

| |
|--|
| GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORTS |
| DATE RECEIVED SEP 20 1995 |
| |

RECEIVED

SEP - 1 1995

Gold Commissioner's Office
VANCOUVER, B.C.

PROSPECTING AND GEOCHEMICAL ASSESSMENT REPORT

for the

NEED 1 - 10 MINERAL CLAIMS

CLINTON MINING DIVISION

Latitude 51⁰ 39' North Longitude 120⁰ 38' West

Owned by: Pacific West Charters Ltd.
P.O. Box 3566
Vancouver, B.C.
V6B 3Y6

Operated by: Pacific West Charters Ltd.
P. O. Box 3566
Vancouver, B.C.
V6B 3Y6

FILMED

Kieran Downes, Ph.D., P.Geo.

August 1995

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

24,039

TABLE OF CONTENTS

| | PAGE |
|---|------|
| SUMMARY | 1 |
| RECOMMENDATIONS | 1 |
| 1.0 INTRODUCTION | 2 |
| 2.0 LOCATION AND ACCESS | 2 |
| 3.0 OWNERSHIP | 2 |
| 4.0 PSYIOGRAPHY | 2 |
| 5.0 GEOLOGY | 2 |
| 6.0 PREVIOUS WORK | 2 |
| 7.0 1995 PROGRAM BY PACIFIC CHARTERS LTD. | 4 |
| 7.1 Introduction | 4 |
| 7.2 Work Program | 4 |
| 7.3 Analysis | 4 |
| 7.4 Results | 5 |
| 7.5 Discussion | 10 |
| 8.0 CONCLUSIONS | 11 |
| 9.0 REFERENCES | 12 |
| 10.0 STATEMENT OF EXPENDITURES | 13 |
| 11.0 STATEMENT OF QUALIFICATIONS | 14 |

LIST OF FIGURES

| | PAGE |
|--------------------------|----------------|
| FIGURE 1 LOCATION MAP | 3 |
| FIGURE 2 PROPERTY MAP | In Back Pocket |

APPENDICES

| | |
|--------------|----------------|
| APPENDIX I | ROCK ANALYSES |
| APPENDIX II | SOIL ANALYSES |
| APPENDIX III | HUMUS ANALYSES |

SUMMARY

In 1989 and 1990 Placer Dome Inc. outlined a very extensive and significant NE-trending gold-in-soil anomaly in the area now covered by the NEED claims. The anomaly, which extends at least 3.8 kms, parallels structures interpreted from Landsat imagery and a VLF-EM survey. The anomaly has never been trenched or drilled.

In 1995 the anomaly was prospected, selected segments were geochemically sampled and the character of the overburden established through pitting within the anomaly. New clear cuts were also prospected and mapped.

The better gold values (up to 850 ppb Au) are found at the higher elevations at the northeast end of the grid where the till is thin and the mineralised bedrock is likely closer to surface. At lower elevations, where the till is overlain by fluvial sediments, colluvium and locally organic peaty sediments, the anomaly is more subdued (30 - 50 ppb Au). Geochemical analyses indicate the gold is present substantially as particulate gold in the till and as hydromorphically sorbed species in the younger overlying sediments.

RECOMMENDATIONS

1. Trench the anomaly on Lines 11200E, 11000E, 10800E, 9600E, 8400E and 7800E.
2. Drill test any significant mineralised structures that are found.

1.0 INTRODUCTION

The *NEED* claims overly Nicola Group volcanics and sediments within the Quesnel Trough (Figure 1). The *NEED* 1 - 7 claims were staked in June 1994 to cover a significant gold-in soil anomaly which extends almost 4 kms along strike. *NEED* 8 - 10 were staked in June 1995 to cover the eastern extension of the anomaly.

2.0 LOCATION AND ACCESS

The claims are located in the Clinton Mining Division at longitude $120^{\circ} 38'$ west and latitude $51^{\circ} 39'$ (1:50,000 NTS sheet 92P/10). The claims are approximately 110 kms north of Kamloops and approximately 50 kms east of 100 Mile House. Access is via various offshoots of the Needa Lake logging road which connects to Highway #24.

3.0 OWNERSHIP

The claims, *NEED* 1 - 10 totalling 29 units, are owned 100% by Pacific West Charters Ltd. *NEED* 1 - 7 were staked in June 1994 and *NEED* 8 - 10 were staked in June 1995. *NEED* 1 - 7 are protected to June 3, 1996. *NEED* 8 - 10 are protected to May 25, 1996.

4.0 PSYIOGRAPHY

The claims straddle a ridge between the generally west flowing Wind Creek and Jim Creek drainage systems, immediately northeast of English Lake (Figure 3). Relief ranges from 1,188 to 1490 metres above sea level. The entire area has been glaciated and younger fluvial sands and gravels are present in the valleys. Parts of the claims have been logged. The remaining, unlogged portions comprise mature spruce or fir.

