

Hole: No. 4

Description: Churn

Location: Austin

Elevation: 568.5

Period: September 18, 1940 to September 27, 1940

Remarks: For ventilation purposes

From	To	Report
0	12	Surface
10	35	Bethel sandstone
35	65	" "
65	74	" "
74	95	Limestone and shale -- small opening at 95'
95	130	" "
130	157	Limestone
157	160	Rosiclare sand
160	197	" "

Hole: No. 6

Description: Churn

Location: Austin

Elevation: 567.6

Period: October 15, 1940 to October 24, 1940

From	To	Report
0	14	Surface
14	30	Bethel Sandstone
30	50	" "
50	65	" "
65	79	" "
79	81	Opening
81	97	Limestone
97	135	Limestone and shale
135	164	Limestone
164	203'6"	Rosiclare Sandstone
203'6"	209	Rosiclare sand, lime and spar
209	215	Spar, some lime and calc
215	220	Limestone
220	225	Lime, spar, lead and calc
225	227'6"	Limestone, some ore
227'6"	270	Limestone
270	280	Oolitic limestone

Hole: No. 7

Description: Churn

Location: Austin

Elevation: 572.4

Period: October 26, 1940 to November 1, 1940

From	To	Report
0	18	Surface
18	87	Bethel Sandstone
87	88	Opening
88	110	Limestone
110	133	Limestone and shale
133	135	Mud opening
135	145	Limestone with some calc
145	172	Oolitic limestone
172	210	Rosiclare sandstone (some spar in sample 205' to 210')
210	212'6"	Spar
212'6"	215	Spar and limestone (ore 210-213½ Good)
215	217'6"	Limestone - some spar
217'6"	220	Limestone
220	230	Limestone and shale
230	234	Spar - Good
234	250	Limestone



Hole: No. 10

Description: Churn

Location: Lackey

Elevation: 503.1

Period: January 10, 1941 to January 15, 1941

From	To	Report
0	5	Surface
5	74	Bethel sandstone
74	75	Opening
75	100	Limestone
100	120	Limestone and shale
120	125	Limestone with some calc
125	145	Limestone
145	189	Rosiclare sandstone (spar showing from 145 to 150)
189	197	Spar Higrade
197	208'6"	Limestone
208'6"	209'6"	Spar and calc
209'6"	220	Limestone

Hole: No. 12

Description: Churn

Location: Austin

Elevation: 514.6

Period: January 22, 1941 to January 26, 1941

From	To	Report
0	17	Surface
17	90'6"	Bethel Sandstone
90'6"	91	Opening
91	120	Limestone
120	145	Shale
145	165	Limestone
165	170	Sandy limestone
170	188	Limestone
188	211	Rosiclare sandstone
211	220	Spar (looks higrade)
220	226	Spar, limestone and calc
226	230	Limestone
230	232'6"	Spar (fair grade)
232'6"	235	Limestone
235	237'6"	Limestone, spar and shale
237'6"	245	Limestone (some spar showing)
245	255	Limestone

Hole: No. 13

Description: Churn

Location: Austin

Elevation: 521.5

Period: January 27, 1941 to January 31, 1941

From	To	Report
0	7	Surface
7	17	Sandstone
17	30	Shale (Paint Creek) Water in the shale at 25'
30	107	Bethel sandstone
107	130	Limestone
130	140	Limestone and shale
140	160	Shale
160	175	Limestone
175	195	Sandy limestone
195	201	Limestone
201	225	Rosiclare sandstone
225	226	Rosiclare sandstone and spar
226	232	Spar (hygrade)
232	235	Spar and limestone
235	237'6"	Limestone and spar (better grade)
237'6"	240	Limestone and spar
240	242'6"	Limestone
242'6"	245	Limestone with trace of spar
245	247'6"	Oolitic limestone
247'6"	250	Oolitic limestone with some calc and spar
250	257'6"	Spar, calc and limestone
257'6"	270	Limestone brown, some spar
270	273	Limestone
273	276	Spar, calc and some limestone
276	279	Limestone
279	281	Spar, calc and limestone
281	287	Sandstone, zinc and spar
287	295	Zinc and limestone
295	305	Brown limestone
305	310	Limestone, some oolitic



Hole: No. 16

Description: Churn

Location: Austin

Elevation: 517.3

Period: February 21, 1941 to February 28, 1941

From	To	Report
0	4	Surface
4	83	Sandstone
83	105	Limestone
105	115	Limestone and shale
115	130	Shale
130	135	Limestone and shale
135	173	Limestone
173	197	Rosiclare sandstone (small opening at 197')
197	200	Limestone, zinc, lead, spar and calc
200	212½	Limestone, calc and spar (likely coming in at 198')
212½	215	Spar (higrade)
215	217½	Spar and limestone
217½	227½	Limestone and calc
227½	250	Limestone
250	252	Opening (Caving zinc and lead)
252	254	Limestone streaks (opening with zinc and lead)
254	260	Limestone, zinc, lead and spar
260	267	Sub Rosiclare sandstone, zinc

Hole caved at 267'

Hole: No. 17

Description: Churn

Location: Austin

Elevation: 538.6

Remarks: Hole drilled in 1941 to 360' and deepened in 1948)

Period: March 4, 1941 to September, 1948

From	To	Report
0	12	Surface
12	30	Sandstone
30	40	Sandstone with some shale
40	80	Sandstone
80	106	White Bethel sandstone
106	127	Limestone
127	151	Shale and limestone
151	204	Limestone
204	229	Rosiclare sandstone
229	232	Spar and limestone (low grade)
232	238	Oolitic limestone, some spar (likely to be cavings)
238	243	Spar (low grade) Pebbles of acid in the cuttings
243	260	Limestone with some spar (likely to be cavings)
260	284	Limestone
284	291	Sub Rosiclare sandstone
291	325	Limestone (crack at 310' with water)
325	330	Limestone with some sandstone
330	350	Limestone (crack at 342½' and water 345' - 350')
350	365	Limestone and sandstone
365	418	Limestone - same water at 410 Strong water at 418

Hole: No. 18

Description: Churn

Location: Austin

Elevation: 535.9

Period: March 19, 1941 to March 26, 1941

From	TO	Report
0	12	Surface
12	15	Sandstone
15	22	Paint Creek shale
22	65	Sandstone
65	70	Bethel sandstone
70	107	White Bethel sandstone
107	117	Limestone
117	130	Limestone with some calc
130	135	Green and pink shale
135	140	Limestone and shale
140	150	Shale
150	206	Limestone
206	228	Rosiclare sandstone
228	255	Limestone

Hole: No. 19

Description: Churn

Location: Austin

Elevation: 536.4

Period: March 31, 1941 to April 23, 1941

From	To	Report
0	12	Surface
12	17	Sandstone
17	27	Shale (probably Paint Creek)
27	104	Sandstone
104	115	Limestone
115	135	Opening
135	155	Broken limestone with mud seams and small openings
155	160	Limestone with calc
160	165	Limestone broken
165	191	Limestone
191	218'6"	Rosiclare Sandstone
218'6"	222	Limestone
222	224	Limestone with calc
224	240	Limestone
240	241	Limestone and shale
241	289	Limestone
289	297	Sub Rosiclare sandstone
297	300	Limestone

Hole: No. 20

Description: Churn

Location: Austin

Elevation: 537.4

Period: April 1, 1941 to April 7, 1941

From	To	Report
0	10	Surface
10	17	Sandstone
17	27	Shale and sandstone
27	76'6"	Sandstone
76'6"	78	Opening muddy
78	104	Sandstone
104	117	Limestone
117	118	Opening
118	120	Limestone
120	135	Shale and limestone
135	150	Shale
150	195	Limestone
195	217	Rosiclare sandstone
217	255	Limestone



Hole: No. 22

Description: Churn

Location: Lackey

Elevation: 506.3

Period: April 17, 1941 to April 23, 1941

From	To	Report
0	5	Surface
5	58	Sandstone
58	85	Limestone
85	105	Shale
105	150	Limestone
150	178	Rosiclare sandstone
178	179	Limestone and sandstone
179	185	Spar
185	210	Limestone

Hole: No. 23

Description: Churn

Location: Austin

Elevation: 508.3

Period: April 25, 1941 to April 30, 1941

From	To	Report
0	5	Surface
5	82	Sandstone
82	112	Limestone
112	127	Shale
127	171	Limestone
171	200	Rosiclare sandstone
200	220	Limestone

Hole: No. 24

Description: Churn

Location: Austin

Elevation: 512.0

Period: May 1, 1941 to May 6, 1941

From	To	Report
0	12	Surface
12	20	Shale
20	91	Sandstone
91	110	Limestone
110	137	Shale
137	172	Limestone
172	205	Rosiclare sandstone
205	230	Limestone

Hole: No. 25

Description: Churn

Location: Austin

Elevation: 524.3

Period: May 8, 1941 to May 13, 1941

From	To	Report
0	10	Surface
10	25	Sandstone
25	35	Paint Creek shale
35	116	Sandstone (water course at 45')
116	140	Limestone
140	161	Shale
161	200	Limestone
200	230	Rosiclare sandstone
230	231 $\frac{1}{2}$	Limestone with spar and lead shines
231 $\frac{1}{2}$	260	Limestone

