

A SURVEY OF ONE HUNDRED STONES – PART 1 <u>SWEET HOME MINE, ALMA, COLORADO</u> <u>A CASE HISTORY</u>

FEBRUARY 25, 2022

Presented by C. Eugene Kooper, PLS, PG, CFedS

Course Discussion Items

1. When conducting a monumented land survey of two or more patented lode mining claims that are in conflict with each other, **must** a Colorado Professional Land Surveyor stake the intersections of the conflicting mineral surveys? In other words, do the Colorado Revised Statutes and/or Board Rules require the intersections to be staked? (See Sec. 38-51-102 Definitions (13))

"Monumented land survey" means a land survey in which monuments are either found or set pursuant to sections 38-51-103, 38-51-104, and 38-51-105 to mark the boundaries of <u>a</u> <u>specified parcel of land</u>.

2. How should the land surveyor address the possibility that monuments have moved in mountainous terrain?

a. What standard of proof should be applied in these is situations?

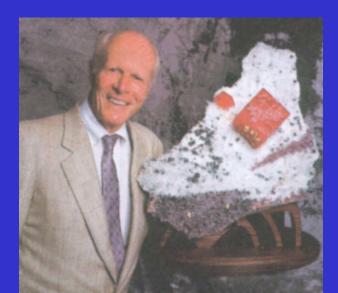
b. How should a surveyor reestablish a corner where the monument has moved?

The Alma King

Rhodochrosite on Quartz, Fluorite and Tetrahedrite

Sweet Home Mine Alma, Colorado

Photograph by Jeff Scovil





The Alma King Crystal as Found

Single Crystal of Rhodochrosite in Vug (4 1/4" x 4 1/4" x 2 1/2")

Rainbow Pocket Sweet Home Mine Alma, Colorado

Photograph by Bryan Lees



Imbedded in a spectacular yet delicate matrix of clear quartz and fluorite crystals lies

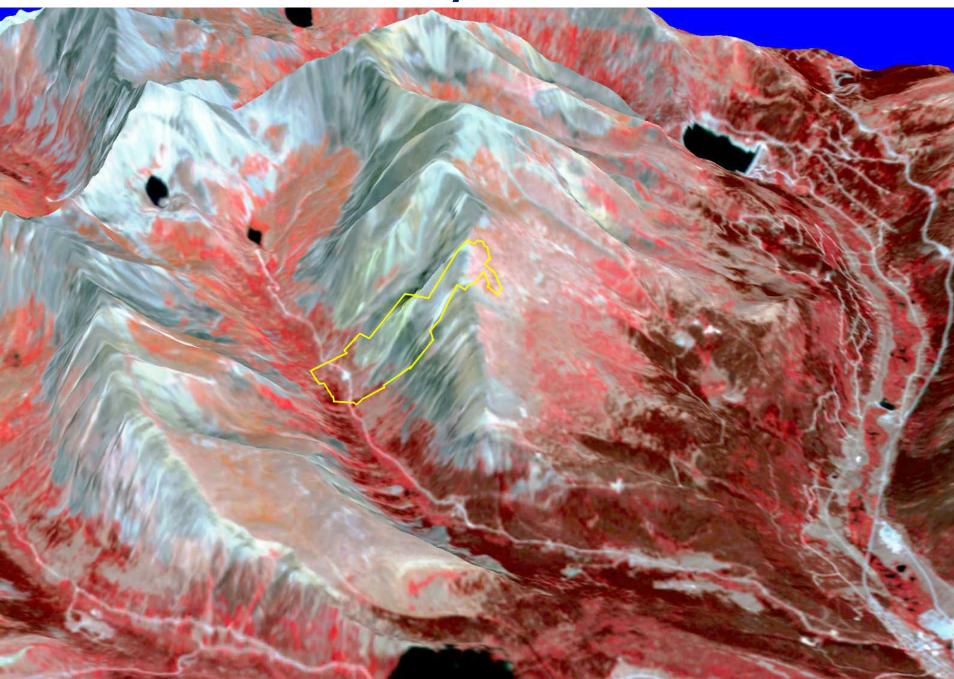
Imbedded in a spectacular yet delicate matrix of clear quartz and fluorite crystals lies the Museum's newly acquired, deep red Alma King rhodochrosite crystal rhombus, the largest and most perfect specimen of its kind in the world. Actual size. Photo: Jeffrey A. Scovil



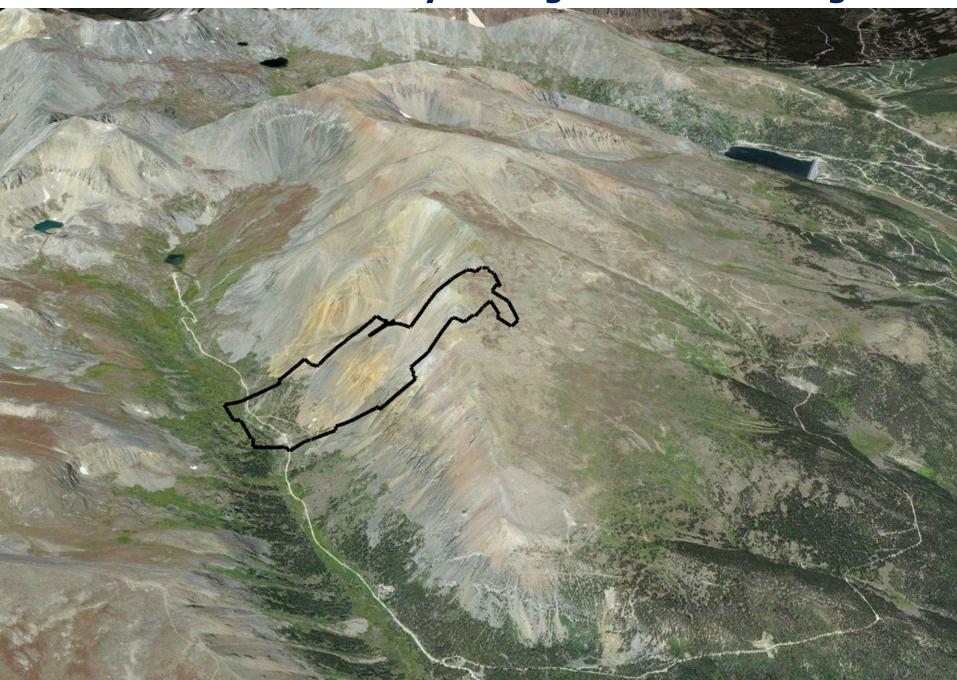
Mt. Bross and Vicinity – Landsat Imagery



Mt. Bross and Vicinity - ASTER Color-infrared



Mt. Bross and Vicinity – Google Earth Pro Image



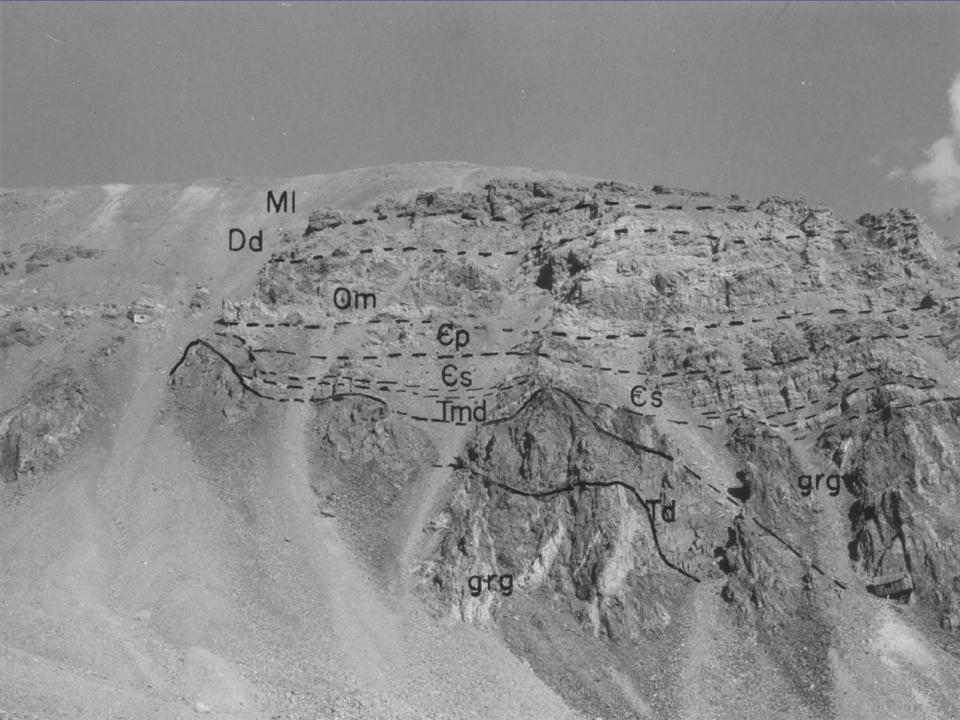
Mt. Bross

Photograph Taken from Loveland Mountain

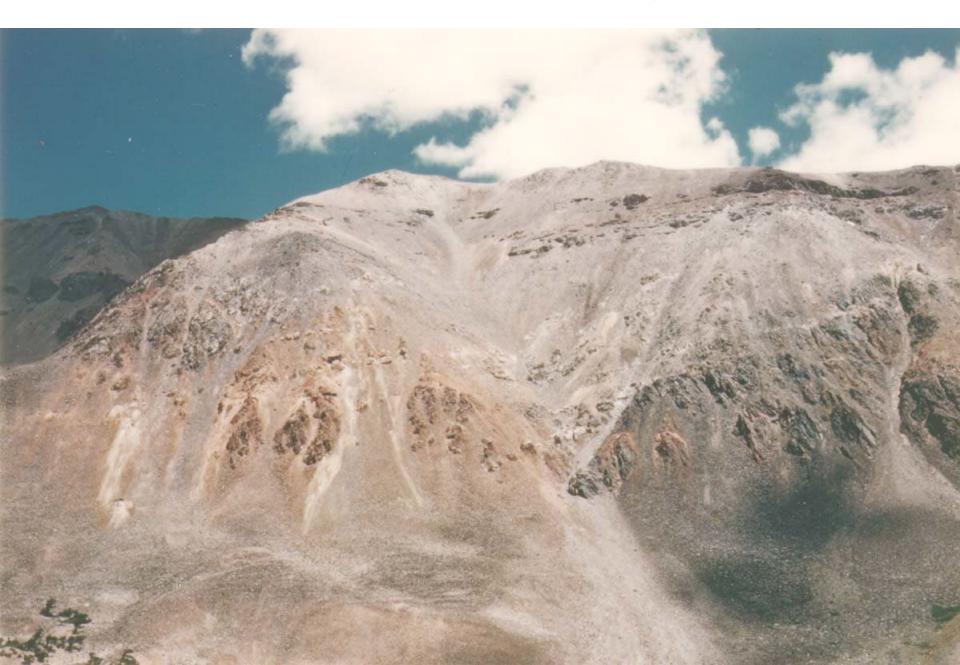


From Colorado School of Mines Masters Thesis by Russell Corn - 1956





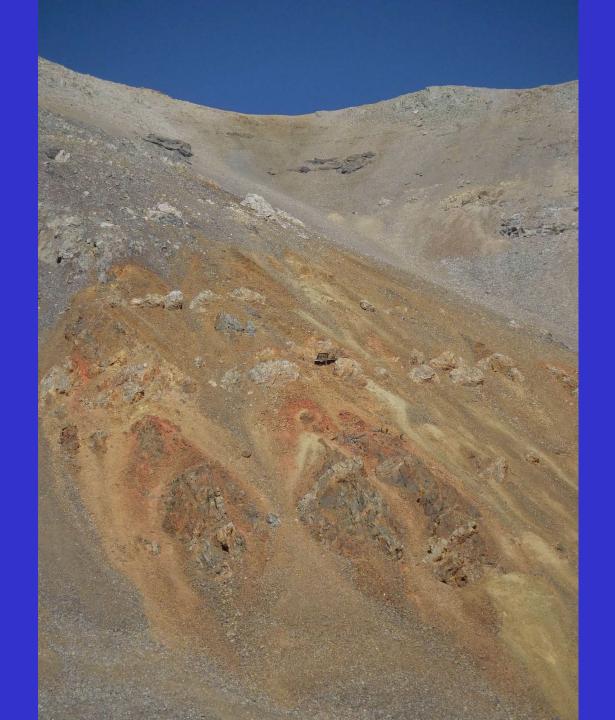
From Colorado School of Mines Masters Thesis by Russell Corn - 1956



