

MAP No.

105 D 3

ASSESSMENT REPORT
PROSPECTUS
CONFIDENTIAL
OPEN FILE



DOCUMENT NO.: 091923
MINING DISTRICT: WHITEHORSE
TYPE OF WORK: GEOLOGICAL, GEOCHEMICAL

REPORT FILED UNDER: Northern Natural Resources Services Ltd.

DATE PERFORMED: Sept. 7-10, 1986

DATE FILED: March 12, 1987

LOCATION	LAT.	60°14'N	AREA: WHEATON RIVER
	LONG.	135°12'W	

CLAIM NAME & NO.	WIND	1-18	YA93448-465
	RAIN	1-43	YA93406-447

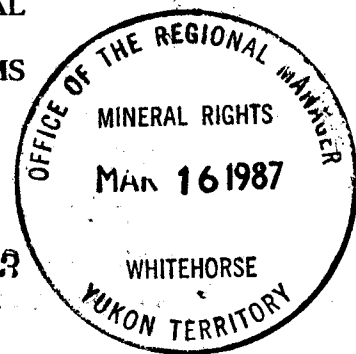
VALUE \$	6,100.00
WORK DONE BY:	H.J. Keyser
WORK DONE FOR:	Aurum Geological Consultants.
DATE TO GOOD STANDING	REMARKS: #222 RAIN



**GEOLOGICAL AND GEOCHEMICAL
ASSESSMENT REPORT
ON THE WIND AND RAIN CLAIMS**

Whitehorse M.D., Yukon
September 7-10, 1986


09 1923



- Claims:** Wind 1-18 (YA 93448-465)
Rain 1-43 (YA 93406-447)
- Location:** 1. 55 km S of Whitehorse, Yukon
2. NTS Sheet 105 D/3
3. Latitude 60° 14'N
Longitude 135° 12'W
- For:** **Northern Natural Resource Services Ltd.**
411-850 West Hastings Street
Vancouver, B.C.
V6C 1V5
- By:** Harmen J. Keyser, B.Sc.
Aurum Geological Consultants Inc.
604-675 West Hastings Street
Vancouver, B.C.
V6B 1N2

March 3, 1987

This report has been examined by
the Geological Exploration Unit
under Section 33 (4) of the Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 6100.00 .

 *R. Diamond*
Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

SUMMARY

The Wind and Rain claims consist of 61 contiguous mineral claims in two groups centered on the Wheaton River, Yukon. They are accessible by road from Whitehorse. The ground became an attractive exploration target in 1981 when AGIP Canada Ltd. discovered a high grade gold ore body 15 kilometers to the west. A number of other highly successful exploration programs are being carried out in the area.

Post-Pleistocene alluvium underlies most of the property. Bedrock below the gravels is thought to be largely Cretaceous granodiorite which has been cut and overlain by Eocene rhyolite and andesite.

The current work program has consisted of reconnaissance prospecting, geological mapping and geochemical sampling. Results of the work have identified gold mineralization in at least two interpreted quartz-chalcedony vein-type structures near the northeast property boundary. Rock samples have returned low-order anomalies in gold (up to 175 ppb). Soil samples taken nearby are anomalous in gold (up to 180 ppb) and silver (up to 25 ppm). In addition, a stream sediment taken at the southwestern property boundary returned 19.2 ppm silver.

Based on these results, a limited program of claim surveying, and additional geological mapping and geochemical sampling are recommended.

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INTRODUCTION

This report was prepared at the request of Mr. M.S. Elson, president of Northern Natural Resource Services Ltd. Its purpose is to describe assessment work carried out on the Wind 1-18 and Rain 1-43 mineral claims during September 1986.

