UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOOSE-LEAF FIELD NOTEBOOK

9-137

Magnet Cove Project

V. C. Frykland

If you find this note book send it to:

Mineral Deposits Branch

U. S. Geological Survey

Washington 25, D. C.

Feb 21

Calcite Pit - General

Lying in the Cg. calcite are blocks of a syenitic rock. These blocks may reach maximum dimensions of 6'. Many of the exposed surfaces show inclusions with almost rectangular outlines. Some have very sharp corners. Reaction rims penetrate varying distances into the syenite, as do small apophyses of Cg. Calcite. Some inclusions are penetrated by reticulating veins of calcite. There appear to be a number of of inclusions in which the reaction rim comprises the mass of the rock with small, center nodular mass of the original syenite remaining. Some 1'-2' max. dimension inclusions that have sharp 90° corners have reaction rims only 1"-2" wide. One 6' block is almost completely composed of reaction products. This large inclusion contains elipsoidal vesuvianite masses 2"-3" in max. dimension.

The Calcite-reaction rim contact is characterized by the presence of a 1/4"-1" zone of fg. dark green mica. Some 1/4"-1/2" diam. green mica may be found in these zones. There is usually a concentration of pyrrhotite on the calcite side of the contact. magnetite in grains ranging from the microscopic to 1/4" and even 1/2" are also on the calcite side. fg magnetite is scattered through the reaction products. Most of the magnetite is subhedral to euhedral. Some of the magnetite has replaced

Feb 21.

Calcite Pit

Calcite along cleavage planes

Away from inclusions (most through 6"-1' and more) are concentrations of dominantly monticellite, apatite and magnetite. They are lying in Calcite. These concentrations are separated by larger areas of Calcite, which has the largest cleavage fragments

Feb 23, Calcite Pits

Road runs N61°30'W, Points are 12.7' from N. Side of road

CP 1 Δ Original set up on Road

X Orientation and Elevation shot.

2 Shot thrown out.

3 Δ West end of pit floor.

4 Δ Top of cut, South side

5 Δ Top of cut, North side

6 Δ Bottom of pit, east end

7 Intersection, top & bottom of cut. On soil, washed soil N.

8 Top cut, on calcite, in angle [illegible] 8 feet [illegible] toward table. Outcrop [illegible]

9 Top cut, in angle on calcite, outcrop goes 8'S.

10 Top cut, outcrop goes N. S. to soil.

11 Top cut at corner, [illegible] on calcite.

12 Top cut, on calcite, irregular [illegible], small corner

13 Top cut on calcite, [illegible] corner.

14 Top cut on calcite

15 Center 3' wide ditch, dump to S 12', ditch in soil. Calcite under as shown by float blocks 13 [illegible]

16 W end of ditch, in center end of dump. Soil covered calcite.

17 Fence corner, soil covered, probably calcite.

18 NE Corner of house [illegible] [illegible] Building extends 36' at right angles ~~between~~ from [illegible] line.

19 NW corner of house, Fence corner 11' N. on line with side of house

20 1.2 S to N edge of US 220, [illegible] of calcite, may be in place.

21 Small calcite blocks [illegible]

22 S.E. end of 4' long, 2' wide calcite outcrop.

Feb 23

CP 23 Top "bottom" N. side cut, altered igneous. Soil South.

24 Top cut, corner, altered igneous, few nodules, [illegible] in clay. (Sample of igneous [illegible] here . .) Soil N.

25 Top cut, altered igneous, Soil N.

26 Top cut, contact [illegible] "clay" cut. Soil N. (about 2' from top)

27 Top cut at contact, calcite E. Top cut goes 7' E to narrow gulley.

28 Foot cut of contact, gulley edge 2' E

29 Foot cut, edge of calcite, see sketch, Soil S.

30 Foot cut, altered igneous, Soil S.

31 Foot cut, at corner, altered igneous, Soil S.

Feb 24

CP 32 Top cut at corner, edge gulley, bottom of cut 7' S. On weathered calcite (clay)

