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GEOLOGICAL REPORT

on

PRELIMINARY SURVEYS & EXAMINATIONS

of

PLACER & LODE MINING PROSPECTS

(including the Wright Cr.Placer Prospect)

near

ATLIN, ATLIN MINING DIVISION

BRITISH COLUMBIA

(N.T.S. Maps 104N/11-W 1/2, 104N/12-E 1/2)

by

W.M. Sharp, P.Eng., B.C.

for

SURPRISE*RESOURCES LTD.(N.P.L.)
VANCOUVER, B.C.

between

JUNE 4TH AND 13TH, 1973.

WILLIAM M. SHARP, P.ENG.

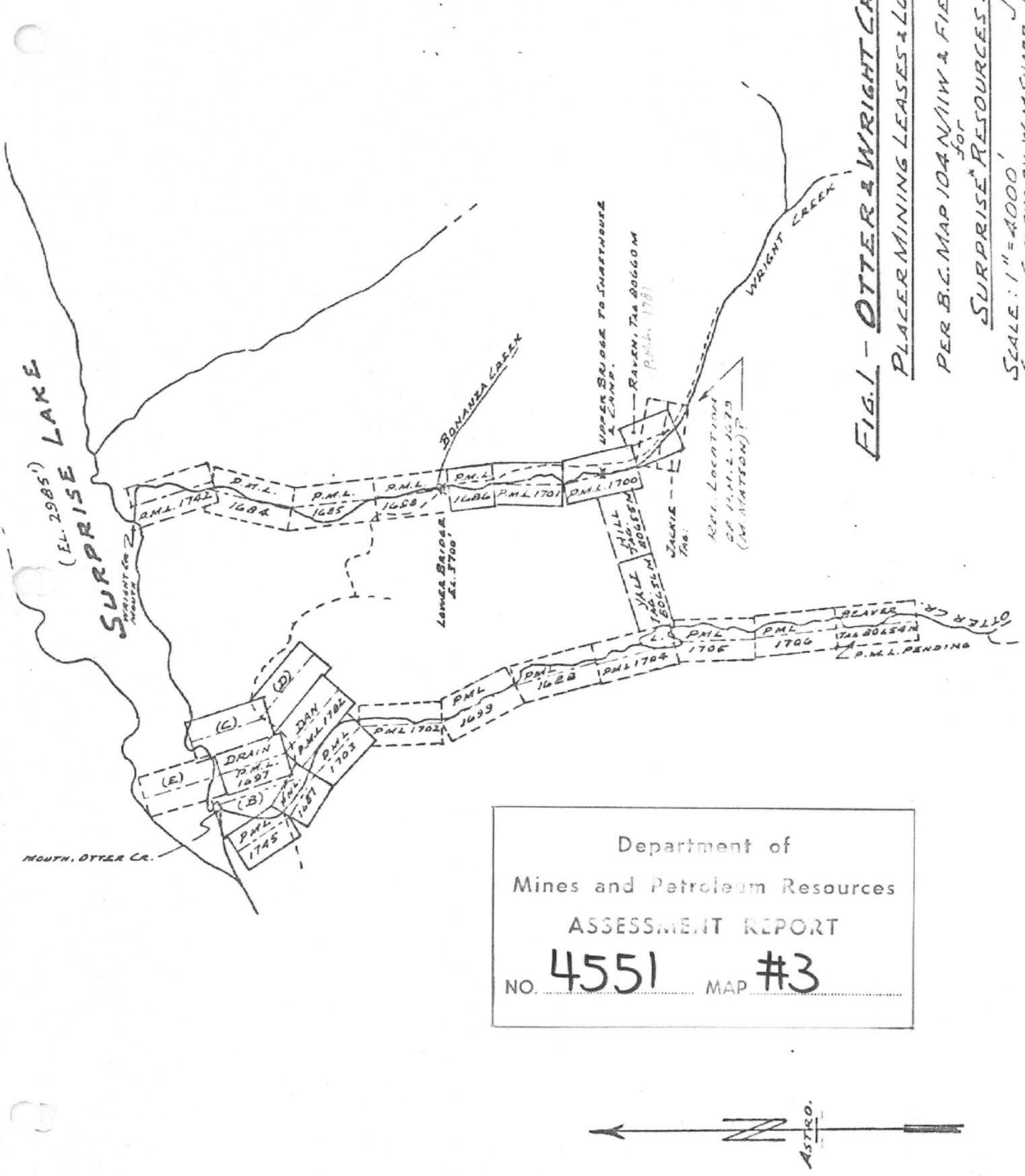

FIG. 1 - OTTER & WRIGHT CREEKS

PLACER MINING LEASES & LOCATIONS

PER B.C. MAP 104N/11W & FIELD SURVEYS
for
SURPRISE RESOURCES LTD.