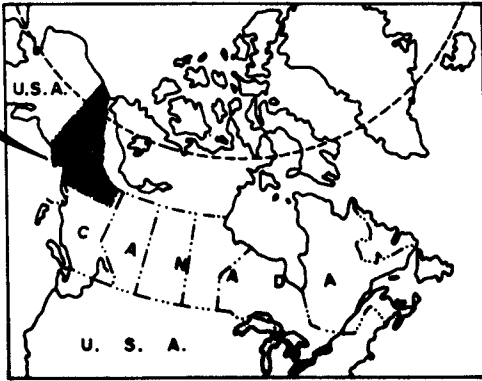
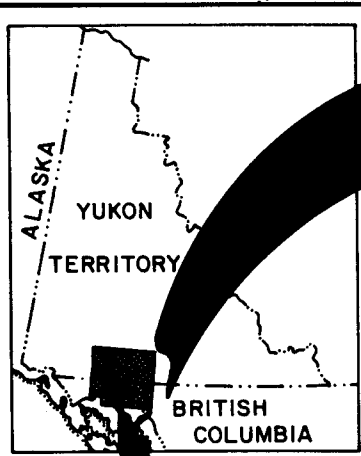
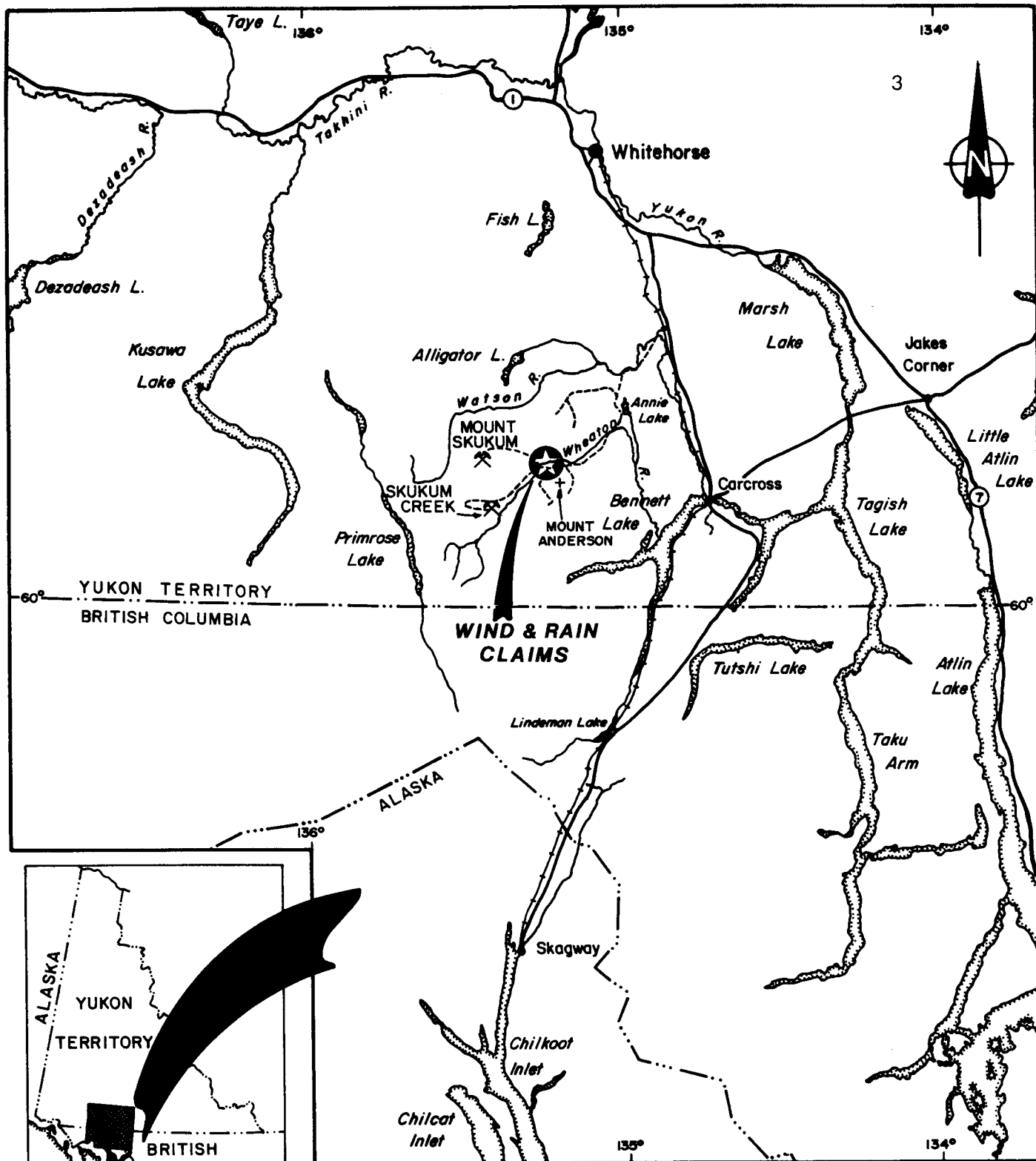
The claims are located about 55 kilometers south of Whitehorse, Yukon and are accessible by road.

Exploration work completed in 1986 consisted of prospecting, geological mapping, and geochemical sampling by H. Keyser of Aurum Geological Consultants Inc.