33 Top cut gulley W. weathered calcite (clay)

34 Top cut, corner, weathered calcite (clay) W, fresh silicate calcite E. goes 5' long cut.

35 Top cut E. edge of a wide calcite, minor magnetite. Soil and float N.

36 Top cut, W. edge of silicate calcite.

37 Top cut, E edge " " ", to E is solid, but weathered calcite. Soil N.

38 Top cut at corner, weathered silicate calcite, Soil N.

39 Top cut in angle (small gulley) Clay weathered silicate calcite to 38. 4' W to solid silicate calcite

40 Top cut, center on calcite, weathered silicate calcite to N.

41 Top cut, calcite E, clay W., Soil N.

42 Top cut Clay E, Calcite W. Soil 1' N of cut

43 N.E. Corner of Calcite at clay

44 N.W. Corner " " " "

45 S.E. Corner " " " "

Calcite Pit Magnet Cove Feb 24 1952 [illegible]

CP 46 S. end of western silicate calcite out crop
47 N. end of western " "
48 Center of gulley, 2' down calcite to W.
49 Top of calcite knob 2' down to N.
50 Center of gulley, W. edge silicate calcite mass. Gray calcite W. 8' W. to igneous contact.
51. Calcite clay N, Igneous S.
52 " E, " W
53 Contact corner, calcite clay S.
54 " " "
55 " calcite clay E, Igneous W
56 On igneous fg. [illegible]
57 Calcite clay E, igneous west.
58 Calcite mass, minor silicates

Feb 26, Tuesday

59 Top cut, on weathered igneous, some calcite float, probably "shot [illegible]." bottom cut 8' S.
60 Top of rock knob that may be artificial 2' down to N. Several rock types as boulders.
61 On igneous (float)
62 Saddle on igneous
63 On altered igneous. Gentle [illegible], must be very near contact
64 Center gulley, top cut, bottom cut 6' S also end calcite. Calcite goes 13' N. Calcite 6" wide at point.
65 Center of gulley foot cut 1½' E & W. S end of calcite mass 3½' long.
66. Foot cut side gulley.

Feb 26

CP 67 foot cut, float W. see sketch
68 foot cut, angle, see sketch, 8" to calcite corner
Soil float S.
69. foot cut 5' N. to calcite corner, dump goes 6' W. to calcite clay.
70. foot cut 7' N. to dump and calcite clay.
71. foot cut 7' dump to edge calcite, soil E.
72. foot cut, 7' dump to N., edge calcite.
73. " " , E. edge of calcite.
74. foot cut 4' dump to calcite.
75. " " , 5' dump to calcite clay.
76. " " 6' dump to calcite.
77. On fence soil and float around
78. Sharp knoll, on float
79. 1½ diam calcite outcrop
80. 1' diam calcite outcrop.
81. Fence Corner. 2' S.
82. Fence line Igneous float, goes to 10' along fence line.
83. About at contact. Igneous E, Calcite W.
84. W. edge 6' deep pit. 7' long diam. in calcite clay
Contact 12-15' South on float basis.
85. Calcite float around
86. Top cut in calcite, calcite clay E.
87. Top & bottom of cut. S. edge of calcite outcrop.
88. Foot cut
89. " "
90. " "
91. " "
92. " "
93. flow cut at end of outcrop.
94. foot cut
95. " "
96. " "
97. " "

Calcite Pit, Magnet Cove, Ark. Feb 26, 1952

CP 98 W end of calcite outcrop
99 Middle of calcite out crop
100 E end " " "
101 N edge of drainage ditch. 1½' to center, dump goes 13' S. of center.
102 Top cut on ~~[illegible]~~ calcite clay.
103 " " " calcite clay.
104 " " middle of calcite [illegible] E side extends 8' South (no silicates
105 Top cut on calcite, Ca does not go S.
106 Top cut " ", goes S. 7 A S
107 gentle swale, probably calcite.
108 Calcite N, igneous S. Ig. coarser grained than W side of pit. Also white minerals, some nepheline [illegible]
109 Fence line, on igneous. (at bend.
110 Fence ", igneous, crest of ridge.
111 About on contact Ca N, Ig S. 12' on line to end ditch 4' E to edge pit in igneous. Contact 6' E of drainage ditch end.
112 E. end of cut on Ig.
113 About on contact in swale.
114 On Ig outcrop 4' down, S wall
115 Fence line, on Ig
116 " Corner, 70' E to creek. (at bend of creek)
117 At Creek bank, 7' down, in igneous Contact about 25' N. along bank.
118 E end of pit 4' to bank edge. Top & bottom of cut.
119 Top cut on calcite, clay to E. [illegible]
120 " " " " , " " ", calcite clay S along cut
121 " ", calcite W. float S.
122 " ", calcite E, clay W.
123 Foot cut. calcite, [illegible], [illegible] W.
124 " "
125 " "
126 " "