SCALE: 1" = 4000' JUNE, 19

COMPIL. & SURVEYS BY W. M. SHARP, P.ENG.

(B) Mechanical Equipment

(1) Bulldozers:

(Manufacturers performance data for ripping/stripping firm, coherent clay containing small boulders)

Basic, 200-foot passes and ripping 1/3 of cycle.

D-7, per 10-hour shift: gross, 700 c.y.; avg. net, 550 c.y.

D-8, " " " " gross, 850 c.y.; avg. net, 680 c.y.

(2) 2-1/2 c.y. Power Shovel: @ 50% of normal capacity in loose, clean material and 2 hours down-time = 1200 c.y./10-hr. day.

PRELIMINARY RECOMMENDATIONS

1. Complete survey (chainage) checks on existing claims.
2. Stake protective claims, where indicated by (1).
3. Carry out a geological reconnaissance examination and inspection of exposures and workings over at least the next 1-mile (up-stream) interval of Otter Creek.
4. Commence detailed delineation of the pay-channel, beginning at the up-stream end of the Drain Lease. Note that the reconnaissance phase of this project might be done adequately and economically by combining overburden-drill and geophysical (resistivity) profiling methods.
5. Sample indicated channel sections via (6") Keystone churn-drill.

SECT. 2 - WRIGHT CREEK

GENERAL

Figs. 1 and 2 supplement the following text.

Wright Creek, which generally parallels Otter Creek, joins Surprise Lake nearly 2 miles east of it. The first (lower) bridge on Wright Creek is reached via a 3-mile continuation of the road

