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REPORT
ON THE
RUBY-COLUMBIA LODES
JEFFERSON COUNTY, MONTANA

COPY

LOCATION

The Ruby-Columbia group of lode claims is situated in the lowland(unorganized) Mining District, Jefferson County, Montana.

They extend in a south and north direction across Ruby Mountain, a smooth hill of regular contour, which rises some 800 feet above the bed of Lowland Creek, which skirts its slope upon the west. The elevation of the collar of the main working shaft upon the Ruby claim is 6660 feet above sea level. The kodak views appearing as frontis pages in this report disclose the general character of the country.

The above property is located 14 miles from Butte, Montana, the nearest center of trade, in a N 20° E direction. The nearest shipping point is Bernice, a station on the Great Northern Railway, 10 miles distant by a good wagon road. Bernice is 3½ miles distant from Basin, a convenient supply point for both labor and material.

An adequate supply of timber, suitable for mining purposes, is near at hand upon some of the claims comprising the group.

Power for the operation of the property has been obtained from boilers generating steam from coal hauled from Bernice, or from cord wood cut near by.

For mining operations of magnitude, electric power is necessary. The nearest present source of electric power is the Genevieve Mine of the Butte and Great Falls Mining Company. This is 9 miles distant in a S 13° 30' W direction from the Ruby. The Butte and Elk Park Mining Company contemplates connecting with the Missouri Power Company's line through Little Boulder Park. If this be done, the terminus will be but 3½ miles distant from the Ruby.

The property comprising this group consists of the following quartz claims, mill site and placer claim, to-wit:-

Survey No. 2285-A, Ruby Lode, U.S. Patent No. 16110
Survey No. 3238, Columbia Lode, U.S. Patent No. 21653
Survey No. 5200, Millsite-Lode, U.S. Patent No. 30921
Survey No. 2286-B, Ruby Millsite, U.S. Patent No. 16110
Survey No. 1461, Lot 37, Placer - 5 acres of surface,
U.S. Patent No. 12991

Together with the following quartz locations, namely: Uncle Sam, United States, Saratoga, North Star, Gold Mountain, Pearl, Ernest, Aurous, Paymaster, and Golden Eagle.

HISTORY

RUBY LODE

Subsequent to its location, the Ruby Lode, which is the principal claim in the Ruby group, experience many vicissitudes of fortune. It was located July 7, 1883. Nicholas Moldenham and Graft, the owners, extracted $140,000.00 in high grade ore from the Ruby shoot above the 50 foot level. In 1887 a lease and bond was given to Marcus Daly, who sunk the Ruby shaft 100 feet. At the same time he drove the Amazon tunnel several hundred feet. On account of personal differences with the owners over some trivial question, he abandoned this lease and bond. For several years the prope-rty remained idle. In 1895, Messrs. Hewitt, Graves and Spriggs took over the property and incorporated the Gold Mountain Mining and Milling Company, paying $90,000.00 for the claim out of the ore extracted. In 1896 this company built a ten stamp mill at the foot of Ruby Mountain, as shown in the accompanying Kodak views. This company opened the Ruby ore shoot on the 150 foot or tunnel level, which Daly had missed by a few feet. The stamp mill operated continuously for two yars, during which time the Ruby shaft was sunk to the 400 foot level, besides some crosscutting and drifting on the 300 foot level. In 1899 the Ruby shaft caved. At about this time the management borrowed $12,000.00 from the Clark-Montana Realty Company and failed to repay the loan. Title passed under a Sheriff's sale to the Clark-Montana Company. This property remained idle practically till 1906 when P.F. Dowling took a lease and bond thereon. I am creditable informed that previous to 1906 the Ruby ore shoot produced in excess of $750,000.00. Within the time at my disposal it was impossible for me to search the old records to verify this statement, but I give it full credence. This shoot extended from the surface to a point 20 feet above the 300 foot level, where it was cut off by a fault striking N 35° E, dipping 50° to the southeast. This shoot reached its greatest dimension on the 200 foot level, where it was 70 feet long by 20 feet in width.

Dowling operated the property continuously for several years but his work was confined principally to developing the Dowling vein, which lies immediately north of the Ruby vein. He encountered an ore shoot upon this vein at the 70 foot level, which he later on developed through the 150 and 300 foot Ruby levels. This shoot was 150 feet long on the 150 foot level and extended from the surface to the underhand stopes below the 300 foot level, below which point the water prevented further work. The average grade of the ore mined from the Dowling shoot compared favorable to that from the Ruby shoot. On 8/8/07 he shipped 43 tons of ore which returned 168 oz. of silver and 10.8 oz. of gold per ton, netting $13,078.84. On 8/15/07 he shipped 39 tons assaying 128.6 oz. of silver and 10.85 oz. of gold netting $10,975.28. On 9/14/07 and again on 10/10/07, he shipped cars netting better than $10,000.00 each. A record of these, together with a copy of other shipments by him and other lessees upon both the Ruby and Columbia claims appears as Exhibit "A" accompanying this report. This list was made from the original smelter returns but is by no means complete. In addition to the ore mined by Dowling from the Ruby shoot, he extracted $275,000.00 from the Dowling shoot.

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COLUMBIA LODE

The Columbia was located by J. Conan in 1884. Shortly afterwards it was sold to Judge E.A. Nichols, Geo. H. Casey, etal., who incorporated the Columbia Mining Company. This company operated in a desultory manner for years, the principal output being derived from lessees working the property. From 1904 to 1907 A.C. Ray of Basin leased the Columbia. Ray discovered a shoot of ore upon the property on what is now known as the Ray vein. During this lease he extracted $110,000.00 from this shoot of ore. The grade and general character of the ore was identical with that found in both the Ruby and Dowling shoots. In July 1906 he shipped 3-7/10 tons which returned 112.96 oz. in gold and 3314.5 oz. in silver, netting $15,528.82 for the shipment. An abstract of the incomplete list of his shipments discloses a total of approximately $78,000.00 shipped. In addition to the lessees previously mentioned, numerous others were known to have made considerable shipments, but unfortunately, it is impossible at this remote date to obtain a complete record. Suffice it to say that very possible the sum total of these would reach $50,000.00.

In September 1910, P.F. Dowling purchased the Columbia lode and commenced mining operations therein. For several years he prospected the property ina small way, and through lessees, without encountering any large ore bodies. In March 1917, he incorporated his entire ownership of the Ruby-Columbia group as the Lowland Ruby Mining Co., under the laws of the State of Montana. The incorporation was for 500,000 shares of a par value of $1.00. Approximately 269,000 shares of this capitalization had been issued, all except possibly 5,000 shares being owned by P.F. Dowling. The remainder was in the treasury. During 1911 Dowling reconstructed the Ruby mill and milled portions of the old dumps. The last mill records, dated Nov. 4, 1911, show heads running 0.40 oz. gold and 4.04 oz. silver. A discussion of the mill will follow hereinafter.

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TITLE

It is represented by Mr. P.F. Dowling that the title to the above property rests wholly in the Lowland Ruby Mining Company. The opinion of Attorney Homer C. Murphy of Helena, Montana, who has in hand the abstract of title for examination, accompanies this report as a separate exhibit, as likewise the legality and sufficiency of the easement through the Amazon lode for the lower Columbia tunnel.

AREAL GEOLOGY

The Lowland Mining District embraces all the country tributary to Lowland Creek, while that portion of this stream's drainage area in the vicinity of the Ruby-Columbia mine is for convenience styled the Ruby District. So far as developed, the Ruby District comprises a limited productive area of approximately two miles in length north and south by one mile in width.

The softly contoured hills in this locality are characteristic of the erosion of comparatively soft rock formations such as the country rock of this area. Locally it is designated rhyolite. More properly speaking, it is dacit. It is a felsitic, bluish-gray to white rock, whose ground mass shows minute crystals of glassy feldspars with small flakes of biotite and rounded masses of quartz. This rock is the typical, late tertiary extrusive volcanic so prevalent throughout the mountainous region of the western United States.

