

SPRUCE Ck. (Placer)

- 1 -

Spruce Creek # 10962
888026
Placer
104N/11,12 104N034

SUMMARY

Carnes Creek Explorations Ltd. of Vancouver has completed a very aggressive exploration program in 1987 for placer gold on Spruce Creek in the historically rich "Atlin Gold Camp" of northwestern British Columbia.

The company has control of 30 placer leases totalling 3,800 acres covering 2 miles of Tertiary and Pleistocene gravels along both sides of Spruce Creek.

Carnes Creek Explorations Ltd. completed a \$1.5 million flow-through share offering with Knight's Financial of Vancouver at \$1.50 per share to implement a preliminary testing program of seismic surveys, placer drilling and large scale bulk testing to outline the initial economic potential of the property and to establish what final detailed exploration programs are necessary to confirm the economic parameters for successful production.

The 1987 exploration program involved 10 refraction seismic lines totalling 5,500 meters (18,045 ft.), 27 large diameter placer drill holes totalling 1,399.20 meters (4,590.55 ft.), bulk testing of two sites involving stripping 132,000 cubic yards of waste and processing 40,000 cubic yards of Tertiary sands and gravels and finally a bulk testing of the Noland tailings pile involving three sites and 5,684 cubic yards of material.

CONCLUSIONS

Original speculation that Spruce Creek properties were considered to contain the highest grade gold in the Atlin area and that the 2 miles of placer leases controlled by Carnes Creek Explorations Ltd. on Spruce Creek contain one of the largest volumes of rich gold bearing Tertiary and Pleistocene gravels is confirmed by this preliminary exploration program.

The whole of the Spruce Creek valley is marked by terraces of glacial gravels and areas of heavy glacial till. It appears that during Tertiary (or pre-Pleistocene)

times the Spruce Creek valley was deeply eroded by a major river and a broad deep mature valley was incised into bedrock with subsequent deposition of thick Tertiary fluvial deposits. During succeeding glacial periods the valley was filled with glacial drift in which the stream cut new channels through the glacial drift grey gravels and in places through the red gold bearing Tertiary channel gravels. The 1987 exploration program on this large property has indicated a very complex picture of gold bearing red Tertiary river gravels, gold bearing blue grey reworked Tertiary or Pleistocene overburden, and also a gold bearing glacial esker. Further detailed exploration is warranted into each of these distinct situations to evaluate their economic potential and ultimately the overall potential of the property.

The 1987 seismic survey indicates that the deepest gold bearing feature on the property is the broad mature Tertiary river valley 500 to 2,000 feet wide over the 2 mile length of the property which is more extensive than originally thought. The bulk testing pits sampled up to 70 feet of Tertiary gravel near the center of the channel and yielded between \$18.00 and \$34.00 per cubic yard near the bedrock interface and between \$0.60 and \$14.00 per cubic yard (avg. \$5.00 per yd³) up to 70 feet above bedrock.

Based on the bulk sampling, fine gold below -35 mesh represents only 10-20% of the tertiary gold, and therefore very sophisticated gravity separation equipment may not be necessary. In Pleistocene gravels, however, the fine gold locally represents up to 90% of the total gold suggesting more sophisticated gravity separation equipment may be required.

The 1987 drilling program indicated that gold occurred in nearly all of the Pleistocene materials which are up to 300 feet in thickness. These intersected sections range in value from less than \$1.00 to \$28.00 per yd³.

The glacial fluvial channels containing thick sequences of grey or grey blue gravels which (may be) reworked Tertiary gravel, definitely are economically mineable in many areas with values that average \$10.00, contrary to historical belief.

Three boreholes also intersected a glacial esker on surface which is 40 to 80 feet thick and can be followed for 2 km on the orthophoto (see Figure 19). Gold values range in this material from \$2.20 to \$39.60 per cubic yard which indicates a very important source of profitable easily mineable material.

