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## GEOLOGICAL REPORT

Vernon Mining Division
Okanogan District B.C.

TRIM 082E092
Lat: 49 59 02 Long; 119 31 10

 $Southern\ Pacific\ Development\ Corp.$ 

1250 West Hastings Street Vancouver, B.C. V6E 2M4

#### -2-SUMMARY

The Blue Hawk property of Southern Pacific Development Corp. is being explored for its copper-gold potential. The key claims of property have been held by location since 1997, with 8 additional contiguous units added earlier this year. The claims have been sold to Southern Pacific subject to a NSR royalty. The Blue Hawk property is road accessible, 11 kilometres northwest of Kelowna in the Vernon Mining Division.

The Blue Hawk project lies within the Intermontane Belt of the Canadian Cordillera at the extreme south end of the Quesnel Terrane. The area is underlain by Harper Ranch Group sediments and volcaniclastics intruded by a small diorite stock. A large NW trending fault zone bisects the present property.

The bulk of the exploration efforts to date have been directed toward the precious metal – sulfide veins, known since the 1930's. Copper-gold bedrock mineralization located by Dawood Mines in the 1970's does not appear to have been followed up since and is one of the targets of the proposed exploration program. The other target is a NW trending fault with associated copper values yet to be adequately explored. The existing Blue Hawk workings appear to be associated with this fault at the southern end of the present property holdings.

A program of property mapping, soil sampling and ground geophysics is recommended to further test the potential of the Blue Hawk property. This program will involve establishing a 3 kilometre base line parallel to the trend of the regional fault. Fifty metre stations will be established along the base line. Cross lines will be established at 100 metre intervals, running 400 metres on each side of the baseline. Sample stations will be established at 25 metre intervals along the cross lines. Soil samples will then be taken at each station and analyzed for Au and 34 element ICP. Following the soil survey a ground VLF-EM and proton magnetometer survey will be completed over the sample grid.

The total cost of the proposed program is estimated at \$100,000.

The preliminary evaluation and mapping program cost was \$800.00.

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## -4INTRODUCTION

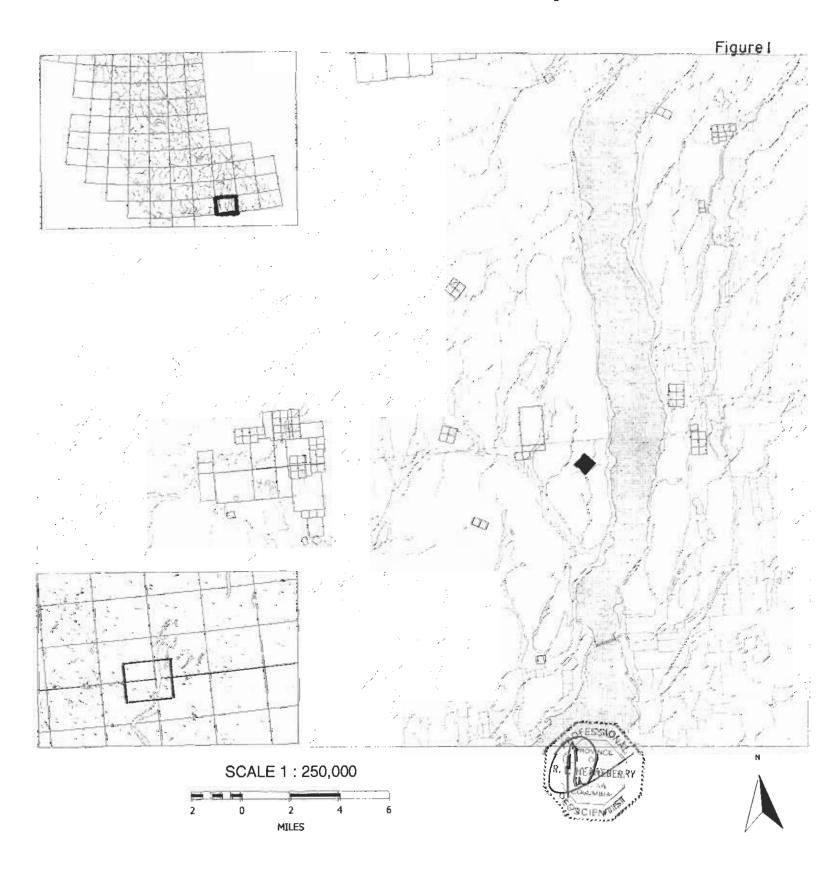
The purpose of this report is to compile the existing historical data from various sources in order to recommend an exploration program to follow up on the copper-gold potential of the Blue Hawk property.

This report was commissioned by Ms. Laara Shaffer, a director of Southern Pacific Development Corp., the property optioners.

The Blue Hawk property has a long exploration history. The original discovery was made in the 1930's, with subsequent exploration activity in the period from the early 1970's through to the mid 1990's. There are two primary targets on the property: precious metal sulfide quartz veins associated with a NW trending normal fault and copper-gold associated with a Jurassic dioritic plug.