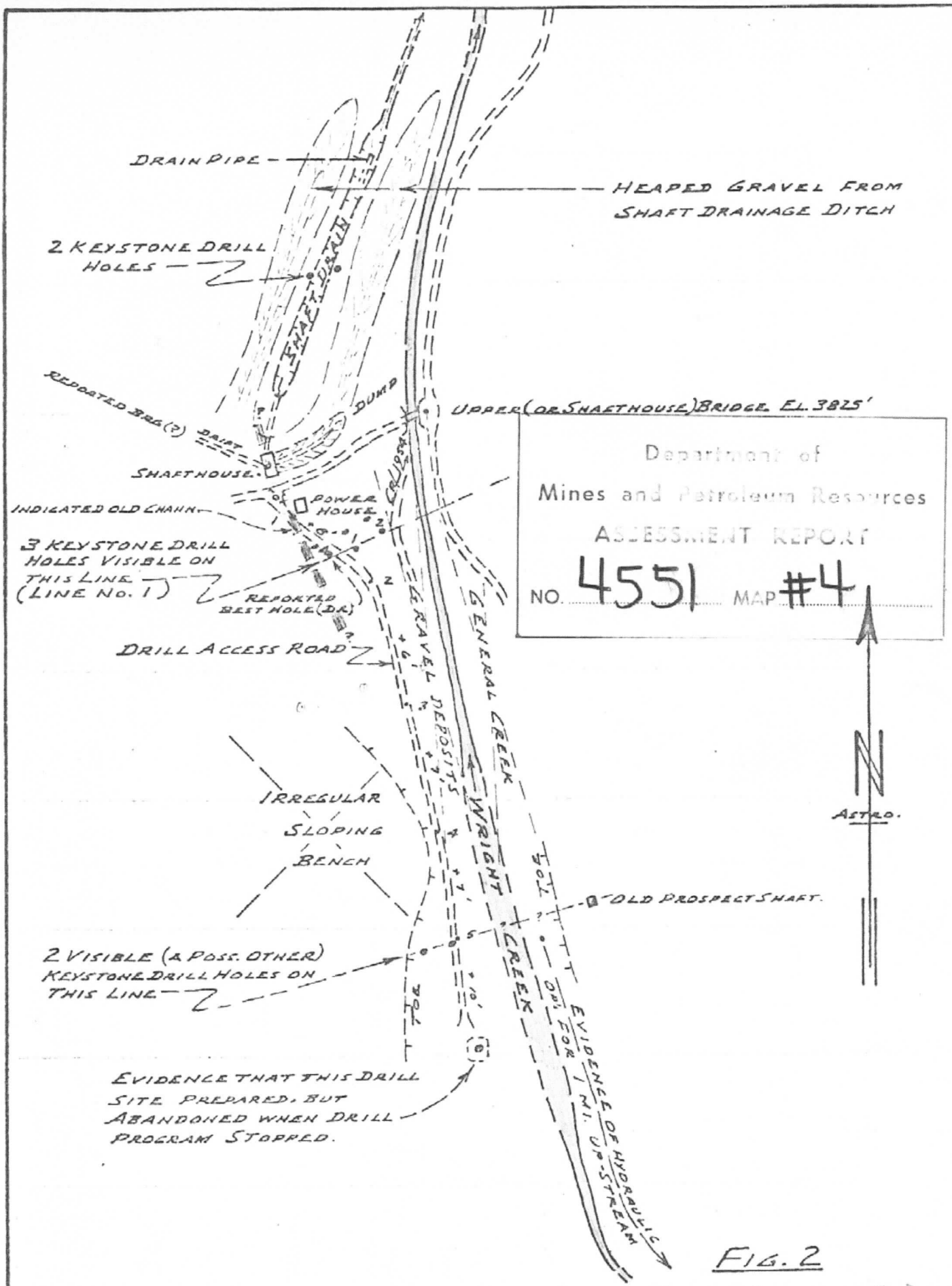

FIG. 2

SURPRISE RESOURCES LTD. - DRILL-HOLE & GENERAL DETAIL
WRIGHT CREEK, ATLIN, B.C.
SCALE: 1 IN. = 200 FT. JUNE, 1973
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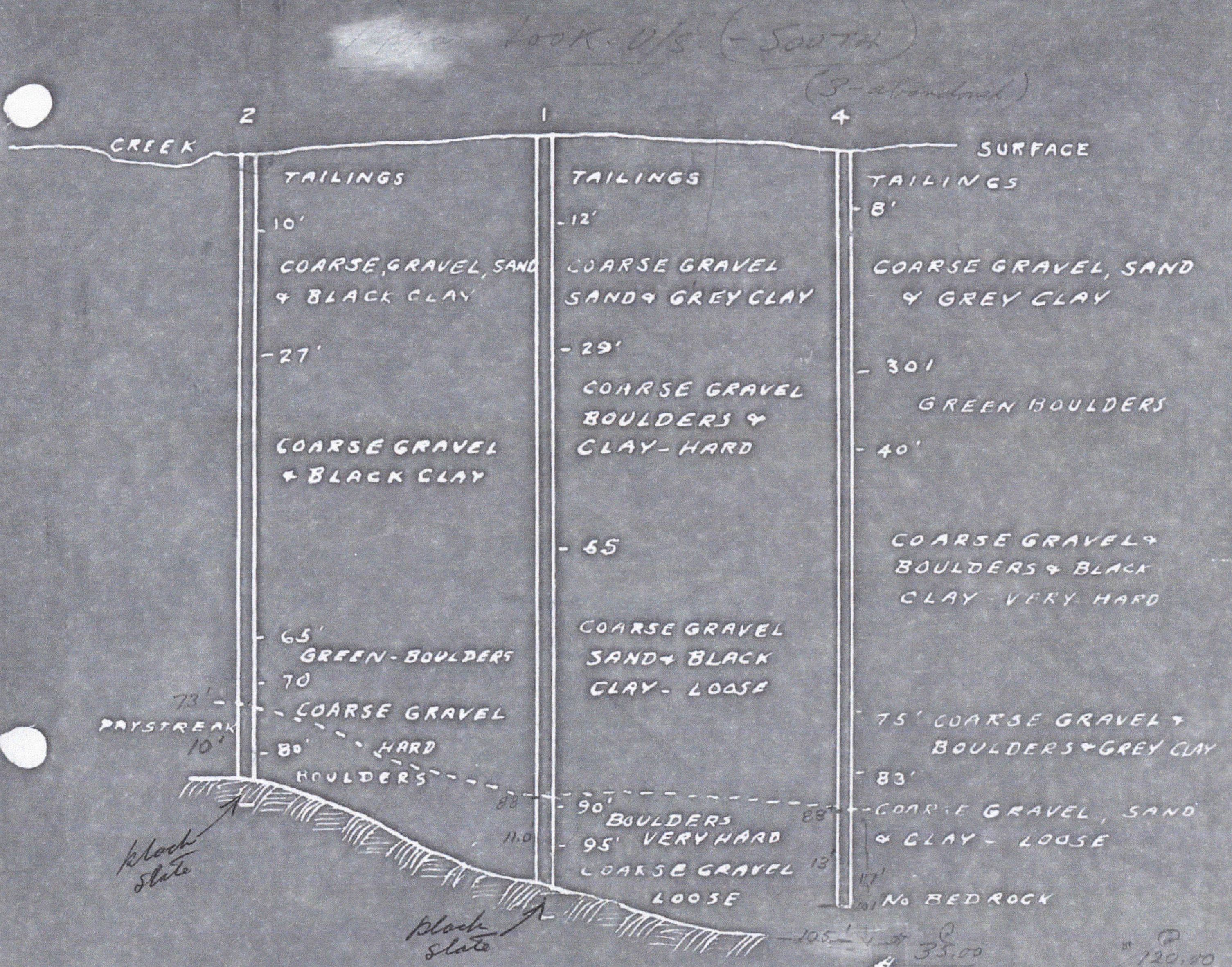


