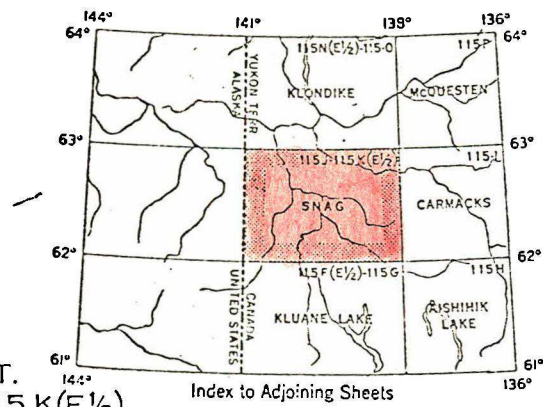




SNAG Y.T.  
SHEET 115J & 115 K(E 1/2)  
FIRST EDITION

Index to Adjoining Sheets

LODE OCCURRENCES

#1 Casino Silver Mines Limited (62°43'N, 138°49'W)  
(Casino and Canadian Creek Properties)  
(Silver-Lead)

1966

References: Cockfield (1928b, pp. 11A-13A; in Bostock, 1957, pp. 576-578); Green and Godwin (1964, pp. 22-24); Green (1965, pp. 34-35; 1966, pp. 39-42).

Casino Silver Mines Limited, formed in 1965, holds a total of 250 claims covering several silver-lead showings located near the headwaters of Casino and Canadian Creeks about 70 miles northeast of Snag Junction and about 190 miles northwest of Whitehorse. The company maintains a gravel airstrip on the property, suitable for use by twin-engined aircraft. During the winter of 1965-66 a 140-mile winter access road was constructed to the property from Burwash Landing on the Alaska Highway and initial mining equipment, fuel, and supplies were moved in via this road prior to break-up in 1966.

The initial exploration work, done during 1965 and early 1966, was concentrated mainly on the Bomber showing located at an elevation of about 4,000 feet near a small tributary of Casino Creek. The Bomber showing consists of a northwest-trending zone about 150 feet wide that contains several strong shears cutting altered and crumbly granodiorite or quartz monzonite and carrying several sub-parallel, steep-dipping sulphide-bearing veins. Four principal veins, No. 1, 2, 3, and 4 have been investigated through surface trenching and by an underground exploration program consisting of 1,200 feet of drifting carried out from an adit located at an elevation of about 3,940 feet southwest of the surface exposures of the No. 1 vein. For a detailed description of the underground workings see Green (1966, pp. 40-41). The Bomber veins consist of lenses of quartz and barite carrying variable amounts of massive sulphides, principally galena. Sphalerite, pyrite and chalcopyrite are subordinate. The No. 1 vein is up to 8 feet wide in places and locally carries lenses of massive sulphides up to 2 feet wide. The other veins of the system are generally 4 feet or less in width. During the trenching operations carried out in the 1965 season, a total of 48.42 tons of ore averaging 161.1 ounces per ton silver and 68.0 per cent lead were hand sorted from the 4 principal veins, and shipped out for smelter testing. In the 1966 season, ground electromagnetic surveys carried out over the Bomber showing area outlined two main conductors; one approximately coincident with the trend of the No. 1 vein, and a second 1,000-foot long feature lying 150 feet southwest of the No. 1 zone and extending to the northwest of it. An inclined HQ-wireline diamond drill-hole was located to intersect both conductors and drilled to a depth of 736.5 feet. The hole penetrated hornblende-biotite-granodiorite containing frequent chloritized shear zones,

foliated and altered granodiorite, and a few thin feldspar porphyry zones, probably representing dyke rocks. Narrow fracture zones containing pyrite and galena in varying amounts were intersected at several places, but significant massive sulphides were not encountered.