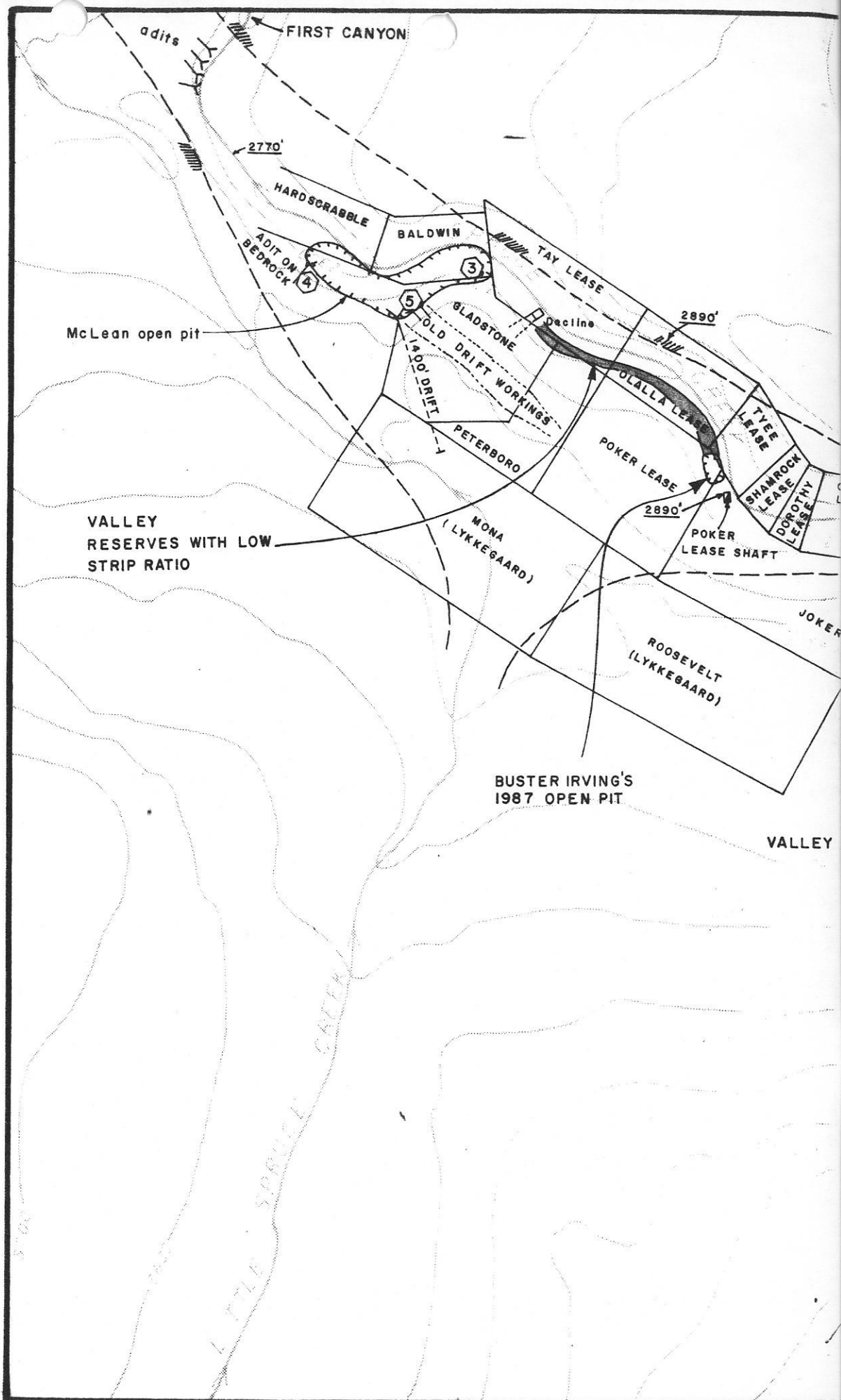
Estimated volume of red Tertiary gravel on the property is 38,000,000 yd³ and the estimated volume of Pleistocene grey gravels on the property is 50,000,000 yd³.