DRILL HOLE No 1 -	89.5 TO 100.5' -	2010 MGS. -	$15.60/CU.YD.	53.00
*DRILL HOLE No 4 -	88.0' TO 101' -	3153 MGS. -	$18.80/CU.YD.	64.00
~~DRILL HOLE No. 2~~	~~73.0' To 83' -~~	~~160 MGS -~~	~~$1.36/CU.YD~~	4.60

@ $35.00 / @ $120.00

ortdary - - $43/cy*

CROSS-SECTION DRILL LINE No. 1 - DRILLED 1951-52

*NOTE NO BEDROCK IN HOLE No. 4
4190 MGS. WERE RECOVERED FROM HOLE No. 4 - 1047 MGS WERE ELIMINATED TO ALLOW FOR SLUFFING WHEN CASING WAS PULLED AND REDRIVEN AFTER CHANGING BROKEN DRIVE SHOE

prob 4 X actual.

RATIO 1973 Au $120 / 1954 Au $35 = 3.4 (average Conserv 3.0) $105/oz

(85 line ?)

WRIGHT CREEK
ATLIN B.C
SCALE 1" = 20
FEBR 11, 1954

SKL19

beyond the Otter Creek bridge. The 1955 shaft and camp, adjacent to the No. 1 line of Keystone drill holes and situating about 1 mile south of the lower Wright Creek bridge, is 16 road-miles from Atlin.

The Wright Creek terrain, like that of Otter Creek, is flatly rounded - particularly within the headwaters area of the creek. However, the Wright Creek headwaters storage capacity is considerably smaller and less effective than that of Otter Creek and, as a consequence, its flow is smaller and more seasonal. Wright Creek, including its west-flowing branch, is only about 6 miles long; its 7 square-mile drainage area is less than half as large as that of Otter Creek. Within the following intervals average stream gradients are:

(a) Headwaters to shaft-camp bridge, 2.7 mi. @ 6.8%.

(b) Shaft-camp bridge to lower bridge (flats), 1 mi. @ 2.3%.

(c) Lower bridge to mouth (canyon section), 2.2 mi. @ 6.2%.

HISTORY

Wright Creek has been worked mainly along its upper section - along, and for a short interval below its westerly-flowing part. The broad, generally flatter valley section between the bend and the lower canyon has been explored by drill holes and a shaft in fairly recent years. First placer mining was by small-scale sluicing methods during brief spring-early summer run-off periods; existing reports contain little factual data on which the volume and tenor of the gravels worked might be estimated.

Between 1936(?) and the mid-1940's Hodges and partners carried out hydraulicking operations, using one or two small monitors. This mining was consistently hampered by a lack of water; after the spring run-off there was, reportedly, only enough for about four 1/2-hour runs per day. Some production data, from W.W. Johnson's Oct. 22, 1963 letter are:

1936-37, 16,000 c.y. yielded $13,759 (485 oz. gold), or 86¢/c.y.

