

**1999 GEOLOGICAL and GEOCHEMICAL
ASSESSMENT REPORT
ON THE ZAYTCHYK PROPERTY**

Quartz Claims

Zaytchyk 001-012 YC01270-YC01281

February 15, 2000

094 076

Mayo Mining District
N.T.S. 105K/16

Latitude: 62° 56' North
Longitude: 132° 07' West

Authors: Greg Johnson
Carl Schulze

Date of work: Aug. 1999

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 1200.

M. R. h
for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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SUMMARY

The Zaytchyk property, consisting of the Zaytchyk 1-12 Claims located in Central Yukon on NTS sheet 105K/16 was staked in 1998 to cover several newly identified auriferous skarn and mineralized dike showings.

The Zaytchyk property is located within the Paleozoic Selwyn Basin which consists of a broad package of Paleozoic sediments extending ESE from north-west of Dawson City to the Yukon-NWT border north of the major NW-SE trending Tintina Fault Zone. This stratigraphy consists of shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform to the north-east. Several episodes of continental uplift have led to periods of increased erosion and resulting continental margin or miogeosynclinal deposition, resulting in formation of comparatively high energy, shallow water sediments, often coarsely grained and variably calcareous. These are separated by strata formed under deeper, quieter water conditions, resulting in formation of fine clastic sediments and chert. The Mid-Cretaceous Tombstone-Tungsten Suite (95-89 Ma) has been emplaced within the Selwyn Basin. Members of this suite occur along an ESE trending belt extending for over 500 kilometres from north-west of Dawson City, Yukon to the Yukon-NWT border. Tombstone Suite intrusives are believed to be related to much of the gold mineralization within the Selwyn Basin.

Extensive thrust faulting along the entire extent of the Selwyn Basin began during Late Jurassic time, resulting in creation of a compressional regime. Most thrust faults are oriented roughly ESE, dipping to the south-west, subparallel to the overall ESE trend of stratigraphy. This regional lineation has been overprinted by a slightly less pronounced north-northwest trending lineation, marked by high angle orthogonal faults suggesting the compressional regime was followed by an extensional tectonic regime.

The Zaytchyk property is underlain by two narrow NW – SE trending members of Road River Group black shale and chert with lesser shale respectively between Cambro-Ordovician Rabbitkettle Formation limestone to the north and late Precambrian Hyland Group siltstone, shale and sandstone to the south. The south-east corner partially overlies a Tombstone Suite quartz-monzonite stock. Two dike suites have been recognized: 1) a north-west trending set of strongly pyritic porphyritic granitic to granodioritic dikes with pronounced argillic and phyllic alteration; and 2) a WNW trending suite within limestone roughly 600 metres to the north.

Rock sampling by Viceroy Exploration (Canada) Inc. in 1998 returned a value of 175 ppb Au from massive pyrrhotite skarn somewhat west of the stock. A value of 20 ppb Au with 24.2 gpt Ag was returned from one of the northern limestone-hosted dikes. Rock sampling in 1999 returned background gold values, although a sample of southern dike material returned values to 1.9 gpt Ag, 290 ppm Cu, and 37 ppm Sb.

Exploration expenditures in 1998 amounted to \$1,210

Geochemical results to date do not warrant further exploration across the Zaytchyk property at current gold prices. However, if prices improve substantially, a brief program of further prospecting and rock sampling of the southern dike suite is recommended.

CHAPTER 1: INTRODUCTION

1.1 Introductory Statement

The Zaytchyk property consists of 12 contiguous quartz mining claims (Zaytchyk 1-12 claims) covering a 2.7 by 0.9 kilometre area covering roughly 2.5 square kilometres within NTS Sheets 105 K/16, in the Mayo Mining District (Figures 1, 2).

The August 1999 exploration program involved prospecting, geological mapping and rock sampling.

1.2 Location and Access

The Zaytchyk property is located 110 kilometres north of the town of Ross River, in the Yukon Territory. It is centered at 62° 56' North latitude, 132° 07' west longitude on NTS Map Sheets 105 K/16 (Figure 1).