LOCATION AND ACCESS

The claims are located in southwestern Yukon, about 55 kilometers south of Whitehorse (Figure 1). The approximate geographic coordinates of a point in the center of the property are $60^{\circ} 14'$ North and $135^{\circ} 12'$ West.

Access is by a good quality all-weather gravel road leading from the paved Whitehorse-Carcross highway to the Mount Skukum minesite. The road distance from Whitehorse to the property is about 75 kilometers.



NORTHERN NATURAL RESOURCE SERVICES LTD.	
WIND & RAIN CLAIMS	
LOCATION	
<i>Aurum Geological Consultants Inc.</i>	March, 1987
Drawn by N.H. Checked by H.K.	Scale 1:1,000,000
FIGURE 1	

HISTORY

Considerable prospecting was carried out in the Wheaton River area starting in the late 1800's, culminating in the discovery of numerous gold and silver (and related metals) occurrences. Gold-silver mineralization has been previously located in the vicinity of the Wind and Rain claims at Mt. Anderson (3 km south), Tally-Ho Mountain (6 km east), Gold Hill (8 km northeast), Vesuvius Hill (6 km northwest), and the Wal claims (1 km north). A copper bearing skarn-type deposit has been located 1 km south.

In 1981 AGIP Canada Ltd. discovered a high grade gold orebody at Mount Skukum, 15 kilometers west of the Wind and Rain claims. This deposit is currently producing some 5000 ounces of gold per month since production started in March 1986. Published pre-production proven reserves stand at 235,000 tonnes (259,000 tons) grading 20 g/t (0.58 opt) gold. Total proven, probable, and possible reserves exceed 450,000 tonnes (496,000 tons) (Doherty 1983).

A second potential gold-silver orebody was discovered in 1985 by Omni Resources Inc. at Skukum Creek, 14 kilometers southwest of the Wind and Rain claims. Reserves are reported at 380,000 tonnes (418,000 tons) grading 9.3 g/t (0.27 opt) gold and 452 g/t (13.20 opt) silver (Omni annual report 1986).

The Wind and Rain claims were acquired by staking in September, 1985 for Northern Natural Resource Services Ltd. by MBW Surveys Ltd. of Whitehorse. There is no record of prior exploration on the ground.

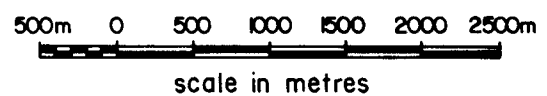
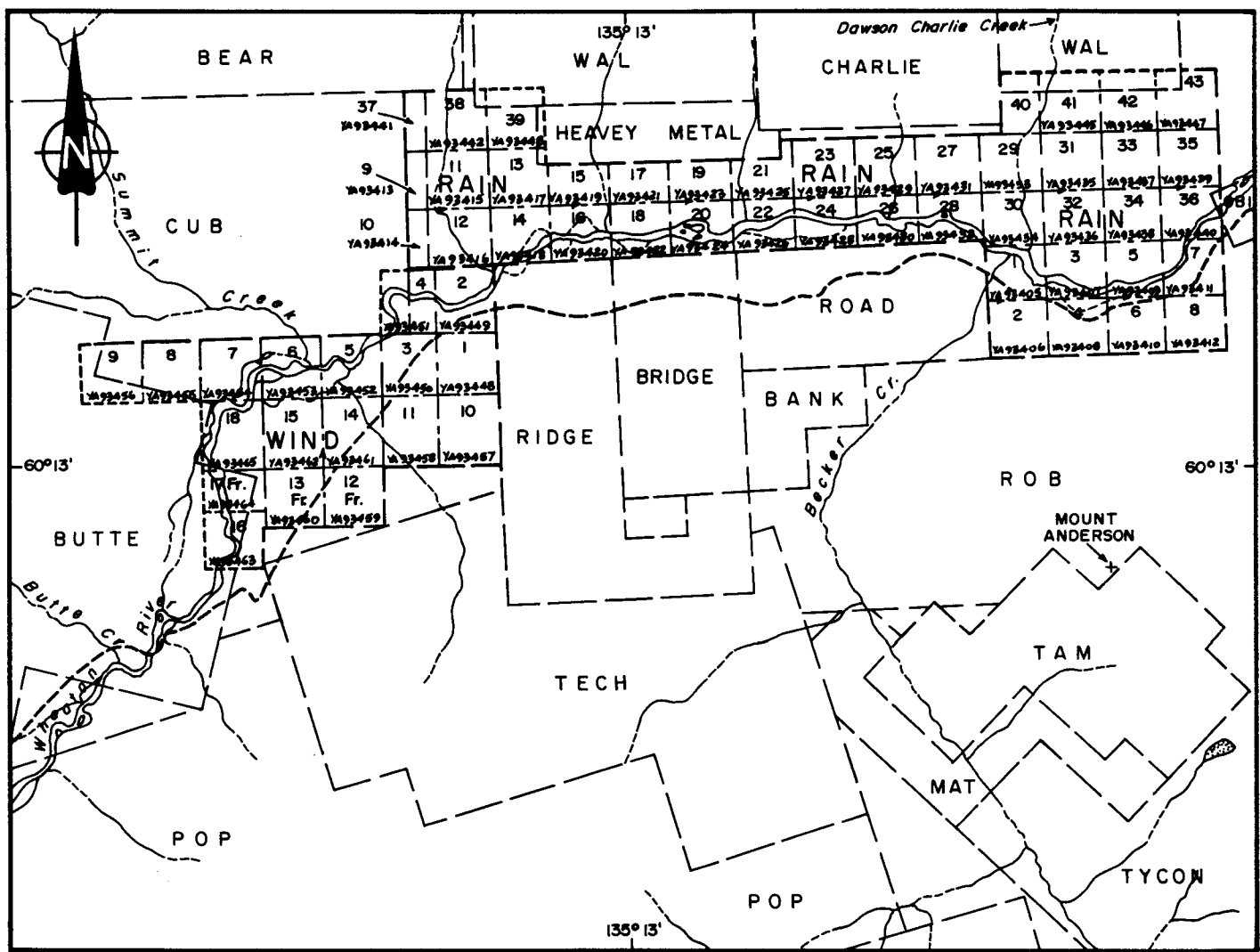
PROPERTY

