

Geological Survey Branch Assessment Report Indexing System



[ARIS11A]

ARIS Summary Report

Regional Geologist,	Kamloops			Date Approve	d:	1999.0	1.05		Off Confid	ential:	1999.04.27
ASSESSMENT RE	PORT: 25571			Mining Divisio	on(s):	Ka	mloops				
Property Name:	WK	-									
Location:	NAD 27 NAD 83 NTS:	Latitude: Latitude: 092/14W	50 57 00 50 57 00	Longitude: Longitude:	121 121	23 00 23 05	UTM: UTM:	10 10	5645290 5645507	613563 613462	
Camp:										٦	
Claim(s):	WK Chrome	e 1									
Operator(s): Author(s):	Tilava Minin Kovacevic, V	g Corporatio Villy	n								
Report Year:	1998									7 7	
No. of Pages:	26 Pages										
Commodities Searched For:	Chromium/C	Chromite, Po	zzolan, Zeolite							•	
General Work Categories:	GEOC, PH	rs									
Work Done:	Geochemica SAMP Elemen Physical TREN	al Sampling/a: ts Analyzed Trench	ssaying (1 For : Multieleme (13 trench(es)	5 sample(s);) ent ;) (166.5 m)					•,		
Keywords:	Cache Cree	k Group, Ch	romite, Permiar	n, Pozzolans, Ulti	ramaf	ics					
Statement Nos.:	3117962										
MINFILE Nos.:											
Related Reports:											

MINERAL TITLES BRANCH Rec'd JUL : 5 1998 r'i'# VANCOUVER, B.C File.

GEOCHEMICAL ASSESSMENT REPORT

for the

WK GROUP

WK CHROME 1 CLAIM WK 1 TO 6 CLAIMS (INC)

Kamloops Mining Division

NTS Map 92 I/14 Lat. 50°57' Long. 121°23'W

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

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REPORT PREPARED BY:

/horany

W. Kovacevic for Tilava Mining Corporation

June 26, 1998

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INTRODUCTION

This report presents the results of a 1997 exploration program, conducted by Tilava Mining Corporation on the WK Group in Kamloops Mining Division.

The report is based on examination, grid preparation and geochemical rock sampling of the WK Chrome 1 and WK 1-6 claims by the President of Tilava Mining Corporation W. Kovacevic during the exploration program, conducted by the Company in August and September, 1997, as well as on data from various published reports and personal communication.

LOCATION AND ACCESS

The property is located on Ferguson Creek, approximately 15 kilometers north-north west of the town of Cache Creek in southcentral British Columbia. (Figure 1) The Geographic coordinates of the claim are 50°57'N. latitude by 121°23'W. longitude; N.T.S. 92 I/14W. Access is via Highway 97 from Cache Creek to Ferguson Creek; thence 3 kilometers east on a good logging road which branches of Highway 97.

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PROPERTY AND OWNERSHIP

The WK Group described in this report consists of one 4 post mineral claim, plus six 2 post mineral claims totalling 650 ha located in Kamloops Mining Division (NTS 92 I/14) and shown in Figure 2. The claims are 100% owned by Tilava Mining Corporation and are described as follows:

Clā	im Name	Units	Tenure Number	Expiry Date	Hectares
WK	Chrome 1	20	317307	May 8, 1998	500
WK	1	1	351764	October 16,	1999 25
WK	2	1	351765	October 16,	1999 25
WK	3	1	351766	October 16,	1999 25
WK	4	1	351767	October 16,	1999 25
WK	5	1	351768	October 16,	1999 25
WK	6	1	351769	October 16,	1999 25



TOPOGRAPHY AND PHYSICAL ENVIRONMENT

claims straddle Ferguson Creek , approximately 3 The kilometers northeast of its confluence with Bonapart River. Relief within the Ferguson Creek Valley is high, elevation range from 1.250 m in the north to less than 900 m in the southwest. climate is semi-arid with temperatures ranging between -25° The +30°. The snowfall is moderate and the property is open for and exploration from April to November. There is a sparse to moderate growth of pine, fir, aspen and low underbrush within the claim. Past logging operations, both north and south of Ferguson Creek, have harvested the larger ponderous pine and jackpine in the area, providing road access but little bedrock exposure. Outcrop is rare and is mainly confined to the cliffs along the creek valley and the rest of the claim is covered with glacial drift.