1938 , 13,800 c.y. yielded $32,715 (1154 oz.), or $2.36/c.y.

The latter grade, at the present $120/oz., would be approximately $8/c.y.

During 1951-52 the pay channel, at about 170 ft. south (up-stream) of the present shaft-house, was explored by 3 (plus one abandoned) holes comprising Line No. 1 (Fig. 2). Two of these penetrated pay-gravel and bedrock forming the west brow and side, respectively, of the channel; the third was stopped in gravel - possibly at 4'-6' above the bedrock floor(?). Holes are on approximately 40-foot E-W centers. The drill logs indicate that bedrock, at least locally, is black slate. The drill-indicated depth of the old channel is about 18 or 20 feet, and the indicated average thickness of pay gravel is about 13 feet - including the near-rim intersection. The weighted-average grade (1954) of the 3 intersections is $12.64 per c.y.; the grade, on $120/oz. gold, is about $43 per c.y. The average and individual grades of these intersections is from 5 to 8 times larger than the grade of the best previously-reported production; hence, it is highly unlikely that they are representative of pay gravels underlying this general interval of the creek.

In 1952 six holes were drilled on an indicated 800-foot wide, and relatively flat cross-section of the valley. However, the writer was unable to find any evidence of them during his recent visit. Subsequent re-examination of the available data suggests that the line of holes may locate 1800 feet below the lower, rather than the upper bridge. This possibility is based on map and field indications of the valley topography and bedrock depths. As all holes encountered bedrock (per photocopy) at depths between 11-19.5 feet, it is hardly likely that they were collared anywhere on the drift and alluvium-covered flat between the bridges or, specifically, on a line 1800 feet down-stream of the upper bridge.

Also, there was no evidence of even the former existance of requisite drill-access roads leading to this location. The writer now concludes that the most logical place to investigate is an indicated 'flat' cross-section of the valley at about 1/2 mile north of the lower bridge.

During 1956 the existing shaft was sunk to a probable depth of about 110 feet. In view of the bedrock depths indicated by the Line No. 1 drill holes, it is unlikely that it reached the 'reported' depth of 136 feet. From the shaft bottom a drift was driven (in gravel?) for 180 ft. northwest, reportedly to explore the west rim, when the obvious target would have been the pay-gravels intersected by the up-stream line of drill holes - particularly those intersected by Hole No. 4. In 1957 a drift being driven towards Line No. 1 was stopped after an advance of 40 feet - apparently because of a pump failure.

CLAIMS

The writer and T. Connolly check-chained the location lines of P.M.L's 1686, 1701, and 1700; T.O. and S.J. Connolly checked-chained the claims south of the latter while the writer was engaged in other surveys. The actual position and length of the above-noted claims is shown on Fig. 1. However, claims north of P.M.L. 1686 have yet to be checked; it is expected that this will lead to some revisions of the 'official' claim plots.

FIELDWORK

June 9, p.m. - Preliminary reconnaissance; locate shaft-house on Map 104N/11-W 1/2; run chain-line for 2000 feet north (d/s) of upper bridge.

June 10 - Check-chaining claims; search out and survey old Keystone churn drill-hole collars; search for Line No. 2 drill-hole collars and/or evidence of old drilling operations.

GEOLOGY

Up-stream of the upper bridge the valley is continuously drift-filled and largely blanketed with tailings (boulders, gravel, sand) from former mining operations. Between bridges, the valley expands from about 200-300 ft. to roughly 700 feet in width, and appears to be floored by 100 or more feet of glacial till; this flat, poorly-drained area is superficially covered by tailings and natural alluvium.

Other examination priorities precluded personal inspections of the few, out-of-the way bedrock exposures. However, G.S.C. Map 1082A shows soft, talc-altered ultrabasic rocks underlying Wright Creek from about 300-3000 feet north of the lower bridge - which probably explains the local increase of the creek gradient and down-cutting in this locality. The G.S.C. map also indicates that the up-stream parts of the valley are underlain by cherty and argillaceous rocks of the regional Cache Creek Group. Bedrock penetrated by the Line No. 1 drill holes is logged as black slate. More probably, however, it consists of the typically shaly argillite and argillaceous quartzite of the general locality which, if striking across the trend of Wright Creek as is suggested by the G.S.C. mapping, might be reflected in the long profile (hump and hollow?) of the floor of the buried pay-channel.