Hole: No. 26

Description: Churn

Location: Lackey

Elevation: 415.2

Period: May 15, 1941 to May 28, 1941

From	To	Report
0	8	Surface
8	12	Boulders and sandstone
12	35	Limestone boulders
35	65	Limestone and mud seams
65	84	Rosiclare sandstone
84	90 $\frac{1}{2}$	Spar
90 $\frac{1}{2}$	160	Limestone (might have been some sub Rosiclare sandstone 147 - 150')

Hole: No. 27

Description: Churn

Location: Lackey

Elevation: 398.0

Period: May 29, 1941 to June 3, 1941

From	To	Report
0	8	Surface
8	14	Boulders
14	21	Limestone
21	22½	Mud opening
22½	25	Limestone
25	51	Rosiclare sandstone
51	62½	Spar (grade)
62½	125	Limestone

Hole: No. 28

Description: Churn

Location: Austin

Elevation: 539.7

Period: June 10, 1941 to June 16, 1941

From	To	Report
0	10	Surface
10	15	Sandstone
15	20	Shale
20	25	Sandstone and shale
25	96	Sandstone (small water course at 45')
96	98	Opening
105	114	Limestone
114	147½	Opening mud
147½	200	Limestone (4 7/8" pipe set at 147½)
200	218	Rosiclare sandstone
218	227	Limestone

Hole: No. 29

Description: Churn

Location: Austin

Elevation: 536.7

Period: June 17, 1941 to June 21, 1941

From	To	Report
0	10	Surface
10	20	Paint Creek shale
20	98	Sandstone
98	120	Limestone
120	140	Shale and lime shells
140	182	Limestone
182	211	Rosiclare sandstone
211	230	Limestone

Hole: No. 30

Description: Churn

Location: Lackey

Elevation: 522.4

Period: June 21, 1941 to June 26, 1941

From	To	Report
0	6	Surface
6	76	Sandstone
76	105	Limestone
105	120	Lime shells and shale
120	170	Limestone
170	190	Rosiclare sandstone
193	197	Limestone
197	208	Spar high in calc
208	210	Limestone
210	217 $\frac{1}{2}$	Limestone r some spar showing
217 $\frac{1}{2}$	222 $\frac{1}{2}$	Limestone with spar and lead shines
222 $\frac{1}{2}$	225	Limestone, spar and lead (probably cavings)
225	230	Spar, limestone and calc
230	237	Limestone

Remarks: Opening 199' - 199 $\frac{1}{2}$ '  
Small opening 199' - 200'  
Lost sample 195' - 200'

Hole: No. 31

Description: Churn

Location: Austin

Elevation: 513.9

Period: June 25, 1941 to July 2, 1941

From	To	Report
0	4	Surface
4	121	Sandstone
121	140	Limestone
140	145	Shale
145	150	Limestone
150	180	Limestone and shale
180	200	Limestone
200	235	Rosiclare Sandstone
235	260	Limestone
260	265	Limestone and calc with traces of zinc and spar
265	267 $\frac{1}{2}$	Limestone and calc with shines of zinc and lead
267 $\frac{1}{2}$	270	Zinc, lead, spar and calc
270	276	Higrade zinc and spar, some calc shines of lead
276	295	Limestone
295	300	Sub Rosiclare Sandstone
300	305	Limestone
305	310	Lead and zinc shines
310	320	Limestone

Remarks: 6" of spar at base of Rosiclare Sandstone

Hole: No. 32

Description: Churn

Location: Austin

Elevation: 508.3

Period: July 4, 1941 to July 8, 1941

From	To	Report
0	3	Surface
3	30	Cypress sandstone
30	40	Paint Creek shale
40	120	Sandstone (water course 75-80')
120	145	Limestone
145	165	Shale
165	209	Limestone
209	238	Rosiclare sandstone
238	241	Spar (grade)
241	254	Spar and sandstone
254	280	Spar and calc
280	290	Spar and limestone
290	295	Zinc
295	310	Zinc and spar
310	317 $\frac{1}{2}$	Zinc, lead and limestone
317 $\frac{1}{2}$	325	Limestone with some zinc

Hole: No. 33

Description: Churn

Location: Austin

Elevation: 502.0

Period: July 10, 1941 to July 15, 1941

From	To	Report
0	2	Surface
2	25	Cypress sand
25	35	Paint Creek shale
35	115	Sandstone (water at 65')
115	145	Limestone
145	155	Limestone and shale
155	165	Shale
165	175	Limestone and shale
175	200	Limestone
200	240	Rosiclare Sandstone
240	248	Spar (grade)
248	259	Limestone and spar
259	265	Spar, some limestone and calc
265	272½	Limestone, some spar
272½	285	Limestone
285	295	Limestone shines of lead and zinc
295	302	Sub Rosiclare Sandstone
302	310	Limestone

Hole: No. 34

Description: Churn

Location: Austin

Elevation: 497.8

Period: July 16, 1941 to July 21, 1941

From	To	Report
0	2	Surface
2	24	Cypress sandstone
24	35	Paint Creek shale
35	112	Sandstone (small water course 85 to 90')
112	120	Bethel sandstone
120	135	Limestone
135	147	Shale and limestones
147	160	Shale
160	175	Limestone
175	180	Limestone and Pyrites
180	205	Limestone
205	234	Rosiclare sandstone
234	240	Spar (S) (water at 230-235')
240	242 $\frac{1}{2}$	Spar and lead (M)
242 $\frac{1}{2}$	245	Limestone, spar and lead (H)
245	247 $\frac{1}{2}$	Limestone, spar and lead (S)
247 $\frac{1}{2}$	250	Limestone and lead (H)
250	252 $\frac{1}{2}$	Limestone and lead (H)
252 $\frac{1}{2}$	257 $\frac{1}{2}$	Limestone, spar and zinc (S)
257 $\frac{1}{2}$	260	Limestone (M)
260	265	Limestone and zinc (H)
265	267 $\frac{1}{2}$	Limestone and zinc (M)
267 $\frac{1}{2}$	270	Limestone and zinc (S)
270	275	Limestone and zinc (M)
275	280	Limestone, zinc and calc (H)
280	282 $\frac{1}{2}$	Limestone and calc (M)
282 $\frac{1}{2}$	285	Zinc (S)
285	287 $\frac{1}{2}$	Zinc and limestone (s)
287 $\frac{1}{2}$	290	Sub Rosiclare sandstone (M)
290	295	Sub Rosiclare sandstone (H)
295	305	Limestone (M)
305	315	Limestone (H)

Hole: No. 35

Description: Churn

Location: Austin

Elevation: 519.3

Period: July 21, 1941 to July 26, 1941

From	To	Report
0	7	Surface
7	25	Cypress sandstone
25	35	Paint Creek shale
35	120	Benoist sandstone (water course at 90-95')
120	135	Limestone
135	140	Limestone and shale
140	145	Shale
145	150	Chocolate shale
150	155	Chocolate and blue shale
155	160	Blue shale
160	170	Limestone
170	175	Limestone and shale
175	200	Limestone
200	205	Rosiclare Sandstone
205	210	Rosiclare Sandstone and Limestone
210	215	Rosiclare Sandstone
215	220	Rosiclare Sandstone and shale
220	226	Rosiclare sandstone (water at 200-205')
226	274	Limestone
274	280	Sub Rosiclare Sandstone
280	300	Limestone

Hole: No. 36

Description: Churn

Location: Austih

Elevation: 544.5

Period: July 27, 1941 to August 1, 1941

From	To	Report
0	20	Surface
20	75	Sandstone
75	103	Benoist Sandstone
103	125	Limestone
125	130	Shale
130	140	Limestone and shale
140	150	Shale
150	185	Limestone
185	190	Rosiclare Sandstone
190	195	Rosiclare Sandstone and Limestone
195	220	Rosiclare Sandstone
220	240	Limestone and spar
240	290	Limestone
290	295	Sub Rosiclare Sandstone
295	300	Sub Rosiclare Sandstone and limestone
300	303	Limestone

Hole: No. 37

Description: Churn

Location: Austin

Elevation: 545.4

Period: August 2, 1941 to August 7, 1941

From	To	Report
0	15	Surface
15	25	Cypress sand
25	70	Sandstone
70	94	Benoist sandstone
94	115	Limestone
115	122	Mud cave
122	128	Shells
128	138	Cave and boulders
138	140	Shale and mud
140	150	Shale and limestone
150	155	Limestone
155	157	Mud opening
157	186	Limestone
186	210	Rosiclare Sandstone
210	215	Rosiclare Sandstone and calc
215	217 $\frac{1}{2}$	Spar
217 $\frac{1}{2}$	218 $\frac{1}{2}$	Opening
218 $\frac{1}{2}$	227 $\frac{1}{2}$	Limestone
227 $\frac{1}{2}$	230	Spar
230	235	Limestone
235	245	Limestone and spar
245	285	Limestone
285	290	Sub Rosiclare Sandstone

Remarks: 21 feet of 6 3/8" pipe set in the hole.