PREVIOUS WORK

The Ferguson Creek showings were first staked in 1939 as Henry Joe and Joe Henry. The Consolidated Mining and Smelting Company of Canada, Limited drove the adit in the bluff in 1931, probably in association with the testing of Scottie Creek showings which company also held at that time. The property was examined by H.M.A. Rice of the Geological Survey in 1942 and several samples were taken for analysis. The results are as follows:

Sample		% Cr ₂ 0 ₃	% Fe ₂ 0 ₃	Cr/Fe
Ferguson	West	50	15	2.25 to 1
Ferguson	East	44	15	2 to 1

A resource potential of 18,000 tones of "reasonably assured" material with 15% chromite and further 18,000 tones of equivalent material was estimated by Rice.

In 1977 the showings were staked as TIK 1 claim group and a ground magnetometer survey was done. The claims were allowed to lapse. The ground was staked by R. Lodmell as Chrome Hawk in 1983 and was sold to Qume Resources Ltd.. Qume cut a short grid over the shoving with intention to conduct an IP survey and, rock sampling of the shoving was done by J.D. Blanchflower, F.G.A.C. Geologist .The best sample (84-18-2) assayed 18.27 % Cr, 1,160 p.p.m. Ni). The ground was restaked by Equinox Resources Ltd. A soil geochemical survey was done for nickel, chromium and platinum group of metals but the results were not encouraging. In 1987 the ground was restaked by R.J. Nethery, P.Eng., as Ferg Claim, who geologically mapped the claim and sampled the shoving for Ni, Cr, Pt and Pd .The average grade of three samples was 21.5 % Cr and the assays for nickel, platinum and palladium were insignificant. The ground was held in 1991/92 by Michael Dickens as LIL 1 who recorded no work on the claims held.

In 1993 the ground was restaked as WK Chrome 1 by the author of this report W. Kovacevic. A grid, consisting of 1 km baseline and 2 km of grid lines was cut, slop corrected, chained and picketed to IP standard (Figure 4). Subsequently, The claims were acquired by Tilava Mining Corporation ("Tilava).

All previous works were concentrated on chromium and platinum group of metals ignoring the potential of the ground for other industrial minerals. The tertiary volcanic tuffs which outcrop along the upper area of Ferguson Creek are also of economic interest. During the 1994 exploration program carried by Tilava, these substantial deposits of volcanic ashes have been subjected to preliminary test to determine the potential of the material as the source for natural pozzolan and zeolites. All samples were delivered to B.C Research Inc., Industrial Mineral Section, and assayed under the supervision of Tim O'Hearn, P.Eng.

All samples, collected from the WK Chrome 1 claim during 1994 exploration program, satisfy the chemical requirement for use as an admixture to Portland Cement as laid out in ASTM Designation: C618-89-a. The results of the CEC (cation exchange capacity) indicated presence of zeolitic constituents however, the samples have low CEC.

During the 1996 exploration program carried by Tilava, the 1993 grid was extended by adding 500 m of base line and 3.8 km of east-west trending survey lines. A total of 28 pozzolan samples were collected from various outcrops and layers of volcanic ash.

All samples, assayed for pozzolan, satisfy the chemical requirement for natural pozzolan for use as an admixture to Portland cement. Further testing by Levelton Engineering of Richmond, B.C. indicate that natural pozzolan from the property readily complies with the physical requirements of ASTM C618-96. Laboratory results are available in Appendix I.

GEOLOGY

The claims are underlain by volcanic and marine sedimentary rocks of the Permian-age Cache Creek Group. These rocks have been intruded by sill-like ultramafic bodies which host the Ferguson Creek and nearby Scottie Creek chromite mineralization. Both



