

INTERVAL SHEET

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VDMR WELL NO. W 688

Date: 8/6/62

Sample Interval: from 93 to 481

PROP: Vetter

Total Depth 481

COMP: Tri-State Pb-Zn

Oil Gas Water Exploratory x

COUNTY: Rockingham

Cuttings Core x Other

From-To	From-To	From-To	From-To	From-To
93.5 - 93.8	142.0 - 142.2	179.4 - 179.6	206.3 - 206.5	238.5 - 238.7
94.5 - 94.7	142.7 - 142.8	179.7 - 179.9	208.1 - 208.3	239.2 - 239.4
98.5 - 98.8	143.5 - 143.7	180.3 - 180.5	209.0 - 209.2	242.1 - 242.4
98.8 - 99.0	146.2 - 146.4	180.6 - 180.8	209.2 - 209.4	242.4 - 242.6
100.7 - 101.0	146.5 - 146.7	182.0 - 182.2	209.5 - 209.7	242.8 - 242.9
102 - 102.2	147.1 - 147.4	185.2 - 185.5	210.5 - 210.8	242.9 - 243.0
102.9 - 103.0	147.4 - 147.7	185.8 - 186.0	212.0 - 212.2	243.2 - 243.4
106.0 - 106.2	147.7 - 148.0	186.5 - 186.7	213.3 - 213.5	244.1 - 244.4
108.0 - 108.1	148.5 - 148.8	186.8 - 187.1	217.0 - 217.2	247.3 - 247.5
109.8 - 110.0	151.2 - 151.4	187.4 - 187.6	217.4 - 217.6	247.6 - 247.7
111.0 - 111.5	151.9 - 152.2	188.1 - 188.3	218.7 - 219.0	248.2 - 248.4
111.8 - 112.1	152.8 - 153.1	188.9 - 189.2	219.2 - 219.5	249.0 - 249.3
113.0 - 113.2	153.5 - 153.8	189.6 - 189.8	219.9 - 220.1	249.6 - 249.7
114.2 - 114.4	154.2 - 154.5	191.5 - 191.7	220.5 - 220.7	250.0 - 250.2
115.7 - 116.0	154.9 - 155.1	192.3 - 192.5	221.3 - 221.5	251.6 - 256.9
118.0 - 118.2	157.1 - 157.4	192.7 - 192.9	223.3 - 223.5	252.0 - 252.3
121.7 - 122	160.4 - 160.7	193.8 - 194.0	224.0 - 224.2	253.3 - 253.2
124.0 - 124.2	161.3 - 161.6	194.8 - 195.0	226.8 - 227.1	253.6 - 253.9
125.5 - 125.7	161.8 - 162.1	195.0 - 195.3	228.0 - 228.3	254.3 - 254.6
127.3 - 127.5	162.4 - 162.7	197.6 - 197.9	228.7 - 229.0	255.2 - 255.5
127.9 - 128.2	165.2 - 165.5	197.9 - 198.2	229.0 - 229.2	256.4 - 256.6
128.2 - 128.5	166.7 - 166.9	198.4 - 198.6	229.5 - 229.8	257.5 - 257.6
129.4 - 129.7	169.0 - 169.3	198.8 - 199.1	231.3 - 231.6	258.1 - 258.3
129.9 - 130.2	170.0 - 170.2	200.1 - 200.3	232.1 - 232.4	258.5 - 258.7
134.5 - 134.7	171.4 - 171.7	200.5 - 200.7	232.4 - 232.7	260.1 - 260.3
136.0 - 136.3	174.4 - 174.6	200.8 - 201.0	232.8 - 232.9	211.6 - 261.9
139.0 - 139.2	175.5 - 175.7	201.1 - 201.3	233.4 - 233.6	262.9 - 263.1
-	176.7 - 176.9	201.4 - 201.7	234.7 - 234.9	263.5 - 263.8
-	177.9 - 178.1	202.6 - 202.8	235.0 - 235.3	264.5 - 264.7
141.0 - 141.2	178.9 - 179.2	205.2 - 205.5	236.2 - 236.4	267.1 - 267.3
		205.8 - 206.0		

INTERVAL SHEET

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Date 8/6/62

PROP: Vetter

COMP: Tri-State Pb-Zn

COUNTY: Rockingham

VDMR WELL NO. W 688

Sample Interval: from 93 to 481

Total Depth 481

Oil Gas Water Exploratory

Cuttings Core Other

From-To	From-To	From-To	From-To	From-To
267.5 - 267.8	311.7 - 312.0	340.2 - 340.4	373.5 - 373.7	412.6 - 412.9
268.2 - 268.4	314.2 - 314.5	341.5 - 341.7	374.2 - 374.4	413.0 - 413.2
268.6 - 268.9	315.1 - 315.4	343.9 - 344.9	374.8 - 375.0	413.4 - 413.7
269.6 - 269.9	316.3 - 316.6	345.5 - 345.7	376.7 - 376.8	417.6 - 417.9
270.7 - 271.0	317.7 - 318.0	346.5 - 346.8	377.0 - 377.1	419.5 - 419.7
271.8 - 272.0	316.7 - 317.1	347.1 - 347.4	377.4 - 377.6	422.6 - 422.8
272.5 - 272.8	318.5 - 318.7	348.4 - 348.6	377.9 - 378.0	423.7 - 423.9
272.8 - 273.0	318.7 - 318.9	349.6 - 349.7	379.9 - 380.1	426.1 - 426.3
273.2 - 273.5	318.9 - 319.2	349.9 - 350.2	381.5 - 381.7	427.0 - 427.2
-	320.6 - 320.8	350.9 - 351.2	383.0 - 383.0	428.4 - 428.6
274.2 - 274.3	320.9 - 321.2	352.5 - 352.8	386.7 - 387.0	429.0 - 429.3
274.6 - 274.8	321.2 - 321.3	353.0 - 353.1	387.1 - 387.4	432.5 - 432.8
277.2 - 277.4	321.5 - 321.7	353.7 - 353.9	388.0 - 389.5	434.0 - 434.3
377.9 - 378.2	321.8 - 322.1	355.0 - 355.3	390.0 - 390.1	435.0 - 435.2
279.0 - 279.1	323.4 - 323.6	358.1 - 358.4	391.0 - 391.2	437.5 - 437.8
281.2 - 281.5	323.6 - 324.8	359.5 - 359.8	392.1 - 392.2	437.9 - 438.1
284.0 - 284.2	326.0 - 326.2	360.2 - 360.4	393.8 - 394.1	439.3 - 439.5
290.1 - 290.3	327.6 - 327.8	362.1 - 362.4	395.0 - 395.2	440.8 - 440.9
290.5 - 290.6	329.0 - 329.3	363.4 - 363.7	395.3 - 395.4	441.8 - 442.1
293.0 - 293.2	332.8 - 333.1	364.9 - 365.0	395.8 - 396.0	443.7 - 443.9
295.0 - 299.0	333.1 - 333.3	365.3 - 365.5	396.6 - 396.8	445.0 - 445.2
299.5 - 299.8	333.5 - 333.7	365.5 - 365.7	398.0 - 398.2	447.0 - 447.2
303.2 - 303.4	334.0 - 334.3	365.8 - 366.0	400.2 - 400.5	448.6 - 448.8
305.3 - 305.6	334.7 - 334.9	367.0 - 367.2	402.2 - 402.5	449.2 - 449.5
307.3 - 307.5	335.3 - 335.5	367.4 - 367.6	404.0 - 404.2	450.0 - 450.2
308.0 - 308.3	336.4 - 336.6	368.5 - 368.7	405.7 - 405.9	451.5 - 451.7
310.6 - 310.8	337.2 - 337.5	369.1 - 369.3	406.2 - 406.4	454.5 - 454.8
-	338.4 - 338.6	369.6 - 369.9	408.5 - 408.7	456.2 - 456.5
-	338.6 - 338.8	371.6 - 371.9	409.8 - 410.0	457.2 - 457.4
311.1 - 311.3	339.0 - 339.2	372.1 - 372.4	411.0 - 411.2	457.5 - 457.8

Well: V-1
Farm: Vetter
Driller:

County: Rockingham
VDMR Well # W 688

Location: Broadway Quad.: 19,250 ft. W. of $78^{\circ}45'$ W; 13,000 ft. S. of $38^{\circ}40'$ N.,
2.4 miles S 78° W. of Timberville, 1.6 miles N. 38° W of center of
Broadway.