Hole: No. 38

Description: Churn

Location: Lackey

Elevation: 513.2

Period: August 8, 1941 to August 13, 1941

From	To	Report
0	4	Surface
4	28	Yellow sandstone
28	54	Sandstone
54	70	Limestone
70	80	Limestone and shale
80	100	Shale
100	143	Limestone
143	170	Rosiclare Sandstone
170	173	Rosiclare Sandstone and Limestone
173	175	Spar
175	240	Limestone

Hole: No. 39

Description: Churn

Location: Lackey

Elevation: 516.1

Period: August 14, 1941 to August 18, 1941

From	To	Report
0	7	Surface
7	54	Sandstone
54	60	Limestone
60	61	Opening
61	70	Limestone
70	80	Limestone and shale
80	87	Shale
87	89	Opening - mud trace
89	95	Shale
95	105	Shale and limestone
105	130	Limestone
130	140	Sandstone and limestone
140	167	Rosiclare Sandstone
167	170	Rosiclare Sandstone and limestone
170	235	Limestone
235	245	Sub Rosiclare Sandstone

Hole: No. 40

Description: Churn

Location: Lackey

Elevation: 512.0

Period: August 19, 1941 to August 21, 1941

From	To	Report
0	4	Surface
4	10	Sandstone
10	13	Boulders
13	20	Boulders, crevices and mud
20	44	Sandstone
44	70	Limestone (1 foot opening 46-47')
70	90	Shale
90	125	Limestone
125	130	Limestone and Sandstone
130	160	Rosiclare Sandstone
160	180	Limestone

Hole: No. 41

Description: Churn

Location: Lackey

Elevation: 523.0

Period: August 22, 1941 to September 1, 1941

From	To	Report
0	3	Surface
3	55	Sandstone
55	80	Limestone
80	100	Limestone and shale
100	140	Limestone
140	145	Limestone and shale
145	155	Limestone and sandstone
155	160	Rosiclare sandstone
160	165	Opening
165	170	Rosiclare sandstone (showing spar)
170	204 $\frac{1}{2}$	Limestone
204 $\frac{1}{2}$	217 $\frac{1}{2}$	Spar
217 $\frac{1}{2}$	220	Limestone
220	222 $\frac{1}{2}$	Spar and limestone
222 $\frac{1}{2}$	225	Spar
225	227 $\frac{1}{2}$	Spar and limestone
227 $\frac{1}{2}$	238	Limestone
238	240	Sub Rosiclare Sandstone
240	243 $\frac{1}{2}$	Sub Rosiclare Sandstone and Limestone
243 $\frac{1}{2}$	245	Sandstone and Limestone
245	250	Limestone

Hole: No. 42

Description: Churn

Location: Lackey

Elevation: 525.7

Period: September 2, 1941 to September 9, 1941

From	To	Report
0	6	Surface
6	56	Sandstone
56	65	Limestone
65	67	Opening
67	80	Limestone
80	100	Limestone and shale
100	140	Limestone
140	145	Sandstone and Limestone
145	171	Rosiclare Sandstone
171	206	Limestone
206	208	Crevice showing spar
208	215	Limestone and spar
215	235	Limestone
235	242	Limestone and Sandstone
242	255	Sandy Limestone

Hole: No. 43

Description: Churn

Location: Lackey

Elevation: 522.0

Period: September 10, 1941 to September 18, 1941

From	To	Report
0	5	Surface
5	35	Sandstone
35	53	Bethel Sandstone
53	80	Limestone
80	95	Limestone and slate
95	140	Limestone
140	145	Limestone and Sandstone
145	165	Rosiclare Sandstone
165	170	Rosiclare Sandstone and Limestone
170	200	Limestone
200	205	Limestone (show spar)
205	225	Limestone
225	227½	Spar
227½	230	Limestone and show of spar
230	235	Limestone

Hole: No. 44

Description: Churn

Location: Lackey

Elevation: 529.4

Period: September 19, 1941 to September 29, 1941

From	To	Report
0	10	Surface
10	60	Sandstone
60	65	Sandstone and Limestone
65	95	Limestone
95	105	Slate
105	150	Limestone
150	178	Rosiclare Sandstone
178	200	Limestone
200	205	Limestone (light gray)
205	207½	Limestone and blue shale
207½	215	Limestone (dark gray)
215	217½	Limestone and spar (216 spar very good)
217½	220	Spar (very good)
220	222½	Limestone (brown) spar very poor
222½	225	Spar (very good)
225	230	Limestone and spar (good)
230	232½	Limestone (spar caving)
232½	237½	Limestone and spar (spar caving)
237½	245	Limestone dark gray (spar caving)
245	250	Limestone oolitic (spar caving)

Hole: No. 45

Description: Churn

Location: Lackey

Elevation: 514.0

Period: September 30, 1941 to October 8, 1941

From	To	Report
0	5	Surface
5	10	Surface and sandstone
10	35	Sandstone
35	40	Sandstone and Limestone
40	55	Limestone, light gray
55	60	Limestone and green shale
60	65	Shale, chocolate and green
65	80	Blue shale
80	105	Dark gray limestone
105	120	Limestone
120	130	Limestone and sandstone
130	135	Sandstone
135	139	Sandstone and shale
139	150	Sandstone
150	155	Limestone
155	160	Limestone with pyrite
160	175	Limestone
175	180	Limestone and shale
180	205	Limestone

Remarks: Hole making water from 155' about 15 gallons per hour.  
Water exhausted on October 8th. Hole bridged and plugged  
with rock and dirt at 45'.

Hole: No. 46

Description: Churn

Location: Lackey

Elevation: 523.5

Period: October 10, 1941 to October 17, 1941

From	To	Report
0	7	Surface
7	20	Sandstone, shells and mud
20	40	Sandstone
40	45	Sandstone and Limestone
45	60	Limestone
60	65	Limestone and shale
65	70	Limestone and shale (chocolate)
70	75	Limestone and shale
75	85	Shale
85	90	Limestone and shale (opening 82-83' pretty filled with red mud)
90	100	Limestone and cavings from opening
100	125	Limestone
125	135	Limestone and Sandstone
135	140	Sandstone
140	145	Sandstone and shale
145	155	Sandstone
155	160	Sandstone and Limestone (Limestone at 157')
160	185	Limestone
185	190	Limestone (faint trace of lead, zinc and spar)
190	195	Limestone (faint trace of zinc)
195	220	Limestone

Hole: No. 47

Description: Churn

Location: Lackey

Elevation: 536.8

Period: October 20, 1941 to October 27, 1941

From	To	Report
0	5	Surface
5	18	Sandstone and shells
18	60	Sandstone
60	65	Sandstone and Limestone
65	79½	Limestone (lost sample thru opening at 79½)
79½	93½	Opening mud (no sample)
93½	94½	Limestone and shells
94½	105	Mud and shale
105	150	Limestone
150	155	Sandstone and Limestone (making a little water)
155	165	Sandstone and shale
165	170	Sandstone
170	175	Sandstone and Limestone (making more water)
175	235	Limestone

Hole: No. 48

Description: Churn

Location: Lackey

Elevation: 541.0

Period: October 29, 1941 to November 5, 1941

From	To	Report
0	14	Surface
14	20	Sandstone and mud
20	75	Sandstone
75	80	Sandstone and Limestone
80	95	Limestone
95	125	Limestone and shale
125	155	Limestone
155	165	Limestone and sandstone
165	180	Sandstone
180	190	Sandstone and shale (cavings)
190	195	Sandstone (cavings)
195	200	Limestone and Sandstone
200	226	Limestone
226	229	Mud and spar
229	230	Opening (most of sample lost)
230	232 $\frac{1}{2}$	Mud and spar
232 $\frac{1}{2}$	235	Drilled like limestone of medium hardness (Cavings from above mud and spar)
235	237 $\frac{1}{2}$	Limestone and spar (making water)
237 $\frac{1}{2}$	252 $\frac{1}{2}$	Limestone (show of spar) cavings
252 $\frac{1}{2}$	260	Limestone

Hole: No. 49

Description: Churn

Location: Lackey

Elevation: 535.6

Period: November 8, 1941 to November 14, 1941

From	To	Report
0	7	Surface
7	20	Sandstone and mud
20	80	Sandstone
80	85	Sandstone and Limestone
85	105	Limestone
105	110	Limestone and shale
110	115	Limestone and chocolate shale
115	125	Shale
125	130	Limestone and shale
130	160	Limestone
160	175	Limestone and sandstone
175	195	Sandstone
195	200	Sandstone and limestone
200	220	Limestone
220	224	Limestone and shale
224	227	Limestone
227	230	Limestone (faint trace of spar)
230	232½	Limestone and shale (trace of pyrite)
232½	265	Limestone

Hole: No. 50

Description: Churn

Location: Lackey

Elevation: 534.8

Period: November 18, 1941 to November 28, 1941

From	To	Report
0	9	Surface
9	20	Sandstone and mud
20	80	Sandstone (opening 48-49')
75	95	Limestone
95	110	Limestone and shale
110	115	Shale (opening 110-111')
115	120	Limestone and shale
120	160	Limestone
160	165	Limestone and sandstone
165	190	Sandstone
190	195	Sandstone and Limestone
195	205	Limestone
205	210	Limestone (faint trace of spar)
210	215	Limestone
215	217 $\frac{1}{2}$	Limestone (white mud)
217 $\frac{1}{2}$	220	Limestone (show spar)
220	222 $\frac{1}{2}$	Limestone (show spar)
222 $\frac{1}{2}$	225	Limestone (show spar)
225	227 $\frac{1}{2}$	Limestone and spar (opening 225 $\frac{1}{2}$ -226 - lost most of sample)
227 $\frac{1}{2}$	232 $\frac{1}{2}$	Limestone and spar (opening and mud 231-232 $\frac{1}{2}$ )
232 $\frac{1}{2}$	234	Mud and spar
234	250	Limestone - spar cavings

Remarks: Most of sample lost 230-232 $\frac{1}{2}$ )

Hole: No. 51

Description: Churn

Location: Lackey

Elevation: 504.8

Period: November 29, 1941 to December 8, 1941

From	To	Report
0	4	Surface
4	20	Sandstone
20	25	Sandstone and Limestone
25	31	Limestone (opening 27-28')
31	41	Opening and mud
41	45	Limestone with show spar
45	60	Mud - cavings - no sample
60	65	Mud and shale
65	70	Limestone and shale
70	75	Limestone
75	80	Limestone and shale
80	105	Limestone
105	115	Limestone and Sandstone
115	140	Sandstone
140	160	Limestone
160	165	Limestone and Sandstone
165	205	Limestone
205	210	Limestone and Sandstone

Remarks: 62 feet of 6" casing.

