

**REPORT ON EXPLORATION**

**ON THE**

**BIRCH LAKE PROPERTY**

**RED LAKE MINING DIVISION  
PROVINCE OF ONTARIO**

**FOR**

**TRADE WINDS VENTURES INC.  
Suite 101, 1220 Eastview Road  
North Vancouver BC, V7J 1L6**

**Ronald C. Wells, P.Geo, FGAC  
Kamloops Geological Services Ltd  
910 Heatherton Court  
Kamloops, BC V1S 1P9**

**Effective Date 20<sup>th</sup> February, 2005**

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### **Item 3: Summary**

Trade Wind Ventures Inc. is exploring the Birch Lake Property for shear zone hosted gold deposits. The Main Central Zone is the premier target and has demonstrated potential for higher grade plunging 'gold shoots' with several intercepts in the 20 to 200 g/t Au range. This report examines the past and present exploration on the property and makes recommendations for future work.

The property features 28 mineral claims in the northeastern part of Birch Lake, 120 kilometres by air northeast from Red Lake in northwestern Ontario. Trade Winds has an option on the property from Pelangio Mines Inc. and can earn a 60% interest subject to a 2% NSR (Placer Dome Inc.).

The Birch Lake area in the northeastern parts of the Birch-Uchi greenstone belt features a variety of gold environments; iron formations were a target in the 1980's. Dome Exploration, later Placer Dome conducted a significant amount of exploration in the property area between 1984 and 1996. Much of this was on High Grade Island (Birch Lake Property) with geological, geophysical, geochemical surveys and 9978 metres of diamond drilling in 54 holes. This drilling tested a number of geological and geophysical targets. Two zones of good mineralization were outlined along a northwest trending deformation-shear zone that crosses High Grade Island. Numerous multi-gram gold intercepts were encountered during Placer Dome drilling on the Main Central Zone at shallow vertical depths generally less than 150 metres. A few 1 to 3 g/t gold intercepts were returned from limited drilling on folded iron formation units in the Western Zone, which lies 700 metres to the northwest.

The Main Central Zone is hosted by a deformation panel (shear) that cuts a steeply north dipping sequence of mafic to intermediate volcanics and sedimentary rocks at a shallow angle. Placer Dome's drilling indicated multiple closely spaced gold zones within the panel over a 350 metre strike length and open to depth. The gold zones are typically associated with high strain, stronger alteration (carbonate, sericite, silica), sulfide concentrations (Po, Py, Aspy, Cpy), quartz veins/veinlets and often occur proximal to porphyritic felsic dykes. Structural studies in 1996 suggested the presence of steeply north plunging, higher grade 'gold shoots' within the Main Central Zone.

A two phase drilling program by Trade Winds Ventures Inc. in 2004 concentrated on the southeastern 'gold shoot' with seven closely spaced holes to 350 metres vertical depth. This drilling returned several 20 to 200 g/t gold intercepts with visible gold in quartz-tourmaline veins. These results support the 'gold shoot' model, however more drilling is required along strike (at depth).

A follow-up, 2 phase exploration program is recommended including 5000 metres of drilling testing the Main Central Zone to depth (shoots). Some surface exploration is recommended to re-examine the Main Central Zone to the southeast where recent magnetic data indicates more complex structural geology. Lake sediment sampling is recommended to test for other gold zones beneath the lake.

#### **Item 4: Introduction and Terms of Reference**

The author was contracted by Trade Winds Ventures Inc. to review all relevant exploration data and prepare a technical report conforming to the standards set out in National Instrument 43-101. The company on July 4<sup>th</sup>, 2003 signed a Letter of Intent with Pelangio Mines Inc. to acquire a 60% undivided interest in the Birch Lake Property subject to a 2% NSR to Placer Dome Inc.

This is the second report of this type on the property. An earlier report by Matt Ball P.Geo. for Mosquito Consolidated Gold Mines Ltd in 2002 did not involve a property visit. Drill core was examined in Red Lake (Campbell Mine) but no samples were taken. The author's report is comprehensive and based in part on a property visit, drill core examination and personal sampling (October 22-25, 2004). The compilations by Ball (2002) were very helpful.

Trade Winds Ventures Inc. conducted an exploration program on the property in 2004 supervised by Lorne Warner P.Geo. (qualified person). This program involved an airborne geophysical survey and seven closely spaced holes on the Main Gold Zone (2144.64m) with total costs of \$480,682.48. The drill target was high grade gold in (interpreted) steeply plunging 'shoots' within the deformation-shear zone. The author examined drill core from five of the 2004 holes while visiting High Grade Island in October. He was not involved in the drilling program which was concluded just prior to the visit.

#### **Item 5: Disclaimer**

This report was prepared for Trade Winds Ventures Inc. and is based on a recent property examination and information provided to the author in reports, assorted maps and plans. The latter information is believed to be reliable but cannot be guaranteed as to the accuracy thereof. The author believes that sufficient data was reviewed to support the interpretations and conclusions of this report for exploration purposes.

## Item 6: Property Description and Location

### Location

The Birch Lake Property consists of 28 mineral claims located in the Keigat Lake map area (Plan G-2086), Red Lake Mining Division in northwestern Ontario. This is in the northeastern part of Birch Lake, 120 kilometres northeast of the town of Red Lake and 45 kilometres northeast of the settlement at Uchi Lake (Figure 1). The geographic coordinates are Latitude 51°25'N, Longitude 92°13'30"W. NTS 52N/8. UTM Zone 15 coordinates are 554,000E, 5,697,000N. Figure 2 shows the location of all of the mineral claims.

**Table 1: Birch Lake Property Claim Information**

<u>Claim Number</u>	<u>Recording Date</u>	<u>Claim Due Date</u>
KRL 1023301	1989-FEB-28	2010-FEB-28
KRL 1023302	1989-FEB-28	2009-FEB-28
KRL 1023304	1989-FEB-28	2009-FEB-28
KRL 1057315	1989-FEB-28	2010-FEB-28
KRL 1057316	1989-FEB-28	2009-FEB-28
KRL 1057317	1989-FEB-28	2009-FEB-28
KRL 1138847	1989-NOV-01	2008-NOV-01
KRL 1138850	1989-NOV-01	2008-NOV-01
KRL 1138851	1989-NOV-01	2008-NOV-01
KRL 1138852	1989-NOV-01	2008-NOV-01
KRL 1138857	1989-NOV-01	2008-NOV-01
KRL 1138858	1989-NOV-01	2008-NOV-01
KRL 1138859	1989-NOV-01	2008-NOV-01
KRL 1139101	1989-NOV-01	2008-NOV-01
KRL 1139102	1989-NOV-01	2008-NOV-01
KRL 1139107	1989-NOV-01	2008-NOV-01
KRL 1139154	1989-NOV-01	2008-NOV-01
KRL 1139155	1989-NOV-01	2008-NOV-01
KRL 793985	1984-SEP-18	2008-SEP-18
KRL 793986	1984-SEP-18	2008-SEP-18
KRL 793987	1984-SEP-18	2009-SEP-18
KRL 793988	1984-SEP-18	2009-SEP-18
KRL 807907	1984-MAY-18	2009-MAY-18
KRL 807908	1984-MAY-18	2009-MAY-18
KRL 807996	1984-MAY-18	2009-MAY-18
KRL 807997	1984-MAY-18	2010MAY-18
KRL 807998	1984-MAY-18	2010-MAY-18
KRL 807999	1984-MAY-18	2009-MAY-18

### Property Status

The Birch Lake Property was originally staked in 1984 by Dome Exploration Canada Ltd. It was later acquired by Pelangio Larder Mines Inc., Placer Dome Inc. retained a 2% Net Smelter Return.

In July 2003, Trade Winds Ventures Inc., (TWD-TSX) signed an option agreement with Pelangio Mines Inc. (PLM-TSX) to acquire the Birch Lake Property. The claims comprising the property with expiry dates are listed in Table 1.

Trade Winds can earn a 60% undivided interest in the property subject to staged cash payments, shares and exploration expenditures. A 2% NSR is retained by Placer Dome Inc. The schedule is as follows:

- (i) pay Pelangio a total of \$145,000 in accordance with the following schedule
  - a. \$25,000 within three days of the Effective Date (firm commitment);
  - b. an additional \$30,000 on or before July 31, 2004 (firm commitment);
  - c. an additional \$30,000 on or before July 31, 2005 ;
  - d. an additional \$30,000 on or before July 31, 2006; and
  - e. an additional \$30,000 on or before July 31, 2007 and
  
- (ii) issue Pelangio a total of 200,000 common shares in the capital stock of Trade winds in accordance with the following schedule:
  - a. 25,000 common shares within three days of the Effective Date (firm commitment);
  - b. an additional 25,000 common shares on or before November 1, 2003 (firm commitment)
  - c. an additional 50,000 common shares on or before July 31, 2004;
  - d. an additional 50,000 common shares on or before July 31, 2005; and
  - e. an additional 50,000 common shares on or before July 31, 2006; and
  
- (iii) incur a total of \$1,700,000 (One Million Seven Hundred Thousand Dollars) in exploration expenditures on the Birch Lake Property in accordance with the following schedule:
  - a. \$150,000 to be incurred on or before July 31, 2004;
  - b. an additional \$300,000 to be incurred on or before July 31, 2005;
  - c. an additional \$500,000 to be incurred on or before July 31, 2006 and
  - d. an additional \$750,000 to be incurred on or before July 31, 2007.

### **Reclamation and Permitting**

Some very old surface disturbance with trenches occurred prior to 1984 exploration by Dome Exploration Canada Ltd. These have largely reverted to their natural state.