Elevation: Approx. 1100'

Total Depth: 481'

Started drilling:

Finished drilling:

Sample description by: E. K. Rader, Virginia Division of Mineral Resources

Reference: Herbert, Paul and Young, R. S., 1956, Sulfide Mineralization in the
Shenandoah Valley of Virginia: Virginia Div. Geol. Bull. 70, p. 32.

GEOLOGIC SUMMARY

Depth	Thickness	Formation (and remarks)
0-93	93'	samples not received Beekmantown fm.
93-481	388'	Dolomite and minor chert, highly fractured, fractures filled with white, coarse-grained dolomite. Entire core appears to be a breccia. 19 shows of zinc mineralization.

Core V-1

<u>Depth</u>	<u>Thickness</u>	<u>Description</u>
93 - 98.8	5.8	Dolomite, siliceous, dark gray, fine grained, fracture ^s filled with dolomite <u>MINERALIZATION</u> : At 94.6' fracture zone with sphalerite in white vein dolomite and pyrite disseminated in gray dolomite fragments.
98.8 - 102.2	3.4	Breccia, fragments medium gray, fine grained dolomite cemented with white coarse vein grained dolomite at 100.7' breccia fragments are dark gray, giving a somewhat mottled appearance. Finely brecciated at 101.1'. Large dolomite fragment at 101.2' to 101.7'.
102.2 - 103.5	1.3	Dolomite, siliceous, dark gray, fine grained some fracturing.
103.5 - 109	5.5	Breccia; fragments - medium to dark gray, fine grained, siliceous dolomite; with white vein dolomite. (Core recovery poor between 106 and 109). <u>MINERALIZATION</u> : Sphalerite crystals disseminated throughout, to $\frac{1}{4}$ "; pyrite at contact of gray dolomite and white dolomite.
109 - 110	1.0	Dolomite, siliceous, dark gray, fine grained.
110 - 111.5	1.5	Breccia; fragments - medium to dark gray, dense to fine grained, siliceous dolomite. (Core recovery poor). <u>MINERALIZATION</u> : Sphalerite crystals in white, coarse grained vein dolomite; pyrite at contact of white dolomite and gray dolomite.
111.5 - 113	1.5	Dolomite, siliceous, dark gray, fine grained. (Core recovery poor).
113 - 114.7	1.7	Dolomite, siliceous, mottled, fine to coarse grained; amount of dark material decreases in lower half.
114.7 - 127	12.3	Breccia; fragments - medium gray, fine grained, siliceous, dolomite cemented by white, coarse grained, siliceous dolomite; mottled 116-117; very minor white dolomite, 122.2 to 124 and 125-127.

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MINERALIZATION: Sphalerite crystals in white dolomite 121.7-122.2 and 124-125; pyrite at 118-119, and with sphalerite.

127 - 127.8	0.8	Breccia; fragments - medium to dark gray, dense dolomite cemented by white coarse grained dolomite.
127.8 - 128.2	0.4	Dolomite; dark gray, siliceous, medium grained fractured and fractures filled with fine grained pyrite which has decomposed for the most part to a black carbonaceous (?) material which soils fingers.
128.2 - 129.3	1.1	Breccia; fragments - medium to dark gray, some mottled, siliceous, fine grained dolomite; some fragments show bedding; orientation random - angular; less than 1/16" to 3".
129.3 - 129.8	0.5	Dolomite, siliceous, dark gray, fine grained; vugs of white dolomite.
129.8 - 142	12.2	Breccia; fragment of three types: medium to dark gray, siliceous, fine grained dolomite; mottled, medium to fine grained dolomite; dark gray, bedded dolomite. All three types are mixed; orientation random; size, less than 1/16" to about 4". Most of the black vein material is decomposed pyrite.
		<u>MINERALIZATION:</u> Pyrite disseminated throughout.
142 - 143.5	1.5	Dolomite, siliceous, medium to dark gray, dense; fractured; fractures filled with white dolomite. Minor brecciated zone at 142.7 to 142.8.
		<u>MINERALIZATION:</u> Pyrite in vein with white dolomite below and gray dolomite above.
143.5 - 145.5	2.0	Breccia; fragments - medium gray to black, siliceous, dense to fine grained dolomite; white, coarse grained dolomite tending to be light gray where the silica content is greatest.
		<u>MINERALIZATION:</u> Pyrite at the contact of white and gray dolomite.
145.7 - 146.5	0.8	Dolomite, siliceous, dark gray, dense.

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146.5 - 147.1	0.6	Breccia; fragments - medium gray, siliceous, fine grained dolomite; medium gray, siliceous, medium grained dolomite with black pyrite. Fragments cemented by coarse grained, white dolomite. <u>MINERALIZATION</u> : Pyrite at contact of white and gray dolomite.
147.1 - 147.4	0.3	Dolomite, siliceous, dark gray, fine grained.
147.4 - 147.7	0.3	Breccia; fragments - medium gray, fine grained, siliceous dolomite; fragments are fractured; fine brecciation at bottom, larger fragments toward top. <u>MINERALIZATION</u> : Pyrite at contact of white and gray dolomite.
147.7 - 148.1	0.4	Dolomite, siliceous, medium gray, dense to fine grained. <u>MINERALIZATION</u> : Pyrite in very narrow fractures.
148.1 - 151.2	3.1	Breccia, upper 0.3' composed of medium gray dolomite fragments cemented by white dolomite and pyrite. Fragments - medium to dark gray, siliceous, fine grained dolomite and mottled dolomite cemented by white, coarse grained dolomite. Fragments randomly orientated.
151.2 - 151.6	0.4	Dolomite, siliceous, medium gray, fine grained.
151.6 - 152.8	1.2	Breccia; fragments - medium gray, fine grained, siliceous dolomite cemented with white, coarse grained dolomite.
152.8 - 153.4	0.6	Dolomite, siliceous, medium gray, fine grained with black wavy bands of decomposed pyrite.
153.4 - 153.7	0.3	Breccia; fragments - medium gray fine grained, siliceous dolomite cemented with white coarse grained dolomite.
153.7 - 154.9	1.2	Breccia; fragments - medium gray fine grained, siliceous dolomite cemented with gray, medium grained dolomite and white coarse grained dolomite.
154.9 - 157	2.1	Breccia; fragments - medium to dark gray or black fine grained to dense, siliceous dolomite cemented with white, coarse grained dolomite. Large fragments shows bedding.