At this early stage a one day trip to the site was made to review the mineral showings and to obtain the general lay of the land and identify the logistics required to undertake the exploration program.

# Blue Hawk Project Location Map



## PROPERTY DESCRIPTION, LOCATION, ACCESSIBILITY

The Blue Hawk project lies within the southern interior approximately 11 kilometres northwest of Kelowna. The project is accessible by the Bear Creek logging mainline and spur roads.

The claims lie on TRIM sheet 082E093 in the Vernon Mining Division. The geographic center of the property is approximately 49 59 15 N latitude and 119 31 05 W longitude. Elevations range from 600 metres in the southeast corner of the property to 1140 metres in the northwest corner of the claim group.

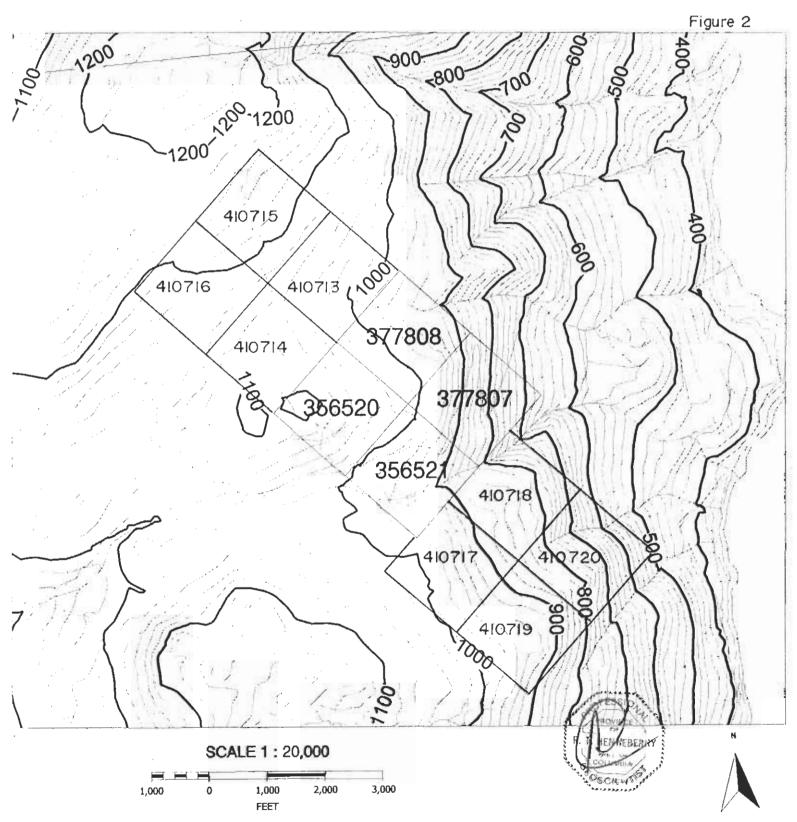
The logistics of working in this part of the province are excellent. Supplies and equipment can for the most part be obtained in Kelowna, as can heavy equipment, fuel and lodging.

The southern interior of the province has a generally temperate climate. The summer field season is generally warm and dry and runs from late-April to early-May through to late-October. Winters can be cold for short periods with moderate snow accumulations.

Water for diamond drilling may be a problem later in the summer, though there is a small lake within the western half of the property.

At this stage of the exploration of the Blue Hawk property, the only permitting required would be for trenching and diamond drilling. These permits are generally readily obtainable contingent on the posting of small (\$5,000 to \$10,000) reclamation bonds.

## Blue Hawk Project Claim Map 082E093



#### -8-PROPERTY HOLDINGS

The Blue Hawk project lies on claim sheet 082E093 in the Vernon Mining Division, covering an area of 300 hectares.

Name	Numbers	Anniversary Date
Quail 3-4	356520-356521	June 13, 2005 *
Quail 1-2	377807-377808	June 14, 2005 *
Quail 5-8	410713-410716	May 23, 2005
Quail 9-12	410717-410720	May 24, 2005

<sup>\*</sup> pending approval of 2004 assessment credits.

The Quail 1-4 claims are registered in the names of Brent McEwen (75%) and Rolland Menard (25%), while the Quail 5-12 claims are registered solely in the name of Rolland Menard. All claims are being held in trust for Armac Investments Ltd. of Vancouver, B.C. Armac has sold the claims to Southern Pacific Development Corp. of Vancouver, B.C. under the following terms:

- 1) A cash payment of \$25,000 upon signing.
- 2) A second payment of \$25,000 subject to favourable results
- 3) Southern Pacific will carry out systematic exploration of the claims. If after two years from the signing of the agreement Southern Pacific feels the property is neither worthy of further work not a feasibility study, Southern Pacific will return the claims to Armac Investments with a minimum of one year of assessment filed for the claims
- 4) The original property vendors retain a 2 percent Net Smelter Return royalty. Southern Pacific retains the option to purchase one percent of the NSR for \$1,000,000 at any time during the first 5 years of this agreement.