Access to the property is via helicopter from Ross River. A winter road extends to historic exploration sites several kilometers to the west.

1.3 Physiography and Vegetation

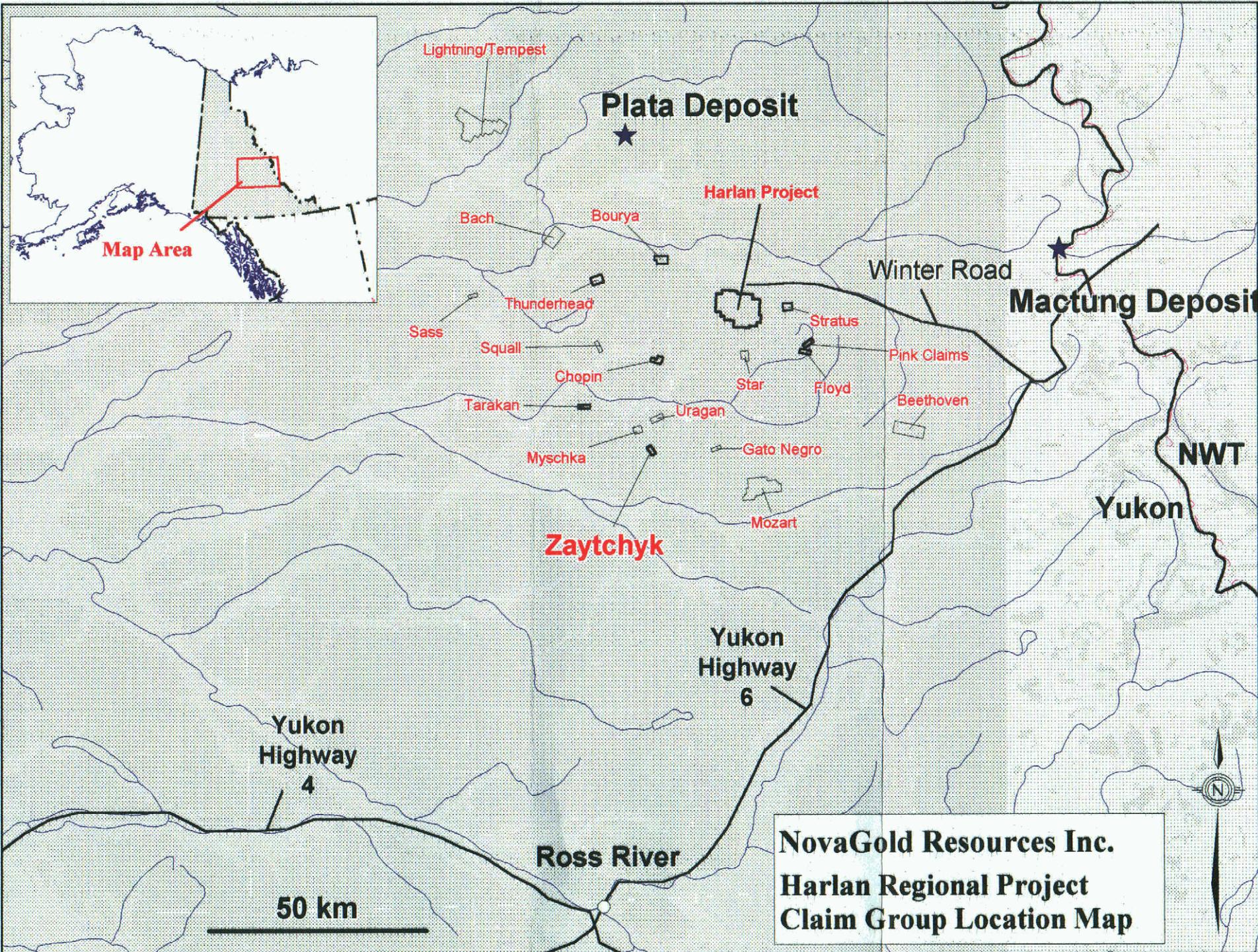
The Zaytchyk property occurs within steep terrain ranging in elevation from 4,800 to 6,200 feet. The property occurs above tree line, with tundra, alpine meadow and talus cover.