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157 - 157.6	0.6	Dolomite, siliceous, dark gray to black, dense stylolites of pyrite.
157.6 - 161.0	3.4	Breccia; fragments - medium gray, fine grained, siliceous, dolomite. Wide range in size of fragments. Cement white, coarse grained, siliceous, dolomite. Cement at 158-158.1 medium crystalline, gray dolomite.
161.0 - 161.8	0.8	Dolomite, siliceous, dark gray to black, fine grained, somewhat mottled.
161.8 - 162.1	0.3	Breccia; fragments - less than $\frac{1}{2}$ ", siliceous, medium gray, fine grained dolomite cemented with white, coarse grained dolomite and gray, medium grained dolomite.
162.1 - 163.4	1.3	Dolomite, siliceous, medium to dark gray, fine grained, fractured, minor white vein dolomite.
163.4 - 164.5	1.1	Breccia; fragments - dark gray, fine grained, siliceous, dolomite cemented with white, coarse grained, dolomite and minor gray, medium grained dolomite.
		<u>MINERALIZATION</u> : Pyrite at the contact of the white and dark gray dolomite and in the gray dolomite.
164.3 - 166.7	2.4	Dolomite, siliceous, dark gray to black, fine grained, somewhat mottled.
166.7 - 169.0	2.3	Breccia; fragments - dark gray to black, dense, siliceous dolomite cemented by white, coarse grained dolomite.
169.0 - 169.5	0.5	Dolomite, siliceous, mottled, fine grained.
169.5 - 171		Dolomite, siliceous, dark gray to black, dense, somewhat mottled near bottom.
171 - 174.4	3.4	Breccia; fragments - medium to dark gray, dense, siliceous dolomite cemented with white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Pyrite at 172.7.
174.4 - 175.5	1.1	Dolomite, siliceous, medium gray, black laminations; fine grained.
175.5 - 176.5	1.0	Dolomite, siliceous mottled, fine grained.
176.5 - 177.9	1.4	Dolomite, siliceous, medium to dark gray, fine grained.

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177.9 - 178.2	0.3	Chert, dark gray to black, dense with white coarse grained dolomite.
178.2 - 179.2	1.0	Dolomite, siliceous, medium to dark gray, fine grained, fractures and sealed with white dolomite.
179.2 - 179.6	0.4	Breccia, fragments - medium to dark gray, fine grained, siliceous dolomite cemented with white, coarse grained dolomite.
179.6 - 180.1	0.5	Dolomite, siliceous, dark gray, fine grained.
180.1 - 183.1	3.0	Breccia, fragments - medium gray to black, dense to fine grained, siliceous dolomite cemented by white, coarse grained dolomite and pyrite.
183.1 - 185.8	2.7	Dolomite, siliceous, medium gray, fine grained.
185.8 - 186.1	0.3	Breccia, fragments - medium gray, siliceous, fine grained dolomite, cemented by white, coarse grained dolomite.
186.1 - 186.8	0.7	Dolomite, siliceous, medium gray, dense with minor white, coarse grained dolomite.
186.8 - 187.4	0.6	Breccia; fragments - medium to dark gray, siliceous, fine grained to dense dolomite cemented by white, coarse grained dolomite and dark gray, medium grained dolomite.
187.4 - 188.0	0.6	Dolomite, siliceous, medium gray, fine grained to dense.
188.0 - 189.2	1.2	Breccia; fragments - medium to dark gray, siliceous, fine to medium grained, dolomite cemented by white, coarse grained dolomite and gray, medium grained dolomite. A dark gray to black, fine grained zone at 188.5' - 188.6'.
189.2 - 190.7	1.5	Dolomite, siliceous, medium gray, fine grained with a black, fine grained zone, 189.5 - 189.7 and some white, coarse grained dolomite.
190.7 - 191.7	1.0	Breccia; fragments - medium to dark gray, siliceous, fine grained, dolomite cemented by white, coarse grained dolomite and gray medium grained dolomite.
191.7 - 192.6	0.9	Dolomite, siliceous, medium gray, fine grained.

192.6 - 192.9	0.3	Breccia; fragments - medium to dark gray, siliceous, fine grained, dolomite, cemented by white, coarse grained dolomite and gray, medium grained dolomite.
192.9 - 194.4	1.5	Dolomite, siliceous, mottled, fine to medium grained.
194.4 - 195.0	0.6	Dolomite, siliceous, medium gray, fine grained.
195.0 - 196.3	1.3	Dolomite, siliceous, mottled, fine grained.
196.3 - 197.9	1.6	Dolomite, siliceous, medium to dark gray, fine grained with some minor white, coarse grained dolomite or fracture fillings.
197.9 - 198.1	0.2	Breccia; fragments - medium gray to black, siliceous, fine grained laminated dolomite cemented by gray, medium grained dolomite and white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Pyrite at contact of cement and fragments.
198.1 - 198.5	0.4	Dolomite, siliceous, dark gray to black, fine grained, with disseminated pyrite.
198.5 - 199.4	0.9	Dolomite, siliceous, medium gray, fine grained with minor white, coarse grained dolomite.
199.4 - 200.4	1.0	Breccia, fragments - light to medium gray, siliceous, fine grained dolomite cemented by white coarse grained dolomite and gray, medium grained dolomite.
200.4 - 200.8	0.4	Dolomite, siliceous, light to medium gray, dense.
200.8 - 201.0	0.2	Breccia; fragments - medium gray, siliceous, fine grained dolomite, cemented by gray, medium grained dolomite with minor white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Disseminated pyrite.
201.0 - 201.4	0.4	Dolomite, siliceous, mottled, fine grained.
201.4 - 202.4	1.0	Breccia; fragments - medium to dark gray, siliceous, fine grained dolomite cemented by dark gray, medium grained dolomite and minor white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Disseminated pyrite.
202.4 - 203.5	1.1	Dolomite, siliceous, medium gray, fine grained with some dark gray, medium grained dolomite.
203.5 - 205.8	2.3	Dolomite, siliceous, mottled, fine to medium grained.

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Small amount of white, coarse grained dolomite.

MINERALIZATION: Disseminated pyrite.

205.8 - 206.3	0.5	Dolomite, siliceous, medium gray, fine grained with a small amount of white, coarse grained dolomite.
206.3 - 206.8	0.5	Dolomite, siliceous, mottled, fine to medium grained.'
206.8 - 209.0	2.2	Dolomite, siliceous, medium to dark gray, fine grained, laminated.
209.0 - 209.2	0.2	Breccia; fragments - medium to dark gray, siliceous, dense, dolomite cemented by white, coarse grained dolomite and pyrite.

MINERALIZATION: Pyrite along fracture and contacts

209.2 - 209.5	0.3	Dolomite, siliceous, medium gray, dense.
209.5 - 210.1	0.6	Breccia; fragments - medium to dark gray, siliceous, fine grained dolomite cemented by white, coarse grained dolomite.

MINERALIZATION: Pyrite surrounding fragments.

210.1 - 210.5	0.5	Dolomite, light gray, dense, siliceous.
210.5 - 211.5	1.0	Breccia; fragments - siliceous, fine grained, medium to dark gray, mottled in lower portion, dolomite. Cement - white, coarse grained dolomite.

MINERALIZATION: Pyrite along all contacts.

