

# ASSESSMENT REPORTS

DAWSON M.D.

MAP No. 115 0 10

TYPE OF WORK:

GEOLOGICAL

091570

REPORT FILED UNDER

Dawson Eldorado Gold Explorations Ltd.

DATE PERFORMED

June 1984

DATE FILED: October 15, 1984

LOCATION - LAT.

63°43'N

Gold Run Creek, Yukon

LONG.

138°40'W

CLAIM Nos.

KLAN 1-12 VA65651-662

WORK DONE BY

J.K. Mortensen (Archer, Cathro &amp; Assoc. (1981) Ltd.)

WORK DONE FOR

Dawson Eldorado Gold Explorations Ltd.

REMARKS

091570

Two samples of wallrock collected in 1984 by Debicki contained no gold, but two of pyritic quartz contained 0.43 and 12.3 g/t Au respectively. Vein material contained some partially digested wallrock inclusions, local blebs of siderite, and vugs up to 5 cm across with stubby quartz crystals.

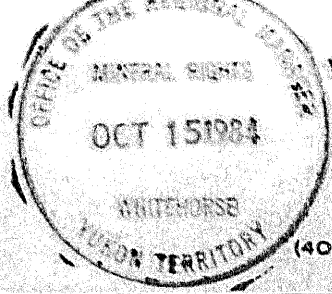
At least two gold-bearing quartz veins occur in the vicinity of the KLAM claims. They range from 0.06 to 1.0 m thick and were reported to yield assays of up to 308.6 g/t Au. Vein material is medium- to coarse-grained, milky quartz with scattered coarse cubes of pyrite and rare grains of galena. Samples of fines from dumps from two adits contained anomalous gold (70 and 180 ppb Au). Pyritized and sideritized wallrocks also bear gold.

**ARCHER, CATIRO**

**& ASSOCIATES (1981) LIMITED**

**CONSULTING GEOLOGICAL ENGINEERS**

**Box 4127, 3125 THIRD AVENUE  
WHITEHORSE, Y.T. T1A 3S9**



**Assessment Report**

**on**

**Klam 1-12 Claims**

**Dawson Mining District**

**NTS 1150/10**

**by**

**J.K. Mortensen, Ph.D.**

**Archer, Cathro & Associates (1981) Limited**

**June 13, 1984**

**091570**

This report has been examined by  
the Geological Survey Unit  
under Section 55 of Yukon Quartz  
Mining Act. It is shown as  
representing a value of the amount  
of \$ 4302.40.

*D. D. Enond*

*for*

Regional Manager, Exploration and  
Geological Survey for Commissioner  
of Yukon Territory.

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## Introduction

Gold-bearing quartz veins were apparently first discovered on Gold Run Creek in 1900 or 1901. Exploration and development work carried out in the area since that time has confirmed the presence of several veins or vein systems containing significant (in some cases, spectacular) gold values. None of the veins has been explored to any extent, however, and the potential of the area remains largely unknown.

The Klam 1-12 claims (Figure 1) were staked by Archer, Cathro & Associates (1981) Limited in 1983 for Dawson Eldorado Gold Explorations Ltd. to cover some of the old workings on Lower Gold Run Creek.

Most lode exploration on Lower Gold Run Creek was carried out between 1901 and 1925, and the workings are mostly caved, and heavily overgrown. As a result, locating these workings for purposes of examination and re-sampling has proven to be very difficult. It has therefore been necessary to conduct an exhaustive search of old staking records, legal survey files and newspaper accounts of the time, in order to determine the extent and location of the previous work.

The following report summarizes the history of lode gold exploration and placer gold production on Lower Gold Run Creek, as compiled from government records, newspaper accounts and other published material. Also included is a preliminary discussion of the bedrock geology and mineralization in the area, based in part on a brief examination of some of the old workings during 1983.