The property consists of 58 unsurveyed mineral claims and 3 fractional claims (Figure 2) staked according to the Yukon Quartz Mining Act and covering approximately 1250 hectares (4000 acres). Claim data is as follows:

Claim Name	Grant No.'s	Recording Date	Expiry Date *
Rain 1-43	YA 93405-447	Sept. 10/85	Sept. 10/87
Wind 1-11	YA 93448-458	Sept. 10/85	Sept. 10/87
Wind 12,13 fr.	YA 93459-460	Sept. 10/85	Sept. 10/87
Wind 14-16	YA 93461-463	Sept. 10/85	Sept. 10/87
Wind 17 fr.	YA 93464	Sept. 10/85	Sept. 10/87
Wind 18	YA 93465	Sept. 10/85	Sept. 10/87

* pending approval of assessment work described herein.

The claims are owned 100% by Northern Natural Resource Services Ltd. They are shown on Yukon Quartz and Placer Sheet 105 D-3 and are known collectively as the Wind and Rain claims.



LEGEND

- claim boundary
- claim number
- tag number
- road
- creeks
- lake

NOTE - ADAPTED FROM D.I.A.N.D. CLAIM MAP SHEET 105D-3

NORTHERN NATURAL RESOURCE SERVICES LTD.			
WIND & RAIN CLAIMS			
CLAIM MAP			
Aurum Geological Consultants Inc.			March, 1987
NTS 105D/3	Drawn by NH	Scale 1:50,000	FIGURE 2

CLIMATE, TOPOGRAPHY AND VEGETATION

The climate in the area of Wind and Rain claims is variable with hot summers and long cold winters. Precipitation is light, averaging about 40 cm (16") annually with heavy snowfalls occurring during the winter months.

Situated at the eastern flank of the Coast Mountains, topography in the area is rugged. Pleistocene glaciation has greatly modified the area, and such glacial features as U-shaped valleys, arêtes and cirques are common. The Wind and Rain claims are centered approximately on the broad, relatively flat, glacially-derived Wheaton River valley. Elevations on the property range from 900 m (3000 ft) at the Wheaton River to about 1100 m (3600 ft) at the valley flanks.

Vegetation consists of stunted spruce and poplar typical of lower elevations in southwestern Yukon. Active flood plains of the Wheaton River are devoid of vegetation.

GEOLOGY

Regional Geology

The Wind and Rain claims are situated at the eastern flank of the Coast Plutonic Belt. Cairnes (1912) and Wheeler (1961) have adequately described the regional geology.

The Coast Plutonic Belt is composed of foliated and non-foliated granitoid rocks of Cretaceous (?) age flanked by older metamorphosed and unmetamorphosed sedimentary and volcanic strata. Granodiorite, granite and quartz diorite are characteristic of the composite plutons. Gabbro and syenite are rare. Irregular belts of lower Mesozoic to Paleozoic (and possibly older) metasedimentary and metavolcanic rocks occur as roof pendants.