211.5 - 212.3	0.8	Dolomite, siliceous, dark gray, medium grained.
212.3 - 217.2	4.9	Breccia; fragments - dolomite, siliceous, medium gray, fine grained. Cement - dark gray, medium grained dolomite. Minor white, coarse grained dolomite.
217.2 - 218.2	1.0	Dolomite, medium to dark gray, banded, siliceous.
218.2 - 219.2	1.0	Breccia; fragments - dolomite, medium gray, angular. Cement - dark gray and white dolomite.
219.2 - 219.9	0.7	Dolomite; siliceous, medium gray, dense.
219.9 - 220.5	0.6	Breccia; fragments - medium gray, dense dolomite. Cement - dark gray and white dolomite.
220.5 - 221.2	0.7	Dolomite, siliceous, medium to dark gray, banded.

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221.2 - 223.2	2.0	Dolomite, siliceous, mottled, medium to dark gray; medium gray more siliceous.
223.2 - 223.8	0.6	Breccia; fragments - medium gray, siliceous dense dolomite cemented by dark gray and white, dolomite. <u>MINERALIZATION</u> : Pyrite disseminated throughout.
223.8 - 225.3	1.5	Dolomite, mottled, dark gray dolomite has more pyrite, than medium gray dolomite, silica content higher in medium gray dolomite. <u>MINERALIZATION</u> : Disseminated pyrite.
225.3 - 227.9	2.6	Dolomite, light to medium gray,
227.9 - 228.7	0.8	Dolomite, mottled. <u>MINERALIZATION</u> : Disseminated pyrite especially in dark gray dolomite.
228.7 - 229.0	0.3	Dolomite, medium gray, dense.
229.0 - 229.2	0.2	Dolomite, mottled.
229.2 - 231.1	1.9	Dolomite, medium gray, dense. <u>MINERALIZATION</u> : Pyrite, disseminated and as fracture fillings.
231.1 - 231.7	0.6	Dolomite, mottled, dark gray, dolomite has disseminated pyrite.
231.7 - 232.4	0.7	Dolomite, medium gray, dense.
232.4 - 232.8	0.4	Dolomite, mottled; dark gray dolomite has pyrite.
232.8 - 233	0.2	Breccia; fragments - medium gray dense dolomite cemented by white, coarse grained dolomite. <u>MINERALIZATION</u> : Pyrite surrounding and replacing fragments.
233 - 233.6	0.6	Dolomite, medium gray, dense.
233.6 - 234.9	0.9	Breccia; fragments - medium gray, dense dolomite cemented by white, coarse grained dolomite. <u>MINERALIZATION</u> : Pyrite surrounding fragments.

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234.9 - 235.3	0.4	Dolomite, mottled; more pyrite in dark gray dolomite.
235.3 - 237.7	2.4	Breccia; fragments - medium gray, dense dolomite cemented by white, coarse grained dolomite and gray dolomite.
		<u>MINERALIZATION</u> : Pyrite disseminated throughout; sphalerite or small crystals at 235.9, in white dolomite.
237.7 - 242.9	5.2	Dolomite, dark gray to black, dense.
		<u>MINERALIZATION</u> : Sphalerite in white, coarse grained dolomite at 238.7', 242.1, 242.6, and 242.9. Pyrite throughout.
242.9 - 243.1	0.2	Dolomite, medium gray, dense.
243.1 - 244.1	1.0	Breccia; fragments - light to dark gray, dense, siliceous, dolomite cemented by white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Pyrite surrounding fragments and disseminated in white dolomite.
244.1 - 247.6	3.5	Dolomite, mottled, siliceous.
247.6 - 247.7	0.1	Breccia; fragments - light to dark gray, dense dolomite cemented by gray dolomite.
247.7 - 249.6	1.9	Dolomite, medium gray, fracture and with pyrite near bottom.
249.6 - 250	0.4	Chert, light to dark gray, dense.
250 - 251.1	1.1	Dolomite, medium gray, dense, siliceous.
251.1 - 252.0	0.9	Breccia; fragments - light to dark gray, dense dolomite, cemented by white, coarse grained dolomite.
252.0 - 253.2	1.2	Dolomite, mottled, medium gray to black, siliceous.
253.2 - 253.5	0.3	Breccia; fragments - light to dark gray, dense, siliceous dolomite cemented by white, coarse grained dolomite.
253.5 - 254.3	0.8	Dolomite, siliceous medium to dark gray, dense.
254.3 - 255.2	0.9	Breccia; fragments - medium to dark gray, dense siliceous dolomite, cemented by white, coarse grained dolomite.

MINERALIZATION: Pyrite disseminated in fragments and surrounding fragments.

255.2 - 256.4	1.2	Dolomite, medium gray, dense, siliceous.
256.4 - 260.0	3.6	Breccia; fragments - medium to dark gray, dense, siliceous dolomite, cemented by white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Sphalerite in white dolomite throughout breccia; pyrite surrounding dolomite fragments and in fractures.
260.0 - 261.3	1.3	Chert, light to medium gray, dense, fractured.
261.3 - 262.8	1.5	Breccia; fragments - light to medium gray, dense, siliceous dolomite cemented by white, coarse grained dolomite and gray, dolomite.
262.8 - 264.2	1.4	Dolomite, mottled, fractured with some white, coarse grained dolomite.
264.2 - 267.3	3.1	Breccia; fragments - medium to dark gray, dense, siliceous dolomite cemented by white, coarse grained and gray dolomite.
		<u>MINERALIZATION</u> : Disseminated pyrite.
267.3 - 269.6	2.3	Dolomite, light to medium gray, dense, fractured, with some white, coarse grained dolomite with pyrite in white dolomite.
269.6 - 270.4	0.8	Breccia; fragments - light to dark gray, dense, siliceous dolomite, cemented by white, coarse grained dolomite.
270.4 - 271.2	0.8	Dolomite, light gray, dense, siliceous, fractured with some white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Pyrite in white dolomite.
271.2 - 272.1	0.9	Breccia; fragments - light to medium gray, dense, siliceous, dolomite cemented white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Pyrite at contact of white and gray dolomite.
272.1 - 272.8	0.7	Dolomite, mottled, dense to fine grained; coarse grained, white vein, dolomite with pyrite at 272.5.

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272.8 - 273.2	0.4	Breccia; fragments - medium gray, siliceous, dense to fine grained dolomite, cemented by white vein dolomite. <u>MINERALIZATION</u> : Pyrite at contact of white and gray dolomite.
273.2 - 273.7	0.5	Dolomite, mottled, dense to fine grained.
273.7 - 277.9	4.2	Breccia; fragments - angular, medium gray, dense to fine grained dolomite; cement coarse grained, white dolomite and medium grained gray dolomite. <u>MINERALIZATION</u> : Pyrite along contact of cement and fragments and disseminated in vein dolomite.
277.9 - 278.4	0.5	Dolomite, siliceous, medium gray, fine-grained; lower portion fracture.
278.4 - 281.0	2.6	Breccia; fragments - light to medium gray, siliceous, angular dolomite; cemented by coarse grained, white dolomite and gray medium grained dolomite. <u>MINERALIZATION</u> : Pyrite disseminated in cement.
281.0 - 286	5.0	Breccia; fragments - mostly dark gray, fine grained, siliceous dolomite, cemented by white, coarse grained dolomite. <u>MINERALIZATION</u> : Pyrite surrounding fragments.
286 - 295	9.0	Breccia; fragments - medium gray, siliceous, dense to fine grained, dolomite cemented by white, coarse grained dolomite. (core recovery poor 292.5-295). <u>MINERALIZATION</u> : Pyrite surrounding fragments; sphalerite in white dolomite at 290.5 and 293 ±.
295 - 299	4.0	Dolomite, medium gray, siliceous, fine grained, highly fractured. (core recovery poor).
299 - 302.3	3.3	Dolomite, dark gray, siliceous, laminated, blebs of white dolomite.
302.3 - 304.8	2.5	Dolomite, dark gray, fine grained, siliceous.
304.8 - 310.6	5.8	Dolomite, mottled, medium to coarse grained, blebs of white dolomite.

