Exhibit 3-g

PRELIMINARY REPORT

ON THE

GOLDSTONE MINE

LEMHI COUNTY, IDAHO

Arthur Lakes,

August 19, 1944

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MAPS

No. 1 PLAN OF WAR EAGLE & GOLDSTONE AREA
Scale: 500-feet to 1-inch omitted - War Eagle not involved in this app.

No. 2 INDIVIDUAL PLANS & LONGITUDINAL SECTION OF GOLDSTONE MINE
Scale: 50-feet to 1-inch - See Exhibit 3-d

No. 3 GOLDSTONE MINE
Scale: 50-feet to 1-inch Herewith

N O T E

Since this Report was written the Pratt Creek road has been relocated and regraded and Goldstone Mine and Camp are now accessible to trucks. During 1946 a road was bulldozed from Goldstone Camp to upper showings and the tunnel of War Eagle which are also now accessible to trucks.

PRELIMINARY REPORT
ON THE
GOLDSTONE MINE
LEMHI COUNTY, IDAHO

SUMMARY Goldstone property comprises eleven claims, nine on Idaho side, and three on Montana side of the Continental Divide, about 19-miles southeast of Salmon, Idaho. Elevations range from 8,000 to 9,000 feet above sealevel and, whilst winters are severe, good operating conditions should prevail for about 10-months per year.

The mine is connected to Salmon by 10-miles farm and mountain road, which is being repaired, and by 9-miles over main highway to town. Salmon is 76-miles from Darby, Montana, which is the nearest railroad point. Supplies are regularly trucked to Salmon and the high grade gold-silver-lead mill concentrates that have been produced from Goldstone have been trucked to Salt Lake City, Utah at $13 per ton. The United States Smelting, Refining & Mining Company at Salt Lake City provides smelting facilities at about $10.60 per ton. The high grade concentrates, of which 26¼-tons shipped in 1927-38 averaged $562 per ton, are reduced $31.35 per ton for smelter charges, concentrate haul, and other expense whereby the above concentrates returned $530.75 per ton after 4.19-tons of water was taken off, leaving 22.078-dry tons which returned $11,717.67.

Goldstone is the only property in this district that has been developed and exploited, therefore has no other precedent of other mine production to judge its future ore possibilities or extensions. The basis for estimating its future is largely geologic and by comparison with the strong and promising War Eagle vein's surficial indications about 8,000-feet west from Goldstone, which is also under option to Goldstone optionees. Ore characteristics of these two showings indicate that Goldstone may be in higher esentially gold ore zone than War Eagles gold, silver, lead zone of mineralization. Goldstone vein shows progressively better ore widths with reported improved values as depth is attained from surface down to the Main No. 5 adit level, and may be expected to extend into the lower gold, silver, lead zone similar to War Eagle surface.

Production records are unavailable except for the 26¼-tons mentioned above. Average ore grade is estimated from assays of ore left unstoped by early operators when gold was $20.67 per ounce, and by calculating back from smelter returns on the 26¼-tons of concentrates. The available assay averages are from ore that may be considered below the average of stoped sections, and may be materially increased by high grade streaks contained in the veins and not accounted for in the assays.

On the above basis the indicated grade is about 0.38-oz. gold, 0.26-oz. silver, 0.6% lead and low copper though the ore in the mine is liberally stained green by its copper content. At $35 per ounce for gold, 72¢ per ounce for silver, 6¾¢ per pound for lead, and 10¢ per pound for copper, the mine ore should gross $14.30 per ton which, on basis of 90% mill saving be reduced to $12.89 per ton anf after freight, smelting and handling of high grade concentrates are deducted will be worth $12.25 per ton at the mill. Mining, milling, and other local charges are estimated

at $7.25 per ton which will leave $5 per ton of mined ore as net operating profit before taxes, depreciation and depletion charges.

The Goldstone ore position indicates a possible 25,000-tons, or more, ready for development and stope exploitation above the Main No. 5 adit tunnel which is adequately connected by upraises and shafts to upper levels and surface. Subject to findings at No. 6 level, 100-feet below No. 5, the ore body should provide about 10,000-tons of milling ore per 100-feet of depth below No. 5 level.

The ore above No. 5 level should provide about 50-tons per diem for two years mill supply before the ore possibilities below No. 5 are exploited. This ore should return an estimated $75,000 per year, or total of $150,000 which should repay capital expenditure and leave a profit. Every 100-foot intervals below No. 5 level should provide net operating profit of about $40,000.

Aside from good mine camp, the property is wholly unequipped, and it will cost an estimated $75,000 to $95,000 to install milling machinery in present mill building, provide Deisel-electric power unit, compressor, etc. inclusive of cars drills and other mine equipment. Mill construction cost cannot be estimated more closely than in this report at the present time as a competent metallurgist will have to work out a flow sheet from representative ore samples which cannot be gotten until No. 6 level is reopened and further developed.

In addition to the equipment cost, another capital charge of $25,000 will have to be provided to drive No. 6 level, rehabilitate and prepare for stoping in levels above No. 5, together with incidental expenses. The total capital required will, therefore, approximate from $100,000 to $120,000 but ore indications suggest return of this money with profit from exploitation above No. 5 level.

This profit will be largely consumed by royalty payments on purchase of the property. This amounts to $50,000 payable by 10% of net smelter returns which should clear it off at $1.30 per ton of mined ore, requiring about 38,500-tons production before the property is wholly owned by the optionees. Thus their indicated operating profit will be about $3.70 per ton or mined ore.

Ore tonnage and value may be increased by exploring the hanging and footwalls of the stoped vein as over 4-feet of ore occurs in footwall of No. 3 and No. 5 levels and 5-feet of ore goes out in hangingwall at No. 5 level and shown on accompanying maps.

Goldstone ore zone rakes about 40° northwesterly from surface down to and below No. 5 level. a 2400-foot crosscut adit tunnel driven from a flat below camp would provide 500-feet additional depth below No. 6 level. However, this ore rake and mining caution requiring following ore downward as closely as possible, makes depth development advisable by continuing down the 2-compartment shaft below No. 6 level. Capital expenditures required for this work have been deducted in estimate of ore returns from lower levels.

CONCLUSIONS Whilst production records are lacking, the sizeable stoped area indicates good production, mostly at $20.67 gold. Any profits derived by earlier operators were under this price handicap com-

pared with present $35 per ounce for gold. Though I cannot predict any degree of certainty I am variously informed that we may expect an increased gold price in the future. Labor price will probably remain but efficiency should improve. These factors should have a beneficial effect on Goldstone's possible profits beyond estimate of this report.

"The unstoped areas shown on accompanying Section, together with favorable geologic and other data presentedin this report, indicate potentiality for good ore tonnage that can be mined at profit."

The price and terms are reasonable and will be paid off by 25% production so that the optionees will not be jeopardized by having to provide funds for purchase or other uses except to equip and develop the mine and mill to production.

Though we have no otherm ines by which to judge Goldstone's future productivity the geology, vein size and indicated lateral and vertical persistence give reasonable assurance of successful ore developments and exploitation on a small scale which, at 50-tons per diem, is limited to operation profits at about $75,000 per year. It will be borne in mind that every mine of this character is subject to a certain degree of speculation, but I believe that this mine will respond to development according to my estimate.

The strong War Eagle showings warrant systematic exploration with expectancy that they may open another producer whereby collective production from Goldstone and War Eagle might provide 100-tons per diem for a centrally located mill. In that event, the profits from 100-tons would more than double estimated profits from 50-tons per diem.

RECOMMENDATIONS While there is always an element of risk in a meagrely explored district such as this and Goldstone has had to establish production precedent, the chances for success appear to me to outweigh those for failure. Success would bring a good little mine capable of profitable production for a number of years. Failure of ore development would limit losses to about $25,000 or $35,000 required to prove conditions at No. 6 and rehabilitate workings and stopes above No. 5

The evidence indicates a successful issue and, subject to the mining risks always attendant upon a proposition of this kind, I recommend this venture with belief that capital return is practically assured and the work advised in this report will provide a small mine that will return good profit.

Details of this summary are attached. Accompanying maps are essential part of this report.

Spokane, Wash.
August 19, 1944

Arthur Lakes
Mining Engineer & Geologist

LOCATION Goldstone property is located in Sections 16-17: T-21-N, R-24-E, in east part of Pratt Creek Mining District, Idaho and over the Continental Divide into Montana as shown on Map No. 1 .

According to sketch map by P. J. Higgins, the property comprises elevan located claims, eight covering full extra-lateral rights to all veins therein for about 12,000-feet along NW-SE strike of lode. Two lie south of Goldstone mine, and one covers Goldstone campsite. The actual location of claims has not yet been investigated.

The nearest supply point is 19-miles from Goldstone Mine at Salmon, Idaho which is reached by 5½-miles of mountain road down Pratt Creek, thence 4½-miles of farm road to Highway No. 28 extending north down Lemhi River 9-miles to Salmon. The mountain road extends east over the Continenetal Divide to railroad at Armstead, Montana about 40-miles from camp. This road is snowbound about six months per year.

The Pratt Creek road has been washed out and is impassable for trucks for about 2-miles. Relocation of about 2-miles south of Pratt Creek from lower power plant connecting with present even grade road about 1-mile above upper power plant will afford good truck road at least cost. Two bridges will be required, one at each end of relocated road.

Salmon, Idaho is 76-miles over paved Highway 93 from Darby, Mont. the end of railroad that extends to smelters at East Helena and Great Falls, Montana. Salmon is served by bus and regular truck line.

TITLE The claims are held by location under ownership of Mrs. Gies of Spokane, and Homer Harris of Salmon, Idaho and are under option to Bennett W. Porter of Seattle, Wash. The claims are reported to be in good standing with assessments and/or intention to hold filed to date.

TOPOGRAPHY The country comprises high upland surface cut by E-W creeks. The property occupies a ridge bounded on north by Wimpy Creek and on the south by Pratt Creek. The vein outcrops and Goldstone workings are on the south slope of ridge between Pratt and Wimpy Creeks.

ELEVATIONS

Salmon	4000-feet above sealevel
Start of Pratt Creek road	5525
Lower Power plant	5645
Upper power plant	6020
War Eagle cabin	7430
Goldstone camp	8170
Portal No. 5 adit	8500
Vein at No. 5 level	8525
No. 4 level	8648
No. 3 level	8732
Collar Hope shaft	9038
Collar Climax shaft	9042
Continental divide	8500

No. 5 Tunnel is the main adit of the mine and is connected by inclined raise to sub-levels No. 4 and No. 3 as shown on Map No. 2. An additional 600-feet depth can be gotten by 2400-feet of crosscut tunnel

driven from the flat below Goldstone camp but, on account of NW ore rake and advisability of staying with, or near, ore in exploring downward extension possibilities of the vein, it would be advisable to continue winz-shaft below No. 6 level horizon.

Open season is about seven months per year with severe winters accompanied by deep snow at upper reaches but when the property resumes operations the winter access over Pratt Creek road will not prove difficult as there are no snowslides or other impediments along it.

HISTORICAL Early history of this property is vague. Some years ago the late Mr. Gies acquired it from a rancher named Stoll. It was bonded to a company who sunk the Climax and Hopes shafts and installed a mill near present campsite. This company's production records are lacking but it is reported that considerable area between Climax and Hope shafts was stoped above No. 3 level. Caved surface between the two shafts indicates that stopes reached grass roots. Later No. 5 crosscut adit was driven in meandering course to eventual intersection with the vein. An inclined raise was extended up to vein at No. 3 and No. 4 levels and the vein was drifted west therefrom. These levels have since been extensively stoped as described herein. The vein at No. 5 level was drifted and stoped. During this time the hydroelectric plants were installed and a mill built on slide rock just below No. 5 Tunnel portal. About 1935-36 the Callahan Cons. M. Co. of Wallace, Idaho acquired an option but did nothing and turned it over to the late Messrs McCarthy, then President of Hecla M. Co., and Fitzpatrick, then President of Union Iron Works, Spokane, and work was put under direction of Hecla technicians. Hereafter this will be referred to as "Hecla" in this report.

Messrs. McCarthy & Fitzpatrick rehabilitated the mill and re-equipped the hydroelectric plants, extended No. 5 level and exploited some of its western stopes. They sunk a 2-compartment vertical shaft-zinc 100-feet to No. 6 level. According to information, at time of their deaths which occurred close together, they were planning to drive a 2400-foot crosscut adit to tap the ore zone about 600-feet beneath No. 5 level. After their demise the property was operated for a time but, due to government restrictions on gold mining and inability of succeeding partner to make bond extensions, the property reverted to the owners and was later optioned to B. W. Porter.

No records of production are available. All records were handed over to the son of Mr. McCarthy who is now at war, hence they are not procurable. Some money must have been made to justify the extensive stoping. My examination of upper workings indicates rather amateurish work and it is possible that operations preceding McCarth & Fitzpatrick were inept and wasteful. The mill location was definitely ill planned on unstable rock slide. The old mill occupied a better millsite and a much better site could have been located on good ground about 150-yards down hill from No. 5 Tunnel portal, to which ore could have been transported over 2-bucket aerial tramway.

McCarthy & Fitzgerald's renewal of mill was limited to minor installations which evidences their possible intention of building a new mill, possibly on the flat near their proposed deeper adit tunnel.

