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EVALUATION REPORT
on the
LUCKY LUKE Copper-Silver-Gold PROPERTY

Terrace Area
Omineca Mining Division
British Columbia

NTS Map-Area 103I/9W
Latitude: 54 37.4' North
Longitude: 128 26.7' West

Prepared For:

Terry Clark

By:

N.C. Carter, Ph.D. P.Eng.
August 31, 2001

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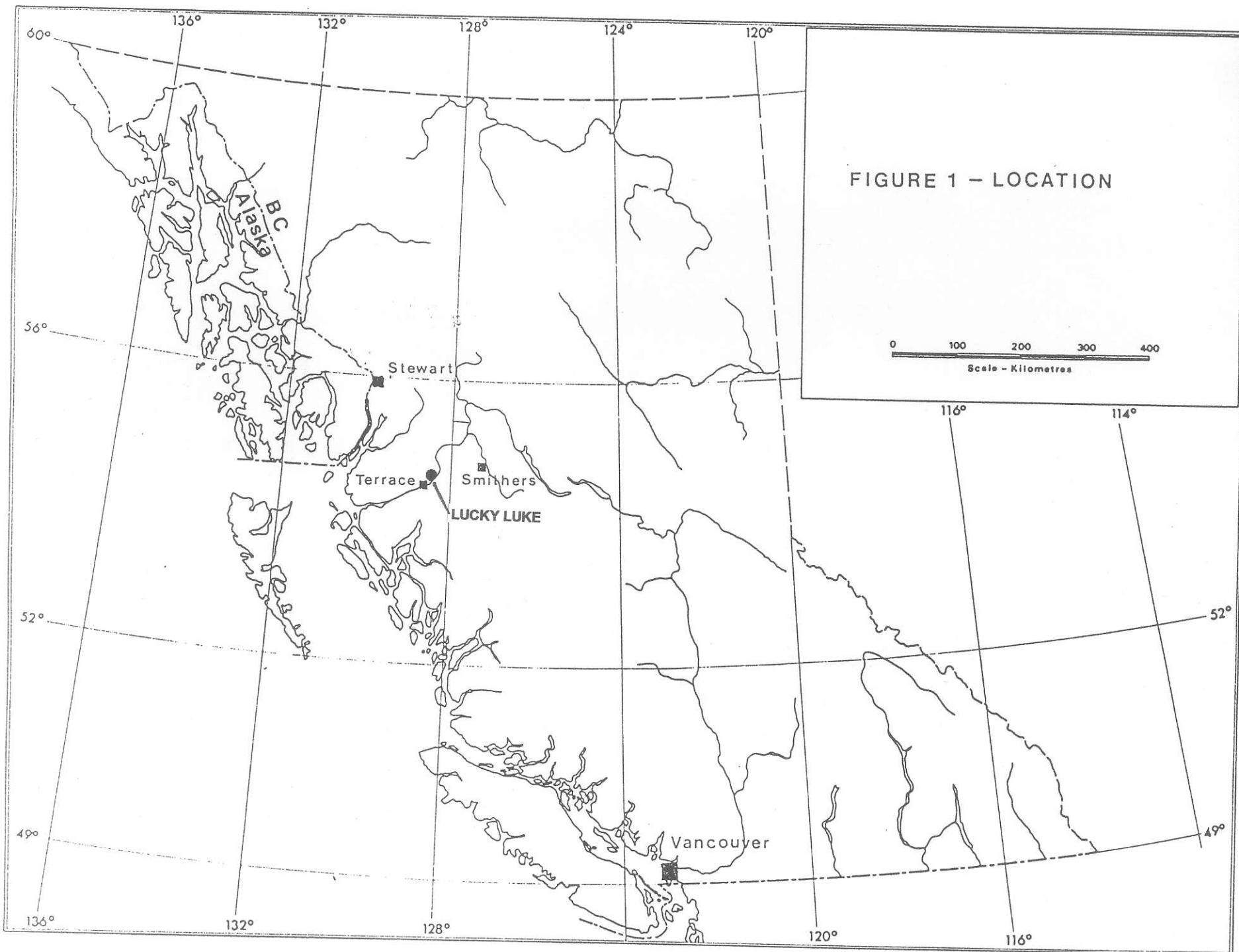
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SUMMARY

The Lucky Luke copper-silver-gold property, situated adjacent to Skeena River northeast of Terrace, British Columbia, consisted of two Crown granted mineral claims which expired in 1993. The property had been maintained in good standing for 76 years by way of assessment work between 1917 and 1946 and by the payment of annual taxes through 1992 on two of the claims which had been Crown granted in 1947.