1.4 Property Exploration History

Exploration for silver bearing lead-zinc veins has occurred in the area since the late 1960s. The LAD Claims several kilometres to the west were staked by the Hess Project, a joint venture by Atlas Exploration, Quebec Cartier Manufacturing Co. and Phillips Brothers Ltd, which performed surface exploration prior to establishment of a winter road and bulldozer trenching in 1969 (Yukon Minfile, 1996). The Atlas interest was transferred to Cima Resources Ltd. which drilled two holes in 1977. Fourteen vein showings were discovered, returning values to 205.7 gpt Ag, 6% Pb, 3% Zn and 2% Cu across 3.0 metres. Drilling intersected two parallel veins within a fault zone returning values of 133.7 gpt Ag/ 1.2 metres and 48.0 gpt Ag/ 2.1 metres respectively.

The SOLO claims were staked roughly four kilometres to the north by Hudson Bay Mining & Smelting in 1968, and re-staked as the RUSH claims by Noranda Exploration Co. Ltd. in 1990. Select grab sampling returned values to 3017 ppb Ag, 75% Pb, 0.2% Zn and 0.9% Sb (Yukon Minfile, 1996). The property was re-staked as the MYSCHKA Claims by Viceroy Resource Corporation in 1998, and transferred to NovaGold Resources Inc. in 1999.

In July 1996 the ANDREW 1-10 claims, currently still valid, were staked by Mr. Ron Berdahl of Whitehorse, Yukon. These claims, staked as two separate blocks just west of the now lapsed LAD claims, cover prospective base metal mineralization. Mr. Berdahl added the SCOTT 1-2 claims within the now lapsed block.



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Table 1 below lists detailed claim status, including assessment status and expiry dates following the 1998 filing.

Claim Name	Grant No.	Owner	New expiry date	Work completed By
ZAYTCHYK 1-12	YC01270-01281	NovaGold Resources Inc.	August 19, 2000	NovaGold

1.5 Work Program

During 1999, limited geological mapping of the property was undertaken, as well as prospecting and rock sampling. A total of 5 rocks were collected within the claim boundaries in early August. All sample locations for 1998 are shown on Figure 3.

1.5.1 Sample Preparation and Assay Procedure

Samples taken in 1999 were sent to NAL Laboratories of Whitehorse for gold fire assay analysis, then sent to IPL Laboratories in Vancouver for 30-element ICP analysis. At NAL, samples were pulverized to -100 mesh, then subject to 30 gram fire assay analysis with AA (atomic absorption) finish.

All rock, soil and silt sampling was quantifiably recorded in the field to ensure a high degree of quality control, and entered into standardized spreadsheet programs. Criteria for each sample included: sample type, width of chip sampling, lithology, alteration and mineralization, and "UTM" location. All sample locations have been tied into UTM co-ordinates and have been plotted. A sample database in Microsoft Excel format is included and can be interfaced with Autocad Map or MapInfo software programs.

1.5.2 Personnel

All applicable assessment work was done by Stephen Erdman, Field Technician. Fireweed Helicopters of Dawson City, Yukon, provided helicopter services.

CHAPTER 2: GEOLOGY

2.1 Regional Geology

The Zaytchyk property is located within the Selwyn Basin which consists of a broad package of Paleozoic sediments extending ESE from north-west of Dawson City to the Yukon-NWT border north of the major NW-SE trending Tintina Fault Zone. This stratigraphy consists of shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform to the north-east. Age of deposition ranges from Late Precambrian to Permian. At least two major episodes of rifting have occurred: the first during deposition of the Late Precambrian Hyland Group sediments (Table 2), and the second during deposition of the Devonian-Mississippian Earn Group sediments. These major rift zones often host poorly sorted coarse clastic sediments, such as debris flows or turbidite horizons. Several episodes of continental uplift have led to periods of increased erosion and resulting continental margin or miogeosynclinal deposition, resulting in the creation of sequences of comparatively high energy, shallow water sediments, often coarsely grained and variably calcareous. These are separated by strata formed under deeper, quieter water conditions, resulting in formation of fine clastic sediments and chert. The Mid-Cretaceous Tombstone-Tungsten Suite (95-89 Ma) has been emplaced within the Selwyn Basin. Intrusives of this suite occur along an ESE trending belt extending for over 500 kilometres from north-west of Dawson City, Yukon to the Yukon-NWT border. Intrusives are believed to control much of the economic gold mineralization within the Selwyn Basin.