Trade Winds Venture Inc. hold a permit from the Ontario MNR covering this year's exploration-drilling program.

## **Item 7: Accessibility, Climate, Local Resources, Infrastructure and Physiography**

Access to the property, in particular High Grade Island is by float plane (summer and ski plane (winter) from Red Lake, 120 kilometres to the southwest. Float plane access is often difficult in October due to low cloud over the esker west of Trout Lake. Alternative access in the winter is by road 55 km northwest from Ear Falls to the South Bay Mine Road then by cat-skidoo trail via Confederation Lake, Swain Lake and Birch Lake. This is contingent on ice conditions.

The property area has cold winters with well below freezing temperatures (-10 to -30<sup>0</sup> C) and mild summers typical for this part of northwestern Ontario. Variable snow accumulations up to 1.5 metres and lake ice occur between late October and April.

Accommodation is available at two lodges on the lake within a 4 kilometre radius of the island. The Birch Lake Lodge (Labines) to the northwest can stay open for winter programs. To the south cabins are held by the Greens who also run Green Airway Ltd. based in Red Lake. The property covers High Grade and Keigat Islands in the northeastern parts of Birch Lake (Figure 2). These are part of a chain of elongate northwest trending islands in the northern parts of the lake, the largest being Johnson Island just west of the property. These islands have low relief, are well wooded and have rocky shorelines. High Grade Island is approximately 1.8 km long and varies from 400 to 600 metres in width. There is no infrastructure reported on the island. Much of the old Placer Dome drill core is housed at the Campbell Mine in Red Lake. Recent drill core by Trade Winds is stacked in the 2004 drilling area, north-central island.

## **Item 8: History**

### **Introduction**

Dome Exploration (Canada) Ltd. in the early 1980's identified the Birch Lake area as highly favourable for iron formation hosted gold targets in the Uchi Subprovince. A large claim group was staked to cover (interpreted) folded iron formations and associated gold occurrences like the Canamer showing (Burchell et al., 1985).

In the property area exploration by Dome and later Placer Dome focused on both folded iron formation and shear zone hosted gold targets. A significant amount of work on High Grade Island included 9978 metres of drilling (1986-1996) and geological, geochemical and geophysical surveys with some stripping. These surveys are summarized in Table 2 and discussed in chronological order. Significant gold intercepts encountered during drilling are listed in Table 3 (Appendix 3).



**Table 2: Birch Lake Property Previous Exploration**

<b>YEAR</b>	<b>COMPANY</b>	<b>REFERENCE</b>	<b>TYPE OF WORK</b>
Pre 1984	Unknown	Burchell et al., 1985	Extensive trenching on Iron Formation, High Grade Island.
1984	Dome Expl. (Canada Ltd.)	Burchell et al., 1985 (a, b, c)	Part of a Regional Program. 5 areas. Line cutting and ground Mag/Em.
1985	“	“	Geological mapping, prospecting. Sampling rock Au, As.
1986	“	Swanson & Burchell, 1986	Selective detailed geological mapping, 5 DDHs, total 580 m.
1987		Swanson & Burchell, 1987	6 DDHs, total 756 m.
1988	Placer Dome Inc.	Burchell, 1988	9 DDHs, total 1441.5m.
1989	“	Rawsthorn, 1989a “ , 1989b	23 DDHs, total 3965 m. Stripping, geological mapping, rock Au, As Detailed ground Mag/VLF-EM surveys.
1990	“	Rawsthorn, 1990 (a, b)	7 DDHs, total 1958m. 2 DDHs extended 188m. Selective geological mapping.
1995	Placer Dome Canada Ltd.	Tessier, 1995 Deveau, 1995	Structural (geological) mapping/interpretation. Geochemical-soil sampling.
1996	“	Boileau/Lapointe, 1996 Seyler, 1996	Ground Mag/IP surveys. 4 DDHs total 1089.76m.
2002	Mosquito Consolidated Gold Mines Ltd	Ball, 2002	Geological Modeling.

## **Pre 1984 Exploration**

References are made to old trenches exposing mineralized and quartz veined iron formation units in the northwestern parts of High Grade Island by Pearce (1984) and Burchell et al. (1985). No information is available on the operator or results from this early exploration.

## **1984-1985 Exploration**

In May 1984 Dome Exploration (Canada) Ltd. interpreted folded iron formation gold targets in the Birch Lake area and staked over 290 claims mainly at the eastern end of the lake. Auriferous quartz veins hosted by iron formation had been identified by the company in 1984 at the Canamer showing at the eastern end of the lake (Pearce, 1984a. 13.2 g/t Au over 1.71 m., chip sample).

This large property was divided into five areas by the company, and the 'Johnson Lake area' included much of High Grade Island. During the 1984-1985 winter period an extensive grid was installed with over 300 line kilometres. Magnetometer and Max-Min. EM surveys were completed on the grid.

Two areas with gold mineralization were indicated by the mapping program on High Grade Island. In the northwestern area two or more folded iron formation units were exposed in outcrop and trenches. Anomalous gold (up to 0.7 g/t) and arsenic values were returned from iron formation samples. In the southeastern portion of the island a shear zone cutting basalts contained mineralized felsic dykes. One 60cm chip sample returned 6.9 g/t Au.

Numerous magnetic and some electromagnetic anomalies were indicated by the geophysical survey, however these were not tested due to the lack of outcrop.

## **1986 Exploration**

During this exploration phase 5 holes were drilled on High Grade Island testing geological and geophysical targets.

Hole 025 tested an EM anomaly in the western area and encountered a broad zone of silicification with local semi-massive pyrrhotite, 5% pyrite, minor chalcopyrite and arsenopyrite. One 5 metre interval averaged 1.60 g/t Au. A follow-up hole 034 along strike 50 metres to the east failed to intersect any significant gold mineralization. Hole 026, 50 metres to the west also tested beneath a surface shear zone but was also negative.

In the central island area hole 028 tested a magnetic anomaly and encountered iron formation in a mafic flow-tuff sequence. No significant gold values were reported. Hole 027, 800 metres to the east tested beneath the 1985 auriferous shear zone (6.9 g/t Au chip) and was the first in the current 'Main Central Zone'. This was the best hole of the 1986 program, encountering several >1 g/t gold intervals including 7.30 g/t Au/1metre

close to surface (16.5-17.5m). The mineralization in this hole was associated with deformed, highly altered and sulfide mineralized basalt with local felsic dykes.

### 1987 Exploration

This was a winter 6 hole drill program. The stripping and mapping recommended by Burchell et al., (1985) did not materialize. Holes 041, 042 and 049 further tested the hole 027 area. These encountered similar mineralization with generally narrow intervals (<2 metres) returning 1 to 3.5 g/t Au values. One 0.6 metre sulfide rich interval in hole 041 returned 21.44 g/t Au associated with semi-massive arsenopyrite.

Hole 044 and 065 were a follow-up to hole 025 (1986) in the western area. Both encountered narrow iron formation with variable sulfide contents. Hole 045 intersected a 5 metre long sulfide rich silicified zone with one 0.7 metre interval returning 0.7 g/t Au.

Ground acquisition to the west of the island was recommended (Swanson and Burchell, 1987).

### 1988 Exploration

Nine holes were drilled in the winter (050 to 059). These focused on a 250 metre strike length of the Main Central Zone at generally shallow depths, less than 100 metres. All of these holes other than 055 and 056 (to the north) intersected auriferous deformation-alteration zones with local quartz veining, felsic dykes and sulfide concentrations (Po, Py, Aspy, Cpy). Placer Dome geologists (Burchell, 1988) interpreted two main Au bearing zones separated by 10 to 15 metres of weakly mineralized material (<1.4 g/t Au). The upper zone had a weighted average of 5.87 g/t Au over 0.95m, the lower zone 15.42 g/t Au over 0.98m. Further drilling (3000m) to explore this zone as well as ground acquisition to the southeast was recommended .

### 1989 Exploration

This was the main drilling period on High Grade Island with 23 holes totalling 3965 metres (holes 060 to 082 inclusive). Coverage of the Main Central Zone was expanded to 700 metres strike length and upto 150 metres depth. 19 of the 23 holes intersected significant gold mineralization. One high-grade interval with visible gold in hole 078 returned 209.40 g/t Au over a metre. Some other holes featured longer intervals with multi-gram gold. For example:

Hole 064	96.1-100.5 (4.4m)	7.08 g/t Au
Hole 069	161.8-164.7 (2.9m)	5.16 g/t Au
Hole 074	171.5-175.7 (4.2m)	8.66 g/t Au

At the end of this program it was concluded (Rawsthorn, 1989) that the mineralized zone(s) were open along strike (NW-SE) and depth. A 5000 metre drill program was recommended to further explore the zone.

## 1990 Exploration

Following the 1989 program there appears to have been a company assessment of exploration methodology including some serious thought on the controls of gold mineralization. The winter drill program featured 7 new holes (083 to 089) and the deepening of two old holes (043 and 082).

Five of the new holes tested magnetic flexures, interpreted folded iron formation targets mainly at the eastern end of the island (hole 083 northwest end). These holes did not encounter any favourable gold mineralized axial-planar structures in the iron formations. Hole 087 on the Main Central Zone (below 078) intersected the favourable structure, the associated gold values were however low. Hole 086 failed to encounter the eastern extension of the zone.

A company data review suggested that gold mineralization was contained in NW plunging shoots within the deformation-alteration zone (Rawsthorn, 1990). This report indicates an area of concern over survey data for drill hole collars from previous drilling. Apparently collars were tied to grid coordinates and down-hole surveys were limited to basic acid tests. It was recommended that all drill hole collars should be surveyed prior to any further drilling.