The subject mineral claims included fault and fracture controlled copper-silver-gold mineralization that was explored by surface trenching and underground workings in the 1920s and 1930s. A small mill was constructed in 1934. Additional development work and limited milling was undertaken in 1960s. The Lucky Luke property has a record of limited mineral production.

An estimate of the fair market value of the Lucky Luke property in 1993, using two recognized valuation methods for mineral properties without documented mineral reserves, would be in the range of \$42,000.00 to \$51,000.00



INTRODUCTION

The Lucky Luke copper-silver-gold property, situated northeast of Terrace, British Columbia, consisted of two Crown granted mineral claims which reverted to the Crown in 1993.

This evaluation report, prepared at the request of Mr. Terry Clark, includes information pertaining to the geological setting and styles of metallic mineralization present on the Lucky Luke property plus a review of exploration and development work completed since the location of original mineral claims in 1917. The principal purpose of this report is to provide an estimate of the value of the property in 1993.

The report is based on a review of published and unpublished documents provided to the writer by Mr. Clark supplemented by information available in the public domain. References to these various sources of information are listed in the appropriate section of the report.

The writer has a good working knowledge of the geology and mineral occurrences of the Terrace area derived by way of numerous mineral property examinations undertaken over the past 34 years. This work involved reporting on several mineral properties on Kitselas Mtn. and near Usk, both in the immediate area of the Lucky Luke property, while in the employed by the Provincial Ministry of Energy Mines and Petroleum Resources.

LOCATION AND ACCESS

The Lucky Luke property is situated 16 km northeast of Terrace in west-central British Columbia (Figure 1). The geographic centre of the property is at latitude 54° 37.4' North and longitude 128° 26.7' West in NTS map-area 103I/9W.

The original mineral claims were located on the lower slopes of Kitselas Mtn. between 0.5 and 1 km west of Skeena River (Figures 2 and 3).

Access to the property area is by highway 16 northeast from Terrace for a distance of 22 km to a ferry which crosses Skeena River to the community of Usk. A secondary road down Skeena River from Usk provides access to the area of the original mineral claims.

The Lucky Luke prospect is well located relative to existing infrastructure. Both Usk and Terrace are on the Jasper - Prince Rupert CN Rail line and Terrace, with a population of 14,000, has daily scheduled airline service and offers most supplies and services.

MINERAL PROPERTY

The Lucky Luke property consisted of two Crown granted mineral claims located in the Omineca Mining Division.

Location of these claims is shown on Figure 3 and details are as follows:

<u>Claim Name</u>	<u>Lot Number</u>
Lucky Luke	7424
Hummer	7425



FIGURE 2 - LOCATION - LUCKY LUKE PROPERTY
 (Topographic contours in feet)

Initial mineral claims were located in 1917 and maintained in good standing by L.E. Moody through 1946. The property was described in 1934 as consisting of four recorded mineral claims; two of these, the Lucky Luke and Hummer, were surveyed and taken to Crown grant status November 7, 1947.

The Moody family caused work to be carried out on the property through the 1960s and paid annual taxes on the two Crown granted claims prior to their reverting to the Crown in 1993 following the death of the recorded owner.

The Lucky Luke prospect is currently included in the GOLD mineral claim (record number 359667) which was located in September of 1997 by an unrelated party.

PREVIOUS WORK

The earliest mining activity in the Terrace area was directed to the recovery of placer gold from a number of drainages tributary to Skeena River beginning in 1884. The first lode mineral claims in the area were located near Usk in 1893.

As previously noted, the Lucky Luke prospect was discovered in 1917 and work by L.E. Moody and partners and various leasers over the next 20 years included prospecting, surface trenching, establishment of road access, camp construction and 160 metres of underground development which consisted of two adit levels, raises, one winze and a sublevel. Sorted crude ore was shipped in 1924. A 20 tons per day mill, consisting of a jaw crusher, ball mill and Wilfley table, was constructed near the railway in 1934 and connected to the lowest mine level by a 535 metres long aerial tramway. Concentrates were produced in 1938.