5.0 GEOLOGY

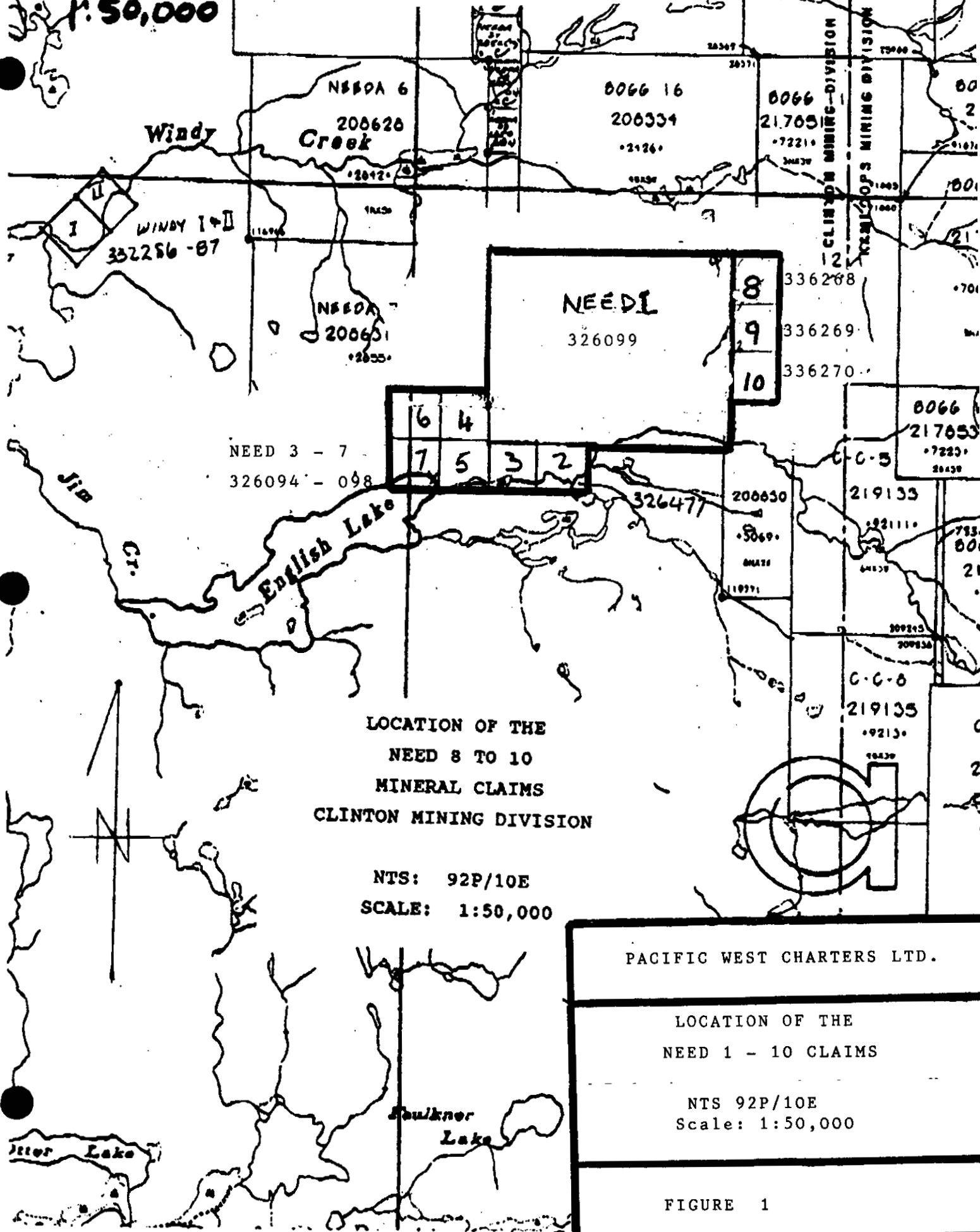
On a regional scale the *NEED* claims overly Upper Triassic to Lower Jurassic Takla-Nicola Group volcanics and sediments. At the property scale the geology consists of siltstone, greywacke, volcanoclastics, andesitic volcanics (flows, tuffs and breccias) and minor felsic volcanics. Glacial till is exposed at higher altitudes while gravels, colluvium and peaty/organic deposits dominate at lower altitudes.

Two major structures, one of NE-trend and one of NW-trend, are interpreted on the basis of Landsat imagery. The NE-trending structure appears to control the gold-in-soil anomaly over its entire strike length.

6.0 PREVIOUS WORK

In 1989, Placer Dome Inc. conducted a multi-element bulk stream sediment survey (160 samples) throughout the district and reconnaissance grids were established over anomalous

92P/10E
1:50,000



LOCATION OF THE
NEED 8 TO 10
MINERAL CLAIMS
CLINTON MINING DIVISION

NTS: 92P/10E
SCALE: 1:50,000

| |
|---------------------------------------|
| PACIFIC WEST CHARTERS LTD. |
| LOCATION OF THE NEED 1 - 10 CLAIMS |
| NTS 92P/10E Scale: 1:50,000 |
| FIGURE 1 |

areas (Warner, 1990). The NEED grid, then termed the EN grid, was established over several drainages anomalous in both gold and tungsten. Subsequent soil sampling identified a large, NE-trending gold (+ copper) anomaly, 1.2 kms long and 300 metres wide. The trend of the anomaly @ 060° is parallel to the base line and to a significant NE-trending structure, interpreted from Landsat imagery. Both the structure and the anomaly are approximately parallel to the probable ice direction and both also parallel the orientation of the Jim Creek/English Lake valley. A second, NW-trending structure, also interpreted from Landsat imagery, intersects the former near Line 10700E.