## 1995 Exploration

Following a period of inactivity, exploration by Placer Dome resumed in 1995 with a geochemical soil program (Deveaux, 1995) and structural geological mapping (Tessier, 1995). The soil program results on High Grade Island suggested that the auriferous zone might continue into the southeastern area. The study by Tessier was important as it indicated some structural geological controls on the known gold mineralization. A large scale fold interference pattern was recognized between N-S  $F_1$  isoclinal folds and NW trending tight  $F_2$  isoclinal folds (north plunging, overturned). Gold mineralization according to Tessier was '*controlled by  $D_2$  structures comprising  $F_2$  fold hinges and reverse dextral, NW trending  $D_2$  deformation zones which are typically at the core of  $F_2$  folds*'. Steeply NNW plunging structures were regarded as an important control.

Two key observations made by Tessier were: 1) that the optimal orientation for drill holes was azimuth  $215^0$  rather than the historic  $250^0$  and 2) that the Central Zone was tested-constrained along strike but open to depth.

## 1996 Exploration

In the winter of 1996 Placer Dome conducted an IP survey over the island and adjacent areas. This survey detected several anomalous responses that could be related to bedrock disseminated mineralization. '*Most anomalies appear to constitute several anomalous zones which often extend to almost E-W orientations.*' (Bolieau and Lapointe, 1996).

Later in September-October a four hole drill program was funded by Pelangio Larder Mines as part of a 'buy-in' agreement signed with Placer Dome. These holes were drilled in two locations (090 with 091, 092 with 093) to test better mineralized parts of the Central Zone down plunge (Seyler, 1996). The two eastern hole 090 and 091 intersected high gold values over narrow widths including 109.1 g/t Au over 1.0 m and 41.6 g/t Au over 1.35m respectively. In these, quartz stringers with tourmaline contained visible gold. The two western holes 092 and 093 were drilled to test the Western Zone at depth and returned long intervals between 6 and 11 metres with 1.65 to 1.75 g/t average Au values.

No follow-up was recommended for the down plunge areas on the Central Zone? The property was acquired by Pelangio Mines Inc.

## **2002 Modeling**

In 2002 Mosquito Consolidated Gold Mines Ltd. held an option on the property from Pelangio Mines Ltd. A compilation of geochemical and geophysical surveys, and three-dimensional geological modeling were done to evaluate exploration possibilities on the property (Ball, 2002). This work involved a 7 day core examination (Red Lake) but not a visit to the property.

A preliminary 3D model involved an interpretation of subsurface geology. The model indicated the following (Ball, 2002):

- The Central Zone is orientated Az 315, 75<sup>0</sup> dip NE
- The Central zone intersects the sedimentary unit in the center of High Grade Island at an acute angle. This intersection may be controlling the eastern high grade shoot within the zone.
- The Central Zone is up to approximately 30 metres wide, as defined by an envelope to anomalous gold and arsenic geochemistry in the drill hole intercepts. The controls on grade distribution within this envelope remain to be determined in detail.

## **Item 9: Geological Setting**

### **Regional Geology**

The Birch Lake Property lies in the Uchi Subprovince of the Canadian Shield. This is an irregular shaped belt of generally easterly trending metavolcanic and lesser metasedimentary, supracrustal rocks with granitoid batholiths and plutons (Figure 3). To the north the Berens River Subprovince is a domain of plutons and tonalitic gneisses. To the south the English River Subprovince is dominated by high grade metasedimentary plutonic rocks.

## Local Geology

The Birch Lake area lies at the northeastern edge of the Birch-Uchi greenstone belt in the east Uchi Subprovince. This area east of the Trout Lake Plutonic Complex features several juxtaposed volcanic-sedimentary assemblages. Pre-2001 geological compilations subdivided this belt into three tectonic (volcanic) assemblages, from oldest to youngest: Balmer (2959 ± 2 Ma), Woman (2840 Ma), and Confederation (2735 to 2739 Ma). Clastic sedimentary rocks lie unconformably upon and locally overlap the volcanic assemblages (Scott and Corfu, 1991; Percival et al., 2000). The most recent geological compilations by Sanborn-Barrie et al., 2004 include the three original assemblages and several others in the Eastern Uchi Subprovince (Figure 3). In the northern Birch Lake area these include:

Archean (4000-2500 Ma. Unsubdivided)

Uus2Mv: Mafic volcanic rocks including massive to pillowed basalts. Lesser associated intermediate to felsic flows, tuff and wackes.

Uus6wk: Wackes and sediments.

Neoarchean (2800-2600 Ma)

Sundown Lake Assemblage (mainly south and southwest of the Lake)

Ssf12co: Conglomerates

Ssf12wk: Wackes

Related to Confederation Assemblage?

Tmu12gb: Gabbroic rocks

Earngey Sequence

Ycf34mv: Mafic volcanics including pillowed basalt and fragmental rocks. Minor intermediate volcanic rocks.

Ycf74it: Intermediate to felsic volcanic rocks. Andesite to dacite tuff, rhyodacite breccia and lapilli tuff, dacite tuff and crystal tuff. Associated feldspar porphyry dykes.

In the northeastern Birch Lake area the geological units, in particular the Earngey sequence are folded and have east to southeasterly strike. Three deformation events have been documented in the Birch-Uchi belt (Scott and Corfu, 1991; Beakhouse and McNeil, 1986). D<sub>1</sub> features north trending S<sub>1</sub> foliation and north plunging L<sub>1</sub> stretching lineation related to F<sub>1</sub> isoclinal folds. D<sub>2</sub> in the northern part of the belt is responsible for the dominant structural grain of the rocks and related to NW-trending, isoclinal folds plunging steeply to the N-NW. S<sub>2</sub> is axial planar to F<sub>2</sub> open folds (Breakhouse and McNeil, 1986), and foliation parallel shear zones of the D<sub>2</sub> event include the Swain

Lake Deformation Zone and Canamer showing shear zone (west and east of Birch Lake respectively). D<sub>3</sub> consists of a north trending crenulation cleavage on the S<sub>2</sub> fabric within D<sub>2</sub> deformation zones. Supracrustal rocks display mineral assemblages typical of Greenschist (locally Amphibolite) facies regional metamorphism.

A large number of gold occurrences occur within a southeasterly trending belt from Mink Lake through the former Argosy mine and the Birch Lake property, to the Canamer showings in the southeast. This trend parallels that of the host stratigraphy, several gold occurrences are related to iron formation. The Argosy Mine produced 101,875 ounces of gold at an average grade of 0.37 opt intermittently between 1934 and 1952 and is currently being explored by Cangold Ltd. (option from Wolfden Resources Inc.).

### **Property Geology**

The geology of the Birch Lake property, in particular High Grade Island is reasonably well understood and has improved with the various company mapping and drilling programs since 1985. Structural geological mapping by Tessier (1995) shown in Figure 4 provided very useful stratigraphic information for the property area (eastern Birch Lake). Compilations and geological modeling by Matt Ball (2002) for the mineralized zones on High Grade Island were also useful.

The property is underlain by a steep northeasterly dipping sequence of mafic to inetermediate volcanic flows and pyroclastic rocks (Figure 5). Thin semi-continuous, banded oxide facies-iron formation units occur within the volcanoclastic sequence. These are good geological-geophysical marker horizons which clearly indicate a NW plunging fold pair in the western part of the island. A sequence of turbiditic sedimentary rocks overlies the volcanics and occupies the core of an antiformal fold along the axes of High Grade and Keigat Islands. On High Grade Island a northeast trending deformation-shear zone occurs on the northern limb of this F<sub>2</sub> fold, subparallel and proximal to its axial trace. This deformation panel is intruded by felsic dykes and hosts the Main Central Gold Zone and possibly the Western Zone.

### **Rock Units**

Table 4 below lists the lithologic units mapped on High Grade Island in order of stratigraphic sequence -youngest up (Ball, 2002). These were subject to due diligence by the author with lithochemical definition of some protoliths (see Item 12). All units are subject to Greenschist facies of regional metamorphism. The volcanic and volcanoclastic rocks correlate with units Ycf34mv and Ycf74it of the Earngey Sequence (2742-2735 Ma) described earlier.

**Table 4. Table Of Lithologic Units On Exposed On High Grade Island**

Major Unit	Subunit	No.	Description	Location
Felsic Intrusive	Felsic dikes	12	Pale green-grey, fine to medium grained, equigranular to porphyritic feldspar-rich intrusive.	Coincident with D2 shear zone
Clastic Sedimentary Unit		6	Turbiditic sequence of sandstone or greywacke, argillite, and minor conglomerate	core of antiformal syncline
Older Volcanic Unit	Intermediate Pyroclastic	3B-4B	Dacitic heterolithic lapilli tuff and tuff breccia intercalated with thin and discontinuous iron formation and chert	High Grade Island 140m thick
	Mafic volcanic	3A	Massive to pillowed flows intruded by dioritic sills	High Grade Island 70m thick
	Younger (?) Intermediate to felsic	4B	Dacitic heterolithic lapilli tuff and tuff breccia, rhyolitic ash tuff, distinct quartz-plagioclase-crystal-lithic lapilli tuff, tuffs at base interbedded with argillaceous sediment (4B_6)	
	Iron Formation	7	Oxide facies banded iron formation and chert, locally interbedded with argillaceous horizons	High Grade Island 15m thick
	Older (?) Intermediate to felsic	4B	Dacitic heterolithic lapilli tuff, ash tuff, massive flows, rhyolitic ash tuff (5A5B), quartz-phyric flows	High Grade Island Base not determined



## Structural Geology

The structural hierarchy for High Grade Island is summarized in Table 5 (after Tessier, 1995). The tight isoclinal F<sub>2</sub> folds are overturned to the northeast and plunge steeply to the north. Steeply-dipping southeast trending D<sub>2</sub> shear zones occur along the limbs of these folds. These D<sub>2</sub> shear zones are altered, mineralized and intruded by felsic dykes.