The other principal showing on the property, the Helicopter vein located 3,400 feet southwest of the Bomber showing, was investigated by surface trenching in 1966. It consists of a strong shear zone in altered, deep-weathered granodiorite. The zone strikes about N 30° W and dips 65 to 70 degrees west. Ground electromagnetic surveys in this area have traced a strong linear conductor associated with the break for a total strike distance of 4,600 feet. Bulldozer trenching across the northern end of the break has exposed several parallel fracture zones totalling about 12 feet in width and containing a 4-inch band of massive galena with quartz as well as some disseminated sulphides. A chip sample across a 3-foot zone containing the massive sulphide band assayed\*: 0.01 ounces per ton gold; 4.87 ounces per ton silver; 18.6 per cent lead, and 0.1 per cent zinc. A grab sample from the massive sulphide band assayed\*: 0.01 ounces per ton gold; 16.4 ounces per ton silver; 55.8 per cent lead, and, 0.1 per cent zinc.

About 4,000 feet southeast of the main Helicopter showing, further bulldozer trenching across the strike of the electromagnetic anomaly has exposed a strong fracture zone similar to the Helicopter north break. The break contains a 1-foot seam of highly decomposed, yellowish-green oxidation material (scorodite?), but no visible sulphide mineralization is present.

Elsewhere on the property, the company investigated several other anomalies outlined by ground geophysical and geochemical surveys carried out in 1966. About 150 feet west of the Helicopter vein, a subparallel, 1,000 foot long electromagnetic anomaly ('H' anomaly) was investigated by bulldozer trenching. A strong break similar to the Helicopter structure was exposed, containing much rusty oxidation staining, but no visible sulphide mineralization. This structure will be further investigated by diamond drilling. The 3,000-foot long, east-west trending 'A' anomaly lying about  $\frac{1}{2}$  mile south of the southern extremity of the Helicopter anomaly was investigated by trenching and diamond drilling. A 442-foot inclined NQ drill-hole, located south of the anomaly axis penetrated a 150-foot thick zone of gougy, dark grey graphite-rich argillaceous material, the probable cause of the anomaly. Due to excessive caving a second hole in this area was abandoned at a depth of 128 feet in rusty, foliated granodiorite.

In the northern part of the property, geochemical

and geophysical surveys outlined several anomalous areas east of Patton Gulch near the headwaters of Casino Creek. Particular emphasis was placed on the area of the 'C' anomalies, located near a small tributary of Casino Creek. The area is marked by a pronounced gossan zone occurring in strongly fractured and altered granodiorite exposed along the banks of the creek. Soil and stream sampling outlined strong copper-zinc anomalies downstream toward Casino Creek. Bulldozer trenching, carried out late in the 1966 season exposed sulphide mineralization (mainly galena, with minor chalcopyrite) occurring in oxidized shear zones in granitic rocks, along two of the conductor areas. The source of the strong copper-zinc anomaly has not yet been determined. Character assays from the 'C' anomaly trenches have reportedly yielded values ranging from trace silver and lead to 50 ounces per ton silver and 74.6 per cent lead. Additional work is planned in this area for the 1967 season.

In the extreme western part of the property, a strong linear magnetic anomaly ('B' anomaly) was found to be associated with a dyke-like body of biotite-hornblende pyroxenite, apparently cutting granodiorite.

(Silver-Lead)

#1 Casino Silver Mines Limited (Casino Creek Property) (62°43'N, 138°49'W).

References: Cockfield (1928b, pp. 11A-13A); Green and Godwin (1964, pp. 22-24); Green (1965, pp. 34-35).

Casino Creek Silver Mines Limited, formed in 1965, hold 222 claims in the Casino Creek area covering silver-lead showings originally staked by J. Meloy of Dawson, Yukon. The property is accessible from an airstrip, suitable for wheel-equipped light aircraft, located on the ridge to the northeast of the main Bomber showing. During the winter, a road, about 140 miles long, was built from the Alaska Highway to the property, following Brooks Arm of Kluane Lake, Brooks Creek, Onion Creek, Nisling River, and Dip Creek. Camp equipment and supplies were moved over the road until break-up early in April 1966.