Of particular interest is the location of the Wind and Rain claims on the eastern margin of the Mt. Skukum volcanic complex, in part an Eocene (Pride and Clark 1985) cauldron.

Faulting, lithologic attitudes and other regional trends are generally northwest, with some younger northeast structures.

Geology of the Wind and Rain Claims

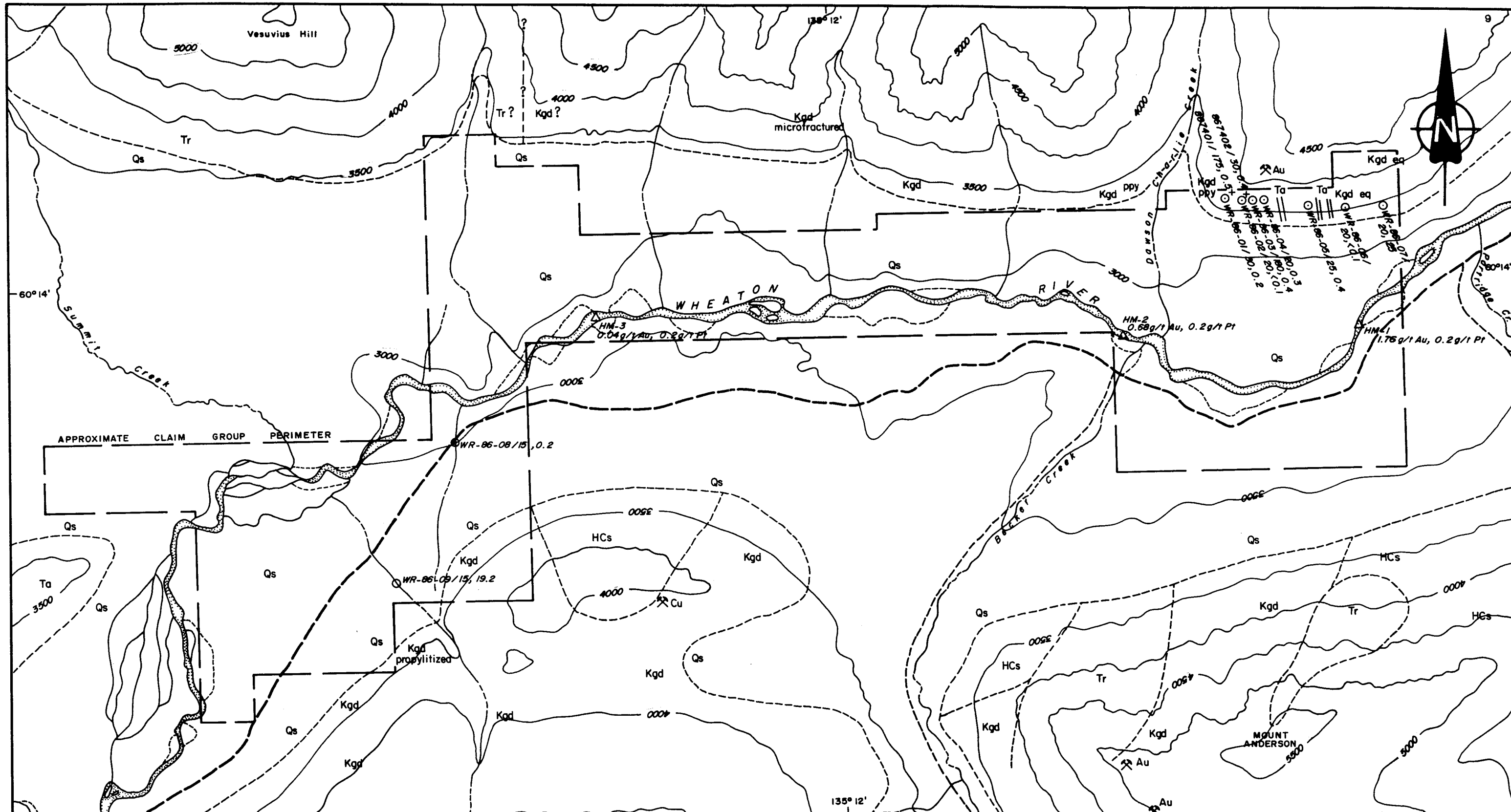
Property geology (Figure 3) is much more complex than can be shown on the previously described regional mapping. The claims are centered on the glacial alluvium-filled Wheaton River valley and outcrops are restricted to valley flanks at the northern and southern property boundaries. Because total bedrock exposure on the claims is probably less than one percent, bedrock geological mapping carried out during 1986 on the Wind and Rain claims was extended to cover parts of the adjacent ground.