In 1990, Placer Dome Inc. extended the NEED grid to the northeast and established infill lines over the better portions of the gold-in-soil anomaly identified in 1989. The extension and infill lines were soil sampled, and the entire grid was mapped and surveyed with ground magnetics and VLF-EM (Warner et al, 1990). Upon completion of this work Placer concluded the gold anomaly, now close to 4 km in length, was likely related to the NE-trending structure interpreted from Landsat imagery. A shorter subparallel gold anomaly, northeast of the main anomaly is coincident with a VLF-EM conductor. There are no obvious structural patterns evident in the magnetics.

7.0 1995 PROGRAM BY PACIFIC CHARTERS LTD.

7.1 Introduction

The 1995 field program, carried out between May 20 to 25, had the following objectives:-

- (a) prospect the gold-in-soil anomaly to determine if a controlling geological structure is present.
- (b) map the distribution of till, gravel, colluvium and organic peaty deposits in selected portions of the anomaly.
- (c) through selective sampling and analysis determine the mode of occurrence of the gold in the soils.
- (d) prospect/map new clear cuts.

7.2 Work Program

The more significant segments of the gold-in-soil anomaly were prospected and new bedrock exposures in the clear cuts were sampled. Test pits were dug in significant segments of the anomaly, and in selected other areas to evaluate the anomaly and the character of the soils throughout the grid. A number of anomalous sites were resampled in order to check the distribution of gold in the soil profile. Typically, about 250 gms of organics were collected together with approximately 1 kg of B-horizon. Large soil samples were collected to ensure an adequate volume of fines for analysis.

7.3 Analyses

All Au analyses (rock, soil and humus) were performed at Dunn Analytical Laboratories Inc. of Saskatoon. Two soil samples were also analysed for Ag, Mo, W and Hg at the

Saskatchewan Research Council's geochemical laboratory, Saskatoon. All analyses are presented in Appendices I, II and III.

Au analyses were carried out as follows:-

rock samples were coarse crushed to - 15 mesh. A 250 gm sub sample was pulverised to 90% passing -150 mesh and a 30 gm sample of this material was analysed by fire assay preconcentration with an atomic absorption finish.

soil samples were sieved to - 250 mesh. A 15 gm sample was extracted in aqua regia and the solution was analysed by atomic absorption (detection limit 5 ppb Au).

humus samples were first macerated and a 10 gm sample was analysed by fire assay preconcentration with an atomic absorption finish.

Ag, Mo, W and Hg analyses were carried out as follows:-

soil samples were sieved to - 80 mesh. A 1 gm sample was extracted in aqua regia and the solution was analysed by Inductively Coupled Plasma Emission Spectrometry.

Placer's samples were collected from a depth of 20 - 30 cms using a hand held auger and only the -80 mesh fraction of the soils, which includes fine sand, silt and clay, was analysed. Particulate gold as well as gold sorbed onto clay/silt will report in this fraction. During this program the -250 mesh fraction of the B and C horizons, as well as the organics, were analysed. The -250 mesh fraction, which includes only silt and clay, was chosen because various studies (Bloom et al, 1989 and Gleeson et al, 1989) have shown this to be the preferred fraction for analysis in tills. This fraction reflects fine free gold, gold released from sulphides and any gold reprecipitated by post glacial processes. Also, by comparing the results of the -250 mesh and -80 mesh fractions an estimate of the amount of fine sand sized particulate gold can be made. The organics were analysed because gold bypasses the B horizon as it is taken up by trees and other vegetation and is returned to the surface when leaves fall where it is incorporated into humus.

7.4 Results (see Figure 3)

Outcrop is very, very rare due to a virtually complete blanket of overburden even on the ridge top. The only outcrop found was on the ridge top where the glacial till is thin (Site 10 - see below), and in some road cuts in the newly clear cut areas. Occasionally, sedimentary or volcanic boulders were found on the slope usually above the baseline. No bedrock structure was identified due to the lack of outcrop. Several prominent breaks in slope occur parallel to the base line and may be the expression of the structure.

1995 analyses are included in the following discussion of sites sampled together with analyses obtained by Placer. Because of the variable nature of the

overburden Placer, by employing a standard sampling depth of 20 - 30 cms, did not sample the same material everywhere on the grid.

Site 1 (L8700E/10300N) The sample site is on a break in slope and was thought to be the extension of the 30 ppb Au anomaly @ L8600E/10350N. The area of the site comprises open country with large stands of aspen and pine. Profile:-

- 0 to 40 cms: brown B-horizon with fragments of intermediate volcanics and very rare granitic fragments (Sample A - 10 ppb Au)
- 40 - 50 cms: transitional B to C horizon. Dark brown to limonitic colour. Rare pebbles of intermediate volcanics. Increase in clay content (Sample B - 5 ppb Au).
- 50 - 70 cms: limonitic, sandy and clay rich till. Rare pebbles of intermediate volcanics (Sample C - <5 ppb Au).

Site 2 (L8400E/10075N)

The sample site, in low lying swampy ground with black peaty organics overlying wet fluvial sandy gravels, is part of a 200 metre long anomaly segment with a maximum value of 40 ppb Au at this site (Placer data). Profile:-

- 0 - 10 cms: black peaty organic material (Sample A - 15 ppb Au).
- 10 - 50 cms: wet, light brown coloured, limonitic sandy gravels with occasional thin clay seams (Sample B - 35 ppb Au).

Sample B's analysis matches Placer's analysis. In this instance gravels/clays and not till were sampled. Pits were also dug at L8400E/10000N, L8200E/10050N and L8200E/10100N. All sites exhibited similar profiles.