## Placer Gold Production on Lower Gold Run Creek

Lower Gold Run Creek has been a rich producer of placer gold since the original discovery of gold there in 1897. Records of placer production on

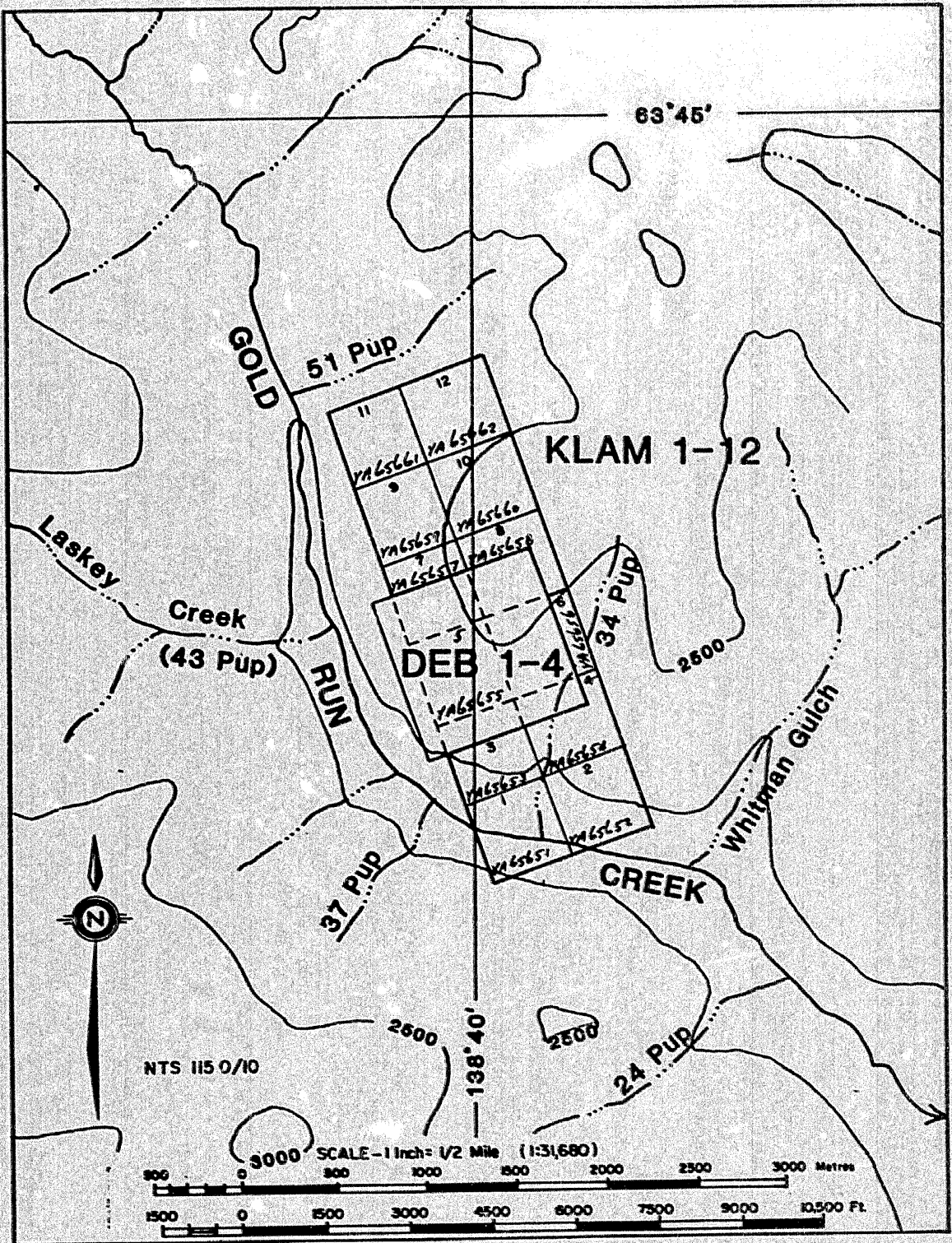


Figure 1  
 ARCHER, CATRO & ASSOCIATES (1981) LIMITED  
**LOCATION MAP**  
**KLAM CLAIMS**  
**KLONDIKE PROJECT**

the creek are very incomplete. The main period of production was from 1897-1923. Mining was mainly by hand methods until 1911, when most of the claims on the lower part of the creek were acquired by Yukon Gold Corporation (later YCGC). A 3.5 km portion of the creek (from Claim No. 12 to No. 36 inclusive) was dredged between 1914 and 1923. Very little placer mining activity took place on the creek between 1923 and 1960. Since 1960, small-scale hand mining and bulldozer sluicing operations have been carried out. Estimated production from 1900 to 1970, excluding dredge production from Claim No. 12 to No. 23 (between 1903-1920) was at least 133,000 fine ounces (\$50,000,000 US at \$375 US gold). Many placer operations were active on Gold Run during the 1903-1920 period, and the section of creek dredged during that time was known to include some very rich ground; therefore total production prior to 1970 may have been as much as double this amount. Yukon Consolidated Gold Corp. reported drill-tested reserves of 24,432,642 cubic yards containing about 200,000 fine ounces (\$75,000,000 US) remaining in 1966 (Green, 1977). These figures indicate that Lower Gold Run Creek was probably one of the richest placer streams in the Klondike District.

The paystreak on Dominion Creek is divided into two sections. The paystreak on Upper Dominion ends about 7 km above the mouth of Gold Run Creek. A second section begins at the mouth of Gold Run and extends to the Indian River. This second paystreak is generally thought to be a continuation of the paystreak on Gold Run Creek itself. The placer gold in Gold Run Creek is typically coarse (including nuggets weighing up to 3 ounces) and rough, and has a slightly, but consistently, higher fineness than that on Dominion Creek.

The Gold Run paystreak stretches from the mouth of the creek up to the mouth of No. 43 Pup (Laskey Creek), a distance of about 6 km, although good

pay has been recovered for an additional 1 km of creek bed up to about 51 Pup. Pay is low grade and very erratic above 51 Pup. Small amounts of pay have been found on Whitman Gulch, a tributary into the left limit of Gold Run at about Claim No. 30, and as much as 1 km up 43 Pup, but by far the majority of the pay has been from Gold Run Creek itself. This distribution has led prospectors to believe that the Gold Run paystreak was derived from bedrock sources(s) on the right and/or left limit of the creek between about 24 Pup and 51 Pup.

