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PRINTED: 01/27/2003

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: DANIELS CAMP

ALTERNATE NAMES:

GREENLEE COUNTY MILS NUMBER: 89

LOCATION: TOWNSHIP 7 S RANGE 32 E SECTION 5 QUARTER NE
LATITUDE: N 32DEG 51MIN 30SEC LONGITUDE: W 109DEG 04MIN 48SEC
TOPO MAP NAME: YORK VALLEY - 15 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:
FLUORINE

BIBLIOGRAPHY:

ELEVATORSKI, 1971, ARIZONA FLUORSPAR, ADMMR
P. 24
TRACE 1947, USGS STRATEGIC MIN. INV. PRELIM.
REPORT 3-207 MAP
AZBM BULL. 180, P. 349-52, 1968
AZBM CIRCA 15, P. 2-9, 1950, WILSON
AZBM BULL. 114, P. 6, 1921, ALLEN & BUTLER
ADMMR DANIELS CAMP MINE FILE

DANIELS CAMP MINE (file)

See: Duncan Fluorspar Mill (file)

GREENLEE CO.
STEEPLE ROCK DISTRICT
T7S R32E Sec. 05

GREENLEE MILS INDEX #89

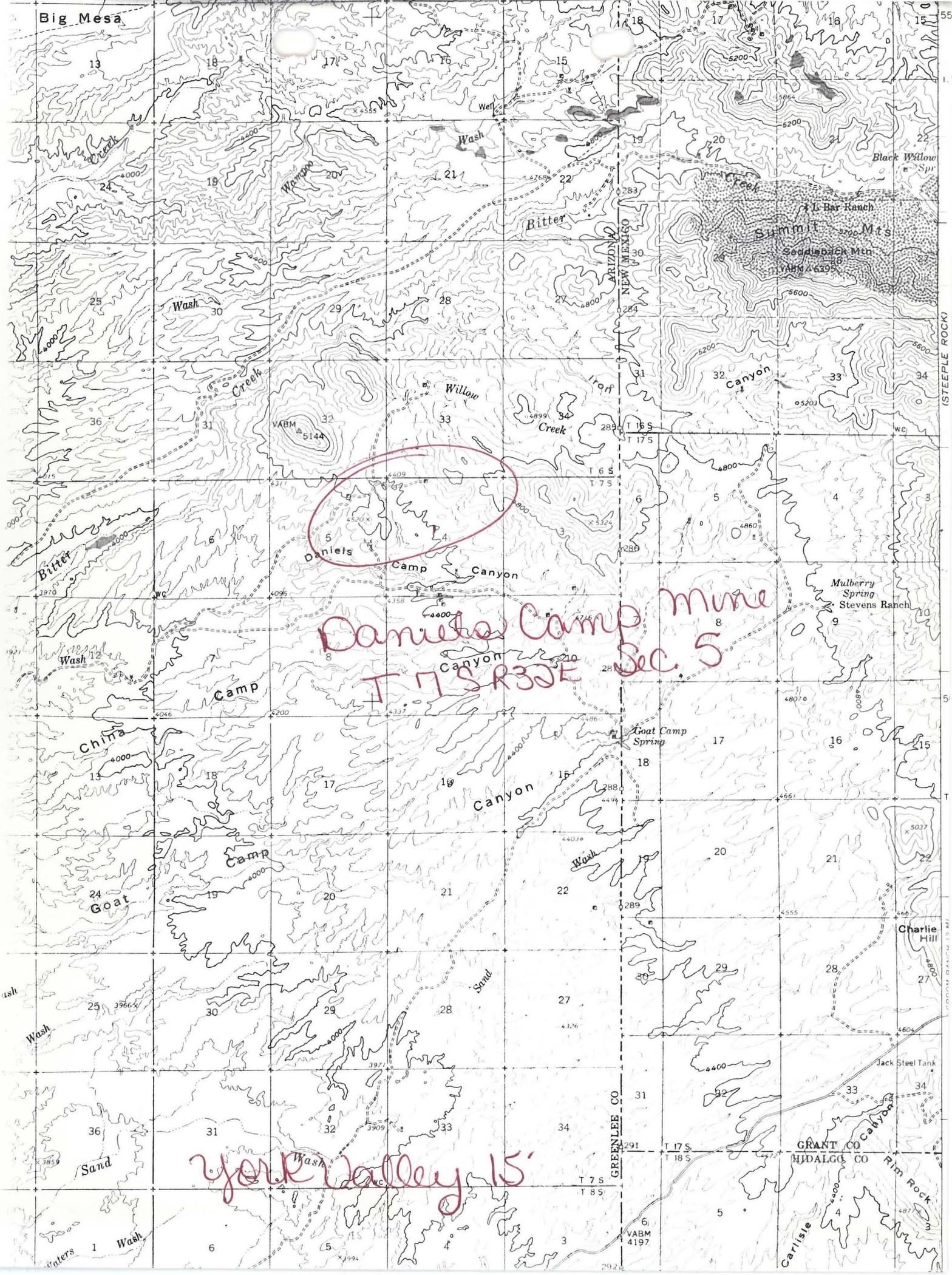
See: Map I-1310-B p. 8; Mineral Deposit Map of the Silver City 1⁰ x 2⁰ Quad., NM & AZ