The fact that these experienced mining men had planned this deeper work contributes to their confidence in the mine's future. This is further born out by my examination and by assays taken during their control of the property.

GEOLOGY The prevailing country rocks are quartzites of the Belt series, about the same age as upper zones enclosing mines of the Coeur d'Alene, Idaho. At Goldstone and War Eagle, the rocks comprise two, or more, wide belts of argillaceous quartzites interbedded between massive, hard, vitreous quartzites. They trend about N 20° W with southeast dips varying from very steep to nearly flat. The softer argillaceous quartzites afford better zones for fissuring, fracturing, and shearing, in contrast to the hard vitreous quartzites which resist them. For this reason the argillaceous quartzites are the ore-favorable rocks of Goldstone, War Eagle, and extensions east into Montana. War Eagle occupies a west belt separated from Goldstone belt by a wide bed of vitreous quartzites. Goldstone belt is interbedded by numerous narrow beds of vitreous quartzite which appear to locally interrupt or narrow vein courses. This belt extends from about ¼-mile west of Goldstone workings more than 1-mile easterly into Montana.

No igneous rocks or dikes were noted at either property but I am informed that diorite occurs at, and near, upper reaches of Wimpy Creek about 1-mile north of this property and considerable dark-colored dioritic dike rock found in slide rock between Goldstone and War Eagle is proof of igneous occurrence in vicinity.

Aside from strata dip changes at various places along the No. 5 level, few structural features are present in Goldstone mine and vicinity. The upper levels, being drifts along vein, are extensively timbered and afford no opportunity to study rock changes or strata attitudes, and the surface is mostly covered except for isolated exposures which are only important by showing rock constituents and characteristics. Undoubtedly obscure structural features relative to vein formation will be found by more detailed work. At present the well defined NW ore rake is important indication of probable downward locality of ore extensions and guide to development.

The principal veins of this meagrely prospected area are: (1) War Eagle vein, (2) Goldstone vein, and (3) McKinley vein. Lesser veins branch into Goldstone, of which the "North vein" following along first drift NW in No. 5 adit and recurring in crosscut driven south between Stations 519 and 520 is best defined. These veins are shown on Map 1

Ore productivity of the various veins appears to be about as follows: Most important are Goldstone and War Eagle. McKinley vein has promise by minor tunnel showings on Montana side of the divide. The "North vein" apparently had some small scattered ore exposures but the few showings in No. 5 level do not give encouragement for its future potentialities.

The strike and dip relationship with attitude of enclosing rocks differs between Goldstone and War Eagle veins. The Goldstone vein strikes generally N. 50° W. with 80o to 87° NE dip up to 90° and reversing steeply in places thereby crosscutting both strike and dip of strata

whereby War Eagle vein strikes generally N 20° W almost with strike of enclosing strata but dips 80° or more NE across strata dip.

Outcrop of Goldstone vein has been intermittently traced about 1100-feet, 300-feet between Climax and Hope shafts, then 400-feet covered gap to 300-feet SE exposure by cuts. It is said to have been traced further SE but I was unable to find cuts that I was satisfied were on this vein. The east cuts are in good, narrow ore, which probably rakes NW into the SE end of No. 4 level but not exposed at No. 5 and probably lies SE of No. 3 level as indicated on Longitudinal Section Map No 2.

War Egale veins have been indicated for about 200-feet length by shallow shafts and cuts on divide between Pratt and Wimpy Creeks 8700-feet northwesterly from Goldstone workings. Its further extension is deeply covered by overburden but its probable strength is indicated by considerable ore on dump of a 20-foot shaft and extensive and large float on Wimpy Creek slope, as described in my reports on War Eagle property, July 3rd. and August 2nd. 1944. War Eagle surface showings indicate greater width than Goldstone outcrops but this might be accidental as erosion might have cut deeper into War Eagle vein and exposed a bulge therein which similar bulge in Goldstone vein was not eroded at surface. Goldstone's good widths at localities in No. 5 level indicate that this vein, and the War Eagle vein, warps into wider structures succeeded by narrowing fissures between the warps.

The locality of War Eagle on actual divide suggests more amenability to erosion than the Goldstone locality on definite hillslope whereby it is possible that War Eagle vein might have been more deeply penetrates by erosive forces, even into a lower horizon of the ore zone described later.

Goldstone workings have explored the vein shear for about 1000-feet length to 600-feet depth. The vein extends NW and SE beyond No. 3 and No. 4 level faces and NW beyond No. 5 drift face, but its SE extension at this latter level has not been exposed possibly because it enters into harder less ore-favorable vitreous quartzites in that direction but also that part of its NW extension may be outside the drift in walls. The two-compartment winze-shaft sunk from No. 5 level to No. 6 was driven out in footwall of the vein, hence does not explore its downward extension. No. 6 level is under water and unexaminable but "Hecla" assays therein indicate good values which are occupying progressively wider vein to the NW. There is reason for belief that better ore widths will be encountered at No. 6 level as it is further driven NW.

Goldstone vein occupies a strong, persistent shear zone whose strike and dip crosscutting strata and structure is encouraging for considerable depth and lateral extensions. My examination, confirmed by experience noted by P. J. Higgins in this mine, indicates greater widths at No. 5 level than prevailed above. As downward continuation of these widths should rake NW beyond the face of No. 6 level, the narrower widths recorded there are not to be considered indicative of lesser vein strength at that lower level.

Information and data from stope section indicates that Goldstone vein averaged 2½-feet ore width in No. 3 and No. 4 levels, in-

creasing to 3 or 4-feet average width at No. 5 level where some sections exceed 9-feet width. Occurrence of ore between 4 and 5-feet width in footwall of No. 3 and No. 5 drifts and of 4-feet width in hangingwall of No. 5 drift, shown on Level plans Map No. 2, indicate that these widths might have been exceeded by testing walls in various localities. The dearth of crosscutting may have resulted in loss of considerable mineable ore by earlier operators. In other words, a possible production lack might have been more the fault of the operators by inadequate exploration rather than the fault of the mine. "Long hole" drilling could be advantageously utilized along the drifts to test walls.

The vein filling consists of quartz, minor barite gangue, and crushed country rock with small bunches and veinlets of lead sulphide, iron pyrite, and some copper which is indicated by liberal green staining. The essential value is gold which is probably associated with iron pyrite or minutely free in quartz fractures and not an associate of the lead sulphide. War Eagle grab samples indicate a silver ratio of about 1-oz. silver to 3% lead, 1-oz. gold to 10-oz. silver. The silver contents are associated with the lead sulphides. Because of the probability that War Eagle environment was more deeply eroded, it is possible that War Eagle ore represents a somewhat deeper, higher lead-silver zone than found at No. 5 level of Goldstone, and thereby the silver-lead content of Goldstone vein is less than that indicated by War Eagle samples.

Goldstone ore type is indicative of an upper zone of mineralization whose downward extension will change by some reduction of quartz some increase in carbonate gangue, increase in silver-lead and untimately in copper, which at present appears to be negligible. Indicated gold content of Goldstone and assayed content of War Eagle's lower grade ore shows close similarity. Therefore (onassumption that War Eagle occupies somewhat lower mineral zone) the indications are that gold tenor may continue and silver-lead increase in Goldstone's further depth extensions.

My examination and the stope map (Map No. 2) indicates a downward ore rake about 35° to the NW. This ore rake is partly due to (1) vein warp over nearly vertical dip with NW plunge downwards. This warping widened the vein allowing better access and greater area for ore solutions to deposit their load, (2) the veins are cut by a series of cross faults around which the ore shoot clusters. These faults dip flatly NW and are apparently pre-mineral, whereby ore solutions would "bank up" underneath them and form richer localities within the oreshoot. They are also post-mineral and have offset the veins' west extensions to the south. (3) A third control of ore rake, presuming correctness of information regards igneous rock occurrence in vicinity of Wimpy Creek, would be the known tendency of ore shoots to rake downward towards their source and the magma from ore solutions originated would be associated with later phases of these igneous intrusions. Formation dip apparently had little influence on the ore rake, though small beds of the harder rocks reduced the veins where they crossed.

The ore rake is important as it controls position at the various horizons, which is a feature in planning deeper developments.

Developments (Refer to Map No. 2) The mine is opened 605-feet deep by the following (1) Climax and Hope shafts sunk 300-feet from surface to No. 3 level, (2) No. 5 adit level 210-feet below No. 3, and (3) shaft-winz sunk 95-feet below No. 5 to No. 6 level.

No. 1 level was driven from Hope and Climax shafts 100-feet below surface and stoped therefrom an unrecorded area to surface.

No. 2 level was driven 115-feet SE and 15-feet NW from Hope shaft, 200-feet beneath surface. The Stope section indicates no stopeing from this level.

No. 3 level was driven 765-feet NW and 225-feet SE along the vein at 300-feet beneath surface, making a total of 990-feet. The inclined raise is 190-feet SE of Hope shaft at this level.

No. 4 level was driven 820-feet NW from inclined raise.

No. 5 level was driven along NW extension of vein for 970-feet from where intersected at station 521.

No. 6 level was driven 120-feet NW from shaft-winz.

435-sublevel and two other short sublevels above No. 3 were driven an aggregated length of 300-feet along the vein.

No. 5 level along the vein is opened by 1280-feet of meandering crosscut from surface. At the 930-foot point an incline raise was run 250-feet up to No. 3 level and No. 4 level was driven NW at 85-feet elevation below No. 3. No. 5 level has also been explored by three footwall crosscuts aggregating 185-feet length. Aside from this there are no other crosscuts in the mine, except for the one connecting No. 4 drift with incline raise.

Thus Goldstone mine has been opened and explored a maximum length of 990-feet to 605-feet maximum depth by 7175 feet of workings divided: 3,330-feet of drifting, 1,465-feet of crosscutting inclusive of 1280-feet of No. 5 crosscut adit to vein, 695-feet of shafting, and 1,683-feet of exploratory raising from No. 3, No. 4, and No. 5 levels.

Ore Shoots The Longitudinal Section, Map No. 2, shows the following stoping:

Level	Drift Length	Stoped above, length	Stoped below, length
No. 3	990-feet	445-feet	260-feet
No. 4	820-feet	460-feet	140-feet
No. 5	970-feet	610-feet	None

This shows greatest stoping length at No. 5 level, where also the greatest stope widths are observed. This is, indirectly, indicative of increasing ore tonnage in depth.

However, the following mineable ore was left unstoped at the various levels:

Level	Drift Length	Stoped Length	Unstoped Length	Total
No. 3	990-feet	445-feet	280-feet	725-feet
No. 4	820-feet	460-feet	200-feet	660-feet
No. 5	970-feet	610-feet	70-feet	680-feet

The Stope Sections indicate that No. 4 level would be extended 280-feet, and No. 5 level 100-feet further NW to reach relative position in the ore shoot achieved by No. 3 level.

The above indicates that the Goldstone oreshoot is over 700-feet long. Its center is about at chute #9 of No. 3 level and chute #9 at No. 5 level (marked "X" on Plan and Section, Map No. 2). Here it achieves a width of 5-feet at No. 3 and 9-feet at No. 5 level. From these greater widths the oreshoot narrows each way but at No. 3 and No. 4 averaged about 2½-feet of ore and at No. 5 more than 3-feet.

From the extensive stoping above and below these levels an undisclosed amount of ore has been mined. Taking minimum widths the following ore blocks are indicated adjacent to the workings:

Ore Possibilities

Block	Length	Heighth	Sq. feet	Width	Cubic feet		Tons
"A"	180-ft.	50-ft.	9,000	2-ft.	18,000	1100	1100
"B"	400	180	72,000	2	144,000	9000	9000
"C"	485	180	87,000	2	174,000	10000	10000
"D"	400	200 60,000	112,000	2 160,000	224,000	14000 10,000 / 4	3500 2500
"E"	240	110	26,400	2	52,800	4200 3300 / 2	2100 1650
"F"	430	100	43,000	3	129,000	8000 / 2	4000
"G"	190	100	19,000	2	38,000	2400 / 2	1200
				Total			29900 tons

Tonnage figured at 16-cubic feet per ton of ore in place.

Blocks D-E-F-G are reduced under measured cubic contents: Block D divided by 4 due to limitations of data regards extent of stopeing above No. 5 level and considerable covered outcrop. Block E on account of uncertainties regards vein characteristics between stations 521 and 400 Raise at No. 5 level. Block F due to lack of drift under this section at No. 6 horizon. Block G due to No. 6 drift being only part way of its lateral extension. This block probably will stope more ore, possibly approaching full estimate.

Dependent upon results at No. 6, the downward continuation of ore should stope about 10,000 per 100-feet of depth over full mineable

stope length.

The above ore estimates will be increased by success of exploration into the footwall in vicinity of sta. 525-27 and in vicinity of 306-308 and in hangingwall in vicinity of sta. 521-22. These good showings might have been mined upwards but should increase ore tonnages below No. 5 level in one case and below No. 3 level in the other.

VALUES Assays on Stope Section are for gold only. The few present ore showings along the levels show considerable lead sulphide in blobs, small bunches and veinlets, very similar (though in lesser quantity) to War Eagle ore. These ore exposures were liberally green-stained indicative of copper in the ore which, however, I believe will prove commercially negligible as very little copper will stain a lot of quartz.