There are no records of any work on the property in the 1940s and 1950s other than the surveying of two of the original recorded mineral claims which were taken to Crown grant status in 1947.

In 1963, Mr. George Moody, the registered owner of the two Crown granted claims, entered into an option agreement with two individuals. Subsequent work by the Lucky Luke Mining Co. included road construction and the rehabilitation of underground workings and the re-establishment of milling facilities. Some 90 tonnes was mined in 1965; this material was sorted and processed and 3 tonnes of concentrate were produced.

Available records suggest that this agreement lapsed sometime in 1966. In early 1967, Terrace Bell Mines Ltd. approached Mr. Moody with an option to purchase proposal but subsequent negotiations were unsuccessful and a formal agreement was not executed.

PHYSICAL SETTING

The Lucky Luke property is situated in the Hazelton Mountains on the east flank of the Coast Range. This is rugged mountainous terrain dissected by deeply incised river valleys notably Skeena River and numerous tributaries. The highest peaks east and west of Skeena River range from 1500 to more than 2200 metres above sea level. Lower slopes are steep and

well forested with mature stands of cedar, hemlock, fir, spruce and cottonwood. The climate is typical of marine west coast regions; average precipitation exceeds 1200 millimetres annually.

The Lucky Luke workings are on the lower eastern slope of Kitselas Mtn. Elevations within the claims area range from 240 to 900 metres. Glacial debris covers much of the well forested lower areas; bedrock is well exposed in numerous bluffs in the higher parts of the claims. The principal workings are between elevations of 300 and 335 metres.

GEOLOGICAL SETTING AND STYLE OF MINERALIZATION

The Lucky Luke property is near the boundary between granitic rocks of the Coast belt to the west and volcanic and sedimentary rocks of the Intermontane belt (Stikine terrane) on the east. Stikine terrane near the summit of Kitselas Mtn. includes felsic fragmental metavolcanic rocks characterized by a prominent northeast-trending directional fabric (Carter, 1970). These and similar volcanic and lesser sedimentary rocks east and west of Skeena River are considered to be older (Late Paleozoic - Early Mesozoic) than the Early Jurassic, Hazelton Group rocks which are prevalent throughout much of the Terrace area.

The Lucky Luke claims are underlain by andesitic flows and biotite and chlorite schists which are cut by narrow felsic dykes (Kindle, 1937). The Lucky Luke is typical of subvolcanic copper-silver-gold deposits and occurrences which are numerous in the area east of Terrace. Mineralization is described by Kindle (1937) as consisting of a number of narrow quartz lenses along a 1 to 2 metres wide, west-northwest-striking, steeply north-dipping fault zone. The quartz lenses and veins range in width from 6 cm to 1 metre and contain the copper minerals bornite, chalcocite and covellite. Malachite staining is widespread and free gold occurs with chalcocite.

The fault zone and contained quartz-sulphide mineralization was explored over a strike length of 70 metres and a vertical range of 55 metres by a number of surface trenches and two adit levels (Figure 4). The lower adit, at an elevation of 302 metres, follows the fault zone over a strike length of about 40 metres. A cross-fault near the western end of the adit drift has displaced the zone. The upper adit, at an elevation of 319 metres, explored the zone over a strike length of 29 metres; surface trenching above this level reportedly (Lay and Mandy, 1937) extended the zone over an additional strike length of 23 metres.

The two adit levels are connected by a raise (Figure 4) and a 24 metres winze sunk below the lower adit level reportedly exposed bornite, chalcocite and free gold over average widths of up to 0.75 metre (Lay and Mandy, 1937).

Grades of mineralization, based on 15 documented samples, range from 0.70 to 7.20% copper, 10.3 to 172.0 grams/tonne (g/t) silver and 1.37 to 50.06 g/t gold and average 2.73% copper, 62.9 g/t silver and 13.19 g/t gold.

Lucky Luke is one of only fifteen properties (out of a total of 224 mineral occurrences and deposits) in the Terrace area with a record of production which is tabulated below.