### Lode Gold Exploration History

Lode gold exploration on Lower Gold Run began in September, 1900, when a group of 10 quartz claims including the Roberts (138A) was staked along the right limit of the creek between about Claim No. 16 and the mouth of 43 Pup. These claims and several others to the southwest were surveyed in 1901 and 1902, and some of the claims were explored with trenches and shallow shafts until about 1906. A second group of claims, including the Yukon Queen (5107) and Yukon Queen Extension (5142), was staked by J. Payne in 1901 on the left limit of Gold Run and right limit of 34 Pup. These claims, which were surveyed in 1903, covered a gold-bearing quartz vein, and were developed by a 50 m adit and two shafts up to 15 m in depth. Several mill tests (of uncertain size) of the vein material were run through the Munger Syndicates test mill in Dawson. The results were sufficiently promising that by July of 1902, the Yukon Queen Mining Syndicate, which was largely financed by the Munger Syndicate, was formed to develop the property. It appears unlikely that a mill was actually constructed on the site or that additional development work was done on the property because the claims were allowed to lapse by the end of 1903.

Prospecting continued in the area, however, and a number of new claims were staked on both limits of Gold Run Creek and were explored with trenches and shallow shafts. The Yukon Queen property was re-staked in August, 1913 by J. Lloyd as the Red Hill (12343), King Mine (12344), Ratta (12444) and Hilda (12445) claims. Lloyd had driven at least 100 m of tunnel on the claims by 1925, and continued to explore the claims with trenches and shallow shafts until 1930. Lode exploration on Lower Gold Run continued sporadically until about 1936, when interest in lode gold in the Klondike declined generally.

The immediate vicinity of the old Yukon Queen workings was re-staked as the Gold Crest claim in about 1942-1947, and later as the Aime claims (15090) in October, 1966 by J.A. Limontagne. The most recent claims are the DEB 1-4 claims (YA5164), which were staked over the workings in July, 1976 by F. Burkhard and explored with bulldozer trenching in 1978. These were surrounded by the Klam 1-12 claims staked by Archer, Cathro & Associates (1981) on behalf of Dawson Eldorado Gold Explorations Ltd. in June, 1983.

#### Location, Access and Vegetation

The Klam claims are located on Lower Gold Run Creek, about 3 to 5 km from its mouth. Access is via a dirt road up Gold Run Creek from the main Dominion Creek road.