Unfortunately no production records are available. These would have been important in evaluating various ore groups, ratio of galena and silver to gold, etc. particularly in lower level stopes exploited by "Hecla". All I have to go on is a note in P. J. Higgins' report "Total receipts $53,336.03-Mill concentrates 86-tons, average $605 per ton" and annotation the "ore mills about 50-tons to 1". This would indicate a very low sulphide content in the mined ore.

The $53,336.03 receipts obviously falls way short of the total past production as it would represent too meagre ore values to justify the extensive development and stoping. It probably represents returns from Hecla's small stoping in west part of No. 5 level. This also is subject to uncertainty in not knowing the actual stoping localities and their extent.

Regards mapped assays the following probabilities should be considered: (1) The unstoped west part of No. 3 and No. 4 levels was left by former operators as too low grade to mine under $20 gold and then existing conditions, either by reason of lower values or narrower widths as compared with the more favorable stoped areas. (2) In mining the ore, lenses and "paystreaks" of high grade ore are encountered. Their enriching effect on mine run ore is not accounted for in this sampling record. (3) Higgins shows widely spaced samples in Hope and Climax shafts assaying 0.64-oz. gold over 29-inches width, 130-feet high in Hope shaft above No. 2 level of 0.74-oz. gold across 25-inches which would return 0.60-oz. across working width of 30-inches. Whilst these samples are too widely spaced to be accepted for averaging, they possibly represent more nearly the grade of mine run than the samplings taken in following estimate. The actual mine ore grade cannot be assessed until No. 6 drift is driven west into and through downward continuation of the ore zone, but it is within reason to figure grade somewhat higher than the averaged assays show and I believe that 10% increase is within conservative limits.

However, the sampling of No. 6 level in intact ore is representative of mine grade. The last 50-feet is progressively widening possibly into beginning of downward ore zone at that level. This level averages 13½-inches width of 0.65-oz. gold for 110-feet length which reduces to 0.28-oz. gold across 30-inch working width, but the last 50-feet assays 0.74-oz. gold across 17-inches, giving 0.43-oz. across working width of 30-inches, which latter is applicable to our estimate.

For the above reasons the following averages may be, probably will be, exceeded by actual stoping of virgin areas.

Sampling indicates the following:

No.	Level	Length	Width	Gold oz.	Reduced to 2½-foot stoping width	
A	No. 3	250-ft.	20-in.	0.57-oz.	0.36-oz.	NW Fault "A"
B	No. 4	140	18	0.41	0.27	NW Fault "B"
C	No. 4	130	6	0.60	0.12	Poor vein
D	No. 4	60	18	0.75	0.45	Ore zone
E	No. 6	110	13½	0.63	0.28	Overall length
F	No. 6	50	17	0.74	0.43	Length in beginning ore zone

Average of A-B-D-F gives 0.35-oz. gold over working width of 2½-feet, or $12.25 gold in the ore. To this must be added some lead, silver, and copper. Analysis of returns from 26.264 tons of concentrates which yielded 22.078 dry tons indicates a probable ore content, at 0.35-oz. gold, as follows:

Gold	0.35-oz.	$12.25 at $35 per ounce
Silver	0.24-oz.	.17 at 72¢ per ounce
Lead	10½-lb. 0.5%	.71 at 6¾¢ per pound
Copper	½-lb. 0.02%	.05 at 10¢ per pound
		$13.18 per ton of mine ore

This gives the following indicated ratios: 0.68-oz. silver to 1-oz. gold, 45/100-oz. silver to 1% lead, 11½% lead to 1-oz. gold, and 1.6-lb. copper to 1-oz. gold.

On basis of 10% increase over the above values the following ore grade is indicated and may be closer to actual averages:

Gold	0.38-oz.	$13.30 at $35 per ounce
Silver	0.26-oz.	.19 at 72¢ per ounce
Lead	11½-lb.	.77 at 6¾¢ per pound
Copper	6/10-lb.	.06 at 10¢ per pound
		$14.32 per ton of mine ore.

This grade of ore is somewhat higher in gold but much lower in silver and lead than five grab samples (excluding picked high grade) taken from dumps at War Eagle which returned 0.31-oz. gold, 3.2-oz. silver, and 10.4% lead per ton, making ratio of 10-oz. silver to 1-oz. gold, 1/3-oz. silver to 1% lead, 38% lead to 1-oz. gold.

The higher lead content at War Eagle together with more carbonate gangue indicates possibility that War Eagle is in a smoewhat deeper zone of mineralization than is penetrated at Goldstone's workings. On this basis the deeper Goldstone developments will be expected to show increase of silver and lead but I believe will maintain its gold content.

MILLING Obviously $14.30 ore will have to be processed by milling into high grade concentrates to ship to smelter.

Future operations at Goldstone will be dependent upon the following contingencies: (1) If War Eagle develops commercial ore bodies operations of Goldstone and War Eagle will be consolidated into one management, powered from a central Diesel-electric plant, and the ore milled in a central mill, probably located at, or near, War Eagle cabin. Collective production of about 100-tons per diem would afford best mill returns as labor costs required in a 50-ton plant are equal to requirements in a 100-tons per diem plant. (2) In event that War Eagle should prove disappointing, or pending its development into productive stage, the Goldstone mill could be re-equipped on 100-tons per diem basis and used for 50-tons or more daily production from Goldstone mine without War Eagle production.

Goldstone' s present indications should assure 50-tons per diem, which might be increased to 75-tons but I doubt that the mine could economically produce 100-tons per diem over any continuous operation. War Eagle's surface and float indications appear to be larger than Goldstone's but it is quite probable that this property, if success is met with in ore development, would approximate production possibilities of Goldstone.

Indications are that the gold content is not associated with either silver or lead content but is probably (1) associated with iron sulphide and (2) partly minutely free within the quartz. Smelter returns from about 26½-tons of concentrates shipped in 1937-38 show lead content varying from 11% to 23%, averaging 14.6% with a quartz content varying from 54% to 68%, averaging 62% which shows that the concentrate is not a flotation product. Judging from the indicated metallic content of the ore the mill will have to provide method and equipment to save the free gold as well as to concentrate the gold and iron associates, silver, lead, and copper.

For the above reasons no flowsheet can be planned for the new mill until work progresses in Goldstone sufficiently to provide representative samples from which a competent metallurgist can work out a method commensurate with capital expenditure and economy of production. Whilst this has an important bearing upon the capital requirements, it cannot be done at this time and the best that can be done is to make liberal estimates of possible cost of mill rehabilitation and equipment.

Milling should yield at least 90% recovery of metals into salable products. It is quite possible a higher efficiency might be worked out but in my estimate I am using 90% recovery factor.

The 26½-tons of concentrates yielded 22.078-tons of dry ore, 4.186-tons being moisture which averaged 16% of the shipping weight. This indicates that filtering was inadequate as proper filtering should reduce the water content at least one half. As the freight haul from Salmon to smelter at Salt Lake, Utah, was about $13 per ton, $2.08 was paid out for water. This should be reduced to about $1.00 per ton of concentrates, making the $12 balance applicable to "dry ore" on which is based payments for included metals.

Analysis of 26.264-tons of concentrates

Conct. weight	Water weight	Dry Weight	Gold oz.	Silver oz	Copper Tons	Lead Tons	Insol-uble	Iron	Sulphur
26.264 Tons	4.186 Tons 16%	22.078 Tons 84%	348.783 ounces 15.8-oz.	246.76 ounces 11.17-oz	0.289 Tons 1.31%	3.24 tons 14.6%	13.68 Tons 62%	1.47 Tons 6.6%	2.7% % 2.7%

Smelter Returns

22.078-tons

Gold	Silver	Copper	Lead	Total
$11,587.22	$142.66	$12.92	$208.51	$11,951.31

Per Ton of Concentrate (Dry)

Gold	Silver	Copper	Lead	Total
$524.83	$6.46	59¢	$9.44	$541.32

Per Ton of concentrate shipped

Gold	Silver	Copper	Lead	Total
$441.18	$5.43	45¢	$7.94	$455.00

On basis of estimated 90% mill recovery the mined ore value from above returns would be (1) Dry concentrate $601.47 per ton. (2) Shipped concentrate $505.55 per ton. On basis of ore values of $14.30 per ton estimated in this report the concentration ratio is 42-tons of mined ore into 1-ton of concentrate.

Milling on basis of 50 to 1 ratio with 90% saving efficiency the following results would be expected:

	Gold	Silver	Lead	Copper	Total
Ore content	0.38-oz	0.26-oz	11½-lb	6/10-lb	$14.32
Multiply by	45	45	45	45	
Concentrate	17.1-oz	11.7-oz	517½-lb	27-lb	
Value per ton	$598.50	$8.42	$34.93	$2.70	$644.55
Value per ton mined ore		18.09			$12.89

Marketing From the above will be deducted Smelting, Hauling and other costs per ton of shipped concentrate.

The United States Smelting, Refining and Mining Co. of Salt Lake City, Utah, scheduled the 26¼-tons as follows:

Gold Pay 100% at $34.9125 per ounce

Silver Pay 100% less ½-ounce less 5% of value of silver at market (77¢) This amounts to a little over 72¢ per ounce for full content.

Lead Not scheduled in return sheets but indicated about 2.4¢ per pound of lead content deducted

Charges averaged	$10.58	Smelting charge per dry ton
	15.42	Hauling (dry ton) On basis of $13 per ton shipped concentrates
	5.34	Other charges inclusive freight on sacks returned, watchman, etc.
Total	$31.34	per dry ton of concentrate
	$25.53	per ton of shipped concentrate

Thus the $644.55 per ton of dry concentrates will be reduced $31.34 to $613.21, which at 50-tons into 1-ton will make the mined ore value $12.26 per ton instead of $14.32 assay value.

From this $12.26 per ton will be deducted mining, milling, development of new ore and overhead at $7.25 per ton leaving about $5 per ton net operating profits before taxes, depreciation, and depletion. Obviously an increased price of gold, which is presumed by a number of sources, will enhance this net operating profit accordingly, as would reduction of labor costs which is not considered at the present time.

On the above basis the net operating profits would be: At 50-tons per diem, $250 per day, $7,500 per month, $75,000 per year.

COSTS With adequate electric power supplied by Diesel-electric generator and with competent labor I estimate the following:

Cost per foot of 2-compartment shaft	$40	to	$50
Cost of drifting & crosscutting on adit levels, per foot	18		18
Cost of drifting & crosscutting on shaft levels, (hoisting & pumping charged) per foot	20		20
Cost of upraising (varying according to amount of timbering)	18		20

Mining costs will vary according to conditions, vein widths, rock stability in walls, etc. If walls prove cavy, as illustrated at some of the wider stopes on No. 5 level, "filled stoping" will be necessary varying from $4 to $5 per ton of ore. If walls stand well, as illustrated in vicinity of No. 3 and No. 4 levels, "shrinkage stoping" would be applicable varying from $3.50 to $4.50 per ton. Probable mining, tramming, pumping, etc. will average about $4 per ton. Milling, hauling, etc. about $2 per ton. Development of new ore during exploitation of stopes at $1000 per month, about 65¢ to 75¢ per ton. Overhead and other costs about 50¢ per ton.

Total mining and milling costs about $7.25 per ton.

MILL: Whilst present site of old Goldstone mill was ill chosen it could be rehabilitated and re-equipped. Whether the present building would prove adequate to house the completed mill will determine largely upon the "flow sheet" determined on by the Metallurgist which is a matter that cannot be discussed in this report.

CAPITAL EXPENDITURE Subject to mill "flow sheet" requirements and ability to procure good equipment second hand from some of the "war baby" mills that will cease operations when the War requirements are over, the following Capital Expenditures are indicated:

Mill	$40,000	to	$50,000
Diesel-electric	15,000		25,000
Equipment, compressors, etc.	20,000		20,000
Driving No. 6 250-feet	7,000		7,000
Rehabilitating and stope preparation above No. 5	10,000		10,000
Other	8,000		8,000
Totals	$100,000		$120,000

FUTURE OPERATIONS In view of the indicated ore position of Goldstone mine the future development program would be conducted in two sequences: (1) Pump out and drive No. 6 level northwest into and through the ore zone. Sample for mill test. Have flow sheet worked out by a competent metallurgist. (2) Repair and rehabilitate the drifts from No. 5 up through No. 4 and No. 3 levels. Extend No. 4 and No. 5 drifts to the same northwest limits penetrated by No. 3 level. Examine the workings above No. 3 level contingent to Hope shaft. This work should provide 50-tons, or possibly up to 75-tons per diem for nearly 2-years and work in No. 2 level and above might increase this. This work would not be undertaken except as an adjunct to stope exploitation and mill production.

First and immediate work is repair and renewal of timbers under old stopes at No. 5 level. It is fortunate that this tunnel was opened this year as some of the timber is in very bad condition and about ready to give way. With the filled stopes overhead, the collapse of a few sets would cost considerable money to reopen the drift at this level, possibly entail a new drive around some of the caved section.