Yukon Group foliated quartz-feldspar-biotite gneisses, schists and marbles (map unit HCs) are the oldest lithology exposed in the area of the Wind and Rain claims. They are found only as isolated roof pendants within younger granodiorite.

Leucocratic medium grained equigranular to porphyritic granitoid rocks (map unit Kgd) have intruded the older metamorphic rocks and are by far the most commonly exposed non-alluvial lithology in the property area. Based on an overall mineralogy of feldspar (%plagioclase + % orthoclase), 60%; quartz, 25%; and mafic minerals, 15%, they can be classified as granodiorite. Hornblende usually predominates over biotite, and both are variably chloritized. A zone of propylitic alteration has been noted near the southwestern part of the property.

Andesitic and rhyolitic rocks (map units Ta and Tr) have been mapped as dikes, hypabyssal plugs, and possible flows and pyroclastics over a wide area, both on and off the property. They are presumably related to collapse of the Mt. Skukum Caldera complex.

The Wheaton River valley itself is filled with unconsolidated Quaternary glacial gravels, alluvium, and lacustrine sediments (map unit Qs)



LEGEND

LITHOLOGIES

- QUATERNARY**
 [Qs] unconsolidated surficial debris
- TERTIARY**
 [Tr] rhyolite, minor dacite, andesite
 [Ta] andesite
- CRETACEOUS**
 [Kgd] granodiorite
- CAMBRIAN (?)**
 [HCs] gneiss, schist, marble

SYMBOLS

- stream sediment sample location; Au ppb, Ag ppm
- ⊙ soil/talus fine sample location; Au ppb, Ag ppm
- + rock sample location; Au ppb, Ag ppm
- △ heavy mineral concentrate sample location
- ⋈ mineral occurrence
- - - approximate lithologic contact
- == dike; not necessarily to scale
- ~ river
- ~ creek
- ~ elevation contour; interval 500ft.
- road

Abbreviations

- Cu - copper
- Au - gold
- ppy - porphyry
- eq - equigranular

Notes - all locations subject to survey

- geology by H. Keyser, September 1986 with additions from Cairnes, 1912 and A.G.C.I. compilation revised to January 1986



NORTHERN NATURAL RESOURCE SERVICES LTD.

WIND & RAIN CLAIMS

GEOLOGY & GEOCHEMISTRY

Aurum Geological Consultants Inc. March, 1987

NTS 105D/3 Drawn by HK/NH Scale 1:22,700 FIGURE 3

estimated to be in the order of 100's of meters in thickness. The sediments consist presumably of locally derived material (e.g. from talus accumulations) with an exotic possibly re-worked glacially transported component. Strand lines have been identified on the south side of the valley between 1070 and 1200 meters ASL.

There is no structural information available on the Wind and Rain claims. However, significant mineral deposits in the Wheaton River area are dominantly associated with northeast-trending fault zones now occupied by rhyolitic to andesitic dikes. The valley of the Wheaton River forms an arcuate northeast-trending lineament, possibly marking a crustal zone of weakness such as a fault.

A tabulated geological history of the property and area is given as Table 1.

TABLE 1. Table of Formations; Wind & Rain Claims.

<u>Unit</u>	<u>Age *</u>	<u>Event/Lithology</u>
Qs	Quaternary	Unconsolidated surficial debris.
---	Pleistocene	Glacial erosion; unconformity.
Ta, Tr	Eocene	Skukum Group; Intermediate to felsic flows, breccias and tuffs related to Mt. Skukum cauldron complex. Faulting, dike emplacement and mineralization.
---	Paleogene ?	Unconformity.
Kgd	Cretaceous	Coast Plutonic Belt: Granitoid intrusions, folding, faulting, metamorphism, erosion.
---	Lower Cretaceous ?	Unconformity.
HCs	Hadrynian	Yukon Group; gneiss, schist, to Cambrian marble.

* modified from Wheeler 1961, and Pride and Clark 1985.

MINERALIZATION

There is no record of mineral discoveries on the Wind and Rain claims prior to the 1986 exploration program; however the ground has undoubtedly been prospected for both placer and lode mineralization.

Mineralization discovered in 1986 consists of crustiform sulfide-free quartz-chalcedony float found in two recessive weathering northeast-trending gullies at the northeast property boundary. Float up to 20 cm in diameter has been located, and the gullies average about 8 meters in width. The vein-type float has returned up to 175 ppb gold (sample no. 867401).