**Table 5. Structural Hierarchy for High Grade Island**

D3	Brittle fault	Late, narrow faults oriented NS with sub-vertical dip
D2	shear	Deformation zone consisting of carbonate altered shear zones with intense S2 fabric, localized at core of F2 folds and at lithological contacts between units of high competency contrast, reverse-dextral motion interpreted
	S2	Strong axial planar flattening fabric oriented 305\67 turning to 279\66 on Keigat island, Weak development in sedimentary rocks to spaced cleavage and joints
	L2	Stretching lineation oriented 59\003, coincident with poles to extension veins within D2 shear zones
	F2	Isoclinal folds, overturned to NE, fold axes trend N to NW and plunge 60-80°
D1	S1	Close spaced bedding-parallel foliation in argillaceous rocks
	F1	North-trending fold observed on Keigat and Burn Point Islands

## Item 10: Deposit Types

Previous exploration on the Birch Lake property has demonstrated that gold mineralization occurs in both deformation-shear zone and iron formation settings. The shear zone setting of the Main Central Zone with associated alteration, quartz veining, sulfide concentrations and felsic dykes can be classified as a greenstone-hosted gold-quartz vein type, Type 14 of Poulsen et al. (2000). The iron formation-hosted vein and disseminated gold mineralization mainly in the northwestern parts of the island have affinity with Type 16 of Poulsen et al. (2000). The following capsule descriptions of these two deposit types are taken from this classification of Canadian gold deposits by Poulsen et al. (2000).

### Greenstone-hosted quartz-carbonate-vein deposits (Type 14)

"Deposits of this group, typified by the Late Jurassic to Early Cretaceous Mother Lode and Grass Valley areas of California, as well as numerous Precambrian examples, consist of quartz-carbonate veins in moderately to steeply dipping brittle-ductile shear zones and locally in shallow-dipping extensional fractures. They are commonly distributed along major fault zones in deformed greenstone terranes of all ages. Veins have strike and dip lengths of 100 to 1000 meters and occur singly or, more typically,

constitute complex vein networks. The veins are hosted by a wide variety of host rock types, but there are district-specific lithological associations.

Veins of this type are dominated by quartz and carbonate, with lesser amounts of chlorite, scheelite, tourmaline, and native gold; pyrite, chalcopyrite, and pyrrhotite constitute less than 10 percent of the veins. The ores are gold-rich (Au:Ag = 5:1 to 10:1) and have elevated concentrations of arsenic, tungsten, boron and molybdenum, with very low base-metal concentrations. Despite their significant vertical extent (commonly > 1km), the deposits lack any clear vertical mineral zoning. Wall-rock alteration haloes are zoned and consist of carbonatization, sericitization, and pyritization. Halo dimensions vary with the composition of the host rock types and may envelope entire deposits in mafic and ultramafic rocks.”

### **Iron-formation-hosted vein and disseminated gold deposits (Type 16)**

“This class of deposits consists of stratabound, disseminated to massive-sulphide lenses and discordant quartz veins in folded iron-formation (Kerswill, 1993). Also commonly termed “Homestake-type” deposits (Caddey et. Al., 1991) they occur in mixed volcanic , volcanoclastic, and sedimentary sequences in greenstone belts of all ages, typically metamorphosed to greenschist or lower amphibolite facies. Host rocks are oxide-, carbonated-, and sulphide facies iron-formation, commonly at or near a volcanic-sedimentary contact. The deposits occur in regionally extensive banded iron-formation at local sites of structural complexity such as fold hinges and discordant shear zones. Stratabound sulphide lenses consist of pyrite, pyrrhotite, arsenopyrite, and native gold. Gold is more abundant in the ore than silver (Au:Ag = 5:1 to 10:1) and typically correlates positively with arsenic. Sulphidation of pre-existing iron-formation facies is most common adjacent to quartz veins, and chloritic and carbonate alteration form distal envelopes at some deposits.”

Ball (2002) makes comparisons between the geological setting of gold mineralization on High Grade Island and that at Goldcorp’s Red Lake mine (high-grade gold zone). This Red Lake gold mineralization is also greenstone-hosted vein type. At High Grade Island there appears to be potential for Red Lake style ‘replacement ore’ and ‘vein hosted high grade ore’, mainly at depth within the Main Central Zone.

### **Item 11: Mineralization**

The majority of previous exploration has been on gold targets located on High Grade Island in the western half of the property. Geological mapping, bedrock stripping and 9978 metres of diamond drilling partially defined two zones of gold mineralization, basically lying on the same NW trend. Most work was on the Main Central Zone, located near the centre of the island. The Western Zone lies 700 metres to the west at the northwestern edge of the island. Tessier (1995) suggested that these are hosted by a single deformation zone offset by north trending cross-faults (Figure 5).

### **The Main Central Zone**

This gold mineralized zone has been tested by more than 35 holes and is tied to a northwest trending deformation-alteration panel (shear zone) hosted by mafic volcanic

flows, mafic to intermediate (some felsic) volcanoclastic rocks, minor oxide iron formation and semi-concordant felsic porphyry dykes. This panel appears to be 60 to 70 metres wide with steep northerly dip.

Carbonate alteration is most noticeable in the panel and is patchy moderate to strong pervasive. This alteration is generally weak and patchy (disseminated) in the surrounding rocks. Sericitization and silicification occur proximal to mineralized quartz vein systems and are spatially associated with high concentrations of disseminated and fracture controlled sulfides (local replacements) including pyrrhotite, pyrite, arsenopyrite and minor chalcopyrite. Quartz veins are commonly deformed (folded, fractured-brecciated) and may contain black tourmaline (schorl) and fine visible gold. Several of these quartz veined, sulfide mineralized and strongly altered intervals with multigram gold values may occur within the panel.

Previous drilling on this zone indicates gold mineralization over a 350 metre strike length and to vertical depths of up to 200 metres. On a longitudinal section (Figure 6) very few pierce points occur below 150 metres vertical. Longer gold intercepts range from 8.66 g/t Au over 4.2 metres in hole 74 to 1.76 g/t Au over 11.0 metres in hole 93. The higher grade gold intercepts are generally narrow but can be quite spectacular, for example 209 g/t Au over 1.0 metre in hole 78, and 52.08 g/t Au over 2.0 metres in hole 90.

### **The Western Zone**

This was tested by a very limited number of holes and occurs in an area of tightly folded iron formation within the core of an antiformal structure. Fold hinges plunge to the north-northwest with shears in the limbs. Significant gold intersections were returned from holes 25, 34 and 45. Hole 25 intersected 8 metres of silicified breccia with local high sulfide concentrations, up to 20% pyrrhotite, 5% pyrite, arsenopyrite and chalcopyrite. A very similar style mineralization to the Main Central Zone, the best gold intercept was 1.60 g/t over 5.0 metres. Hole 34 intersected a similar width of silicification though with much lower sulfide concentrations. One significant gold intercept was returned with 2.4 g/t over 0.4 metres.

## **Item 12: Exploration**

### **Introduction**

Trade Winds Ventures Inc. optioned the Birch Lake property from Pelangio Mines Inc. in July 2003. The company commenced exploration under the direction of Lorne Warner P.Geo. in March 2004. The main target for exploration was higher grade gold shoots at depths greater than 100 metres in the Main Central Zone on High Grade Island. Previous geological interpretations by Rawsthorn (1990), Tessier (1995) and Ball (2002) had indicated good potential for steeply plunging mineralized shoots in this area. The company was also interested in exploring the potential for other mineralized shear zones on the property. 2004 company exploration included the following:

- An airborne geophysical survey. 162 line kilometres, approx. 50m spacing including EM and high sensitivity magnetics using a helicopter. March 24 to April 3, 2004.
- Two phase of NQ diamond drilling on the Main Central Zone with 7 holes totalling 2144.64 metres.  
Phase 1 (June 2004) 4 holes, 1102.59 metres total  
Phase 2 (Sept-Oct., 2004) 3 holes plus extending hole 95. 1042.05 metres total.

The total cost of the 2004 company exploration program on the property was \$480,682.48. These exploration expenditures are in accord with the option agreement with Pelangio, Item 2c(iii). The results from 2004 exploration are discussed in the following sections of this report.

### **2004 Helicopterborne Geophysical Survey**

This was a DIGHEM<sup>V-DSP</sup> survey by Fugro Airborne Surveys Corp. with 50 metre (approx) spaced NE flight lines (Az.45<sup>0</sup>NE). There was complete coverage of the favourable mineralization trend on High Grade Island and projection across Keigat Island. Large areas were covered to the north and south. 'The purpose of this survey was to detect zones of conductive mineralization and provide information that could be used to map the geology and structure of the survey area.' (Garrie, 2004).

The author examined a selection of geophysical maps supplied to the company by Fugro, some comments follow:

#### ***Total and Vertical Field Magnetics***

Strong magnetic features occur along the axis of High Grade Island (Figure 7). At the western end the magnetic feature is broad with contorted magnetic linears on the vertical gradient map. These related to the tightly folded iron formation units in this area with plunging axes to the north-NE. In the central island area magnetic features are SE trending and more linear. This feature broadly coincides with the Main Central Zone and narrow iron formation units to the north. At the eastern end of the island magnetic (gradient) linears again appear to be contorted suggesting folded iron formation units. A possible north trending F<sub>1</sub> structure may occur in this area.