<u>Year</u>	<u>Tonnes</u>	<u>Copper(kilograms)</u>	<u>Silver(grams)</u>	<u>Gold(grams)</u>
1924	23	5063	9829	560
1938	3	738	1182	62
1966	<u>3</u>	<u>1158</u>	<u>3359</u>	<u>93</u>
	29	6959	14370	715

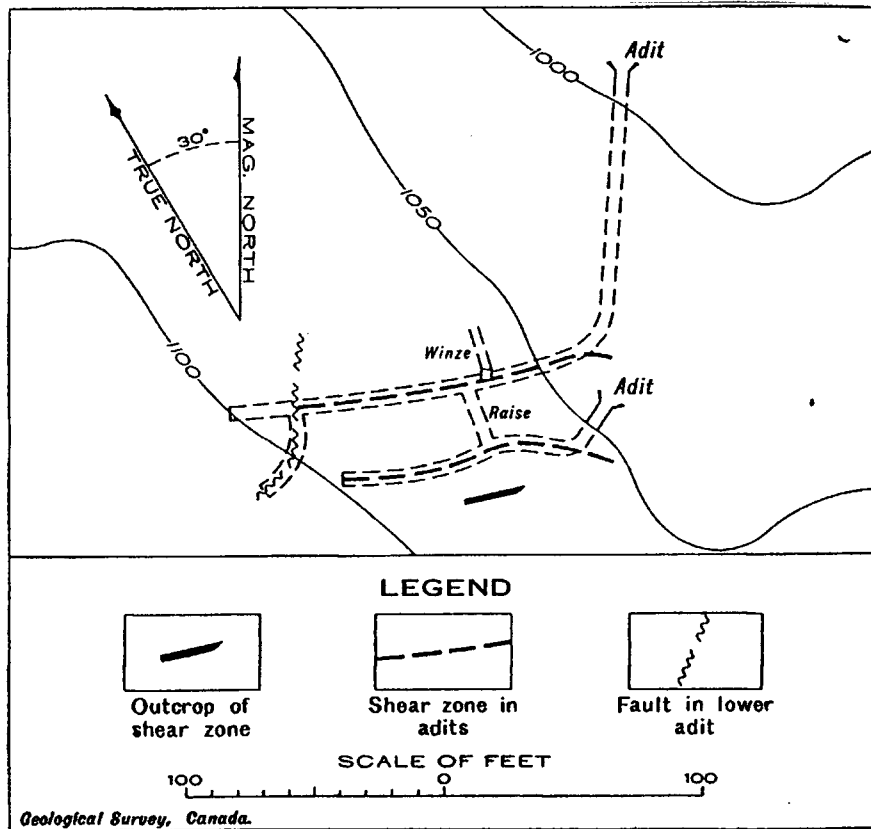


FIGURE 4 - LUCKY LUKE - PLAN OF UNDERGROUND WORKINGS
 (After GSC Memoir 205 - topographic contours in feet)

Average recovered grades from this production (24% copper, 495.5 g/t silver and 24.66 g/t gold) are significantly higher than the average grades reported from underground and surface sampling and no doubt reflect sorting of the material in 1924 and the mill concentrates produced in 1938 and 1966.

EVALUATION OF THE LUCKY LUKE PROPERTY

The purpose of this section is to provide an independent estimate of what the value of the Lucky Luke property would have been in 1993 when the Crown granted mineral claims reverted to the Crown for non-payment of taxes.

Evaluation Methodologies

Evaluation or valuation of mineral properties, particularly those in the exploration stage, is an exercise which is currently undergoing further review (Draft Discussion Paper - CIM Special Committee on Valuation of Mineral Properties (CIMVal), April 2001). Nevertheless, several approaches have been used in the past to assign value to mineral properties for which no mineable reserves have been established. In summary, these include:

(1) Comparable Transaction Analysis is a market approach to the valuation of exploration stage mineral properties (Lawrence, 1986, 2000). This method involves a review of documented option and farm-in agreements entered into by willing buyers and willing sellers in an open and unrestricted market. This method works best where it is possible to compare a subject property with nearby, similar properties for which recent option/participation agreements have been negotiated.

(2) Discounted Cash Flow estimates to determine the present value of a mineral property are appropriate for properties for which an economically viable deposit has been identified and a feasibility study has been completed.