Feb 26, '52

CP 127 Floor S. side of calcite mass

128 Foot cut

129 " "

130 " "

131 Floor of pit Calcite mass.

Feb 28

132 Top cut, Calcite E, clay W.

133 N.E. corner of large inclusion on cut face. Top of cut 3' N

134 Top cut. Wedge of Calcite. 6' on base to angle ~~corner~~ on cut face sketch

135 Top cut, at corner Calcite clay W. and N.

136 Top cut, Soil S. Calcite N. No silicates

137 " - Calcite E.

138 Top cut, on calcite, no silicates

139 " " Soil, floor E.

140 " " " " E.

141 " " " "

142 " " " "

143 " " " "

144 " " " "

145 N.E. corner of calcite cut crop, Soil N. & E

146 Calcite E, Soil W.

147 Calcite S. " N.

148 " E. " W.

149 Foot of Calcite mass on cut face

150 " " " "

151 S. edge 3' diam calcite. Some Apatite

152 N. corner of calcite knob.

153 See sketch

154 Corner of Calcite knob. Igneous 1-2' N.
Side goes 8' toward S. Abundant Apatite & Monazite

155 E corner of calcite knob. About 15' high (at w end)
Soil N. No dike where contact goes

Feb 23 '52

Colcite Pit Mount Eve

Cp	156	N end of Calcite out crop. goes 14' covered 25
		Soil N. within 2-3 feet of contact.
	157	S end of calcite out crop 5' long.
	158	2-3' from contacts.
	159	outcrops
		Center of gully. 3' up. About on contact Ig N.
	160	About on contact Ig N. Covering between 159-160
	161	Calcite clay W- Igneous E.
	162	" " W - " "
	163	About on contact Ig. W.
	164	Top shot. Ig igneous
	165	" " Soil ridge crest
	166	foot cut. - Soil S.
	167	" " " "
	168	" " " "
	169	" " " "
	170	" " Foot S.
	171	foot cut. " " "
	172	End of calcite block Soil S
	173	foot cut on calcite.
	174	" " " "
	175	" " end calcite outcrop
	176	" " on calcite
	177	Top & bottom of cut.

Feb 29

	178	Calcite out crop. Moly veinlets 70°/48° with py.
		Moly grades into calcite 7'W to longer outcrop
	179	W end corner of calcite out crop.
	180	W. edge calcite.
	181	E " " "
	182	On calcite
	183	" " edge
	184	" " "
	185	" "
	186	" edge

Feb 29

Calcite Pit - Magnet Cove

EP 187 Edge of calcite
188 " "
189 Top early steep, natural slope below.
190 " " Edge of dump
191 " " on dump.
192 ~~Middle~~ " dump
193 On " dump.
194 N. edge of dump; calcite N.
195 Very steep bank on calcite.
196 Foot dump, river 15' E, dump goes 25' W.
on alluvium.
197 Edge of river 20' W to foot steep.
198 " " " foot of dump
199 " " " " "
200 " " " " " 3' W. this S. edge of dump
201 " " " Calcite N, Igneous S.
202 " " " this is true contact
~~202~~ " " " on alluvium
203 " " " "
204 " " " , on igneous, Some 25 on W bank
205 " " " , Some calcite float N of 204
206 On float edge, covered
207 edge of river, alluvium
208 " " " "
209 On bank " "
210 Edge of river 2½' up to E.
211 " " " "
212 On bank 2½ down to W., 2' W to river edge.
213 Center of outcrop
214 Calcite " "
215 " " "
216 " " "
217 " " "