Site 3 (L8000E/10200N)

This site, in wet low lying swampy ground with black peaty organics overlying wet fluvial gravels, is at the southwest end of a weak segment of the anomaly (Placer - 20 ppb Au). The profile is similar to Site 2. No sample taken.

Site 4 (L7800E/10150N)

This site in wet low lying swampy ground with black peaty organics overlying wet fluvial gravels, is part of a broader anomaly segment (Placer - 55 ppb Au) trending of the grid. The profile is similar to Site 2. No sample taken.

Site 5 (L11100E/10400N)

This sample site is on the east side of a depression where water has pooled probably during the spring melt and is outside the area sampled by Placer. Profile:-

- 0 - 15 cms: brown to black organic layer (Sample A - 20 ppb Au).
- 15 - 60 cms: strongly oxidised gravels with pebbles and cobbles of pyritic, fuchsite-bearing felsic volcanics, sediments and intermediate volcanics (Sample B - 25 ppb Au).

The organics are quite anomalous at this locale probably due to a mix of auriferous forest litter and adsorption of geochemical gold. A sample of the felsic volcanic (NR-4) analysed at 30 ppb Au.

Site 6 (L11000E/10225N)

Barren sediments are exposed at 10180N on this line. The gold-in-soil anomaly here (Placer - 90 ppb Au) is not drainage related. Profile:-

0 - 5 cms: brown organic layer (Sample A - 15 ppb Au).

5 - 55 cms: ochreous pebbly gravel with pebbles and cobbles of sediments and pyritic, fuchsite-bearing felsic volcanics (Sample B - 50 ppb Au).

The analysis of Sample B is clearly anomalous at just over half the value obtained by Placer. The organics are also moderately anomalous.

Site 7 (L11000E/10125N)

The gold-in-soil anomaly here is not related to drainage (Placer - 55 ppb Au). Profile:-

0 - 5 cms: forest litter/organic layer (Sample A - 50 ppb Au).

5 - 10 cms: ochreous B-horizon developed on till (Sample B - 15 ppb Au).

10 - 55 cms: limonitic washed till with pebbles of sediments and rare intermediate volcanics (Sample C - 70 ppb Au).

Both the organics and the till are anomalous at this locale. The low value of the B-horizon is unusual as B-horizon soils developed on auriferous tills are generally not depleted in gold (Gleeson et al, 1989).

Site 8 (L11000E/10025N)

This sample site is in a small depression close to the creek which lies at the centre of a 75 metre wide drainage valley (Placer - 145 ppb Au). Profile:-

0 - 15 cms: brown to black organic layer (Sample A - 25 ppb Au).

15 - 55 cms: oxidised, limonitic washed till with pebbles and cobbles of sediments, minor intermediate volcanics, rare felsic volcanics and one quartz pebble (Sample B - 70 ppb Au).

Both the organics and the till are very anomalous at this locale. The gold value of the -80 mesh fraction is approximately twice the value of the -250 mesh fraction suggesting the presence of fine sand sized gold.

Site 9 (L11300E/10075N)

This sample site lies on the eastern boundary of claim NEED 9, on a steep hill slope. (Placer - 850 ppb Au). Profile:-

0 - 5 cms: humus layer (Sample A - 110 ppb Au).

5 - 25 cms: ochreous washed till (Sample B - 230 ppb Au).

All samples collected at this site are anomalous. A comparison of the -80 mesh and -250 mesh values suggests a significant proportion of the gold (73%) is present in the fine sand

fraction. The humus too is highly anomalous clearly reflecting the auriferous character of the till.

Site 10 (L11300E/10050N)

This sample site also lies on the same steep hill slope as Site 9 (Placer - 435 ppb Au). ritic sediments with thin 1 - 3 mm quartz veins orientated @ 335⁰/75⁰NE are exposed at this locale (NR-9 @ 30 ppb Au). Profile:-

0 - 5 cms: humus (Sample A - 30 ppb Au).

5 - 25 cms: brown stoney, pebbly washed till with pebbles of (pyritic) sediments (Sample B - 120 ppb Au).

A comparison of the -80 mesh and -250 mesh values suggests a significant proportion of the gold (73%) is present in the fine sand fraction. The percentage is the same at both Site 9 and 10 despite the fact that the gold values are significantly different. The humus too is very anomalous.

Site 11 (L11200E/10300N)

This sample site lies on a steep hill slope (Placer - 230 ppb Au). Profile:-

0 - 5 cms: organic layer (Sample A - 10 ppb Au).

5 - 10 cms: brown, B-horizon developed on fluvial gravel (Sample B - 15 ppb Au).

10 - 50 cms: fluvial gravel (Sample C - 35 ppb Au).

A comparison of the -80 mesh and -250 mesh values suggests a significant proportion of the gold is present in the fine sand fraction. The gold content of the organics is weakly anomalous.

Site 12 (L11200E/10000N)

This sample site lies on a moderate slope on the baseline (Placer - 110 ppb Au). Profile:-

0 - 5 cms: humus layer (Sample A - 15 ppb Au).

5 - 25 cms: brown B-horizon developed on glacial till under a grey-white (fluvial ?) silty layer (Sample B - 25 ppb Au).

Both the humus and till are moderately anomalous. A comparison of the -80 mesh and -250 mesh values indicates gold in the fine sand fraction.