Hole: No. 52

Description: Churn

Location: Lackey

Elevation: 547.3

Period: December 10, 1941 to December 19, 1941

From	To	Report
0	9	Surface
9	20	Sandstone and mud
20	92	Sandstone (opening 91-92' -- lost sample)
92	110	Limestone
110	125	Limestone and shale
125	135	Shale
135	140	Limestone and shale
140	170	Limestone
170	180	Limestone and Sandstone
180	210	Sandstone (ct)
210	215	Limestone (ct)
215	270	Limestone
270	275	Limestone and Sandstone
275	280	Limestone

Hole: No. 53

Description: Churn

Location: Crystal

Elevation: 551.5

Period: December 30, 1941 to January 8, 1942

From	To	Report
0	5	Surface
5	85	Sandstone
85	90	Sandstone and Limestone
90	115	Limestone
115	120	Shale
120	125	Limestone and Shale
125	130	Shale
130	165	Limestone
165	175	Limestone and Sandstone
175	200	Sandstone
200	230	Limestone
230	235	Limestone 230-233, opening 233-235 mud, ct and show spar and lead
235	237 $\frac{1}{2}$	No Sample
237 $\frac{1}{2}$	240	Limestone and spar
240	255	Limestone
255	262 $\frac{1}{2}$	Limestone, trace ct, lead, spar (lost most of sample)
262 $\frac{1}{2}$	265	Limestone, trace ct, lead, spar
265	275	Limestone and Sandstone

Hole: No. 54

Description: Churn

Location: Crystal

Elevation: 570.4

Period: January 3, 1942 to January 15, 1942

From	To	Report
0	14	Surface
14	70	Sandstone
70	80	Sandstone (broken)
80	85	Opening (sample lost)
85	90	Limestone (mud cave)
90	95	Limestone (hole went crooked at 87')
95	105	Limestone
105	130	Limestone and shale
130	135	Limestone and shale cavings
135	170	Limestone
170	175	Sandy limestone
175	180	Sandstone and white mud
180	185	Sandstone
185	190	Sandstone and chert (pyrite)
190	205	Sandstone
205	230	Limestone
230	235	Limestone, show lead, zinc and spar (234-235 soft)
235	250	Limestone, very weak trace lead and zinc
250	255	Limestone
255	260	Limestone (crevice) Heavy trace lead, zinc and spar
260	265	Limestone, calc, spar, zinc and lead (263-265 soft)
265	275	Limestone, sandstone, spar, zinc, trace of lead
275	277½	Sandstone, show lead, zinc and spar
277½	280	Sandstone and limestone, zinc, trace lead and spar
280	285	Limestone, trace zinc and lead
285	287½	Limestone, trace zinc

Hole: No. 55

Description: Churn

Location: Crystal

Elevation: 572.2

Period: January 12, 1942 to January 22, 1942

From	To	Report
0	20	Surface
20	95	Sandstone
95	100	Sandstone and limestone
100	115	Limestone (making water at 115)
115	125	Crevice (lost sample)
125	130	Mud and limestone
130	140	Shale and mud
140	145	Limestone
145	150	Limestone (pyrite)
150	155	Limestone, pyrite heavy
155	160	Limestone (pyrite)
160	165	Limestone
165	170	Opening 169' - lost sample
170	175	Limestone
175	185	Limestone and sandstone
185	190	Sandstone
190	210	Sandstone and limestone
210	215	Sandstone and limestone (pyrite) Limestone at 212'
215	240	Limestone (pyrite)
240	275	Limestone
275	280	Limestone and sandstone
280	285	Limestone

Hole: No. 56

Description: Churn

Location: Crystal

Elevation: 573.5

Period: January 16, 1942 to January 26, 1942

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From	To	Report
0	15	Surface
15	20	Sandstone and shale
20	80	Sandstone (crack at 65')
80	85	Sandstone (mud seam)
85	90	Sandstone and limestone
90	105	Limestone
105	135	Limestone and shale
135	155	Limestone
155	165	Limestone (pink grain)
165	175	Sandy limestone
175	185	Sandstone, limestone and white mud
185	190	Sandstone, mud and chert
190	195	Sandstone and shale
195	205	Sandstone
205	210	Sandstone and limestone
210	230	Limestone (pyrite)
230	235	Limestone, weak trace spar
235	240	Limestone
240	245	Limestone, traces of calc
245	265	Limestone
265	270	Limestone, traces of calc
270	280	Sandstone and limestone
280	285	Limestone

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Hole: No. 57

Description: Churn

Location: Crystal

Elevation: 558.3

Period: January 28, 1948 to February 7, 1942

From	To	Report
0	5	Surface
5	90	Sandstone (mud seams and water at 85')
90	95	Limestone and sandstone cavings
95	110	Limestone
110	125	Limestone and shale
125	130	Shale
130	155	Limestone
155	165	Limestone (pink grain)
165	170	Sandy limestone and calc
170	175	Limestone, sandstone and calc
175	180	Sandstone and calc
180	185	Sandstone, limestone and calc
185	190	Sandstone, limestone and shale
190	200	Sandstone
200	205	Sandstone and limestone
205	210	Sandy limestone
210	250	Limestone
250	260	Limestone and calc
260	270	Limestone
270	275	Limestone and sandstone
275	280	Limestone

Hole: No. 58

Description: Churn

Location: Crystal

Elevation: 544.7

Period: February 10, 1942 to February 19, 1942

From	To	Report
0	12	Surface
12	20	Sandstone and shale
20	55	Sandstone
55	65	Sandstone (broken)
65	70	Sandstone
70	75	Sandstone (badly broken)
75	80	Sandstone (Limestone at 77')
80	95	Limestone and mud cave (lost sample)
95	100	Limestone and mud
100	120	Limestone and shale
120	130	Limestone, calc, pyrites
130	140	Limestone
140	150	Limestone (pink grain)
150	165	Sandy limestone
165	170	Sandstone
170	175	Sandstone and limestone
175	190	Sandstone and pyrite
190	195	Sandstone and limestone (mostly limestone)
195	200	Limestone and calc
200	255	Limestone (water at 225')
255	260	Limestone and sandstone
260	265	Sandstone
265	268	Limestone

Hole: No. 59

Description: Churn

Location: Crystal

Elevation: 543.8

Period: February 23, 1942 to March 11, 1942

From	To	Report
0	12	Surface
12	15	Shale
15	25	Sandstone and shale
25	55	Sandstone
55	60	Sandstone and shale
60	95	Sandstone
95	115	Limestone
115	125	Limestone and shale (small opening)
125	130	Limestone, shale and mud
130	135	Limestone and shale
135	140	Limestone, shale and mud
140	150	Limestone and shale
150	160	Limestone and shale cavings
160	165	Limestone (pink grain)
165	175	Limestone (pink grain)
175	190	Sandy limestone
190	195	Sandstone and limestone
195	200	Sandstone and shale cavings
200	215	Sandstone (heavy asphalt 210-215)
215	217 $\frac{1}{2}$	Sandstone and limestone
217 $\frac{1}{2}$	225	Limestone
225	230	Limestone and white mud
230	260	Limestone
260	270	Limestone and calc
270	275	Limestone
275	280	Limestone and sandstone
280	285	Sandstone
285	290	Limestone with a little sandstone

Hole: No. 60

Description: Churn

Location: Crystal

Elevation: 515.4

Period: March 12 to March 20, 1942

From	To	Report
0	4	Surface
4	15	Sandstone
15	45	Sandstone and shale
45	50	Sandstone
50	55	Sandstone and shale
55	115	Sandstone
115	120	Mostly limestone
120	135	Limestone
135	145	Limestone and shale
145	160	Limestone, muddy - shale and pyrite
160	165	Limestone, shale, calc and pyrite
165	170	Limestone and pyrite
170	180	Limestone, pyrite and calc
180	185	Limestone and pyrite
185	190	Limestone, calc (pink grain limestone)
190	195	Limestone (pink grain)
195	200	Sandy limestone
200	215	Limestone and sandstone
215	220	Sandstone, shale and chert
220	225	Sandstone, calc with a little spar
225	232 $\frac{1}{2}$	Sandstone
232 $\frac{1}{2}$	235	Sandstone, limestone, calc, trace lead and spar
235	238	Limestone, spar and trace lead (water)
238	242 $\frac{1}{2}$	Spar
242 $\frac{1}{2}$	247 $\frac{1}{2}$	Limestone, spar
247 $\frac{1}{2}$	250	Spar and gangue
250	252 $\frac{1}{2}$	Limestone and spar
252 $\frac{1}{2}$	255	Limestone, gangue and spar
255	257 $\frac{1}{2}$	Limestone, shale and spar
257 $\frac{1}{2}$	260	Limestone, shale and spar and gangue
260	265	Limestone, spar with traces of zinc
265	267 $\frac{1}{2}$	Limestone with some spar
267 $\frac{1}{2}$	270	Limestone with traces of spar and lead
270	280	Limestone
280	285	Limestone, show zinc, trace lead (live water & hole caving from 280 - 285)
285	290	Limestone and cavings
290	295	Limestone and sandstone (show zinc, trace lead, probably cavings)
295	305	Limestone and ore cavings