March 1, 1952

CP	219	Crest of ridge, igneous
221	220	down slope, Ig float
222	221	" " " Ig float
223	222	Top cut, Ig down 15' to river edge.
224	223	" " " " " "
225	224	N. edge of Calcite, may be about this corner
226	225	5' from river edge, on Calcite.
227	226	9' N to edge, east end, of cut. 6' E. to road
		Calcite to N.
228	227	N.W. corner of bridge.
229	228	Top of road cut on calcite - Ig. contact
		Ca E, Ig W., contact goes N.
230	229	About at contact, Calcite E, Ig. W.
	231	Top ridge, Ig float
	232	Top road cut, contact about 2.3' S. calcite S.
	233	" " " , on Ig.
	234	" " " " " (pegmatite)
	235	Ig float. There is a Ig and Ca rocks, Ig near road
		east. 236, Ig to N. east end contact
	236	Ig float.
	237	Top road cut, about on Ig. contact, Ig N. (about 25 yds
	238	Ig float.
		March 8, 1952
	239	Δ S. side of highway.
	240	7' S to N. Edge road, E. edge of driveway
	241	About at contact, Ig S. Calcite N.
	242	" " " Ig E, Calcite W.
		Top & bottom road cut meet.
	243	top road cut. Ig. (?) 6' South to bottom cut
	244	" " " 10' South to bottom of cut.
	245	Top cut.
	246	E. end of calcite out Crop
	247	S.W. " " " " " , contact is probably
		about 15' W.
	248	Foot cut, About End. Syenite W contact.
		Calcite contact about 7'-8' W.

March 9, 1952

CP 299 About E. edge of End Syenite Nike.
fg. Leucite Syenite with patches of a coarser phase. Top of cut some pegmatitic phases are present. Fresh boulder rests on weathered material.

250 Foot cut. at Syenite - Calcite contact contact is at coarser phase, large vesuvianite crystals are at Ig side. contact is irregular but essentially vertical. (No calcite in Ca along)

251. Calcite outcrop begins in ditch. 4' N of point To Calcite mass.

252 Calcite in ditch, 3' N. to calcite, (2' wide)

253 about E. end of calcite outcrop. float to river (about 25°. Contact Probably 40°-50° E to River.

254 N.W. Corner of bridge.

255 End of abutment.

256. S.W. Corner of bridge.

257 N. Corner C.g. Syenite, pegmatite phases are prominent.

258 S Corner of calcite outcrop Cover Near S end of calcite mass, float to South Can't go on property to South.

259. Δ Across River.

260. Topo Shoot, in float.

261 Contact 5-10' N. (float)

262 Top bank, Ig. Float. - may not be for from contact. Ig not for

263 Top " , on calcite

264 On flat 2' higher toward River. Calcite to West. Igneous Rock

265 Edge River.

266 " " Riffle 30' up stream Ig.

267 " " out crop in river goes 30' up stream. Calcite.

268 Topo Shoot, 15' W. to bank.

~~Feb~~ March 11, 1952

Calcite may be found out cropping along the stream at least 300' North of the South end of the island. The out cops here reach 50'-75' above the river level. There are ribs of other rock types and the impression I got was of perhaps E-W trending bodies, rather than one long mass N to the river.

Drilling on perovskite hill went to calcite (fragments of Ca and apatite) at 5' and 18'. Crest 9% apatite fragments in solid rock, 7% apatite fragments at hole

Wilson Prospect No. 1

March 12, 1952

Potash Sulphur Springs.

1 Δ

P 2 Δ 10 of old Survey, end of ~~At~~ dump. Dump 8'N 8'S.

X3 on stake No. 7 in center of cut in muck. Gone 15' N.W. 10' either side.

X4 N.E Corner of Wilson House elev. about 395.00

5 Top & bottom of cut. muck begins S & W. 19' to ~~X~~ Stake No. 9. which is 2' from cut bottom.

6 foot cut. muck, 3' up to N. Rock exposed looks like decomposed Novaculite (metamorphic) Sample PS-1

7. on muck triangle Sandy weathered rock exposed. Sample PS-2

8 On Stake No. 8. Some Sandy rock. See Sketch.

9 Top cut, bottom 1'N, 1' down. N. end of muck. original ~~Ba~~ Surface W. end of Sandy exposure of muck.

10. Top 2nd Corner of cut. 1'E, of Stake No. 13. 7'E to head of other cut.

11 Top cut 9' down to bottom 1½' W. Sandy material in cut. Natural Surface.

12 At corner of cut (top) bottom 3' down 1'N. bottom of cut in Sandy material. few gossan streaks

13 Bottom of N. edge cut. Sandy material. cut 8' wide at bottom. 11' to top S cut. Damp begins at top S. cut. Small area of caliche 93. 6" thick.