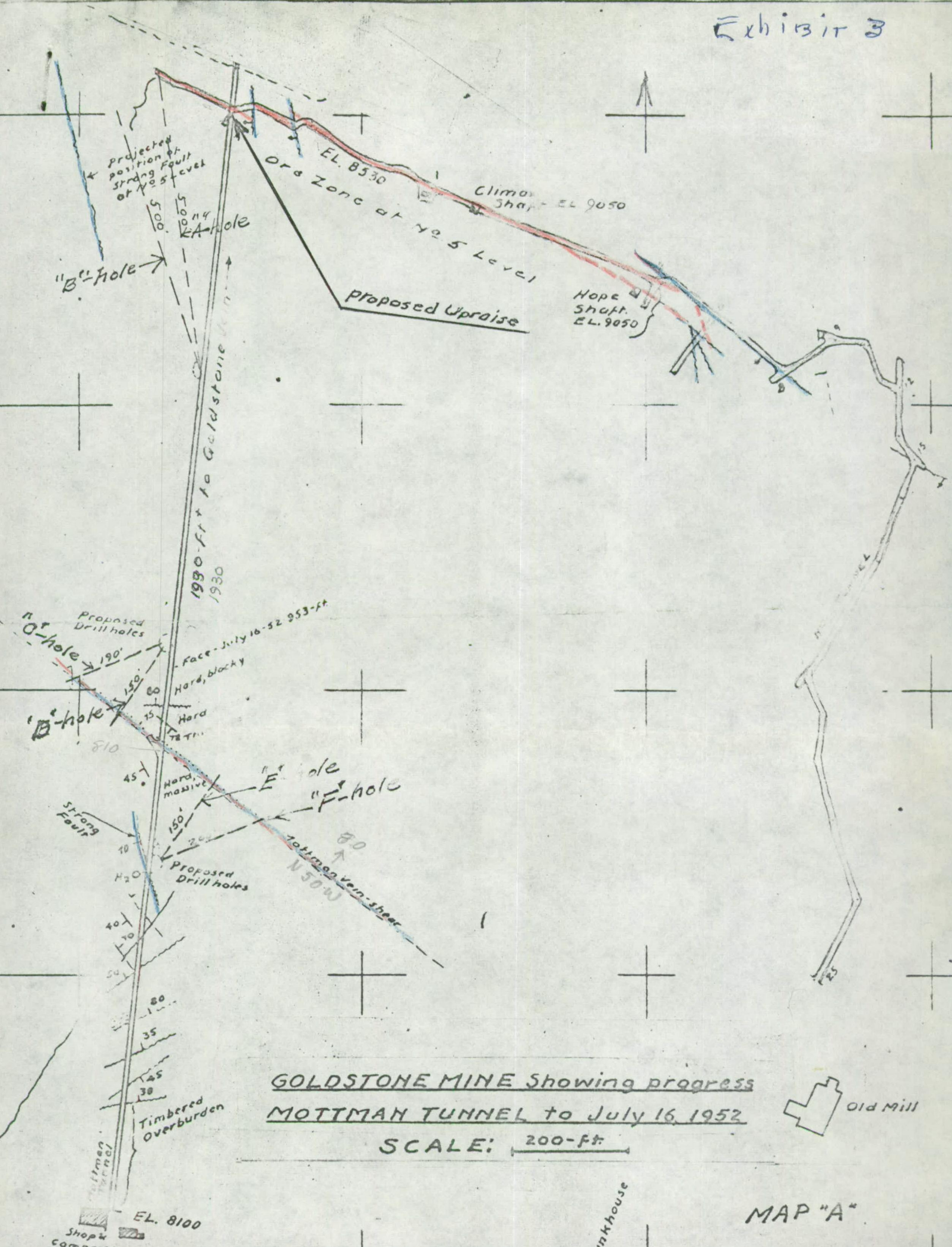
When compressor facilities are provided the No. 6 level should be pumped out and drift work done therein. Whilst exploitation of ore found therein would not proceed as early as the stope production above No. 5 level, this No. 6 level is our "key" level for (a) representative ore on which to base mill flow sheet, and (b) for vital information as to grade and character, extent and continuity, of ore at this level.

When compressor facilities are provided a systematic "long hole" testing program should be put into effect as it is quite possible that important ore additions might be found in areas mentioned in this report. Two important footwall showings and one important hangingwall showing that were not stoped at No. 3 and No. 5 levels are illustrative of this.

If permanent compressor equipment is unobtainable it might be possible to rent a large size portable equipment that could be installed at portal of No. 5 to be used in opening and developing No. 6 level due to the desirability of information and samples there.

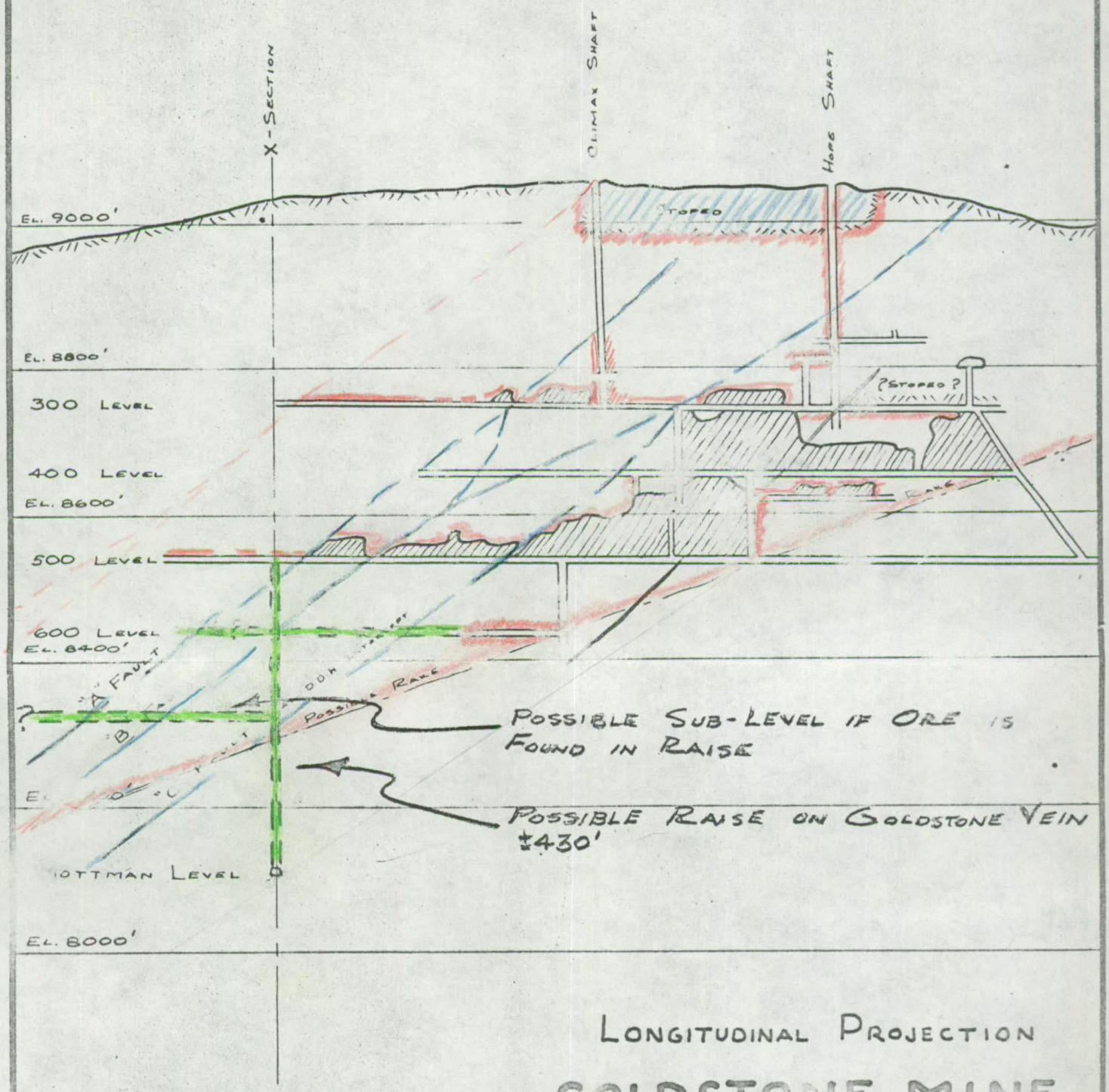
Further detailed examination of the various workings to determine possible ore extensions out into the walls, upper level possibilities, etc.

Exhibit 3



GOLDSTONE MINE Showing progress
MOTTMAN TUNNEL to July 16, 1952
SCALE: 200-ft.

MAP "A"



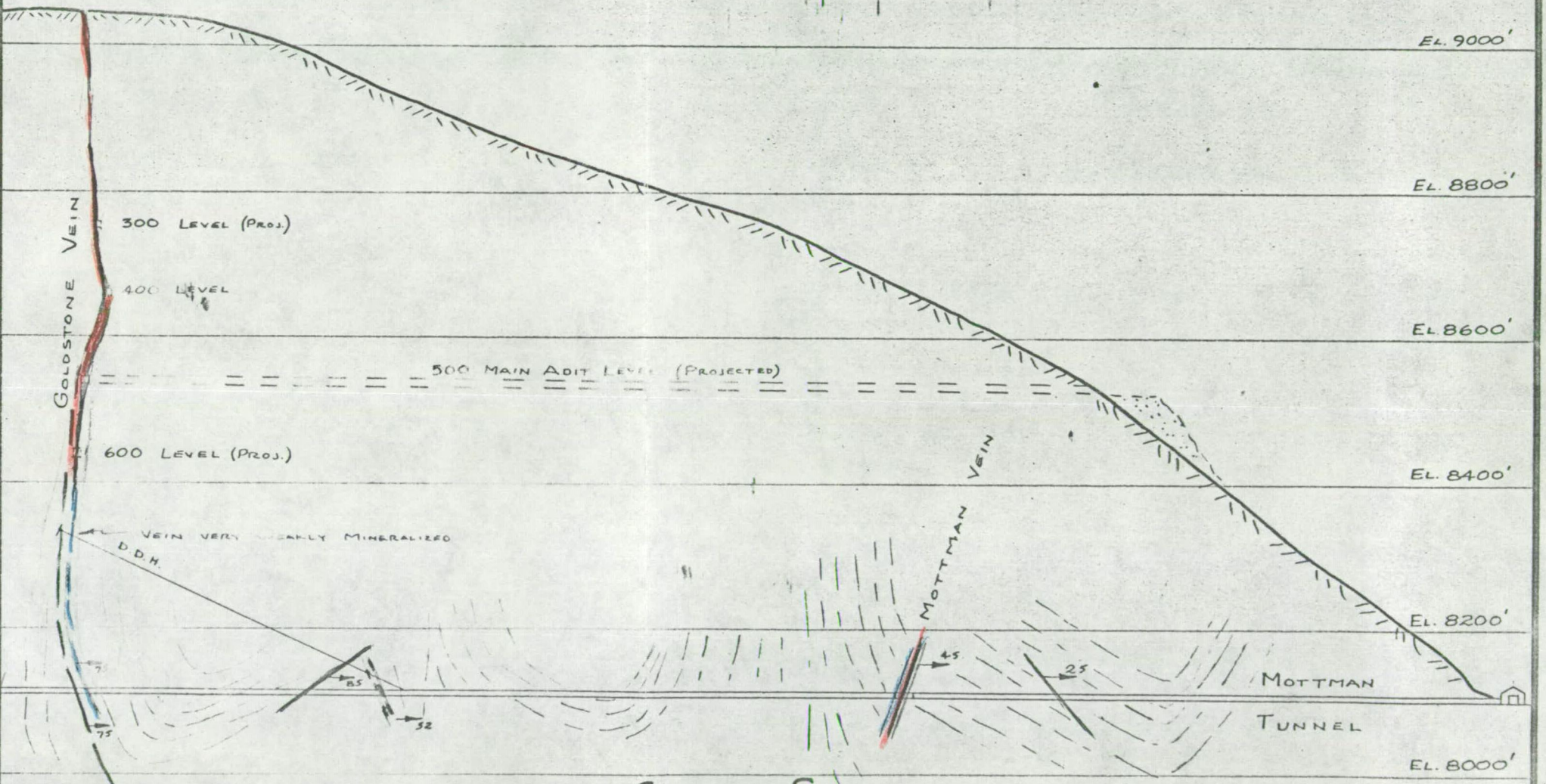
LONGITUDINAL PROJECTION

GOLDSTONE MINE

SECS 16-17, T21N, R24E. LEMHI CO., IDAHO

1" = 200'

9/1/56 MAP "B"