From Colorado School of Mines Masters Thesis by Russell Corn 1956

Sweet Home Mine and Outbuildings





Google Earth

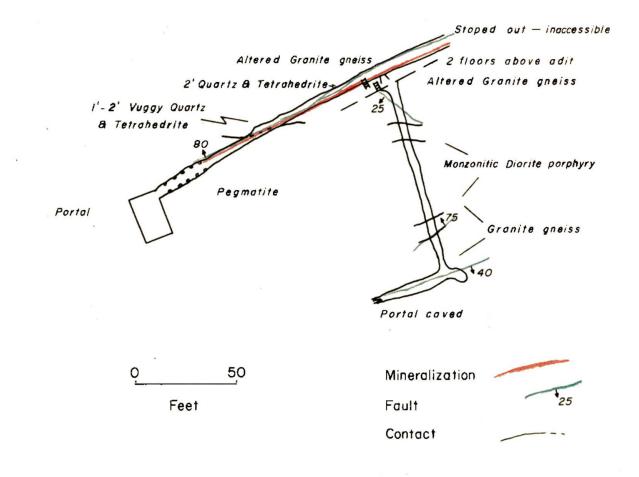


FIGURE 31

GEOLOGIC MAP

OF

UPPER ADIT, HOME SWEET HOME MINE

PARK COUNTY, COLORADO

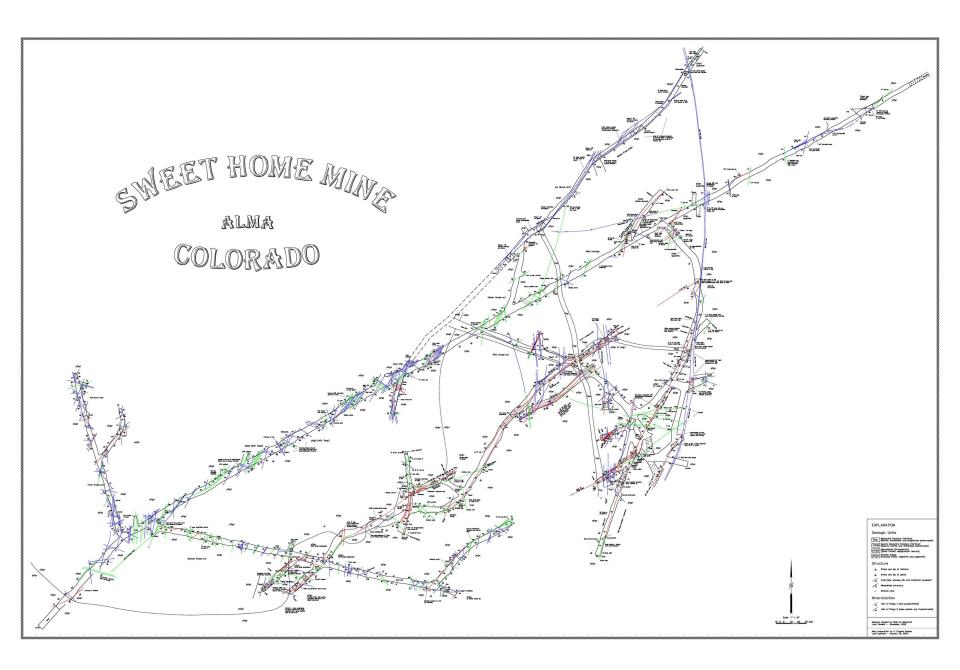
R. CORN AUGUST 1956

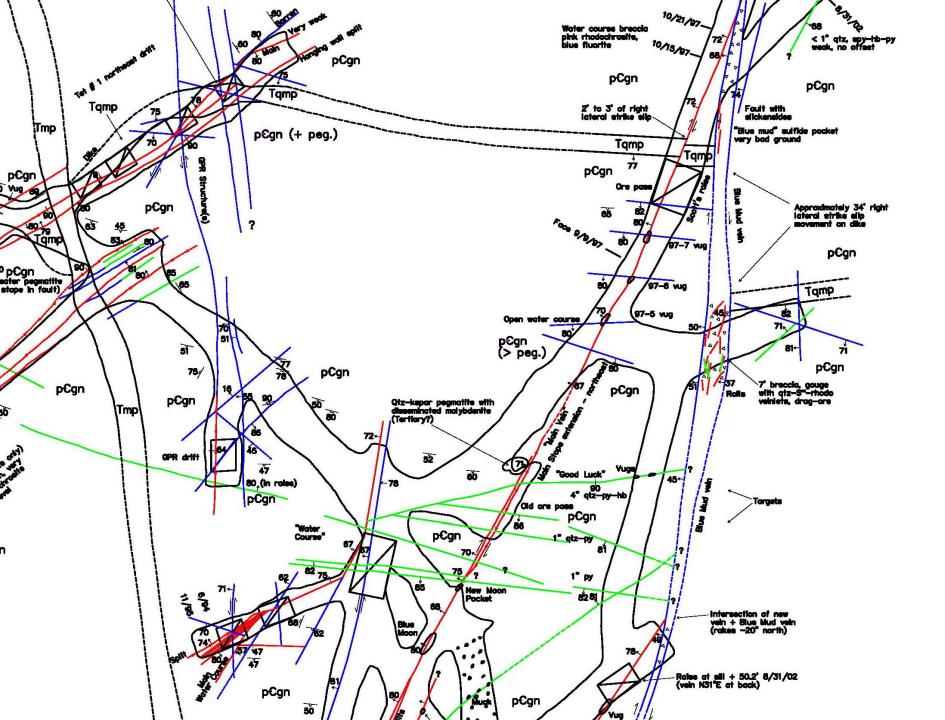


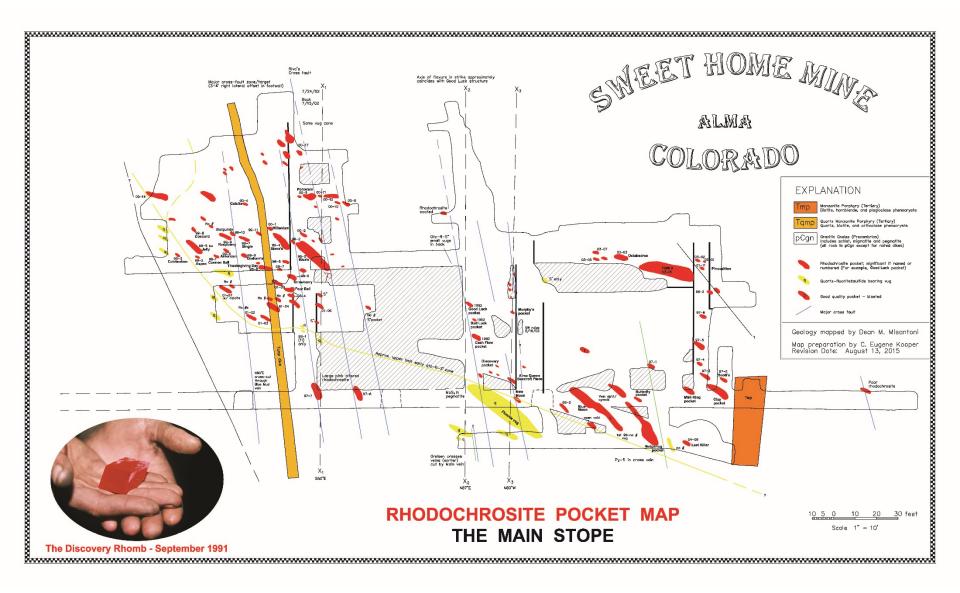




Google Earth









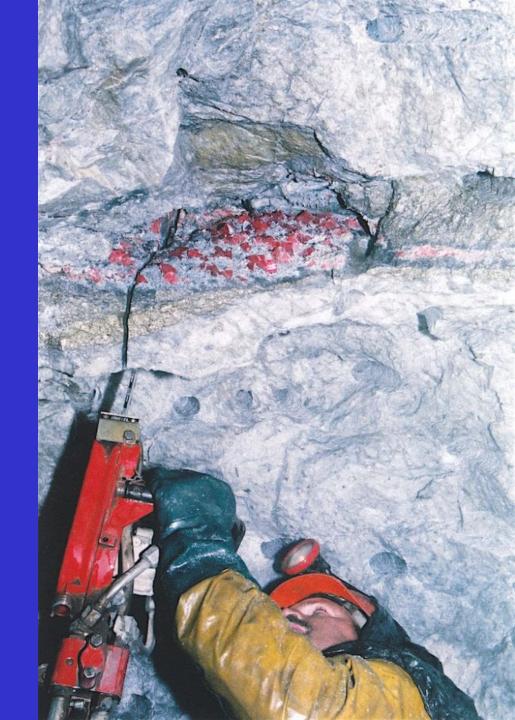


Unnamed Rhodochrosite

Extracting Crystal Plate Using a Diamond-Impregnated Chainsaw

Nate's Pocket Sweet Home Mine Alma, Colorado

Photograph by Bryan Lees



Unnamed Rhodochrosite Rhodochrosite on Quartz and Pyrite Nate's Pocket, Sweet Home Mine - Alma, Colorado



Rhodochrosite with Needle Quartz and Sulfide Minerals (*in situ*)

Hedgehog Pocket Sweet Home Mine Alma, Colorado

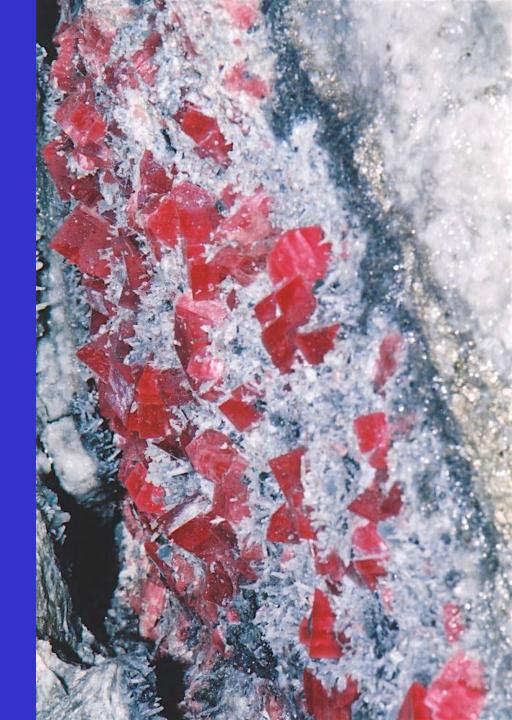
Photograph by Bryan Lees

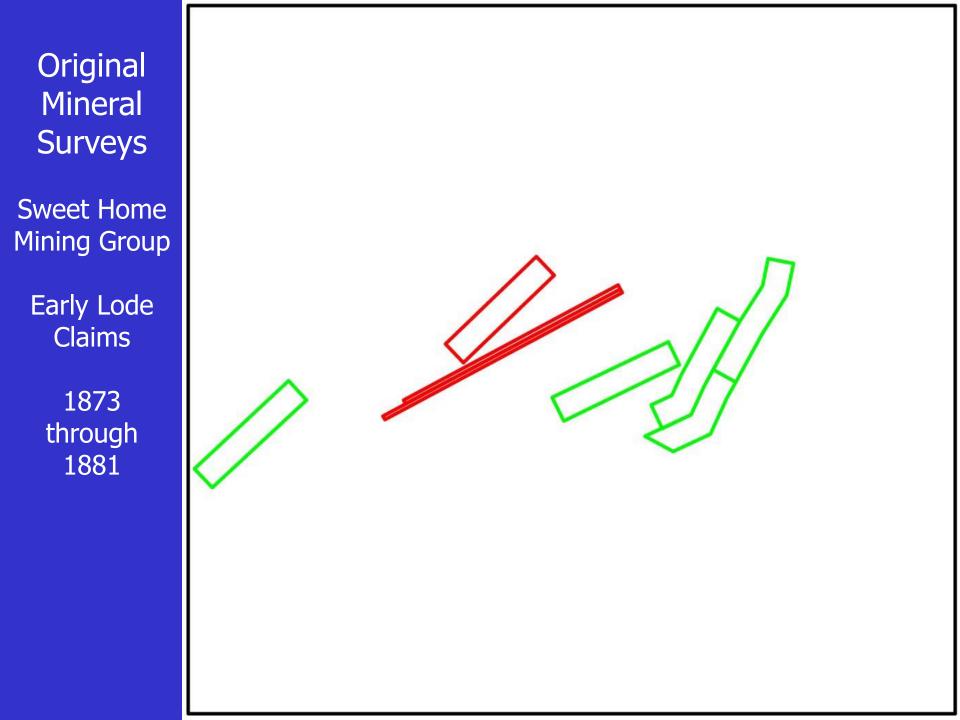


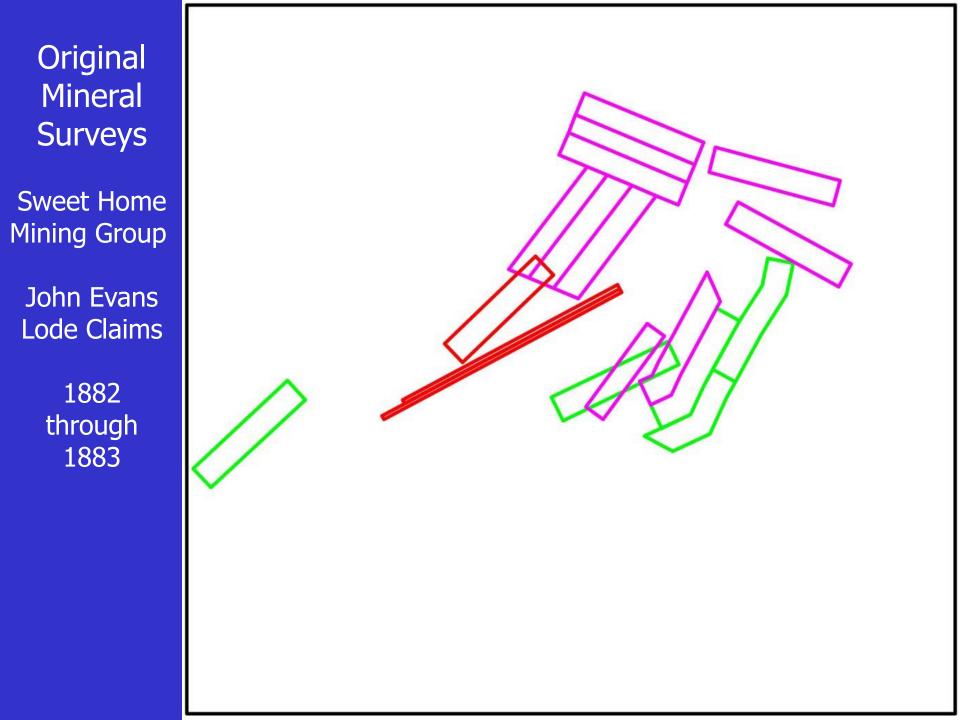
Rhodochrosite with Needle Quartz and Sulfide Minerals (After Extraction)

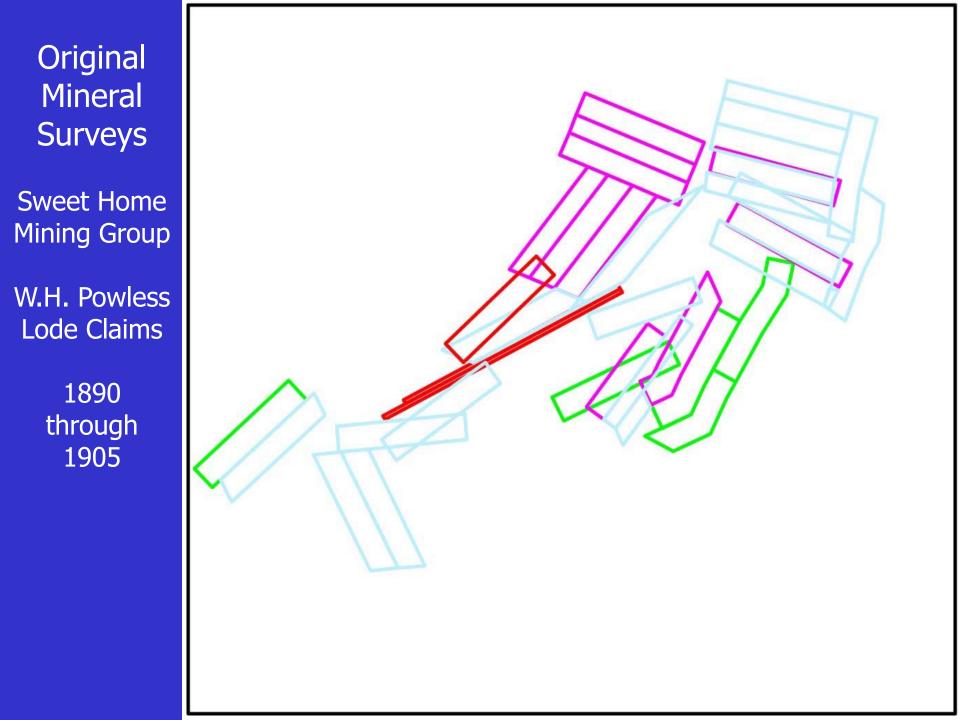
Hedgehog Pocket Sweet Home Mine Alma, Colorado

Photograph by Bryan Lees









March 31,1932.

Gerald Galloway's Proposal to Edwin Spray to Survey Nine Lode Claims and One Mill Site

A Mere \$830

Mr.Edwin C.Spray 2110 Market St., Denver, Colo..