Extensive thrust faulting along the entire extent of the Selwyn Basin began during Late Jurassic time, resulting in creation of a compressional regime. Most thrust faults are oriented roughly ESE, dipping to the south-west, subparallel to the overall ESE trend of stratigraphy. Several major regional thrust faults were formed including the Dawson Thrust, Tombstone Thrust, and Robert Service Thrust. This regional lineation has been overprinted by a slightly less pronounced north-northwest trending lineation, marked by high angle orthogonal faults suggesting the compressional regime was followed by an extensional tectonic regime.

2.2 Property Geology

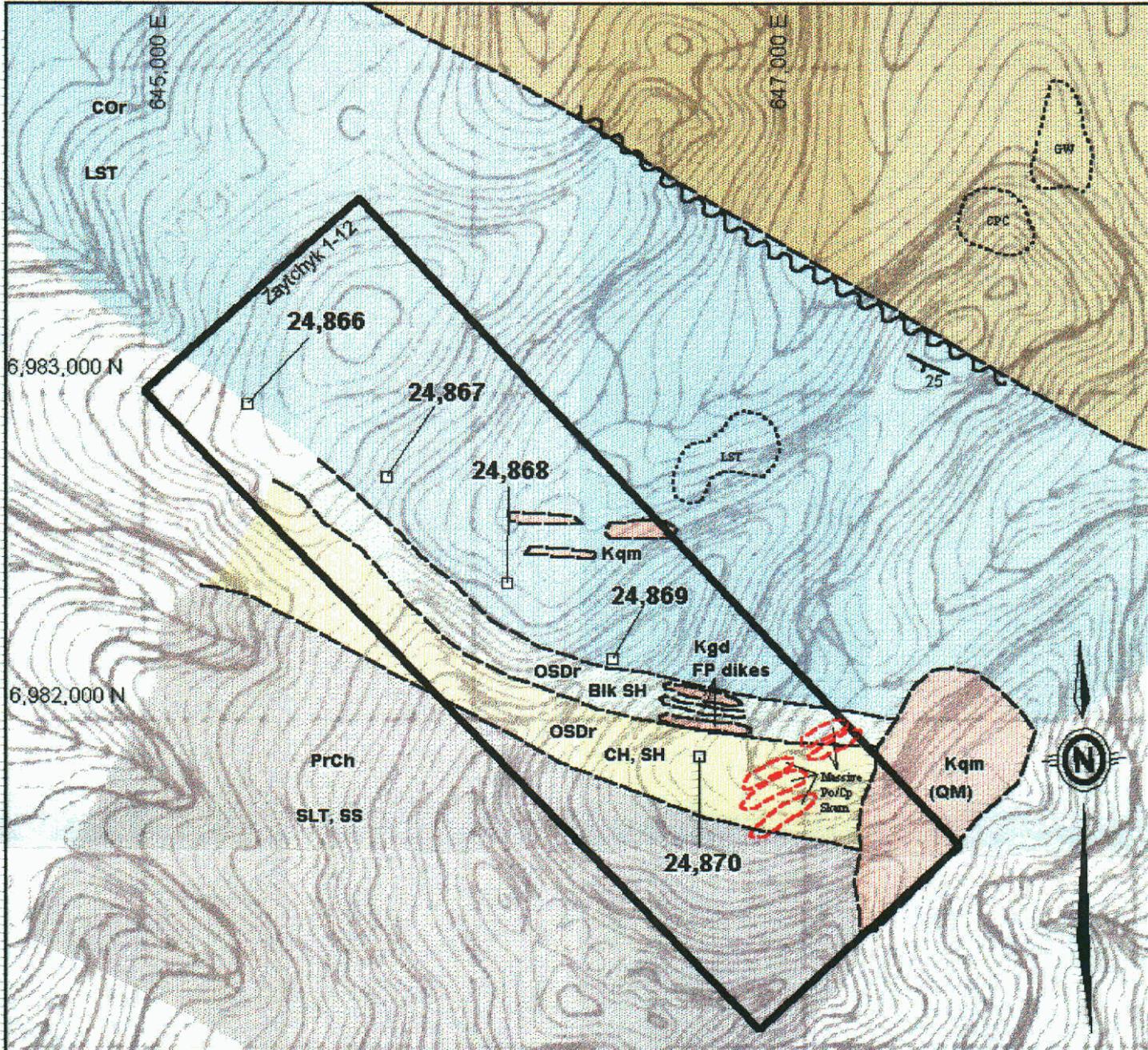
The Zaytchyk 1-12 claims are underlain by two narrow NW – SE trending members of Road River Group black shale and chert with lesser shale respectively. These occur between a thick assemblage of Cambro-Ordovician Rabbitkettle Formation light gray limestone to the north, and late Hadrynian to early Cambrian Hyland Group siltstone, shale and lesser sandstone to the south. The south-east corner of the property partially overlies a Tombstone Suite quartz-monzonite stock. Two sets of dikes have been recognised: 1) a north-west trending suite of strongly pyritic porphyritic granitic to granodioritic dikes with pronounced argillic and phyllic alteration; and 2) a WNW trending suite within limestone roughly 600 metres to the north.