#### -9-PREVIOUS EXPLORATION

The Blue Hawk property has a long exploration history. The property was first discovered in the 1930's. Exploration work consisted of surface trenching and pits and two adits. A small shipment of 5 tons was made in the late 1930's, returning 5 ounces of silver and 18 ounces of silver. (MMAR, 1938).

Dawood Mines Ltd. actively explored the property in the late 1960's through to the mid 1970's. They undertook programs of soil sampling and ground geophysics, followed by surface trenching. Dawood identified a large copper-gold soil anomaly on the east side of the property. Trenching to bedrock uncovered mineralized bedrock in several areas within this zone. This mineralization was not tested further. (Read, 1969; Fox, 1972; Fox 1974; Fox 1974b).

N.C. Lenard held the property through much of the early 1980's, completing limited prospecting, mapping and sampling programs, essentially enough work to maintain the property. (Lenard, 1980; 1981; 1981b; 1984).

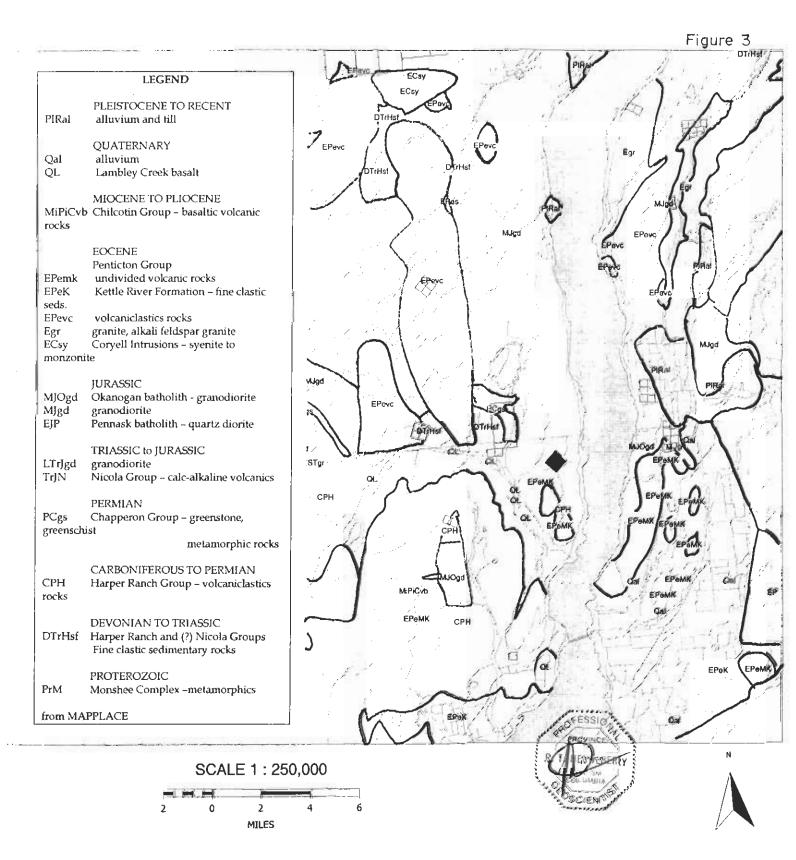
Tillicum Gold Mines evaluated the existing surface and underground showings, sampling most of the known showings. George and Krueckl (1984) found the gold values to be significant but erratically distributed.

Pinewood Resources obtained the property in the late 1980's and completed several exploration programs over the next few years. Dasler (1989) directed a program of excavator trenching of existing vein systems, followed by mapping and sampling (only for Au and Ag). At same time, Mark and Cruickshank (1988) completed IP and resistivity surveys. A strong linear anomaly of over 1000 metres paralleling Jennie Creek was identified as were several smaller individual anomalies thought to correlate with known mapped zones of shearing. Diamond drilling and trenching was recommended to test the linear anomaly and the area of the existing workings.

The drilling and trenching directed at the linear anomaly proved graphitic sediments and volcaniclastics to be the source of the anomaly. The volcanic units carried pyrite and pyrrhotite while the granodiorite carried only minor amounts of sulphides. These mineralized areas were generally not sampled. (Macfarlane, 1990).

Pinewood Resources then completed further soil sampling (for Au only) further to the north of the existing grid (Devlin and Smith, 1991). Finally, Pinewood completed a 5 hole drill program in the area of the existing adit. Vein mineralization consisted of pyrite, with minor chalcopyrite and rare pyrrhotite. Narrow alteration zones (to 3 metres) were noted around the veins. Analysis was only for gold and returned values to 565 ppb Au. The diorite was locally mineralized with disseminated pyrite and chalcopyrite (Smith, 1994) but was never sampled.

## Blue Hawk Project Regional Geology



## -11-REGIONAL GEOLOGY (summarized from MAPPLACE)

The Blue Hawk property lies within the Intermontane Belt of the Canadian Cordillera. This area lies at the extreme south end of the Quesnel terrane.

The regional geology is characterized by Devonian to Triassic volcanic and sedimentary rocks intruded by a series of predominantly Jurassic plutonic rocks. These rocks are locally overlain by Eocene and earlier sediments and volcanics, and locally intruded by small Eocene stocks. Finally, glacial till and alluvium forms thin veneers to locally thicker deposits.