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310.6 - 310.9	0.3	Dolomite, black to medium gray, laminated and mottled, medium to fine grained.
310.9 - 311.5	0.6	Dolomite, medium gray, fine grained.
311.5 - 312.4	0.9	Breccia; fragments - medium gray, fine grained dolomite, cemented by white coarse grained dolomite. (0.15' of core missing).
		<u>MINERALIZATION</u> : Sphalerite in vein dolomite.
312.4 - 314.5	2.1	Dolomite, medium to dark gray, dense to fine grained.
314.5 - 315.6	1.1	Breccia; fragments - medium gray, fine grained to dense dolomite, cemented by white and gray dolomite.
		<u>MINERALIZATION</u> : Pyrite at contact of vein dolomite and fragments.
315.6 - 316.6	1.0	Dolomite, dark gray to black, dense, with blebs of white dolomite.
316.6 - 317.2	0.6	Breccia; fragments - medium to dark gray, fine grained dolomite, cemented by white coarse grained dolomite.
		<u>MINERALIZATION</u> : Sphalerite in vein dolomite, abundant at 316.7 - 316.9.
317.2 - 318.5	1.3	Dolomite, dark gray, medium grained, fractured, filled with white dolomite.
318.5 - 318.9	0.4	Breccia; fragments - medium gray, fine grained dolomite cemented by white vein dolomite.
		<u>MINERALIZATION</u> : Sphalerite between white and gray dolomite.
318.9 - 319.7	0.8	Dolomite, dark gray, fine to medium grained, siliceous.
319.7 - 320.8	1.1	Dolomite, mottled, fine grained.
320.8 - 321.2	0.4	Breccia; fragments - medium gray, fine grained dolomite, cemented by white vein dolomite and gray medium grained dolomite.

MINERALIZATION: Pyrite disseminated throughout.

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321.2 - 321.5	0.3	Dolomite, medium to dark gray, fine grained, siliceous.
321.5 - 321.8	0.3	Breccia; fragments, gray dolomite in white vein dolomite.
		<u>MINERALIZATION</u> : Sphalerite in white dolomite
321.8 - 323.3	1.5	Dolomite, medium to dark gray, fracture, fine grained, small amount of pyrite in fractures.
323.3 - 323.6	0.3	Breccia; fragments - medium gray, fine grained dolomite cemented by white vein dolomite and gray, medium grained dolomite.
		<u>MINERALIZATION</u> : Pyrite at fragment - cement contact.
323.6 - 327.6	4.0	Dolomite, medium to dark gray, fine to medium grained; laminated, blebs of white dolomite; fractured, especially at 326.5.
327.6 - 332.1	4.5	Dolomite, mottled, fine to medium grained, fractured, filled with white dolomite, with minor disseminated pyrite.
332.1 - 333.1	1.0	Dolomite, siliceous, fine grained, medium gray; fractured, filled with white dolomite.
333.1 - 333.5	0.4	Breccia; fragments - medium gray, fine grained dolomite cemented by white vein dolomite.
333.5 - 333.9	0.4	Dolomite, medium to light gray, dense to fine grained, siliceous.
333.9 - 334.5	0.6	Dolomite, dark gray, dense to fine grained, siliceous.
334.5 - 337.1	2.6	Dolomite, dark gray to black, laminated, fine grained, gray dolomite cement.
337.1 - 338.0	0.9	Breccia; fragments - medium gray, medium grained dolomite cemented by medium to coarse grained dolomite and minor white dolomite.
338.0 - 338.6	0.6	Dolomite, light to medium gray, dense, siliceous.
338.6 - 339.0	0.4	Breccia; fragments - medium gray, fine grained dolomite cemented by white dolomite.

MINERALIZATION: Pyrite in white dolomite.

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339 - 340	1.0	Dolomite, medium to dark gray, dense, siliceous.
240 - 240.5	0.5	Breccia; fragments - dark gray, dense, siliceous dolomite cemented by white, coarse grained dolomite.
340.5 - 343.9	3.4	Dolomite, medium gray, dense to fine grained, fractures, with white, coarse grained dolomite.
343.9 - 344.9	1.0	Breccia; fragments - medium gray, dense, siliceous dolomite cemented by white, coarse grained dolomite. <u>MINERALIZATION</u> : Sphalerite in white dolomite.
344.9 - 346.4	1.5	Dolomite, mottled, fine to medium grained, siliceous.
346.4 - 346.8	0.4	Breccia; fragments - medium to dark gray, fine grained, angular dolomite, cemented by white coarse grained dolomite.
346.8 - 348.2	1.4	Dolomite, mottled, fine grained to dense, siliceous.
348.2 - 349.9	1.7	Dolomite, medium gray, dense to fine grained, fractured at top, with coarse grained, white dolomite, a large vein of white dolomite near bottom with sphalerite.
349.9 - 350.8	0.9	Dolomite, mottled, fine to medium grained, siliceous.
350.8 - 351.4	0.6	Dolomite, medium gray, fine grained to dense, fractured, with white, coarse grained dolomite. <u>MINERALIZATION</u> : Pyrite at white - gray dolomite contact.
351.4 - 352.9	1.5	Breccia; fragments, fine grained, siliceous dolomite cemented by white and gray medium grained dolomite. <u>MINERALIZATION</u> : Sphalerite in white dolomite; Pyrite disseminated throughout.
252.9 - 353.2	0.3	Dolomite, medium gray, fine grained to dense siliceous.
353.2 - 354.2	1.0	Breccia; fragments - medium to dark gray, fine to medium grained dolomite cemented by white, coarse grained dolomite. <u>MINERALIZATION</u> : Sphalerite disseminated in white dolomite.

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354.2 - 357.7	3.5	Dolomite, mottled, fine to medium grained, fractured in lower portion, with minor white, coarse grained dolomite.
357.7 - 359.5	1.8	Dolomite, medium gray to black, laminated, fractured with white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Sphalerite in white dolomite; Pyrite at contact of white and gray dolomite.
359.5 - 360.2	0.7	Dolomite, mottled, fine to medium grained, fractured, with minor white, coarse grained dolomite
360.2 - 361.0	0.8	Dolomite, medium to light gray, fine grained to dense, fractured, minor white dolomite.
361 - 362.1	1.1=	Dolomite, mottled, fine to medium grained, very dark gray to black.
362.1 - 363.4	1.3	Breccia; fragments - angular, fine grained, medium gray dolomite cemented by white, coarse grained dolomite.
		<u>MINERALIZATION</u> : Pyrite at the contact between the gray and white dolomite.
363.4 - 364.2	0.8	Dolomite, mottled (light to dark gray), fine grained, to dense, siliceous, fractured in lower portion, with white vein dolomite.
364.2 - 365.2	1.0	Dolomite, dark gray to black, fine to medium grained, fractured, with white vein dolomite.
365.2 - 365.5	0.3	Breccia; fragments - medium to dark gray, fine grained, dolomite cemented by white vein dolomite.
		<u>MINERALIZATION</u> : Pyrite at contact of white and gray dolomite.
365.5 - 365.8	0.3	Dolomite, dark gray, medium to fine grained.
365.8 - 366.9	1.1	Dolomite, light to medium gray, dense.
366.9 - 367.4	0.5	Breccia; fragments - light to medium gray, dense dolomite cemented by white, coarse grained dolomite.
367.4 - 368.1	0.7	Dolomite, medium gray to black, laminated, fine grained, fractured with some pyrite and white dolomite.