Underlying this formation there occurs the great, early tertiary intrusive granite mass known as the Boulder Batholith, to whose presence is primarily attributed the productivity of the numerous mines in western Montana and Idaho.

LOCAL GEOLOGY

Ruby Mountain, which rises to an elevation of about 800 feet above the floor o f the gulch through which Lowland Creek flows, is composed wholly of dacite. The hill slopes disclose fragments of this formation, together with blocks showing masses of brecciated dacite cemented with the same material. Underground development shows a main system of N 20° W fractures which are cut by two later series of N 45° E and N 85° E faults, respectively.

VEIN SYSTEM

The vein system upon these claims consists of a cemented breccia zone one hundred and fifty feet in width and practically parallel to the joining planes of the formation, and extending at least 4500 feet in length. Within this zone or lode appears bands and plating a brecciated country rock along the strike of which ore has been deposited. There well defined portions of this lode have proven productive and have been named the Ray, Dowling and Ruby veins respectively.

The veins have been cut by four major faults, as shown upon Plate IV, accompanying this report. These faults are premineral and do not greatly displace the veins; invariably, the ore bodies have been found lying on the upper side of the faults.

The ore minerals in the vein are pyrites, quartz, silver sulphides and very finely divided native gold. The ratio of gold to silver is approximately as 1:30.

Decomposition products of the feldspars are present in the gangue together with a sacchrarcidal quartz.

Characteristic of this form of mineral deposit is the formation of individual lenses, pipes or shoots of high grade ore rather than the general and continuous low-grade mineralization of the entire vein. These pay shoots are reticulated in occurrence, and extensive prospecting alone is the sole method of discovery. Genetically, a re-currence of these ore shoots may be anticipated in the Ruby-Columbia lode, not only in the dacite, but in the adjacent underlying granite as well, as, this lode is evidently a fissure due to the regional adjustment of the earth's crust, and necessarily, of considerable magnitude. The origin of the ore was due to the circulation and precipitation within the fissure of mineralized solutions originating in the Boulder Batholith.

Three such bonanza ore shoots have been developed thus far in the property, their total output exceeding $1,000,000.00.

These ore bodies are similar in physical appearance and geological occurrence to the bonanzas found in Nevada in the Goldfield Consolidated Mine.

Plate IV shows the distribution of the principal ore shoots, together with the veins and faults intersections on the various levels.

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EQUIPMENT

For several years, and more particularly since the collar of the shaft caved, mining operations in the property have been confined to surface workings and the territory above the 150 foot or tunnel level. Consequently the surface equipment has deteriorated. The shaft house is in poor state of repair; with in this building there is one 70 H.P. internal fire box, Scotch Marine boiler, and one 40 H.P. Aimes boiler. Also, one 12x 14 single stage, one 7 x 10 double cylinder hoist with cage. In addition to numerous cabins sufficient to accomodate a small working force, there is a boarding house. There is also a blacksmith shop, ore bins, etc., together with numerous cars and other small mining equipment, tools, etc.

At the mill ample quarters are available for all employees. In addition there is a suitable office building, store house etc.

DEVELOPMENT

Plate III, prepared on a scale of 1 inch to 140 feet, is adapted from a 50 foot scale plan working map made by Barker & Wilson. Accessible workings were checked by the writer and found accurate. Accordingly, the entire survey was accepted. This map, together with Plate V, which is a longitudinal section along the line A-A, gives a fair idea of the development of the property.

Chronologically, the work progressed as follows: The shaft was sunk to the 50 foot level by the original owner. Marcus Daly sunk to the 150 level and drove the 150 foot or tunnel level. The Gold Mountain Mining Company sunk to the 400 foot level, doing a small amount of drifting and crosscutting on the 300 and 400 foot levels. Dowling extended the 150 foot level south through the claim and connected with the Middle Columbia tunnel. He also drove 300 level south through the claim, as shown upon Plate III. Both this level and the one above traverses the Ruby Fraction lode which is not owned by the Lowlands Ruby Mining Company. At various times Dowling had this fraction under option, but never completed its purchase. The owner of this claim has never molested him in trespassing underground so long as he mined no ore therein. It would be very desirable to obtain ownership of this fraction, but no immediate necessity now requires this being done. In addition to these working, Dowling drove a level from the 70 foot mark in the whim shaft on the Ruby. He also sank several shallow shafts, as shown. Upon the Columbia claim several tunnels have been run as shown. The lower tunnel has its portals upon the Amazon claim, permission for which is protected by an agreement with the Amazon owners. The workings upon the Columbia are drained to the level of the lower tunnel by the Amazon tunnel. Several fair prospects for ore bodies in this claim can easily be explored from these tunnels, without interfering with the development of the Ruby property. This latter is more important. Unfortunately, the writer was unable to examine the Ruby workings below the 150 foot or tunnel level, as they were filled with water. However, through personal inquiry of miners who worked in the bottom levels, and after a thorough study of all surface openings, stopes and accessible workings a fairly safe appraisal of the development possibilities of the property is possible. I find the statements made by parties interested fairly well substantiated, while the physical and geological conditions observable warrant more extensive exploratory work.

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The former owners and lessees of the Ruby-Columbia have had only a faint appreciation of the latent possibilities of the property. All exploratory work has been done in a empirical manner, conducted along the line of least resistance. Neglecting wholly the safeguards of competent technical supervision, mine workings were extended regardless of the occurrence of faults, slips, break or change of physical conditions of the rock, and the valuable evidence thus afforded obliterated, necessitating a repetition of the work at another point. The outcome of this method of development is invariably suspension.

Future development possibilities of the Ruby-Columbia lode are reassuring. Exploratory work thus far conducted, has demonstrated a strong well mineralized lode, containing a type of mineral deposit that elsewhere has uniformly afforded a large production. The extraction of over one million dollars from three separate ore shoots further strengthens this confidence.

Exploratory work through the present main working shaft is costly, and withall, unsatisfactory. The only practical method is to develop the Ruby-Columbia lode through a crosscut tunnel. The advantages of such a plan are manifold. Any parallel vein will be intersected, water encountered will drain through the tunnel and the ore and waste material cheaply hauled by gravity, and the low grade ore existing in the property made commercially available. The cost per foot of driving such a tunnel will be less than one-forth that of shaft sinking, and its cost of maintenance many times less.

There are two such possible tunnel sites, each obtaining practically the same depth. The first is a drift tunnel through the Princess Claim, which would have to be purchased. The second, and more desirable location, is a crosscut tunnel from the North Star claim, near the mill. Upon Plates II, III and V the location of this proposed tunnel is shown. Detailed field study will determine the most favorable location of this tunnel. Such a tunnel will be approximately 2600 feet long and give a vertical depth at the shaft of 640 feet, or 250 feet below the 400 foot level. The cost of such a tunnel should not exceed $12.50 per foot, with adequate equipment. Such a tunnel can be advantageously located with respect to the mill site.

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METALLURGY AND MILL

The major portion of the Ruby-Columbia output has been shipped direct to the smelter for treatment. This was necessary on account of the crude and inadequate treatment plant upon the property. Originally, this was a ten stamp mill with plates and tables. A poor recovery was achieved which was but slightly improved by the addition of a percolation cyanide annex. The result was but slightly improved, and after an indifferent experiment, the plant was closed. With proper metallurgical investigation, the treatment of the low grade ore can be solved. The ore contains no cyanides insuperable of neutralization, while the improvements in silver Cyanidization insure a satisfactory recovery.

The planning of a treatment plant is however, a matter for further consideration as it is impossible to forecast positively the character, grade or amount of milling ore available. There is without doubt, a fair tonnage of this ore through out the summerged workings. Upon the 150 foot level there is a body of low grade ore approximately 12 feet thick and possibly twenty feet long which has extensions above and below. This assays from six to twelve dollars per ton in gold and silver.

MILL

The Kodaks appearing as frontis pages in this report show the mill. This is an ancient affair. It has however, salvage value. The mill consists of ten, one thousand and fifty pound stamps, in new mortars; two twelve foot copper plate tables; two Wilfley concentrating tables; one 35 H.P. engine; one 35 H.P. and one 40 H.P. boiler; one Gates crucher and two ore feeders; tools, equipment and small supplies. The Cyanide Annex contains two 5 x 30 foot percolating tanks, solution and storage tanks, precipitation boxes, etc.