My dear Mr. Spray:-

Having been away from here for a few days will explain the delay in answering your letter of the 21st.

In patenting your claims at the Sweet Home Mine, I might suggest that you combine the Sweet Home Fraction with the Combination, and the Eagle with the Social Fund. This will make, instead of eleven claims, nine claims to patent,- a saving of about \$356.00. The Mill Site should not go to patent until there are milling improvements upon that site, otherwise the application is sure to be refused.

The estimated maximum cost to patent the nine claims, which includes everything, is \$1805.00, as flaows:-

Surveys, field and office,	\$830.00
Abstracts of title certified	
copies of recorded instruments,	25.00
Supervisor of surveys,	\$250.00
Advertising applications,	60.00
Filing fee Denver Land Office,	10.00
Attorney fees	105.00
Posting notices, wi tness fees,	
Notary Public fees and stamps,	15.00
Purchase price to Land office	
\$5.00 per acre, 102 ac.,	510.00
	\$1805.00

This figure should be less, but is difficult to arrive at exactly Usually the survey costs \$55.00 a claim, and the intersections of claim line about \$5.00 an intersection for computations. And as you know the crossing of lines is quite considerable. However, I will do the very best I can for you Mr.Spray. I would ask \$400.00 down to cover fee to Supervisor of Surveys and my expenses and abstracts.

The first thing required would be an abstract of title. This showing everything clear, the next step would be to give yourself authority to make application, power of attorney. Then I would make the survey and have all claim line in perfect order, and next get an order for survey from the Government. The notes would go in for approval. Approval is usually three or four months after time of survey.

Surveys, field and office, Abstracts of title certified copies of recorded instruments, Supervisor of surveys, Advertising applications, Filing fee Denver Land Office, Attorney fees Posting notices, wi tness fees, Notary Public fees and stamps, Purchase price to Land office \$5.00 per acre, 102 ac.,

\$830.00 25.00 \$250.00 60.00 10.00 105.00 15.00 510.00 \$1805.00

Edwin Spray's Letter Accepting Mr. Galloway's Proposed Costs



DEPENDABLE SINCE 1904

2110 MARKET ST. DENVER, COLORADO April 27, 1932

Gerald F. Galloway, U. S. Deputy Mineral Surveyor, Alma, Park County, Colo.

Dear Mr. Galloway:

The information and recommendations with reference to patenting of the unpatented Sweet Home lode Claims, contained in your letter of March 31st, is appreciated.

I have thought the matter over a great deal, and altho I dislike to go to this additional expense, have decided after looking the matter over from the various angles that under the circumstances it is the sensible thing to do.

I appreciate your offer to do all that you can to keep the expense down and to axtend the time of payment of your fee-- I will, however, be anxious to get it paid off as quickly as possible.

You will note from the records that the title to the Sweet Home property and equipment is now in my name-- your letter leads me to believe that you are under the impression that it is still a Company or a partnership.

Mr. Harry A. Davis, 407 University Building, Keystone 6051, Denver, is my attorney and I would prefer that he attend to any legal work in connection with the matter that might be necessary at this end of the line-- aside from that I would expect you to assume the responsibility and attend to the detail, including any legal work that can and should be done there by you. You need not hesitate to refer any of the legal work to Mr. Davis, as he is competent and very thorough. He has had many years and a wide range of experience, and I am sure you will find him most agreeable to work with.

The unpatented Sweet Home Claims are as follows :-

Sweet Home Fraction	Wedge
Combination	
Bluebird	Silent Friend
Daniel	Crackerjack
Kasel	Social Fund
	Eagle
Spray	
	Conset Ways Million of

Sweet Home Mill Site.

UNITED STATES DEPARTMENT OF THE INTERIOR GENERAL LAND OFFICE

OFFICE OF THE SUPERVISOR OF SURVEYS

DENVER, COLORADO

September 29, 1932.

Mr. Gerald F. Galloway, U. S. Mineral Surveyor, Alma, Colorado.

Dear Sir:

6

You are hereby directed to survey the claim of Edwin C. Spray, upon the Sweet Home Fraction, Blue Bird, Daniel, Spray, Kasel, Wedge, Silent Friend, Social Fund and Crackerjack lodes, and the Sweet Home mill site, in Buckskin and Consolidated Montgomery Mining Districts, Denver Land District, Park County, Colorado, fully described in the enclosed copies of additional and amended location certificates.

This survey will be designated as Mineral Survey No. 20504 A&B, and must be made in strict conformity with the existing laws and official rules and regulations thereunder.

Make prompt returns to this office.

Very truly yours,

Russell K. Allen Administrative Cadastral Engineer.

Enclosures JF

UNITED STATES DEPARTMENT OF THE INTERIOR

GENERAL LAND OFFICE

OFFICE OF THE SUPERVISOR OF SURVEYS

DENVER, COLORADO

January 26, 1933.

Mr. Gerald F. Galloway, U. S. Mineral Surveyor, Alma, Colorado.

Dear Sir:

7

I enclose order for Mineral Survey No. 20507 embracing the locations eliminated from Survey No. 20504.

Your assistants' oath in Survey No. 20504 will be corrected in this office. A new assistants' affidavit will be required for the new survey, and if your assistant Kinney is not available the signature of one assistant will be sufficient. You should prepare new affidavit of your own, however, for Survey No. 20504.

In regard to Surveys Nos. 3103, 3105 and 3106, you should report that "Cor. 1 of Sur. No. 3106 was found standing and that the corners of the other surveys were fixed as approved in relation to this corner."

If the original position of Cor. 4 of Survey No. 766 can be determined, you should report that the original corner stone was replaced in the mound of rocks where it originally stood. 4

Your explanation as to the old Enterprise tunnel is satisfactory and the marginal notation in the returned field notes should be ignored.

Owing to the uncertainty of the ties and relative positions in Survey No. 20504, the intersections and areas were not checked.

I hope you will be able to return these field notes in acceptable form.

Very truly yours

Administrative Cadastral Engineer.

Enclosure JF

January 21st.1933.

Mr.Russel K.Allen Administrative Cadastral Engineer Office of the Supervisor of Surveys Denver, Colorado.

My dear Sir:-

Your letter of January 18th. received with the field notes of Survey No.20504.

I had the idea that these claims would be considered as one group because they are tied together in a group of common ownership. However, the claimant ,no doubt, will make an amended application for survey as you suggest.

Cor.l of Sur.No.3106 Colorado Springs lode was found fallen over but in a large mound of stones.So I took it as being the correct corner. And Cor.4 of Sur.No.766 J.G.Blaine had fallen off the edge of a cliff down onto a ledge six feet below. The original mound of stones remained fairly intact. So I placed the corner stone back in the mound of stones..However I will report more fully,- only I don't want to get too tedious.

The old Enterprise tunnel caved in and a new tunnel was started just above it. The newly broken rock was filled into the old tunnel. The portal is still visible a little to one side and below the new tunnel.

Thank you so much for your helpful criticizms.

In the new arrangement of surveys, will you require new final oaths to be made for Sur. No. 20504? The one helper Kinney has left the country.

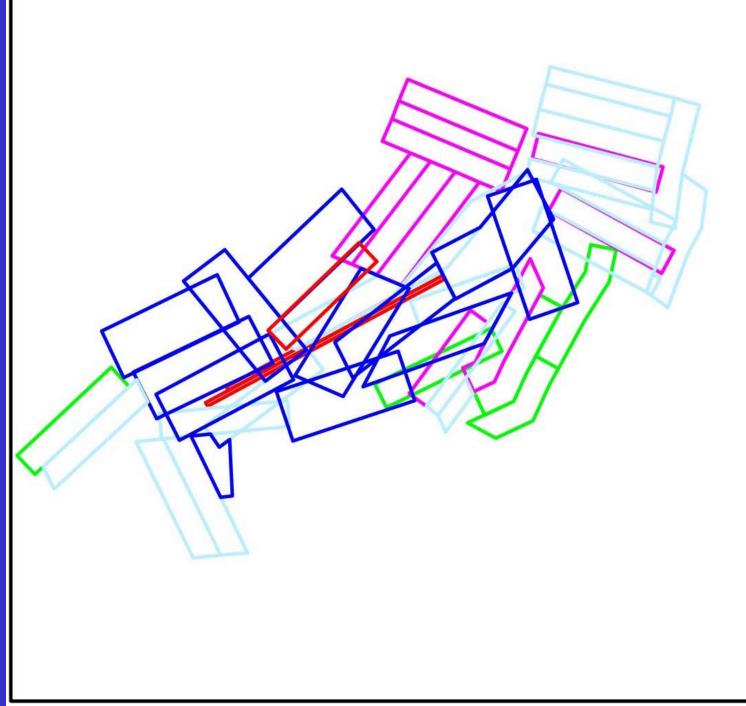
Very truly yours,

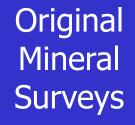
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Galloway Lode Claims and Mill Site

> 1932 and 1938

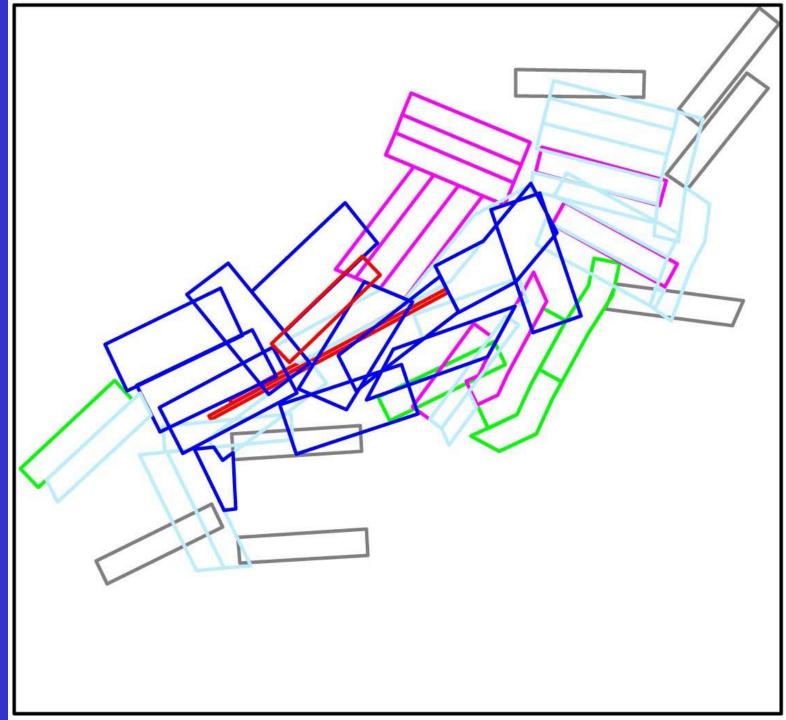


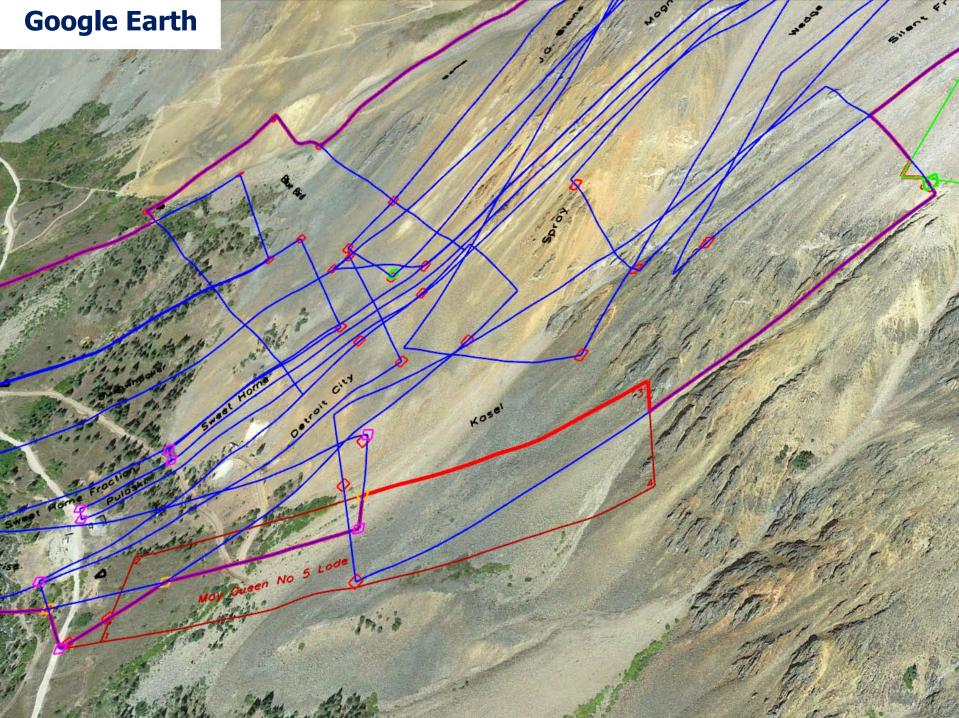


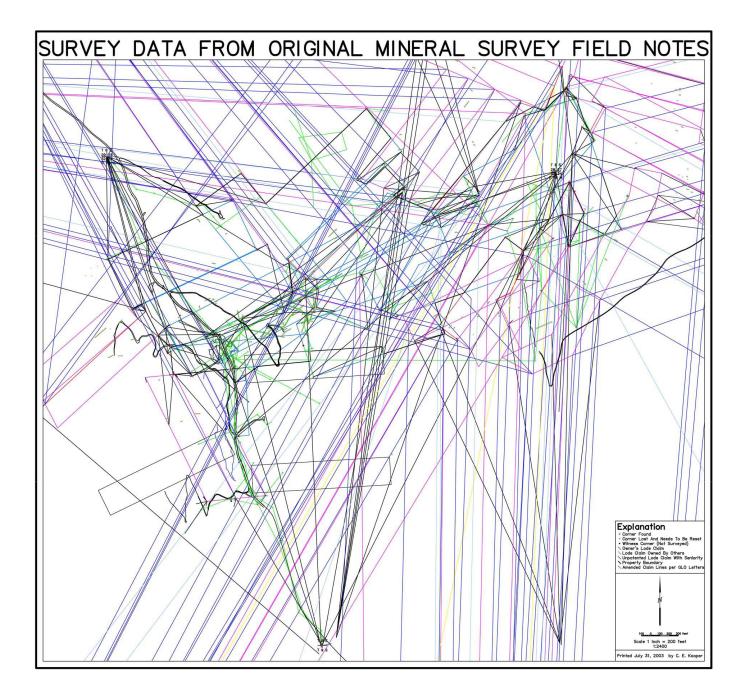
Sweet Home Mining Group

Unsurveyed Lode Claims

Various Dates









Survey Traverse Lines Run in 1932 by Gerald F. Galloway, USMS for Mineral Survey Nos. 20504 and 20507 A&B



Solar Observation for July 20, 1932 by Gerald F. Galloway

Survey for E.C. Spray July 2071932 Jolar Vuli # 1932 0 Tal 5 Sigl and Foresight Needle H.A O V.A. Vernier 49013' 00 51250 E 62051'LA. 620 33' 2 490 28: 49045 62°140 0.0' 512°35'E 50°41' 60° 33 H 50° 52' 60°20 r 500 15' 59 51 Computed bearing \$ 13° 15' E Var 13° 41 E