CROSS - SECTION

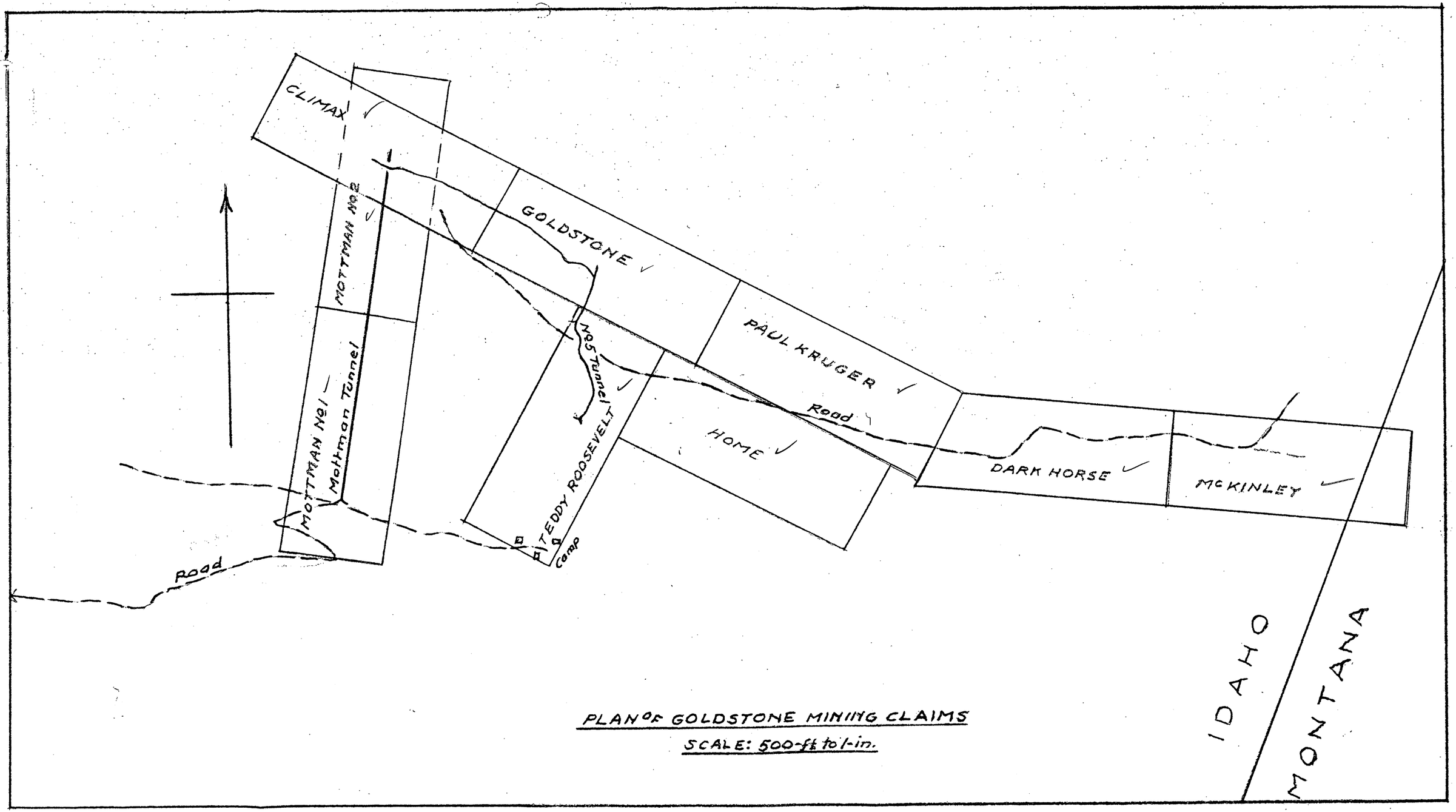
GOLDSTONE MINE

1" = 200'

MAP "C"

SECS. 16-17, T 21N, R 24 E. LEMHI CO., IDAHO

9/1/56



PLAN OF GOLDSTONE MINING CLAIMS

SCALE: 500-ft to 1-in.

Claim Map Exhibit 2(b)

5 ee

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
Spokane, Washington 99204
October 29, 1964

MEMORANDUM

To: Chief, Division of Exploration Operations

From: Acting Field Officer, Region I

Subject: Application Examination
OME-6362 (Gold)
Goldstone Mining Company
Goldstone Mine
Lemhi County, Idaho

INTRODUCTION

The Mottman adit of the Goldstone mine was inspected September 25, 1964, in the company of Sylvester Kramp. Mr. Kramp is familiar with the mine having worked in it at various times and was designated by B. W. Porter, president of the applicant company, to act as his representative. As all of the other workings were caved and inaccessible, no attempt was made to visit them. About 2 hours were spent on the property.

Most of the applicant's proposed program was in the order of development, but it was thought that exploration in depth by drifting on the vein from the Mottman tunnel might be feasible. However, on the basis of available information it is concluded that the chance of a significant discovery of gold-silver ore by such a drift is less than fair and it is recommended that the application be denied.

MINE WORKINGS AND GEOLOGY

The Goldstone mine has been developed by 2 vertical shafts, 4 levels, and an adit crosscut about 330 feet below the deepest drift. The shafts and 1 adit leading to the 4 developed levels are caved and inaccessible but are described in the application and an accompanying report by Arthur Lakes, Consulting Mining Engineer.

The geology of the Pratt district and the Goldstone mine is described by:

Umpleby, Joseph B. (1913), Geology and ore deposits of Lemhi County, Idaho: U. S. Geol. Survey Bull. 528, p. 121-122

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The Goldstone vein strikes N. 62° W. and dips 75°-85° NE. and is a quartz-filled fissure ranging in width from a few inches up to 4 feet; locally it includes many fragments of wall rock. The hanging wall is sharply defined, but many stringers of vein matter extend into the footwall. Scattered through the quartz are chalcopyrite, its oxidation products, and galena; gold is said to vary directly with the percentage of copper in the ore. The vein wall rock is chloritic schist and quartzite (1913).

The Mottman tunnel is 2,027 feet long and cuts the Goldstone vein at 1,930 feet. Thus, it has been driven 97 feet beyond the vein. The depth of a horizontal diamond drill hole beyond the face is not known. At tunnel level the vein is a shear zone a little more than a foot wide with quartz stringers and clay seams 1 to 2 inches thick; a few weak copper stains were noted. The vein strikes N. 63° W. and 78° SW. Although the vein dip is in the opposite direction of the dip in the upper workings, there is little doubt that this is the Goldstone as no vein was found in the 97 feet of drift beyond. At 1,910 feet from the portal is a 3-foot wide shear zone striking N. 60° W. and dipping 65° SW. This could be a split from the main structure, but it showed no evidence of quartz or other mineralization. Wall rock in this part of the crosscut is quartzite with layers of shaley beds.

About 810 feet from the portal the Mottman tunnel crossed the Mottman vein which strikes about N. 50° W. and dips 80° NE. It has been followed northwesterly by a drift for about 20 feet. At the face the vein is about 3 feet wide and consists of quartz and sheared quartzite wall rock. Two samples were taken at the face, one of the hanging-wall part, the other of the footwall. Both assayed only a trace each of gold, silver, lead, and copper over a width of 1 foot.

The plan and section of the workings accompanying the application contain only limited assay data. Toward the west end of the workings the following lengths, widths, and grades are indicated:

Level	Length (feet)	Av.width (inches)	Av.grade Au oz/T
300	255	20	0.57
400	140	18	0.41
	120	4(?)	0.60
	70	18	0.75
500	70	14	0.36
600	110	15	0.62

If the three shoots on the 400 level are averaged, weighting by length times width, the average indicated grade at that horizon is 0.53 ounce gold per ton. On the 600 level there are three assays that might be considered erratics. If they are thrown out, the average indicated grade at that horizon is 0.32 and the above tabulation would be:

Level	Length (feet)	Av.width (inches)	Av.grade Au oz/T
300	255	20	0.57
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600	110	15	0.32

This suggests that the width variation is small and irregular as the depth increases, but the gold values show an abrupt decrease between the 400 and 500 levels, and a steady decrease over all. Unfortunately, there are no assay values for base metals.

On page 11, Lakes (1944) states: ". . . The few present ore showings along the levels show considerable lead sulphide in blobs, small bunches and veinlets, very similar (though in lesser quantity) to War Eagle ore." At the bottom of page 12 he states: "The higher lead content at War Eagle together with more carbonate gangue indicates possibility that War Eagle is in a somewhat deeper zone of mineralization than is penetrated at Goldstone's workings. On this basis the deeper Goldstone developments will be expected to show increase of silver and lead, but I believe will maintain its gold content." As a comparison of Goldstone and War Eagle, Lakes gives the following figures:

	Goldstone	War Eagle
Oz/T gold	0.35	0.31
Oz/T silver	0.24	3.20
Percent lead	0.5	10.40
Percent copper	0.02	N.A.

If Lake's reasoning is correct, the tenor of the Goldstone mineralization as well as that of ore should show an increase in lead as the depth on the vein increases. A sample of the Goldstone vein taken in the Mottman tunnel by this examiner assayed 0.01 ounce gold and 0.2 ounce silver, 0.45 percent lead, 0.02 percent copper and trace zinc over a width of 3 inches. Admittedly, the Mottman tunnel cut the vein far outside the ore zone as projected from the mine workings, but the ratio of gold and silver combined to lead and copper bombined is 1 ounce to 2.24 percent.

The plan of the Mottman tunnel, scale 1" = 200', which accompanied the application, shows six proposed diamond drill holes, some of which have been drilled. Hole collars were seen at the approximate locations indicated. Near holes A and B were several partially filled and much disturbed core boxes and scattered all about were pieces of drill core. Markings on the boxes were illegible or lacking and Kramp had no information other than that the holes had been drilled. He showed me five additional core boxes stored in a shed near the Mottman portal, but these too had been partially scattered and greatly disturbed. Any information the cores might have given is now lost.

Mr. Porter called at the Spokane office the day after I returned from this trip. He stated that he had no records of the drilling results which he had sent to Lakes. At Porter's request Lakes wrote to me on October 18, 1964, stating:

> "The holes were drilled after my last inspection but a check of the map and my knowledge of the mine's geology indicates: (1) The one hole drilled ahead of the tunnel face could not cut the vein structure which had already been encountered in the tunnel. (2) Two holes drilled toward the vein structure were pointed into barren area underneath the ore shoot rake as shown on the Longitudinal Section hence could not be expected to cut ore."

Apparently, he has neither logs nor assays of samples from any vein that might have been cut.

CONCLUSIONS

The only data available suggests that there is a decrease in gold values with depth indicated by limited sample assays from the ore zone; that there is an indicated increase in base metals to precious metals content in the order of 2.23 percent base metals to 1 ounce precious metals; and that in the nearby War Eagle mine, believed to be at a lower ore horizon, this ratio is increased to 2.96 percent base metals to 1 ounce precious metals. Admittedly, the base metals to precious metals ratio at the Mottman level is tenuously based on

one sample assay. However, it is not far out of line with the pattern suggested by data from the mine workings and the War Eagle samples.

It is therefore concluded on the basis of available information that the chance of making a significant discovery of gold-silver ore by drifting westerly on the Mottman level is less than fair; that exploration by raising to the 600 level and drifting could only be considered as development of known ore; and that raising half way to the 600 level and drifting might find some ore but whether the ratio of base metals to precious metals would be less than 1 percent to the ounce is questionable. It is therefore further concluded that there is reasonable doubt that the project could qualify strictly as a gold-silver project much below the 600 level. Should more assays for base metal content of the ore on the 600 level become available this last conclusion might be reversed.

It is recommended that the application be denied without prejudice and should base metals be restored to the eligible list or should base metal assays from the 600 level indicate a reversal of the final conclusion, that the application be reconsidered.

D R MacLaren

D. R. MacLaren

Distribution:
OME(2)
USGS(SRO) ✓
Docket
MacLaren

Docket

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OFFICE OF MINERALS EXPLORATION
So. 157 Howard Street
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If Lake's reasoning is correct, the tenor of the Goldstone mineralization as well as that of ore should show an increase in lead as the depth on the vein increases. A sample of the Goldstone vein taken in the Mottman tunnel by this examiner assayed 0.01 ounce gold and 0.2 ounce silver, 0.45 percent lead, 0.02 percent copper and trace zinc over a width of 3 inches. Admittedly, the Mottman tunnel cut the vein far outside the ore zone as projected from the mine workings, but the ratio of gold and silver combined to lead and copper bombined is 1 ounce to 2.24 percent.

The plan of the Mottman tunnel, scale 1" = 200', which accompanied the application, shows six proposed diamond drill holes, some of which have been drilled. Hole collars were seen at the approximate locations indicated. Near holes A and B were several partially filled and much disturbed core boxes and scattered all about were pieces of drill core. Markings on the boxes were illegible or lacking and Kramp had no information other than that the holes had been drilled. He showed me five additional core boxes stored in a shed near the Mottman portal, but these too had been partially scattered and greatly disturbed. Any information the cores might have given is now lost.

Mr. Porter called at the Spokane office the day after I returned from this trip. He stated that he had no records of the drilling results which he had sent to Lakes. At Porter's request Lakes wrote to me on October 18, 1964, stating:

> "The holes were drilled after my last inspection but a check of the map and my knowledge of the mine's geology indicates: (1) The one hole drilled ahead of the tunnel face could not cut the vein structure which had already been encountered in the tunnel. (2) Two holes drilled toward the vein structure were pointed into barren area underneath the ore shoot rake as shown on the Longitudinal Section hence could not be expected to cut ore."

Apparently, he has neither logs nor assays of samples from any vein that might have been cut.

CONCLUSIONS

The only data available suggests that there is a decrease in gold values with depth indicated by limited sample assays from the ore zone; that there is an indicated increase in base metals to precious metals content in the order of 2.23 percent base metals to 1 ounce precious metals; and that in the nearby War Eagle mine, believed to be at a lower ore horizon, this ratio is increased to 2.96 percent base metals to 1 ounce precious metals. Admittedly, the base metals to precious metals ratio at the Mottman level is tenuously based on

one sample assay. However, it is not far out of line with the pattern suggested by data from the mine workings and the War Eagle samples.