14 bottom Cut. to 3' up. 8' wide. Sandy material green stained. gossan streaks have no particular trend. PS-3

15 bottom N. edge of cut. 4' up to top. Cut 8' wide at corner on S. Side. About at contact with Igneous looking dk. green material ~~X X X~~

16 Stake No. 1. 4' West to corner. 6' E to bottom cut. 6' up. decomposed ig.

Potash Sulphur Springs March 12, 52

PS-17 E W. edge, bottom cut 2' up. 9' E to E side. 2' E to top about 6' up. 1' wide dike S 45° E, dips 30° S. 2' S. of point in small trench. dk. green rock either side. PS-4 sample. dike looks like feldspar - Carbonate rock.

18 At Stake No. 5. foot E side cut. 3' up. 9' W to bottom. W side. top 2' over. 3' up. rock in cut face looks fragmental fragments about 6" in diam. Several colors of green and cream. great variation in weathering. At end of exposures muck N.

19. not on mat W. side cut. 7' up cut is 9' wide. cut in soil and creep material.

20. 2' South to bottom cut 3' from there to top muck at end of dump on that side 6' N to bottom other side cut. 3' up. on creep material about end of cut.

21. Wedge of dump covered. Natural Slope. Tops shoot.

22. Broad swell Sunkole 25° S. (shallow)

23. float (Wavecrite) tops shoot.

24 float. tops shoot

25 Swell to edge muck S.

26 N edge muck.

27. N. edge muck. not so wide to E.

28 Broad swell. tops

29 N. edge muck. tops shoot.

30 S. edge of muck. tops shot.

31 W. " " "

32 Tops cut.

33 tops. shot.

34 15' S. to muck.

35 20' to muck.

36 Tops. Shot, float.

37 Top cut, 3 down, bottom cut. 1' W. Covered in Cut.

P-38 At corner top cut. Weathered Ig. in cut to S.
39 Foot cut. 4' up. top 2' N. end of exposure, cover E.
cut 9' wide to S bottom. Main rock is green
clay-igneous. Irregular blebs & masses (small
of white clay.
40 1' E. of Stake No. 2., E end cut. 6' to top &
bottom of N & S. sides of cut. float around.
Top- [illegible]
41 foot of cut, at corner (clip 3 [illegible] also [illegible] commonly
42 " " " 6' E to Top cut.
weathered rock (clay - igneous origin ?)
43 foot cut, 2' N to Top. bottom cut 15' wide
9½' up to top. Material is igneous rock
which has weathered along joints. You get an
effect of spheroidal weather. Joints at top of
cut are creeping down hill. Joints filled with
2 [illegible] gossan. there are 1' long quartzite [illegible] masses
7' below surface. This appears to be a
breccia at one point. Rest seems to be white
clay masses between irregular bands of Iron gossan
44 At stake No 3., bottom of cut 3' S.
cut floor, clay weathered igneous (?) Weathered.
Corner bottom of cut 7' N [illegible]
45 Top cut, float.
46 At stake No. 11, top cut. 7' South to bottom, 7' North
to bottom. Near end of clay. cover S & E
47 foot cut. 2½' up. 2' N to top. bottom S. side 11' S.
7' wide rib of Novaculite (Recrystallized) goes across
floor here.
48 bottom of cut, Novaculite, 4½ up to top 1' N.
Cut 9' wide. 87° or joint (?)
49 foot cut 9' wide, N 8 W, Igneous clay, E.

Ig. clay to 10' E. of point
then cover. Novaculite
to 450.

P 50 At Stake No. 12. 4' N. to. top cut and sand.
7' S. to. top cut and sand. Monadnock Float
exposed. (1' thick)
51 Topo Shot.
52 Topo Shot.
53 Topo Shots
54 Top cut, in muck.
55 Top shots, muck starts 12' N. parallel contour.
56 At Stake No. 12' S. to N. limit of cut
also edge of muck.
57 Top cut. about 12' wide. bottom. 5' W.
off cover.
58 Rod was raised 1'. top cut, and corner, 7' W.
cut is in brown clay, abundant mica. (Igneous)
Cut continues S. 15° E.
59 Topo Shot, Cover, Small.
60 Topo shot, Cover "
61 Topo Shot. Cover "
62. Top cuts. cut in muck to W.
63 Top cut. muck S. 1, cut 9' wide at bottom.
64 Top of muck pile, effort here, Slopes 10' W.
7' South
65 foot of muck pile, cover 1.
66 " " " " "
67 " " " 5' S.W.
68 Foot W. Side cut. 3' up 1' N. to. top cut 8' wide
3' from bottom to top S. side.
2' W of Sandy material (W) - Igneous (E) contact
68 Foot of muck pile. Next cover
70. Top opposite 10. Sandy material wall exposed
in cut. 4½' down. See sketch.
71 Top muck pile, bottom about 15' N.
72 Top muck pile.