During the summer of 1965, two bulldozers moved to the property in 1964 (Green, 1965, p. 35), were used to strip the veins on the Bomber showing. About 48.42 tons of ore, assaying 161.1 ounces of silver per ton and 68.0 per cent lead were hand-sorted in this operation and flown to an airstrip near McQuesten for shipment to the smelter. On completion of the winter road, mining equipment was moved to the property and a crew of up to 16 men were employed in underground exploration of the Bomber showing. No work was done on two other silver-lead showings, the Helicopter, located about 3,000 feet to the west, or the Trombley Creek showing (62°40'N, 138°38'W), about 7 miles to the southeast. The latter showing, located on a tributary of Dip Creek is described by Cockfield (1928). The author visited the property in late August 1965 and in April 1966.

The Bomber showing, located on a tributary of Casino Creek at an elevation of about 4,000 feet, consists of veins, striking about N 40° W and dipping steeply, that cut granodiorite. Surface trenches were cut on four veins, No. 1, lying to the northeast and tested previously by a short shaft (Green and Godwin, 1964), was stripped for a distance of about 280 feet; No. 2, about 50 feet southwest of No. 1, was stripped for about 160 feet, No. 3, about 100 feet further to the southeast was stripped for about 250 feet, and No. 4 slightly southwest of No. 3 was stripped for about 40 feet. No. 1 vein is the widest with an apparent width to 12 feet. The remaining veins have some wider portions but are generally 4 feet or less in width. Ore was sacked during the stripping operation, and of the total of 752 sacks, 491 came from the No. 1 vein, 195 from the No. 2, 10 from the No. 3, and 56 from the No. 4. (Prospectus, Casino Silver Mines Limited, 1966).

1965

The surface trenches are in frozen ground and both vein material and country rock have undergone alteration as a result of both oxidation and frost action. Much of the vein material exposed consists of brown - to rusty-stained, punky material containing limonite, quartz crystals, barite, and patches of greasy-appearing dark quartz. Lenses of both galena and barite up to 20 feet in length and several feet in width occur within the veins. Galena is frequently altered to cerussite and some secondary native silver was found in the punky rock. Sphalerite, chalcopyrite, and pyrite, all common in the underground workings, appear to have been removed by oxidation. Granodiorite of the country rock, has crumbled to a coarse sand, probably as a result of surface weathering and frost action, and iron-and manganese-staining is common, particularly near the veins.

An underground exploration program consisting of about 1,200 feet of drifting and crosscutting was carried out between January and mid-April 1966. The adit is located about 565 feet N 26° W of the old shaft on the No. 1 vein at an assumed elevation of 3,940 feet up to 165 feet beneath the surface showings. The No. 1 vein was intersected about 445 feet from the portal and followed for some 375 feet. A spur commenced from about 60 feet along the No. 1 vein explored ground to the SW of it for a strike length of about 150 feet and up to 60 feet from the main drive. In addition, the area beneath the 2, 3, and 4 vein was tested by two crosscuts, both trending about WSW and approximately 120 feet apart, the first turning off some 325 feet from the portal.

Country rock in the underground workings is medium grained hornblende-biotite granodiorite varying from fresh rock to a soft pale-green rock in which the mafic minerals and feldspar have undergone an pervasive alteration, presumably to clay minerals with minor calcite. The alteration, not closely related to the vein faults, is often accompanied by minor faulting with the development of slickensides and destruction of the original texture. The No. 1 vein, as exposed underground, consists of a wide fault zone containing lenses of vein quartz and barite, with sulphide minerals including galena, dark brown sphalerite, pyrite, and chalcopyrite. Much vuggy material containing crystals of quartz, barite, pyrite and chalcopyrite is present. In places, the chalcopyrite has been stained iridescent blue and green, elsewhere, it has a thin dark grey to black metallic coating, possibly of native

1965

silver. Little evidence of oxidation was seen underground. Lenses of massive sulphide minerals, principally galena and sphalerite, occur in the vein, one about 27 feet long and up to 18 inches in width was exposed in the drift and another perhaps 80 feet in length and of the same width was cut by 2 small crosscuts on the NE side of the drift and in a number of test holes. The company reports (The Northern Miner, 14 April 1966, p. 1) that a sample across 14 inches of the first sulphide lens assayed 128.7 ounces of silver per ton and 73.9 per cent lead.