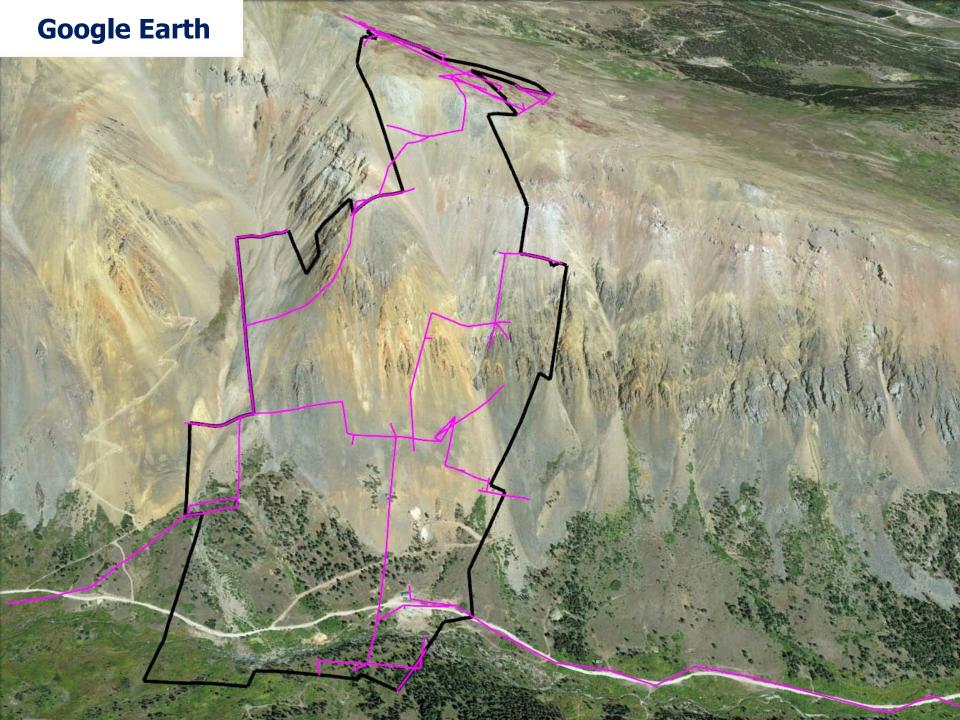
Calculation Sheet for

Solar Observation for July 20, 1932 by Gerald F. Galloway

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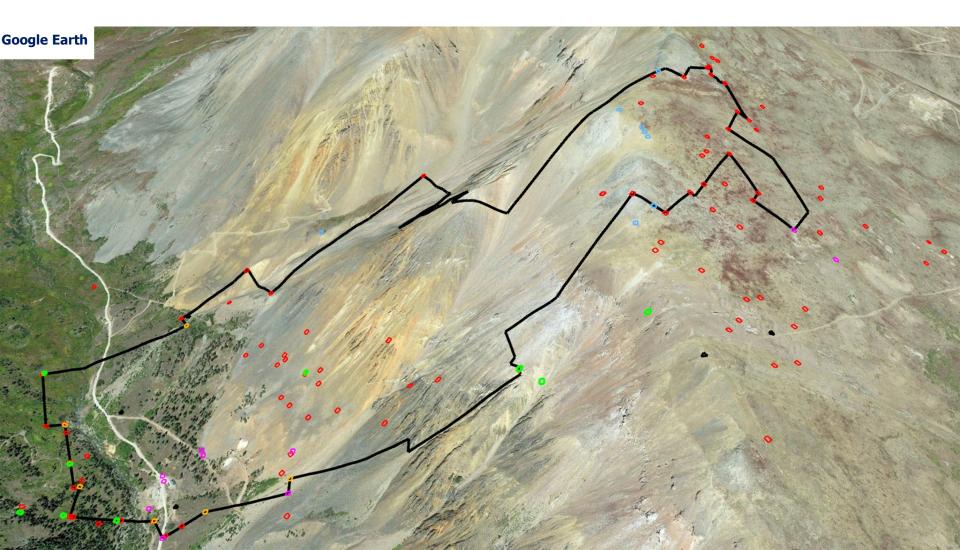
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Original Mineral Survey Corners and Accessories and Monuments Set for the Nineteen Lode Mining Claims Comprising the Sweet Home Mining Group

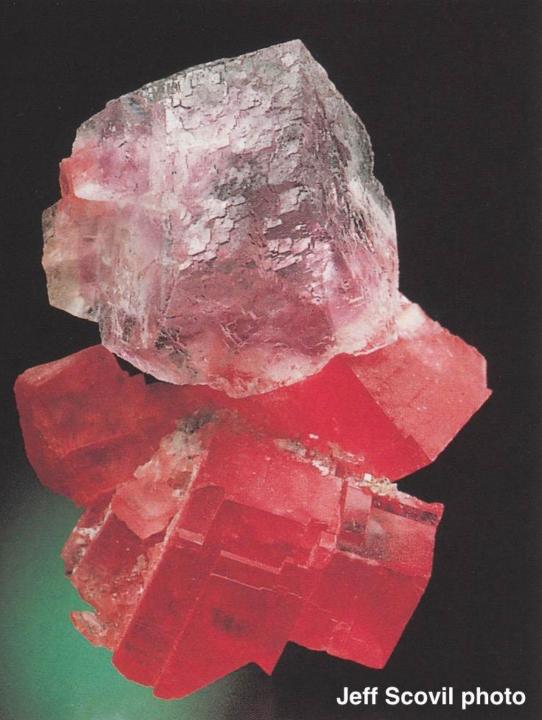


Unnamed Rhodochrosite

Fluorite on Rhodochrosite (4.1 cm high)

Murphy's Pocket Sweet Home Mine Alma, Colorado

Photograph by Jeff Scovil



Example of a discrepancy in the official record

Marginal notations in red ink on plats of prior official surveys INSTRUCTIONS

TO

U. S. Deputy Mineral Surveyors,

FOR THE

District of Colorado,

MAY 1, 1886.

FIRST INSTRUCTIONS (1886, CO) SPECIFYING A SEPARATE REPORT

(f) The use or adaptability of the claim for placer mining, and whether water has been brought upon it in sufficient quantity to mine the same, or whether it can be procured for that purpose.

- 14 -

(g) What works or expenditures have been made by the claimant or his grantors for the development of the claim, and their situation and location with respect to the same as applied for.

 (\hbar) The true situation of all mines, salt licks, salt springs, and mill seats, which come to your knowledge, or report that none exist on the claim, as the facts may warrant.

(i) Said report must be made under oath, and duly corroborated by one or more disinterested persons.

44. Descriptive reports upon placer claims taken by legal subdivisions are authorized only by special order, and must contain a description of the claim in addition to the foregoing requirements.

PRELIMINARY PLAT.

45. You will file with your field notes a preliminary plat on drawing paper or tracing muslin, protracted on a scale of two hundred feet to an inch, on which you will note accurately all the topographical features and details of the survey in conformity with the specimen plat herewith. Pencil sketches will not be accepted.

REPORT.

46. You will also submit with your return of survey a report upon the following matters incident to the survey, but not required to be embraced in the field notes.

47. If the meridian from which your courses were deflected was established by other means than by the solar apparatus attached to your transit, you will state in detail your observations and calculations for the establishment of such meridian

48. If any of the lines of the survey were determined by triangulation or traverse, you will give in full detail the calculations whereby you arrived at the results reported in your

field notes. You will also submit your calculations of areas of placer and mill-site claims or other irregular tracts.

- 15 -

49. You will mention in your report the discovery of any material errors in prior official surveys, giving the extent of the same.

ERRORS.

50. Whenever a survey has been reported in error, the deputy surveyor who made it will be required to promptly make a thorough examination, upon the premises, and report the result under oath to this office. In case he finds his survey in error, he will report in detail all discrepances with the original survey, and submit any explanation he may have to offer as to the cause. If, on the contrary, he should report his survey correct, a joint survey will be ordered to settle the differences with the surveyor who reported the error.

JOINT SURVEY.

51. A joint survey must be made within ten days after the date of order, unless satisfactory reasons are submitted, under oath, for a postponement.

52. The field work must in every sense of the term be a *joint* and not a separate survey, and the observations and measurements taken with the same instrument and chain, previously tested and agreed upon.

53. The deputy surveyor found in error, or if both are in error, the one who reported the same will make out the field notes of the joint survey, which, after being duly signed and sworn to by both parties, must be transmitted to this office.

54. The surveyor found in error will be required to pay all expenses of the joint survey and preliminary examinations incident thereto, including ten dollars per day to the surveyor whose work is proved to be substantially correct.

55. Your field work must be accurately and properly performed, and your returns made in conformity with the foregoing instructions. Errors in the survey must be corrected at your own expense, and if the time required in the examination of your returns is increased by reason of your neglect or field notes. You will also submit your calculations of areas of placer and mill-site claims or other irregular tracts.

49. You will mention in your report the discovery of any material errors in prior official surveys, giving the extent of the same.

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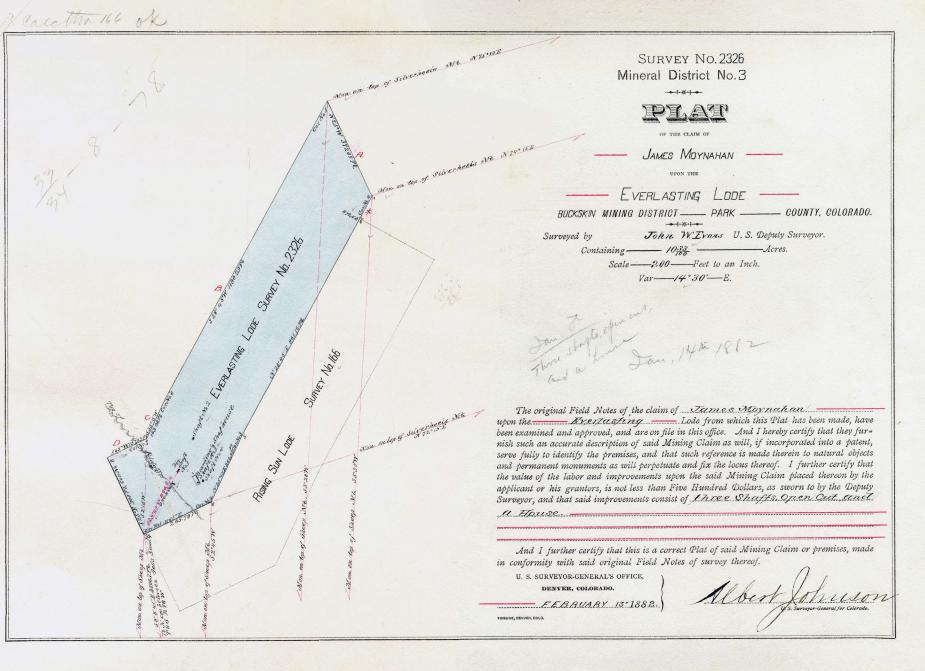
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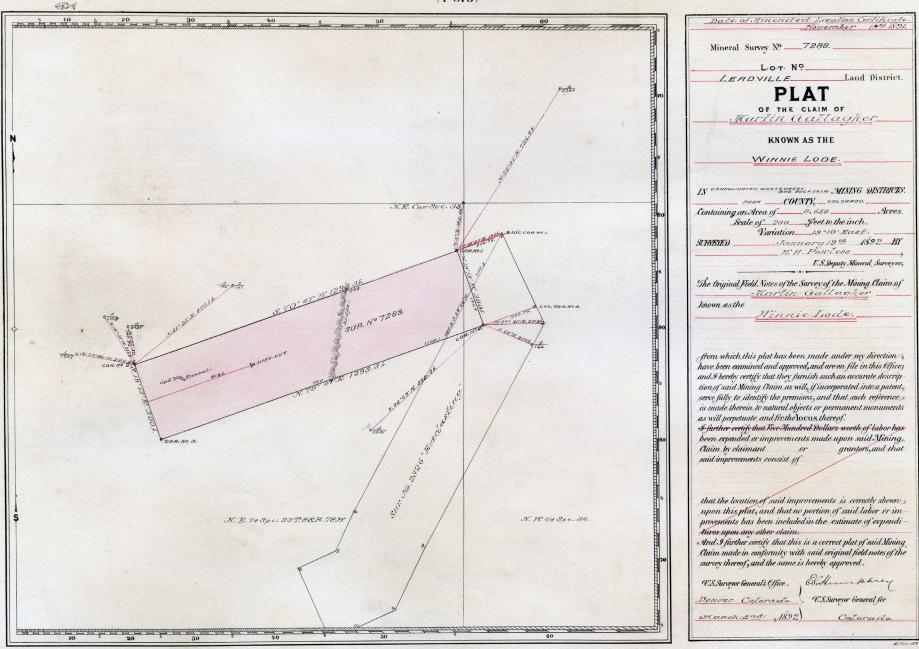
52. The field work must in every sense of the term be a *joint* and not a separate survey, and the observations and measurements taken with the same instrument and chain, previously tested and agreed upon.

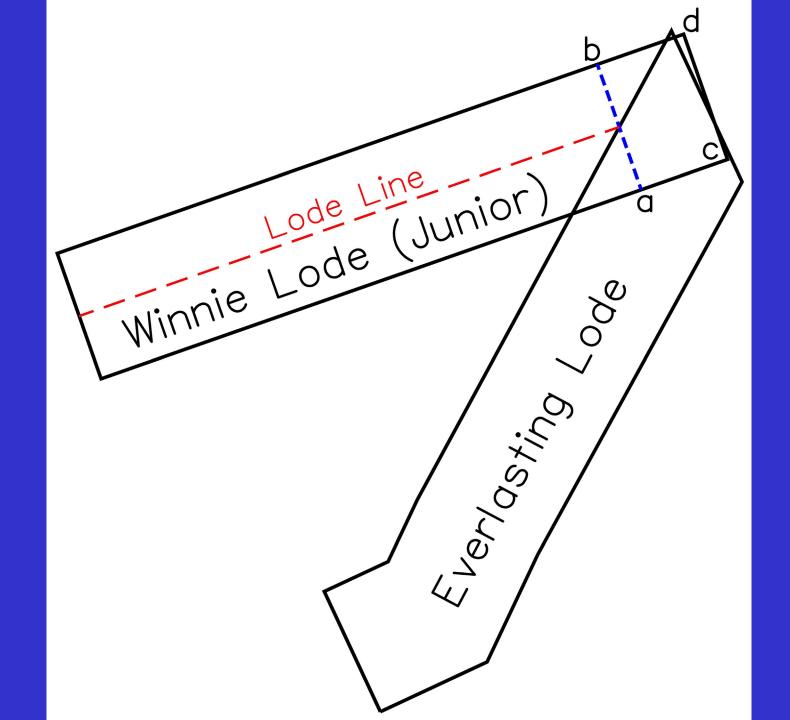
53. The deputy surveyor found in error, or if both are in error, the one who reported the same will make out the field notes of the joint survey, which, after being duly signed and sworn to by both parties, must be transmitted to this office.