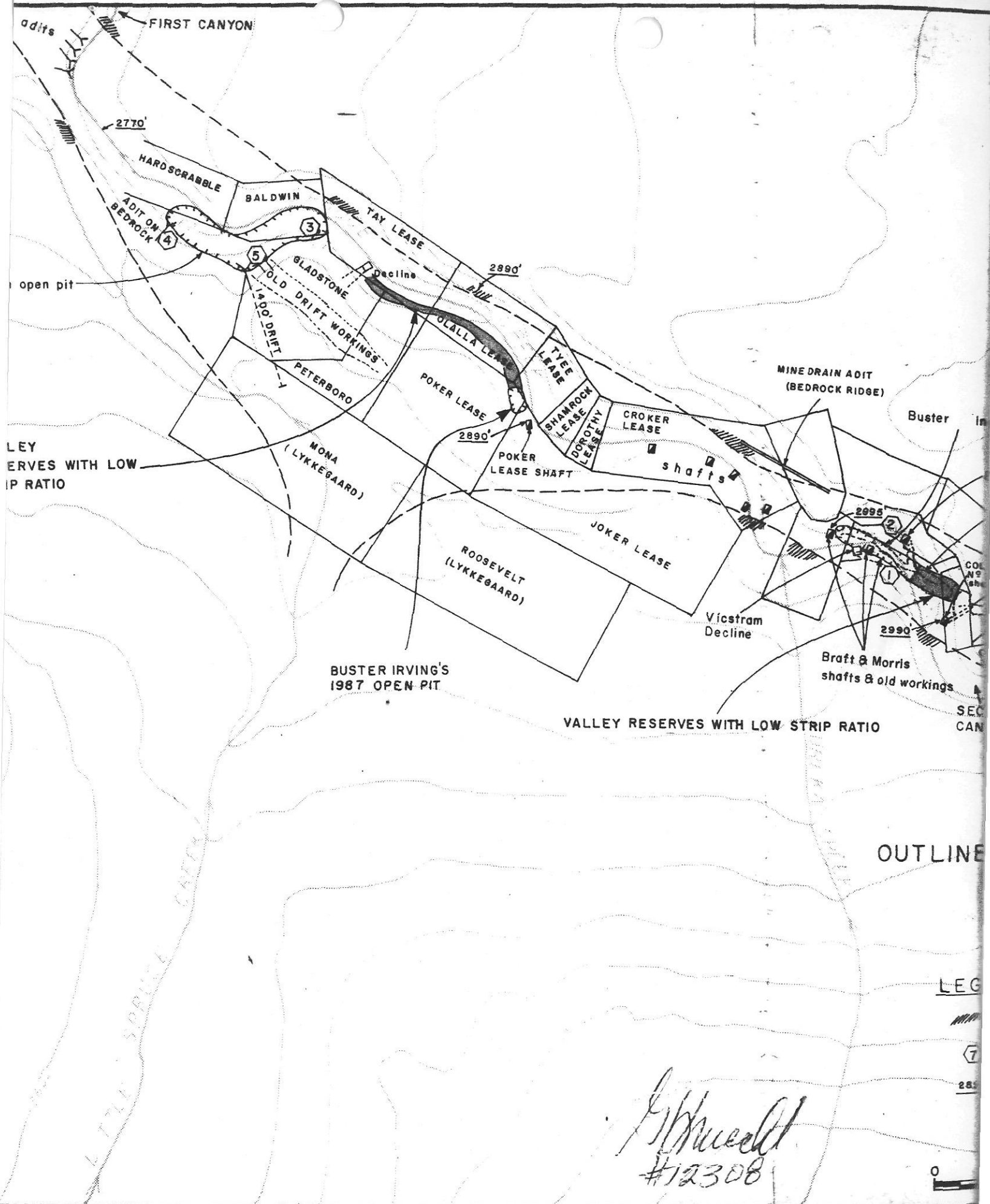
It can be concluded, on the basis of the 1987 field program results, that a large scale open pit mining operation as envisioned by Carnes Creek management has an excellent chance for success.

RECOMMENDATIONS

It is recommended that immediate ongoing investigation be focussed on the esker sediments since this site has the best opportunity for early production and positive cash flow. The following are recommended for the esker evaluation:

1. Winter drilling program on the esker materials using 200 foot spacing of holes to a depth of 40 to 80 feet.
2. Carry out a detailed aerial photographic interpretation on the property and surrounding areas to identify glacial features that may have gold values similar to the esker discovered in 1987.
3. Prepare a preliminary economic evaluation of the 1987 and 1988 work on the basis of drilling results on the esker.
4. Conduct a bulk sampling and processing program early in the 1988 field season on the esker sediments.
5. Carry out preliminary field investigations on additional glacial features that have the potential for gold values.





open pit

VALLEY RESERVES WITH LOW STRIP RATIO

BUSTER IRVING'S 1987 OPEN PIT

VALLEY RESERVES WITH LOW STRIP RATIO

Vicstram Decline

MINE DRAIN ADIT (BEDROCK RIDGE)