Potash Sulphur Springs March 12, 1952

P. 73 Corner of cut. cut 12' wide top to bottom 3' over both sides. Still sandy material (may be feldspar carbonate type).

74 Top bottom of S. side of cut. mark to 25' E thru sandy rock. Mark goes 20' W. 9' wide here. About 4' from S. stake 14.

75 Top of cut at corner outcrop in cut floor. Cut runs S 39° W to other cut, about 9' wide bottom of cut 1' N.

76 Δ set South cut.

77 N.W. corner of cut, dump material E.W

78 Top cut, mark sandy, foot cut 1' E. cut crooked.

79 Top cut, at corner.

80 Top & bottom cut. Mark N & S. Top to N. 15' W to end mark.

81 foot cut, at corner, top 1' E S. cut goes 8' W. very decomposed to crumbly rock. 13' N.E to approx. cut bottom 4' further to top.

82 Bottom cut 5' E to top, 6' up cut 8' wide at bottom 2' up at W. to top. decomposed igneous.

83 bottom of cut at corner. Top 2' W 4' up 12' E to bottom of cut 3' further to top. Cover begins here.

84 End of cut, top & bottom, mark goes 10' W. Couch 15' S.

85 foot of mark pole in N.W. gulley. cover.

86 " " " " "

87 Top & bottom cuts, mark S.W.

88 small gully into gulley

89 Tops shot.

90 top mark goes 20' W.

91 tops shot, 15' E to end dump.

92 Tops shot

Potash Sulphur Springs March 12, 1932
Wilson Prospect #1

P 93 East of dump
94 Tope shot
95 " "
96 Tope shot, 70 feet E to foot muck pile

The whole area seems to be the same igneous rock, variations in everything give a different appearance. There are a few inclusions of Novaculite and the whole mass may be fragmental. Muscovite is present in some of the rock.

Magnet Cove.
North of Hooper Barn. End. Peg. Pyenite about 25' wide.

Calcite Pit Samples:

VF-CP-38 "Tuffa" type NE corner of hill above calcite pit

VF-CP-39 "Tuffa" type Same locality as above

VF-CP-40 Apatite from Quarry sent for V_2O_5 and Rare earth analyses.

VF-CP-41 Calcite for V_2O_5 and rare earth analyses.

X-Section to be made

Calcite Pit Samples

VF-CP-22	Fine grained calcite from Δ 187 in pit. There are two specimens from this point. Both calcite.
VF-CP-23	Igneous rock from Δ 264. Thin-section.
VF-CP-24	Eud. Syenite from ditch along road. See map. Δ 248
VF-CP-25	Eud. Syenite fragment with 1/4" sphene crystal at Δ 248.
VF-CP-26	Igneous rock at Δ 249.
VF-CP-27	Igneous rock at Δ 250
VF-CP-28	Eud. Syenite at Δ 248
VF-CP-29	Igneous rock from West side of calcite pit
VF-CP-30	Banded inclusion from pit
VF-CP-31	Inclusion with portion of reaction rim.
VF-CP-32	Perovskite from Perovskite hill
VF-CP-33	Eudialyte Syenite from C.P. area
VF-CP-34	Eudialyte Syenite N.E. of Moore's Barn.
VF-CP-35	1½" diam. inclusion in calcite - Section
VF-CP-36	Cross section of Moly. vein - Section
VF-CP-37	30' wide dike N.E. corner of hill above Calcite pit.