The mill building is in fair state of preservation. It is conveniently located for economic mining operation, through the proposed crosscut tunnel. There are ample accommodations at the mill in the way of bunk house, store room, office, etc. for the mine and mill crew.

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SYNOPSIS

The Ruby-Columbia property is situated in the Lowland Mining District, Jefferson County, Montana.

The country rock is dacite of late Tertiary Period overlying quartz monzonite of the Boulder Batholith.

The vein system consists of three or more mineralized bands within a strong, well developed fissure zone or lode, within which the ore occurs as reticulated masses; three of these ore shoots upon the Ruby and Columbia have produced in excess of $1,000,000.00.

Unestimated tonnage of ore of milling grade are indicated by exposures on the 150 foot level.

The vein extends in depth at least through the dacite and into the granite, thus insuring one thousand feet depth or more beneath the present bottom levels.

The problem of economical exploration of the Property is solved by development through a proposed crosscut tunnel.

Geological considerations and physical appearance of vein warrant not only exploratory work in the present workings, but at greater depths.

Under proper terms of price and conditions, the property is recommended as a meritorours venture.

RECOMMENDATIONS

Amendment of the North Star location is advised so as to provide ample dump facilities for the proposed crosscut tunnel. The construction of the crosscut tunnel proposed is recommended on the plea of affording more thorough exploration of the vein system and lessened operating costs.

Patent the various lode locations embraced in the group as soon as possible.

Concentrate all development efforts upon the Ruby claim, leaving the Columbia vein take secondary position. The work in the latter claim can best be done through lessees temporarily.

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CONCLUSIONS

From an analysis of the physical appearance of the Ruby-Columbia vein and a study of the geological data observable we submit the following findings:-

Mine development at the property has demonstrated the presence of a strong, well mineralization lode which, with in the limits of the Ruby and Columbia claims, has produced in excess of $1,000,000.00.

The Ruby type of ore deposit is one that is often a prolific producer.

The probabilities are excellent for the existence of numerous other ore bodies similar to the Ruby. Dowling and Ray shoots in the territory above the present bottom levels, while the virgin territory possible of exploration through the projected crosscut tunnel warrants the necessary expenditure for its construction.

We accordingly advise that the Ruby-Columbia property justifies deep exploration with a fair certainty of developing a valuable mine, and under reasonable terms of purchase, it is a most attractive venture.

Respectfully submitted,
Harper, MacDonald & Co.

per Arthur V. Corry E.M.

Butte, Montana
Feb. 17, 1920

RUBY MINE SHIPMENTS COPIED FROM SMELTER RETURNS. D.C.B.

DATE 1906	DRY WT. Pounds	OZ. GOLD	OZ. AG.	NET VAL.
9/6	54692	1.09	42.3	$1,160.83
10/11	65418	.46	18.5	560.63
11/9	71579	.86	26.6	1,060.78
12/3	71187	.60	15.3	631.36
12/6	72067	3.60	38.8	2,830.75
1907 1/18	46619	.63	23.2	599.41
"	83937	.67	23.6	1,030.42
"	77990	.70	27.0	1,062.22
2/6	77268	1.70	37.7	2,037.55
2/23	90344	1.22	27.5	1,631.61
3/23	86275	1.46	29.4	1,848.69
3/30	72482	2.56	53.0	2,849.99
8/8	86387	10.8	168.0	13,078.84
8/15	78153	10.85	128.6	10,975.28
8/20	66396	5.18	68.5	4,425.29
	60748	9.02	123.7	7,337.14
	74266	10.42	128.0	10,067.24
	73523	6.30	88.7	6,164.45
	86709	10.61	117.0	11,568.14
	73496	2.30	39.0	2,167.03
	71574	4.08	60.7	3,749.76
	78296	3.71	64.5	3,829.45
	71470	8.80	93.8	7,556.88
	85052	6.21	47.0	5,762.27
	78511	2.52	58.0	2,819.72
11/16	83214	2.52	36.2	2,254.68
11/26	86950	2.07	26.7	1,997.68

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DATE 1908	DRY WT. Pounds	OZ. GOLD	OZ. AG.	NET VAL.
9/15	61296	1.85	39.8	1,555.39
"	9893	1.26	269.3	733.02
10/2	43728	2.16	58.9	1,431.22
10/15	53913	1.72	47.0	1,392.57
10/23	55126	1.44	35.0	1,117.68
10/29	66778	1.24	27.5	1,110.52
10/31	66129	1.34	25.3	1,134.11
11/14	134755	1.90	34.4	3,281.28
11/21	73972	2.04	32.7	1,870.01
12/1	155613	1.98	31.5	3,795.40
"	74287	1.99	34.5	2,103.80
12/8	166352	1.65	28.9	3,411.05
12/15	78736	1.71	26.5	1,622.36
"	67460	2.08	33.6	1,732.71
12/16	89274	1.62	26.0	1,754.23
12/22	87936	1.42	28.3	1,597.36
12/29	74349	1.32	22.4	1,187.73
1909				
1/9	77093	1.42	14.6	1,180.29
1/12	79617	1.67	19.0	1,491.23
2/23/06	76963	2.54	53.4	3,021.18
12/6/07	72067	3.60	28.8	2,830.75
1909 Cont.				
1/22	80918	1.68	25.1	1,648.30
1/23	79894	1.42	20.6	1,337.83
1/30	74487	1.48	21.9	1,313.58
"	82158	1.52	23.9	1,521.16
2/9	62815	.77	19.0	617.16
2/11	72238	1.37	23.5	1,230.57

COPY

DATE 1909	DRY WT.	OZ. GOLD	OZ. AG.	NET VAL.
2/20	78890	.98	22.1	975.87
2/26	73809	.93	21.0	854.71
3/5	86991	1.21	28.4	1,431.87
3/13	77293	1.09	28.9	1,173.69
3/16	74275	.87	28.1	938.09
3/20	85757	.98	36.6	1,322.37
3/27	65561	.76	21.3	688.07
3/31	81598	.76	19.6	795.99
7/9	55517	.46	16.1	358.08
7/13	80992	.53	14.9	404.56
7/24	91194	1.02	22.5	1,219.26
7/31	85588	1.14	31.8	1,415.21
8/17	75077	.35	14.0	363.75
8/24	74929	.71	15.2	628.28
8/31	72019	.38	19.1	459.84
9/8	90246	.45	16.5	586.15
10/8	66420	.31	13.8	298.89
11/5	39912	2.86	46.4	1,431.64
11/12	103651	5.48	82.5	7,527.34
11/15	112148	3.77	68.9	5,590.58
11/18	75209	2.72	43.3	2,553.35
11/27	75967	3.34	46.0	3,079.32
1910 1/28	55539	4.56	49.5	2,950.23
2/2	151686	3.47	41.0	6,181.96
2/3	86297	2.16	28.1	2,178.57
2/9	72221	1.41	25.9	1,444.21
2/15	90997	1.39	20.2	1,457.32

COPY

DATE	DRY WT.	OZ. GOLD	OZ. AG.	NET VAL.
2/18	103077	1.52	20.5	1,793.54
2/23	85285	1.54	28.9	1,669.58
2/26	111403	2.52	42.7	3,571.02
3/4	93078	2.51	43.5	2,976.17
3/8	75166	2.19	35.5	2, 030.61
3/12	81046	2.45	38.3	2,447.99
"	80767	2.50	38.5	2,438.59
5/17	82162	1.42	17.7	1,306.79
5/24	105015	2.01	24.7	2,439.50
				$227,062.93
1910 Cont.				
6/1	80360	3.09	42.4	3,034.39
6/4	85008	2.88	45.1	3,085.37
6/21	93192	1.96	36.2	2,385.20
7/26	85211	2.08	43.9	2,448.00
8/9	79488	1.98	33.3	1,970.00
8/12	82914	1.09	13.1	940.00
"	79307	1.40	18.8	1,228.47
8/24	73463	2.39	24.9	2,228.47
8/25	91057	2.00	28.6	2,173.08
9/17	75256	1.88	28.7	1,714.33
10/26	80421	2.50	35.25	2,394.54
1911				
1/6	45971	1.68	45.1	1,106.52
1912				
1/17	14059	.59	54.1	269.65
"	34806	1.38	28.0	255.30
10/18	37542	1.14	9.6	397.01
"	29038	1.01	48.9	597.31
11/13	59801	.44	16.2	329.20
12/21	74613	.69	10.0	452.90
				$256,093.11