The Monashee Complex of undivided metamorphic rocks lies on the eastern edge of the map area. Devonian to Triassic fine clastic sediments believed to correlate with the Harper Ranch and/or Nicola Groups lie within the west central section of the map area. The Carboniferous to Permian Harper Ranch Group volcaniclastics rocks appear to overlie the Devonian to Triassic clastic sediments. These rocks are overlain in turn by greenstones and greenschist metamorphic rocks of the Permian Chapperon Group.

Aside from the aforementioned volcanics and sediments, the western half of the map area is dominated by Jurassic granodiorites to quartz diorites, including the Okanogan and Pennask batholiths.

The Eocene Penticiton Group forms a large Tertiary outlier through the centre of the map area. Penticton group rocks include fine clastic rocks, volcaniclastic rocks and undivided volcanic rocks. Chilcotin basaltic volcanics lie on the extreme eastern edge of the map area. Small Tertiary stocks outcrop in the northern half of the map area.

Thin veneers and locally thicker accumulations of till and alluvium outcrop along the east side of Okanogan Lake.

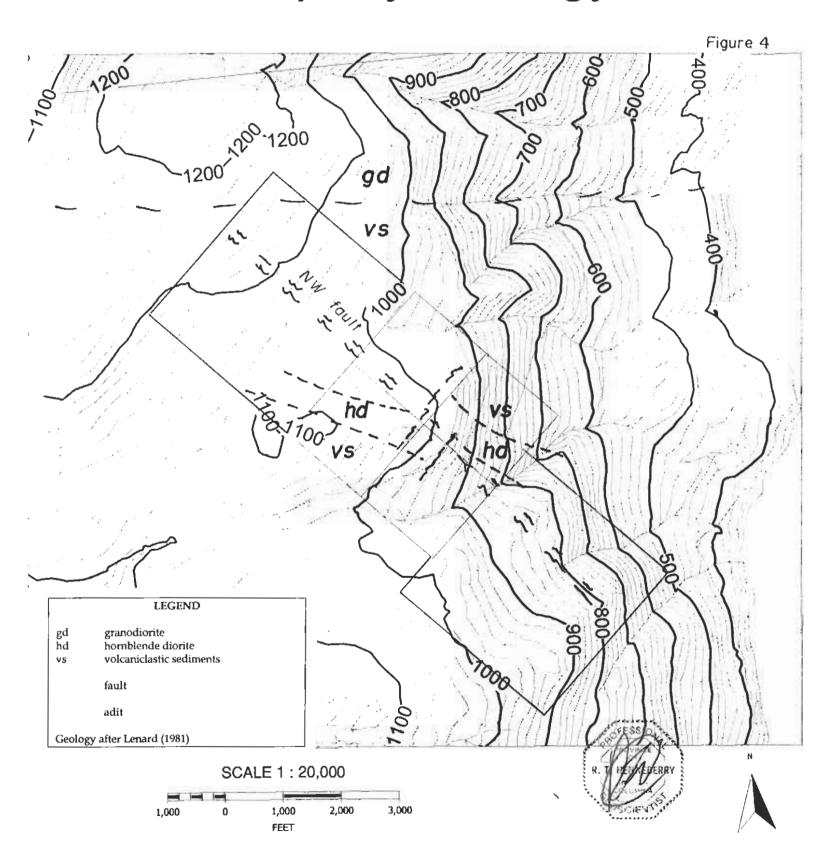
Structurally, the map area is transected by a series of generally north trending normal faults and associated splay faults that appear to be associated with the Tertiary outliers.

#### Blue Hawk Area Geology (summarized from MINFILE and MAPPLACE):

The Blue Hawk deposit lies in an area underlain by the Harper Ranch Group. Harper Ranch rocks consist of argillites, cherts and limestones along with island arc derived clastic and volcaniclastic rocks, including sandstone and conglomerate. These rocks are intruded in the map area by sills, dykes and plugs related to the Okanogan batholith.

Structurally, the area is dominated by a northwest trending normal fault that strikes through the long axis of the present Blue Hawk property. The presently known mineralization on the Blue Hawk property appears to be associated with this fault.

# Blue Hawk Project Property Geology



## Blue Hawk Property Geology:

The Blue Hawk property is underlain by Harper Ranch Group metasediments and volcanics, intruded by a small diorite plug related to the Okanogan batholith. A thin veneer of glacial till masks the geology over much of the property.

Diamond drilling in the area of Jennie Lake shows that section of the claim group to be underlain by locally graphitic, chloritic andesite. The andesite is a grey black, fine grained, massive, competent rock. The unit carries pyrite and pyrrhotite in concentrations up to 5%-7%, as blebs, stringers, veinlets and disseminations. The andesite was intruded by sills and dykes of grey, fine-grained, chloritized granodiorite carrying  $\pm 1\%$  disseminated pyrite (Macfarlane, 1990).

The area on lower Jennie creek below the Blue Hawk workings was trenched and found to be underlain by dark grey, silty graphitic shale/slate, with local sandy and silty horizons and by grey-green andesite. (Macfarlane, 1990).