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368.1 - 369.1	1.0	Dolomite, dark gray to black, fine to medium grained, fractured, with minor white dolomite.
369.1 - 369.6	0.5	Dolomite, medium gray to black, laminated fine grained, fractured with some pyrite and white dolomite.
369.6 - 371.0	1.4	Dolomite, medium gray, fine to medium grained, fractured, with white vein dolomite.
371 - 371.9	0.9	Breccia; fragments - medium gray dolomite, cemented by white vein dolomite.
		<u>MINERALIZATION</u> : Sphalerite at 371.6, in white dolomite.
371.9 - 373.2	1.3	Dolomite, light to medium gray, dense, fractured.
373.2 - 373.5	0.3	Breccia; fragments - medium to dark gray, dolomite cemented by white dolomite.
373.5 - 374.2	0.7	Dolomite, medium to dark gray, laminated, fractured.
374.2 - 374.8	0.6	Breccia; fragments - medium gray, fine grained dolomite cemented by gray dolomite and white dolomite.
374.8 - 376.5	1.7	Dolomite, light to medium gray, dense, fractured near bottom, with white vein dolomite.
376.5 - 377.3	0.8	Breccia; fragments - medium to dark gray, dense to fine grained dolomite cemented by white, coarse grained dolomite and gray medium and grained dolomite.
377.3 - 377.8	0.5	Dolomite, mottled, wavy color bands, fine grained.
377.8 - 378.5	0.7	Dolomite, fine grained, black to dark gray.
378.5 - 382.5	4.0	Breccia; fragments - medium to dark gray, fine grained dolomite cemented by white, coarse grained dolomite.
382.5 - 385.5	3.0	Breccia; fragments - same as above; cement dark gray to black, fine grained dolomite.
385.5 - 387	1.5	Dolomite, medium gray, fine grained.
387 - 388	1.0	Breccia; fragments - dense, light to medium gray dolomite cemented by dark gray dolomite.
388 - 389.5	1.5	Dolomite, medium gray, dense.
389.5 - 390.6	1.1	Dolomite, dark gray, fine grained fractured.
390.6 - 392.0	1.4	Breccia; fragments - dark gray, medium grained dolomite cemented by coarse grained, white dolomite.

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392 - 394.5	2.5	Dolomite, mottled, medium grained, fractured, with white dolomite.
394.5 - 395.5	1.0	Dolomite, dense, medium to light gray, fractured, (core recovery poor).
395.5 - 396.1	0.6	Dolomite, dark gray, fine grained.
396.1 - 397.1	1.0	Breccia; fragments, dark gray, fine grained dolomite cemented by white, coarse grained dolomite.
397.1 - 400.	2.9	Dolomite, dark gray to black, fine grained.
400 - 401.5	1.5	Breccia; fragments - dark gray, fine grained dolomite cemented by white, coarse-grained dolomite.
<u>MINERALIZATION</u> : Sphalerite in white dolomite.		
401.5 - 403	1.5	Dolomite, dark gray to black, fine grained, fractured.
403 - 405.5	2.5	Breccia; fragments - light to dark gray, dense to fine grained dolomite cemented by white, coarse grained dolomite.
405.5 - 406.1	0.6	Dolomite, mottled, dense to medium grained.
406.1 - 407.5	1.4	Breccia; fragments - medium gray, dense dolomite cemented by dark gray to black, fine grained dolomite.
407.5 - 409.5	2.0	Dolomite, dark gray to black, fine grained. (Core recovery poor).
409.5 - 410.9	1.4	Dolomite, medium gray, fine grained, fractured, with white, coarse grained dolomite.
410.9 - 412.5	1.6	Dolomite, dark gray to black, fine grained.
412.5 - 412.9	0.4	Breccia; fragments - dark gray to black, fine grained, dolomite cemented by white, coarse grained dolomite.
412.9 - 413.2	0.3	Dolomite, medium gray, dense, siliceous.
413.2 - 415.5	2.3	Breccia; fragments - medium gray, dense dolomite cemented by white, coarse grained and dark gray medium grained dolomite.
415.5 - 418	2.5	Dolomite, mottled, (medium gray to black), dense to fine grained, fractured, with white, coarse grained dolomite at 417'.

418 - 422.3	4.3	Dolomite, light to medium gray, dense, siliceous.
422.3 - 423.7	1.4	Dolomite, medium gray, fine grained, fractured.
423.7 - 424.9	1.2	Breccia; fragments - medium to dark gray, fine grained dolomite cemented by white, coarse grained dolomite.
424.9 - 426.5	1.6	Breccia; fragments - medium gray, dense dolomite cemented by black to dark gray, medium grained dolomite, somewhat mottled.
426.5 - 427.5	1.0	Dolomite, dark gray to black, fine grained, (core recovery poor).
427.5 - 428.7	1.2	Breccia; fragments - medium to dark gray, fine grained dolomite cemented by white, coarse grained dolomite.
428.7 - 431.7	3.0	Dolomite, dark gray to black, fine to medium grained, siliceous.
431.7 - 433.7	2.0	Breccia; fragments - medium to dark gray, fine grained, dolomite cemented by white, coarse grained dolomite and a minor amount of medium grained, gray dolomite.
433.7 - 434.4	0.7	Breccia; fragments - medium to dark gray, fine grained dolomite cemented by medium grained gray dolomite.
434.4 - 436.5	2.1	Dolomite, dark gray to black, fine grained to dense, siliceous.
436.5 - 437.9	1.4	Breccia; fragments - medium to dark gray, fine to medium grained dolomite cemented by white, coarse grained dolomite and some gray dolomite.
437.9 - 439.3	1.4	Dolomite, light to medium gray, fine grained.
439.3 - 440.8	1.5	Dolomite, dark gray to black, fine grained.
440.8 - 441.5	0.7	Dolomite, mottled, fine to medium grained.
441.5 - 442.5	1.0	Dolomite, light to medium gray, dense.
442.5 - 447	4.5	Breccia; fragments - medium to dark gray, dense to fine grained dolomite, cemented by white, coarse grained and gray, medium grained dolomite.