PRELIMINARY APPRAISAL/*CONCLUSIONS*

The mile-long, 400-700 foot-wide flat area between bridges is apparently underlain, surficially, by a thick blanket of the typical local clay/silt/sand till. That this is probably water-saturated is evidenced by the flat, locally swampy cover and sinuous, braided stream pattern. Therefore, even surface mining (mechanical or hydraulic) in this area might be difficult and costly. Such an operation would probably entail relocation and deepening of the creek channel, and continuous unwatering (via sumps, pumps, etc.) of the working area. These and other factors could restrict operations and increase mining costs to levels perhaps not

justified by the existing reserves (?) of pay-gravel. The writer's revised estimates of the potential profitability of mining a 1400-foot length of pay gravel in this locality are based on a hopefully-realistic extrapolation of the figures provided by the Line No. 1 drilling, and on the difficulty of mining in water-saturated ground. Values previously on $35 per oz. gold base are transposed to the current $120 per oz. base:

Preliminary Estimates:

(a) Based on uncut 1954 drill-hole sample data:

Gross Recovery, 45,000 c.y. @ $23.46		$1,056,000.
Stripping, 515,000 c.y. @ 0.50	$257,500.	
Mining, 45,000 c.y. @ 1.00	45,000.	
Washing, 45,000 c.y. @ 0.25	11,250.	
Royalty, etc.	53,000.	366,750.
Gross Profit		$ 689,250.
Dam construct., 18,000 c.y. @ 0.50	$ 9,000.	
Bridges and light structures	4,000.	
Install washing/waste disposal facilities	40,000.	
Roads	2,000.	
Financing, interest, overhead	20,000.	
Contingencies (mainly operational)	25,000.	100,000.
Net Profit		$ 589,250.

(b) Based on cut drill-hole assays:
The average of these is cut to a level equal to twice the current value of the 1938 production:

Gross Recovery, 45,000 c.y. @ $16		$ 720,000.
Pit-preparation & mining costs	$366,750.	
Plant installation cost, etc.	100,000.	466,750.
Net Profit		$ 253,250.

(c) Based on tentative break-even grade:

Gross Recovery, 45,000 c.y. @ $11		$ 495,000.
Pit-preparation & mining costs	$366,750.	
Plant installation cost, etc.	100,000.	466,750.
Net (residual) Profit		$ 28,250.

W. M. Sharp. P Eng.

PRELIMINARY RECOMMENDATIONS

(1) Complete check (chain) survey of claims.

(2) Complete reconnaissance investigation of property.

(3) Delineate pay-channel over 1400' length in vicinity of 1956 shaft:

Suggest use of overburden drill in conjunction with geophysical (resistivity) profiling on cross-lines 200 ft. apart.

(4) Sample (and check-sample vic. Line No. 1) indicated channel via (6" dia.) Keystone churn-drill or equivalent equipment.

(5) Pending results of above, investigate water content and permeability of glacial and alluvial deposits overlying pay-gravels - re. subsequent detailed feasibility studies.

W. M. Sharp, P.Eng.

SECT. 3 - SPRUCE CREEK

GENERAL

Figs 3 and 3A supplement the following text.