54. The surveyor found in error will be required to pay all expenses of the joint survey and preliminary examinations incident thereto, including ten dollars per day to the surveyor whose work is proved to be substantially correct. x 5.28° 35' W. 95.5 ft. See letter 21797- Feb. 13-1892 A. N. 25' 4' W. 3765" " " " " 5.28° 28' W. 12044 " 21709- " 3- " C. 5.24' 47' W. 167.5 " D. 5.66' 47' W. 170.1 " " 18208 - AUG. 21. 1897.



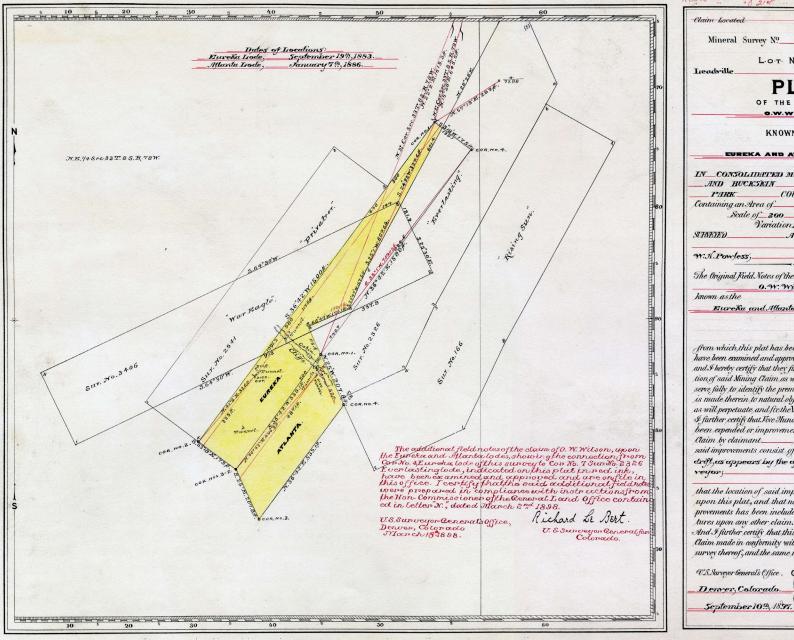
(4-675)





(4-675)

Red J. G. O. a. 10th. 1897.



M.J. Mineral Survey Nº 12063 LOT NO Land District. PLAT OF THE CLAIM OF O.W.WILSON KNOWN AS THE EUREKA AND ATLANTA LODES IN CONSOLIDATED MONTGOMERY AND BUCKSKIN MINING DISTRICTS, COUNTY. COLORADO. Containing an Area of_ 6.603 Acres. Scale of 200 Feet to the inch. Variation 13º45 East. August 3rd, 1897._BI U.S. Deputy Mineral Surveyor, W.H. Powless, The Original Held Notes of the Survey of the Mining Claim of 0. W. Wilson , known as the EureKa and Atlanta Lodes from which this plat has been made under my direction & have been examined and approved, and are on file in this Office; and I hereby certify that they furnish such an accurate descrip tion of said Mining Claim as will, if incorporated into a patent, serve fully to identify the premises, and that such references is made therein to natural objects or permanent monuments as will perpetuate and ficthelocus thereof. I further certify that Five Hundred Dollars worth of labor has been expended or improvements made upon said Mining. Claim by claimant____ or his grantors, and that said improvements consist of six tunnels, a cut, and a drift, as appears by the affidavit of the deputy surthat the location of said improvements is correctly shown upon this plat, and that no portion of said labor or improvements has been included in the estimate of ecpenditures upon any other claim. And I further certify that this is a correct plat of said Mining Claim made in conformity with said original field notes of the survey thereof, and the same is hereby approved .

Thos. D.Kolmson

W.S.Surveyor General for

Colorado.

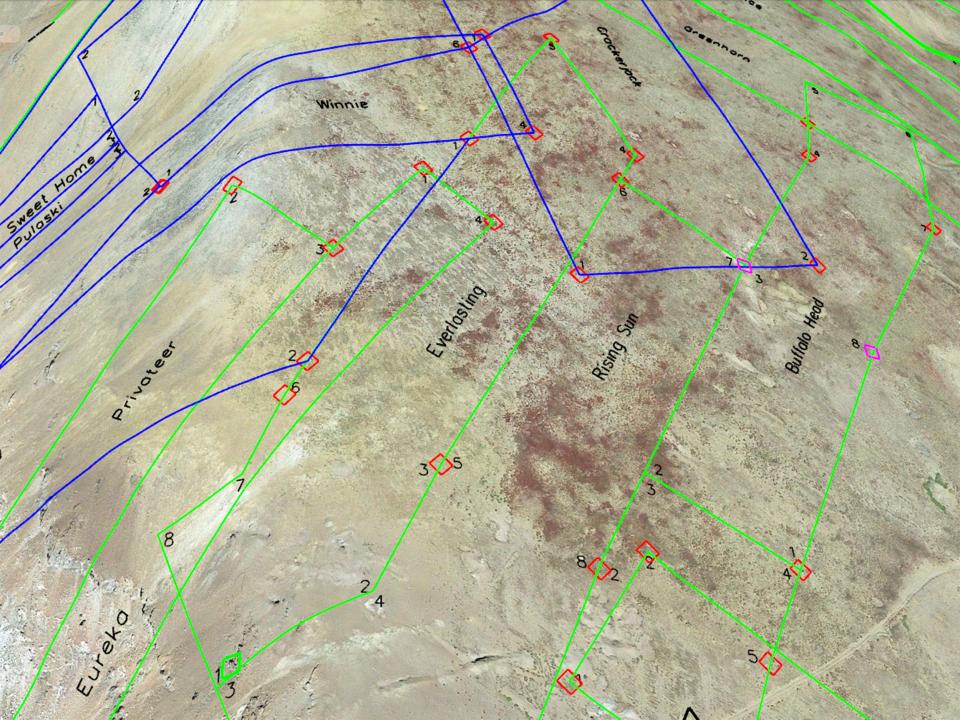
* 5,28° 35' Y. 95,5ft. See Letter 21797- Feb. 13-1892 A. N. 25° 4' Y. 376.5" " " " " " " " " B. 5.28° 28' W. 1204.4 " " 2170.9- " 3- " C. 5.24° 47' W. 167.5 " " 18208 - AUG.21-1897.

SURVEY NO. 2326 Mineral District No. 3

-

ME. N 75.10'E

* 5,28° 35' M. 95.5 ft. See Letter 21797- Feb. 13-1892 A. N. 25° 4' N. 376.5 " B. 5. 28 . 28 . M. 1204.4 " " 21709- " 3- " C. 5. 24 47'N. 167.5 " D. 5.66° 47' N. 170.1 " " 18208 - AUG.21- 1897. 11 Received S. G. O. AUG 10 1897 Denver, Colo. <mark>ዾ፟ኇፚፙፙፙፙፙ</mark>ፙዀዀዀዀዀዀዀዀዀፙፙፙፙፙ ang 21- 97 (4 - 683.)Mineral Survey No. 12062 Lot No. Leadville Land District. FIELD NOTES



Comparisons of the original survey measurements, Sur. No. 2326 retracements of the Everlasting Lode during the surveys of Sur Nos. 7288 and 12063, and a resurvey completed in 2019

- . 6, Rising Sun, Sur. No. 166 to Cor.
- N 28°45' E, 88.58 ft. (Onder S 28°35' W, 95.50 ft. (Reised
- N 28°33'15" E, 95.33 ft. (Resurve
- 4-5, Everlasting Lode, Sur. No. 2326
 - N 25°00' W, 372.05 ft. (Original survey, 1882) N 25°04' W, 376.50 ft. (Religicement survey, Sur. No. 7288, 1892) vev. 2019
 - Evenasting Lodes Sur A 45/ W, 1190/29 60 (Original survey, 1882) 28' W, 1204.40 ft Retracement/survey 28°28'0'W, 1205.27 t. (Reservey, 2019
 - 5-7, Everlasting-Lode Sur No. 2326 S 25°15' W 163.08 ft. (Original su \$ 24°47' M, 167.50 ft. (Recatement
- 7-8, Everlasting Lode, Sur. No. 2326 AS 65900 W 37/33 S 66°47' W, 170.10
 - cinal racement survey, Sur



Cor. No. 4 Luzerne Lode Sur. No. 5889

Photo looking to the southeast across South Park with Alma, Colorado in the midground





Cor. No. 4 Luzerne Lode Sur. No. 5889 East Face





The Ribbon

Rhodochrosite with Tetrahedrite (24 cm)

Good Luck Pocket Sweet Home Mine Alma, Colorado

Photograph by Harold and Erica Van Pelt

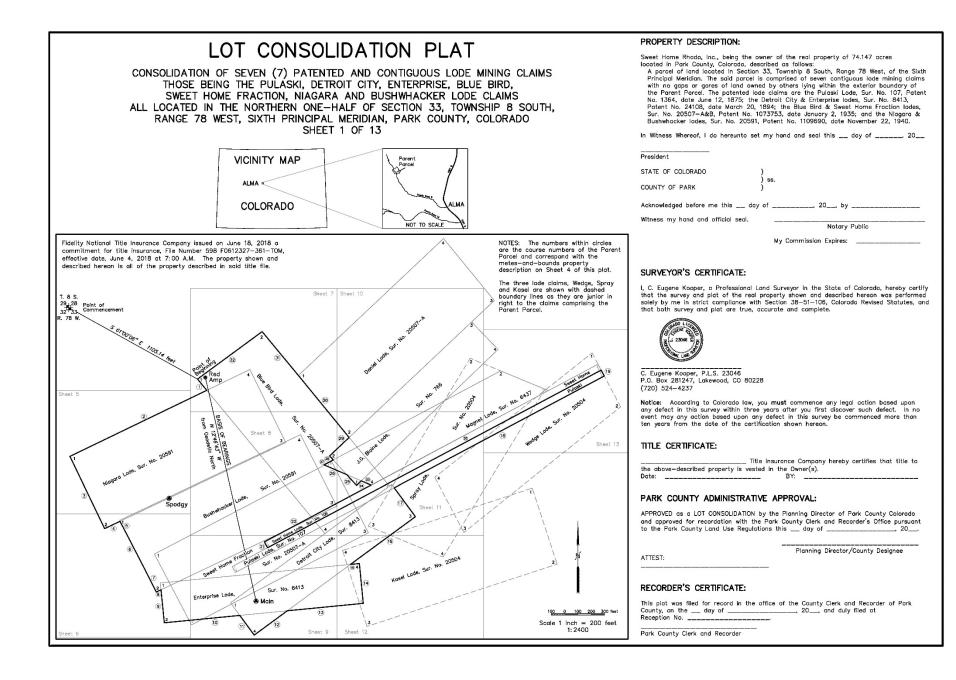


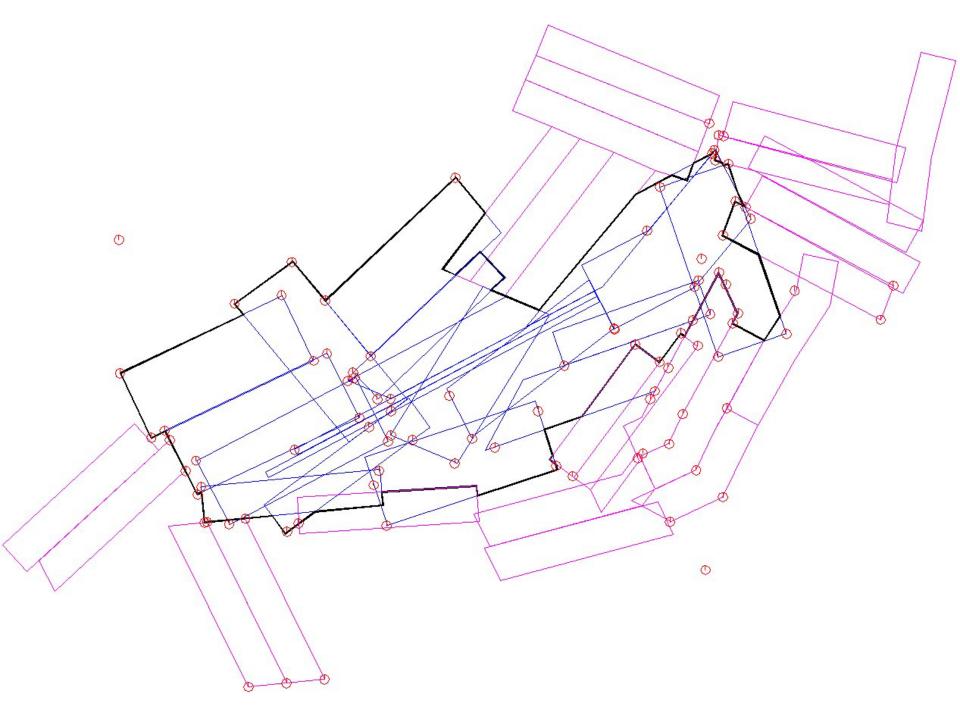
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LOT CONSOLIDATION PLAT

CONSOLIDATION OF SEVEN (7) PATENTED AND CONTIGUOUS LODE MINING CLAIMS THOSE BEING THE PULASKI, DETROIT CITY, ENTERPRISE, BLUE BIRD, SWEET HOME FRACTION, NIAGARA AND BUSHWHACKER LODE CLAIMS ALL LOCATED IN THE NORTHERN ONE-HALF OF SECTION 33, TOWNSHIP 8 SOUTH, RANGE 78 WEST, SIXTH PRINCIPAL MERIDIAN, PARK COUNTY, COLORADO SHEET 2 OF 13

HISTORY OF SURVEYS

The first cadastral surveys conducted in the area were the township lines of Township 9 South, Ronge 78 West, Sixth Principal Meridian. The field surveys were conducted between June 2 and 12, 1873 by U.S. Deputy Surveyor, Benjamin M. Whittmore and approved with the township subdivision by the U.S. General Land Office (GLO) on September 9, 1873. The township subdivision survey of Township 8 South, Ronge 78 West, Sixth Principal Meridian was surveyed between October 29 and November 7, 1882 by U.S. Deputy Surveyor, Frank Koons under a contract dated July 13, 1882. The township subdivision piet was approved by the GLO on March 2, 1883.

On August 20, 1873, U.S. Deputy Surveyor Fred C. Morse surveyed the Sweet Home Lode, Sur. No. 106 and the Pulaski Lode, Sur. No. 107. The General Land Office approved the mineral surveys on September 10, 1873. The Sweet Home Lode was patented on November 28, 1876 (Patent No. 2043) and filed for record by the Park County Recorder on December 23, 1876 (Book 8, Page 422). The Pulaski Lode was patented on June 12, 1875 (Patent No. 1364) and filed for record by the Park County Recorder on July 10, 1875 (Book 7, Page 358).