Site 13 (L11200E/9975N)

This sample site lies at the foot of the the hill on which Sites 9 and 10 were sampled. (Placer - 135 ppb Au). Profile:-

0 - 5 cms: humus layer (Sample A - 5 ppb Au).

5 - 50 cms: poor B-horizon developed on on very stoney washed till. Pebbles of sediments dominant over rare intermediate volcanics (Sample B - 40 ppb Au).

Both the -80 mesh and -250 mesh values are anomalous and the presence of gold in the fine sand fraction is indicated. The humus is not anomalous at this locale. The till is anomalous

Site 14 - Clear Cut on West Boundary of NEED 1

Test pits were dug along the southern edge of the clear cut. Two south flowing creeks are present one at the western edge and one at the eastern edge. The bed of the western creek is approximately 3 metres below the surface. There is no bedrock exposed, however, intermediate volcanics and fine grained sediments are exposed upslope. The profile exposed in the creek is:-

- 0 - 15 cms: forest litter and humus (Sample 95N-1: <5 ppb Au).
- 15 - 20 cms: pale yellow limonitic pebbly clay (Sample 95N-4: 15 ppb Au).
- 20 - 250 cms: limonitic pebbly till. Pebbles are rarely angular and are composed entirely of sediments, intermediate volcanics and minor agglomerate (Sample 95N-2: <5 ppb Au).

Sample 95N-3 (25 ppb Au) is stream bed gravel and screened to - 1/2".

Samples 95N-5 & 6 were collected from a pit near the eastern edge of the clear cut as the creek bed is virtually overgrown. Profile:-

- 0 - 15 cms: forest litter and humus.
- 15 - 25 cms: red B-horizon soil with rare pebbles of intermediate volcanics and sediments (Sample 95N-5: <5 ppb Au).
- 25 - 60 cms: grey to limonitic pebbly till with pebbles of intermediate volcanics and sediments (Sample 95N-6: 35 ppb Au).

Samples 95N-7 & 8 were collected from a road cut. Profile:-

- 0 - 10 cms: forest litter and humus.
- 10 - 20 cms: red B-horizon soil (Sample 95N-7: 5 ppb Au).
- 20 - 55 cms: grey to limonitic pebbly till with pebble of intermediate volcanics and sediments (Sample 95N-8: 15 ppb Au).

Site 15 - Clear Cut on North Boundary of NEED 1.

No samples were taken at this road cut which shows 3 - 4 metres of gravelly till (washed) with rounded to sub rounded boulders, cobbles and pebbles of sediments, intermediate volcanics, often vesicular, felsic volcanics and rare altered feldspar porphyry.

Site 16 - Clear Cut in North-Central NEED 1

Samples L94-1, 2 & 3 were collected from the southwest corner of the clear cut. Profile:-

- 0 - 5 cms: organic layer (Sample L94-1: <5 ppb Au).
- 5 - 15 cms: red B-horizon soil (Sample L94-2: <5 ppb Au).
- 15 - 100 cms: sandy to gravelly till with pebbles and cobbles of intermediate volcanics and sediments (Sample L94-3: 25 ppb Au).

Sample L94-4 (15 ppb Au), a B-horizon soil, was collected adjacent to a bleached, barren, hydrothermally altered volcanic (?) in the southeast corner of the clear cut.

Samples L94-5 & 6 were collected adjacent to a barren, friable, 30 cm wide clay-quartz breccia in the southeast corner of the clear cut. L94-5 (10 ppb Au) is a B-horizon soil. L94-6 (10 ppb Au) is an underlying limonitic, gravelly, clay rich, pebbly till without cobbles or boulders. The pebbles are of sediments and intermediate volcanics.

Nine rock samples were collected for assay:-

Site 14:- NR-1 and NR-3

Site 5 :- NR-4

Site 15 :- NR-5 and NR-6

Site 16:- NR-8

Site 10:- NR-9

NR-1: pyritic quartz veined sediments. The quartz veins which strike 130° are typically 1 - 3 mm wide. (5 ppb Au).

NR-3: pyritic (+ rare chalcopyrite), fuchsite-bearing felsic volcanic outcrop. (10 ppb Au).

NR-4: pyritic, fuchsite-bearing felsic volcanic cobble in gravel. (30 ppb Au).

NR-5: pyritic felsic volcanic outcrop. (15 ppb Au).

NR-6: calcareous, pyritic outcrop. Carbonate present as thin (<1mm) veinlets and in the matrix. (20 ppb Au).

NR-8: friable clay-quartz breccia outcrop. (5 ppb Au).

NR-9: outcrop of pyritic sediments with 1 - 3 mm quartz veinlets. (30 ppb Au).

7.5 Discussion

Good till is exposed at the higher elevations and good B-horizon soils are developed on this till. At lower elevations the till becomes overlain by fluvial sediments, colluvium and organic peaty material. Also, the till where exposed is frequently winnowed or washed such that the fines are removed. The better geochemical values (and anomalies) are obtained at the higher elevations where the till is exposed e.g. Sites 9 and 10. Lower values (weaker anomalies) are obtained at lower elevations where the till is typically winnowed and/or overlain gravels, colluvium or organics e.g. Site 2. Placer Dome's samples were collected from a depth of 20 to 30 cms using a hand held auger. Because of this the till has not been sampled consistently, especially at the lower elevations, due to the presence of younger sediments of different composition and origin. Despite this the gold-in-soil anomaly is remarkably persistent, it tracks the NE-trending structure interpreted from Landsat imagery, and is not controlled by drainage - it cross cuts drainage. The linear character of the anomaly clearly indicates the structure is controlling the distribution of the gold.