LEGEND

related

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TERTIARY Miocene and/or Pliocene 13 Plateau lava; olivine basalt, basalt andesite, ash and breccia beds; basaltic arenite. Miocene 12 Deadman River Formation: shale, sandstone, tuff, diatomite, conglomerate, breccia. Ologocene Andesite, dacite, felsite, related tuff and breccia; 11 greywacke, shale; minor lignite and conglomerate. Eocene and (?) Ologocene Kamloops Group Skull Hill Formation: datity, trachyte, basalt, andesite, 10 rhyolite, related breccias. Eocene Coldwater Beds 9 Conglomerate, sandy shale, arkose, coal, JURASSIC Middle Jurassic 8 Shale, grit. 7 Chert-pebble conglomerate, greywacke. Mount Lytton Batholith 6 Granodiorite, quartz diorite. TRIASSIC Upper Triassic Guichon Creek Batholith 5 Granodiorite, quartz monzonite, quartz diorite. Nicola Group Augite andesite flows and breccia, tuff, argillite, 9 greywacke, grey limestone. PERMIAN AND/OR TRIASSIC 3 Serpentinite and serpentinized peridotite.

PERMIAN

Cache Creek Group

2 Marble Canyon Formation: massive limestone, limestone breccia and chert, minor argillite, tuff, andesitic and basaltic flows.

1 Basic volcanic flows, cuff, chert, limestone, argillite.

. . older rock types are unconformably overlain by an extensive cover of volcanic flows and breccias belonging to the Eocene-age Kamloops Group.

Outcrop on the property is generally restricted to the Ferguson Creek gorge. The chrome-bearing ultrabasics form rugged "hoodoo" like outcrops for over 400 meters along the north side of Ferguson Creek. Serpentinized dunite and harzburgite are exposed in outcrop and workings but the prospect is largely covered by a thick mantle of till and alluvium. The serpentinized dunite is massive and locally may have granular texture.

Chromite occurs as parallel layers of grains in the dunitic rocks. The dunite trends northerly and has a steep eastward dip. It has been traced across the creek and is inferred to continue further north and south.

1997 WORK PROGRAM COMPLETED

The 1997 exploration program on the WK Group was conducted by Tilava Mining Corporation of Clinton, B.C. . This work was completed between August 21 and September 4, 1997. The 1997 program was designed to sample a major pozzolan outcropings straddling WK Chrome 1 and WK 3 claim for potential source of natural pozzolan. It included grid preparation, hand trenching, rock geochemical and mapping. Project supervision was by Willy Kovacevic, President of Tilava Mining Corporation and the author of this report.

Grid Preparation

Grid preparation on the property consisted of 1000 m of north and south trending Base Line and 3.9 km of east-west trending survey grid lines cut, chained and picketed to IP standard.

The 1997 grid is shown in Figure 4 and consists of 1 km of Base Line trending Az 360° N and 3.9 km east-west trending, 100 m spaced, survey grid lines. These survey lines are used during the geochemical rock (trench and pit) sampling.

Trenching

A total of 166.5 metres (13 trenches) approximately 1.2 m wide (benched and hand-trenched) and 4 small pits were cut and excavated in the area bound by 00 N + 350 E and 100 N + 350 E (Fig. 4). In addition to trenching, in areas were pozzolan was partly exposed some spots were hand stripped and cleaned. The trenches were cut in a general east-west direction following the configuration of a large, south facing, pozzolan exposure.



The rock samples were taken at approximately 2.5 m intervals. Figure 5 , a trench plan, shows all the trenches, stripped and cleaned area together with the location of rock samples taken in the large stripped area. Description of the trenches and rock samples are as follows:

TRENCH NO.	LENGTH	NO. OF SAMPLES	ASSAY SAMPLE
	0.5	_	3
TR - 1	25 m	7	WK-97-1
TR - 2	10 m	4	WK-97-2
TR - 3	9 m	4	WK-97-3
TR - 4	13 m	5	WK-97-4
TR - 5	3 m (includin of app. 1 stripped	5 g an area Om x 3m)	WK-97-5
TR - 6	33 m	12	WK-97-6
TR - 7	27 m	10	WK-97-7
TR - 8	7 m	3	WK-97-8
TR - 9	9 m		WK-97-9
	(including 9 x 7 m s massive o	an are 6 tripped utcrops)	
TR - 10	3 m	1	WK-97-10
TR - 11	7 m	3	WK-97-11
TR - 12	8.5 m	3	WK-97-12
TR - 13	12 m	3	WK-97-13
0/C 1		1	WK-97-0C-1
0/C 2		1	WK-97-0C-2
0/C 3		1	WK-97-0C-3
P/1 , $P/2$ ar	nd P/3 (comp	osite) 1	WK-97-PT-1

A total of 64 rock samples, were collected during the survey using the grid lines for control. A composite sample from each trench and 1 pit plus 3 single outcrops samples were assayed by ACME Analytical Laboratories Ltd. in Vancouver, B.C. and run for WRA (Geochem Whole Rock ICP analysis - 20 samples). Analytical results are available in Appendix I.