AZ Bur Mines Bull. 180 p. 349-52 1968

" " " " 114 p. 6 1921

AZ Bur Mines Circ. 15 p. 2-9 1950

York Valley 15' Map (included in file)



Big Mesa

Black Willow Spr

I. Bar Ranch

Summit Mts

Sedalsack Mtn

VABM 4639

(STEEPLE ROCK)

Daniels Camp Mine
T 7 S R 30 E Sec. 5

Mulberry Spring
Stevens Ranch

China

Goat Camp Spring

Goat

Charlie Hill

5037

4000

4000

4000

4000

4000

4000

4000

4000

4000

4000

4000

4000

GRANT CO

NIDALGO CO

Carlisle

Rim Rock

4077

4077

4077

York Valley 15'

GREENLEE CO

T 7 S

T 8 S

VABM 4197

T 7 S

T 8 S

T 9 S

T 10 S

T 11 S

T 12 S

T 13 S

T 14 S

T 15 S

T 16 S

T 17 S

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T 276 S

report compiled by Jan Walt 5/28/75
verbatim from Elevators from topo map

60
6
66
6
72

Daniels Camp Mine

LOCATION: The Daniels Camp 'mine' is located in the Steeple Rock mining district in the western foothills of the Mule Creek Mountains, about 15 miles northeast of Duncan. The mine shaft is shown on the York Valley, Ariz.-N. Mex. 15 minute quadrangle in T. 7 S., R. 32 E., Sec. 5, NE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$. The shaft is on or slightly above the 4400 foot contour line (1341 meters) and is located at 32.85843° (32° 51' 30.35") North latitude and 109.07996° (109° 4' 47.86") West longitude. *on the topographic map.*

The Daniels Camp mine can be reached from Duncan by driving northwest on Arizona Highway 75 for 9 miles from the Ariz. 75-U.S. 70 junction. Drive northeast on a dirt road along Sanders Wash for 4 miles to a fork in the road. (The right fork ^{east} leads to the Polly Ann Mine in 2½ miles.) Take the left fork to the northeast for 2 miles and the Daniels Camp mine is on the north side of the road.

OWNERSHIP: *Ms. Elizabeth Tea, Greenlee County Recorder, inherited the two claims from her father. The annual work is up to date.*

GEOLOGY: "The fluorspar occurs as deep green to blue-green stringers in fractured andesite. Nearby is a markedly porphyritic andesite dike. Fluorspar stringers mixed with barren rock extend over an 8 to 10 foot width." (Elevatorski, 1971)

DEVELOPMENT: "Development works consist of one shaft and a large open cut from which most of the production was obtained. It was one of the four largest producers in the district." (Elevatorski, 1971)

DANIELS CAMP MINE

Located in the NE-1/4 sec. 5, T7S R32E, about 1.5 airline miles northwest of the Polly Ann Mine at about elevation 4400. It is one of the four largest producers in the district.