#### ***Electromagnetic***

A large number of weak EM anomalies have been interpreted, many are linear with northwest trend and coincide with the deeper parts of channels between the islands and mainland. The correlation between EM and magnetic anomalies is generally poor, conductive cover is often suggested. The 1996 IP surveys by Placer Dome on the island indicated several subparallel, fairly strong NW chargeability anomalies which coincided in part with known areas of mineralization. These IP chargeability features do not show up on airborne EM maps.

### ***Apparent Resistivity***

In general the resistivity patterns show fair agreement with magnetic trends. Resistivity lows coincide with anomalous EM trends suggesting conductive overburden. The 1996 Placer Dome (ground) IP-Resistivity data indicates several resistivity highs at either end of High Grade Island possibly related to bedrock alteration or intrusives?

The 2004 airborne geophysical survey was useful as it confirmed that the main geophysical targets of interest are on High Grade Island. Narrow iron formation units produce a strong magnetic geophysical response. The contorted magnetic features (vertical gradient) at the eastern end of the island suggest another area with more complex structure. This could explain why the limited drilling in this area has not encountered the favourable structure(s) to date.

### **Item 13: Drilling**

The 2004 Trade Winds drilling program on the Birch Lake property was in two phases, each of about 1000 metres and totalling 2144.64 metres. All of the drilling was on the Main Central Zone on High Grade Island and from the same pad as 1996 holes 90 and 91 (grid 8105N, 4600E). The 1996 holes were (at the time) two of the deepest on the zone and had returned narrow high grade gold intersections including 109.1 g/t over 1 metre and 41.6 g/t over 1.35 metres. The object of the 2004 drilling was to test the potential for a plunging high grade gold shoot in this area at vertical depths ranging from 150 to 350 metres and also laterally for up to 50 metres.

Details regarding the drill holes occur in Table 6, UTM coordinates were determined using a hand held GPS unit. Hole collar azimuth ranged from 206<sup>0</sup>SW. All of the drilling was NQ core size (previous was BQ and narrower) and by E. Caron Diamond Drilling with offices in Whitehorse, YT. All previous drilling on the property had used crude acid test for down-hole surveys (dip only). Trade Winds used a Flexit system with azimuth and dip readings every 15 metres recorded in a laptop computer at the end of the hole. This data indicates significant changes in hole azimuth and dip with depth.

The author had complete access to all drilling data including original assay certificates. Gold intercepts (composites) were determined independently and are listed in Table 6A; silver, copper and arsenic values are included. The drilling data was compiled on three drill sections (Az 212<sup>0</sup>SW) by the author, Figures 8, 9 and 10. These show the main geological units, deformation-alteration panel and significant gold intercepts.

## **Results**

The three drill sections are spaced approximately 15 metres apart (same azimuth) and indicate a steep northerly dipping sequence of mafic flows, intermediate to mafic volcanoclastics and underlying metasedimentary rocks including argillite and greywacke. Interbedded mafic flows and lapilli tuffs of similar basaltic composition give way downhole to lengthy intervals of lapilli and lithic tuffs.

The mineralized deformation-alteration panel lies immediately above the metasedimentary rock contact and is subconformable with 60 to 70 metres true width. The panel features variable carbonate, sericite and silica alteration, generally stronger in areas of quartz veining. Stronger concentrations of sulfides (fracture controlled and disseminated) are associated with this quartz veining-alteration and include pyrrhotite, pyrite, arsenopyrite and minor chalcopyrite. Deformation involves a moderate to strong foliation and widespread fracturing. This, combined with strong alteration makes protolith identification difficult. Felsic dykes appear restricted to the panel, and range from a few centimeters up to 10 metres in width. They include siliceous feldspar and quartz-feldspar porphyries (pre-syn kinematic) which are often highly fractured-altered with numerous quartz veinlets and sulfides.

### **Central Section-Holes TWBL-094, 96, 97 and 98 (Figure 8)**

- On this section four holes tested the mineralized panel at different vertical depths, hole 094 at 150m, holes 096 and 098 at 200 to 250m and hole 097 at 300 to 350m.
- Hole 094 was cut short of the footwall metasedimentary rock contact and consequently did not test the entire panel width. This is important as mineralization occurs close to the lower contact (on this section) in deeper holes.
- All four holes encountered visible gold in deformed quartz vein with local black tourmaline (schorl) and sulfide rich wallrocks. Some of this mineralization is associated with felsic dykes and their contacts, suggesting that they are pre to syn-mineral.
- All four holes encountered significant gold values within the deformation-alteration panel with 2 to 5 multi-gram gold intercepts per hole. It is possible to interpret several sub-conformable mineralized shoots which may continue for greater than 200 vertical metres on section. For example: hole 094: 3.47 g/t Au/2.70m, hole 096: 34.54 g/t Au/9.85m, and hole 097: 21.21g/t/2.35m. These intersections all have a similar position relative to an upper felsic dyke. In hole 097 another higher grade gold interval of 229.83 g/t Au/2.45m occurs above a broad felsic dyke lower in the panel. A 2.38 g/t Au /2.95m intercept occurs in the same area in hole 096 above. Hole 094 higher above did not cover this area.
- This well mineralized section, probably the strongest to date in the Main Central Zone features two or more high grade gold shoots. There is an interesting spatial

association between the gold mineralization and felsic dykes. A lower prominent felsic dyke appears to widen with depth.

#### **North Section – Holes TWBL-095/09A and 099 (Figure 9)**

- Two holes tested the zone at approximate vertical depths of 150m (095) and 250 (099). Hole 095 was lengthened (095A) during Phase II drilling to intersect the footwall sedimentary sequence.
- The deeper of the two holes 099 produced significantly more gold intercepts within the panel, however these were in the 1 to 2.3 g/t Au range over 1 to 3 metre lengths.

#### **South Section-Hole TWBL-100 (Figure 10)**

- A single hole 100 tested the zone at 200 to 280m vertical depth and encountered several gold intercepts. There was again a spatial association with felsic dykes. The strongest gold interval at 6.69 g/t Au/3.00m occur near the lower contact and may correlate with the lower gold shoot in hole 097 to the northwest.
- A well mineralized interval with felsic dykes between 261 and 276m was not sampled. Visible gold was noted by the author in a deformed quartz vein at 275.5m. Sampling of this interval is critical to the interpretation of this section.

#### **Previous Drilling – Holes 090 and 091**

- Two previous drill holes in this area produced two high grade gold intercepts of 52.08 g/t Au/2.00m (hole 090) and 41.59 g/t Au/1.4.0m (hole 091). These holes were not subject to down-hole azimuth surveys and the very approximate pierce points are shown on the northern drill section (Figure 9). If the uppermost felsic dyke (in these holes) is taken as a marker horizon the two intersections correlate with the upper gold shoot on the central section (Figure 8). This is interesting as hole TWBL-096 in 2004 produced a similar high grade intercept of 113.94 g/t Au/2.95m.

#### **Item 14: Sampling Method and Approach**

Tessier (1995) noted that all of the previous drilling (Az 250<sup>0</sup>) was probably at an oblique angle to the mineralized zones and would result in apparent widths significantly greater than the true widths. Later drilling in 1996 (Az 215<sup>0</sup>) and 2004 (Az 206<sup>0</sup> to 234<sup>0</sup>) took this into account and was more optimal *ie.* more perpendicular to the zone.

The core handling, geotechnical and logging procedures were established at the beginning of the drilling program by Lorne P. Warner, P.Geo., the qualified person responsible for the management of Trade Winds' exploration at Birch Lake. All of the core processing and sampling was conducted at a temporary logging facility built on

High Grade Island and the 2004 core was cross stacked in this area. The 2004 drilling utilized NQ core size compared to previous BQ and BQTK (which are both smaller). This resulted in larger and theoretically better sample sizes for gold. The procedures for the core on arriving at the core logging station were as follows:

1. First pass examination with core orientation and block correlations
2. Core is marked every one metre
3. Geologists log core. The geological units were kept as simple as possible, for example MFVL (mafic flows) MFTF (mafic tuffs), LPTF (lapilli tuff), INTF (intermediate tuff), QFP (quartz-feldspar porphyry), GB (gabbro) and METASED (metasedimentary rocks)
4. Sample intervals were determined and clearly marked by the geologists. Individual sample lengths ranged from 20cm up to 2 metres, most were around 1metre.

All of the above procedures were performed on site under direct geological supervision. Significant gold intercepts from the 2004 drilling program are available in Table 6A.

#### **Item 15: Sample Preparation, Analyses and Security**

Core from the 2004 Trade Wind's drilling program was sampled on site, generally under the supervision of the qualified person. The core was split using a conventional mechanical (Longyear) splitter, bagged than shipped direct to Eco Tech Laboratory Ltd. in Kamloops, BC. Half the core was left in the core boxes as a permanent record. The sample numbers during sampling were taken from Eco Tech sample tag books. Half core samples were run by the laboratory for gold using fire assay (30 gm) with A.A. finish. Multi-gram gold samples were subject to metallic assay. All samples were also run by the laboratory using a standard multi-element (28 elements) ICP package. The laboratory conducted its own in-house quality control using well known standards.

During core sampling the company geologists inserted one duplicate and blank for every 20 samples at regular intervals for quality control. Duplicates were often inserted after well mineralized samples, especially those with visible gold. A commercial standard (1.33 g/t Au) was also inserted routinely from hole 095 onwards.