Potash Sulphur Wilson ?/ Prospect

VFPS-5	7/10' channel at Δ70. Sandy material with irregular limonite veins
VF-PS-6	At face below Δ76. 4½' channel. Elipsoid masses of white clay with iron veins meandering between.
VF-PS-7	Sample of iron gossan
VF-PS-8	Handspecimens of coarse-grained igneous rock / breccia like in a few spots.
VF-PS-9	Channel 1½' in green altered (clay) ig. rock at P39.
VF-PS-10	Handspecimen Cg. igneous rock at Δ 68.
VF-PS-11	Grab sample of Fe stained igneous, at Δ38.
VF-PS-12	Residual Nodule at in green clay
VF-PS-13	Breccia like material float between the two S.W. cuts.
VF-PS-14	Syenite and Fe Ox from W. end of S.W. most trench
VF-PS-1	fg. porous igneous rock. f
VF-PS-2	" " " "
VF-PS-3	" " " " No
VF-PS-4	" " " "

Rutile Pit Samples

VF-RP-37 Hole 0-2 49.1'-52.3' USBM # 1301

VF-RP-38 Hole 0-3 23'-26.5' 1347

VF-RP-39 Hole 0-3 34.3'-35.2' 1352

VF-RP-40 Hole 0-3 59.5'-64.5' 1365

VF-RP-41 Magnetic concentrate from old Rutile Pit Mill.

VF-RP-42 Rutile Concentrate from old mill

VF-RP-43 Rutile crystals from West pit

VF-RP-44 Float rutile from West most float area. See Map. B411.16.

Rutile Pit Samples

VF-RP-19	Hole I-1	20'-26'	U.S.B.M. #	1189
VF-RP-20	Hole I-1	36'-40'		1192
VF-RP-21	Hole I-1	67'-72'		1200
VF-RP-22	Hole J-1	32.5'-35.9		1911
VF-RP-23	Hole J-2	31.8'-39.4'		1846
VF-RP-24	Hole J-3	33'-39'		1865
VF-RP-25	Hole J-3	75'-82'		1872
VF-RP-26	Hole J-3	96'-103'		1875
VF-RP 27	Hole J-3	103'-109'		1876
VF-RP-28	Hole K-5	24'-29'		1491
VF-RP-29	Hole K-5	57.5'-67'		1496
VF-RP-30	Hole L-2	14'-21'		1965
VF-RP-31	Hole L-2	21'-28'		1966
VF-RP-32	Hole M-5	54'-61'		1885
VF-RP-33	Hole O-1	21'-24'		1633
VF-RP-34	Hole O-2	9.5'-11.7'		1289
VF-RP-35	Hole O-2	27.1'-29.1'		1296
VF-RP-36	Hole O-2	29.1'-34.1'		1297

Rutile Pit Samples

VF-RP-1	Hole B-2	91'-95'	U.S.B.M.	#1333
VF-RP-2	Hole B-2	110'-115'	"	1337
VF-RP-3	Hole B-3	27'-34'	"	1758
VF-RP-4	Hole B-3	73'-79'	"	1765
VF-RP-5	Hole C-2	30'-36'		1553
VF-RP-6	Hole C-2	73'-80'		1560
VF-RP-7	Hole C-2	80'-86'		1561
VF-RP-8	Hole C-1	54'-60'		1557
VF-RP-9	Hole E-7	48'-49.8'		1396
VF-RP-10	Hole E-7	49.8'-52'		1397
VF-RP-11	Hole E-7	73'-76.5'		1405
VF-RP-12	Hole E-7	108.2'-111.4'		1418
VF-RP-13	Hole F-1	10.7'-19.4'		1716
VF-RP-14	Hole F-1	110.4'-120.1'		1727
VF-RP-15	Hole G-2	56'-58'		1219
VF-RP-16	Hole G-2	115'-118'		1234
VF-RP-17	Hole G-2	53-56'		1218
VF-RP-18	Hole G-4	135.8'-145'		1816

Channel Samples
Calcite Pit, Magnet Cove
cut by H.L. Sobel 3/4/52 to 3/7/52

No.		Length of channel
VF-CP-	1	2.3'
VF-CP-	2	1.5'
VF-CP-	3	2.1'
VF-CP-	4	2.4'
VF-CP-	5	7.5'
VF-CP-	6	2.0'
VF-CP-	7	1.9'
VF-CP-	8	4.5'
VF-CP-	9	3.8'
VF-CP-	10	2.0'
VF-CP-	11	3.2'
VF-CP-	12	2.7'
VF-CP-	13	3.1'
VF-CP-	14	2.5'
VF-CP-	15	7.7'
VF-CP-	16	1.9'
VF-CP-	17	7.0'
VF-CP-	18	4.4'
VF-CP-	19	2.4'
VF-CP-	20	1.8'
VF-CP-	21	2.1'

Locations shown on calcite pit plane-table sheet.