It is therefore concluded on the basis of available information that the chance of making a significant discovery of gold-silver ore by drifting westerly on the Mottman level is less than fair; that exploration by raising to the 600 level and drifting could only be considered as development of known ore; and that raising half way to the 600 level and drifting might find some ore but whether the ratio of base metals to precious metals would be less than 1 percent to the ounce is questionable. It is therefore further concluded that there is reasonable doubt that the project could qualify strictly as a gold-silver project much below the 600 level. Should more assays for base metal content of the ore on the 600 level become available this last conclusion might be reversed.

It is recommended that the application be denied without prejudice and should base metals be restored to the eligible list or should base metal assays from the 600 level indicate a reversal of the final conclusion, that the application be reconsidered.

D. R. MacLaren

D. R. MacLaren

Distribution:
CME(2)
USGS(SRO)
Docket
MacLaren

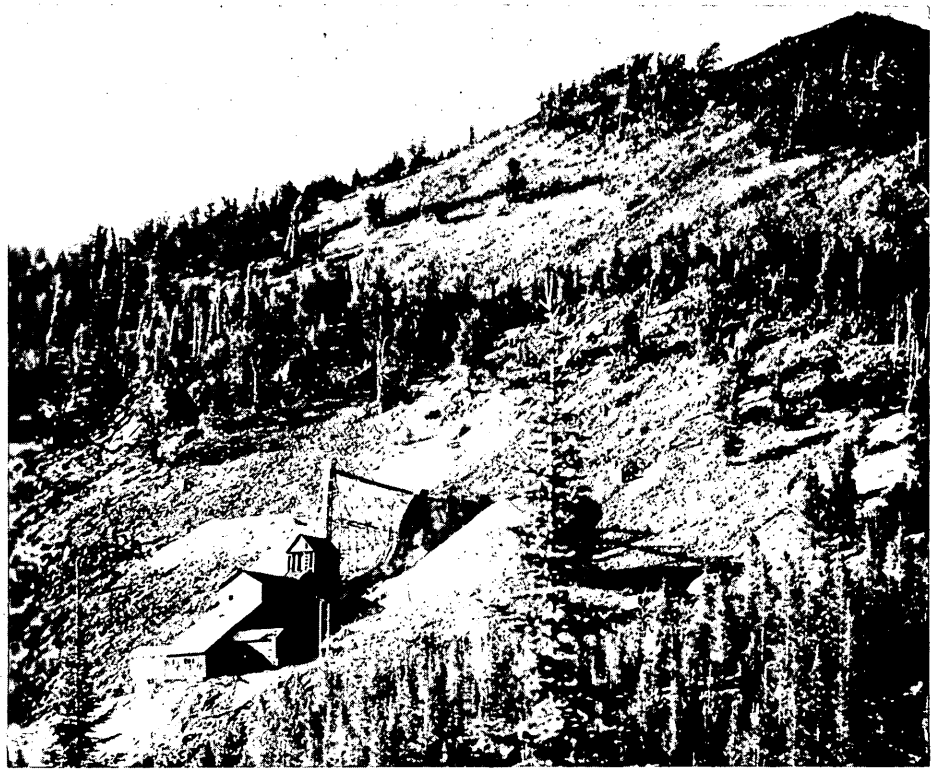
Exhibit 3-C

GOLDSTONE

MINING COMPANY

A WASHINGTON CORPORATION

A Mining Enterprise of Merit



Goldstone mill and mine near Salmon, Idaho, now being readied to resume production of gold

PROSPECTUS

This prospectus is designed to furnish very briefly information in connection with the capital stock offering of the Company which, together with a complete Engineer's report containing an analysis of the geology, mineralization, ore occurrence, underground workings and other data, is available for public inspection at the office of the Company at 511 Securities Building, Seattle, Washington, and in the office of the Director of Licenses at Olympia, Washington, all designed to set forth the material facts with respect to this issue of stock. No one is authorized to make a statement not contained therein or reasonably inferred therefrom.

Because these securities are believed to be exempt from registration they have not been registered with the Securities and Exchange Commission; but such exemption, if available, does not indicate that the securities have been either approved or disapproved by the Commission, or that the Commission has considered the accuracy or completeness of the statements in this communication.

Dated December 1, 1947.

FACTS ABOUT GOLDSTONE MINING COMPANY

ORGANIZATION and HOLDINGS

The Goldstone Mining Company was organized as a corporation under the laws of Washington July 10, 1947, to acquire mining properties in Idaho by discovery, location, option, lease, or otherwise, and to develop them for the production of gold and other valuable minerals. It is currently engaged in reopening the Goldstone mine, a gold producer before the war. The mine lies within a group of nine mining claims in the eastern part of the Pratt Creek Mining District, Lemhi County, Idaho, about 19 miles southeast of the town of Salmon. Seven of the claims lie on the Idaho side of the Continental Divide, and two on the Montana side. The claims are described as: Goldstone, Climax, Dark Horse, Paul Kruger, Home, Teddy Roosevelt, McKinley, Custer No. 1, and Custer No. 2. The company is capitalized at $525,000 with 3,500,000 shares of NON-ASSESSABLE common stock having a par value of 15 cents each.

OFFICERS and MANAGEMENT

Officers and directors of the Goldstone Mining Company are: B. W. Porter, Spokane and Seattle man, president and treasurer; Dr. Edw. Le Cocq, Seattle, vice-president; Emil Mottman, Kelso banker, secretary.

So that the greatest possible amount of funds raised by public subscription will go into development of the property, none of the officers or directors will be paid a salary as such. However, B. W. Porter will receive $300 a month and his expenses for managing the company's business.

The company's mining engineer and geologist is Arthur Lakes of Spokane and Nelson, B.C. Mr. Lakes is a well-known and reputable mining engineer, with many years' experience in the Pacific Northwest's mining districts, and particularly in Idaho.

Company attorneys are Wettrick, Flood and O'Brien, Seattle, Washington.

A detailed audit and verification of the accounts of the company will be made annually by an independent public accountant, and written reports will be submitted annually to stockholders. The annual meeting of stockholders will be held in Seattle upon written notice to each stockholder.

HISTORY of the GOLDSTONE MINE

Little is known about the early history of the Goldstone Mine, but existing evidence indicates that it was a producer almost from the start.

Some years ago the late Isadore Gies of Spokane acquired the property from a rancher named Soules and bonded it to a company which sank two shafts from the surface to the 300-foot level and built a mill near the present camp site. This company's production records are unavailable, but the caved ground surface between the shafts indicates that a considerable area was stoped right up to grass roots. Later, a crosscut adit was driven into the mountain at the 500-foot level. An incline raise was extended up to the vein on the 300-foot level, and a drift was driven out on the vein from the raise at the 400-foot level. Considerable ore was mined from these levels by stoping. (See map.) During this period, hydro-electric plants were installed, and a mill was built below the portal of the adit.

About 1935-36, the Callahan Mining Company of Wallace, Idaho, took an option on the property but turned it over to the late James F. McCarthy, then president of Hecla Mining Company of Wallace, and the late James Fitzpatrick, then president of the Union Iron Works of Spokane. Messrs. McCarthy and Fitzpatrick rehabilitated the mill, reequipped the hydro-electric plants, extended the adit and mined ore from some of its western stopes. They also sank a two-compartment winze 100 feet below the 500-foot level adit, and at the time of their deaths, which occurred close together, reportedly were planning to drive a 2,400-foot crosscut adit to tap the ore zone about 400 feet below the existing main working tunnel. The property was operated for a time after their deaths, but because of war-time restrictions on gold mining and the subsequent inability of the new operators to make bond extensions, it reverted to the owners and later was optioned to B. W. Porter for $50,000, payable at the rate of 10 per cent of the net smelter returns from ore produced. Total purchase price is payable within 5 years after removal of war time mining restrictions. With the lifting of governmental restrictions on gold mining, Mr. Porter organized the Goldstone Mining Company to reopen the mine.

PLAN of DEVELOPMENT

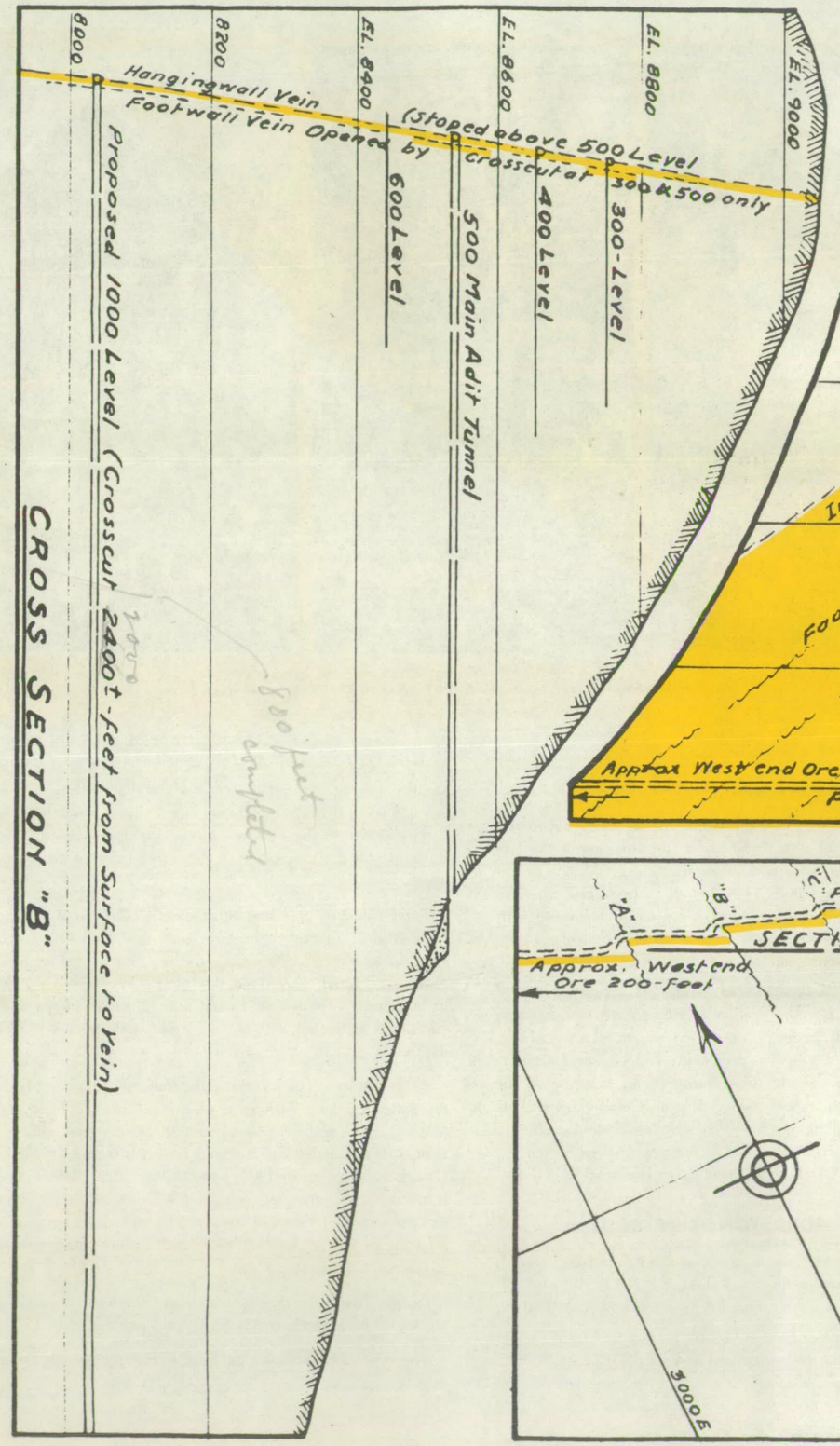
Goldstone Mining Company already has expended a considerable sum in improving the mine plant, and when this program is completed plans to mine and mill ore remaining in the upper levels and tap the virgin ore deposits believed to exist at lower levels.