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447 - 448.1	1.1	Dolomite, dark gray to black, fine grained.
448.1 - 448.8	0.7	Breccia; fragments - medium gray, fine grained dolomite cemented by white, coarse grained dolomite.
448.8 - 449.5	0.7	Dolomite, mottled, siliceous, dense to fine grained.
449.5 - 450.5	1.0	Dolomite, medium gray, dense.
450.5 - 454.4	3.9	Breccia; fragments - medium to dark gray, dense to fine grained dolomite cemented by white, coarse grained dolomite.
454.4 - 458.8	1.4	Dolomite, medium gray, fine grained.
455.8 - 456.5	0.7	Breccia; fragments - dark gray dolomite cemented by white vein dolomite.
456.5 - 457.5	1.0	Dolomite, mottled, fine grained.
457.5 - 458.2	0.7	Breccia; fragments - medium to dark gray, fine grained dolomite cemented by white, coarse grained dolomite.
458.2 - 460.2	2.0	Dolomite, light to dark gray, dense, laminated, fractured.
<u>MINERALIZATION</u> : Sphalerite crystal at 460'.		
460.2 - 461.3	1.1	Breccia; fragments - medium to dark gray dolomite cemented by white vein dolomite.
461.3 - 463	1.7	Dolomite, light to medium gray, dense, (core recovery poor).
463 - 467.5	4.5	Breccia; fragments - medium gray, fine grained dolomite cemented by white vein dolomite.
467.5 - 469	1.5	Chert, light gray to "white" with minor gray dolomite.
469 - 470.5	1.5	Dolomite, siliceous, medium gray, fractured.
470.5 - 473	2.5	Dolomite, dark gray to black, fine grained, (core recovery poor).
473 - 478	5.0	Dolomite, medium to light gray, dense to fine grained, white dolomite blebs, fractured.
478 - 478.5	0.5	Dolomite, dark gray to black, fine grained.
478.5 - 481	2.5	Dolomite, mottled, fracture, fine to medium grained.

CORE V-1
Beekmantown Formation

BOX NO. 1
(93-110)

THICKNESS	DESCRIPTION
1.4'	Dolomite, dark-gray, dense, minute fractures filled with dolomite.
0.4'	Vein zone, dense dolomite with vein dolomite (white), coarse grained, sphalerite & pyrite crystals in veins.
1.1'	Dolomite, dark-gray, dense, minute fractures filled with dolomite. *Dolomite vein type 0.05' at bottom segment.
2.9'	Dolomite, dark gray, dense, well fractured (no vein material as sealer) Pyrite, disseminated.
10.2'	Dolomite -(Chatter breccia zone) dark gray, fine grained black carbonaceous layer at very top. Various angular fragments, vein type & recrystalline dolomite, sphalerite, pyrite along edges of veins.
1.0'	Dolomite, dark-gray, fine grained, minor patches of vein dolomite.

BOX NO. 2
(110-127)

1.6'	Dolomite, Chatter breccia zone, pyrite, sphalerite, carbonaceous material.
3.4'	Dolomite, dark gray, dense, minute fractures filled with dolomite.
1.0'	Dolomite, Chatter breccia zone, dolomite, medium gray.
1.0'	Dolomite, dark-gray, dense, carbonaceous material *Some areas appear to be recrystalline.
4.8'	Dolomite, Chatter zone, recrystalline and carbonaceous types in places. *Towards lower portion of segment sphalerite quite pronounced in vein dolomite.
0.7'	Dolomite, dark gray, dense, minor fractures.
2.7'	Dolomite, Chatter breccia zone, fragment appears similar to enclosing material, sphalerite.
1.8'	Dolomite, dark gray, dense & recrystallized zones & some vein dolomite.

BOX NO. 3
(127-142)

- 0.7' Dolomite, Chatter breccia zone, pebbles recrystalline dolomite.
- 0.4' Dolomite, dark-gray, recrystalized zone.
- 1.2' Dolomite, Chatter breccia zone, pebbles are carbonaceous recrystalline & dense type dolomite, angular (no metallic minerals)
- 0.7' Dolomite, dark gray, dense, minor vein type dolomite.
- 12.0' Dolomite, Chatter breccia zone, recrystalline areas, carbonaceous vein types, in some areas vein types relatively absent.

BOX NO. 4
(143-156)

- 1.5' Dolomite, dark gray, dense, vein type fractures & areas, 1 minor breccia pocket.
- 2.1' Dolomite, Chatter breccia zone, pyrite.
- 0.9' Dolomite, dark, gray, dense.
- (9.5)
10.5'
(1.0') Dolomite, Chatter breccia zone, with some areas 0.2-0.6' of dense dark-gray dolomite, pyrite.

BOX NO. 5
(156-171)

- 0.6' Dolomite, dark-gray dense, in center 0.3' Chatter breccia zone.
- 3.4' Dolomite, Chatter breccia, bottom of segment grades into dense dolomite.
- 2.2' Dolomite, dark-gray, dense, minor vein type, small Chatter breccia zone in middle 0.3'
- 1.5' Dolomite, Chatter breccia zone.
- 1.8' Dolomite, dark-gray, dense, with veins.
- 2.9' Dolomite, Chatter breccia zone, pyrite, with mottled carbonaceous zone 0.3'.
- 1.9' Dolomite, dark gray, fine grained, dense, mottled, with some fracture veins.

BOX NO. 6
(171-185)

- 2.7' Dolomite, Chatter breccia zone, typical.
*Pyrite, large amount in this zone, occurred in breccia and as cement in small veins.
*Minor areas of fine, dense, gray dolomite.

- 2.9' Dolomite, med-dark gray, fine-grained, some vein material & mottled appearance, carbonaceous material, bedding at approximately 30° from horizontal.
*Minor zones & pockets brecciated & recrystalline material.
- 5.0' Dolomite, Chatter breccia zone, large amounts of recrystalline dolomite at top & 0.5' zone in middle, pyrite in small amounts & with carbonaceous material cementing veins.
- (3.4') Dolomite, dark gray, dense, small breccia zone 0.5' mottled areas & carbonaceous bands, approximately 30° from horizontal.
- 3.5'
- BOX NO. 7
(185-199)
- 7.3' Dolomite, Chatter breccia zone, dense dolomite areas up to 0.5', pyrite.
- 3.0' Dolomite, dark-gray, dense, mottled appearance, carbonaceous banding, vein type dolomite, in fractures.
- 1.7' Dolomite, Chatter breccia type.
- 1.9' Dolomite, dark gray, dense, with areas of carbonaceous dolomite, recrystalline, minor breccia, 0.2'.
- BOX NO. 8
(199-214)
- 4.0' Dolomite, Chatter breccia zone, pyrite disseminated thru recrystalline dolomite, as masses in vein type, minor areas of recrystalline.
- 2.4' Dolomite, dark-gray, dense type, minor breccia zone, & pyrite cemented fractures, mottled appearance in areas.
- 1.4' Dolomite, Chatter breccia zone, abundant pyrite at vein contacts as disseminated grains.
- 2.2' Dolomite, dark-gray, dense type, small chatter breccia zone 0.1'
- (4.0') Dolomite, Chatter breccia zone, abundant pyrite in veins, carbonaceous materials, minor recrystalline zones
- 7.6' 0.4'.
- BOX NO. 9
(214-229)
- 3.6' Dolomite, cement mostly recrystalline & carbonaceous, pyrite, some dense or recrystalline areas - 0.6'.
- 0.8' Dolomite, dark-gray, dense, carbonaceous banding.
- 3.9' Dolomite, Chatter breccia zone, abundant pyrite.