On April 1, 1881, U.S. Deputy Minerol Surveyor Lee Hayes surveyed the J.G. Bloine Lode, Sur. No. 766 and the survey was approved on April 9, 1881. A patent was issued on October 31, 1882 (Patent No. 6581) and filed for record by the Park County Recorder on April 26, 1901 (Block 24, Page 401). The three above mineral surveys were connected to the North ½ Cor. of Sec. 4, T. 9 S. R. 78 W, Sixth P.M.

The Magnet Lode, Sur. No. 6437 was surveyed on August 12, 1690 by U.S. Deputy Mineral Surveyor W.H. Powless and approved by the GLO on September 6, 1890. During the survey, deputy Powless faund material errors in the bearings and distances of the Sweet Home and Pulaski side lines. Line 3-4 of the Magnet Lode is common with Line 1-2 of the Sweet Home Lode. The 1' discrepancy in the bearing of the side lines is likely due to a local magnetic anomaly (e.g. this lode is named the Magnet Lode). The discrepancies of 135 feet in the lengths of the Sweet Home and Pulaski lode claims ore due to deputy Morse's overestimation that the scree slope had a topographic slope of 40°. The Magnet Lode was patented on February 23, 1892 (Patent No. 19696) and filed for record by the Park County Recorder on April 16, 1892 (Bok 37, Page 247).

The surveys of the Grover Cleveland Lode, Sur. No. 7287 and the Winnie Lode, Sur. No. 7288 were commenced on November 30, 1891 and completed on January 19, 1892 by U.S. Deputy Mineral Surveyor, W.H. Powless. The Grover Cleveland Lode was approved by the GLO on May 18, 1892, patented on June 20, 1893 (Patent No. 23081) and filed for record by the Park County Recorder on November 27, 1903 (Book 56, Page 141). The Winnie Lode was approved by the GLO on March 2, 1892. The Winnie Lode was patented on September 23, 1896 (Patent No. 27418) and filed for record by the Park County Recorder on November 27, 1903 (Book 56, Page 140). These two mineral surveys are not port of the Parent Parcel, but are included in this narrative as their locations were used to resetablish the lines of the Sweet Home and Pulaski lodes.

The Highland Mary Lode, Sur. No. 8411 was surveyed on June 23, 1893 by U.S. Deputy Mineral Surveyor, W.H. Powless, approved by the the GLO on July 12, 1893, and patented on March 20, 1894 (Patent No. 24107).

The survey of the Detroit City and Enterprise lodes, Sur. No. 8413 was commenced on June 26, 1893 and completed on June 27, 1893 by U.S. Deputy Mineral Surveyor, W.H. Powless and approved by the GLO on July 14, 1893. The Detroit City and Enterprise lodes were patented on March 20, 1894 (Patent No. 24108) and filed for record by the Park County Recorder on September 10, 1894, (Book 54, Page 125).

The survey of the Sun Flower No. 1 and Sun Flower No. 2 lodes, Sur, No. 17480 was commenced on December 12, 1904 and completed on December 13, 1904 by U.S. Deputy Mineral Surveyor, W.H. Powless and approved by the GLO on January 24, 1905. The Sun Flower No. 1 and Sun Flower No. 2 lodes were patented on October 30, 1906 (Patent No. 44718).

HISTORY OF SURVEYS (CONTINUED)

On September 29, 1932 a mineral survey order was issued to U.S. Mineral Surveyor Gerald F. Gollowy to survey nine lode claims and a mill site as Sur. No. 2050-A-&&B. After the field work was completed and the preliminary plat and field notes submitted for review by the General Land Office, a problem was identified. Three of the lode claims, the Blue Bird, Sweet Home Fraction and Daniel were not contiguous with the other six lode claims. The Dept. of Interior's Interior Decision, "Wagner Assets Realization Corp." (53 ID 614) directly dealt with this problem. The decision was issued on March 11, 1932, but was not published until 1933. The Colorado state office still operating under the old policy rejected the survey. The claim owner decided an Jonuary 25, 1933 to remove the Blue Bird, Sweet Home Fraction and Daniel Ides along with the Sweet Home Mill Site from Sur. No. 20507-A&B and have them surveyed under a new mineral survey order for Sur. No. 20507-A&B

The survey of the Social Fund, Silent Friend, Wedge, Crackerjack, Spray, and Kasel lodes, Sur. No. 20504 was commenced on October 1, 1932 and completed on November 15, 1932 by U.S. Mineral Surveyor Gerald F. Galloway and approved on June 7, 1933. A patent was issued for the six lodes on February 20, 1935 (Patent No. 1074568) and filed for record by the Park County Recorder on March 6, 1935 (Book 117, Page 191).

The survey of the Blue Bird, Sweet Home Fraction and Daniel lodes and the Sweet Home Mill Site, Sur. No. 20507-A80 was commenced on Jonuory 30, 1933 and completed on February 25, 1933 by U.S. Mineral Surveyor Geraid F. Galloway and approved by the GLO an June 10, 1933. The mill site was omitted from the patent application as no mining activities were being conducted on the mill site. A patent was issued for the three lodes on January 2, 1935 (Patent No. 1073753) and filed for record by the Park County Recorder on February 1, 1935 (Botent 17, Page 130).

The survey of the Bushwhacker and Niagara lodes, Sur. No. 20531 was commenced on August 1, 1938 and completed on August 28, 1938 by U.S. Mineral Surveyor Gerald F. Galloway and approved by the GLO an September 21, 1938. A patent was issued for the two lodes on November 22, 1940 (Patent No. 1109690) and filed for record by the Park County Recorder on December 20, 1940 (Book 126, Page 678).

RE-ESTABLISHMENT OF LOST CORNERS

The original stone for Cor. No. 1 of the Sweet Home Lode was found in place during the field survey. Cors. Nos. 2 and 3 are located in the upper portion of the scree slope and were destroyed by slide activity and Cor. No. 4 was destroyed by a mining access road. None of the corners of the Pulaski Lode were found during the field survey. Cors. Nos. 1 and 4 lie within Buckskin Road and a driveway. Cors. Nos. 2 and 3 are located in the upper portion of the scree slope and were destroyed by slide activity. The lines of the Sweet Home and Pulaski lodes were resetablished based on the position of Cor. No. 1 of the Sweet Home Lode; the positions of the Magnet Lode, Sur. No. 6437 and Grover Cleveland Lode, Sur. No. 7287 (Line 3-4 of the Magnet and Line 1-2 of the Grover Cleveland Lode, Sur. No. 7287 (Line 3-4 of the Magnet and Line 1-2 of the Grover Cleveland Lode, Sur. No. 7287 (Line 3-4 of the Magnet and Line 1-2 of the Grover Cleveland Lode, Sur. No. 7287 (Line 3-4 of the Magnet and Line 1-2 of the Grover Cleveland Lode, Sur. No. 7287 (Line 3-4 of the Sweet Home Lode); and a connection made to Cor. No. 3 of the Pulaski Lode during the original survey of the Social Fund Lode. Sur. No. 2050 by Gerald F. Galloway in 1932.

The original stone for Cor. No. 2 of the J.G. Blaine Lode was found in place during the field survey. The stone for Cor. No. 1 was found lying below the corner position. The original bearing rock accessory was found and the stone monument restabilished based on the record tie from the bearing rock. The field notes for Sur. No. 20507-A&B state that deputy Galloway found the stone slightly fallen over and restabilished the stone based on the original bearing rock. Cor. No. 3 was destroyed in the scree slope. Cor. No. 4 was not found. However, Cor. No. 4 was found by U.S. Mineral Surveyor Galloway during the survey of Sur. No. 20507-A&B. From the field notes [Cor. No. 4 had] "fallen out of place down a cliff and replaced in the mound of stone where it was ariginally." During the survey of the Magnet Lode, material errors were reported in the bearings and distances of Line 1-2 and Line 4-1 of the J.G. Blaine Lode.

RE-ESTABLISHMENT OF LOST CORNERS (CONTINUED)

The original stones for Cors. Nos. 1 and 4 of the Magnet Lode were found in place during the field survey. Cors. Nos. 2 and 3 are located in the upper portion of the scree slope and were destroyed by slide activity. Line 2-3 of the Magnet Lode and its extension are shored by four other lodes. The common line of the five lode claims was reastabilished by a connection to Cor. No. 3 of the Colardo Springs Lode, Sur. No. 3106 (also Cor. No. 1 of the Tiger Lode, Sur, No. 3103) during the survey of the Spray Lode, Sur. No. 25054 by U.S. Mineral Surveyor Gerald F. Galloway in 1932.

The original stone to Cor. No. 1 of the Highland Mary Lode was found in place during the field survey. Cor. No. 4 was found leaning downhill and reestablished using the record tie from its original bearing rock.

Five of the eight corners of the Detroit City and Enterprise lodes were found during the field survey. The witness corners to Cors. Nos. 2 and 3 of the Detroit City Lode were found in place. Cor. No. 1 of the Detroit City Lode was destroyed by mining activity. The witness corner to Cor. No. 4 was previously found lying in the ditch of Buckskin Gulch Road. Cor. No. 1 of the Enterprise Lode was rehabilitated based on the record ties to the remains of the two original bearing trees. Cor. No. 2 of the Enterprise Lode was found in place, but it may have moved downhill due to soil creep and froat heave. However, the only evidence of this is a slight discrepancy with the record tie to its bearing rock. Cor. No. 3 of the Enterprise Lode was destroyed in the scree slope. Cor. No. 4 was found in an upright position with a mound of stone. However, this area of the scree slope has slid downhill en masse approx. 20 feet since it was originally established (approx. 0.5 feet/year) Cors. Nos. 1 and 4 of the Detroit City Lode and Cors. Nos. 3 and 4 of the Enterprise Lode was destroited based on the record relationships to the positions of the four found corners of Sur. No. 8413.

The three stone monuments marking the corners of the Sun Flower No. 1 and Sun Flower No. 2 northern end lines were found. The common corner of Cors. Nos. 2 may have moved downhill due to soil creep and frost heave, but the only evidence of this is a slight discrepancy with the record tie to its bearing rock. Cor. No. 3 of the Sun Flower No. 1 Lode is displaced from the true corner position. It has not been rehabilitated, but the corner is an extant corner as the original bearing rock was found. The stone mounment that originally marked Cor. No. 3 of the Sun Flower No. 2 Lode was rotated 180° and moved 0.79 feet along Line 3-4 of the Sun Flower No. 2 Lode by U.S. Mineral Surveyor Gerald F. Galloway during the survey of the Sweet Home Mill Site, Sur. No. 20507-B. It was marked as Cor. No. 1 of said mill site. The error in placement of Cor. No. 1 of the solar observation for Sur No. 7. A20.

The four original stone corners of the Blue Bird Lode were found during the field survey. The stone originally set to mark Cor. No. 2 of the Blue Bird Lode was found in an upright position, but 11.54 feet downhill from the corner position due to slide activity (approx. 0.15 feet/year). The witness corner to Cor. No. 4 has a falling of 1.97 feet from Line 1-2 of the Detroit City Lode. However, the scree slope in this area is unstable, so Line 3-4 of the Blue Bird Lode is taken to be on Line 1-2 of the Detroit City Lode. The street slope in this area is unstable, so Line 3-4 of the Blue Bird Lode is taken to be on Line 1-2 of the Detroit City Lode. This was a failed of the street slope of the Detroit City Lode. This is supported by the intent that there not be any remaining fractions of ground. In a September 17, 1932 letter to Mr. Edwin C. Spray, the owner of the Blue Bird and Detroit City lodes, U.S. Mineral Surveyor Geraid F. Gallaway stated, "All claim[s] fit together so that, between them, there are no fractions of ground."

All four corners of the Sweet Horne Fraction Lode and the southwesterly end line (Cors. Nos. 1 and 2) of the Daniel Lode were found in place during the field survey.

All eight corners of the Bushwhacker and Niagara lodes were found in place during the field survey.

Notice: According to Colorado law, you must commence any legal action based upon any defact in this survey within three years after you first discover such defact. In no event may any action based upon any defect in this survey be commenced more than tan years from the date of the certification shown hereon.

SURVEYOR'S CERTIFICATE:

I, C. Eugene Kooper, a Professional Land Surveyor in the State of Colorado, hereby certify that the survey and plat of the real property shown and described hereon was performed solely by me in strict compliance with Section 38-51-106, Colorado Revised Statutes, and that both survey and plat are true, accurate and complete.



C. Eugene Kooper, P.L.S. 23046

Specimen Before Trimming and Final Cleaning

Rhodochrosite with Tetrahedrite and Quartz (8 inches)

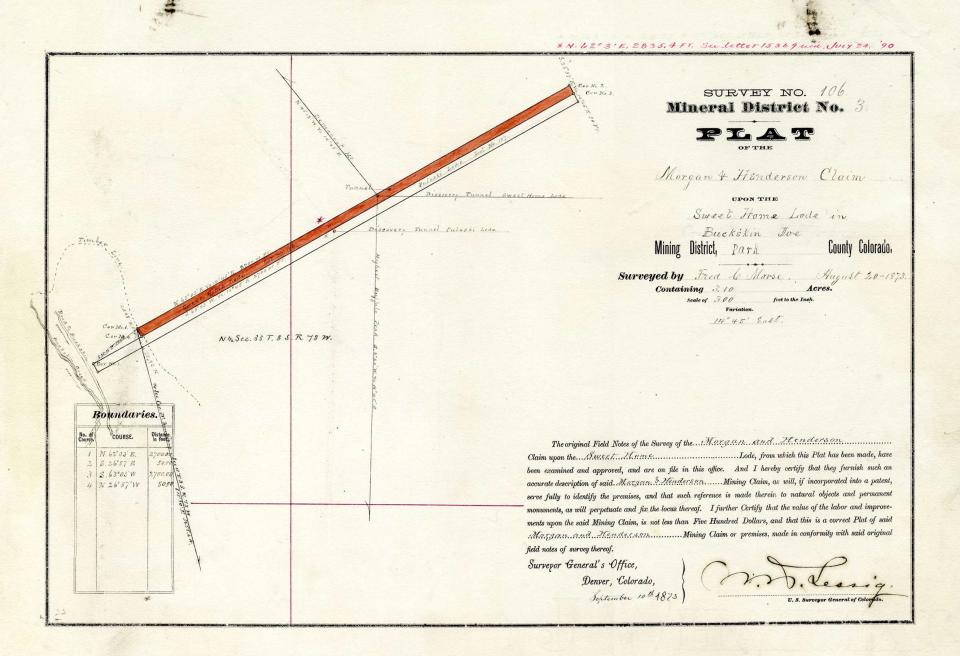
Sweet Home Mine Detroit City Portal Alma, Colorado

Photograph by C. Eugene Kooper



540 No. 106 - Sweet Home Lode whereon it is situate, diffs S. 50° W. down 25° to 40° Adjoining claims, on the South East- side the Pulaski Lode Survey No. 107 - owned by Edward W Henderson and Samuel 13 Morgan, no others Known, men August 20-1873 Fred le Moorse U.S. Deputy Surveyor

Lau This means that the surface of the ground is not level, that it dips down below the horizon 25° to 40°, - That the course or direction of Such dip is South 50° West. The ground on which corners No. 2 and 3 are located differ at above described, 40° and the ground whereon Corners No. 1 and Have located dips 25.° Fred le Morse



* N. 62° 3' E. 2835, 4 FT. See letter 15369 uci, July 24. 90

Cor No. 2.