A comparison of the -80 mesh and -250 mesh gold values indicate significant gold in the fine sand fraction of the till, close to the projected trace of the NE-trending structure interpreted from Landsat imagery, at higher elevations. At lower elevations the anomalies are more subdued (30 to 50 ppb Au) and both the -80 mesh and -250 mesh analyses give somewhat similar results.

Outcrop is extremely rare on the grid being present only locally at the northeast end of the grid at higher altitudes, and there is limited outcrop in the clear cuts. Seven rock samples were analysed. These were pyritic, hydrothermally altered sediments and volcanics. The highest value was 30 ppb Au from altered volcanics. Clearly, these pyritised volcanics and sediments are not the source of the gold.

8.0 CONCLUSIONS

1. The gold-in-soil anomaly is almost 4 kms long and is spatially related to structures interpreted from Landsat imagery and VLF-EM surveys. It trends northeasterly and is exposed at elevations ranging from 1220 to 1400 metres. It is not controlled by drainage.
- 2.,. Outcrop is very rare and the interpreted structures have not been found in outcrop.
3. A glacial till is present and the best gold values are found at higher elevations at the northeast end of the grid where the till is thin and the mineralized bedrock is likely closer to surface.
4. The gold anomaly is persistent but more subdued at lower elevations due to the presence of colluvium, fluvial sediments and local organic peaty sediments which overlie the till.
5. Analyses indicate the presence of significant gold in the fine sand fraction of the auriferous till where exposed at higher elevations. At lower elevations the gold anomaly may be the result of geochemical dispersion into the younger overlying sediments.
6. Pyritized and hydrothermally altered volcanics and sediments are not enriched in gold and cannot be the source of the anomaly.

9.0 REFERENCES

Bloom, L.B. and Steele, K.G. (1989): in *Drift Prospecting*, eds. R.N.W. DiLabio and W.B. Coker; Geological Survey of Canada Paper 89-20.

Gleeson, C.F., Rampton, V.N., Thomas, R.D. and Paradis, S. (1989): in *Drift Prospecting*, eds. R.N.W. DiLabio and W.B. Coker; Geological Survey of Canada Paper 89-20.

Warner, L. (1990): *Geochemical Assessment Report for the NEEDA 1-2, 4-11, 15, 17-29, 33, 34, 40-43 Mineral Claims, Clinton Mining Division. Report for Placer Dome Inc.*

Warner, L. Edwards, K. & Cannon, R.W. (1990): *Geological, Geophysical and Geochemical Assessment Report for the NEEDA 5-8, 29, 33, 34; BOGG 1-4, 7-20 and CC 1-8 Mineral Claims, Clinton Mining Division. Report for Placer Dome Inc.*

STATEMENT OF EXPENDITURES

| | | |
|--|---------------|--------------------|
| Personnel | | |
| Kieran Downes, Consulting Geologist: 10 days @ \$400/day | \$ 4,000.00 | |
| Glen Kline, prospector: 1 day @ \$200/day | <u>300.00</u> | 4,300.00 |
| Accommodation | | |
| 7 nights @ \$50/night | <u>350.00</u> | 350.00 |
| Food | | |
| 7 days @ \$25/day | <u>175.00</u> | 175.00 |
| Transportation | | |
| Airfare | 390.00 | |
| 4x4 pick-up truck rental: 7 days @ \$35/day | 365.00 | |
| Fuel and Oil | 120.00 | |
| Taxi | <u>42.00</u> | 820.00 |
| Analysis | | |
| 25 mineral soil samples for Au @ \$14/sample | 360.00 | |
| 2 mineral soil samples for multi-element analysis | 30.00 | |
| 11 organic soil samples for Au @ \$14/sample | 175.00 | |
| 7 rock samples for Au @ \$14/sample | <u>94.00</u> | 653.00 |
| Miscellaneous | | |
| Communications and field equipment usage | <u>50.00</u> | 50.00 |
| Report Preparation | | |
| Compilation and writing | <u>800.00</u> | <u>800.00</u> |
| TOTAL EXPENDITURES | | \$ 7,148.00 |

STATEMENT OF QUALIFICATIONS

I, **KIERAN M.J. DOWNES**, of the City of Saskatoon, Province of Saskatchewan, DO HEREBY CERTIFY THAT:

- 1) I am a Consulting Geologist with a business office at 355 Avondale Road, Saskatoon, Saskatchewan, S7H 5B4; and President of KIERAN DOWNES & ASSOCIATES LTD.
- 2) I graduated from University College Galway, Ireland in 1971 with a Bachelor of Science Honours Geology degree, and from Trinity College Dublin, Ireland in 1974 with a Ph.D. degree in Geology.
- 3) I am a Registered Member of the Association of Professional Engineers of Saskatchewan (No. 4892) with a permit to consult, and a Registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia (No. 21005).
- 4) I have practised my profession as a geologist for the past twenty three years and my professional experience includes:
 - Post Doctoral Fellow with the Institute for Industrial Research & Standards, Dublin, Ireland (1974 - 1977).
 - Senior Geologist with Minatome S.A. of Paris, France (1977 - 1980).
 - Successively: Project Geologist, District Geologist and Senior Geologist with the Saskatchewan Mining Development Corporation (1980 - 1988).
 - Exploration Manager with Cameco Corporation (1988 - 1992).
 - Consulting Geologist (1992 - 1995).
- 5) I own no direct, indirect or contingent interest in the subject claims, nor shares in or securities of Pacific West Charters Ltd.
- 6) I carried out the exploration program on the NEED 1 - 10 claims in May 1995. This report documents the results of that program.