Development works consist of one shaft and a large open cut from which most of the production was obtained. In the open cut, the fluorspar occurs as deep green to blue-green stringers in fractured andesite. Nearby is a markedly porphyritic andesite dike. Fluorspar stringers mixed with barren rock extend over an 8 to 10 ft. width.

In 1975 all mine openings were caved.

DANIELS CAMP MINE

LOCATION: The Daniels camp 'mine' is located in the Steeple Rock mining district in the western foothills of the Mule Creek Mountains, about 15 miles northeast of Duncan. The mine shaft is shown on the York Valley, Ariz.-N. Mex. 15 Minute quadrangle in T.7S., R32E, Sec 5, NE1/4. The shaft is on or slightly above the 4400 foot contour line (1341 meters) and is located at 32.35343° ($32^{\circ}51'30.35''$) North Latitude and 109.07996° ($109^{\circ} 4' 47.86''$) West longitude.

The Daniels Camp mine can be reached from Duncan by driving northwest on Arizona Highway 75 for 9 miles and from the Ariz. 75-U.S. 70 Junction. Drive northeast on a dirt road along Sanders Wash for 4 miles to a fork in the road. (The right fork leads east to the Polly Ann Mine in 2-1/2 miles.) Take the left fork to the northeast for 2 miles and the Daniels Camp mine is on the north side of the road.

OWNERSHIP: Ms. Elizabeth Tea, Greenlee County Recorder, inherited the two claims from her father. The annual work is up to date.

GEOLOGY: The fluorspar occurs as deep green to blue-green stringers in fractured andesite. Nearby is a markedly porphyritic andesite dike. Fluorspar stringers mixed with barren rock extend over an 3 to 10 foot width.

Development work consist of one shaft and a large open cut from which most of the production was obtained. In 1975 all mine openings were caved.

"In 1952 some production again came from the Duncan district and in 1953 the largest amount (1,951 tons) of fluorspar produced in Arizona in a single year was shipped from mines in the Duncan and Castle Dome districts and from the Spar Mine." (Val Alstine & Moore, 1969, as above).

GEOLOGY: "This western foothill portion of the Mule Creek Mountains is made up of porphyritic andesite, basalt and rhyolite tuff, intruded by dikes of rhyolite porphyry.

The veins occupy two systems of fissures. One system, representing irregular and branching shear faults, strikes between north 10 degrees east and north 25 degrees west, subparallel to the principal rhyolite dikes; it has yielded somewhat more than half of the total district production and is exemplified at the Fourth of July and Luckie No. 1 mines.

The veins consist largely of dense massive to banded quartz, locally with coarsely crystalline calcite and colorless or green fluorite of medium to coarse texture.

Individual spar shoots, which are best in the andesite and basalt, average approximately 3 to 4 feet wide and 50 feet long by 50 feet high. In places spar shoots of good quality and size continue below water level, which was encountered at depths of from 90 to 165 feet. The Polly Ann is reported to have been drowned out at 185 feet or 50 feet below water level.

The Duncan area may not yet be considered as exhausted, but costs of mining, pumping, transportation and milling have held back further development of it during recent years." (Wilson, 1950, p. 8-9).