The terrain in the area consists of low rounded hills separated by rather broad creek valleys with narrow, V-shaped tributaries. The creek bottoms and lower slopes are heavily overgrown with willows, aspen, birch and stunted spruce. South and west-facing slopes are typically covered with stands of aspen, birch and stunted spruce, while north-facing slopes are covered by scattered spruce and willows, with a thick layer of moss on the ground surface. The entire

area has been burned at least once, and the abundant cut stumps indicate that the slopes were probably completely logged off during early placer mining on the creek.

### Geology

Geological mapping of Lower Gold Run Creek and Lower Dominion Creek was not completed during the 1983 field season, and the geology of the area is still not well understood. The Gold Run Valley is underlain by platy, tan weathering, muscovitic quartzite and quartz-muscovite schist down to at least 51 Pup. This unit forms the footwall of a major thrust fault above which a sequence of chlorite and chlorite-biotite schist has been emplaced. The chlorite schists of the upper plate form the crest of the ridge between Dominion and Sulphur Creeks as far south as the head of Gold Run Creek, and are believed to continue along the ridge crest between Gold Run and Sulphur Creeks to at least the head of 24 Pup. It is probable that parts of the ridge system between Gold Run and Dominion Creeks are also capped by klippen of chlorite schist of the upper plate. Northeast of King Solomon Dome, this same thrust fault is marked by discontinuous bodies of sheared serpentinite. Regional mapping of most of the Klondike District by the writer has shown that serpentinite only occurs along major thrust fault zones. Scattered subangular to subrounded clasts of sheared and locally, strongly altered serpentinite are present in dredge tailings from the mouth of 24 Pup to at least 37 Pup, confirming the presence of a thrust zone in the area of Lower Gold Run Creek.

In the old workings examined by the writer on the Red Hill, Ratta and Yukon Queen claims, the exposed bedrock is a medium-grained, chlorite-quartz schist and chlorite-actinolite-quartz gneiss. It is uncertain whether this

unit belongs to the upper or lower thrust panel. Foliation and compositional layering in the rocks dips shallowly to the north.

### Mineralization

Gold-bearing quartz veins were encountered in both the Yukon Queen and Red Hill claims. The vein located and explored by a 35 m adit on the Yukon Queen property was reported to dip at 45° to the north or northeast, and range from 0.5 to 1 m in thickness. Slickensides were visible along the vein walls and up to 0.3 m of fault gouge was locally present. The wallrock was pyritized and also gold-bearing. A 1.5 m channel sample across a 1 m wide vein, and including 0.25 m of wallrock on each side, is reported to have assayed 0.6 oz/ton Au, and selected hand samples assayed up to 4.3 oz/ton Au. A separate vein was drifted on the Ratta claim between the Yukon Queen adit and 34 Pup. At the Ratta adit, which was briefly examined by the writer, this vein is 6 to 15 cm wide, and dips due north at about 20°. The wallrocks are pyritized (up to 3-4% pyrite as much as 0.5 m on either side of the vein). In 1915, J. Lloyd reported that he had drifted over 21 m on a vein on the Ratta claim that was 36 cm thick, dipped 45° to the northeast and had yielded assays as high as 9.0 oz/ton Au, but with only minor Ag.

Vein material visible on waste dumps of the old workings on Lower Gold Run Creek is similar to that from other gold-bearing lodes in the Klondike. It consists of medium to coarse-grained milky quartz with scattered coarse cubes of pyrite and rare grains of galena. No visible gold was seen during a brief examination of the dump material. Samples of fines from the dumps of the Ratta and Yukon Queen adits contained background levels of all elements except gold, which was moderately anomalous in both cases (70 and 180 ppb Au, respectively, Table 1).