KIERAN M.J. DOWNES, Ph.D., P.Ge.

Dated at Saskatoon this 31st day of August, 1995

APPENDIX I

Dunn Analytical Laboratories Inc.

Bay 2 - 630 45th Street West
Saskatoon, Saskatchewan
Canada S7L 5W9
Phone: 306-242-9088 Fax: 306-242-9591

Report # 50180

Kieran Downes

3908 Taylor Street East
Saskatoon, Sask.
S7H 5H5

No. of Samples: 7
Sample Type: Rock

Attention: **Kieran Downes**

Reference # 0

| Sample Number | Au ppb |
|---------------|--------|
| NR-1 | 5 |
| NR-3 | 10 |
| NR-4 | 30 |
| NR-5 | 15 |
| NR-6 | 20 |
| NR-8 | 5 |
| NR-9 | 30 |

May 29, 95

Signed Bernie Dunn

APPENDIX II

Dunn Analytical Laboratories Inc.

Bay 2 - 630 45th Street West

Saskatoon, Saskatchewan

Canada S7L 5W9

Phone: 306-242-9088

Fax: 306-242-9591

Report # 50179

Kieran Downes

3908 Taylor Street East

Saskatoon, Sask.

S7H 5H5

No. of Samples: 29

Sample Type: Soil

Attention: Kieran Downes

Reference # 0

| Sample Number | Au ppb |
|------------------|--------|
| L94-1 | < 5 |
| L94-2 | < 5 |
| L94-3 | 25 |
| L94-4 | 15 |
| L94-5 | 10 |
| L94-6 | 10 |
| N95-2 | < 5 |
| N95-3 | 25 |
| N95-4 | 15 |
| N95-5 | < 5 |
| N95-6 | 35 |
| N95-7 | 5 |
| N95-8 | 15 |
| L8000E-10200N | 40 |
| L8400E-10075N | 35 |
| L8700E-10300N-A | 10 |
| L8700E-10300N-B | 5 |
| L8700E-10300N-C | < 5 |
| L11000E-10025N-B | 25 |
| L11000E-10125N-B | 15 |

May 29, 95

Signed



Dunn Analytical Laboratories Inc.

Bay 2 - 630 45th Street West

Saskatoon, Saskatchewan

Canada S7L 5W9

Phone: 306-242-9088

Fax: 306-242-9591

Report # **50179**

Kieran Downes

3908 Taylor Street East

Saskatoon, Sask.

S7H 5H5

No. of Samples: 29

Sample Type: Soil

Attention: **Kieran Downes**

Reference # 0

| Sample Number | Au ppb |
|------------------|--------|
| L11000E-10125N-C | 70 |
| L11000E-10225N-B | 50 |
| L11100E-10400N-B | 25 |
| L11200E-9975N-B | 40 |
| L11200E-10000N-B | 25 |
| L11200E-10300N-B | 15 |
| L11200E-10300N-C | 35 |
| L11300E-10050N-B | 120 |
| L11300E-10075N-B | 230 |

May 29, 95

Signed

Bernie Dunn

SASKATCHEWAN RESEARCH COUNCIL GEOCHEMICAL LAB

=====

M129 DOWNES JUNE 8/95 (3) PG. 1285 [1.0 GM REG. DIG.]
 OT95.33

1 As HNO3/HCL ICP
 2 Sb HNO3/HCL ICP
 3 Bi HNO3/HCL ICP
 4 Te HNO3/HCL ICP
 5 Pb HNO3/HCL ICP
 6 Ni HNO3/HCL ICP
 7 Co HNO3/HCL ICP
 8 Cu HNO3/HCL ICP
 9 Zn HNO3/HCL ICP

| | As | Sb | Bi | Te | Pb | Ni | Co | Cu | Zn |
|----------------|-----|-----|-----|-----|-----|-----|-----|------|------|
| LS3 | 8.7 | 0.2 | 0.2 | 0.7 | 15. | 42. | 34. | 52. | 198. |
| L11300E 10050N | 6.5 | 0.9 | 0.2 | 0.5 | 7. | 11. | 13. | 64. | 55. |
| L11300E 10075N | 9.1 | 0.8 | 0.4 | 0.5 | 7. | 15. | 16. | 148. | 79. |

SASKATCHEWAN RESEARCH COUNCIL GEOCHEMICAL LAB

=====

M129 DOWNES JUNE 8/95 (3) PG. 1285 [1.0 GM REG. DIG.]

1 Ag HNO3/HCL ICP
 2 Mo HNO3/HCL ICP
 3 W HNO3/HCL ICP
 4 Hg HNO3/HCL ICP

OT95.33

5
 6
 7
 8
 9

| | Ag | Mo | W | Hg |
|----------------|-----|-----|-----|-----|
| LS3 | 0.2 | 13. | 1. | 0.2 |
| L11300E 10050N | 0.4 | 1. | 47. | 0.2 |
| L11300E 10075N | 0.5 | 1. | 9. | 0.2 |

APPENDIX III

Dunn Analytical Laboratories Inc.

