

MEMO TO: G. S. W. Bruce
DATE: March 25, 1985
FROM: L. V. MacCormack
SUBJECT: Tanacana Mines Limited Property
Lightning Creek Area, Cariboo Mining Division
British Columbia

Lat.: 53°02' Long.: 121°58' N.T.S.: 93-H-4

The holdings of Tanacana Mines Limited are located in the Lightning Creek-Barkerville Area of north-central British Columbia about 26 miles east of the town of Quesnel and 450 miles north-northeast of the city of Vancouver. The property is accessible from provincial highway 26.

The property is comprised of 14 placer leases numbered PML.852, PML.1459, PML.1859-PML.1862 inclusive, PML.6106, PML.6332, PML.7067, PML.7074, PML.7092, PML.7117, PML.7120, and PML.7121, and 139 located mineral units which enclose the placer leases.

The submission is essentially a general review of work that has been performed by Tanacana on their holdings. The following is a chronological listing of developments on the holdings obtained from the previously-mentioned review:

- 1861-1900: Discovery of placer gold in Lightning Creek area. Test churn drilling during this period returned values as high as \$95.00/cu. yd.
- 1914-1938: Extensive drilling in Lightning Creek area by Consolidated Gold Alluvial B.C. Limited -- results not recorded in review.
- 1970: Acquisition of placer leases of Tanacana Mines Limited.
- 1971: Test drilling followed by establishment of washing plant. Approximately 1000 yards of gravel put through plant with recovery of 15 ounces of gold (0.015 oz Au/cu. yd.).
- 1972: Plane table survey on main placer lease (PML.6332). Eight test pits were dug and sampled. Results show average gold values of \$2.00/cu. yard and were reported to confirm results of churn drilling carried out in 1970 (results unavailable). Some shallow refraction seismic work carried out to obtain profiles.

- 1977: Geological mapping, prospecting, and shallow refraction seismic surveys conducted over eight placer leases. One major channel identified for which further work was recommended.
- 1978: Further shallow refraction seismic surveys performed on placer leases. Three possible channels identified. Test pitting and drilling recommended.
- 1979: Work mainly concentrated on mineral claims away from placer leases. Included reconnaissance geological mapping and VLF-EM 16 surveying with a limited amount of shallow refraction seismic surveying. Object to identify structures - results not given but further work recommended.
- 1980: Test pits and trenches put down on placer leases and sampled - results of this work returned values for gold ranging from \$0.12/cu. yd. to \$1.92/cu. yd. (Gold @ \$600.00/oz. CDN).
- : Helicopter electromagnetic and magnetic survey over entire Tanacana property. Several conductors indicated. Additional claims staked.
- 1981: Ground electromagnetic surveys (Maxmin II EM-16) over selected airborne targets. Three ground conductive zones outlined. Follow-up work included digging pits with a backhoe along conductor axes. At least 150 pits were dug. No results are available although it is reported results were inconclusive - presumably very low to erratic gold results.
- 1982: Ground electromagnetic (C.E.M. Shootback EM) surveys in selected areas of the property to provide detailed information on conductive zones indicated by airborne survey. Several conductive zones were outlined.
- : Wildcat diamond drilling (6 holes) to test ground geophysical conductors. Samples obtained from drilling returned values from nil to 0.006 oz Au per ton -- results deemed inconclusive.


Although the information submitted is quite general, it is apparent the area in and around Lightning Creek has had a long history, and a considerable amount of time would be required to carry out a detailed study. Information on placer leases adjoining the Tanacana placer holdings on the north has been the subject of submissions to Domex in 1972 (file 2104) and

1939, 1931 and 1928 (file 862). After some study, these submissions were turned down. In his evaluation of the Lightning Creek placers (Wingdam Property) in 1972, Dr. K. D. Watson spoke with Dr. A. Sutherland Brown of the British Columbia Department of Mines and Petroleum Resources. In his report of their conversation, Dr. Watson records "Dr. Sutherland Brown believes that anyone seriously interested in Lightning Creek should be prepared to carry out a thorough programme of drilling to establish the gold content and quantity of gold-bearing gravels".

To properly evaluate the Tanacana placer leases a programme as envisaged by Dr. Sutherland Brown would be required. It is felt the information supplied by Tanacana does not provide sufficient encouragement to warrant such an expensive undertaking. Work on other parts of the Tanacana property, excluding the placer leases, has outlined several electromagnetic conductors, some of which have been tested by diamond drilling and/or trenching. However, no significant gold-bearing mineralization has been identified to date.

In conclusion, it is the writer's opinion that the Tanacana holdings do not warrant a detailed evaluation by Dome.

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