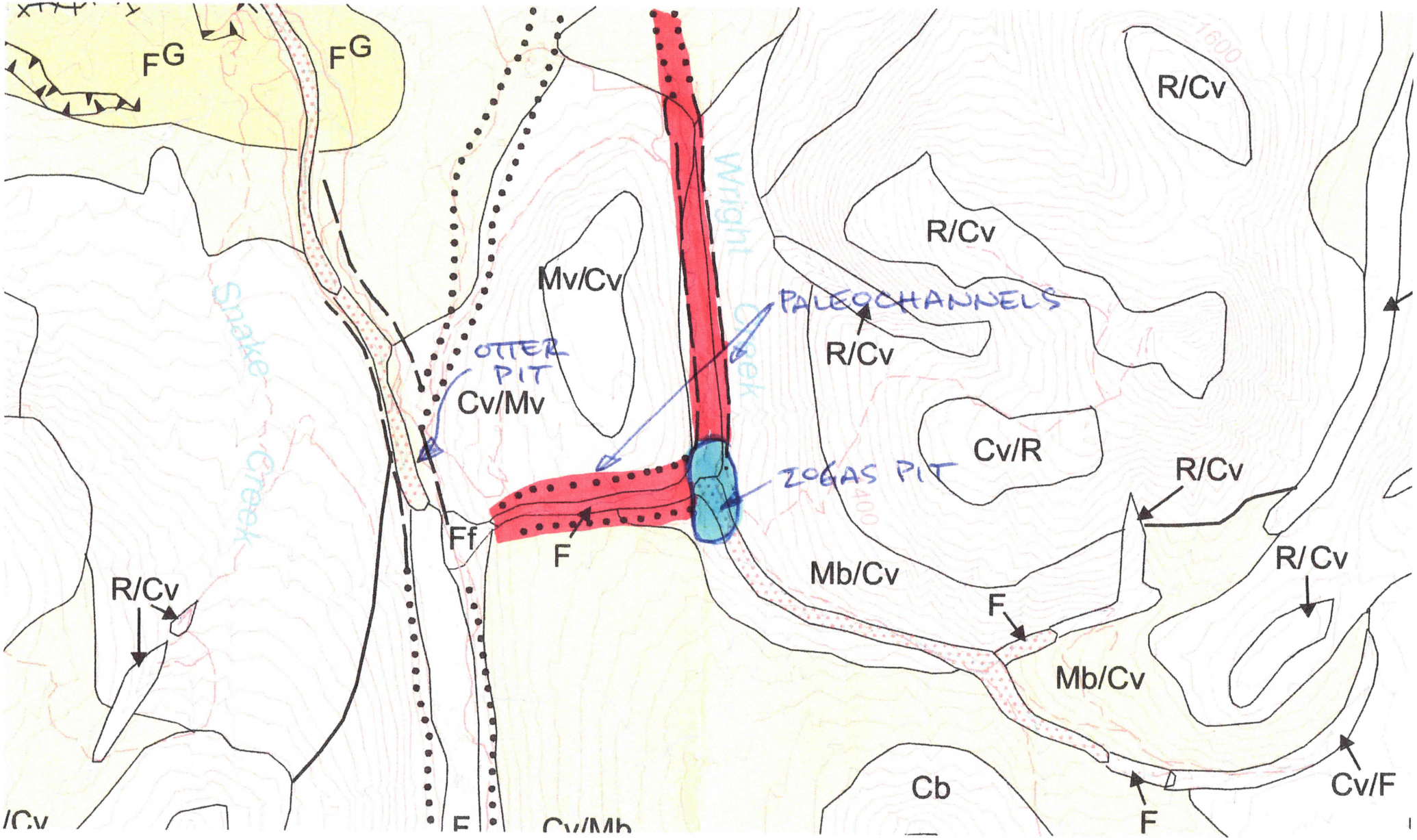
From Atlin, the leases on lower Spruce Creek are readily accessible via 7 miles of good road.

Fig. 3 is a plot of P.M.L's 1707,-08,-09 and the upstream contiguous claims according to the writer's check-survey. Fig. 3A portrays the general group of claims covering lower Spruce Creek, and including those on Fig. 3, according to B.C. Dept. of Mines maps. The position of the old buried channel (par map - Rept. to Min. of Mines, 1936) is shown on both.