Bay 2 - 630 45th Street West

Saskatoon, Saskatchewan

Canada S7L 5W9

Phone: 306-242-9088

Fax: 306-242-9591

Report # 50181

Kieran Downes

3908 Taylor Street East

Saskatoon, Sask.

S7H 5H5

No. of Samples: 11

Sample Type: Humus

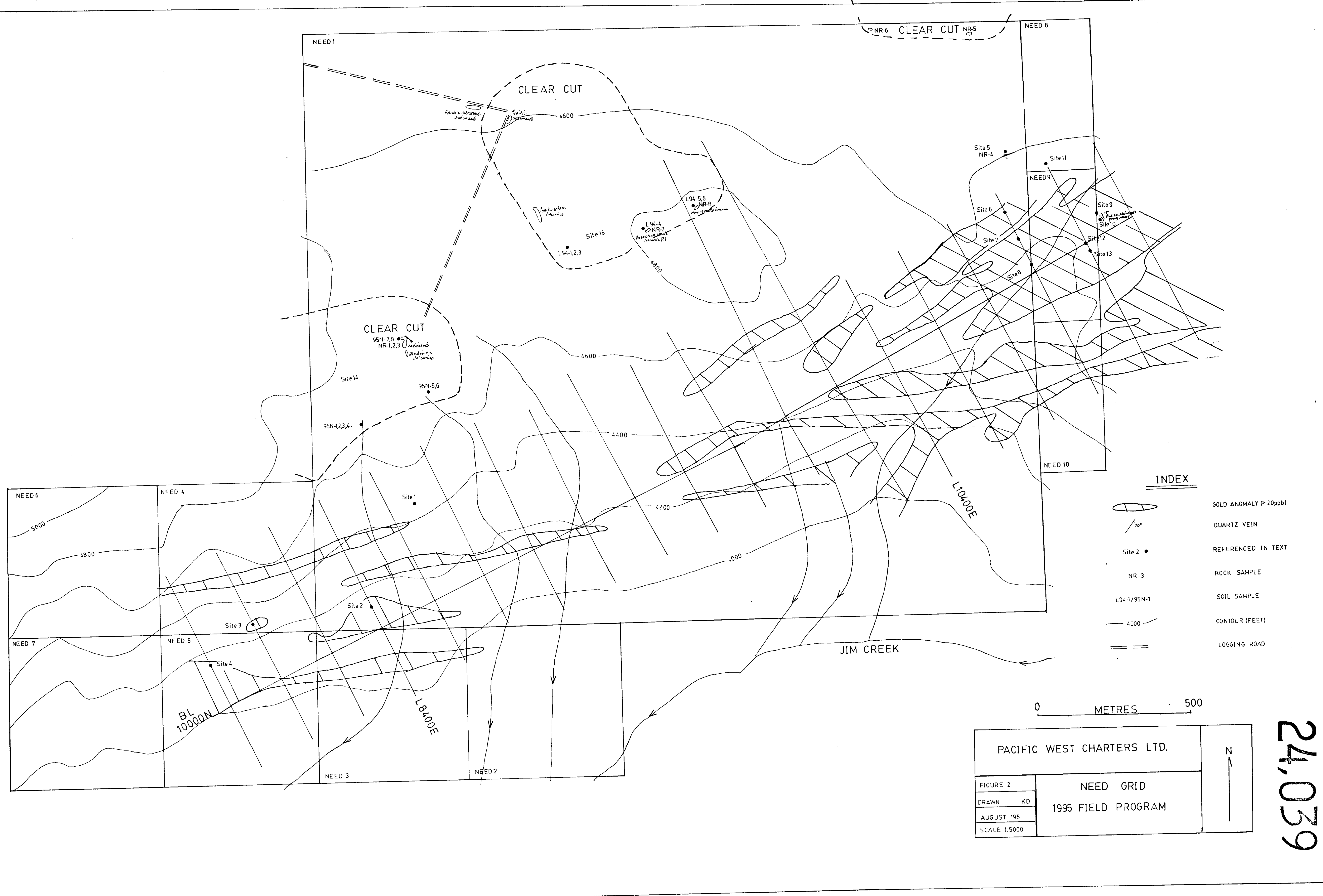
Attention: **Kieran Downes**

Reference # 0

| Sample Number | Au ppb |
|----------------|--------|
| N-95-1 | <5 |
| L8400E-10075N | 15 |
| L11000E-10025N | 10 |
| L11000E-10125N | 50 |
| L11000E-10225N | 15 |
| L11100E-10400N | 20 |
| L11200E-9975N | 5 |
| L11200E-10000N | 15 |
| L11200E-10300N | 10 |
| L11300E-10050N | 30 |
| L11300E-10075N | 110 |

May 29, 95

Signed Bernie Dunn



INDEX

| | |
|--|------------------------|
| | GOLD ANOMALY (> 20ppb) |
| | QUARTZ VEIN |
| | REFERENCED IN TEXT |
| | ROCK SAMPLE |
| | SOIL SAMPLE |
| | CONTOUR (FEET) |
| | LOGGING ROAD |

0 METRES 500

| | | |
|----------------------------|--------------------|--|
| PACIFIC WEST CHARTERS LTD. | | |
| FIGURE 2 | NEED GRID | |
| DRAWN KD | 1995 FIELD PROGRAM | |
| AUGUST '95 | | |
| SCALE 1:5000 | | |

24,039
 GEOLOGICAL BRANCH
 ASSESSMENT REPORT