.63	49	0	8	13	0	1	0	0	0	29	0	0	29
647	6227' 6.5"	2.72	29	0	5	5	0	42	0	0	0	19	0	0	19
648	6228' 6.5"	2.72	37	0	6	5	0	40	0	0	0	12	0	0	12
649	6229' 8"	2.66	46	0	7	10	0	18	0	0	0	19	0	0	19
650	6230' 9"	2.65	51	0	8	9	0	14	0	0	0	18	0	0	18
651	6231' 4.5"	2.66	51	0	8	10	0	12	0	0	0	19	0	0	19
652	6232' 9"	2.67	49	0	7	10	0	20	0	0	0	14	0	0	14
653	6233' 5.5"	2.67	43	0	7	10	0	21	0	0	0	19	0	0	19
654	6234' 4.5"	2.62	59	0	6	11	0	7	0	3	0	14	0	0	14
655	6235' 6"	2.71	31	0	3	7	1	44	0	0	0	14	0	0	14
656	6236' 4.5"	2.67	38	0	6	8	0	20	0	0	0	28	0	0	28
657	6237' 6"	2.86	3	0	0	0	7	87	3	0	0	0	0	0	0
658	6238' 7.5"	2.87	2	0	0	0	3	93	2	0	0	0	0	0	0
659	6239' 8"	2.89	2	0	0	0	5	89	4	0	0	0	0	0	0
660	6240' 2.5"	2.89	0	0	0	0	0	84	4	12	0	0	0	0	0

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SHELL WESTERN E & P
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NORTH EAST DRINKARD UNIT FIELD
LEA COUNTY, NEW MEXICO

File No.: 16890
Date: 1-AUG-91
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Page: 8

MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
661	6241' 8.5"	2.81	0	0	0	0	0	74	0	26	0	0	0	0	0
662	6242' 9.5"	2.88	4	0	0	0	0	92	2	2	0	0	0	0	0
663	6243' 6"	2.90	9	0	2	0	0	86	3	0	0	0	0	0	0
664	6244' 3.5"	2.85	4	0	0	0	1	93	0	2	0	0	0	0	0
665	6245' 4.5"	2.85	5	0	0	0	0	81	0	9	0	5	0	0	5
666	6246' 5"	2.85	5	0	0	0	3	92	0	0	0	0	0	0	0
667	6247' 2.5"	2.89	2	0	0	0	0	63	0	35	0	0	0	0	0
668	6248' 10"	2.86	5	0	2	0	1	90	0	0	0	2	0	0	2
669	6249' 6.5"	2.84	5	0	0	0	3	85	0	1	0	6	0	0	6
670	6250' 1"	2.85	4	0	0	0	0	96	0	0	0	0	0	0	0
671	6251' 3"	2.85	4	0	0	0	0	94	0	0	0	2	0	0	2
672	6252' 6"	2.85	2	0	0	0	0	95	0	0	0	3	0	0	3
673	6253' 3"	2.85	3	0	0	0	0	94	0	0	0	3	0	0	3
674	6254' 10"	2.85	4	0	0	0	0	92	0	0	0	4	0	0	4
675	6255' 4"	2.85	4	0	0	0	0	94	0	0	0	2	0	0	2
676	6256' 10"	2.84	4	0	0	0	3	91	0	0	0	2	0	0	2
677	6257' 4"	2.84	4	0	2	0	0	90	0	0	0	4	0	0	4
678	6258' 6"	2.84	3	0	0	0	3	91	0	0	0	3	0	0	3
679	6259' 10.5"	2.84	3	0	0	0	8	89	0	0	0	0	0	0	0
680	6260' 7.5"	2.85	3	0	0	0	0	94	0	0	0	3	0	0	3
681	6261' 5"	2.85	3	0	0	0	0	94	0	0	0	3	0	0	3
682	6262' 7"	2.86	3	0	0	0	0	96	0	1	0	0	0	0	0
683	6263' 6"	2.82	12	0	0	2	0	81	0	0	0	5	0	0	5