- 1.2' Dolomite, med-gray, recrystalline area, mottled appearance in places.
- 2.5' Dolomite, Chatter breccia zone, also mottled & recrystalline areas up to 0.5', relatively little pyrite & vein dolomite.
- (3.0') Dolomite, med-dark gray, dense, some pyrite vein areas minor breccia zones of 0.2' & 0.3' + other small breccia pockets approximately 0.2', pyrite in breccia veins.
- 7.0' (?)Styolite veins.
(3.1')
- BOX NO. 10
(229-243)
- 5.9' Dolomite, Chatter breccia zone, with some recrystalline & dense type dolomite areas, up to 0.5', abundant pyrite.
- 3.5' Dolomite, med-dark gray, dense, some mottled areas & carbonaceous bands, 1 small breccia zone approximately 0.1' with sphalerite.
- (1.5') Dolomite, Chatter breccia zone with pyrite & sphalerite
4.4' in veins.
(2.9')
- BOX NO. 11
(243-256)
- 10.1' Dolomite, med-gray, dense, somewhat mottled, few fractures minor breccia zones 0.2' (1 large 0.7')
10.4' veins with sphalerite & pyrite in veins.
0.3'
- BOX NO. 12
(256-271)
- (14.7') Dolomite, Chatter breccia zone, with minor recrystalline zones 0.2' & 0.6' carbonaceous bands, abundant sphalerite & pyrite in veins and disseminated, in some breccia zones pebbles surrounded by pyrite.
- BOX NO. 13
(271-285)
- (14.0') Dolomite, pebbles range from 0.01' up to 0.2'. Various recrystalline & dense type dolomite zones up to 45.7' 0.5', some areas of recrystalline cement.
- BOX NO. 14
(285-304)
- (14.0') (Continued above Chatter Breccia Zone)
- (5.0') Dolomite, dark-gray, dense type with fractures & some vein type, bedding or carbonaceous bands noted.
5.8'
0.8'
- BOX NO. 15
(304-319)
- 3.1' Dolomite, med-dark gray, med-grained, recrystalline type dolomite, minor amounts of disseminated pyrite & vein material.
*recrystalline material gets finer grained in lower segments.

- 3.5' Dolomite, dark-gray, dense type.
- 1.6' Dolomite, Chatter breccia zone, very abundant sphalerite.
- 1.6' Dolomite, dark gray, dense type.
- 1.0' Dolomite, Chatter breccia zone (typical)
- 1.0' Dolomite, dark gray, dense, with small amounts of vein material.
- 0.5' Dolomite, Chatter breccia zone, extremely large masses of honey-yellow sphalerite comprising approximately 50% of zone.
- 1.9' Dolomite, dark gray, dense type with vein material.

3.4'

BOX NO. 16
(319-332)

- (15') Dolomite, 0.3' zone of vein type & large sphalerite masses at approximately 318.9-319.1, minor breccia zones up to 0.3' with pyrite, bedding & carbonaceous bands present.
- 0.9' Dolomite, Chatter breccia zone, predominantly recrystalline, some vein type.
- 4.2' Dolomite, dark-gray, dense, few small breccia zones 0.2', vein material with pyrite.
- 1.9' Dolomite, Chatter breccia zone, predominantly recrystalline, some vein type.
- 2.2' Dolomite, dark-gray, dense, mottle appearance.
- (1.3') Dolomite, Chatter breccia zone, mainly recrystalline, vein type, small amounts of pyrite.

4.4'

(3.1')

BOX NO. 17
(332-346)

- 0.9' Dolomite, med-dark gray, recrystalline, fine-medium grained.
- 1.0' Dolomite, Chatter breccia zone, recrystalline dolomite predominant, minor sphalerite, pyrite.
- 0.6' Dolomite, med-gray, finely crystalline dolomite, few veins.
- 0.4' Dolomite, Chatter breccia zone, sphalerite masses in vein material.

- 1.3' Dolomite, med-dark gray, fine grained.
- 5.4' Dolomite, Chatter breccia zone, 3 lithology types
pyrite & sphalerite.
- 1.0' Dolomite, med-dark gray, fine-grained, dense, mottled
appearance.
- 0.6' Dolomite, Chatter breccia zone, massive sphalerite,
minor pyrite.
- BOX NO. 18
(346-362)
- 1.4' Dolomite, med-dark gray, fine-grained, dense, mottled
appearance in some areas.
*vein type dolomite, 0.1' with sphalerite approx. 25%
- 2.6' Dolomite, dark-gray, fine-grained, with veins in lower
part, minor sphalerite.
- 4.3' Dolomite, Chatter breccia zone typical lithology,
pyrite & sphalerite in small amounts.
- 2.2' Dolomite, med-dark gray, finely crystalline, mottled
- 5.5' Dolomite, Chatter breccia zone typical with finely
crystalline zones up to 0.5'.
- BOX NO. 19
(362-374)
- 1.0' Dolomite, dark-gray, fine-grained, very few veins.
- 1.3' Dolomite, Chatter breccia zone with zone of dark gray,
fine grained 0.2'.
- 1.5' Dolomite, dark gray, dense with veins & small breccia
zone 0.1'.
- 1.0' Dolomite, Chatter breccia zone typical,
- 1.0' Dolomite, light-medium-gray, finely crystalline.
- 6.0' Dolomite, Chatter breccia zone with zones of finely
crystalline dolomite up to 0.2', sphalerite masses
in 0.3' segment approximately 15%, masses approx-
imately 0.02'.
- (0.2') Dolomite, med-dark gray, finely crystalline.
- 1.5'
- (1.3')
- BOX NO. 20
(374-392)
- 1.9' Dolomite, Chatter breccia zone, minor sphalerite only
1.2 of core available.

	1.3'	Dolomite, med-dark gray, finely crystalline, dense, carbonaceous banding.
	(13.5')	Dolomite, Chatter breccia zone, zone appears leached in places, sphalerite in veins, pyrite. *zones of med-dark gray fine grained up to 0.6'.
	39.5'	
BOX NO. 21 (392-407)		
BOX NO. 22 (407-422)	(4.0) 4.1'	Dolomite, light-medium gray, dense (core missing)
BOX NO. 23 (422-347)	6.4'	Dolomite, Chatter breccia zone.
	3.1'	Dolomite, dark-gray, fine-med grained, noticeably crystalline throughout segment.
	2.9'	Dolomite, Chatter breccia zone, crystalline zones up to 0.5'.
	1.9'	Dolomite, dark-gray, fine-grained, dense, with some veins & vein type dolomite present.
BOX NO. 24 (437-452)	(0.6') (0.8')1.4'	Dolomite, Chatter breccia zone.
	4.8'	Dolomite, med-dark gray, fine-grained, dense, minor veins, minor breccia zones up to 0.05'.
	7.3'	Dolomite, Chatter breccia zone, pyrite. *minor dense dolomite zones to 0.4'.
	0.8'	Dolomite, light-med gray, fine grained.
	(1.3')	Dolomite, Chatter breccia zone, zones of light gray dense type up to 0.5', pyrite.
	5.8'	
BOX NO. 25 (452-466)	4.5'	
	3.9'	Dolomite, dark gray, med-coarse grained, vein type dolomite section 0.1',

(5.6') Dolomite, Chatter breccia zone.

8.6'

BOX NO. 26
(466-481)

3.0'

2.4' Dolomite, light gray, white, dark gray, evidently crystalline or predominance of vein type dolomite. *core recovery for this segment 0.15'.

7.6' Dolomite, med-dark gray, dense, mottle appearance, small veins cutting it.

2.0' Dolomite, Chatter breccia zone, zones of coarsely recrystalline material.

(See Va. Div. Geol. Bull. 70, 1956, Herbert & Young)