COPY

COLUMBIA

1907				
3/13	54989	2.10	71.5	2,256.20
3/7	20515	1.13	40.9	450.51
3/2	76520	0.37	10.9	439.22
2/13	59085	0.13	5.2	104.88
1/31	78529	1.89	24.6	1,142.19
1/11	86868	1.01	24.3	1,367.74
1906				
12/28	81334	0.87	21.2	1,085.57
1212	104479	0.81	20.2	1,314.87
11/20	69155	0.74	18.5	802.20
11/6	82292	0.82	17.4	980.10
10/30	75462	1.00	20.0	1,078.35
10/5	82825	0.42	13.1	564.04
9/12	74967	0.43	11.4	477.16
8/23	88911	0.48	12.2	621.04
8/2	64084	0.38	8.0	305.30
7/26	66420	1.61	42.3	1,777.00

(Note ---> #1 North of Ruby shaft 1500 tons on dump reputed .60 Au by Boyer

#2 Raise 30' north of shaft - 25' high with 2' of $25 ore in back probably on 150' level (uncertain)

#3 Gob in Dowling stope above tunnel 3000 tons of .60 Au ✓

#4 South of Dowling winze on 150' level bottom of drift and back

#5 2000 tons of gob in Ray stope on Columbia .60 Au by Boyer

#6 Boyer mentions second class dump upper Columbia tunnel .50 Au

#7 75' from portal middle tunnel. Boyer mentions x-cut showing ore

#8 Boyer mentions good vein in x-cut from upper Columbia tunnel about 100' from portal

#9 Near north end Columbia claim Boyer mentions ore on east side of drift.

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FIGURE 6

RUBY SILVER MINES, INC.

RUBY AREA

JEFFERSON CO., MONTANA

1 INCH = 300 FEET

Maps received with
letters attached to
Mr. MacLaren's memo

y Room for Reissue

U. S. Government Messenger Envelope

Standard Form No. 65
November 1961
General Services Administration
General Regulation No. 27

65-105

NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM		NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM	
[redacted]	STOP		STOP
[redacted]	STOP		STOP
[redacted]	STOP		STOP
[redacted]	STOP		STOP
[redacted]	STOP		STOP
~~TTP - Room 3035~~	STOP		STOP
~~Dr. Ed Fitch~~ ~~Rm 6524~~ ~~Interior Bldg.~~	STOP 43		STOP
Denzel Selfridge MMT R-4459	STOP		STOP
6308 OME	STOP		STOP
	STOP		STOP

Use other side

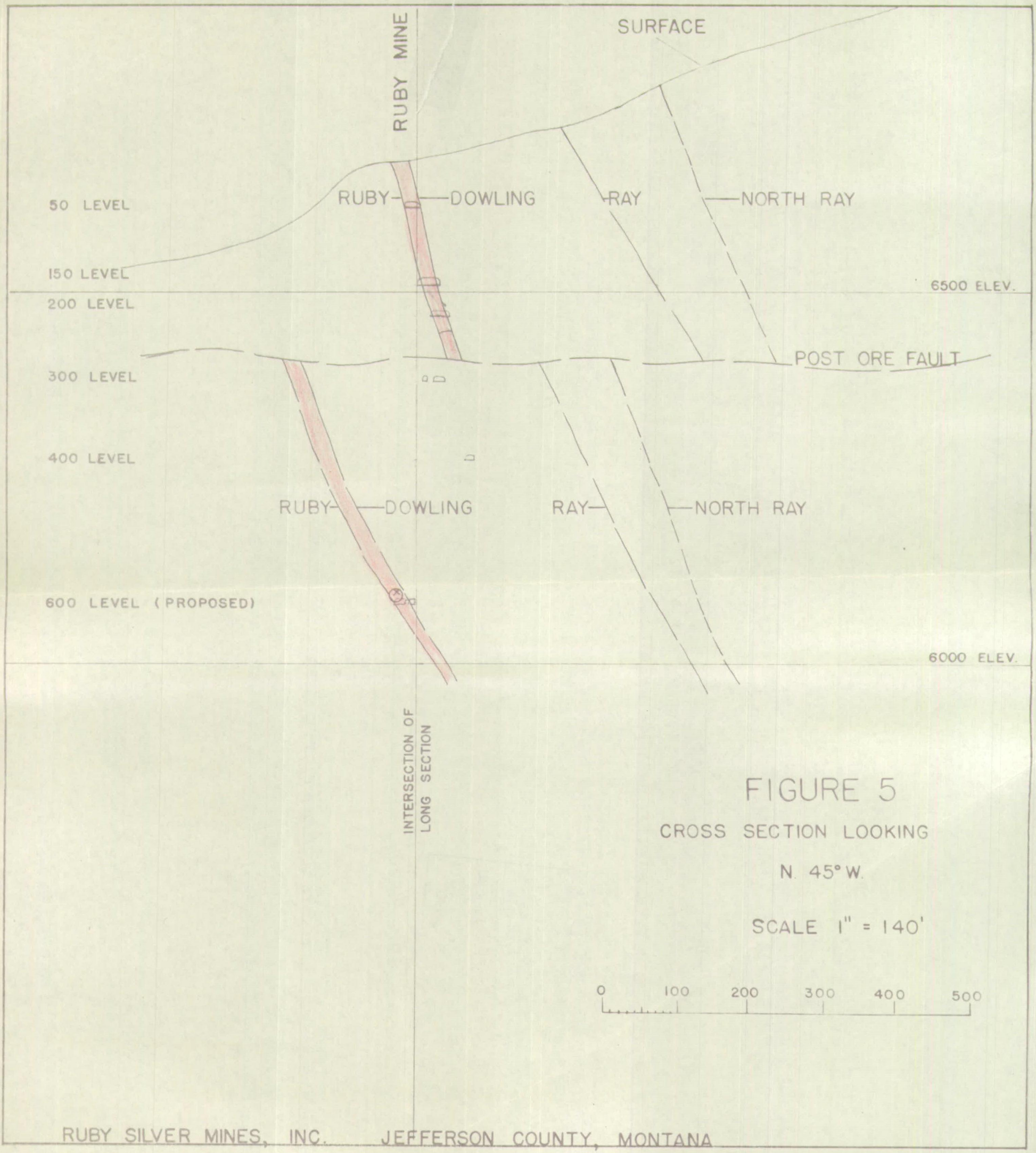
Use STOP only when messenger service between Government buildings in Washington, D. C., is required or wherever a STOP system is used. Your mail room has STOP information.