A detailed examination of the QC data for the program did not indicate any laboratory contamination problems. The differences between gold values from original samples and those from duplicates ranged from a 0% to 20%. The larger differences were for samples with gold values > 1g/t indicating a mild 'nugget effect'.



Core sampling and sample preparation were conducted to industry standard, security and analytical procedures the same. Mention has to be made of a well mineralized interval in hole TWBL-100 that was not sampled. The company is aware of this and will be sampling shortly.

The author strongly recommends that all core within the deformation-alteration panel be sampled. This data is very useful for composites as well as vectoring.

### **Item 16: Data Verification**

As described above, core sampling, logging and analysis were conducted to industry standards.

The author spent four days in Red Lake, Ontario between October 22<sup>nd</sup> and 25<sup>th</sup>, 2004 conducting a property and drill core examination relating to the Birch Lake property. Lorne Warner P.Geo., the qualified person and manager of the Trade Winds' Birch Lake project accompanied the author. Three days were spent examining old Placer Dome drill holes from High Grade Island, This core was stored at the Campbell Mine in Red Lake. One day was spent on High Grade Island examining 2004 drill core and the logging facility. This property examination with follow-up data review provided much of the material for this report.

#### **1. Main Central Zone Holes, Core Examination**

The old pre-1996 Placer Dome drill core stored at the Campbell Mine is reasonably well organized, however some boxes are notably rotten. An examination was made of drill core from several shallow holes on the Main Central Zone, in particular holes 042, 053, 078 and 082. Core from hole 045 on the Zone was also examined.

The Central Zone holes cover a 200 metre strike length and encountered mineralized zones at vertical depths down to approximately 110 metres. Hole 078 (Az 250<sup>0</sup>) is important as it crosses the 2004 (Az 215<sup>0</sup>) sections at an oblique angle and at shallow depths. A summary log follows:

**Table 7. Summary Drill Log. Hole 078**

<b>From</b>	<b>To</b>	<b>Comments</b>
3.96	47.00	Metabasalt flows with interbedded lapilli tuffs of similar composition
47.00	54.50	Quartz crystal tuffs. Lithic-feldspar-crystal tuffs with mm scale bluish quartz crystals.
54.50	55.00	Banded oxide-iron formation with significant magnetite. Cherty bands.
55.00	127.00	Interbedded mafic lapilli tuff with lesser metabasalt flows.
127.00	197.60	Mineralized Deformation-Alteration Zone. Significantly higher strain, foliated with zones of stronger alteration (carbonate-sericite-silica) accompanying quartz veining and sulfide concentrations (Po, Py, Aspy, Cpy). Several significant gold intercepts.  <div style="text-align: right;"><b>Au g/t</b></div> 130.7-131.7 (1.0)      3.17 149.0-150.0 (1.0)      1.40 155.7-157.2 (1.5)      1.78 160.0-162.2 (2.3)      3.58 165.0-167.0 (1.9)      1.78 174.5- 176.5 (2.0)      105.30 183.5 -184.5 (1.0)      8.07  Felsic (QFP) dykes occur at 136.0 – 137.40, 147.05-147.95, 152.1-152.6, 156.2-159.95, 162.2-163.1, 167.0-171.45, 190.35-194.0.
197.60	215.00	Metasediments-argillite and siltstone.
	EOH	

The stratigraphy in hole 078 is similar to the deeper holes drilled in 2004, the main differences being narrow quartz-feldspar crystal tuff units and magnetite-chert iron formation in hole 078. These units lie in a transition area from massive metabasalt flows to lapilli tuffs above the deformation panel. The crystal tuffs are felsic and distinct from the surrounding rocks.

The gold mineralized zones are very similar to those encountered in deeper 2004 holes in this area and are also confined to the panel. One very high grade gold intercept of 105.20 g/t Au/2m is associated with high strain, quartz veinlets and sulfide concentrations in an area of broader felsic dykes in the lower part of the panel. This intercept could possibly correlate with the lower high grade shoot in the 2004 holes. The need for extending hole 094 to the footwall sediments is again clearly apparent.

Hole 053 drilled 170 metres northwest of hole 078 on the Central Zone 1 (NW shoot) encountered a similar stratigraphic sequence with local felsic crystal-lithic tuffs. The deformation panel appears to be higher in the volcanic sequence than in hole 078

with a narrow iron formation unit (chert-magnetite) near its base. Within the panel there is brittle-ductile deformation with generally weaker sulfide concentration and alteration than hole 078. One higher strain area does feature larger quartz veins up to 10 cm wide and one intercept of 11.85 g/t Au over 1.0 metre. Another lower quartz vein zone hosted by crystal-lithic (felsic) tuffs featured a 1.9 metre long intercept grading 63.94 g/t.

The association of gold mineralized zones with strong alteration, sulfide concentrations and quartz veining within the deformation (high strain panel was clearly evident during the core examination. Other spatial associations (possibly genetic) were also apparent with felsic (QFP) dykes and similar composition quartz-feldspar crystal lithic tuffs, possible intrusive and extursive equivalents? Another important observation was that the deformation panel cuts the volcanic stratigraphy at a small angle.

### **Western Zone, Hole 045 Core Examination**

A single hole 045 was examined from this zone which features several oxide iron formation (chert-magnetite) units interbedded with argillite and some tuff. The iron formation units have variable sulfide contents including pyrite, pyrrhotite, arsenopyrite and local chalcopyrite. Low gold values in this hole (up to 1.40 g/t) are associated with a silicified zone with higher sulfide contents at an iron formation, argillite contact.

### **Lithochemical Sampling and Results**

An examination of Placer Dome drill core and logs indicated a significant amount of confusion between tuffs and schists and intermediate to felsic volcanics with altered mafic units. Within the deformation panel schists were often called tuffs. Above the panel there are broad intervals called Mafic to Intermediate or Intermediate to felsic units that are probably carbonated (ankerite) metabasalt flows and tuffs. As part of this due-diligence the author took a suite of 12 representative core samples (4 holes) from volcanic flows, tuff and felsic dyke units. These were run by Eco Tech Laboratory Ltd. in Kamloops, BC for ICP major oxides and trace elements (Certificate AK2004-1749). Table 8 summarizes the lithochemical sample data and includes the original (log unit) and interpreted lithologies (protolith). A few conclusions follow:

- The main volcanic flow-tuff sequence is basaltic to basaltic andesite in composition, high iron tholeiites.
- Quartz-feldspar crystal tuff units have rhyolite to trachyandesite composition (distinctly felsic) with local elevated arsenic values.
- Felsic QFP dykes are rhyolitic to trachyandesitic in composition similar to the felsic tuffs. These dyke samples featured high arsenic values even when base metal values (including Ag) were very low.

**Table 8: Lithology Samples, October 2004 Drill Core Examination**

HOLE NO.	DEPTH M	LOG UNIT	LITHOLOGY INTERPRETED	SELECTED GEOCHEMISTRY												
				Cu ppm	As ppm	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	MgO %	Fe <sub>2</sub> O <sub>3</sub> %	CaO %	Na <sub>2</sub> O %	K <sub>2</sub> O %	TiO <sub>2</sub> %	MnO %	P <sub>2</sub> O <sub>5</sub> %	LOI %
042	10.0	F.Int	Felsic. RD.	6	1555	66.8	15.8	0.72	1.84	3.47	5.65	2.53	0.40	0.03	0.12	2.55
042	23.0	F. Int	Felsic. R.D.	12	215	69.5	15.2	0.50	1.44	2.02	5.33	3.16	0.46	0.02	0.10	2.18
053	52.8	M-Int.V	Basaltic T.	90	<5	42.1	13.4	7.68	14.50	10.60	1.30	0.45	1.41	0.20	0.10	8.36
053	97.0	M-Intv	Metabasalt F.	77	40	52.7	13.8	3.27	13.00	4.83	1.99	2.73	1.26	0.18	0.09	6.10
053	154.0	M.Int.V	Metabasalt F.	108	45	48.3	13.4	7.33	13.90	5.19	2.31	0.10	1.77	0.14	0.12	7.48
078	27.2	Int-F.V.	Metabasalt F.	41	<5	48.1	11.5	5.23	18.90	5.99	1.59	<0.1	2.27	0.21	0.22	6.17
078	52.5	Int-F.T	Felsic CLT	8	<5	62.4	14.5	2.43	6.93	1.84	5.12	3.49	0.49	0.17	0.13	2.44
078	66.0	Int-F.T	Metabasalt F.	58	5	47.6	11.8	4.35	12.20	9.54	1.00	2.32	0.92	0.22	0.11	9.92
078	88.0	Int-F.Lt	Basaltic LT.	88	25	46.8	14.1	4.98	13.70	11.30	1.82	0.06	1.32	0.24	0.14	5.53
078	119.5	Int-F.T	Basaltic LT.	104	110	41.3	13.0	5.10	12.40	9.65	1.44	2.43	1.10	0.23	0.10	13.2
078	156.8	F.Int	FQP.RD	9	1945	6638	16.5	0.63	1.85	1.82	4.18	5.40	0.20	0.02	0.13	2.32
078	167.5	F.Int	FQP.RD	13	155	63.8	16.0	0.91	2.68	2.74	5.85	3.66	0.39	0.04	0.13	3.70
078	193.5	F.Int	Felsic.RD	14	1525	67.2	16.9	0.53	1.48	2.39	5.93	3.25	0.23	0.03	0.18	1.75
078	100.0	Int-F.T	Felsic CLT	6	200	62.9	13.6	1.99	6.85	2.74	3.30	4.19	0.67	0.13	0.12	3.42