Diamond drilling showed the area to the north of the Blue Hawk workings is underlain by andesite to andesitic volcaniclastic rocks with cherty bands and diorite. The andesite is dark green to blackish green in fresh sections to blue-grey to grey-green in highly altered sections. The diorite is dark green in color and hosts numerous xenoliths of andesite, local patches of disseminated pyrite and chalcopyrite. (Smith, 1994).

#### -14-DEPOSIT TYPES

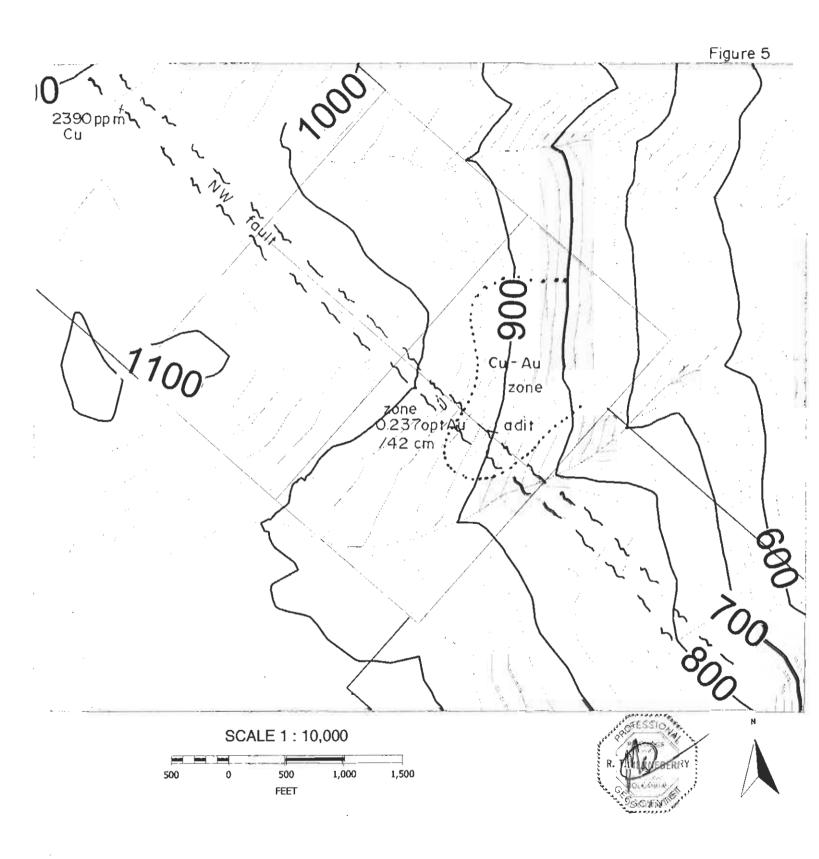
There are at least two distinct styles of mineralization on the Blue Hawk property. The first is precious metal-sulfide quartz veins associated with a NW trending normal fault. The Blue Hawk adit and the majority of the surface trenching were directed toward these targets. A grab sample taken along the strike projection of this fault to the NW returned 2390 ppm Cu, indicating the fault may be mineralized through its length.

The veins in the workings area are hosted in a hornblende diorite that according to Lenard (1984) has some affinities with the geological setting of the Bridge River and Cadillac gold camps: gold quartz genetically related to albitite veins and pods. The hornblende diorite wallrock is partially albitized, while the veins themselves are pyritized, sericitized and partially calcitized.

The second type of mineralization is copper-gold associated with a Jurassic diorite plug. Early soil sampling by Dawood Mines (Fox, 1972; Fox, 1974) located a large NE trending copper-gold soil anomaly 60 metres by 215 metres on the east side of the present Southern property. Random rock chip sampling within this zone by Dawood Mines returned copper values ranging from 0.12% to 0.30% and gold values ranging from 0.005 to 0.05 ounces per ton. Despite the fact further exploration was recommended, it appears this zone was not followed up.

This copper-gold zone appears to be associated with a hornblende diorite plug in Harper Ranch Group andesites and volcaniclastics. A large granodiorite related to the Jurassic Okanogan Intrusions lies within a kilometre to the north, suggesting a possible setting for porphyry copper mineralization.

# Blue Hawk Project Mineralized Zones and Anomalies



#### -16-MINERALIZATION

The precious metal – sulfide quartz veins on the Blue Hawk property have been developed by two adits and several surface pits and trenches over a strike length in excess of 180 metres. A small shipment of 5 tons was shipped from the property in the 1930's. This shipment contained 5 ounces of gold and 18 ounces of silver. (Read, 1969)

The veins trend westerly to north-westerly along fractures and shears in the hornblende diorite. They range from narrow fractures to 1.2 metres thick and are generally en-echelon and are separated by shears, which also run parallel to the veins. Mineralization consists of pyrite, minor galena and dark oxidation products. Traces of chalcopyrite, sphalerite and arsenopyrite are also noted in the veins. (MINFILE 082ENW002)

The surface exposures have been repeatedly sampled through the 1970's to the 1990's, with the most recent sampling completed by Pinewood Resources (Dasler, 1989). Though values in excess of 3.4 grams per tonne were obtained from each of the veins, the distribution tended to be erratic. Dasler's best zone was Trench #1, where the average assay of 10 channel samples, all of which assayed greater than 0.013 opt gold, was 0.237 opt gold and 0.92 opt silver over an average width of 42 centimetres. Gold assays appeared to correlate well with sulphides, especially pyrite.