All samples, assayed for pozzolan, satisfy the chemical requirement for natural pozzolan for use as an admixture to Portland cement. However, a certain number of samples have elevated LOI therefore, a quality control and additional testing will be required before commercial production. Further testing by Levelton Engineering of Richmond, B.C. indicate that natural pozzolan from the property readily complies with the physical requirements of ASTM C618-96. Laboratory results are available in Appendix II.

ECONOMIC IMPLICATION FOR THE FERGUSON CREEK INDUSTRIAL MINERAL DEPOSITS

Chromite

Chromite is the sole commercial source of chromium. It is essential to many sectors of the defense and manufacturing industries. Because of its importance, it is classified as a strategic mineral and many countries stockpile chromite ore and ferochrome as a strategic reserve. About 90% of the world's high-grade chromite reserves in large stratiform deposits are in Africa- largely in South Africa and Zimbabwe. This, combined with the fact that almost one third of the world's podiform reserves are in the former USSR has made chromite a politically sensitive mineral. Canada and U.S. are almost entirely dependent upon imports for its chromium needs.

For military purposes chrome is used primarily in alloys associated with ordinance, missiles, armor plate and motor components. In industry it is used in superalloys, commonly light weight and heat resistant, such jet turbine components, as well as in the making of stainless steel. Three-quarters of the chromium goes into ferrochrome used in manufacturing of stainless and other alloy steels. The remainder of chromite is used in number of nonmetallurgical industries, including chemicals, pigments, refractories, and foundry sands.

The Ferguson Creek deposit chromite concentrates to 50% Cr_2 O₃ and a Cr/Fe ratio of 2.25:1 which is satisfactory for metallurgical grade (stainless and other chromium bearing steel alloys) with estimated price in the range of \$75-120/t. The mineralization concentrates readily on Wilfley table to 50% Cr_2O_3 and 15% Fe at grinds of -28 to 1 35 mesh, yielding a chrome-iron

ratio of 2.25 to 1. Additional tests must be performed on the chromite mineralization to determine if its sulfur, phosphorus, SiO etc. content are satisfactory.

Pozzolán

The term "pozzolan" has been defined by the American Society for Testing Materials (ASTM) as " a siliceous or siliceous and aluminous material which itself possesses little or no cementitious value but will, in finely divided form and in presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties".

Pozzolanic material is mixed with standard Portland cement, generally in the proportion of 10 - 40% by weight. Pumice and pumicite are the most important pozzolans, but opaline shale and diatomite are also used as the source for natural pozzolan. A major use of portland-pozzolan cement is in construction of large-mass concrete dams. Among the advantages claimed for pozzolan-portland cement are generally cheaper cost; lowering of heat of hydration; earlier development of maximum rate of heat development; improved workability; increased plasticity; decrease in segregation of the concrete ingredients; decrease in bleeding of water; improved water tightness of concrete; greater sulphate resistance; improved tensile strength; elimination of retardation of alkali-aggregate reaction.

Pozzolan is sold by itself and also pre-mixed with portland cement with an estimated price in the range of \$100/t.

Zeolites

The tertiary volcanic tuffs, which outcrop along the upper area of Ferguson Creek, are also of economic interest as a potential source for natural zeolite. Preliminary tests indicate that most tuffs and sandstones in the area contain zeolites.

The most profitable applications of zeolites utilize their adsorption, ion exchange and molecular sieve properties. Present applications are in the following fields: construction industry as pozzolan; agriculture as soil conditioners, fertilizer regulators, deodorizers and feed supplements, aqua-culture in filtering systems; treatments of heavy metals and waste water, oxygen separators, solar energy storage; and domestic use as deodorizers and pet litter.