Lode

Con No. 3

SURVEY NO. 106 Mineral District No. 3.



OF THE

Morgan & HEnderson Claim

UPON THE

Sweet Home Lode in

Buckskin Joe















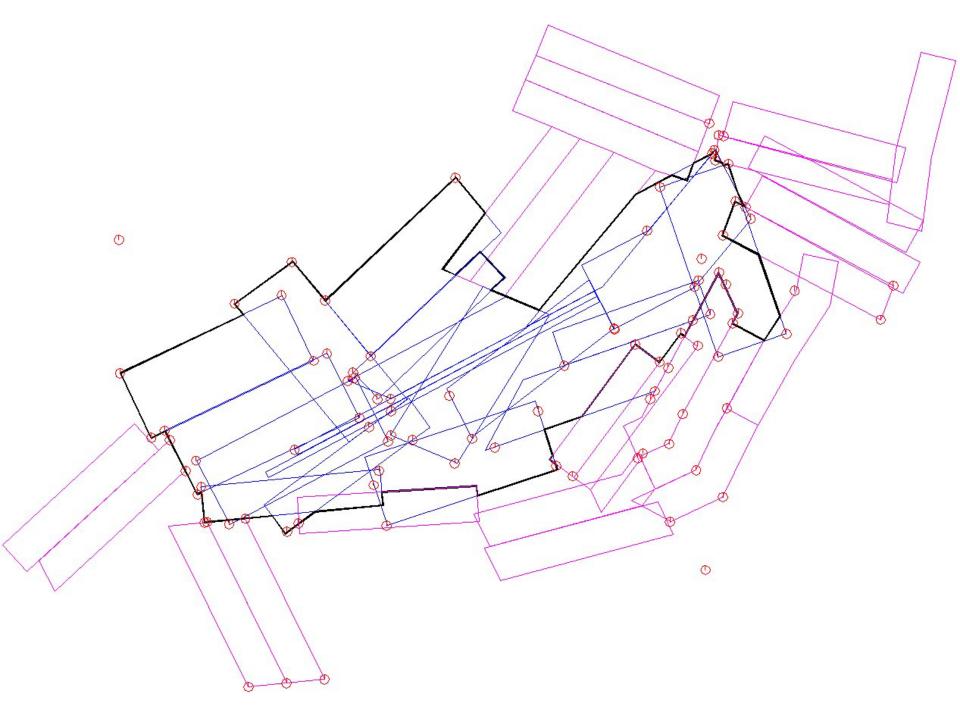
The Sno Cone

Rhodochrosite with Pyrite and Tetrahedrite (17 x 14 x 9.5 cm)

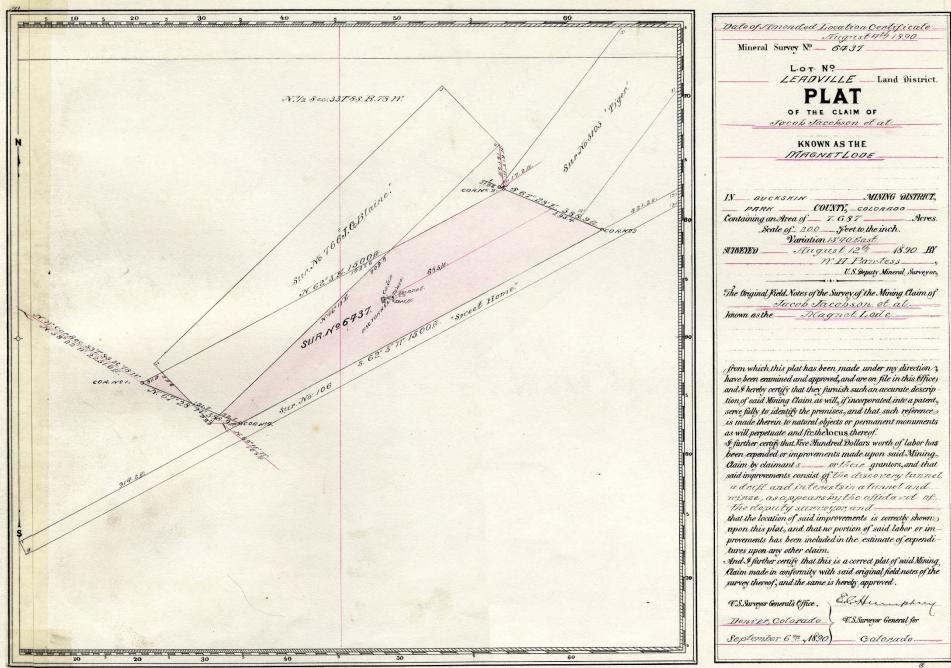
Good Luck Pocket Sweet Home Mine Alma, Colorado

Photograph by Jeff Scovil





(4-675)

















Unnamed Rhodochrosite

Rhodochrosite on Quartz, Fluorite & Barite (6.4 x 10.8 x 6.8 cm) 19-02 Pocket, Sweet Home Mine, Detroit City Portal - Alma, CO

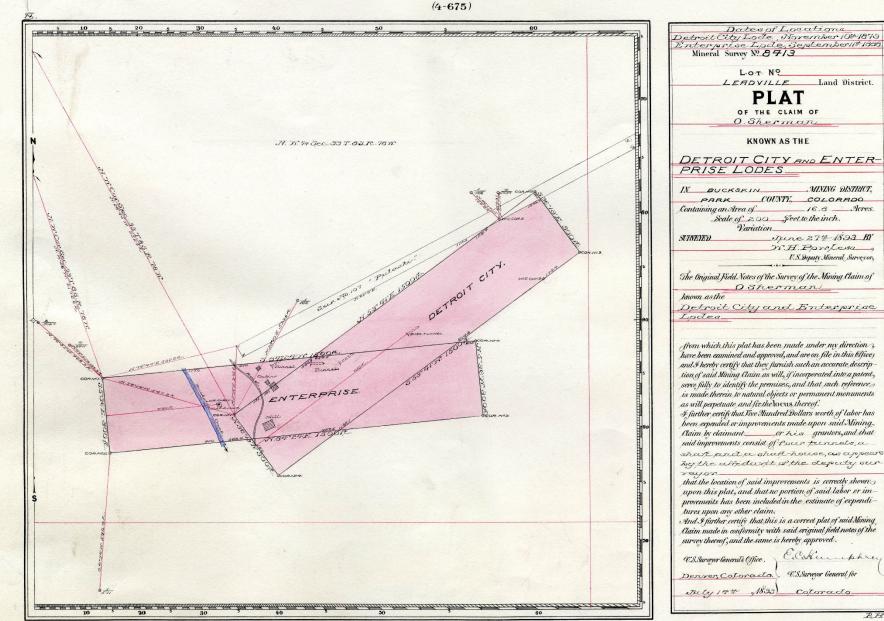


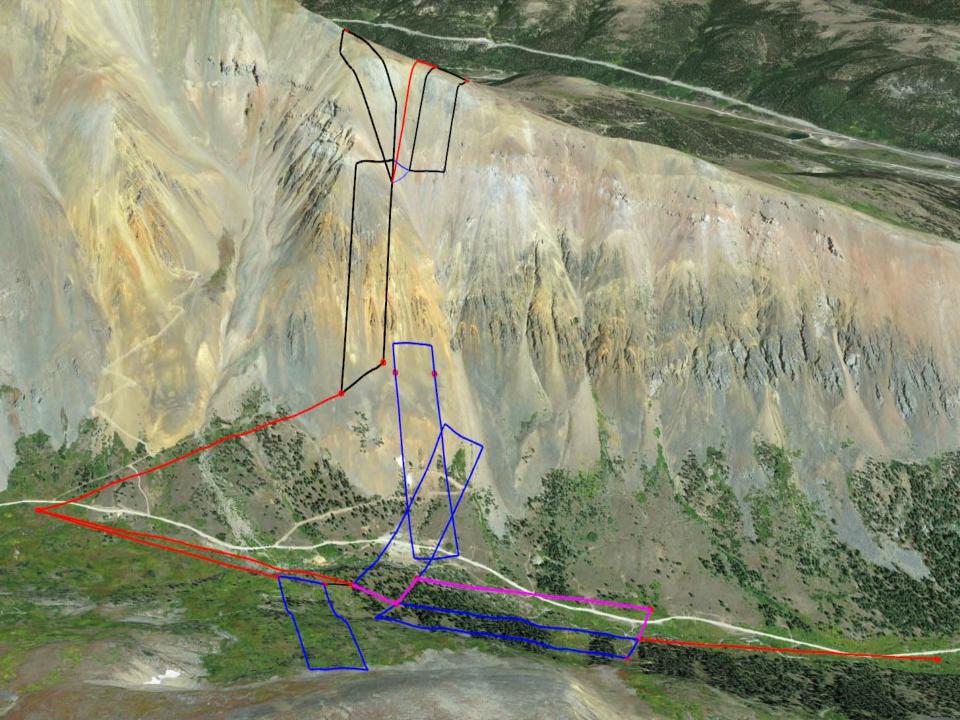
Photo by Annette Slade





Theord J. F. D. June





















Unnamed Rhodochrosite Rhodochrosite on Quartz (8.25 cm x 6.4 cm) Thanksgiving Day Pocket, Sweet Home Mine - Alma, Colorado







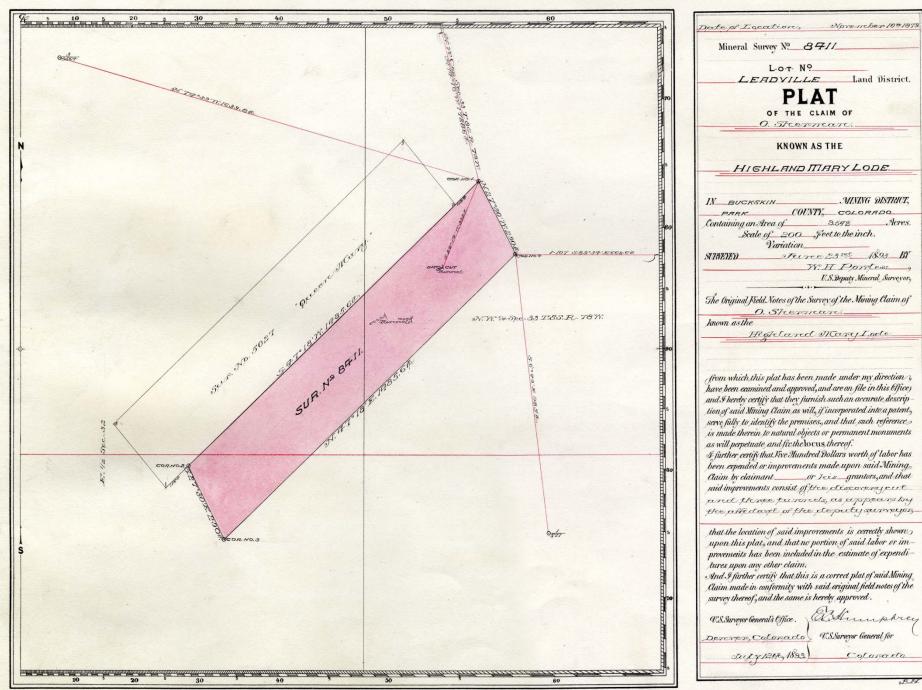


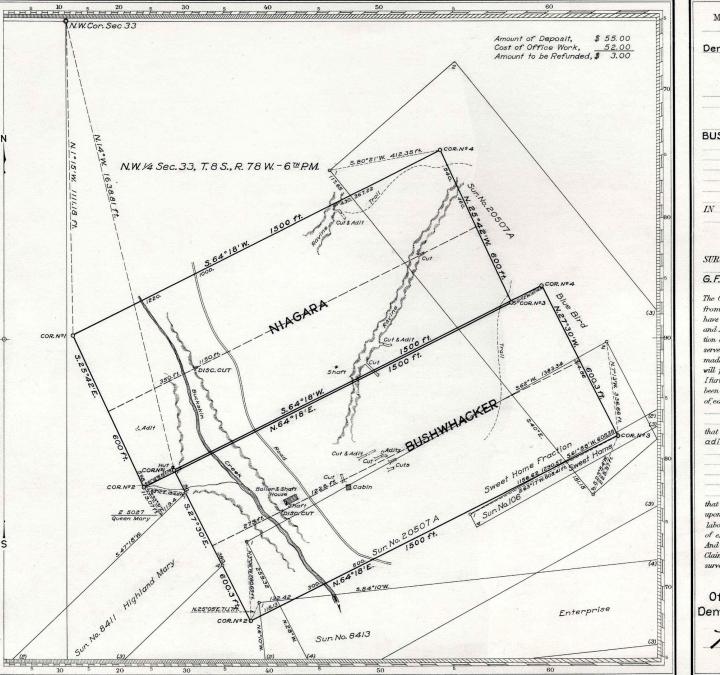
Example - Technical Overlap Between Junior Lode and Senior Lode.

This example has the Senior Lode corners as the intermediate monuments and both lines are end lines.

In Colorado prior to 1923, territory and state law mandated lode claim widths be no wider than 300 feet. In fact, before 1923 the Territory and State of Colorado allowed individual counties to determine the maximum width of lode claims. The counties of Boulder, Clear Creek, Gilpin and Summit had a maximum lode claim width of 150 feet. In 1923, the State of Colorado changed the width of lode claims to match the Federal width of 600 ft.