"Duncan (Steeple Rock) district - Medium - to coarse-grained, colorless or green fluorite, as lenses in veins of dense, massive to banded quartz cutting Tertiary rhyolite, andesite and basalt. Ore shoots, averaging 3-4 feet thick, 50 feet long and 50 feet high, contain about 65 percent CaF_2 and 25-30 percent SiO_2 . Arizona's most productive fluorspar district." (Val Alstine & Moore, 1969, p. 352)

Others of the Arizona fluorspar deposits, "exemplified in the Duncan, Castle Dome and Vulture areas, are many miles from outcrops of large intrusive bodies, but they are more or less closely associated with abundant dikes which indicate the presence of stock-like intrusives beneath. The associated dikes are rhyolite in the Duncan area, rhyolite and diorite porphyry in the Castle Dome district and andesite porphyry and pegmatite in the Vulture area." (Wilson, 1950, p. 6)

"The Duncan fluorite veins contain a little tungsten, but are 4 miles from gold veins of the Steeple Rock district and 11 miles from siliceous silver, gold, copper and lead deposits of the Ash Peak district. Peilomelane containing tungsten, generally under 2 percent WO_3 , occurs in parts of the Duncan veins. Limonite is locally present." (Wilson, 1950, p. 7)

In the Duncan district mineralization generally followed faulting, although there was some additional movement as some of the fluorite is brecciated. The orebody type is generally fissure veins (mineral mass filling open spaces along a fracture with or without chemical alteration of adjoining rock), with some shear zones (zone of fissuring or shearing that has been mineralized by impregnating solutions, by replacement or by filling of open spaces), and some breccia filling (zone of shattering in which mineralization has cemented or replaced the shattered mass of angular fragments and comminuted material). The mode of origin

was hydrothermal (mineral deposition by heated, ascending solutions) and the shape of the orebodies are tabular (orebody relatively long in two dimensions and short in one dimension). The ore controls were generally fracturing (jointing) and faulting. The wall rock alteration is slight to moderate and the type of alteration was silification (increase in amount of quartz or opal in country rock). (Definitions within parentheses are from the MAS classification manual). There was no confidential information entered in the record or used in the study. Access to all underground workings in the area was denied by MESA for safety reasons. None of the mines are currently active.

Duncan district

LOCATION: The Duncan fluorspar district is located in the Steeple Rock mining district in the western foothills of the Mule Creek Mountains, between 11 and 20 miles by road northeast of Duncan, Arizona. The mines are within 2 to 3 miles of the Arizona-New Mexico state line in T7S, R32E, sections 4, 5, 9, 10 and 15. The mines are shown on the York Valley, Arizona-N. Mexico 15 minute topographic quadrangle.

The Duncan fluorspar mines can be reached by driving northwest of Duncan, Arizona, on Arizona Highway 75 for 2 miles from the Ariz. 75-U.S. 70 junction. Turn right through a gate in the highway fence and drive $8\frac{1}{2}$ miles northeast on a well-maintained gravel road to Goat Camp Spring. The Goat Camp Mine is near this; the Luckie No. 1 and 2 mines are about $1\frac{1}{2}$ miles along a road to the northwest and the Polly Ann Mine is about 1 mile further along the road to the west. The Daniels Camp mine and the Fourth of July Mine can be reached from the Polly Ann Mine by continuing west on the same road for about 3 miles until it forks back to the northeast, and then by driving northeast for 2 miles to the Daniels Camp mine and an additional mile to the Fourth of July Mine. According to the topographic map this road fork can also be reached from Duncan by driving northwest on Arizona Highway 75 for 9 miles from the Ariz. 75-U.S. 70 junction and taking a northeast dirt road following along Sanders Wash for 4 miles.

Most of the mines are located near or above elevation 4400 feet (1341 meters) in hilly terrain with local relief about 250 feet within 1 square mile (75 to 100 meters). Duncan, Arizona, has precipitation evenly distributed throughout the year ranging from 12 inches in May to 1.83 inches in August with a mean yearly precipitation of 8.90 inches (Green & Sellers, 1964, p. 163, U. of A. Press). The climate is temperate with the mean daily temperature ranging from 41.0°F in December to 78.6°F in July (Green & Sellers). The area near the mines has desert vegetation and is pri-

marily used for grazing. The area is only 37 miles by road from Clifton, Arizona, a large town with a good labor supply of experienced miners.