Buster In

COLN'S shaft

SEC CAN

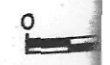
OUTLINE

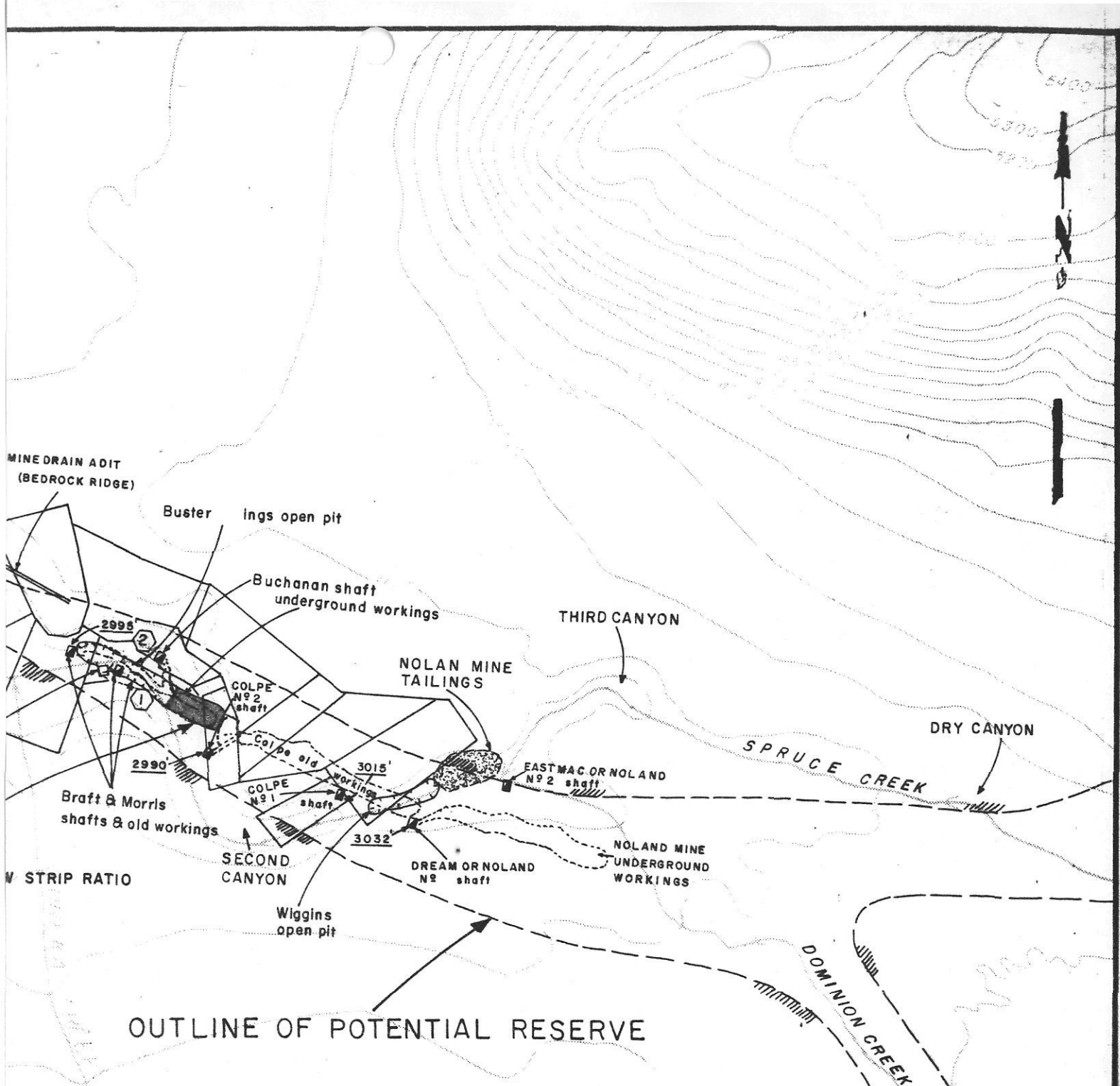
LEG

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J. H. Maxwell
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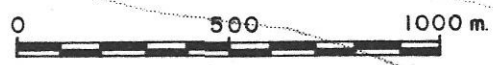