INSTRUCTIONS

1. Identify Agency of Addressee
2. Void Previously Used Block
3. Write Clearly
4. Send Surplus Envelopes to Supp.

NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM		NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM	
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP

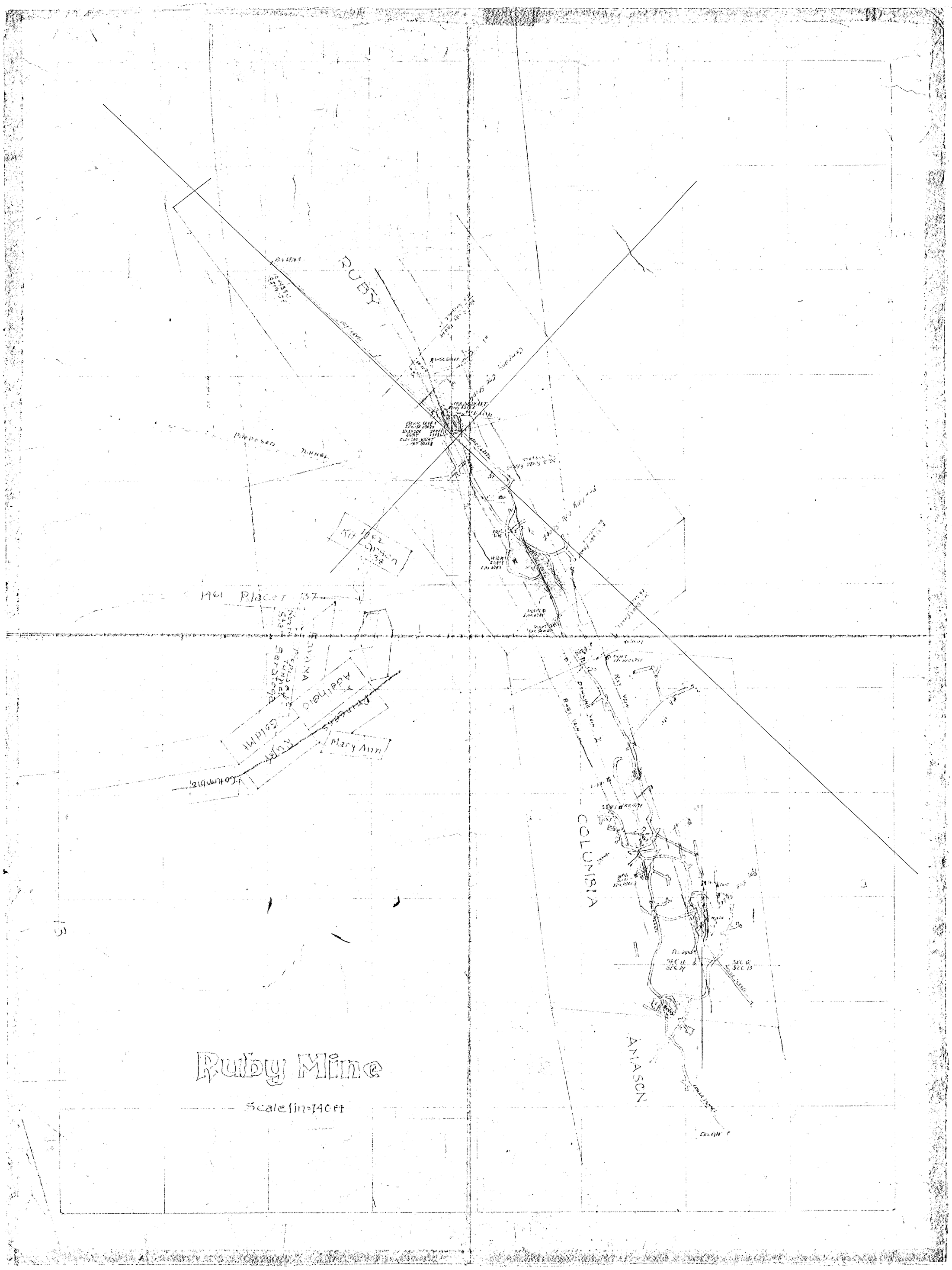
Use other side first

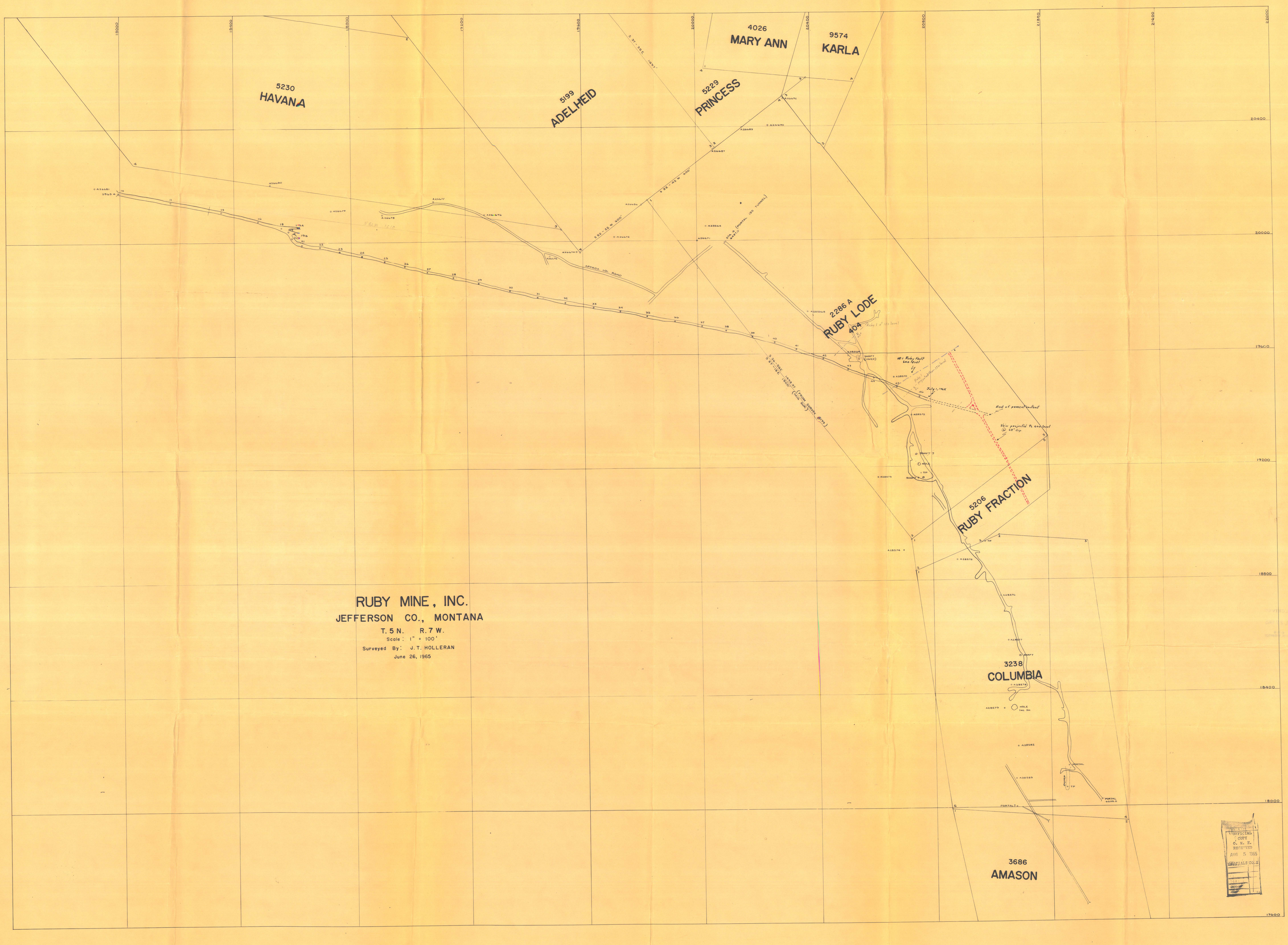

RUBY MINE
SURFACE
50 LEVEL
RUBY
DOWLING
RAY
NORTH RAY
150 LEVEL
6500 ELEV.
200 LEVEL
POST ORE FAULT
300 LEVEL
400 LEVEL
RUBY
DOWLING
RAY
NORTH RAY
600 LEVEL (PROPOSED)
6000 ELEV.
INTERSECTION OF LONG SECTION
FIGURE 5
CROSS SECTION LOOKING
N. 45° W.
SCALE 1" = 140'
0
100
200
300
400
500
RUBY SILVER MINES, INC. JEFFERSON COUNTY, MONTANA

5

OFFICIAL FILE COPY
O. M. E
RECEIVED JUN 3 1963

DATE	INITIALS	CODE


RUBY
PROPOSED TUNNEL
Placer 37
Adelinda
Mary Ann
COLUMBIA
AMASCY
Ruby Mine
Scale 1in=140ft



RUBY MINE, INC.

JEFFERSON CO., MONTANA

T. 5 N. R. 7 W.

Scale: 1" = 100'

Surveyed By: J. T. HOLLERAN

June 26, 1965

OFFICIAL COPY
O. M. R.
RECEIVED
AUG 5 1965
HELENA, MONT.