Of the two crosscuts to test the 2, 3, and 4 veins, the first, closest to the portal, cut a zone of minor faulting with some thin veins of sulphide minerals and the second cut two veins parallel to the No. 1 vein and located about 75 and 95 feet SW of it. The first of these veins appears to be a composite break, up to 12 feet in width, with dips to both the NE and SW. The second farther to the SW dips about 70°SW and carries a band of galena up to 4 inches thick.

#### Casino Creek

(Silver-Lead)

NTS 115 J 10

#1 Casino Creek Property (62°43'N, 138°49'W)

Reference: Green and Godwin (1964, pp. 22-24)

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\*Identified by X-Ray Diffraction Laboratory, Geological Survey of Canada.

1964

Late in 1964, L.I. Proctor of Whitehorse, Yukon purchased 16 claims covering this showing from J. Meloy, of Kirkman Creek, Yukon. Two bulldozers were taken to the area by way of a ferry on the Yukon River and an existing 15 mile road from the mouth of Britannia Creek. An air-strip, suitable for wheel-equipped light aircraft, was built on the ridge to the northeast of the showing.

The property was visited in mid-summer in the company of J. Meloy. At that time considerable bulldozer stripping had been done on the main showing (Bomber showing of Green and Godwin, 1964 but also referred to as the Airport showing) by the Yukon Consolidated Gold Corporation, Limited who held the ground under option in 1963. Four veins are present, referred to as numbers 1 to 4 from northeast to southwest respectively. No. 1 vein to the northeast is the strongest and a short shaft has been sunk on it (Green and Godwin, 1964). Most of the stripping was done on the Nos. 3 and 4 veins, each of which was exposed for about 100 feet. However, the stripping did not reach unaltered country rock and secondary minerals have replaced most of the sulphide minerals in the veins. A sample of altered rock from the No. 4 vein, composed mainly of crystalline quartz and a heavy coating of light buff cerussite without visible galena assayed: 0.06 ounces of gold and 40.0 ounces of silver per ton, 49.9 per cent lead, and 0.2 per cent zinc. Proctor reports that five representative samples of galena ore taken from the shaft on the No. 1 vein assayed an average of 166.8 ounces silver per ton and 66.24 per cent lead.

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#2

J. Meloy (62°42 1/2'N, 138°50'W)References: Bostock (1936a, pp. 43-44); Little (1959, p. 18).

1963

J. Meloy owns 16 claims near the head of Casino Creek. In 1963, Rio Tinto Canadian Exploration Limited, and its affiliate the Yukon Consolidated Gold Corporation Limited, optioned these claims and staked an additional 32 claims in the area. The property may be reached by a 4-mile cat road that branches off the Canadian Creek truck road, about 14 miles from where it leaves the Yukon River near the mouth of Britannia Creek.

Two prospects on the property, known as the Helicopter and Bomber showings, occur about 3,000 feet apart and are near two small tributaries of Casino Creek at an approximate elevation of 3,500 feet. Outcrop between the showings and in the general vicinity is almost negligible due to talus, buckbrush, and trees. Only the ground exposed by trenches, excavated in 1950 by Meloy, was seen by Godwin when the property was visited in the middle of August 1963. Since his visit the optioning companies, under the direction of B. Hester, carried out a trenching, mapping, and sampling program that was concentrated on the Bomber showing. A total of about 4,340 feet of trench was cut or deepened with a small bulldozer over the period from 16 August to 20 September 1963.

On the Helicopter showing a vein is exposed by 3 trenches and several small pits. The intersection of vein material in the trenches and pits indicates that the vein strikes northwest and dips steeply. Vein material is mainly galena with white anglesite alteration, some quartz, and some black manganese stain. A grab specimen of massive galena taken by Godwin from a 6-inch width of vein exposed in a pit assayed\*: 0.02 ounce of gold and 12.4 ounces of silver to the ton, 56.8 per cent lead, and 0.8 per cent zinc. Country rock surrounding the vein is medium-grained granite, which is generally strongly weathered and decomposed.