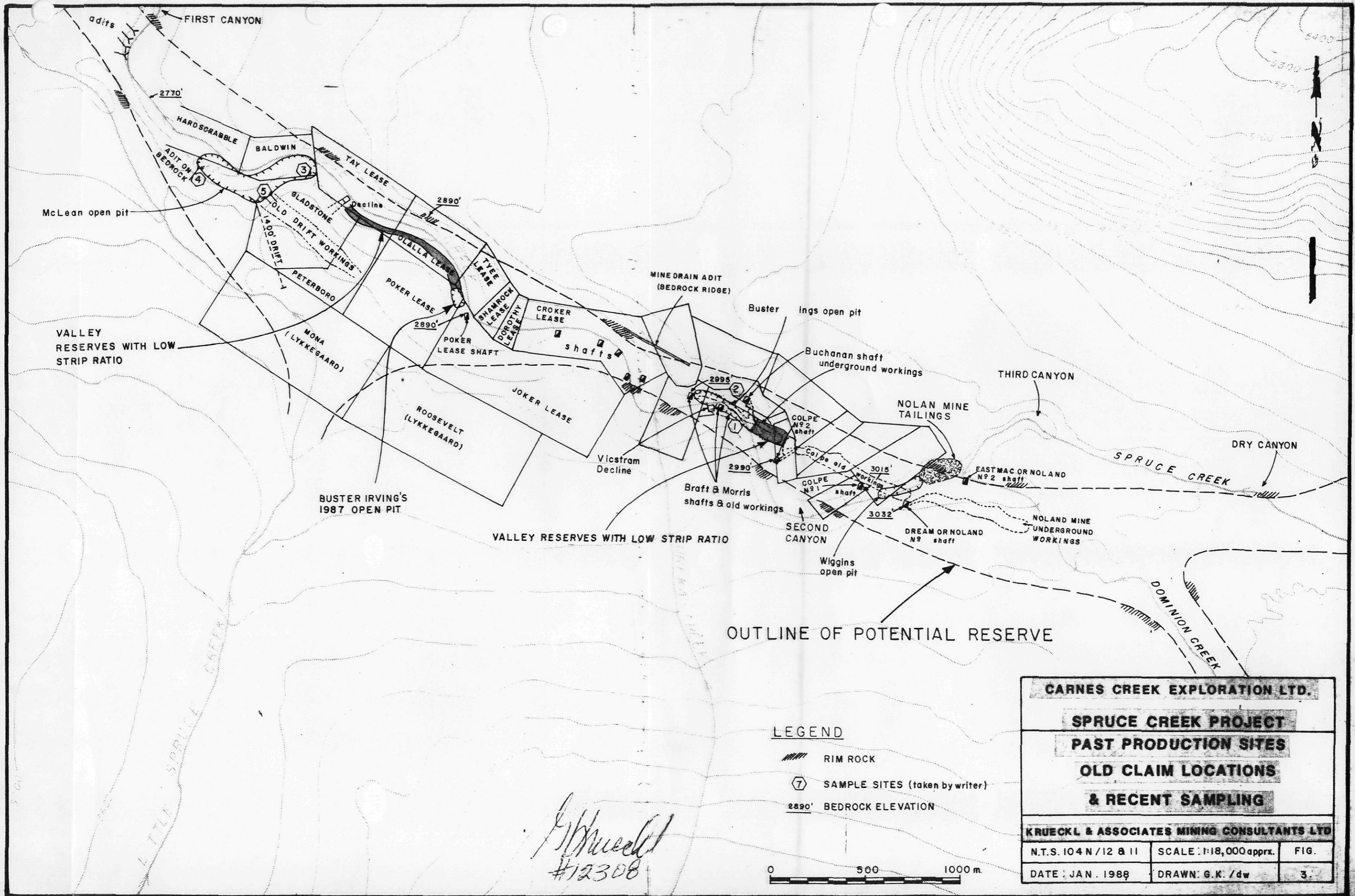
OUTLINE OF POTENTIAL RESERVE

LEGEND

-  RIM ROCK
-  SAMPLE SITES (taken by writer)
-  2890' BEDROCK ELEVATION






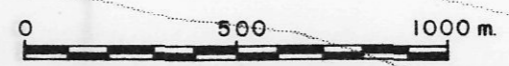
CARNES CREEK EXPLORATION LTD.		
SPRUCE CREEK PROJECT		
PAST PRODUCTION SITES		
OLD CLAIM LOCATIONS		
& RECENT SAMPLING		
KRUECKL & ASSOCIATES MINING CONSULTANTS LTD		
N.T.S. 104 N/12 & 11	SCALE: 1:18,000 approx.	FIG.
DATE: JAN. 1989	DRAWN: G.K./dw	3



J. Woodall
#12308

LEGEND

-  RIM ROCK
-  SAMPLE SITES (taken by writer)
-  2890' BEDROCK ELEVATION



CARNES CREEK EXPLORATION LTD.		
SPRUCE CREEK PROJECT		
PAST PRODUCTION SITES		
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N.T.S. 104 N/12 & 11	SCALE: 1:18,000 apprx.	FIG.
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