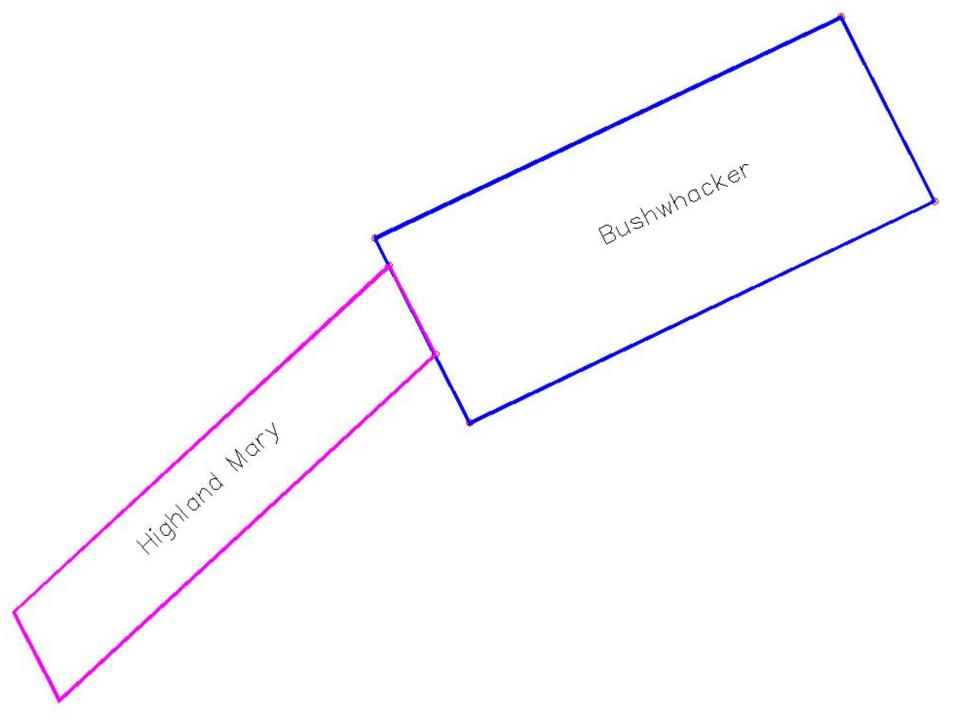
In order for the two claims to share a common end line, the field notes and patent for the Bushwhacker Lode, Sur. No. 20591 (junior lode) must call the Highland Mary Lode, Sur. No. 8411 (senior lode) corners as being on the Bushwhacker Lode end line. Otherwise the conditions in Sec. 10-224 are not met. (4-675)

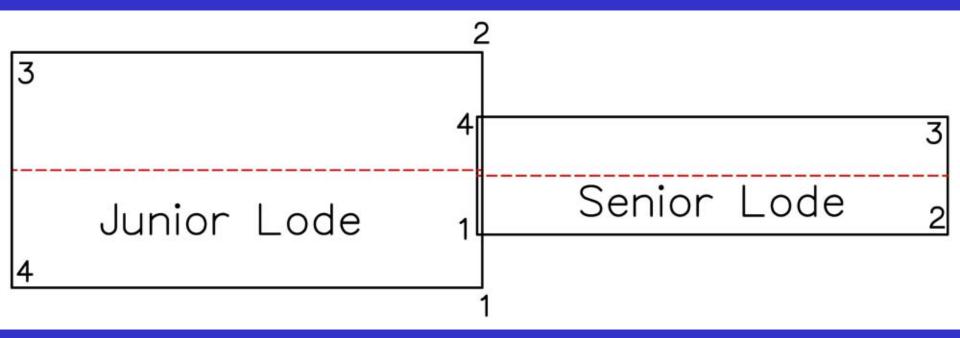




Mineral Survey No. 20591
Denver Land District. PLAT OF THE CLAIM OF
F. D. LEWIS
KNOWN AS THE
USHWHACKER AND NIAGARA LODES
N BUCKŠKIN MINING DISTRICT,
PARK COUNTY, COLORADO
Scale of 200 Feet to the inch. Variation 13°09'East
URVEYED AUGUST 28, 1938 BY
F. Galloway Mineral Surveyor, General Land Office.
he Original Field Notes of the Survey of the Mining Claim rom which this plat has been made under my direction, are been examined and approved, and are on file in this Office, not levely certify that they furnish such an accurate descrip- on of said Mining Claim as will, if incorporated into a patent, erve filly to identify the premises, and that such reference is uade therein to natural objects or permanent monuments as ill perpetuate and fix the locus thereof. further certify that Five Hundred Dollars worth of labor has een expended or improvements made upon, or for the benefit f, each location embraced in said mining claim by claimant F. D. Lew is or his grantors and hat said improvements consist of nine cuts and five
ndits, Value, \$3400.00 hat the location of said improvements is correctly shown pon this plat, and that no portion of or interest in said labor or improvements has been included in the estimate of expenditures upon any other claim. In lituther certify that this is a correct plat of said Mining laim made in conformity with said original field notes of the urvey thereof, and the same is hereby approved. Office of Supervisor of Surveys enver, Colorado, September 21,1938
Russel K. allen Administrative Cadastral Engineer.

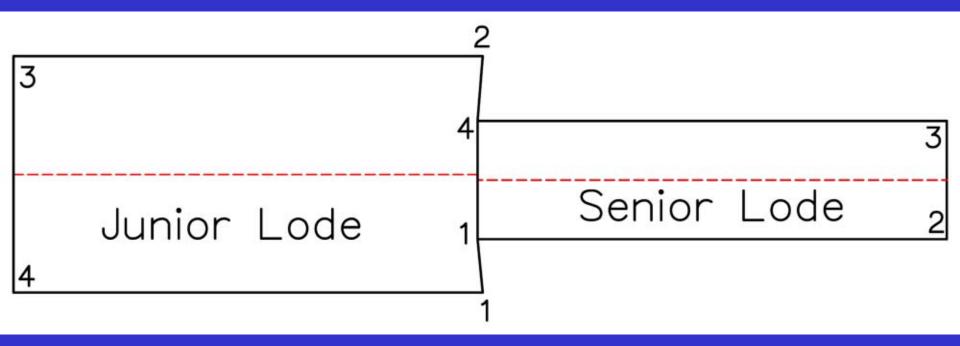
(4-675)





In this example, Line 1-2 of the Bushwhacker Lode (Junior) as run on the ground should control. Cors. Nos. 1 and 4 of the Highland Mary Lode (senior) should be regarded the same as line trees in a rectangular PLSS survey. As such, they are angle points in Line 1-2 of the Bushwhacker Lode. While this may seem contrary to the requirement that the end lines of lode claims be substantially parallel in order to preserve the extralateral rights of the lode claim, that does not mean that the retracement surveyor is at liberty to ignore evidence of the line as run on the ground.

The resurveyor is not charged with fixing a prior error that may impact the claimant's *bona fide* rights. In this particular example, my plat shows the Bushwhacker Lode end line (Line 1-2) with two angle points.











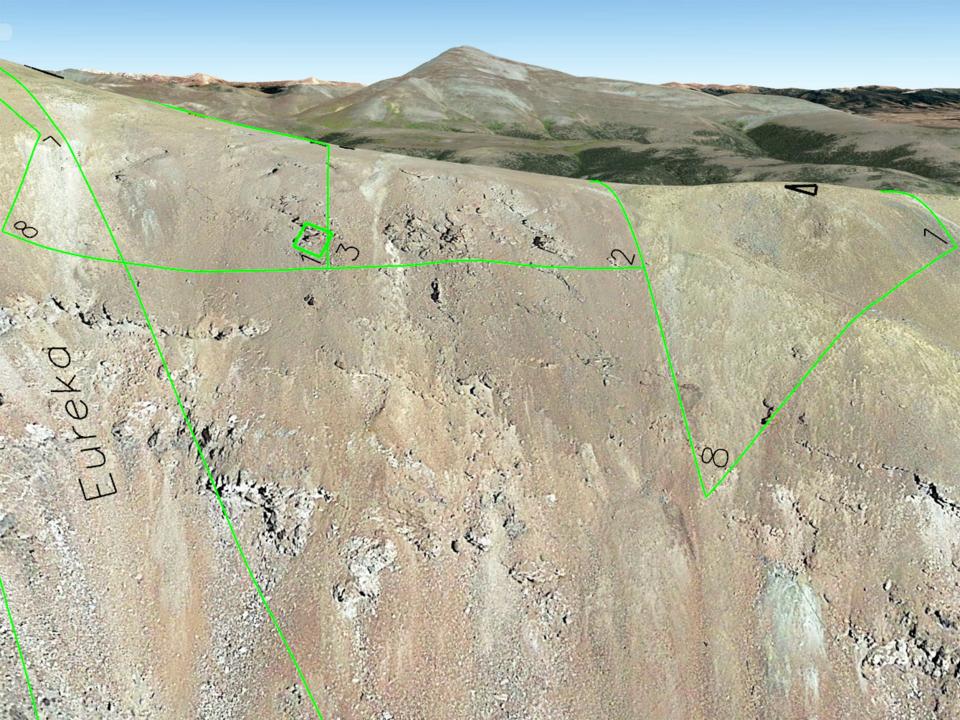




Unnamed Rhodochrosite Rhodochrosite on Quartz & Tetrahedrite (10.5 x 14.5 x 4.7 cm) Calcite Pocket, Sweet Home Mine - Alma, Colorado

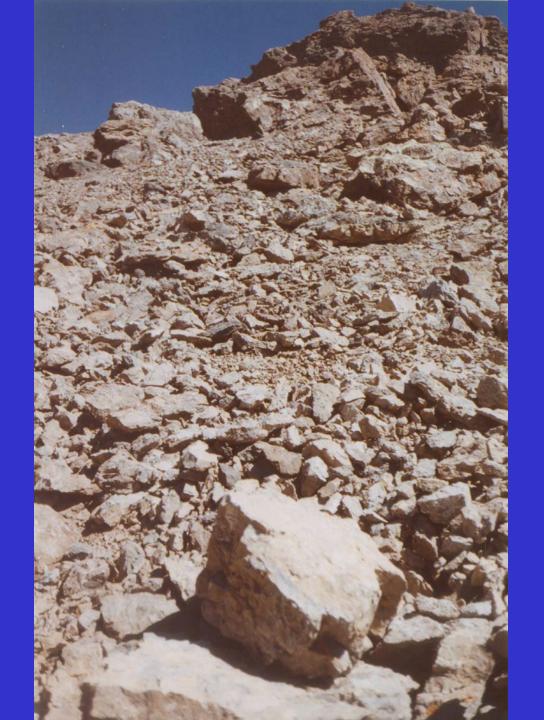


Photo by Evan D'Arpino





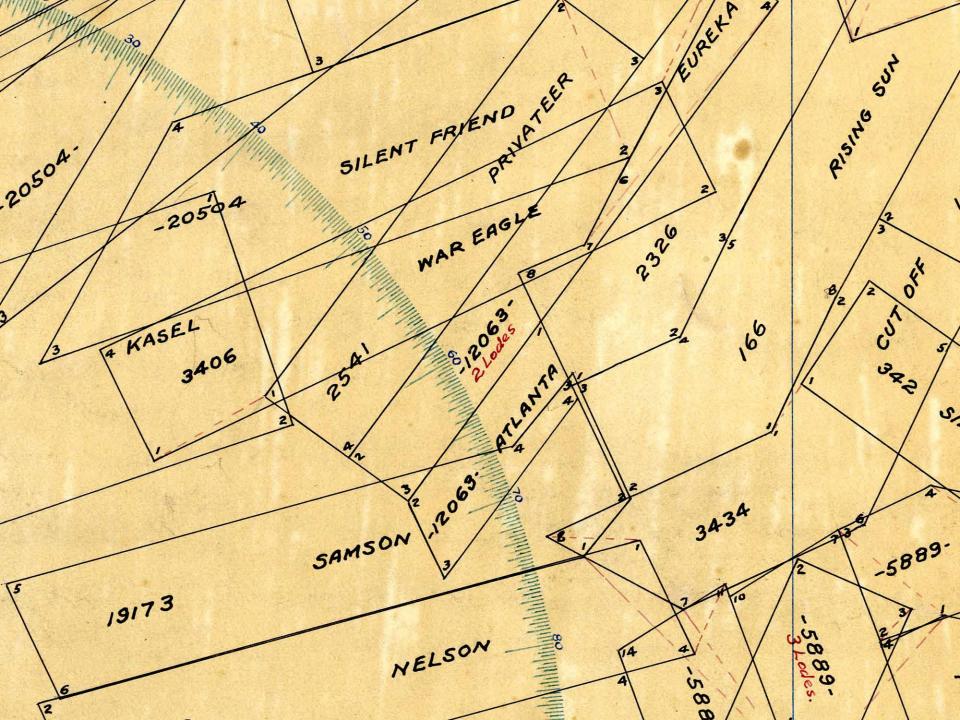
Thence N. 25° W Va. 14° 30 E. 300. Set cor, No. 3 a lime \$18 × 14 × 10 inches chiseled "3-166" in a Feet mound of stones, Whence "M-166" chiseled on line stone rock in place Six feet above The ground bears N. 47° E Va 14° 30' E 55.





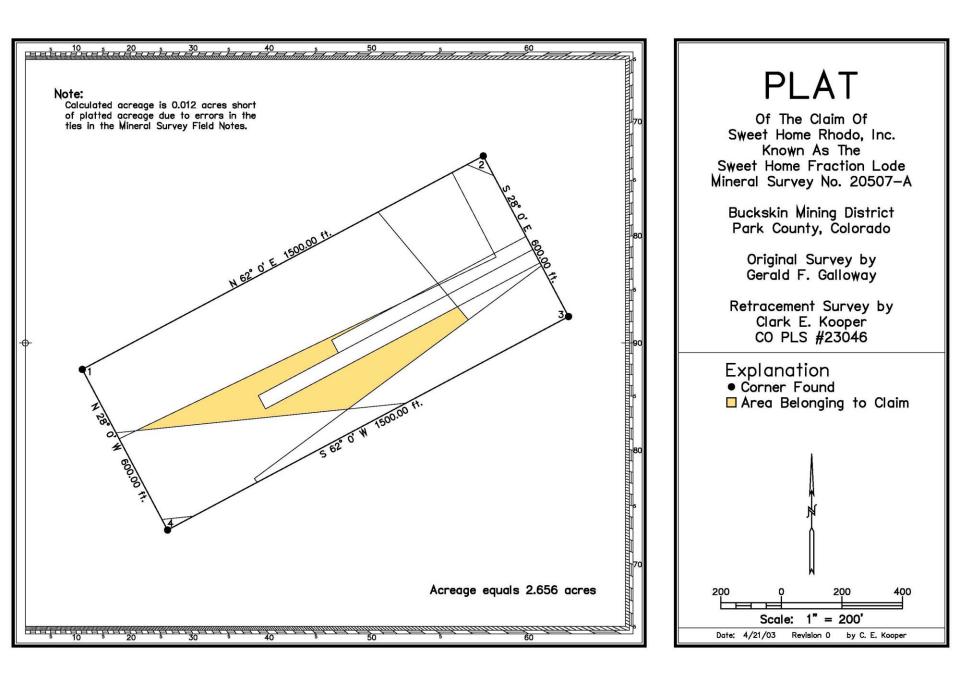






Unnamed Rhodochrosite Rhodochrosite and Huebnerite (3 cm across) Sulfide Pocket, Sweet Home Mine - Alma, Colorado





SWEET HOME FRACTION LODE.

Beginning at Cor. No. 1 of the Sweet Home Fraction Lode, where I -

Set a granite stone, 24x8x7 ins., 12 ins. in the ground, with a mound of stone, for Cor. No. 1, mkd. 1-SHF-20507 A; from which

The NW. cor. sec. 33, T. 8 S., R. 78 W., 6th Prin. Mer., bears N. 19°40' W., 1956.43 ft. dist.; previously described.

Cor. No. 4 Sur. No. 8411 Highland Mary lode bears S. 45° 33' W., 121.21 ft. dist.

Cor. No. 1 Sur. No. 107 Pulaski lode bears S. 81° 35' E., 587.94'ft. dist.

A spruce tree, 8 ins. diam., bears N.54° 30' E., 37.7 ft. dist.; mkd. BT-1-SHF-20507 A.