Hole: No. 61

Description: Churn

Location: Crystal

Elevation: 513.4

Period: March 23 to March 31, 1942

From	To	Report
0	3	Surface
3	15	Sandstone
15	55	Sandstone and shale
55	110	Sandstone
110	115	Limestone (about 110½')
115	120	Limestone and shale
120	125	Limestone
125	130	Limestone and white mud
130	135	Limestone, shale, pyrite and calc
135	145	Limestone and shale
145	155	Shale
155	165	Limestone
165	175	Limestone and calc (enough water to drill with)
175	180	Limestone
180	190	Sandy limestone
190	195	Sandy limestone and heavy calc
195	200	Sandy limestone
200	205	Limestone and sandstone
205	210	Sandstone
210	215	Sandstone and chert
215	225	Sandstone
225	230	Sandstone and limestone (limestone about 229')
230	250	Limestone
250	255	Weak show lead, spar, zinc and calc
255	260	Better zinc, little lead, spar and calc
260	265	Limestone, heavy trace of ore, probably cavings
265	272½	Limestone, traces ore and calc
272½	275	Limestone, light show spar, trace lead and zinc
275	285	Limestone, weak trace of ore
285	295	Limestone and sandstone with weak trace of ore
295	300	Limestone with weak trace of ore

Hole: No. 62

Description: Churn

Location: Crystal

Elevation: 494.5

Period: April 2, 1942 to April 11, 1942

From	To	Report
0	5	Surface
5	10	Sandstone
10	20	Sandstone and shale (water about 90 gph)
20	100	Sandstone (bad slide at 40-45'. Crack at 55-60'. Broken at 60-65'. Broken at 85-90'. Water level lowered from 12' to 70'.)
100	102 $\frac{1}{2}$	Sandstone and limestone, weak shine of zinc
102 $\frac{1}{2}$	120	Limestone
120	155	Limestone and shale
155	170	Limestone
170	180	Limestone and calc (lime-pink grain)
180	185	Sandy limestone and calc - Roz
185	190	Sandstone and limestone with calc
190	200	Sandstone and limestone (crack)
200	205	Sandstone limestone, pyrite (crack)
205	215	Sandstone and shale
215	220	Sandstone, weak shine spar - Roz
220	222 $\frac{1}{2}$	Limestone, good show of spar
222 $\frac{1}{2}$	225	Very small recovery
225	227 $\frac{1}{2}$	Limestone, spar and weak zinc (water level lowered to about 145'. Recovery small)
227 $\frac{1}{2}$	230	Sample lost (shale cavings)
230	235	Limestone, some spar
235	240	Limestone and pyrite
240	245	Limestone, weak traces lead, spar and zinc
245	252 $\frac{1}{2}$	Good show spar
252 $\frac{1}{2}$	265	Limestone, traces ore
265	270	Limestone, show spar
270	275	Limestone, spar and some zinc
275	280	Sandy limestone with traces of ore
280	285	Sandstone and limestone with traces of ore
285	290	Sandstone with light show spar and zinc
290	295	Limestone

Hole: No. 63

Description: Churn

Location: Crystal

Elevation: 479.5

Period: April 14 to April 23, 1942

From	To	Report
0	10	Surface and boulders
10	15	Shale
15	50	Sandstone
50	55	Sandstone, shale and pyrite
55	90	Sandstone (broken at 65-70; badly broken at 70-75)
90	110	Limestone (contact about 91')
110	130	Limestone and shale
130	135	Shale
135	160	Limestone
160	165	Limestone (pink grain)
165	175	Sandy limestone
175	180	Sandstone and limestone
180	190	Sandstone, limestone and calc (enough water to drill with)
190	195	Sandstone and shale
195	205	Sandstone
205	210	Sandstone and limestone
210	215	Sandy limestone
215	270	Limestone
270	275	Sandy limestone
275	280	Sandstone and limestone

Hole: No. 64

Description: Churn

Location: Crystal

Elevation: 528.5

Period: April 20, 1942 to April 28, 1942

From	To	Report
0	11	Surface
11	20	Sandstone and mud
20	25	Sandstone
25	30	Sandstone and shale
30	35	Shale
35	40	Sandstone and shale
40	110	Sandstone
110	115	Sandstone, limestone and calc (lime at 114'. Small opening 113½ to 114')
115	120	Limestone (opening mud and gravel)
120	125	Limestone (120-122)(Mud and calc 122-125)
125	130	Limestone, calc cavings
130	140	Limestone and shale
140	145	Shale
145	150	Limestone and shale
150	155	Shale
155	165	Limestone and shale
165	185	Limestone
185	195	Limestone and sandstone
195	230	Sandstone
230	232½	Sandstone and spar
232½	235	Sandstone, limestone and spar (limestone at 233')
235	237½	Limestone and spar
237½	240	Limestone, spar and show zinc
240	242½	Limestone, show spar and zinc
242½	255	Limestone
255	260	Limestone, trace spar, zinc and lead
260	265	Limestone, water
265	275	Limestone, show zinc and spar
275	280	Limestone, spar, zinc and lead
280	285	Limestone, sandstone, spar, zinc and lead
285	287½	Sandstone and show spar, zinc and lead
287½	290	Limestone

Hole: No. 65

Description: Churn

Location: Crystal

Period: April 24 to May 6, 1942

Elevation: 466.0

From	To	Report
0	6	Surface and boulders
6	8	Shale
8	30	Sandstone
30	35	Sandstone and shale
35	40	Sandstone
40	45	Sandstone and shale
45	50	Shale
50	80	Sandstone
80	85	Sandstone and limestone, weak trace of spar and zinc (lime at 85')
85	95	Limestone and calc
95	100	Limestone
100	110	Limestone and shale
110	115	Shale
115	120	Limestone and shale
120	125	Shale
125	150	Limestone (pyrite at 130-135)
150	160	Limestone (pink grain)
160	170	Sandy limestone
170	175	Sandstone
175	180	Sandstone and chert
180	185	Sandstone, shale, pyrite
185	195	Sandstone, shale and pyrite
195	260	Limestone
260	265	Limestone, traces spar
265	270	Limestone and Sub Rosiclare sandstone
270	275	Limestone

Hole: No. 66

Description: Churn

Location: Crystal

Elevation: 513.0

Period: April 29, 1942 to May 9, 1942

From	To	Report
0	8	Surface
8	16	Sandstone (water)
16	30	Shale
30	35	Shale and sandstone
35	105	Sandstone
105	110	Sandstone and limestone (contact at 107')
110	115	Limestone
115	120	Limestone and shale
120	125	Limestone
125	130	Limestone and shale
130	135	Limestone
135	140	Limestone and shale
140	150	Shale
150	185	Limestone (lost most of water between 170-180', no noticeable opening)
185	190	Limestone and sandstone
190	225	Sandstone (mud at 210-212½') <i>Rm</i>
225	280	Limestone
280	285	Limestone, trace lead, zinc and spar
285	290	Limestone, sandstone, faint trace lead, zinc and spar
290	295	Sandstone and limestone

Hole: No. 67

Description: Churn

Location: Crystal

Elevation: 471.9

Period: May 9, 1942 to May 18, 1942

From	To	Report
0	10	Surface
10	85	Sandstone (opening from 63 to 65')
85	90	Sandstone and limestone (top of lime 88')
90	105	Limestone
105	110	Limestone and shale
110	115	Limestone, shale and red rocks
115	120	Limestone and shale
120	130	Shale
130	165	Limestone
165	170	Limestone and sandstone
170	180	Sandstone and shale (top Rosiclare at 180')
180	185	Rosiclare sandstone
185	195	Rosiclare sandstone and shale
195	207 $\frac{1}{2}$	Rosiclare sandstone
207 $\frac{1}{2}$	210	Rosiclare sandstone and calc
210	212 $\frac{1}{2}$	Rosiclare sandstone and limestone
212 $\frac{1}{2}$	215	Limestone, traces of spar
215	225	Heavy spar and lead
225	230	Spar, limestone and traces of lead
230	235	Heavy spar with shinses of lead and zinc
235	237 $\frac{1}{2}$	Zinc, spar and lead
237 $\frac{1}{2}$	240	Zinc, spar, and lead (not so heavy)
240	270	Limestone with traces spar, zinc and lead (cavings)
270	285	Limestone
285	290	Limestone and sandstone, trace spar, zinc and lead
290	295	Limestone and sandstone

Hole: No. 68

Description: Churn

Location: Crystal

Elevation: 524.9

Period: May 12, 1942 to May 26, 1942

From	To	Report
0	9	Surface
9	15	Sandstone
15	20	Sandstone and shale
20	30	Shale
30	35	Shale and sandstone
35	40	Sandstone (small mud cave and water 35-35½)
40	105	Sandstone
105	110	Sandstone and limestone (contact at 108')
110	120	Limestone
120	124	Limestone (no sample, opening at 124')
124	139	Opening and thin mud
139	150	Mud and gravel
150	155	Mud and shale
155	160	Mud, gravel, limestone and pyrite (lime at 158')
160	170	Limestone and pyrite
170	190	Limestone
190	195	Limestone and sandstone
195	200	Sandstone
200	205	Sandstone and water
205	215	Sandstone
215	220	Sandstone and shale
220	230	Sandstone
230	232½	Sandstone, spar and water
232½	235	Sandstone, limestone and spar (lime contact at 233')
235	237½	Limestone, show spar, faint trace of zinc
237½	240	Limestone
240	245	Limestone, show zinc and trace of lead and spar
245	260	Limestone, trace zinc, show spar (cavings)
260	275	Limestone
275	280	Limestone, show zinc, spar and lead
280	282½	Limestone, trace zinc, spar and lead
282½	285	Limestone, trace zinc, spar
285	290	Limestone, zinc and spar cavings
290	295	Limestone and sandstone (zinc and spar cavings)
295	297	Limestone (zinc and spar cavings)

Remarks: 161 feet of 4 7/8" casing.