(3) Geotechnical Rating Method, a cost approach to valuation, measures the conceptual probability of the discovery of a mineral deposit on a subject property by way of a geoscience factor rating method to generate a cash value for each mineral claim comprising the property (Kilburn, 1990). A systematic assessment of each mineral claim is undertaken to determine its location relative to significant mineralization, producing mines and on- and off-property geological, geochemical and geophysical targets. Each of these categories includes a number of sub-categories ranging from high to low potential and which have been assigned numerical values. These values are combined and used as a multiplier of a deemed base acquisition cost to determine the value of each mineral claim comprising the subject property. This method is appropriate for mineral properties situated in well known, established or emerging mining districts.

(4) Appraised Value Method involves a cost approach to assigning value to a mineral property for which a viable deposit has not been defined (Roscoe, 1986, 2000). The value of such properties is based on their exploration potential and this method provides a means by which a value of this potential can be measured. A combination of past exploration expenditures plus warranted future expenditures to test the exploration potential are used to arrive at a property value. Only those past expenditures which are

meaningful and have effectively advanced the property potential are considered to be retained expenditures; these are combined with the estimated costs of a recommended and warranted program of additional investigative work to arrive at an estimate of property value.

Value of the Lucky Luke Property

Two of the foregoing methodologies are not considered to be appropriate for providing an estimate of value for the Lucky Luke property. These include discounted cash flow estimates which only apply to those mineral properties for which an economically viable deposit has been identified and a feasibility study completed, an approach which is obviously not applicable in this case.

The Geotechnical Rating Method, which measures the conceptual probability of the discovery of a mineral deposit on a subject property by way of a geoscience factor rating method to generate a cash value for each mineral claim comprising the property, is most appropriate for mineral properties situated in well known, established or emerging mining districts. In the writer's opinion, this is not a proper methodology for mineral prospects in the Terrace area. Although well known for a number and diversity of mineral occurrences and deposits, none of these have had a significant record of production.

In the writer's opinion, the two best methods for determining a value for the Lucky Luke property in 1993 are slightly modified versions of the Comparable Transaction Analysis and the Appraised Value Method.

Comparable Transaction Analysis

As noted previously, this is a market approach to the valuation of exploration stage mineral properties. This method works best where it is possible to compare a subject property with several nearby similar properties for which option/participation agreements have been negotiated during a specific time frame. While no examples of such agreements are available for mineral properties in the Terrace area between the years 1990 and 1995, the writer is of the opinion that the offer to purchase agreement negotiated for the Lucky Luke property in 1963 could be used for these purposes.

This agreement specified a purchase price of \$35,000 payable over a 7 year period to earn a 100% interest in the property. Terms included a payment of \$25,000 by 1968, the \$10,000 balance payable by 1970 and a 12.50% Net Smelter Royalty payable on any production from the property with any such payments deducted from the property payments owing.

Available records suggest that this agreement remained in effect for about three years. In view of the limited production from the property during this period, it would be reasonable to assume that the value of the transaction in 1966 would have been 25% of the \$35,000 purchase price or \$8,750.00. This amount, inflated to 1993 dollars using Bank of Canada data, would have been \$42,866.59.

Appraised Value Method

This approach involves a determination of the value of the potential of a mineral property based on previous exploration expenditures. Past exploration expenditures on a subject mineral property are assessed to determine if a property's value is either enhanced or

diminished by previous exploration work. This method also incorporates the assumption that, if the value of the property has been enhanced by previous work, there must also be a reasonable expectation that if additional funds are spent, the property's value will be further enhanced. A combination of retained past expenditures, or those that have enhanced property value, plus warranted future expenditures can provide an estimate of property value (Roscoe, 1986,2000).

Since the Lucky Luke Crown granted mineral claims expired in 1993, warranted future expenditures, or a recommended program of additional work, to further enhance property value are not applicable. However, the claims were kept in good standing from 1917 to 1993 and the costs incurred in maintaining the claims over this 76 year period obviously constitute value.

A conservative estimate of past expenditures on the Lucky Luke property would include the minimum annual assessment work requirements since the initial location of the claims in 1917. Through 1946, or the year before two of the claims were Crown granted, yearly work requirements would have been \$100 per year per claim. In view of the fact that only two of the claims were taken to Crown grant status, these costs between 1917 and 1946 would have amounted to 2 claims @ \$100/year per claim x 29 years = \$5,800.00. The 1993 value of this amount, based on Bank of Canada inflation data, would be \$48,050.41.