SUMMARY AND CONCLUSIONS

The ground, presently covered by WK Chrome I claim, has been known and partially explored by numerous operators since 1927. However, the poor outcrop exposure and the volcanic and alluvial cover has thwarted past exploration. Numerous sampling of the same showing and meaningless geochem/geophysic surveys have done little to improve the knowledge of the existing chromite mineralization. Since significant chromite mineralization occurs within the subject claim and nearby Scottie Creek and further north on Mika claim, it is reasonably to assume that the chromite lenses in the NE showing could continue for some distance both north and south under the cover.

Potential for other industrial minerals, mainly pozzolan and zeolite, do exist. The preliminary examination indicate that these minerals may by of substantial and possibly of enormous potential. Proximity to major transportation highway, render these minerals commercially valuable.

The test results, both chemical and physical, indicate that the pozollan from the property readily complies with the requirements of ASTM C618-96 for use as mineral admixture in concrete.

REFERENCES

- Blanchflower J.D. (1984) Report on Chrome Hawk Claim, Kamloops Mining Division, British Columbia for Qume Resources Ltd..
- Blanchflower J.D. (1994) Personal communication
- Nethery R.J. (1989) Geological Report Ferg Claim, Kamloops Mining Division, British Columbia (Assessment Report).
- Hancock K.D. Ultramafic associated Chromite and Nickel Occurrences in British Columbia (Open File 1900-27 (Chrome Ridge, Scottie Creek, Mika & Ferguson Creek occurrences p. 21-23)

Hancock K.D. Personal communication (1990-1993).

Harben P.W. (1990) - Industrial Minerals Geology and World Bates R.L. Deposits -(Chromite p. 52-61, Diatomite p. 102-105, Pumice & Scoria p. 217-219).

Harben P.W. (1992) - The Industrial Minerals Handy Book -A Guide to Markets, Specifications, & Prices (Chromite p. 21-22, Pumice & Scoria p. 67, Zeolites p. 94-95)

STATEMENT OF EXPENDITURES

Willy Kovacevic, Prospector August 21, 22, 25, 26, 27, 28, 29, 30, 31 and September 1, 2, and 4 12⁻days @ \$175 p.d.\$2,100 Marcel Dorval, Field Assistant August 21, 22, 25, 26, 27, 29, 30, 31 and September 1 9 days @ \$100 p.d. 1.5\$ 900 Clemence Mallet, Field Assistant September 1, and 2 2 day @ 100 p.d. • • • • • • • • • • • \$ 200 Total Personnel \$3,200 \$3,200 TRANSPORTATION: Truck 4x4 12 days @ \$75 p.d ••••• \$ 900 Fuel 104.40 Total Transportation \$1,004.40 \$1.004.40 OTHER EXPENSES: Groceries ····· \$ 153.17 Field Supplies 202.74 Misc. drafting, typing photo copying, delivering 200.00 Total Other Expenses \$ 555.91 \$ 555.91 CONTRACTORS: Levelton Engineering Ltd. Acme Analytical Lab Ltd. \$1,116.82 341.23 Total Contractors \$1,458.05 \$1,458.05 Total 1997 Exploration Cost \$6,218.36 _____

FIELD PERSONNEL:

STATEMENT OF QUALIFICATIONS

I, Willy Kovacevic, of the Village of Clinton, Province of British Columbia, DO HEREBY CERTIFY THAT I have the following prospecting and related experience:

- 1971 Completed The Canadian Securities Course (The Investment Dealers Association of Canada).
- 1972 Attended a prospecting course (hard rock) organized by The B.C. & Yukon Chamber of Mines.
- 1975-1976 Developed and shipped polymetalic ore from Adams Plateau, B.C. to Cominco (Borex Mining Ltd. Spar I and Spar II claims).
- 1976 Attended a prospecting course (placer gold recovery) organized by B.C. & Yukon Chamber of Mines.
- 1977-1978 As the President of Lorcan Resources Ltd. (VSE public company) supervised and participated in gephysical and diamond drilling (Lost Cabin Mine, California). Worked as diamond driller helper.
- 1977-1979 Prospected and gechemically surveyed group of claims owned by Mineta Resources Ltd. (VSE public company) in Monashee Range, B.C.. Prospected and geochemically surveyed in southcentral B.C. for Tilava Mining Corporation (as owner).
- 1980-1983 Explored for oil and gas in USA, produced and marketed oil in Clinton County, Kentucky for Robico Investment Ltd. (as owner) and for group of VSE public companies, Mineta Resources Ltd., Westam Oil Ltd. and Boram Oil Ltd. (as principal).
- 1983-1990 Supervised and participated in various phases of exploration on the properties owned by Star of Mineta Ltd. as principal (Kirkland Lake, Ontario, Adams Plateau, B.C., Golden Loon claims Little Fort, B.C..
- 1993-1997 Prospected and geochemically surveyed WK Chrome I industrial mineral prospect (chromium, pozzolan and zeolite) Clinton, B.C. and Golden Loon claims (gold).