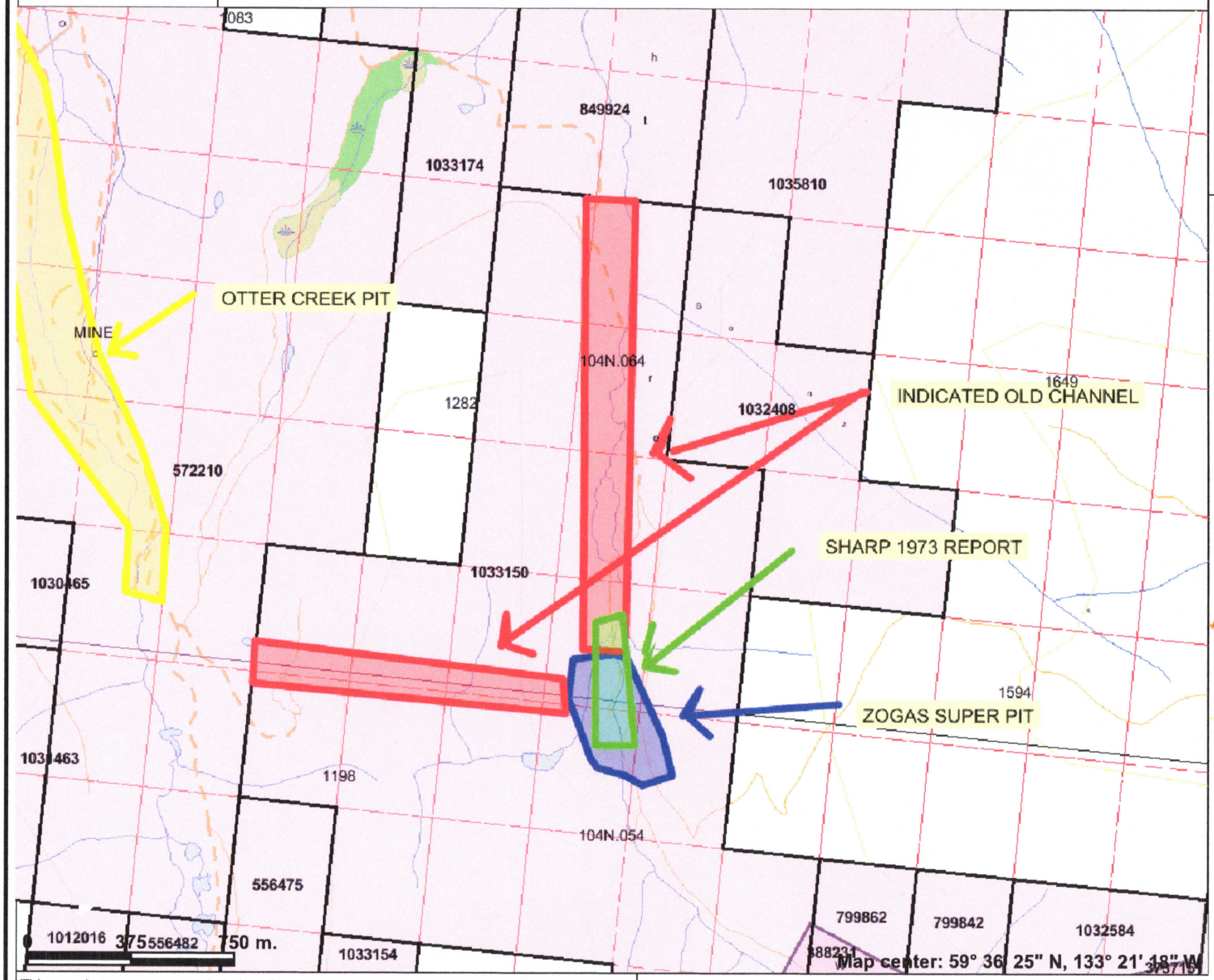
FIELDWORK

This was done on June 12, 1973 and comprised a chainage check, using the mouth of Eureka Creek as the local topographic reference point, of P.M.L. 1707,-08,-09 initial and final posts and the initial post of Mattson's P.M.L. 1567; the final post of the latter

BC GEOSCIENCE MAP 2003-1.



WRIGHT PALEOCHANNELS - GEOSCIENCE MAP 2003-1



Legend

- Indian Reserves
- National Parks
- Conservancy Areas
- Parks
- Federal Transfer Lands

Placer Tenure (current)

- Placer Claim
- Placer Lease
- MTO Grid (MTO)
- First Nations Treaty Related Lands
- First Nations Treaty Lands
- Integrated Cadastral Fabric
- Survey Parcels
- BCGS Grid

Contours (1:250K)

- Contour - Index
- Contour - Intermediate
- Areaof Exclusion
- Areaof Indefinite Contours

Annotation (1:20K)

Transportation - Points (TRIM)

- Helipad

Transportation - Lines (TRIM)

- Airfield
- Airport
- Airstrip
- Airport.Abandoned
- Ferry Route
- Road (Gravel Undivided) - 1 Lane
- Road (Gravel Undivided) - 2 Lanes

Scale: 1:21,690