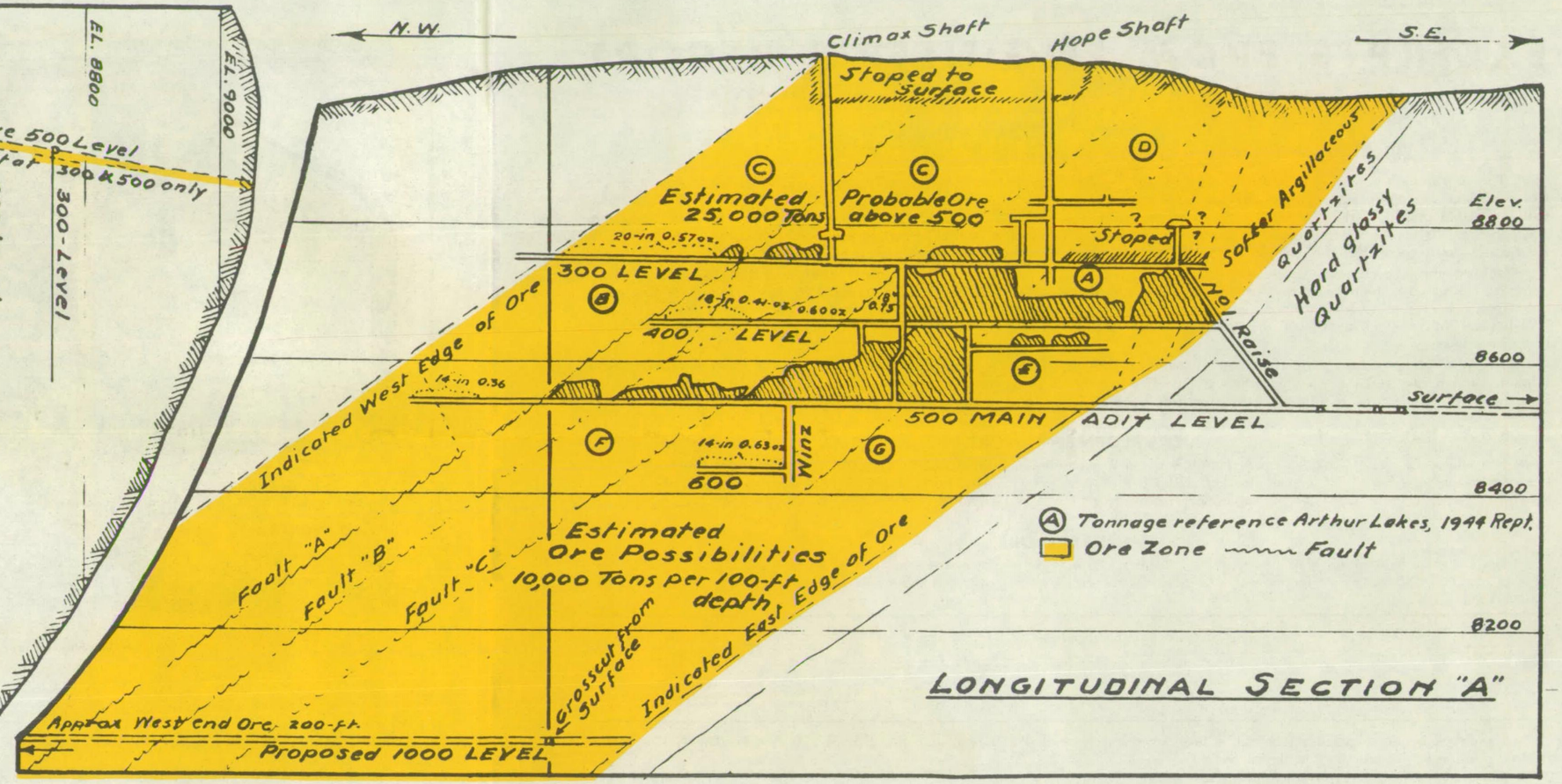
The company's mining engineer, Arthur Lakes, estimates that more than 25,000 tons of gold ore are probably available for stoping above the 500-foot level adit, sufficient to provide about 50 tons of mill feed daily for two years.

"This ore should return an estimated $75,000 per year, or a total of $150,000, which should repay capital expenditures and leave a profit," the Engineer says in his report on the property.

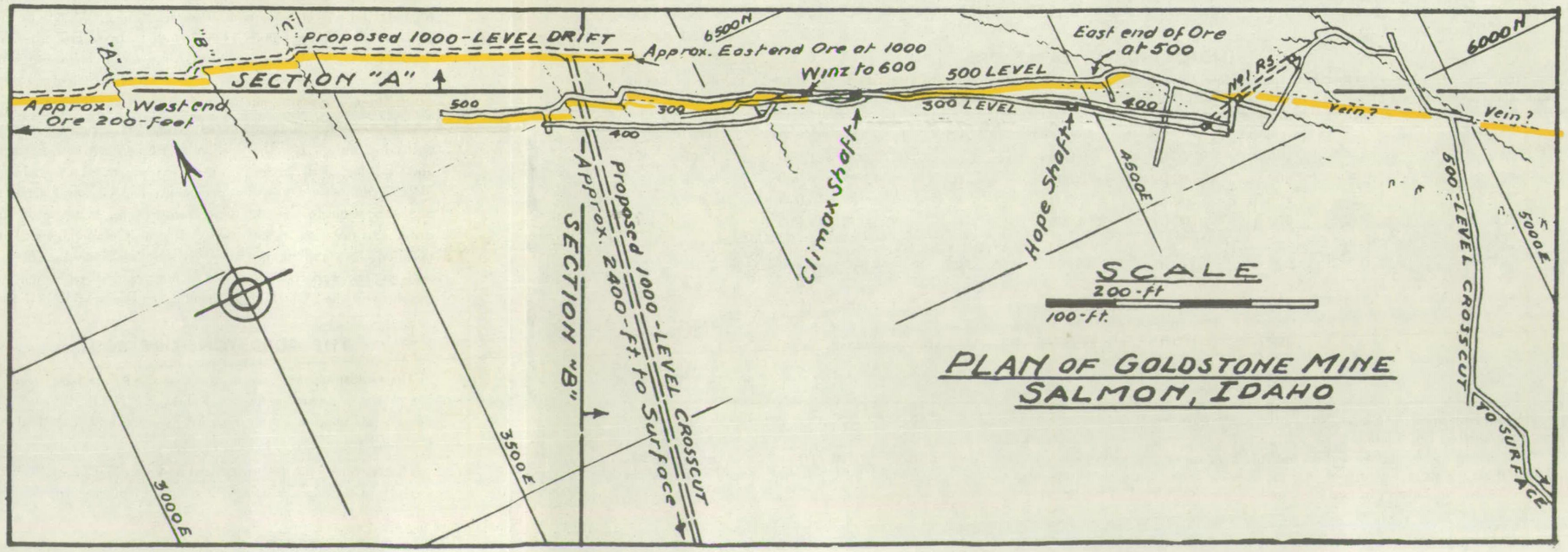
The Engineer also estimates that the Goldstone ore body will yield about 10,000 tons of milling ore for each 100 feet of depth below the 500-foot level adit, which would result in a net operating profit of about $40,000 for each 100 feet of additional depth obtained.

Goldstone Mining Company plans to tap the ore zone at about twice the depth of the deepest original workings by driving a lower adit as originally proposed by Messrs. McCarthy and Fitzpatrick. (See accompanying Plan Map.) The fact that these experienced mining men had planned this deeper development work contributes to the confidence of the present operators in the mine's future. This confidence also is based on the favorable geological report of Engineer Lakes, excerpts from which are quoted elsewhere in this prospectus.





LONGITUDINAL SECTION "A"



PLAN OF GOLDSTONE MINE
SALMON, IDAHO

EXCERPTS FROM ENGINEER'S REPORT

(From "Preliminary Report on the Goldstone Mine," by Arthur Lakes, mining engineer. Original on file for public inspection)

GEOLOGY

"The prevailing country rocks are quartzites of the Belt series, about the same age as upper zones enclosing mines in the Coeur d'Alene mining region of Idaho. At Goldstone, they comprise two, or more, wide belts of argillaceous quartzites interbedded between massive, hard, vitreous quartzites. They trend about N 20 W with southeast dips varying from very steep to nearly flat. The softer argillaceous quartzites afford better zones for fissuring, fracturing, and shearing, in contrast to the hard vitreous quartzites which resist them. For this reason, the argillaceous quartzites are the ore-favorable rocks. . . .

"Goldstone vein occupies a strong, persistent shear zone whose strike and dip crosscutting strike and dip of strata is encouraging for considerable depth and lateral extensions. My examination, confirmed by experiences noted by P. J. Higgins in this mine, indicates considerable greater widths at No. 5 level than prevailed above. As downward continuation of these widths should rake NW beyond the face of No. 6 level, the narrower widths recorded there are not to be considered indicative of vein strength at that lower level.

"The vein filling consists of quartz, minor barite gangue, and crushed country rock with small bunches and veinlets of lead sulphide, iron pyrite, and some copper which is indicated by liberal green staining. The essential value is gold, which is probably associated with iron pyrite or minutely free in quartz fractures and not an associate of the lead sulphide. . . .

DEVELOPMENT WORK

"The Goldstone mine has been opened and explored a maximum length of 990 feet to 605 feet maximum depth, by 7,175 feet of workings divided: 3,330 feet of drifting; 1,465 feet of crosscutting, inclusive of 1,280 feet of No. 5 crosscut adit to vein; 695 feet of shafting; and 1,683 feet of exploratory raising from levels No. 3, No. 4, and No. 5.

MINEABLE ORE

"The Longitudinal Section Map shows greatest stoping length at No. 5 level, where also the greatest stope widths are observed. This is, indirectly, indicative of increasing ore tonnage in depth. However, the following mineable ore was left unstoped at the various levels:

Level	*Drift Length*	*Stoped Length*	*Unstoped Length*	*Total*
No. 3	990 feet	445 feet	280 feet	725 feet
No. 4	820 feet	460 feet	200 feet	660 feet
No. 5	970 feet	610 feet	70 feet	680 feet

"The Stope Sections indicate that No. 4 level would be extended 280 feet, and No. 5 level 100 feet further NW to reach relative position in the ore shoot achieved by No. 3 level.

"The above indicates that the Goldstone ore shoot is over 700 feet long. Its center is about at chute No. 9 of No. 3 level, and chute No. 9 at No. 5 level (marked 'X' on Plan and Section Map). Here it achieves a width of 5 feet at No. 3, and 9 feet at No. 5 level. From these greater widths the ore shoot narrows each way, but at No. 3 and No. 4 averaged about 2½ feet of ore, and at No. 5 more than 3 feet.

INDICATED MINEABLE ORE

"From the extensive stoping above and below these levels an undisclosed amount of ore has been mined. Taking minimum widths, the following ore blocks are indicated adjacent to the workings:

Block	*Length*	*Height*	*Square Feet*	*Width*	*Cubic Feet*		*Tons*
"A"	180 ft.	50 ft.	9,000	2 ft.	18,000	1,100	1,100
"B"	400 ft.	180 ft.	72,000	2 ft.	144,000	9,000	9,000
"C"	485 ft.	180 ft.	87,000	2 ft.	174,000	10,000	10,000
"D"	400 ft.	200 ft.	112,000	2 ft.	224,000	14,000	
						4	3,500
"E"	240 ft.	110 ft.	26,400	2 ft.	52,800	4,200	
						2	2,100
"F"	430 ft.	100 ft.	43,000	3 ft.	129,000	8,000	
						2	4,000
"G"	190 ft.	100 ft.	19,000	2 ft.	38,000	2,400	
						2	1,200
						Total	29,900

"Dependent upon results at No. 6, the downward continuation of ore should stope about 10,000 tons per 100 feet of depth over full mineable stope length.

"The above ore estimates will be increased by success of exploration into the footwall in vicinity of station 525-27 and 306-308, and in hanging wall in vicinity of station 521-22. These good showings might have been mined upwards but should increase ore tonnages below No. 5 level in one case, and below No. 3 level in the other.

20-room bunkhouse, meathouse, and assay office at the Goldstone Mine

MINE PLANT and IMPROVEMENTS

Mine camp buildings at the property are ample to accommodate a large crew of men. Built under the direction of the late Mr. McCarthy, they are well preserved and could not be replaced today for $20,000. They include a two-story, 20-room bunkhouse with hot and cold water showers, a cookhouse with facilities to feed 40 men, a meathouse, an assay office, a blacksmith shop, a superintendent's cottage, and a large garage.

Goldstone Mining Company has reroofed the camp buildings with aluminum, has retimbered mine tunnels where necessary, and has installed modern mining equipment. This includes electric pumps of 265-gallon-per-minute capacity and generating equipment to operate them, compressors, compressed air drills, and ore cars. A Diesel-electric power plant also will be installed. New milling machinery is scheduled for the 100-ton mill on the property. Ten miles of new road were built from the mine to the main highway leading to the town of Salmon.

THE GOLDSTONE ORE BODY

The Goldstone ore zone is more than 700 feet long, according to the company geologist. Values are chiefly in gold, although this mineral is accompanied by small amounts of silver, lead, and copper.