Bedding extends ESE, dipping gently to the south-west. Somewhat to the north bedding orientations steepen substantially, suggesting a broadly folded terrane. A well developed north-east trending lineation is shown by deep valleys extending north-east from the property. An inferred north-west trending fault separates Rabbitkettle Formation limestone from a thick assemblage of Earn Group clastic sediments to the north.

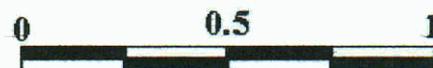
TABLE 2: ZAYTCHYK STRATIGRAPHIC COLUMN

(Modified after Gordey and Andersen, 1993)

Age	Group	Formation (Lithology)	Geology Map Designation	Description
Mid-Late Cretaceous (95-89Ma)	Tombstone-Tungsten Plutonic Suite	Diorite through Granite (Most commonly Quartz-Monzonite)	Kqm, Kg, Kdr	Felsic to intermediate, dioritic to granitic intrusives, most commonly monzonitic, quartz monzonitic to quartz dioritic. Frequently quartz-feldspar to feldspar porphyritic within upper emplacement levels and dykes. Tungsten Suite along Yukon - NWT border is now believed to be part of Tombstone Suite.
Devonian - Mississippian	Earn Group	Prevost Formation Shale, chert-pebble-conglomerate, chert-quartz sandstone	DMp, (Dme)	Brown weathering shale, grey - grey-brown weathering chert-pebble-conglomerate, dark grey to black chert-quartz sandstone.
Devonian	Earn Group	Portrait Lake Formation Shale, chert	Dp, (Dme)	Shale, chert, minor sandstone and conglomerate.
Ordovician - Early Devonian	Road River Group	Steel Formation	SS (OSDr)	Weakly to moderately calcareous orange weathering mudstone to siltstone, often bioturbated reflecting oxygenated bottom water conditions.
Ordovician - Early Devonian	Road River group	Duo Lake Formation	OSD (OSDr)	Black siliceous shale and chert, minor limestone. Weathers black to bluish white; local tan weathering.
Ordovician - Early Devonian	Road River group	Menzies Creek Formation	Mv	Basalts, andesites; frequently porphyritic and calcareous.
Cambrian - Early Ordovician		Rabbitkettle Formation	Cor	Buff - tan weathering, thin - medium bedded limestone, lesser slate, quartzite, phyllite, limestone, local basalt flows, tuffs, breccias.
Late Precambrian to Early Cambrian	Hyland Group	Narchilla Formation	Can (PrCh)	Maroon, brown, black to green thin bedded argillite, phyllite, siltstone. Lesser light brown weathering "grit" and sandstone. Minor limestone to sandy limestone.
Late Precambrian to Early Cambrian	Hyland Group	Yusezyu Formation	Py (PrCh)	Variably calcareous siltstone, sandstone, conglomerate, locally calcareous "grits". Also, abundant members comprised of phyllite, argillite, shale, lesser limestone.