Hole: No. 69

Description: Churn

Location: Austin

Elevation: 475.2

Period: May 19, 1942 to May 28, 1942

From	To	Report
0	12	Surface
12	30	Sandstone
30	45	Sandstone and shale
45	85	Sandstone
85	90	Sandstone and limestone (contact at 87')
90	120	Limestone
120	125	Limestone and shale
125	135	Shale
135	140	Limestone and shale
140	165	Limestone
165	180	Limestone and sandstone
180	205	Rosiclare Sandstone
205	207½	Rosiclare sandstone and limestone
207½	275	Limestone

Hole: No. 70

Description: Churn

Location: Crystal

Elevation: 529.4

Period: May 27, 1942 to June 5, 1942

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From	To	Report
0	8	Surface
8	15	Sandstone
15	25	sandstone and shale
25	30	Shale
30	35	Shale and sandstone
35	105	Sandstone
105	110	Sandstone and limestone (contact at 107')
110	125	Limestone
125	135	Limestone, mud and gravel (mud cave 128-130')
135	140	Limestone, mud and gravel and shale
140	150	Shale, mud and water
150	180	Limestone
180	195	Limestone and sandstone
195	205	Sandstone
205	210	Sandstone and shale
210	220	Sandstone
220	225	Sandstone and limestone (contact at 221')
225	260	Limestone
260	265	Limestone and spar
265	270	Limestone, spar and zinc
270	272 $\frac{1}{2}$	Limestone, spar and zinc (no so good)
272 $\frac{1}{2}$	275	Limestone, show spar and zinc (probably cavings)
275	277 $\frac{1}{2}$	Limestone, show spar and zinc
277 $\frac{1}{2}$	285	Limestone, spar and zinc
285	287 $\frac{1}{2}$	Limestone, sandstone, spar and zinc
287 $\frac{1}{2}$	290	Sandstone, show spar and zinc
290	292	Sandstone and limestone, show spar and zinc

Remarks: Lost most of water in 277 $\frac{1}{2}$  to 280'.  
The 282 $\frac{1}{2}$ -285' run drilled much harder than any of the previous  
one runs.  
Ore in 287 $\frac{1}{2}$ -292' probably cavings.

Hole: No. 71

Description: Churn

Location: Austin

Elevation: 487.3

Period: May 29, 1942 to June 8, 1942

From	To	Report
0	12	Surface
12	16	Paint Creek shale
16	90	Sandstone
90	95	Sandstone and limestone (contact 92')
95	110	Limestone
110	115	Limestone and shale (small opening 114-115')
115	120	Limestone and chocolate shale
120	135	Shale
135	175	Limestone
175	180	Limestone and Rosiclare sandstone
180	210	Rosiclare sandstone
210	220	Limestone
220	225	Limestone and shale
225	285	Limestone (broken at 270-275')

Hole: No. 72

Description: Churn

Location: Crystal

Elevation: 537.0

Period: June 6, 1942 to June 17, 1942

From	To	Report
0	6	Surface
6	65	Sandstone
65	70	Sandstone and limestone (contact at 67')
70	80	Limestone
80	84½	Limestone (no sample) (opening at 84½')
84½	101	Opening
101	110	Mud (no sample)
110	115	Mud and limestone
115	145	Limestone
145	155	Limestone and sandstone
155	165	Sandstone
165	170	Sandstone and shale
170	180	Sandstone
180	227	Limestone

Hole: No. 73

Description: Churn

Location: Lackey

Elevation: 546.0

Period: June 9, 1942 to June 17, 1942

From	To	Report
0	6	Surface
6	75	Sandstone
75	90	Limestone
90	100	Limestone and shale
100	105	Shale
105	110	Shale and red rock
110	115	Shale
115	150	Limestone
150	155	Limestone and sandstone
155	185	Rosiclare sandstone
185	190	Rosiclare sandstone and limestone (limestone at 187')
190	205	Limestone (small opening with weathered lime 200-205')
205	210	Limestone and shale
210	250	Limestone

Hole: No. 74

Description: Churn

Location: Austin

Elevation: 547.9

Period: June 17, 1942 to June 25, 1942

From	To	Report
0	3	Surface
3	85	Sandstone
85	90	Sandstone and limestone (top of lime at 89')
90	105	Limestone
105	110	Opening no sample recovery
110	120	Opening mud and gravel
120	135	Shale, mud and gravel
135	140	Limestone and shale
140	180	Limestone
180	210	Rosiclare sandstone
210	212 $\frac{1}{2}$	Small opening - good spar, shine of lead
212 $\frac{1}{2}$	215	One foot drilled hard; 1 $\frac{1}{2}$ opening - no sample recovery
215	220	Good spar (soft)
222	223	Limestone (hard)
223	225	Spar (soft)
225	230	Limestone (hard)
230	255	Limestone
255	257 $\frac{1}{2}$	Limestone with shine of spar
257 $\frac{1}{2}$	260	Limestone, good show spar, lead shines
260	262 $\frac{1}{2}$	Lead, zinc and spar
262 $\frac{1}{2}$	265	Heavy zinc
265	267 $\frac{1}{2}$	Light zinc and lead
267 $\frac{1}{2}$	270	Sub Rosiclare Sandstone with zinc cavings
275	285	Limestone

Hole: No. 75

Description: Churn

Location: Crystal

Elevation: 544.5

Period: June 18, 1942 to June 25, 1942

From	To	Report
0	12	Surface
12	80	Sandstone
80	95	Limestone
95	115	Limestone and shale (small opening 94-94½')
115	120	Shale
120	125	Shale and limestone
125	160	Limestone
160	165	Limestone and sandstone
165	170	Limestone
170	175	Sandstone
175	185	Sandstone and shale
185	195	Sandstone
195	200	Sandstone and limestone (contact 198')
200	235	Limestone
235	239	Limestone, calc and show spar (1' of soft drilling from 238-239)
239	241	Limestone, calc and spar cavings
241	255	Limestone (water 255-260')
255	260	Limestone, sandstone, calc and show spar
260	262½	Limestone (calc and spar cavings)
262½	265	Limestone and sandstone
265	270	Limestone

Hole: No. 76

Description: Churn

Location: Crystal

Elevation: 550.6

Period: June 26, 1942 to July 4, 1942

From	To	Report
0	9	Surface
9	85	Sandstone
85	90	Sandstone and limestone (contact at 89')
90	105	Limestone
105	110	Opening 105-107; limestone 107-110)
110	125	Limestone and shale
125	135	Shale
135	165	Limestone
165	180	Limestone and sandstone
180	205	Sandstone
205	210	Sandstone and limestone (contact at 206')
210	270	Limestone
270	275	Sandstone and limestone

Hole: No. 77

Description: Churn

Location: Crystal

Elevation: 557.3

Period: June 27, 1942 to July 6, 1942

From	To	Report
0	10	Surface
10	95	Sandstone
95	100	Sandstone and limestone (contact at 97')
100	115	Limestone
115	120	Limestone and mud (opening 118-120)
120	130	Limestone and shale
130	140	Shale
140	185	Limestone
185	190	Limestone and sandstone (top Rosiclare sandstone at 187')
190	215	Rosiclare sandstone
215	217 $\frac{1}{2}$	Sandstone and spar (good spar 216-217 $\frac{1}{2}$ )
217 $\frac{1}{2}$	220	Limestone and spar
220	222 $\frac{1}{2}$	Limestone weathered
222 $\frac{1}{2}$	235	Limestone
235	240	Limestone and shale
240	245	Shale - good show spar
245	247 $\frac{1}{2}$	Weathered limestone, good show spar
247 $\frac{1}{2}$	250	Sandy limestone - better spar
250	252 $\frac{1}{2}$	Limestone
252 $\frac{1}{2}$	265	Limestone (spar cavings)
265	267 $\frac{1}{2}$	Limestone and spar with faint trace zinc
267 $\frac{1}{2}$	275	Limestone (spar cavings)
275	285	Limestone and sandstone (spar cavings)

Hole: No. 78

Description: Churn

Location: Crystal

Elevation: 568.4

Period: July 7, 1942 to July 16, 1942

From	To	Report
0	11	Surface
11	80	Sandstone
80	85	Sandstone and limestone (contact at 84')
85	100	Limestone
100	105	Limestone and shale
105	110	Limestone
110	120	Limestone and shale
120	125	Shale
125	135	Shale and limestone
135	160	Limestone
160	170	Limestone and sandstone
170	195	Sandstone
195	200	Sandstone and limestone (contact at 198')
200	265	Limestone
265	275	Limestone and sandstone