Wallrock to the gullies is porphyritic granodiorite. Andesite and rhyolite dikes have been identified in the immediate area.

GEOCHEMISTRY

A total of 9 talus fine and sediment samples, 2 rock samples and 3 heavy mineral concentrate samples were collected during the 1986 exploration program. All samples were analyzed for gold, and selected samples were analyzed for platinum, silver, lead, copper, arsenic, antimony, and barium by CDN Resource Laboratories Ltd. of Delta, B.C.

Results of the talus fine sampling show one sample anomalous in gold (WR-86-03) and another anomalous in silver (WR-86-07) from the northeast property boundary. A stream sediment taken at the southwestern part of the property (WR-86-09) is anomalous in silver.

Three heavy mineral concentrate samples were taken from gravels in the Wheaton River to determine gold and platinum content in the gravels. The concentrates were fire assayed for gold and platinum, and then recalculated to determine a concentration ratio and an original metal content. Results for gold are shown in Table 2.

**TABLE 2. Description of Heavy Mineral Concentrates
from Wind & Rain Claims.**

Sample No.	No. of Panfulls	Weight before panning	Final weight of sample	Concent'n Ratio	q/t Gold * in concentrate	q/t gold in gravel	\$ Value/t of Gold in gravel
HM-1	25	250000	56	4464.29	1.76	0.000394	\$0.22
HM-2	17	170000	94	1808.51	0.68	0.000376	\$0.21
HM-3	18	180000	117	1538.46	0.04	0.000026	\$0.01

CONSTANTS:

Weight of gravel in pan before panning: 10 kg.

Price of gold in CDN Dollars: \$550.00

All weight in grams.

* from Fire Assay of panned concentrate

Gold contents at the eastern part of the claims (HM-1 and 2) average about 0.000385 g/tonne. A sample at the western part of the claims (HM-3) contained only 0.000026 g/tonne gold. Platinum was not detected in any of the samples.

CONCLUSIONS AND RECOMMENDATIONS

Bedrock underlying the Wind and Rain claims is presumed to be mostly Cretaceous granodiorite, which has been cut and overlain by felsic to intermediate volcanics of the Tertiary Skukum Group. The geological setting is interpreted to be suitable for hosting precious metal vein-type deposits as are found elsewhere in the Wheaton River area. Thick accumulations of glacial and lacustrine sediments blanket bedrock in all areas except the northern and southern property boundaries, making lode mineral exploration difficult.

The property is an epithermal gold-silver prospect. Mineralization located during the current work program consists of quartz-chalcedony breccia float found in two separate northeast-trending gullies east of Dawson-Charlie Creek. Float found in the gullies has returned up to 175 ppb gold. The gullies are interpreted to be underlain by recessive-weathering shear zones hosting potential gold-silver vein-type mineralization. Soil samples anomalous in gold and silver have been taken in the immediate area and indicate additional mineralization. Although the southern extensions of the gullies are definitely on the Wind and Rain claims, they project northeastward onto adjoining property.

A single stream sediment anomalous in silver was taken at the southwestern part of the claim group where propylitically altered granodiorite has been mapped. Together these data possibly reflect bedrock silver mineralization.

Preliminary sampling of heavy mineral concentrates from river gravels indicates that gold is present but is sub-economic.

Based on these results, further work is warranted on the Wind and Rain claims. The following is recommended:

1. Because all located mineral targets are very close to the claim boundaries, legal surveying should be completed before initiating any other work.
2. Carry out more detailed mapping and sampling east of Dawson-Charlie Creek in the area of samples 867401 and 867402.
3. Attempt to locate the source of anomalous silver in the area of sample WR-86-09.

4. Any further work (trenching, drilling etc.) is dependant on results of the above work, and on results of exploration work currently being carried out on adjoining properties.

Respectfully submitted,



Harmen J. Keyser, B.Sc.

March 3, 1987

REFERENCES

- Doherty, R.A., 1983:
Mt. Skukum; Assessment Report No.'s 091462 and 091474. In
D.I.A.N.D. Exploration and Geology, 1983. pp. 162-164.
- Pride, M.J. and G.S. Clark, 1985:
An Eocene Rb-Sr Isochron for Rhyolite Plugs, Skukum Area,
Yukon Territory. Canadian Journal of Earth Sciences vol. 22,
pp. 1747-1753.
- Wheeler, 1961:
Whitehorse Map-Area, Yukon Territory. 105D. Geological Survey
of Canada, Memoir 312.