SHELL WESTERN E & P
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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
684	6264' 3"	2.85	3	0	0	0	0	95	0	0	0	2	0	0	2
685	6265' 6"	2.86	2	0	0	0	0	89	0	7	0	2	0	0	2
686	6266' 9.5"	2.86	3	0	0	0	0	87	0	10	0	0	0	0	0
687	6267' 7.5"	2.85	5	0	0	0	0	94	0	1	0	0	0	0	0
688	6268' 10"	2.65	44	0	9	13	0	6	0	0	0	28	0	0	28
689	6269' 9"	2.83	8	0	0	0	4	84	0	0	0	4	0	0	4
690	6270' 3.5"	2.83	9	0	0	0	0	87	0	0	0	4	0	0	4
691	6271' 6.5"	2.81	10	0	0	7	8	68	0	4	0	3	0	0	3
692	6272' 3.5"	2.86	5	0	0	0	0	81	0	14	0	0	0	0	0
693	6273' 7"	2.87	4	0	0	0	0	75	0	21	0	0	0	0	0
694	6274' 7"	2.84	5	0	0	3	2	79	0	9	0	2	0	0	2
695	6275' 5"	2.84	8	0	0	0	0	79	0	9	0	4	0	0	4
696	6276' 9.5"	2.85	7	0	0	0	0	83	0	7	0	3	0	0	3
697	6277' 9"	2.85	7	0	0	0	5	78	0	10	0	0	0	0	0
698	6278' 2"	2.83	7	0	0	0	2	87	0	0	0	4	0	0	4
699	6279' 5.5"	2.83	15	0	0	0	0	80	0	5	0	0	0	0	0
1006	6590' 3.5"	2.77	0	0	0	0	57	42	0	1	0	0	0	0	0
1007	6591' 7.5"	2.82	0	0	0	0	15	79	0	6	0	0	0	0	0
1008	6592' 4.5"	2.86	0	0	0	0	0	96	0	4	0	0	0	0	0
1009	6593' 4.5"	2.84	0	0	0	0	18	81	0	1	0	0	0	0	0
1010	6594' 8.5"	2.82	0	0	0	0	16	81	0	3	0	0	0	0	0
1011	6595' 9.5"	2.82	0	0	0	0	17	79	0	2	0	2	0	0	0
1012	6596' 7"	2.83	0	0	0	0	27	72	0	1	0	0	0	0	0

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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
1013	6597'6.5"	2.83	1	0	0	0	24	74	0	0	0	1	0	1	0
1014	6598'3.5"	2.83	0	0	0	0	19	81	0	0	0	0	0	0	0
1015	6599'4.5"	2.82	1	0	0	0	33	66	0	0	0	0	0	0	0
1016	6600'2.5"	2.72	0	0	0	0	93	7	0	0	0	0	0	0	0
1017	6601'7.5"	2.76	0	0	0	0	67	33	0	0	0	0	0	0	0
1018	6602'5.5"	2.81	2	0	0	0	29	69	0	0	0	0	0	0	0
1019	6603'9.5"	2.83	1	0	0	0	20	79	0	0	0	0	0	0	0
1020	6604'5.5"	2.83	0	0	0	0	22	78	0	0	0	0	0	0	0
1021	6605'6.5"	2.84	2	0	0	0	26	72	0	0	0	0	0	0	0
1022	6606'3"	2.81	0	0	0	0	34	66	0	0	0	0	0	0	0
1023	6607'5.5"	2.74	1	0	0	0	87	9	0	3	0	0	0	0	0
1024	6608'3.5"	2.72	2	0	0	0	94	4	0	0	0	0	0	0	0
1025	6609'9"	2.71	2	0	0	0	98	0	0	0	0	0	0	0	0
1026	6610'2.5"	2.73	1	0	0	0	96	3	0	0	0	0	0	0	0
1027	6611'4.5"	2.73	0	0	0	0	87	13	0	0	0	0	0	0	0
1028	6612'5"	2.73	3	0	0	0	81	16	0	0	0	0	0	0	0
1029	6613'7.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1030	6614'7.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1031	6615'9"	2.70	0	0	0	0	99	0	0	1	0	0	0	0	0
1032	6616'8.5"	2.72	0	0	0	0	94	6	0	0	0	0	0	0	0
1033	6617'7.5"	2.72	0	0	0	0	99	0	0	1	0	0	0	0	0
1034	6618'5.5"	2.72	0	0	0	0	90	4	0	6	0	0	0	0	0
1035	6619'3"	2.75	0	0	0	0	72	28	0	0	0	0	0	0	0