Hole: No. 79

Description: Churn

Location: Crystal

Elevation: 567.3

Period: July 10, 1942 to July 17, 1942

From	To	Report
0	14	Surface
14	20	Red sandstone
20	95	Sandstone
95	100	Sandstone and limestone (top of limestone at 98')
100	105	Limestone
105	115	Limestone, crevice, clay and mud
115	120	Limestone and shale
120	140	Shale
140	145	Limestone and shale
145	170	Limestone
170	185	Limestone (sandy)
185	190	Limestone and Rosiclare sandstone (Rosiclare at 188')
190	210	Rosiclare sandstone
210	214	Rosiclare sandstone, opening 212-214 trace spar
214	222 $\frac{1}{2}$	Rosiclare sandstone, good show spar
222 $\frac{1}{2}$	225	Limestone with trace of spar
225	270	Limestone
270	275	Limestone (sandy)
275	280	Limestone
280	285	Sub Rosiclare sandstone
285	290	Sub Rosiclare sandstone and limestone

Hole: No. 80

Description: Churn

Location: Crystal

Elevation: 554.8

Period: July 17, 1942 to July 23, 1942

From	To	Report
0	6	Surface
6	65	Sandstone
65	70	Sandstone and limestone (contact at 67')
70	85	Limestone
85	95	Limestone and shale
95	100	Shale
100	105	Shale and limestone
105	110	Shale
110	115	Shale and limestone
115	150	Limestone
150	160	Limestone and sandstone
160	180	Sandstone
180	185	Sandstone and limestone (contact at 181')
185	210	Limestone

Hole: No. 81

Description: Churn

Location: Crystal

Elevation: 572.4

Period: July 20, 1942 to July 29, 1942

From	To	Report
0	16	Surface
16	95	Sandstone (opening 48' - 53')
95	100	Sandstone and limestone (top of limestone 96')
100	120	Limestone
120	125	Limestone and shale
125	140	Shale
140	180	Limestone (small opening 169' - 170')
180	185	Limestone (sandy)
185	215	Posiclare sandstone (top contacted at 186')
215	220	Limestone
220	222½	Limestone and shale break
222½	225	Limestone
225	280	Limestone
280	285	Limestone and sandstone

Hole: No. 82

Description: Churn

Location: Crystal

Elevation: 569.8

Period: July 27, 1942 to August 1, 1942

From	To	Report
0	12	Surface
12	16	Shale and sandstone
16	80	Sandstone
80	85	Sandstone and limestone (contact at 84')
85	90	Limestone
90	95	Limestone and shale
95	100	Limestone
100	110	Limestone and shale
110	125	Shale
125	140	Shale and limestone
140	170	Limestone
170	185	Sandstone
185	190	Sandstone and shale
190	200	Sandstone
200	205	Sandstone and limestone (contact at 204')
205	240	Limestone
240	245	Limestone, calc with faint trace of spar
245	250	Limestone and calc
250	265	Limestone
265	270	Limestone and Sub Rosiclare sandstone
270	275	Limestone

Hole: No. 83

Description: Churn

Location: Crystal

Elevation: 572.4

Period: July 30, 1942 to August 8, 1942

From	To	Report
0	14	Surface
14	90	Sandstone
90	100	Opening crevice clay and mud (lime contact at 98')
100	110	Crevice
110	120	Limestone and shale
120	135	Shale
135	185	Limestone
185	190	Limestone and Rosiclare Sandstone (contact at 187')
190	210	Rosiclare Sandstone
210	215	Rosiclare Sandstone and Limestone
215	245	Limestone
245	246	Crevice
246	247 $\frac{1}{2}$	Limestone crevice
247 $\frac{1}{2}$	260	Limestone
260	265	Limestone and shale
265	275	Limestone
275	280	Limestone and Sub Rosiclare Sandstone

Hole: No. 84

Description: Churn

Location: Crystal

Elevation: 574.5

Period: August 6, 1942 to August 14, 1942

From	To	Report
0	16	Surface
16	90	Sandstone
90	95	Sandstone and limestone (contact at 91')
95	100	Limestone
100	111	Opening
111	115	Limestone and mud (no sample)
115	120	Mud
120	125	Mud, limestone and shale
125	135	Limestone and shale
135	170	Limestone
170	180	Limestone and sandstone
180	210	Sandstone
210	215	Sandstone and limestone (contact at 211')
215	275	Limestone
275	280	Limestone and sandstone

Hole: No. 85

Description: Churn

Location: Crystal

Elevation: 525.1

Period: August 10, 1942 to August 19, 1942

From	To	Report
0	10	Surface
10	20	Sandstone and shale
20	65	Sandstone (opening 52-55')
65	70	Sandstone and limestone (contact at 68')
70	80	Limestone
80	95	Limestone and shale
95	110	Shale
110	120	Shale and limestone
120	145	Limestone
145	155	Sandy limestone
155	160	Limestone and Rosiclare Sandstone (contact at 157')
160	185	Rosiclare sandstone (small opening 183-184')
185	187 $\frac{1}{2}$	Limestone broken (bottom Rosiclare at 185')
187 $\frac{1}{2}$	190	Limestone
190	197 $\frac{1}{2}$	Limestone broken and weathered (traces spar 190-195)
197 $\frac{1}{2}$	215	Limestone
215	220	Limestone, sandstone and spar (show spar 219-220)
220	222 $\frac{1}{2}$	Limestone with traces spar
222 $\frac{1}{2}$	235	Limestone
235	245	Limestone (sandy)
245	255	Limestone

Hole: No. 86

Description: Churn

Location: Crystal

Elevation: 574.9

Period: August 15, 1942 to August 22, 1942

From	To	Report
0	14	Surface
14	90	Sandstone
90	95	Sandstone and limestone (contact 93')
95	110	Limestone
110	120	Limestone and shale
120	125	Shale
125	130	Shale and limestone
130	135	Shale
135	180	Limestone
180	210	Sandstone
210	270	Limestone
270	275	Limestone and sandstone

Hole: No. 87

Description: Churn

Location: Crystal

Elevation: 516.3

Period: August 20, 1942 to August 28, 1942

From	To	Report
0	8	Surface
8	20	Sandstone, clay and shale
20	65	Sandstone
65	70	Sandstone and limestone (contact at 66')
70	90	Limestone
90	100	Limestone and shale
100	115	Shale
115	155	Limestone
155	160	Limestone and Rosiclare sandstone (contact at 157')
160	180	Rosiclare Sandstone
180	195	Limestone
195	205	Limestone (weathered)
205	230	Limestone
230	235	Limestone (sandy)
235	250	Limestone

Hole: No. 88

Description: Churn

Location: Crystal

Elevation: 448.6

Period: August 30, 1942 to September 8, 1942

From	To	Report
0	4	Surface
4	25	Sandstone
25	40	Sandstone and shale
40	70	Sandstone (opening 68-68½ -- water)
70	75	Limestone (contact at 70')
75	80	Weathered limestone, opening
80	85	Weathered limestone
85	95	Limestone
95	105	Limestone and shale
105	110	Shale
110	115	Limestone and shale
115	155	Limestone
155	160	Limestone and sandstone
160	180	Sandstone <i>Roz</i>
180	190	Sandstone and faint trace of spar
190	195	Sandstone and show spar <i>Roz</i>
195	197½	Sandstone, limestone, spar, show zinc, trace lead
197½	207½	Limestone, spar, show zinc, trace lead. (In runs 202½-205 and 205-207½ sand cavings, probably some ore cavings. Small opening 206-206½, lost part of water and most of sample)
207½	220	Limestone (sandstone, spar, zinc and lead cavings)
220	225	Limestone, spar, zinc and show lead
225	227½	Limestone, zinc, and show spar and lead
227½	230	Limestone, show zinc, spar and lead
230	255	Limestone (spar and zinc cavings)
255	260	Limestone, show zinc, spar and lead
260	265	Limestone, sandstone, zinc, spar and show of lead
265	270	Limestone (zinc, spar and lead cavings)

Hole: No. 89

Description: Churn

Location: Crystal

Elevation: 411.2

Period: September 4, 1942 to September 14, 1942

From	To	Report
0	14	Surface
14	30	Boulders and mud crevice
30	43	Limestone
43	55	Mud cave
55	60	Limestone and Rosiclare sandstone
60	75	Rosiclare Sandstone
75	80	Rosiclare sandstone and limestone (bottom Rosiclare 76')
80	82½	Limestone and show of spar
82½	102½	Limestone
102½	107½	Limestone and shale
107½	140	Limestone
140	142½	Limestone and sandstone
142½	147½	Limestone

Hole: No. 90

Description: Churn

Location: Crystal

Elevation: 411.7

Period: September 10, 1942 to September 17, 1942

From	To	Report
0	5	Surface
5	35	Sandstone
35	40	Sandstone and limestone, show of spar (contact at 38')
40	55	Limestone
55	70	Limestone and shale
70	80	Shale
80	85	Shale and limestone
85	115	Limestone
115	120	Limestone and sandstone
120	155	Sandstone
155	160	Sandstone and lime, show spar (contact 159')
160	210	Limestone (water at 175-180')
210	220	Limestone and sandstone, faint trace spar
220	230	Limestone
230	234	Limestone, show spar
234	236	Limestone, trace spar
236	238	Limestone