GEOLOGICAL LEGEND



Cretaceous: Tombstone Suite

Kgd, Kqm - Granodiorite (GDR), Diorite (DIOR), local quartz-monzonite dikes, quartz-monzonite stock SE of Zaytchyk. Locally feldspar porphyritic (FP).

Devono-Mississippian: Earn Group

DMe - Chert-pebble conglomerate (CPC), shale (SH).

Ordovician to Devonian: Road River Group

OSDr - Chert (CH), minor shale

OSDr - Shale (SH), siltstone (SLT), locally calcareous, minor limestone-marble (LST), local argillite (ARG).

Cambrian to Ordovician: Rabbitkettle Formation

COR - Limestone (LST), minor siltstone

Precambrian to Early Cambrian

PrCh - "Gritty" siltstone (SLT) to coarse sandstone (SS), locally calcareous, minor shale.

- Geological contact
- Outcrop boundary
- Limit of alteration
- Strike and dip of bedding
- Strike and dip of foliation
- Fault

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NOVAGOLD RESOURCES INC.

**Zaytchyk Claims
Sample Location
and Geology Map**

NTS: 105K/16 & 105N/1

DRAWN BY: CS, GJ

DATE: Feb 2000

REVISION:

SCALE: 1:10,000

CHAPTER 3: MINERALIZATION

3.1 Property Mineralization

Reconnaissance soil traverses by Viceroy Exploration (Canada) Inc. across the present property returned background gold values. In 1998 rock sampling by Viceroy returned a value of 175 ppb Au from one of several massive pyrrhotite skarn occurrences roughly 250 metres west of the stock. A value of 20 ppb Au with 24.2 gpt Ag was returned from one of the northern limestone-hosted dikes.

A total of five rock samples were obtained in 1999. All returned background gold values, although sampling of southern dike material returned values to 1.9 gpt silver, 290 ppm copper, and 37 ppm antimony. A separate sample of northern dike material returned weakly elevated copper and arsenic values, and 37 ppm antimony.

CHAPTER 4: CONCLUSIONS

The Zaytchyk property, consisting of the Zaytchyk 1-12 claims located in Central Yukon on NTS sheet 105K/16, was staked in 1998 to cover several newly recognized auriferous skarn and dike-hosted mineral occurrences.

The Zaytchyk property is located within the Paleozoic Selwyn Basin which consists of a broad package of Paleozoic sediments extending ESE from north-west of Dawson City to the Yukon-NWT border north of the major NW-SE trending Tintina Fault Zone. This stratigraphy consists of shallow shelf to off-shelf marine clastic and chemical sediments, as well as basinal clastic sediments derived from the Ancient North American Platform to the north-east. Several episodes of continental uplift have led to periods of increased erosion and resulting continental margin or miogeosynclinal deposition, resulting in formation of comparatively high energy, shallow water sediments, often coarsely grained and variably calcareous. These are separated by strata formed under deeper, quieter water conditions, resulting in formation of fine clastic sediments and chert. The Mid-Cretaceous Tombstone-Tungsten Suite (95-89 Ma) has been emplaced within the Selwyn Basin. Members of this suite occur along an ESE trending belt extending for over 500 kilometres from north-west of Dawson City, Yukon to the Yukon-NWT border. Tombstone Suite intrusives are believed to control much of the economic gold mineralization within the Selwyn Basin.

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CHAPTER 5: RECOMMENDATIONS

Geochemical results to date do not warrant further exploration across the Zaytchyk property at current gold prices. However, if prices improve substantially, a brief program of further prospecting and rock sampling of the southern dike suite is recommended.