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## CERTIFICATE OF ANALYSIS

TO : ARCHER CATHRO & ASSOC. (1981) LTD.,

BOX 4127  
WHITEHORSE, Y.T.  
Y1A 3S9

CERT. # : AB313269-001-A

INVOICE # : I8313269

DATE : 11-AUG-83

P.O. # : NONE

KLONDIKE

Sample description	As ppm (ICP)	Mo ppm (ICP)	Zn ppm (ICP)	P ppm (ICP)	Pb ppm (ICP)	Bi ppm (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Ni ppm (ICP)	Fe % (ICP)	Mn ppm (ICP)	Cu ppm (ICP)	As ppm AAS	Ag ppm
KLAM-01	<10	<1	77	640	<1	<2	<0.5	28	22	5.34	515	30	0.4	70 <del>ppb</del>
KLAM-02	15	2	62	1060	6	2	<0.5	25	21	4.39	(875)	31	0.6	16 <del>ppb</del>

TABLE 1

Geochemical analyses of fines from waste dump at Ratta

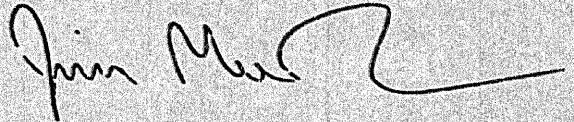
(KLAM-01) and Yukon Queen (KLAM-02) adits, Lower Gold Rush Creek

Summary and Conclusions

At least two gold-bearing quartz veins are present in the vicinity of the Klam claim group. These veins dip shallowly to moderately to the north or northeast. They range from 0.06 to 1.0 m in thickness and were reported to yield assays of up to 9 oz/ton Au. Pyritized wallrocks are also gold-bearing. The richness and distribution of placer deposits on Gold Run Creek suggests that other similar vein systems may be present in the area. Detailed mapping, soil geochemistry and re-location and re-sampling of the old workings will be necessary to evaluate the lode potential of this area.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



J.K. Mortensen, Ph.D.

/mjm

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CONSULTING GEOLOGICAL ENGINEERS

1016-510 WEST HASTINGS STREET  
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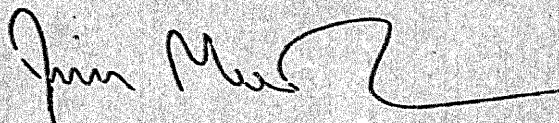
## APPENDIX I

### CERTIFICATE

I, James K. Mortensen, with residential address in Vancouver, British Columbia, do hereby declare

1. I am a geologist in the employ of Archer, Cathro & Associates (1981) Limited, 1016-510 West Hastings Street, Vancouver, B.C. V6B 1L8.
2. I am a graduate in geological engineering of the University of British Columbia (B.A.Sc., 1977, M.A.Sc., 1979) and graduate in geology of The University of California, Santa Barbara (PhD., 1983).
3. I am a member of the Geological Association of Canada and the Geological Society of America.
4. I am a registered Engineer-in-Training in the Association of Professional Engineers of British Columbia.
5. I have practised my profession as a geologist for the past eleven years.
6. I have supervised the work described in this report.

Respectfully submitted,



J.K. Mortensen, PhD.

/mc

## APPENDIX II

### REFERENCES

Dawson Daily News, 1901-1933

Engineering and Mining Journal, August, 1902; May 27, 1922

Green, L. 1977, The Gold Hustlers, Alaska Northwest Press, p. 294

Klondike Daily Nugget, 1903

Western Miner, May, 1956

Yukon Sun, 1900-1903

Yukon World, 1905-1906

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## APPENDIX III

April 17, 1984

Mining Recorder,  
Dawson Mining District,  
Box 249,  
Dawson, Y.T.  
Y0B 1G0

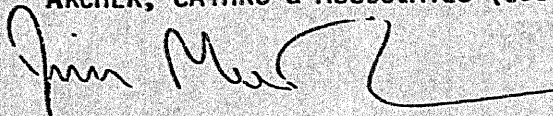
Dear Sir:

Re: Application of Regional Mapping Costs in  
Klondike District to Property Assessment

Part of the assessment work for 1983-84 filed on quartz claims in the Klondike area held by Dawson Eldorado Gold Explorations Ltd. or jointly by Dawson Eldorado and Archer, Cathro & Associates (1981) Limited consists of geological mapping outside of the individual properties for which the work was filed. We believe that this is justified because of the extreme scarcity of outcrop in the area and the lack of a detailed geological map of the Klondike which makes it impossible to interpret the geology of a particular property based solely on the very few bedrock exposures within the claim boundaries. In order to understand the bedrock geology of a claim group, it is therefore necessary to carry out more reconnaissance scale mapping in the general area of the property and extrapolate the regional geology onto the property.

Yours truly,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED



J.K. Mortensen.

/mc