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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
1036	6620' 4"	2.73	0	0	0	0	87	13	0	0	0	0	0	0	0
1037	6621' 8.5"	2.76	2	0	0	0	60	38	0	0	0	0	0	0	0
1038	6622' 6"	2.79	1	0	0	0	42	57	0	0	0	0	0	0	0
1039	6623' 7.5"	2.84	1	0	0	0	22	77	0	0	0	0	0	0	0
1040	6624' 6.5"	2.77	0	0	0	0	45	52	0	3	0	0	0	0	0
1041	6625' 6.5"	2.79	1	0	0	0	54	45	0	0	0	0	0	0	0
1042	6626' 6.5"	2.77	1	0	0	0	66	33	0	0	0	0	0	0	0
1043	6627' 7.5"	2.83	0	0	0	0	12	62	0	26	0	0	0	0	0
1044	6628' 7.5"	2.73	0	0	0	0	88	12	0	0	0	0	0	0	0
1045	6629' 9"	2.81	3	0	0	0	25	68	0	0	0	4	0	4	0
1046	6630' 8.5"	2.83	3	0	0	0	20	75	0	0	0	2	0	2	0
1047	6631' 6.5"	2.83	0	0	0	0	20	80	0	0	0	0	0	0	0
1048	6632' 6.5"	2.82	0	0	0	0	26	72	0	0	0	2	0	2	0
1049	6633' 7"	2.83	2	0	0	0	9	89	0	0	0	0	0	0	0
1050	6634' 6"	2.82	0	0	0	0	14	86	0	0	0	0	0	0	0
1051	6635' 5"	2.83	0	0	0	0	17	83	0	0	0	0	0	0	0
1052	6636' 5.5"	2.87	1	0	0	0	14	60	0	25	0	0	0	0	0
1053	6637' 5.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1054	6638' 5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1055	6639' 6.5"	2.71	2	0	0	0	98	0	0	0	0	0	0	0	0
1056	6640' 1.5"	2.72	1	0	0	0	99	0	0	0	0	0	0	0	0
1057	6641' 8"	2.72	2	0	0	0	94	4	0	0	0	0	0	0	0
1058	6642' 4.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0

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MINERALOG (TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
1059	6643' 9"	2.71	3	0	0	0	95	2	0	0	0	0	0	0	0
1060	6644' 5.5"	2.72	3	0	0	0	87	10	0	0	0	0	0	0	0
1061	6645' 5.5"	2.73	5	0	0	0	83	12	0	0	0	0	0	0	0
1062	6646' 6"	2.83	0	0	0	0	22	78	0	0	0	0	0	0	0
1063	6647' 6"	2.83	0	0	0	0	17	83	0	0	0	0	0	0	0
1064	6648' 1.5"	2.82	3	0	0	0	28	67	0	0	0	2	0	0	2
1065	6649' 6"	2.85	1	0	0	0	13	86	0	0	0	0	0	0	0
1066	6650' 10"	2.87	0	0	0	0	4	80	0	16	0	0	0	0	0
1067	6651' 6"	2.85	0	0	0	0	14	86	0	0	0	0	0	0	0
1068	6652' 4.5"	2.85	0	0	0	0	11	89	0	0	0	0	0	0	0
	6653' 0"	2.83	3	0	0	0	20	75	0	0	0	2	0	2	0
1069	6654' 10"	2.72	0	0	0	0	92	8	0	0	0	0	0	0	0
1070	6655' 2.5"	2.73	0	0	0	0	91	0	0	9	0	0	0	0	0
1071	6656' 10"	2.72	0	0	0	0	94	6	0	0	0	0	0	0	0
1072	6657' 8"	2.73	0	0	0	0	93	7	0	0	0	0	0	0	0
1073	6658' 9"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1074	6664' 7"	2.83	0	0	0	0	17	78	0	0	0	5	0	0	5
1075	6665' 10"	2.84	0	0	0	0	16	84	0	0	0	0	0	0	0
1076	6666' 6.5"	2.83	0	0	0	0	24	76	0	0	0	0	0	0	0
1077	6667' 6.5"	2.84	0	0	0	0	21	79	0	0	0	0	0	0	0
1078	6668' 7.5"	2.82	0	0	0	0	18	81	0	1	0	0	0	0	0
1079	6669' 8"	2.83	0	0	0	0	23	77	0	0	0	0	0	0	0
1080	6670' 5"	2.83	3	0	2	0	11	84	0	0	0	0	0	0	0