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STATEMENT OF QUALIFICATIONS

I, Carl Schulze, of the City of Whitehorse, Yukon Territory, Canada, do hereby certify that:

- 1) I held the position of Project Geologist with NovaGold Resources Inc. during the 1999 exploration program, and currently act as NovaGold's agent for its Yukon-based projects.
- 2) I graduated from Lakehead University with a Bachelor of Science Degree in Geology in 1984.
- 3) I have been continually active in mineral exploration since 1984.
- 4) I personally supervised and participated in the 1999 field program.
- 5) I am immediate past-president of the Yukon Chamber of Mines and a member of the Yukon Prospector's Association.



Carl Schulze, Geologist
Wolf Star Resources

APPENDIX 1

APPLICABLE EXPENDITURES FOR ASSESSMENT CREDITS

Zaytchyk Property Expenditures	
Description	Expenditure
Labor	200
Helicopter	240
Geochemical Analyses	95
Compilation	75
Map Production	250
Report Writing	350
Total	1,210

APPENDIX 2: ROCK SAMPLE GEOCHEMICAL RESULTS

2a) ROCK SAMPLE DESCRIPTION SHEET

Sample No.	Easting	Northing	Traverse	Zone	Sample Type	Width (m)	Sample Descr.	Ferm.	Lithology	Modifer	Colour	Carb. Presence	Sulfidation	Argillc Alt.	Potassic Alt.	Phytic Alt.	Limonite	Mineral #1	Amount %	Mineral #2	Am %	Other Mineral	Am %	Date	Sampler	Comments
24866	645319	6982968		9	CG		Rc	DMe	SS	frac	BY		S1				wk							1/8/99	S.E.	Fractured sandstone
24867	645327	6982747		9	CG		Rc	Kqm	QPM	frac	yel		S1	A2		Pl3	mod	Py	3					1/8/99	S.E.	Local veinng + Py, Arsenopyrite
24868	646105	6982419		9	CG		Rc	Kqm	QPM	Sarcimus	yel-brn			A2		Pl2	wk	Py	<1					1/8/99	S.E.	Moderately altered dykes
24869	646422	6982187		9	CG		Rc	OSDr	Ch?	brecc	l brn		S1	A2			mod	Py	<1					1/8/99	S.E.	Scattered, frac. cont. Pyrite
24870	646684	6981889		9	CG		Rc	OSDr	Ch?	frac	tan		S1	A1			mod							1/8/99	S.E.	Locally finely fractured

2b) ROCK SAMPLE GEOCHEMICAL RESULTS

Sample No.	As	Ag	Cu	Pb	Zn	As	Sb	Hg	Mo	Tl	Bi	Cd	Co	Ni	Ba	W	Cr	V	Mn	La	Sr	Zr	Sc	Ti	Al	Ca	Fe	Mg	K	Na	P
	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%	%	%	%
24866	<5	<0.1	15	14	62	19	<5	<3	1	<10	<2	0.4	5	19	404	<5	119	8	230	17	5	3	2	<0.01	0.56	0.65	2.32	0.07	0.12	0.01	0.01
24867	<5	<0.1	81	21	173	119	37	<3	2	<10	<2	3.6	3	179	105	<5	14	82	278	19	46	7	6	0.05	3.94	0.04	2.98	0.74	0.22	0.07	0.08
24868	<5	1.9	290	13	773	58	6	<3	1	<10	<2	9.1	6	132	80	<5	24	56	314	19	54	12	4	0.01	3	0.19	2.55	0.78	0.23	0.11	0.08
24869	<5	0.8	72	110	169	25	<5	<3	<1	<10	<2	<0.1	8	28	128	<5	58	14	1845	12	6	4	2	<0.01	0.36	0.13	2.51	0.12	0.09	0.03	0.02
24870	<5	0.2	13	38	64	31	11	<3	<1	<10	<2	<0.1	5	14	131	<5	6	6	232	68	11	2	1	<0.01	1.36	0.01	2.36	0.36	0.21	0.02	0.04