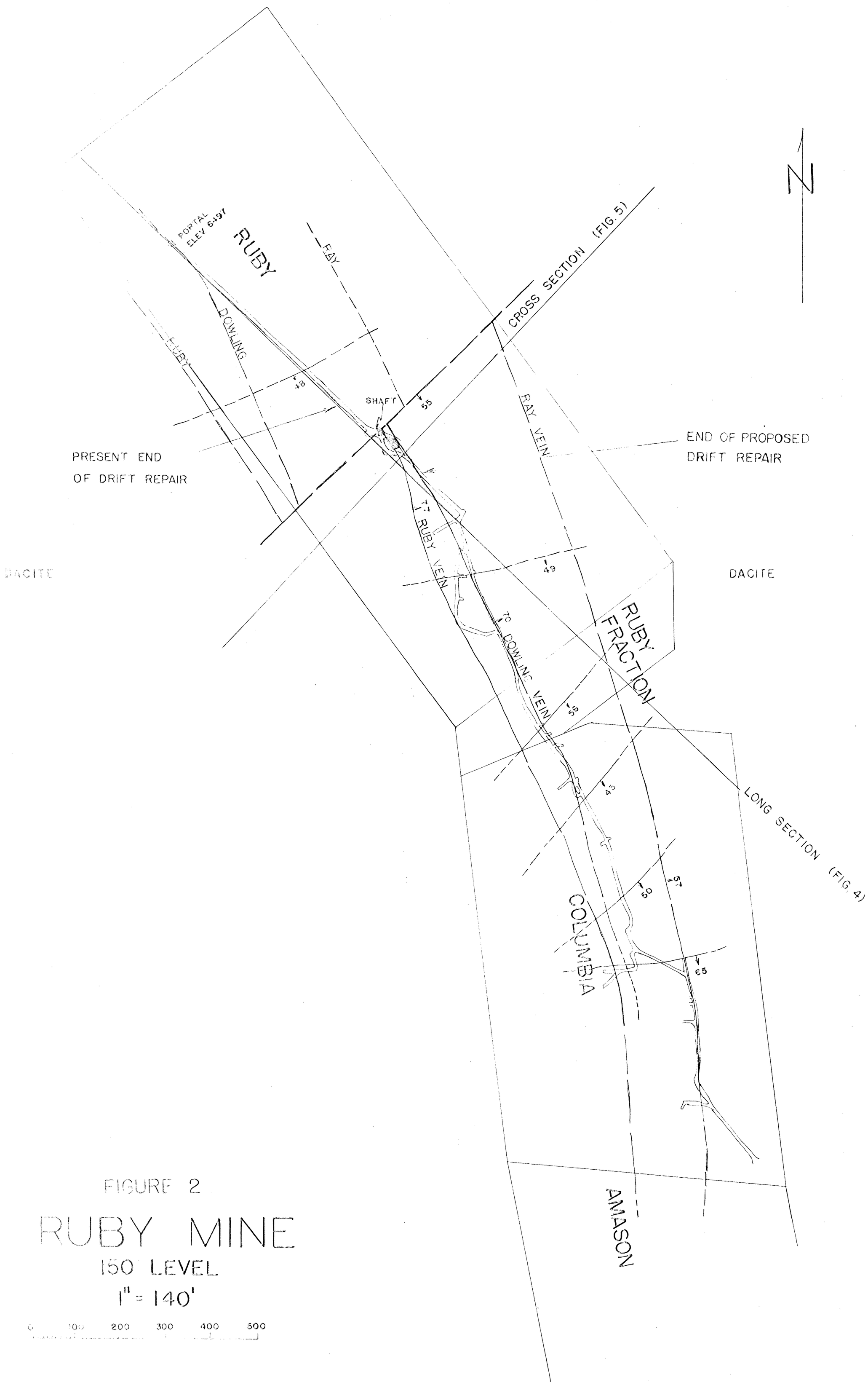


FIGURE 2

RUBY MINE

150' LEVEL

1" = 140'

RUBY SILVER MINES, INC. JEFFERSON COUNTY, MONTANA

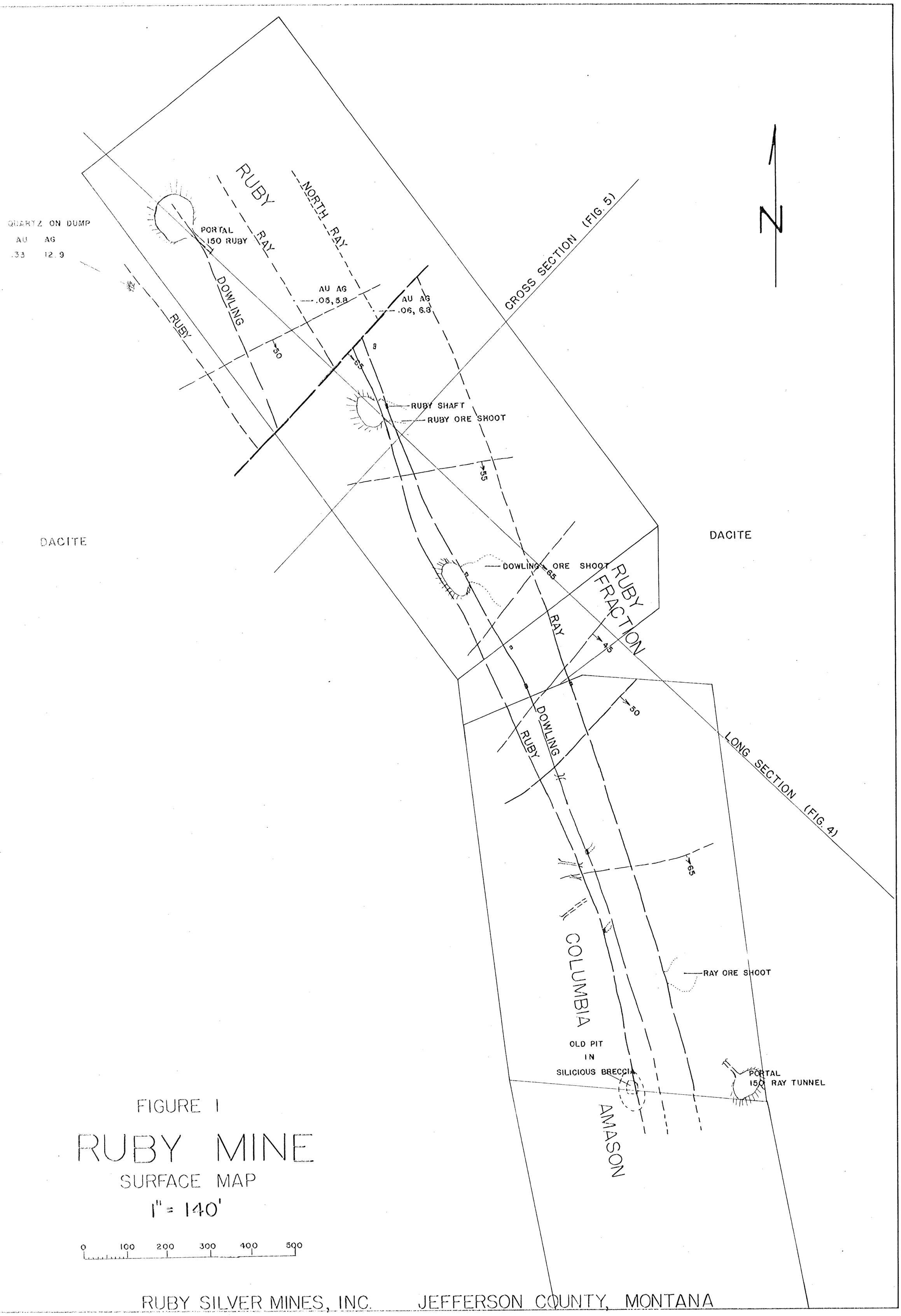


FIGURE 1

RUBY MINE

SURFACE MAP

1" = 140'