STATEMENT OF QUALIFICATIONS

I, HARMEN J. KEYSER, hereby certify that:

1. I am a geologist with AURUM GEOLOGICAL CONSULTANTS INC., 604-675 West Hastings Street, Vancouver, British Columbia.
2. I am a graduate of Saint Mary's University, Halifax, with a degree in geology (B.Sc., 1981) and have been involved in geology and mineral exploration continuously since then.
3. I am a member of the Geological Association of Canada (A3759).
4. I have no direct or indirect interest in the properties or securities of Northern Natural Resource Services Ltd.
5. I am the author of this report on the Wind and Rain claims, Whitehorse Mining District, Yukon, which is based on my personal examination of the property September 7-10, 1986, and on referenced sources.
6. This report is intended to satisfy assessment requirements only.

December 17, 1986


Harmen J. Keyser, B.Sc.

APPENDIX

AURUM GEOLOGICAL CONSULTANTS INC. Rock Sample Description Record

Date: Sept. 1986 Project: Wind/Rain NTS: 105 D/3 Area: Wheaton River, Yukon
Samplers: HK Lab: CDN

Sample No.	Location	Description	Width	Au ppb	Ag ppm	Ba ppm
867401	E side of D.C. Creek	Crustiform sulfide-free quartz-chalcedony breccia float found in prominent NE trending gully. Up to 30x30x20 cm; angular.	Float	175	0.5	320
867402	200 m E of 867401	Similar to above. Found in second gully. Minor hematite and clays along fractures	Float	30	0.4	220

CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

GEOCHEMICAL REPORT

To: Aurum Geological Consultants Inc.
1614 - 675 West Hastings Street
Vancouver, B.C.
V6B 4W3

Number: 86-326
Date: September 30, 1986
Proj.: 8674

Attn: Harmen Keyser cc. Mike Elson

	Au ppb	Ag ppm	Pb ppm	Cu ppm	As ppm	Sb ppm	Ba ppm
WR-86-01	30	0.2	18	35	12	< 1	1340
WR-86-02	20	<0.1	24	26	6	< 1	1040
WR-86-03	180	0.4	21	46	18	< 1	1240
WR-86-04	20	0.3	23	39	21	< 1	1400
WR-86-05	25	0.4	38	38	24	< 1	1480
WR-86-06	20	<0.1	15	22	15	< 1	1180
WR-86-07	20	25	18	21	15	< 1	1680
WR-86-08	15	0.2	15	6	12	< 1	1020
WR-86-09	15	19.2	37	59	24	4	960
867401	175	0.5					320
867402	30	0.4					220

Duncan Sardese

CDN RESOURCE LABORATORIES LTD.

#8, 7550 RIVER ROAD, DELTA, B.C. V4G 1C8 / TEL. (604) 946-4448

** ASSAY REPORT **

To: Aurum Geological Consultants Inc.
1614 - 675 West Hastings Street
Vancouver, B.C.
V6B 4W3

Number: 86-326
Date: September 30, 1986
Proj.: 8674

Attn: Harmer Keyser cc. Mike Elson

	Au g/t	Pt g/t
HM-1	1.76	<0.2
HM-2	0.68	<0.2
HM-3	0.04	<0.2

Duncan Sanderson

Licensed Assayer of British Columbia

091923

Mike Elson
411 - 850 West Hastings Street
Vancouver, B.C. V6C 1E1

May 5, 1987



Mr. M.A. Fish
Mining Recorder
Whitehorse Mining District
Rm 201, Federal Building
Whitehorse, Yukon
Y1A 2B5

Dear Mr. Fish:

Enclosed is a statement of costs to accompany the assessment report on the Wind and Rain claims.

Value of Assessment Work-Wind and Rain claims:

1. Fieldwork

Geologist 5 days @\$275	\$1,375.00	
Prospector 5 days @\$200	1,000.00	
Truck rental 4 days @\$125	500.00	
Camp costs	200.00	
Gasoline and expediting	200.00	
Consumables	50.00	
Helicopter charter 1.3 hr @440	572.00	
Gas 1.3 @77/hr	100.00	
Mobilization and demobilization	<u>742.00</u>	<u>\$4,739.10</u>

2. Analytical Work

2 rock @ 20.00	40.00	
9 soil @ 20.00	180.00	
3 H/m @ 20.00	<u>60.00</u>	<u>280.00</u>

3. Report Preparation

3 days @ \$275	\$ 825.00	
Drafting	275.00	
Typing	100.00	
Reproduction	214.00	
Materials	200.00	
Co-ordination	<u>250.00</u>	<u>1,864.00</u>

TOTAL \$6,883.10
=====

Yours truly,

MIKE ELSON

ME/ab
Enclosure