**Geological Abbreviations**

R.D. Rhyolitic Dyke  
 FQP Feldspar-Quartz Porphyry  
 CLT Crystal-Lapilli Tuff  
 LT Lapilli Tuff  
 T Tuff  
 F Flow

## Metal Associations

A statistical examination was made of analytical data from the 2004 drilling program core samples (328 total). The main aim was to examine correlations between gold and other elements such as Ag, Cu and As. Correlation coefficients were determined on a hole basis with the following results:

**Table 9: Au, Ag, Cu and As Correlations. 2004 Core Samples.**

TWBL-094	Au	Ag	Cu	As
Au	1			
Ag	0.594759	1		
Cu	0.037426	0.469378	1	
As	0.392706	0.249416	-0.245612	1

  

TWBL-095	Au	Ag	Cu	As
Au	1			
Ag	-0.02351	1		
Cu	0.041859	-0.397947	1	
As	0.384456	0.293901	-0.069304	1

  

TWBL-096	Au	Ag	Cu	As
Au	1			
Ag	0.996918	1		
Cu	-0.062711	-0.097561	1	
As	0.334318	0.383373	-0.380527	1

  

TWBL-097	Au	Ag	Cu	As
Au	1			
Ag	0.986302	1		
Cu	0.014563	0.003108	1	
As	-0.035532	0.038925	-0.108463	1

  

TWBL-098	Au	Ag	Cu	As
Au	1			
Ag	0.477833	1		
Cu	0.067769	-0.177536	1	
As	-0.051505	0.404696	-0.259433	1

  

TWBL-099	Au	Ag	Cu	As
Au	1			
Ag	0.426954	1		
Cu	-0.055057	0.346232	1	
As	0.411686	0.323498	0.127478	1

  

TWBL-100	Au	Ag	Cu	As
Au	1			
Ag	0.964363	1		
Cu	0.494937	0.549352	1	
As	0.27565	0.303078	0.151111	1

The most interesting gold correlation is the moderate to very high with silver, especially in holes 096 and 097. Hole 095 shows no correlation between gold and silver? Copper show no relationship with gold, arsenic shows weak to moderate correlation in some holes.

## Item 17: Adjacent Properties

This report is on the Birch Lake property held under option by Trade Winds Ventures Inc. The company does have an interest in other adjacent properties (under option) such as the Birch Lake Sandy Point Property (Fronteer Development Group Inc.), the Labine Property (B. Labine) and Cansummit claims (Cangold Ltd.).

**Item 18: Mineral Processing and Metallurgical Testing**

No metallurgical testing has been conducted on samples from the property to date.

**Item 19: Mineral Resource and Mineral Reserve Estimates**

Not applicable. The absence of accurate hole survey data, in particular three dimensional collar locations and down-hole azimuths makes any such calculation premature at this time.

**Item 20: Other Relevant Data and Information**

All relevant information has been included in the report.

**Item 21: Interpretation and Conclusions**

A detailed review has been made of all available mineral exploration data on the Birch Lake Property as well as a site visit and core examination. An earlier report by Matt Ball (2002) involved a significant amount of data compilation and was very helpful.

The property has received a significant amount of previous gold exploration, mainly by Dome, Placer-Dome between 1984 and 1996. This was for shear zone and deformed iron formation hosted gold targets and involved 54 drill holes (9978m). The two target types occur along a steeply north dipping and northwest trending deformation panel which crosses High Grade Island. Significant multi-gram gold intercepts have been returned from drilling on the Main Central Zone and to a lesser extent the Western Zone, 700 metres to the northwest.

Previous drilling on the Main Central Zone indicated multiple closely spaced gold zones within the deformation panel over a 350 metre strike length and shallow vertical depths generally to 110 metres, locally 200 metres. These gold zones are typically associated with high strain, stronger alteration (carbonate, sericite, silica), sulfide concentrations (Po, Py, Aspy, Cpy), quartz veins/veinlets and often occur proximal to porphyritic rhyolite-dacite dykes. Longitudinal sections and structural studies suggested that the higher grade gold mineralization was concentrated N to NW plunging 'shoots' within the panel (Tessier, 1995; Ball, 2002). At least two shoots 170 metres apart were indicated by the previous drilling, both with local gold values/intercepts in the 50 to 200 g/t range. Trade Winds in 2004 concentrated on the southeastern shoot and tested it with seven holes to 350 metres vertical depth. This drilling returned several 20 to 200 g/t gold intercepts with some spectacular visible gold in quartz-tourmaline veins. These results support a plunging high grade gold shoot model, however more drilling is required along strike and to depth. The gold mineralization in this area also appears to be strengthening with depth through an apparent association with broader felsic dykes.

The 2004 airborne geophysical survey for the property, in particular magnetics indicates that the southeastern portion of High Grade Island is structurally complex. Very limited previous drilling in this area may not have tested its gold potential. High Grade Island on many of the geophysical maps stands out as a fairly distinct domain from other areas. Keigat Island appears to be dominated by sedimentary rocks without iron formations.

The Western Zone has been tested by a limited number of holes and is primarily an iron formation gold target. Exploration to date has not produced results comparable with the Main Zone. This is a lower priority exploration area.

## **Item 22: Recommendations**

The Birch Lake property clearly has high potential for higher grade gold zones similar to those in the Red Lake camp to the southwest. To date systematic drilling has been the most effective exploration tool and will continue to be so. A significant amount of future drilling and surface exploration is warranted.

1. The Main Central Zone on High Grade Island remains the premier exploration target with potential for gold shoots averaging greater than 20 g/t. Exploration drilling with down hole surveys should continue in the 2004 area with holes testing to 500 metres vertical depth. Holes should also test along strike at greater than 200 metres vertical depth. Larger felsic intrusives at depth in the panel may play a significant role in the distribution of gold.
2. If positive results continue to be generated from the southwest shoot, drilling should commence on the northwest shoot (170m to NW).
3. A detailed examination should be made of geological, geochemical and geophysical data for the southeastern portion of High Grade Island. If outcrop is absent or sparse in target areas, trenching and or stripping is warranted to expose potential mineralization and better understand the structural setting.
4. A lake sediment geochemical survey as suggested by Ball (2002) would be useful. The focus would be on identifying parallel gold mineralized panels in submerged areas.

**Proposed Budgets**

**Phase 1 (Winter)**

Diamond Drilling 2000 metres @\$170 per metre all in	\$340,000.00
Lake Sediment Survey (same time)	10,000.00
Contingencies at 10%	<u>35,000.00</u>
Sub Total	\$385,000.00

**Phase 2 (Summer – Fall)**

Diamond Drilling 3000 metres @\$170 per metre all in	\$510,000.00
Surface geological surveys, trenching/stripping	40,000.00
Contingencies at 10%	<u>55,000.00</u>
Sub Total	\$505,000.00

**Grand Total                    \$909,000.00**



### **Item 23: References**

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## **APPENDIX 1**

### **Certificate of Qualified Person:**

**I, Ronald C. Wells, P. Geo am a professional Geoscientist residing at 910 Heatherton Court, Kamloops, British Columbia.**

1. I am a Registered member of the Association of Professional Engineers and Geoscientists of British Columbia (APEG) and a Fellow of the Geological Association of Canada.
2. I am a graduate of the University of Wales, U.K. with a B.Sc. (Hons.) in Geology (1974), did post graduate (M.Sc.) studies at Laurentian University, Sudbury, Ontario (1976-77) in Economic Geology.
3. I am presently employed as Consulting Geologist and President of Kamloops Geological Services Ltd., Kamloops B.C.
4. I have been employed continuously as geologist for the last 25 years throughout Canada, USA and Latin America and have past experience and employment as a geologist in Europe.
5. Ten of these years were in the capacity of Regional Geologist for Lacana Mining Corp., then Corona Corporation both in northern Ontario / Quebec and British Columbia.
6. Over the last 12 years I have consulted for major and junior companies in a large number of projects from 'grass roots' through to mature producing mines. These have been for precious and base metals in a variety of geological environments including porphyries (Copper Mt., Kerr-Sulphurets, Mt. Milligan) skarns (BC, Mexico, Honduras), mesothermal-epithermal veins (Courageous Lake NWT, Dome and Detour Lake Mines Ont., Crucitas Costa Rica), conglomerate gold (S. Africa), iron formations (Musselwhite Ont., Meliadine Nunavut) and base metal VMS (Manitoba and Newfoundland).
7. As a result of my education, professional experience and professional qualifications, I am a qualified person as defined in National Instruments 43-101.
8. That I visited the Birch Lake Property with Lorne Warner P.Ge. and examined drill core and the logging facility on High Grade Island. Previously October 22 to 24, 2004 was spent at the Campbell mine, Red Lake examining property drill core.

9. I prepared this report based on data supplied to me by the property owners. Some of this data could not be directly verified by me but is correct to the best of my knowledge.
10. The author has checked all Mineral Titles and Tenure details and believes them to be correct.
11. I am not aware of any material fact or material change with respect of the subject matter of this report, the omission to disclose which would make this report misleading.
12. I am independent of Trade Winds Ventures Inc. and have no interest, either direct or indirect in the Birch Lake or adjacent properties.
13. I have read National Instrument 43-101, F1 and this report has been prepared according to the standards of disclosure for mineral projects.

Dated at Kamloops, British Columbia this 20<sup>th</sup> day of February, 2005.

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Ronald C. Wells, P. Geo

Consulting Geologist.

**APPENDIX 2**

**Consent of Qualified Person:**

Ronald C. Wells  
Consulting Geologist  
Kamloops Geological Services Ltd.