The regional geology map shows a large, northwest trending fault structure striking through the heart of the present Southern Pacific property. The Blue Hawk adit and associated workings appear to lie within this zone. The bulk of the exploration and development completed to date has concentrated in a small section of the strike projection of this fault, with the majority relatively unexplored. A grab sample of rusty, oxidized material taken from the fault during the property visit/examination returned a value of 2390 ppm Cu.

The work completed by Dawood Mines in the early 1970's concentrated on the copper-gold potential of the property. Dawood (Fox, 1972; Fox, 1974) undertook soil geochemical surveys over the mineralized area, expanding the grid to the north and to the east and west. They were successful in located a broad somewhat linear zone of copper-gold mineralization extending to the northeast from the known vein showings. Limited trenching by Dawood (Fox, 1974b) found intensely altered sediments mineralized with low-grade chalcopyrite, pyrite and gold. Fox reported values ranging from 0.12% to 0.30% copper and 0.005 to 0.05 opt gold from rock chip sampling within the zone.

Pinewood Resources also undertook an induced polarization and resistivity survey of 7.1-line kilometres in the area, concentrating to the north and west of the known showings. A linear EW anomaly with a strike length in excess of 1 kilometre was located. Trenching at the extreme east end of the anomaly found graphitic schist, thought to be the cause. Limited drilling at the western end of the anomaly intersected locally, graphitic, chloritic andesites and chloritized granodiorite. The andesites carried 5%-7% pyrite and pyrrhotite as blebs, stringers, veinlets and disseminations. The granodiorite carried ± 1% disseminated pyrite. (Macfarlane, 1990)

## -17INTERPRETATION AND CONCLUSIONS '

The largest part of the exploration program completed to date on the Blue Hawk property has been concentrated on the precious metal – sulfide quartz veins. As is commonly the case with properties containing old workings, exploration efforts concentrate on repeatedly sampling the same exposures. The existing precious metal - sulfide quartz veins at surface are well weathered, consisting of rusty, oxidized, broken to semi-massive quartz. The only justification for further sampling would be plugger drilling and shallow blasting of existing exposures to obtain fresh surfaces.

The open Blue Hawk adit should also be mapped and sampled. A cursory examination during the property visit/examination showed several quartz veins cutting the tunnel at acute angles, with the tunnel staying on the structures for 1 or 2 rounds before loosing the structure in the other wall. The only persistent structure is located in the far end of the tunnel, where a 10 cm to 20 cm quartz vein carrying local minor amounts of sulfides was noted. The dip of the vein in the tunnel as measured was 60-70 NE, while the dips measured on surface were 70-80 SW,

The copper-gold zone first located by Dawood Mines (Fox, 1972; Fox, 1974) is an area that requires further exploration, as it has received virtually no attention since 1974. This zone includes the existing Blue Hawk workings. The drilling completed by Pinewood Resources in 1990 and later logged by Smith (1994) reported the presence of abundant sulfides including chalcopyrite, in the host diorite, but these zones were never sampled. The core is now scattered about the property, rendering it useless.

This area of the property is one of the key target areas requiring follow up. This follow up will include geochemical sampling and ground geophysics. As well, geological mapping will be undertaken in the area. The existing trenched area could be sampled to assess the copper potential of the host rock.

The previous mapping by Fox (1974b) shows a large body related to the Okanogan batholith outcropping just of the edge of the present claim holdings to the north. The diamond drilling to the west (Macfarlane, 1990) showed the granodiorite intrusive to be approximately 35 to 40 metres below surface. This intrusive could very well serve as a proximal heat source to drive mineralizing fluids and systems in the project area. These fluids could possibly pool at the volcaniclastics sediment / intrusive contact, which appears to be relatively flat lying.

These fluids could percolate up through the overlying volcaniclastic sediments, as well as pool at the flat lying volcaniclastic sediment / intrusive contact. A program of mapping, soil sampling and ground geophysics will evaluate this potential.

The regional NW trending normal fault has received very little exploration effort aside from the immediate Blue Hawk workings area. This is a strong lineal structure mapped over a strike length in excess of 10 kilometres. Several of the existing logging roads in the project area cut across the projected strike extension of the fault. A grab sample taken from this fault during the property visit/examination returned a value of 2390 ppm copper. This fault needs to be evaluated through a program of mapping, soil geochemistry and ground geophysics.