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MINERALOG(TM) DATA
(Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Total Clay	Kao	Chl	Ill+Smc
1081	6671'6.5"	2.84	0	0	0	0	15	85	0	0	0	0	0	0	0
1082	6672'6.5"	2.82	0	0	0	0	29	71	0	0	0	0	0	0	0
1083	6673'3.5"	2.81	0	0	0	0	29	71	0	0	0	0	0	0	0
1084	6674' 6"	2.72	0	0	0	0	93	7	0	0	0	0	0	0	0
1085	6675'6.5"	2.71	0	0	0	0	98	0	0	0	0	2	0	0	2
1086	6676'6.5"	2.71	0	0	0	0	98	2	0	0	0	0	0	0	0
1087	6677' 9"	2.71	0	0	0	0	97	3	0	0	0	0	0	0	0
1088	6678'6.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1089	6679' 11"	2.71	0	0	0	0	97	3	0	0	0	0	0	0	0
1090	6680'9.5"	2.72	0	0	0	0	95	5	0	0	0	0	0	0	0
1091	6681' 7"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1092	6682'6.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1093	6683'7.5"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1094	6684' 6"	2.71	0	0	0	0	100	0	0	0	0	0	0	0	0
1095	6685' 6"	2.71	0	0	0	0	97	3	0	0	0	0	0	0	0
1096	6686' 4"	2.80	0	0	0	0	29	60	0	11	0	0	0	0	0
1097	6687' 6"	2.85	0	0	0	0	6	71	0	23	0	0	0	0	0
1098	6688'5.5"	2.82	0	0	0	0	10	86	0	4	0	0	0	0	0
1099	6689'10.5"	2.83	0	0	0	0	17	79	0	4	0	0	0	0	0
1100	6690' 11"	2.83	0	0	0	0	13	82	0	5	0	0	0	0	0
1101	6691'10.5"	2.83	2	0	0	0	9	79	0	10	0	0	0	0	0
1102	6692' 7"	2.83	0	0	0	0	17	80	0	3	0	0	0	0	0
	6693' 0"	2.85	3	0	0	0	10	87	0	0	0	0	0	0	0

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MINERALOG(TM) DATA
 (Weight percent)

Sample ID	Sample Depth (ft)	Grain Dens.	Qtz	Plg	Ksp	Alb	Cal	Dol	Pyr	Anh	Gyp	Clay	Total	Kao	Chl	Ill+Smc
1103	6694'	2.84	2	0	0	0	17	81	0	0	0	0	0	0	0	0
1104	6695'	2.81	0	0	0	0	23	77	0	0	0	0	0	0	0	0

Qtz - quartz
 Plg - plagioclase
 Ksp - K-feldspar
 Alb - albite
 Cal - calcite
 Dol - dolomite
 Pyr - pyrite
 Anh - anhydrite
 Gyp - gypsum
 Kao - kaolinite
 Ill - illite
 Chl - chlorite
 Smc - smectite
 Grain dens. - calculated grain density

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