The Bomber showing, the larger of the two showings, consists mainly of four subparallel, steeply dipping, northwesterly trending veins, which are exposed by one shaft, and six trenches that are at approximate right angles to the veins. Although the veins are not a constant distance apart along their length, in one trench the four veins were spaced at 50-foot intervals. Veins are up to 5 feet wide and are marked by the following:

- (1) white crystalline barite;
- (2) galena and white anglesite alteration that tends to occur as discontinuous lenses;
- (3) brown limonite;
- (4) black manganese stain concentrated on fractures;
- (5) crystalline and locally vuggy quartz;
- (6) white alteration (kaolinization(?)) of the country rock adjacent to the vein.

Country rock is the same decomposed medium-grained granite that was found on the Helicopter showing.

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\*Assayed by G. Spalding, Whitehorse, Y.T.

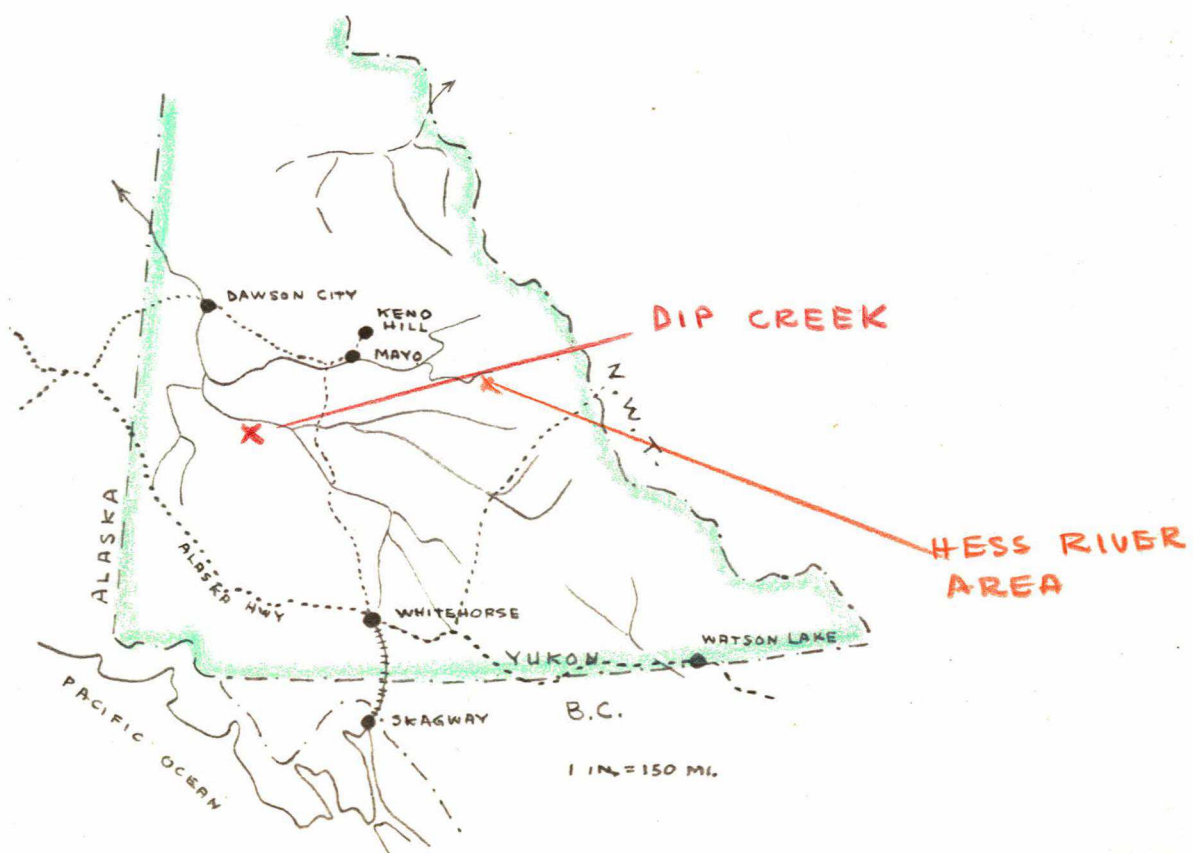
1963

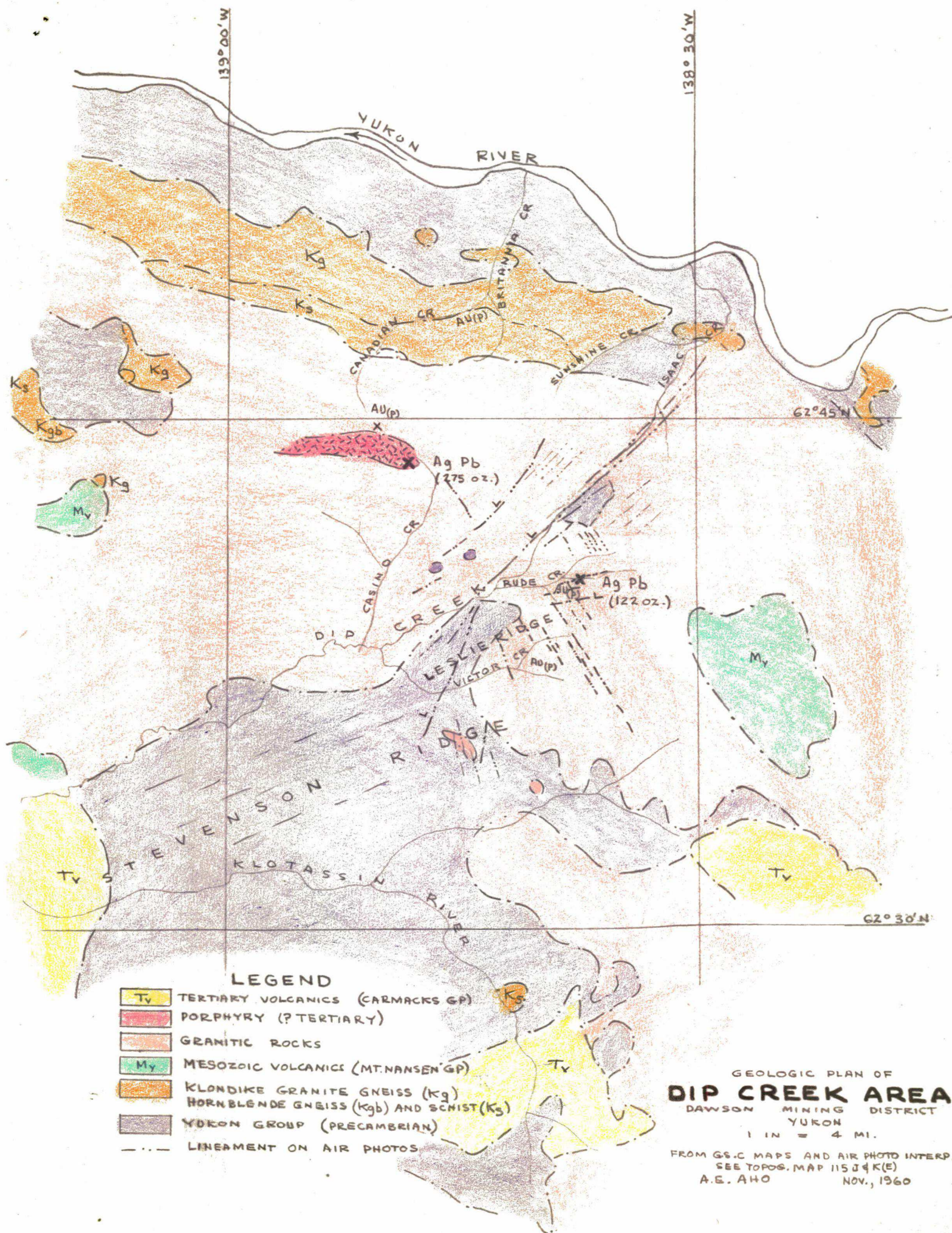
The most southwesterly vein on the Bomber showing is apparently the shortest and weakest of the four veins, and is marked mainly by black manganese stain. Some galena and barite float, however, was found near the vein in the bottom of a trench. The strongest vein noted was the most northwesterly one. It had an exposed length of about 200 feet and extended up the hillside over a change in elevation of about 50 feet. A shallow shaft, sunk on this vein, had sloughed at the bottom so that only the upper 7 feet of the vein was visible. The exposed part of the vein was 3 feet wide, bordered by gouge, and about one-tenth galena in surface area. One pod of galena was 5 inches wide and a grab specimen of this pod, taken by Godwin, assayed\*: 0.04 ounce of gold and 108.6 ounces of silver to the ton, 61.5 per cent lead, and trace zinc. The greatest width of galena (2 1/2 feet) noted on the property was from the vein immediately to the southwest of the strongest one noted above. A grab specimen, taken by Godwin from this 2 1/2-foot width, assayed\*: 0.01 ounce of gold and 275.4 ounces of silver to the ton, 66.5 per cent lead, and no zinc.