Sample Splits from A+K. Survey - Hardy-Walsh

These numbers DO refer to Sample numbers given in 1972. The numerals refer to plane table shots on pits

VF-HS	2	1	
VF-HS	2	9	VF-HS-200 - "Jacupirangite" from Slope west of Hardy-Walsh Property.
VF-HS	4	1	
VF-HS	4	2	
VF-HS	4	5	
VF-HS	5	6	VF-HS-201 Jacupirangite specimen.
VF-HS	5	8	
VF-HS	6	4	
VF-HS	7	5	VF-HS-202 Jacupironite
VF-HS	7	8	
VF-HS	8	5	missing point VF-HS-203 Jac-pirangite
VF-HS	9	5	A
VF-HS	9	5	B X VF-HS-204 Jacupirangite for thin section.
VF-HS	9	5	D
VF-HS	9	6	All from N. Slope of Hardy-Walsh hill.
VF-HS	1	2 0	
VF-HS	1	2 7	
VF-HS	1	3 1	VF-HS-205 Brookite for analysis. 3rd Knob.
VF-HS	1	3 4	
VF-HS	1	3 7	
VF-HS	1	3 9	
VF-HS	1	4 0	
VF-HS	1	4 4	
VF-HS	1	4 4	B
VF-HS	1	4 5	
VF-HS	1	4 6	
VF-HS	1	6 3	
VF-HS	1	73-174	
VF-HB	1	4	
VF HB	4	7	
VF HB	5	4	
VF-HB	7	6	
VF-HB	8	2	
VFHF	2	6	

Sample Notes

Calcite Pit - CP

~~VF-CP~~ ~~Sample of inclusion showing [illegible] zone on edge of it~~

~~VF-CP-2~~ ~~Sample of inclusion showing banding~~

~~VF-CP-3~~ ~~Sample of country rock~~

Additional Christy Samples, from Bureau of Mines

VF-C-31	Hole C-8,	63.5'-66'	(U.S.B.M # 1012)
VF-C-32	Hole C-8,	85'-86.5'	(" # 1018)
VF-C-33	Hole C-8,	100.5'-102.5'	(" # 1025)
VF-C-34	Hole C-4	77.5'-80.5'	(" #419)
VF-C-35	Hole C-4	103'-106'	(" #427)

Feb. 22

VF-C-13 Row D, Pit 1, 20' down

VF-C-14 Row D, Pit 2, 15' down

VF-C-15 Row D, Pit 3, 15' down

VF-C-16 Row D, Pit 4, 15' down

VF-C-17 Row D, Pit 5, 15' down

VF-C-18 Row E, Pit 2, 20' down

VF-C-19 Row E, Pit 3, 10' down

VF-C-20 Row E, Pit 4, 15' down

VF-C-21 Row E, Pit 5, 20' down

VF-C-22 Row F, Pit 1, 5' down

VF-C23 Row F, Pit 4 - 10' down

VF-C-24 Row F, Pit 5 - 10' down

VF-C-25 Brookite concentrate from residual ore west end of property.

VF-C-26 Row A, Pit 4, dump

VF-C-27 Row B, Pit 5, dump

VF-C-28 Row E, Pit 6, dump

VF-C-29 Row F, Pit 2, dump

VF-C-30 Row B, Pit 3, dump

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Sample Notes

VCF-1	Calcite Pit - Hand specimen showing vein of calcite cutting Syenite inclusion. Contact zone on either side of vein Moderately altered syenite out side contact zone. Brass green-yellow green crystals at interface of calcite-contact zone - Probably vesuvianite.
VCF-2	Calcite Pit - Hand specimen showing portion of contact zone and less altered syenite

Feb. 22

Christy Property Samples

VF-C-1	~~Pit 1, Row A.~~ from dump.
VF-C-2	Pit 2, Row A, 10' down.
VF-C-3	Row A, Pit 3, 10' down
VF-C-4	Row B_2, Pit 1, 5' down
VF-C-5	Row B_2, Pit 2, 20' down
VF-C-6	Row B_2, Pit 3, 5' down
VF-C-7	Row B_2, Pit 4, 10' down.
VF-C-8	Row C_3, pit 1, 15' down
VF-C-9	Row C_3, Pit 3, 5' down
VF-C-10	Row C_3, Pit 2, 20' down
VF-C-11	Row C_3, Pit 4, 5' down
VF-C-12	Row C_3, Pit 5, 20' down