Hole: No. 91

Description: Churn

Location: Crystal

Elevation: 392.9

Period: September 14, 1942 to September 17, 1942

From	To	Report
0	13	Surface
13	30	Boulders and mud
30	35	Limestone and sandstone (Rosiclare Sandstone at 34')
35	57½	Rosiclare sandstone (weathered 50-57½')
57½	60	Rosiclare sandstone and limestone (contact at 59')
60	62½	Limestone and spar 60-61½'
62½	85	Limestone (trace of spar 67½-70')
85	89	Mud cave
89	92½	Limestone crevices
92½	95	Limestone crevices and mud cavings

Hole: No. 92

Description: Churn

Location: Crystal

Elevation: 397.7

Period: September 19, 1942 to September 26, 1942

From	To	Report
0	8	Surface
8	16	Mud, gravel and water
16	25	Sandstone
25	30	Sandstone and spar
30	45	Limestone
45	50	Limestone and shale
50	55	Limestone
55	60	Limestone and shale
60	70	Shale and water
70	80	Shale and limestone
80	110	Limestone
110	115	Limestone and sandstone
115	140	Sandstone
140	145	Sandstone, trace spar and chert
145	147 $\frac{1}{2}$	Sandstone, trace lead and chert
147 $\frac{1}{2}$	150	Sandstone, trace zinc, lead and chert
150	152 $\frac{1}{2}$	Sandstone, limestone and trace zinc and lead
152 $\frac{1}{2}$	155	Limestone and spar
155	160	Limestone and spar, trace lead
160	162 $\frac{1}{2}$	Limestone (spar cavings)
162 $\frac{1}{2}$	200	Limestone
200	205	Limestone and sandstone
205	230	Limestone

Hole: No. 93

Description: Churn

Location: Crystal

Elevation: 400.4

Period: September 22, 1942 to September 28, 1942

From	To	Report
0	8	Surface
8	20	Boulders and mud
20	30	Boulders, crevices and mud
30	35	Boulders and mud
35	40	Limestone and mud
40	45	Limestone and sandstone (contact at 44')
45	70	Rosiclare Sandstone
70	75	Rosiclare sandstone and limestone (contact 74')
75	135	Limestone (weathered 100' - 107½')
135	140	Sandy limestone
140	145	Limestone and sandstone

Hole: No. 94

Description: Churn

Location: Crystal

Elevation: 416.0

Period: September 28, 1942 to October 3, 1942

From	To	Report
0	6	Surface
6	15	Sandstone and shale
15	40	Sandstone
40	45	Sandstone, limestone and show spar (contact at 41')
45	55	Limestone
55	60	Limestone and shale
60	65	Limestone
65	75	Limestone and shale, water
75	85	Shale
85	90	Limestone
90	95	Limestone and shale
95	120	Limestone
120	130	Limestone and sandstone
130	140	Sandstone
140	145	Sandstone and chert
145	155	Sandstone, chert and pyrite
155	160	Sandstone, show of spar and pyrite
160	162 $\frac{1}{2}$	Sandstone and show of spar and pyrite
162 $\frac{1}{2}$	165	Sandstone, limestone, spar, show zinc, trace lead (limestone contact at 163 $\frac{1}{2}$ ' )
165	167 $\frac{1}{2}$	Limestone, spar and trace of zinc and lead
167 $\frac{1}{2}$	169	Limestone, spar, zinc and show lead (opening 168-168 $\frac{1}{2}$ ' with water)
169	172	Limestone, spar, zinc, with trace of lead
172	175	Limestone, show spar and zinc
175	185	Limestone (spar and zinc cavings)
185	197 $\frac{1}{2}$	Limestone, spar, zinc and lead (3 feet of ore in run 185-190')
197 $\frac{1}{2}$	200	Limestone (spar, zinc, lead - some cavings)
200	215	Limestone (spar, zinc and lead cavings)
215	225	Limestone and sandstone (spar, zinc and lead cavings)
225	230	Sandstone, spar, zinc and lead
230	232 $\frac{1}{2}$	Sandstone, limestone, spar, zinc, lead and chert
232 $\frac{1}{2}$	235	Limestone, spar, zinc and lead (not so good)
235	240	Limestone (spar, zinc and lead cavings)

Hole: No. 95

Description: Churn

Location: Crystal

Elevation: 503.1

Period: September 30, 1942 to October 7, 1942

From	To	Report
0	3	Surface
3	50	Sandstone
50	70	Limestone (contact at 50')
70	85	Limestone and shale
85	95	Shale
95	100	Shale and limestone
100	120	Limestone (weathered)
120	135	Limestone (water)
135	165	Rosiclare Sandstone (contact at 135') (Crack at 150-155')
165	170	Rosiclare sandstone and limestone (contact at 168')
170	185	Limestone (weathered 180-185')
185	200	Limestone, calc and mud seam (seam bad 185-190')
200	235	Limestone
235	245	Sub Rosiclare Sandstone

Hole: No. 96

Description: Churn

Location: Crystal

Elevation: 419.4

Period: October 6, 1942 to October 12, 1942

From	To	Report
0	5	Surface
5	20	Sandstone and shale
20	40	Sandstone (trace spar 35-40')
40	42 $\frac{1}{2}$	Sandstone, limestone, show zinc and spar (limestone contact at 41')
42 $\frac{1}{2}$	45	Limestone
45	50	Limestone and shale
50	60	Limestone
60	65	Limestone and shale
65	85	Shale
85	115	Limestone
115	130	Limestone and sandstone
130	160	Sandstone (chert at 150-155 and 155-160')
160	162 $\frac{1}{2}$	Sandstone and limestone (faint trace zinc) (contact at 162')
162 $\frac{1}{2}$	165	Limestone (faint trace of zinc)
165	175	Limestone
175	180	Limestone (faint trace spar)
180	185	Limestone
185	190	Limestone (faint trace spar and zinc)
190	215	Limestone
215	225	Limestone and sandstone
225	235	Limestone

Hole: No. 97

Description: Churn

Location: Crystal

Elevation: 600.4

Period: October 9, 1942 to October 17, 1942

From	To	Report
0	14	Surface
14	80	Sandstone
80	85	sandstone and limestone (contact at 83', opening 81-83')
85	90	Limestone
90	95	Limestone and shale
95	100	Limestone
100	105	Limestone and shale
105	115	Shale
115	125	Shale and limestone
125	170	Limestone
170	175	Limestone and Rosiclare sandstone (contact at 172')
175	200	Rosiclare sandstone
200	202 $\frac{1}{2}$	Rosiclare Sandstone (calc) (Bottomed at 202 $\frac{1}{2}$ ')
202 $\frac{1}{2}$	210	Sandstone, limestone and good show spar
210	212	Limestone with traces of spar
212 $\frac{1}{2}$	220	Limestone
220 <sup>-19</sup>	225	Limestone, spar and calc (soft from 223-225')
225 <sup>-21</sup>	230	Spar, mud and calc
230	235	Limestone, traces spar
235	270	Limestone
270	272 $\frac{1}{2}$	Opening 271-272 $\frac{1}{2}$ , no recovery
272 $\frac{1}{2}$	275	Limestone, show lead and zinc
275	277 $\frac{1}{2}$	Limestone, lead shines caving from 272 $\frac{1}{2}$
277 $\frac{1}{2}$	280	Limestone

Hole: No. 98

Description: Churn

Location: Crystal

Elevation: 396.2

Period: October 13, 1942 to October 21, 1942

From	To	Report
0	6	Surface (water)
6	21	Mud and gravel
21	30	Sandstone (water)
30	32½	Sandstone, trace spar
32½	35	Sandstone, limestone and spar (limestone contact at 34')
35	37½	Limestone and spar
37½	40	Limestone, shale and show of spar
40	45	Limestone
45	50	Limestone and shale
50	55	Limestone
55	60	Limestone and shale
60	70	Shale
70	80	Shale and limestone
80	105	Limestone
105	120	Limestone and sandstone
120	145	Sandstone
145	150	Sandstone and limestone, trace spar and lead
150	155	Limestone, show spar, trace lead
155	157½	Limestone, show spar and zinc
157½	160	Limestone, trace spar and zinc (small opening 159' - water - lost most of sample)
160	175	Limestone
175	180	Limestone, show spar
180	190	Limestone
190	200	Limestone, trace spar and zinc
200	205	Limestone
205	207½	Limestone and sandstone
207½	210	Sandstone
210	212½	Sandstone and limestone

Hole: No. 99

Description: Churn

Location: Crystal

Elevation: 597.1

Period: October 17, 1942 to November 20, 1942

From	To	Report
0	12	Surface
12	80	Sandstone
80	85	Sandstone (opening 82'-87') (contact limestone at 87')
85	90	Limestone and sandstone
90	105	Limestone
105	120	Opening - no recovery
120	130	Shale
130	135	Shale and limestone (water at 135')
135	170	Limestone
170	175	Limestone and Rosiclare sandstone (contact at 174')
175	205	Rosiclare sandstone
205	230	Limestone
230	235	Limestone and shale
235	270	Limestone

Hole: No. 100

Description: Churn

Location: Crystal

Elevation: 395.1

Period: October 23, 1942 to October 23, 1942

From	To	Report
0	6	Surface (water)
6	18½	Mud and gravel
18½	27½	Sandstone, very soft (cavings)
27½	30	Sandstone with trace spar
30	34	Sandstone and spar
34	37½	Sandstone, shale and spar
37½	42½	Sandstone, shale and mud
		Lime continued at 42½'

*Rev only*