Fresh porphyritic, biotite, hornblende granite with phenocrysts up to 1/2 inch long outcrops on the ridge, about 3/4 of a mile to the north of the property. On the eastern end of this ridge occurs a rounded dome of Tertiary (?) quartz feldspar porphyry that is similar to that mapped in the Carmacks sheet (Bostock, 1936a). Creeks near this dome have deposits of rusty-red limonite (Little, 1959).

- #2: Small silver-lead vein, high Ag/Pb ratio,  
discovered 1916. (A.E.A. notes)
- #3: Float and quartz veins with sulfides and  
fluorite. (A.E.A. notes)
- #4: Quartz vein reported 8 feet wide and values  
up to 0.4 oz/ton gold. (G.S.C. Prelim. map  
44-34, marginal note.) Restaked in 1957,

HS J,K





PLACER OCCURRENCES

#1 L.I. Proctor (62°45'N, 138°51'W)References: Cairnes (1917, pp. 29-31)\*; Bostock (1941, pp. 28-30);  
Little (1959, pp. 16-19).

1964

Late in 1964, L.I. Proctor purchased placer claims on Canadian Creek and mineral claims covering a silver-lead showing about 2 1/2 miles to the south from J. Meloy, formerly of Kirkman Creek, Yukon. The placer claims include Discovery claim on Patton Gulch, a tributary of Canadian Creek and 8 adjoining claims of Canadian Creek. The original Discovery on Canadian Creek was staked 21 April 1911, and the creek has been worked intermittently since. (for descriptions see Cairnes, 1917, pp. 29-31; Bostock, 1941, pp. 28-30; and in Little, 1959, pp. 16-19). The deposit is notable in that it contains a considerable amount of tungsten, chiefly in the form of the mineral ferberite, and it has been considered as a potential source of tungsten in both World Wars. , also placer wolframite - ~~Silver~~

Late in the season, Proctor moved 2 bulldozers and supplies to the property by way of a ferry on the Yukon River and an existing 15 mile road from the mouth of Britannia Creek, of which Canadian Creek is a tributary. A limited amount of testing was done on the placer ground and an airstrip was constructed near the Casino Creek silver-lead property.

Duke RiverL.I. Proctor

Early in 1964, L.I. Proctor, of Whitehorse, Yukon, applied for a 10-mile dredging lease on the Duke River extending upstream from about 1/4 mile above the bridge on the Alaska Highway, near mile 1099. Between July 3rd and August 10th, 1964 a drilling program of 12 holes was completed on the gravels between the lower end of the proposed lease and the canyon that discharges about 3/4 of a mile upstream from the highway. Depth of gravel is reported to be about 22 feet and the ground is not frozen. Some values were obtained, but the ground is not considered economic for dredging and the application was withdrawn.