Additional property maintenance costs include the annual taxes paid on the Crown granted claims since 1948. At a nominal \$20 per year for both claims, these payments would have totaled \$900.00 through 1992. In constant 1993 dollars this would be equal to \$3,482.51.

The total of the assessment work requirements plus the annual taxes equals \$51,532.92. This amount, deemed to be retained expenditures for valuation purposes, is considered to be a conservative estimate of actual property expenditures between 1917 and 1992.

CONCLUSIONS

The Lucky Luke mineral claims were kept in good standing by the Moody family between 1917 and 1993. The exploration and development work completed over this 76 period would have incurred costs well in excess of the nominal value (\$51,532.92) assigned by a modified Appraised Value method. For example, the underground development alone (160 metres of drifting, crosscutting and raising) would have cost about \$35 per metre in the 1920s or approximately \$5,600. The cost of duplicating this work in the 1980s would have been about \$985/metre or roughly \$157,600. This was but one facet of work undertaken; there was also an investment in roads, camp and mill construction in the 1920s and 1930s. Additional property costs also include underground and mill rehabilitation in the 1960s.

The Lucky Luke prospect has a modest record of past mineral production. While the value of this production cannot be used for valuation purposes, it is worthy of note that the gross value of the mineral production between 1924 and 1966, incorporating average 1993 metal prices and Canada - United States dollar exchange rate, would have amounted to slightly more than \$31,000.00.

The full potential of the Lucky Luke property remains unknown. Available records indicate that virtually all of the previous work on the property was done in the area of known

mineralization but the along strike and depth extent of the this zone was never tested by diamond drilling. No comprehensive, modern day exploratory work was completed over the remainder of the property.

An estimate of what sort of a transaction value the property might have had immediately prior to the cancellation of the Crown granted mineral claims in 1993 is more difficult to assess. There are no records of comparable mineral property transactions in the Terrace area in the early to mid-1990s. The property was subject to an option to purchase agreement in the 1960s and a discounted value of this transaction, adjusted for inflation, provides a second estimate of property value in 1993.

A fair market value for the Lucky Luke property in 1993, based on two valuation methods for mineral properties without reserves, would have ranged between \$42,000.00 and \$51,000.00.

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CERTIFICATE

I, **NICHOLAS C. CARTER**, Consulting Geologist, with residence and business address at 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S.(1962) and the University of British Columbia with Ph.D.(1974).
2. I have practiced my profession as a geologist, both within government and the private sector, in eastern and western Canada and in parts of the United States Mexico and Latin America for more than 35 years. Work has included detailed geological investigations at mineral districts, examinations of, and reporting on, a broad spectrum of mineral prospects and producing mines, supervision of mineral exploration projects and comprehensive mineral property evaluations.
3. I have been registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1966. I am a Fellow of both the Canadian Institute of Mining, Metallurgy and Petroleum and the Geological Association of Canada and am a past director of The Prospectors and Developers Association of Canada and a past president of the British Columbia and Yukon Chamber of Mines.
4. I am a "qualified person" for purposes of National Instrument 43-101. Relevant experience with regard to the foregoing report includes numerous personal examinations, geological studies, and related research projects directed to a number and variety of precious and base metals deposits throughout British Columbia, elsewhere in North America and in parts of South America.
5. I have not personally examined the Lucky Luke property but am familiar with the geological setting of the immediate area and with a number of mineral occurrences and prospects throughout the Terrace, British Columbia district.
6. I have prepared all sections of the foregoing report which is based on a number of published and unpublished reports pertaining to past exploration work and the geological setting of the property and on information relating to the Lucky Luke mineral claims provided to the writer by Mr. Terry Clark.
7. As of the date of this certificate, I am not aware of any material fact or material change with respect to the subject matter of the foregoing technical report which is not reflected in the report, the omission to disclose which makes the technical report misleading.
8. I hold no interest, directly or indirectly, in the mineral property that is the subject of the foregoing technical report or in any adjacent mineral property.

Dated at Victoria, British Columbia, this 31st day of August, 2001:

N.C. Carter, Ph.D. P.Eng.

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Consulting Geologist