### -18-RECOMMENDATIONS

The Blue Hawk project of Southern Pacific Development Corp. requires further exploration. The bulk of the exploration efforts to date have been directed the precious metal – sulfide veins, known since the 1930's. The copper-gold bedrock mineralization located by Dawood Mines in the 1970's does not appear to have been followed up since. The NW trending fault, hosting the existing Blue Hawk workings, has not been explored outside if the immediate Blue Hawk workings themselves.

A program of property mapping, soil sampling and ground geophysics is recommended to further test the potential of the Blue Hawk property. This program will involve establishing a 3 kilometre base line parallel to the trend of the regional fault. Fifty metre stations will be established along the base line. Cross lines will be established at 100 metre intervals, running 400 metres on each side of the baseline. Sample stations will be established at 25 metre intervals along the cross lines. Soil samples will then be taken at each station and analyzed for Au and 34 element ICP. Following the soil survey a ground VLF-EM and proton magnetometer survey will be completed over the sample grid. This grid will cover the copper-gold bedrock mineralization located by Dawood Mines.

The total cost of the proposed program is estimated at \$100,000.

The preliminary evaluation and mapping program cost was \$800.00.

#### -19-REFERENCES

Dasler, P.G. (1989). Report on the Kurtis Property. Report for Prospectus for Pinewood Resources Ltd.

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Lenard, N.C. (1984). Economic Geology of the Gold Quartz Vein System of the Bluehawk Gold Mine (Bear 3 Claim). British Columbia Ministry of Energy and Mines Assessment Report 12519.

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Read, W.S. (1969). Geochemical – Geophysical Report Tower Group. British Columbia Ministry of Energy and Mines Assessment Report 1894.

Smith, F.M. (1994). Assessment Report on the Kurtis Property. British Columbia Ministry of Energy and Mines Assessment Report 23811.

## -20-CERTIFICATE OF QUALIFIED PERSON

I, R.Tim Henneberry, P.Geo. do hereby certify that:

I am the Qualified Person of:

Southern Pacific Development Corp. 1250 West Hastings Street Vancouver, B.C. V6E 2M4

I earned a Bachelor of Science Degree majoring in geology from Dalhousie University, graduating in May 1980.

I am registered with the Association of Professional Engineers and Geoscientists in the Province of British Columbia as a Professional Geoscientist.

I have practiced my profession continuously for 23 years since graduation.

I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

I am responsible for the preparation of the technical report titled "Geological Report Blue Hawk Project" and dated June 20, 2004, relating to the Blue Hawk property. I visited the Blue Hawk property on May 13, 2004 for one day.

I have not had prior involvement with the property that is the subject of the Technical Report.

I am not aware of any material fact or material change with respect to the subject matter of the Technical report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.

I am a director of Southern Pacific Development Corp., but I do not own any shares of Southern Pacific Development Corp.

I have read NI 43-101 and Form 43-101F, and the Technical Report has been prepared in compliance with that instrument and form.

I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible to the public, of the Technical report.

Dated this 20th day of June, 2004.

Termebarry, D

## -21-COST ESTIMATES

## Property mapping, sampling

Establish two grids totalling 3000 m of base line
Establish 800 m cross lines every 100 m, sample every 25 m
Soil sample at 25 m intervals on every second cross line
Conduct VLF-EM and proton magnetometer surveys over grid
Soil sample for Au and 34 element ICP
Rock sample for Au and 34 element ICP
Map property

Geologist	15 days	@	\$ 300	/day	\$ 4,500
Prospector	15 days	@	\$ 250	/day	\$ 3,750
Assistant	15 days	@	\$ 200	/day	\$ 3,000
Assistant	15 days	@	\$ 200	/day	\$ 3,000
Assistant	15 days	@	\$ 200	/day	\$ 3,000
Room & Board	75 days	@	\$ 125	/day	\$ 9,375
Vehicle + Fuel	15 days	@	\$ 200	/day	\$ 3,000
Vehicle + Fuel	15 days	@	\$ 200	/day	\$ 3,000
Analysis - rock	150 sample	@	\$ 35	/sample	\$ 5,250
Analysis - soil	1085 sample	@	\$ 22	/sample	\$ 23,870
Geophysical surveys					\$ 15,000
Travel					\$ 5,000
Sundries					\$ 2,500
Report					\$ 2,500
Contingency					\$ 13,255

\$ 100,000

## -22-STATEMENT OF COST

Property evaluation and examination: May 13, 2004

Total cost for 2003/20	004 assessment	credits	\$800.00
Report	1 day @	\$300 per day	\$300.00
Tim Henneberry Brent McEwen	1 day @ 1 day @	\$300 per day \$200 per day	\$300.00 \$200.00



**EXCELLENCE IN ANALYTICAL CHEMISTRY** 

ALS Canada Ltd 212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 10: LARMAC MANAGEMENT LTD. 1250 W HASTINGS ST **VANCOUVER BC V6E 2M4** 

Page: 1 1-JUN-2004

Account: TARMAN

## **CERTIFICATE VA04030373**

Project: Bluehawk

P.O. No.:

This report is for 4 Rock samples submitted to our lab in Vancouver, BC. Canada on 21-MAY-2004.