910 Heatherton Court,  
Kamloops, B.C. V1S 1P9  
Tel. (250) 828-2585  
Fax (250) 372-1012  
E-Mail: [rwells@mintarix.com](mailto:rwells@mintarix.com)

To: British Columbia Securities Commission and Sedar

I hereby consent to the filing with regulatory authorities referred to above, of the “Report on Exploration on the Birch Lake Property, Red Lake Mining Division, Province of Ontario” and dated February 20, 2005.

Yours truly,

---

Ronald C. Wells, P.Geo.  
Consulting Geologist

## APPENDIX 3

Table 3: Significant Gold Intercepts 1986-1996 Drilling Programs

## WESTERN ZONE

HOLE-ID	AZIMUTH	DIP	FROM	TO	LENGTH	AU_GPT
025	34	-45	34.0	39.0	5.0	1.60
025	34	-45	58.5	59.2	0.7	1.37
034	214	-45	69.7	70.1	0.4	2.40
045	214	-45	43.6	44.0	0.4	1.40

## MAIN CENTRAL ZONE

HOLE-ID	AZIMUTH	DIP	FROM	TO	LENGTH	AU_GPT
027	250	-45	16.5	17.5	1.0	7.30
027	250	-45	26.0	28.9	2.9	1.51
027	250	-45	49.1	49.6	0.5	1.40
027	250	-45	56.5	57.5	1.0	1.40
027	250	-45	85.8	86.8	1.0	3.40
041	250	-45	29.9	30.9	1.0	2.75
041	250	-45	81.5	82.1	0.5	1.40
041	250	-45	85.1	85.6	0.6	21.44
041	250	-45	99.1	99.8	0.7	3.40
042	250	-45	14.5	15.3	0.8	3.28
045	214	-45	47.0	47.7	0.7	1.40
049	250	-45	59.6	60.1	0.5	1.40
049	250	-45	73.5	75.5	2.0	1.05
049	250	-45	80.0	80.5	0.5	3.58
050	250	-45	139.6	140.5	1.0	3.05
050	250	-45	147.0	148.0	1.0	2.10
051	250	-45	122.0	123.0	1.0	2.25
051	250	-45	126.7	128.5	1.8	1.59
052	250	-45	24.0	25.0	1.0	3.25
052	250	-45	28.5	30.3	1.8	1.56
053	250	-45	118.6	120.6	2.0	1.40
053	250	-45	122.6	123.6	1.0	11.85
053	250	-45	136.6	138.5	1.9	63.94
054	250	-45	46.4	47.4	1.0	1.40
054	250	-45	50.4	51.4	1.0	1.40
054	250	-45	58.4	59.4	1.0	2.42
054	250	-45	72.0	73.4	1.4	4.18
054	250	-45	75.0	75.8	0.8	1.75
058	250	-39	108.0	109.0	1.0	3.58
058	250	-39	121.6	123.6	2.0	5.64
059	250	-45	179.9	184.9	5.0	1.84
059	250	-45	203.7	204.4	0.7	4.28
062	250	-45	131.1	132.7	1.6	0.96

HOLE-ID	AZIMUTH	DIP	FROM	TO	LENGTH	AU_GPT
064	250	-45	77.2	79.4	2.2	1.50
064	250	-45	96.1	100.5	4.4	7.08
065	250	-45	76.8	77.8	1.0	2.42
066	250	-45	141.0	143.0	2.0	1.25
066	250	-45	156.0	157.0	1.0	4.20
066	250	-45	165.5	166.3	0.9	2.38
067	250	-45	56.4	57.4	1.0	11.15
068	250	-45	110.9	111.0	0.1	6.60
069	250	-45	161.8	164.7	2.9	5.16
070	250	-45	201.0	201.5	0.5	1.50
071	250	-45	86.0	86.9	0.9	1.20
071	250	-45	87.8	90.0	2.3	1.40
071	250	-45	101.8	102.8	1.0	2.33
071	250	-45	106.8	107.8	1.0	5.22
072	250	-45	72.0	76.9	4.5	2.32
074	250	-45	171.5	175.7	4.2	8.66
074	250	-45	181.0	185.0	4.0	0.80
075	250	-45	147.4	148.1	0.8	8.13
076	250	-45	50.0	51.0	1.0	1.30
077	250	-45	104.0	110.0	4.0	0.93
077	250	-45	114.0	115.0	1.0	3.33
077	250	-45	118.0	119.0	1.0	1.20
077	250	-45	120.0	120.8	0.8	1.70
078	250	-45	130.7	131.7	1.0	3.17
078	250	-45	149.0	150.0	1.0	1.40
078	250	-45	155.7	157.2	1.5	1.78
078	250	-45	160.0	162.2	2.3	3.58
078	250	-45	165.1	167.0	1.9	1.78
078	250	-45	174.5	176.5	2.0	105.30
078	250	-45	183.5	184.5	1.0	8.07
079	250	-45	10.1	11.1	1.0	2.67
079	250	-45	17.6	18.6	1.0	2.00
080	250	-45	34.1	34.6	0.5	2.10
080	250	-45	118.0	119.0	1.0	1.60
081	250	-45	114.2	115.2	1.0	1.50
081	250	-45	155.7	156.7	1.0	1.00
082	250	-45	139.3	144.5	5.2	1.23
087	250	-60	201.0	202.5	1.5	1.20
090	215	-60	208.0	210.0	2.0	52.08
090	215	-60	215.6	216.6	1.0	1.58
091	215	-74	226.2	226.8	0.5	3.45
091	215	-74	228.9	229.1	0.2	1.11
091	215	-74	235.7	237.0	1.4	41.59
091	215	-74	254.0	257.3	3.3	4.13
092	215	-62	157.7	163.7	6.0	1.65
093	215	-72	188.6	199.6	11.0	1.76

**APPENDIX 4**

**TABLE 6: 2004 Drilling Program - Hole Data**

<b>BIRCH LAKE PROJECT: DRILL HOLE DATA TRADEWINDS PROGRAMS</b>							
<b>HOLE ID</b>	<b>LOC E</b>	<b>LOC N</b>	<b>ELEVATION</b>	<b>LENGTH (m)</b>	<b>START</b>	<b>FINISH</b>	<b>LOGGED BY</b>
DDH-TWBL-094	553868	5697572	406	219.90	7-Jun-04	9-Jun-04	LW
DDH-TWBL-095	553868	5697572	406	193.10	10-Jun-04	13-Jun-04	LW
DDH-TWBL-095A	553868	5697572	406	272.69	26-Sep-04	27-Sep-04	LW, RK
DDH-TWBL-096	553868	5697572	406	291.39	14-Jun-04	17-Jun-04	LW
DDH-TWBL-097	553868	5697572	406	398.20	18-Jun-04	24-Jun-04	LW
DDH-TWBL-098	553868	5697572	406	299.31	21-Sep-04	25-Sep-04	LW
DDH-TWBL-099	553868	5697572	406	352.35	29-Sep-04	7-Oct-04	RK
DDH-TWBL-100	553868	5697572	406	311.00	7-Oct-04	12-Oct-04	RK



## APPENDIX 4

Table 6A: Significant Gold Intercepts. 2004 Drilling Program

	From m	To m	Length m	Au g/t	Ag ppm	Cu ppm	As ppm
DDH TWBL 094	169.00	171.00	2.00	1.27	0.15	89	668.75
	190.00	192.50	2.50	3.47	0.64	101.20	2868.00
DDH TWBL 095	157.00	163.00	6.00	0.94	0.29	78.91	1342.33
	189.00	190.50	1.50	1.59	0.33	67.33	3528.33
DDH TWBL 096	196.95	200.15	3.20	3.44	0.40	135.86	2146.64
	239.15	242.10	2.95	113.94	4.43	85.07	8329.66
	239.15	249.00	9.85	34.54	1.53	66.46	4829.95
	258.70	261.65	2.95	2.38	0.65	93.76	7716.95
DDH TWBL 097	306.40	308.75	2.35	21.21	1.40	109.15	3074.15
	310.75	311.75	1.00	1.98	0.70	160.00	9840.00
	344.75	350.00	5.25	3.08	0.62	39.79	2247.10
	357.85	360.30	2.45	244.73	9.21	100.59	522.55
	363.00	364.00	1.00	1.41	0.40	92.00	3300.00
	371.00	373.00	2.00	2.73	0.95	57.00	6602.50
DDH TWBL 098	206.00	209.40	3.40	6.15	0.59	84.85	2339.56
	233.00	234.00	1.00	2.03	0.30	79.00	2615.00
	254.00	255.00	1.00	1.16	0.40	69.00	1115.00
	272.00	273.00	1.00	1.75	0.40	93.00	5920.00
DDH TWBL 099	207.50	208.50	1.00	1.15	0.10	86.00	2255.00
	231.00	232.00	1.00	2.29	0.50	58.00	395.00
	248.00	251.00	3.00	2.11	0.60	90.00	3043.33
	285.95	288.00	2.05	1.11	0.35	92.29	3981.34
	304.45	307.00	2.55	1.19	0.44	121.71	9967.65
	256.00	257.00	1.00	1.24	0.40	97.00	2935.00
DDH TWBL 100	207.00	208.00	1.00	1.20	0.50	93.00	6450.00
	239.00	241.00	2.00	3.39	0.70	87.75	538.75
	246.00	247.00	1.00	1.14	0.10	75.00	265.00
	250.00	251.00	1.00	1.21	0.40	94.00	5130.00
	281.00	282.00	1.00	1.77	0.70	83.00	250.00
	285.00	288.00	3.00	6.69	0.97	133.00	1991.67