MUNOUN

Willy Kovacevic Prospector APPENDIX I

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852 E. HASTINGS ST. VANCOUVER BC V6A 1R6

PHONE (604) 253-3158 FAX (604) 253-1716

WHOLE ROUICP ANALYSIS

Tilava Mining Exploration PROJECT WK GROUP File # 97-6741 Box 372, 307 McDonald Ave, Clinton BC VOK 1K0 Submitted by: W. Kovacevic

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SAMPLE#	Si02	Al 203	Fe203	MgO	CaO	Na20	K20	Ti02	P205	MnO	Cr203	Ba	Ni	Sr	Zr	Y	Nb	Sc	LOI	C/TOT	\$/101	SUM	
	%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	ppm	ррп	ppm	ppm	ppm	%	%	%	%	
UK-97-1	56 65	15 98	5 42	2 10	4 59	2.69	1.94	.77	.36	- 13	.010	771	32	465	86	15	<10	<10	9.4	.05	.03	100.20	
UK-97-2	57 26	16 29	4 84	2 33	4 36	2.71	2.01	.75	.30	.05	.008	673	24	486	87	11	<10	<10	9.2	.06	.02	100.26	
UK-07-3	58 47	13 08	4.71	1 87	2 87	1 76	2 22	52	.19	.05	.008	604	22	262	105	16	<10	<10	13.3	.05	.02	100.07	
UK-07-/	57 74	15 70	/ A5	1 50	7 87	2 24	1 02	67	28	10	006	712	27	370	116	16	<10	<10	11.7	05	<_01	100.23	
UK-97-5	57 42	15 67	4.05	1 90	4 19	2.16	1.76	.68	.29	-08	.006	668	26	367	85	16	<10	<10	11.1	.06	<.01	100.35	
	21.10	12101	,			20.00										• -							
WK-97-6	57 59	15 59	4 45	1 73	4.08	2.07	1.91	.62	.35	.06	.005	616	<20	352	80	15	<10	<10	11.6	.06	<.01	100.18	
UK-97-7	54 31	15 82	5 00	2 16	4 35	1 93	1 45	65	24	-09	005	601	24	363	79	13	<10	<10	12.3	.07	<.01	99.42	
UK-97-8	58 98	15 39	5 17	1 80	3 58	2.60	2.22	.74	.30	.07	.006	831	30	403	84	16	<10	<10	9.3	.05	<.01	100.31	
UK-97-9	58 23	15 62	5 41	2 04	3 89	2.17	2.08	.65	.23	.10	-006	693	20	368	90	16	<10	<10	9.8	.04	<.01	100.37	
UK-97-10	52 61	16.00	8 07	4 26	4 15	2 77	96	70	-08	- 10	019	320	54	265	56	14	<10	17	11.4	.03	<.01	100.07	
WK 97 TO	12.41	17.77	0.01	4.20	4.12	L	.70	,			.017	327	24	205		•••							
UK-97-11	56 48	15 07	5.85	2.41	4.08	1.92	1.68	-65	.53	.12	.006	597	26	306	98	19	<10	11	11.2	.06	.01	100.12	
ur-07-12	52 03	15 35	6 08	3 41	4 00	2 66	1 00	80	.17	.07	.015	414	42	321	94	14	<10	14	12.5	.05	<.01	99.99	
WK 77 12	55 67	15 07	5 03	2 52	1.60	2 34	1 38	82	20	07	000	520	26	366	85	20	<10	12	10 6	07	< 01	100.01	
WK-77-13	55 70	15.07	4 01	2.52	1.18	2.34	1 30	.00	28	07	0007	510	35	344	80	20	<10	11	10.6	07	04	100 14	
RE WK-97-13	50.70	17 41	/ 07	2.11	4.40	2.31	1.37	.07	.20	12	.007	5/1	~20	616	77	<10	~10	~10	73	- 05	.07	100.14	
WK-97-UL-1	20.39	17.01	4.03	2.14	4.02	2.01	1.17	.01	- 1 1	. 12	.004	241	~20	414		10	10	10	(J	.02	,02	100.12	
UK-07-00-2	58 31	15 51	5 20	2 00	3 71	2.06	1 00	62	31	11	800	603	20	344	124	18	<10	<10	9.9	. 04	<.01	100.05	
	55 76	1/ 01	/ 02	2.07	3 76	2 01	1 07	61	10	13	005	681	21	371	100	16	<10	<10	13.4	.15	.03	100.12	
WK-97-00-3 UK-07-1	55 77	15 70	4.72	2.30	6 25	2 20	1 66	.01	76	12	007	687	42	388	103	18	<10	<10	12 0	0.9 0.9	< 01	00 77	
WK~P1-7/~L STANDADD_SO-15/CSA	1/9 03	17.36	7.40	7 10	5 05	2.20	2 04	1 62	2 74	1 / 1	1 075	2270	42	602	675	17	14	<10	50	3.84	5 26	00 00	
STANDARD SU-TO/CSA	40.95	16.01	7.40	1.17	5.95	C. 44	2.00	1.02	£	1.41	1.015	2210			012	14	14	- 10			2.20		