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\*Reprinted in Geological Survey of Canada, Memoir 284 (Bostock, 1957, pp. 442-445).

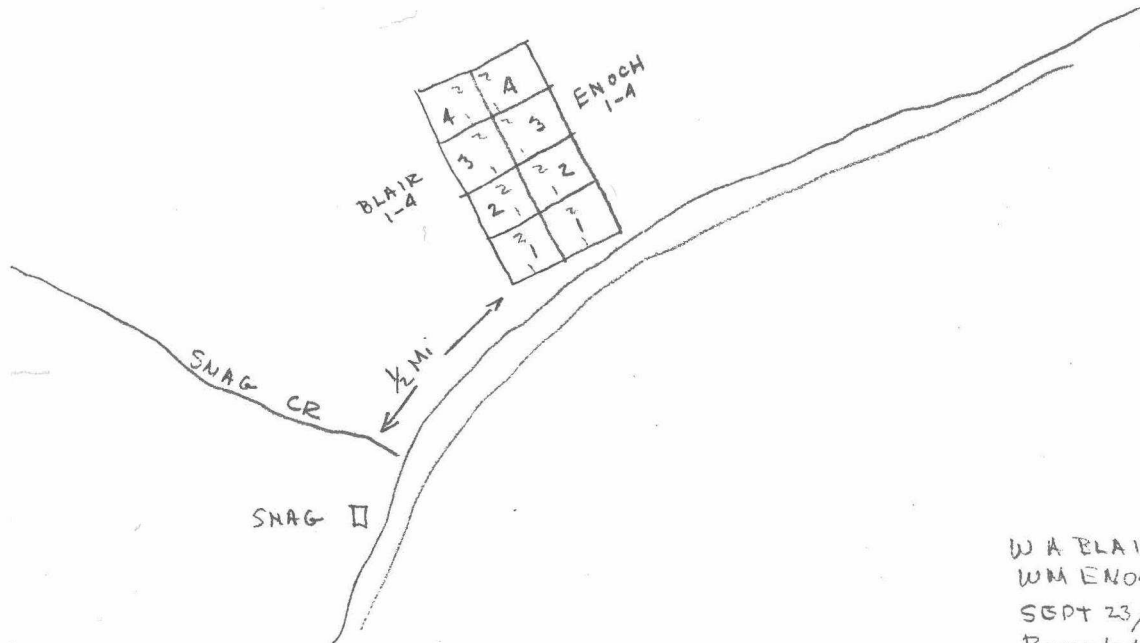
Proctor owns two small dredges - 4 1/2 cubic foot buckets formerly operated by Yukon Gold Placers Limited on Henderson and Thistle Creek, both located south of Dawson, Yukon. During the early spring of 1964, the hull and superstructure of the dredge on Henderson Creek was moved to Granville, Yukon.

- #2: Placer gold. Canadian and Brittania Creeks.
- #3: Rude Creek. Fairly coarse, flattened placer gold, discovered 1915. 100 oz. mined below Trombley Creek.
- #4: Placer gold, Sonora Gulch. (from A.E.A. Notes)
- #5: Placer gold, Klines Gulch, discovered and mined (600 oz.) in 1898. (from A.E.A. Notes)
- #6: Placer gold, Butterfield Gulch. (from A.E.A. Notes)

Another note on old reports ..

Britannia & Canadian ck stamped: 1910-11 John Brode

- Dept of Interior Repts 1919 William Creek car propitid - ? wear
- Galena found @ Ruby cks in 1927 (1928 D.I. Repts) ~~Chambers?~~ Carmichael?
- A 1914 german pilot ~~at~~ <sup>in one summer</sup> failed to have  
mined 20 ounces of gold from a tunnel / tower  
on two small strings of quartz "on The Blockstone  
River - strings were too far apart



W A BLAIR  
 WM ENOCH  
 SEPT 23/52  
 Recorded Nov 4/52