0 100 200 300 400 500

RUBY SILVER MINES, INC. JEFFERSON COUNTY, MONTANA

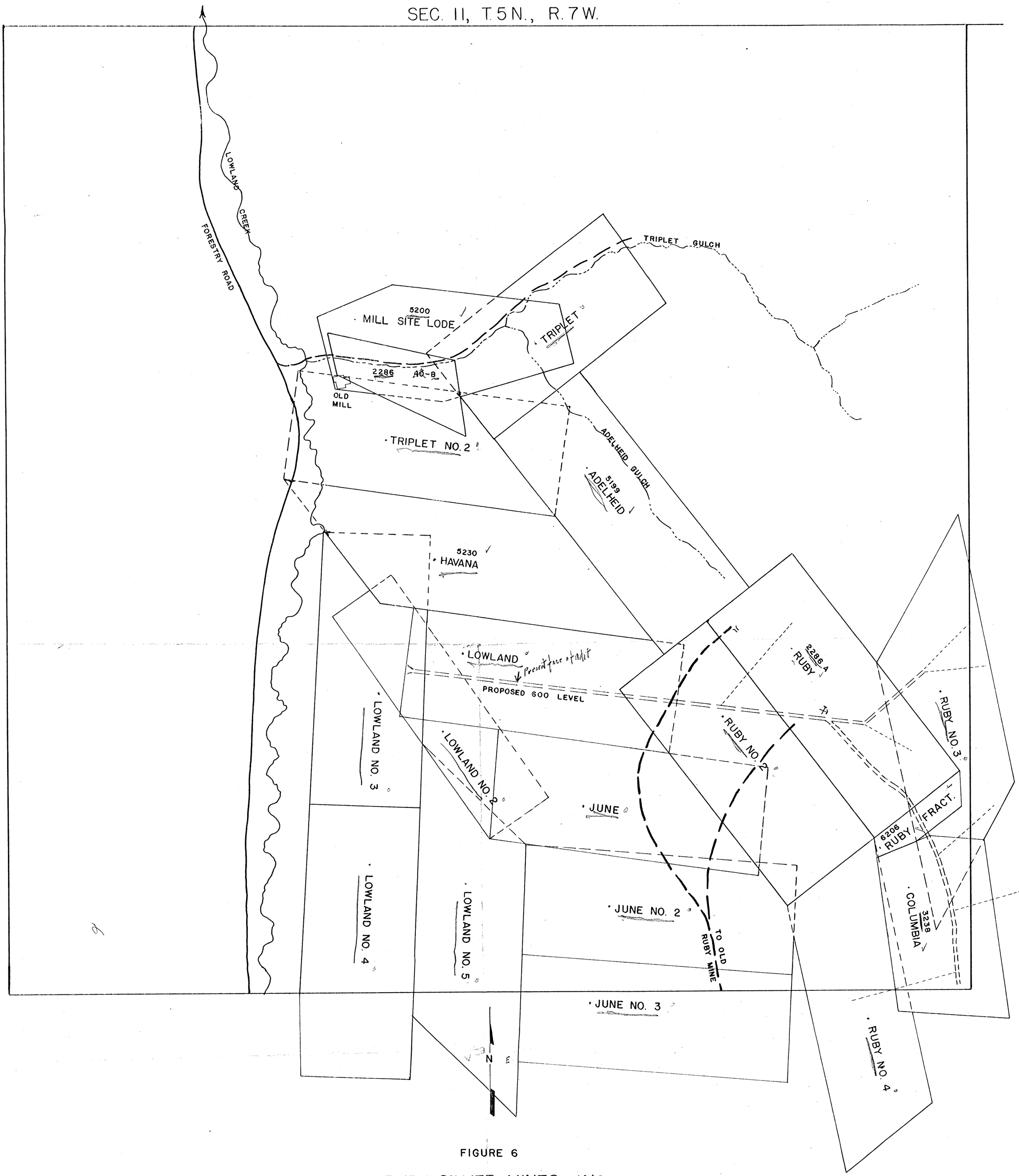


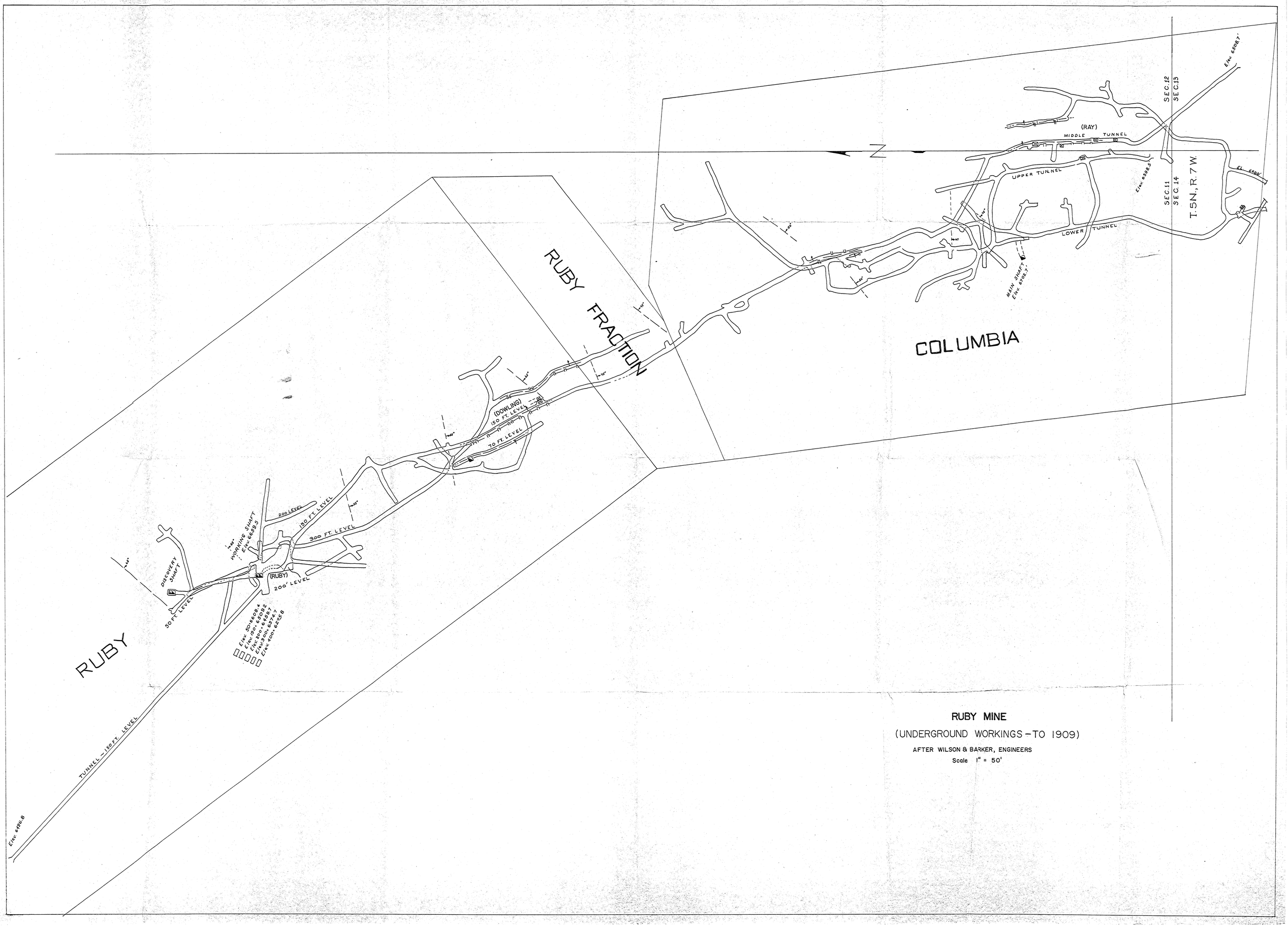
FIGURE 6

RUBY SILVER MINES, INC.