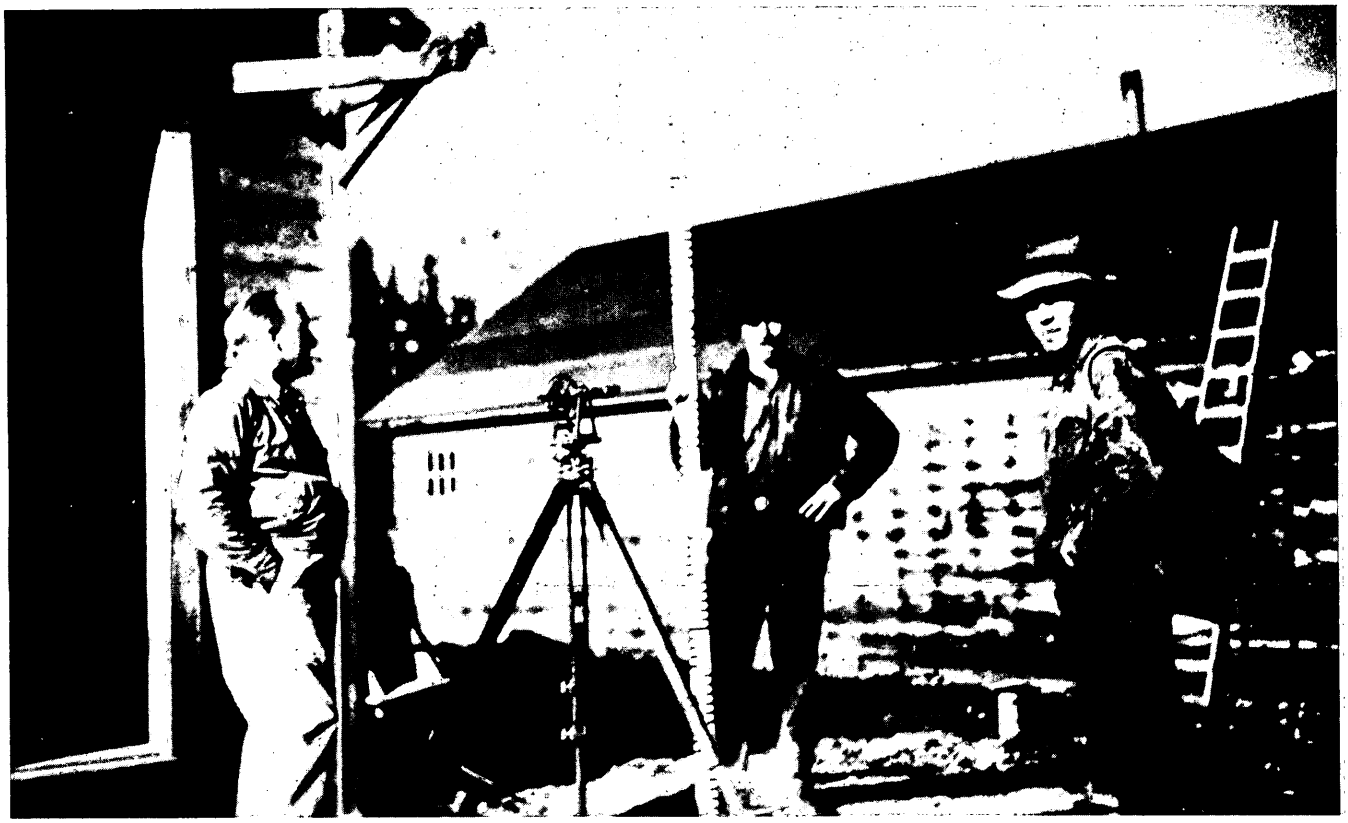
The ore shoot has been explored and partially mined only to a depth of 605 feet, a comparatively short distance in this era of deep mining. Available records show that the ore improved in quantity and quality as depth was attained from the ground surface down to the 600-foot level. Geological indications are favorable for a continuation of this condition to a considerable depth.

Total value of gold and other metals taken from the Goldstone Mine is unknown because early-day production records are missing, but stoped areas indicate it was considerable. As previously stated, an estimated $150,000 worth of ore remains to be removed from areas of the mine already opened and an additional estimated $40,000 net profit with each 100 feet of depth.

A photostatic copy of the only smelter report available is reproduced on the back page of this prospectus. It covers 86 tons of concentrates trucked from the Goldstone mill to the United States Smelting, Refining and Mining Co., Salt Lake City, between August, 1937, and October, 1939. These concentrates ran 439 ounces in gold and 273 ounces in silver, with small amounts of lead and copper. The 86 tons of concentrates, after deduction of hauling costs and smelter charges, netted $51,248, or $591.30 per ton.

Ore samples from the mine average .35 ounces over a working width of 2½ feet, or $12.25 in gold per ton.

The ore body is shown in longitudinal section on the next page.



Mining Engineer Arthur Lakes and survey crew at the modern camp of the Goldstone Mining Company, near Salmon, Idaho. 40-man cookhouse in background.

CONCLUSIONS

"Although production records are lacking, the sizeable stoped area indicates good production, mostly at $20.67 gold. Any profits derived by earlier operators were under this price handicap compared with the present $35 per ounce for gold. . . .

"The unstoped areas shown on the accompanying map, together with favorable geologic and other data presented in this report, indicate potentiality for good ore tonnage that can be mined at profit.

"The price and terms are reasonable and will be paid off by production so that the optionees will not be jeopardized by having to provide funds for purchase or other uses, except to equip and develop the mine and mill to production.

"The evidence indicates a successful issue and, subject to the mining risks always attendant upon a proposition of this kind, I recommend this venture with belief that capital return is practically assured and that the work advised in this report will provide a small mine that will return good profits."

GOLDSTONE'S OFFER TO THE PUBLIC

The Goldstone Mining Company is offering 1,000,000 shares of its 15c par value NON-ASSESSABLE common stock at 25c per share to equip, develop and operate the Goldstone Mine, principally a gold producer, 19 miles southeast of Salmon, Idaho. The company reserves the right to withdraw this offer at any time.

Although the law of the State of Washington authorizes the use of 35% of funds raised for selling and administrative expenses, the total expense for distribution of these securities shall not exceed 20%, and company officials believe it can be done for much less.

Net proceeds from this offering, after the deduction of selling costs and administrative expense, which will not exceed 20%, will be expended by the company directly for mining, milling, and developing the Goldstone Mine herein described. An estimated $40,000 to $50,000 will be spent for new milling machinery, and $15,000 to $25,000 for a Diesel-electric power plant, $20,000 for modern mining equipment, $17,000 for developing ore on and above No. 6 level and $60,000 for 1,000-foot level.

Orders may be made by mail to the company's office.

GOLDSTONE MINING COMPANY

511 Securities Building ☆ Seattle 1, Washington

P. O. BOX 1980

UNITED STATES SMELTING REFINING AND MINING COMPANY
NEWHOUSE BUILDING
SALT LAKE CITY 13, UTAH

August 14, 1947

Mr. F. J. Wettrick
Wettrick, Flood and O'Brien
805-10 Arctic Building
Seattle 4, Washington

Dear Mr. Wettrick:

One of the boys finally found time to dig down into the old archives for records of Goldstone Mine shipments.

We believe the sheet attached will give you the pertinent information you wish with respect to assay values, net smelter proceeds and so forth. The transportation items have been listed on the back of the sheet.

We trust the information given here will be helpful in once again opening up the Goldstone property. We wish you luck in this enterprise and of course would be glad to again handle shipments from that property.

Yours very truly,

F. X. Meyer

F. X. Meyer

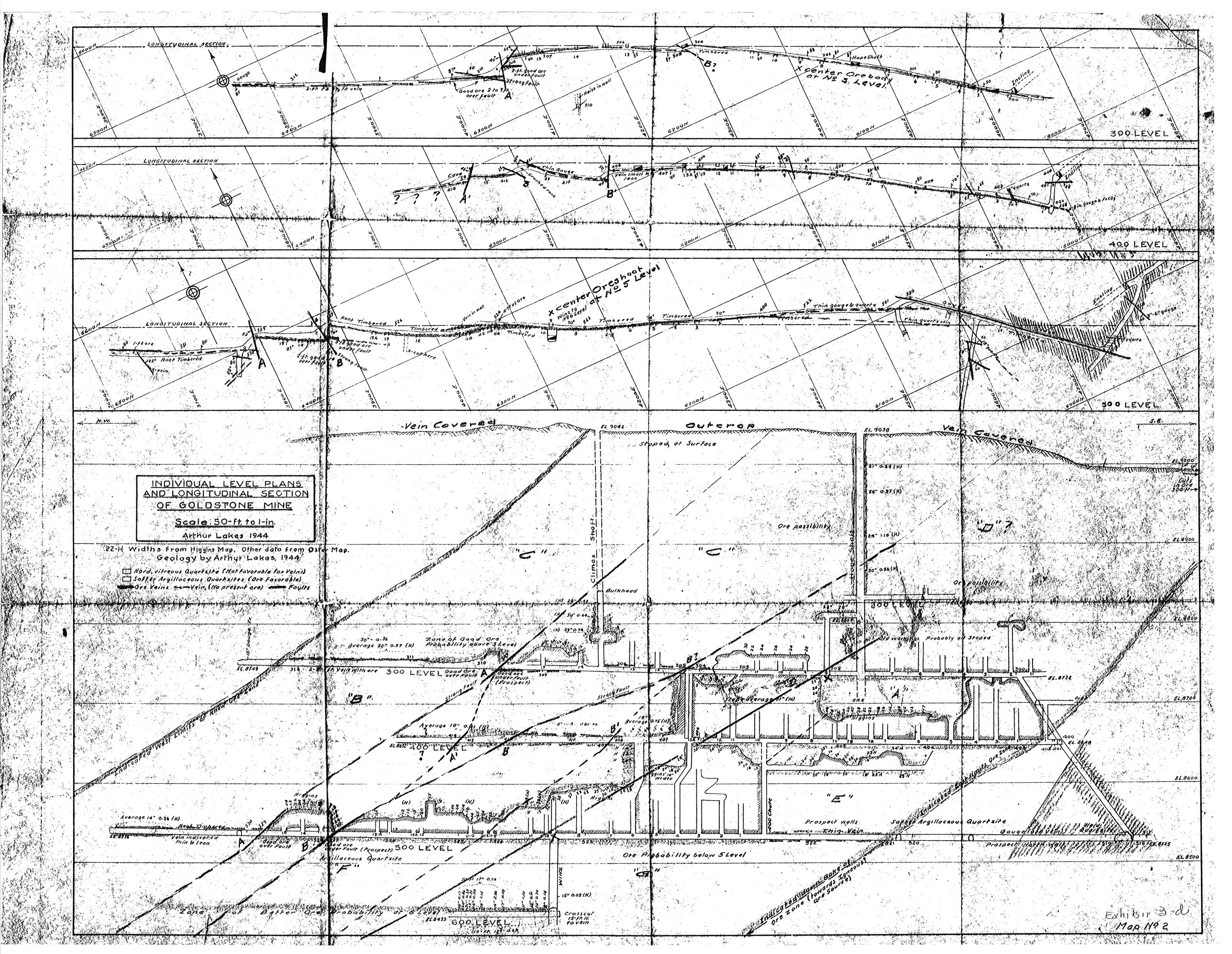
FXM:lw
Enc.

ASSAY RECORD

SHIPPER Goldstone Mine - Conita ~~[illegible]~~ Sp - Baker, Idaho MONTH

FORM CO-729

DATE OF RECEIPT	LOT NO.	DRY WEIGHT TONS	% H2O	AU	AG	CU	PB	INSOL.	FE	ZN	SUL.	% CAO	PAY ~~[illegible]~~ PR. TON	NET PROCEEDS TO SHIPPER AFTER SMT.
8-10-37	1	4526	23.5	16515	1128	140	109	661	76	—	25	7	55752	242373
9-4-37	2	4357	17.7	12920	968	85	108	684	62	—	28	8	43465	179970
10-2-37	3	3898	18.2	14795	1048	140	130	635	79	—	28	16	49945	194686
10-2-37	4	1016	5.0	42304	1844	85	5045	227	62	—	49	—	146574	145477
11-13-37	5	3856	16.8	19532	1310	14	146	640	80	—	30	—	65859	253952
11-13-37	6	1121	46	36693	1523	10	4912	297	52	—	52	52	125960	137665
1-14-38	7	3004	16.2	29115	1915	16	184	581	90	—	36	—	98733	290187
1-14-38	8	1272	1.0	43199	1703	7	4675	288	50	—	44	6	147767	184608
2-21-38	9	4611	12.0	18871	1269	17	1780	610	70	—	29	—	63584	284171
4-12-38	10	4516	11.1	2435	1478	145	2960	530	101	—	29	8	81985	361428
5-26-38	11	4737	7.6	27486	1752	80	2410	537	68	—	30	—	93629	443521
6-11-38	12	4686	7.2	15591	1060	120	2468	541	55	—	28	6	52684	237378
6-27-38	13	5129	5.2	15879	1085	55	2740	500	60	—	27	8	53851	266170
7-11-38	14	5218	2.8	20018	1301	70	3190	444	59	—	35	29	68521	347561
7-28-38	15	5367	1.8	14517	979	95	2510	487	65	—	26	4	49884	267727
8-4-38	16	5325	2.3	8032	803	85	2100	580	74	—	20	—	28182	139909
8-19-38	17	5512	1.4	10725	893	115	2590	520	68	—	23	—	34584	180248
9-6-38	18	5476	1.5	13435	1250	90	2880	493	66	—	30	10	46197	242631
10-7-38	19	8353	2.1	15745	1205	140	2240	553	67	—	25	8	53616	434803
7-18-39	20	3097	3.1	16795	1535	100	1950	558	95	—	21	8	54763	171820
10-9-39	21	1592	3.2	23968	1199	133	1868	573	95	—	19	4	77997	118577


INDIVIDUAL LEVEL PLANS AND LONGITUDINAL SECTION OF GOLDSTONE MINE
Scale: 50-ft to 1-in.
Arthur Lakes 1944
22-H Widths From Higgins Map, Other data from Osborne Map.
Geology by Arthur Lakes, 1944
Hard, vitreous Quartzite (Not Favorable for Veins)
Softer Argillaceous Quartzites (Ore Favorable)
Ore Veins
Vein, (No present ore)
Faults
LONGITUDINAL SECTION
300 LEVEL
400 LEVEL
500 LEVEL
600 LEVEL
X Center Orebody at No 3 Level
X Center Orebshoot Winz to 496 Level at No 5 Level
Vein Covered
Outcrop
Stoped at Surface
Climax Shaft
Bulkhead
Zone of Good Ore Probability above 3 Level
Ore Probability below 5 Level
Zone of Better Ore Probability at 6 Level
Old workings Probably all Stoped
Prospect walls
Softer Argillaceous Quartzite
Indicated West Limits of Know Ore Zone
Indicated East Limits of Ore Zone (towards Igneous Ore Source)
Exhibit 3-d
Map No 2