The following have access to data associated with this certificate:

TIM HENNEBERRY JOAN PURDY

	SAMPLE PREPARATION							
ALS CODE	DESCRIPTION							
WEI-21	Received Sample Weight							
LOG-22	Sample login - Rcd w/o BarCode							
CRU-31	Fine crushing - 70% <2mm							
SPL-21	Split sample - riffle splitter							
PUL-31	Pulverize split to 85% <75 um							

ANALYTICAL PROCEDURES									
ALS CODE	DESCRIPTION	INSTRUMENT							
Au-AA23	Au 30g FA-AA finish	AAS							
ME-GRA21	Au Ag 30g FA-GRAV finish	WST-SIM							
ME-ICP41	34 Element Aqua Regia ICP-AES	ICP-AES							

To: TARMAC MANAGEMENT LTD. ATTN: TIM HENNEBERRY 612 NOOWICK RD RR 1 MILL BAY BC VOR 2P4

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.





## ALS CHEMEX **EXCELLENCE IN ANALYTICAL CHEMISTRY**

ALS Canada Ltd.

1250 W HASTINGS ST **VANCOUVER BC V6E 2M4** 

10: TARMAC MANAGEMENT LTD.

Page: 1 1-JUN-2004 Account: TARMAN

212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218

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ME-GRA21	Au Ag 30g FA-GRAV finish	WST-SIM							
ME-ICP41	34 Element Aqua Regia ICP-AES	ICP-AES							

To: TARMAC MANAGEMENT LTD. **ATTN: TIM HENNEBERRY** 612 NOOWICK RD RR 1 MILL BAY BC V0R 2P4

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:



**EXCELLENCE IN ANALYTICAL CHEMISTRY** 

ALS Canada Ltd.

212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 1250 W HASTINGS ST VANCOUVER BC V6E 2M4 Fage: ∠ - A
Total # ⇒s: 2 (A - C)

Date: 1-JUN-2004 Account: TARMAN

Project: Bluehawk

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Sample Description	Method Analyte Units LOR	WEI-21 Recvd Wt. kg 0.02	ME-GRA21 Au ppm 0.05	ME-GRA21 Ag ppm 5	ME-ICP41 Ag ppm 0.2	ME-ICP41 AI % 0.01	ME-ICP41 As ppm 2	ME-ICP41 B ppm 10	ME-ICP41 Ba ppm 10	ME-ICP41 Be ppm 0.5	ME-ICP41 Bi ppm 2	ME-ICP41 Ca % 0.01	ME-ICP41 Cd ppm 0.5	ME-ICP41 Co ppm 1	ME-ICP41 Cr ppm 1	ME-ICP41 Cu ppm 1
4301 4302 4303 4304		0.58 0.78 0.18 0.64	0.19 0.38 <0.05	<5 <5 <5	2.4	1.62	<2	<10	30	<0.5	<2	2.58	<0.5	4	46	2390
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EXCELLENCE IN ANALYTICAL CHEMISTRY

ALS Canada Ltd.

212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 1250 W HASTINGS ST VANCOUVER BC V6E 2M4 Page: 2 - B Total # :s: 2 (A - C)

Date: 1-JUN-2004 Account: TARMAN

Project: Bluehawk

									(	ERTIFI	CATE C	F ANA	LYSIS	VA040	30373	
Sample Description	Method Analyte Units LOR	ME-ICP41 Fe % 0.01	ME-ICP41 Ga ppm 10	ME-ICP41 Hg ppm 1	ME-ICP41 K % 0.01	ME-ICP41 La ppm 10	ME-ICP41 Mg % 0.01	ME-ICP41 Mn ppm 5	ME-ICP41 Mo ppm 1	ME-ICP41 Na % 0.01	ME-ICP41 NI ppm 1	ME-ICP41 P ppm 10	ME-ICP41 Pb ppm 2	ME-ICP41 S % 0.01	ME-ICP41 Sb ppm 2	ME-ICP41 Sc ppm 1
4301 4302 4303 4304		15.3	10	<1	0.42	10	0.71	720	3	0.26	3	910	2	1.64	<2	7



**EXCELLENCE IN ANALYTICAL CHEMISTRY** 

ALS Canada Ltd.

212 Brooksbank Avenue North Vancouver BC V7J 2C1 Canada Phone: 604 984 0221 Fax: 604 984 0218 10: TAKMAG MANAGEMENT LTD. 1250 W HASTINGS ST VANCOUVER BC V6E 2M4

Project: Bluehawk

Page: ∠ - C Total # jes: 2 (A - C) bc.e: 1-JUN-2004 Account: TARMAN

**CERTIFICATE OF ANALYSIS VA04030373** 

Sample Description	Method Analyte Units LOR	ME-ICP41 Sr ppm 1	ME-ICP41 Ti % 0.01	ME-ICP41 Ti ppm 10	ME-ICP41 U ppm 10	ME-ICP41 V ppm 1	ME-ICP41 W ppm 10	ME-ICP41 Zn ppm 2	Au-AA23 Au ppm 0.005	
4301 4302 4303 4304		38	0.16	<10	<10	77	<10	69	0.019	
										<u>-</u>