.200 GRAM SAMPLES ARE FUSED WITH 1.5 GRAM OF LIBO2 AND ARE DISSOLVED IN 100 MLS 5% HNO3. OTHER METALS ARE SUM AS OXIDES. TOTAL C & S BY LECO (NOT INCLUDED IN THE SUM).

- SAMPLE TYPE: ROCK Samples beginning 'RE' are Reruns and 'RRE' are Reject Rerunsa

APPENDIX II

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Levelton Engineering Ltd.

150-12791 Clarke Place Richmond, B.C.

E-Mail: levelton@unixglubcua

Construction Materials

Metallurgy and Corrosion

alytical Chemistry

vsical Testing

Building Science

Geotechnical

Environmental

Canada V6V 2H9

Tel: 604 278-1411 Fax: 604 278-1042 December 29, 1997 File: 197-788

Tilava Mining Corporation 307 McDonald Place Box 372 Clinton, B.C. V6H 1R3

Attention: Mr. Willy Kovacevic

Dear Sir:

RE: **Clinton Natural Pozzolan** Final Report - Sample #2

On November 25, 1997, seventeen 170 gm+ packets of Clinton natural pozzolan were received in our laboratory for physical qualification testing. Contents of seven randomly selected packets were combined and tested according to the physical requirements of ASTM C618-96, "Standard Specification for Coal Fly Ash and Raw Calcined Natural Pozzolan for Use as a Mineral Admixture in Concrete". The final results are presented in the attached table and indicate this tested pozzolan readily complies with the physical requirements of ASTM C618-06.

We are returning all unopened packets and unused sample as requested.

We trust this meets your report requirements. Thank you for this opportunity to be of service.

LEVELTON ENGINEERING LTD.

W.J. Gerry, C.Tech. Laboratory Supervisor

marc N. A. CUMMING N.A. Cumming, P.Eng.

President

Direct Line: 207-5100







PROPERTIES OF FLY ASH

PROJECT:	Tilava Mining Corporation	FILE:	197-788
SAMPLE LOCATION:	Site	REPORT NO .:	2
SAMPLE DATE:	Clinton, B.C.	DATE:	November 25, 1997

Property	Sample	ASTM C618-96 Requirements Type N
Physical - ASTM C618-96		
Soundness, Autoclave, % Expansion or Contraction	-0.036	<u>+</u> 0.8 max
Fineness: Retained 45 µ m, % Blaine, cm²/gm	17.0 5570	34 max -
Relative Density	2.404	-
Strength Activity Index With Cement: @ 7 days, % Control @ 27 days, % Control Water Requirement, % Control	80.3 81.7 100	75 min 75 min 115 max

APPENDIX III

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