RUBY AREA

JEFFERSON CO., MONTANA

1 INCH = 300 FEET



RUBY MINE

(UNDERGROUND WORKINGS – TO 1909)

AFTER WILSON & BARKER, ENGINEERS

Scale 1" = 50'

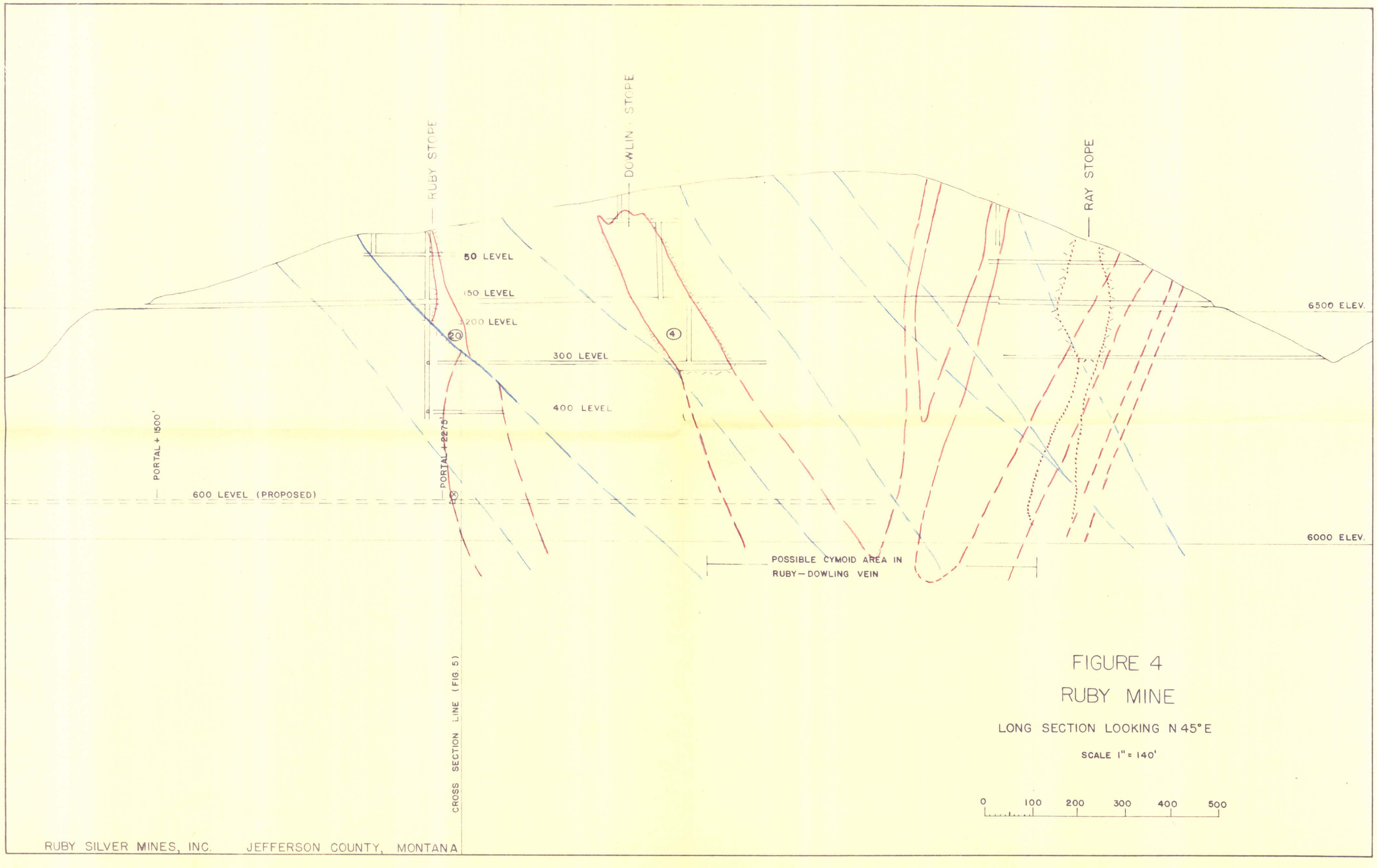


FIGURE 4

RUBY MINE

LONG SECTION LOOKING N 45° E

SCALE 1" = 140'

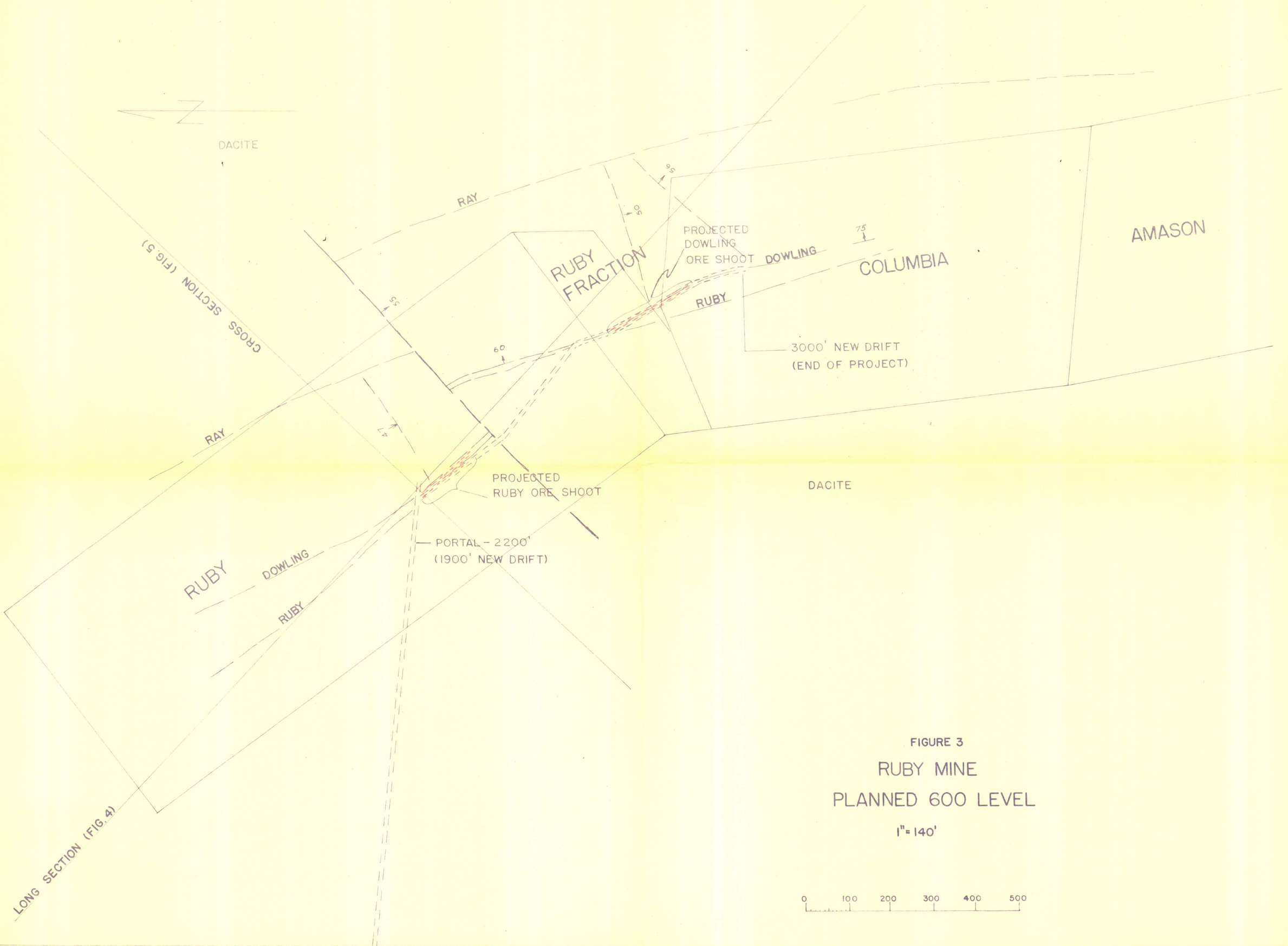


FIGURE 3

RUBY MINE

PLANNED 600 LEVEL

1" = 140'