PRODUCTION HISTORY: "Initial production began in 1918, with significant shipments in 1936-44, and the last production recorded in 1953. Total Greenlee production is estimated at 7,500 tons." (Elevatorski, 1971)

In 1921 Allen and Butler reported in Arizona Bureau of Mines Bulletin 114 that "according to the owners (Joe Hardy and associates), two carloads of fluorspar have been shipped from the deposits located about sixteen miles from Duncan." "The deposits on their other groups have yielded a small tonnage of high grade fluorspar. The owners estimate that 150 tons per month of selected fluorspar can be produced." (Allen & Butler, 1921)

"Fluorspar mining began in the Duncan district and in the Sierrita Mountains in 1918; however, output was small through 1920 and ceased during 1921-35. Production from the Duncan district was resumed in 1936 and continued until the end of 1944." (Val Alstine & Moore, 1969, Ariz. Bur. Mines Bull. 180, p. 349).

"Shipments, made largely during 1936-44, amounted to possibly 6,500 tons, valued at \$124,000. Most of this output came from the Fourth of July, Luckie, Polly Ann and Daniels Camp mines. It went largely to flotation mills at Lordsburg and Deming, but some was shipped directly to steel plants and for hydrofluoric acid manufacture. The spar averaged about 65 percent calcium fluoride and 25-30 percent silica, although some ranged up to 93 percent calcium fluoride." (Wilson, 1950, p. 8, Az. Bur. Mines Circ. 15).

Danils Camp same as Polly Ann except.

(A-4) cont.

64 ?
 65 ?
 66 "
 67 " elev. abt 4400 = 01341
 72 "
 73 "
 74-5 "

(A-5)

1-13
 14 " 1 (1.5 mi. NW Polly Ann)
 on pile rd
 15 ? 4 $\frac{7.10 \text{ km}}{6 \text{ mi.} + 1.5 = 7.5 \text{ mi.}} = 12.07 \text{ km}$ (1.6093)
 16 3 < 50 km

(A-6)

1-13 same as A-1
 14 " 0 no confid.
 15-16 " 75 1975 yr. info
 17 ? 1 ore min. exposed in place
 18-21 ? yr of discovery
 22-25 ? yr 1st prod.
 26-29 ? yr. last prod.
 30-31 " 61 1 shaft. int. test Elevatorshi
 32 " 1 little used
 33 ?
 34-7 ? yr.
 38-39 81 1 open cut (trenching) Elevatorshi
 40 1 little used
 41 ?
 42-45 ? yr.
~~46~~

(A-7)

1-13 see A1
 14-36 andesite
 37-9 120 ^{an} Tertiary - ?
 40 2 faulting (fractures)
 41 5 intrusion (by ^{porphyritic} andesite dike)
 42-3 80 undetermined
 44-6 120 Tert. dike,
 47 4 mineralization following event
 48-50 3.0 ? density - see Polly Ann
 51-53 156 andesite
 54-5 $\frac{1}{2}$ fractures contain ore
~~55~~ gangue.

Daniel's Camp

(A8)

1-13 as (A1)
 14-16 120 Tert.
 17. no data - prob. same as Polly Ann
 4 - cse phan.
 18-20 200 fluonite
 21-2 06 halide
 23 4 cse phan.
 24-7 1 1 %?
 28 wt-vol %?
 29-31 412 qty
 32-3 15 SiO₂
 34 4 cse phan.
 35-8 %?
 39 wt-vol %

(A9)

1-13 as A1
 14 0 no confid. info
 15-16 07 fissure veins
 17-18 02 shear zone
 19-20 04 breccia filling
 21-2 1 hydrothermal
 22-5 1 tabular
 26-7 2 ore controls fract.
 3 fault.
 28 ? 3 mod. wall rx alt.
 29-34 07 silicification " " "
 35-9 0 surf.
 40-4 0 "
 45-8 0 "
 49-52 0 "
 53-8 ? length min. zone
 59 ? }
 60-1 } strike
 62 }
 63-8 ? ave width min. zone
 69-70 ? dip
 71 ? dip
 72-5 3 10' (.305 m/ft) = 3.05 8-10 ft Elev.