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# **CARNIVAL RESOURCES LTD.**

**GEOLOGICAL & GEOPHYSICAL**

**ASSESSMENT REPORT**

on the

**GLOVER 11 CLAIM**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT  
N.T.S. 82E/1W**

**Greenwood M.D.**

25,901

**April 30, 1999  
Vancouver, B.C.**

**Laurence Sookchoff, P.Eng.  
Sookchoff Consultants Inc.**

*Sookchoff Consultants Inc.*

**Geological & Geophysical  
Assessment Report  
on the  
Glover 11 Claim  
for  
Carnival Resources Ltd.**

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**Geological & Geophysical  
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Carnival Resources Ltd.**

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## **Introduction**

Between January 29, 1999 and February 5, 1999, exploration programs of underground geological mapping and sampling in addition to a localized magnetometer survey were completed on the Glover 13 claim of the Glover Claim Group for assessment on the Glover 11 claim. The purpose of the surveys was to determine the mineral values contained within the skarn zone exposed in the underground workings and to isolate a previously indicated potential massive sulfide zone to the north of the underground workings.

Information for this report was obtained from sources as cited under the Selected Reference section of this report and from periodic work the writer completed since 1980 on the Hek and Glover Claim Group which included the data acquired from the supervision and management of exploration programs.

## **Summary**

The Glover Claim Group, comprised of three claims, the Glover 1, Glover II and Glover 13, is located within the northern extension of the Republic Graben which hosts a number of productive gold mines including one of the leading gold producers of the United States, the Knob Hill mine of northern Washington.

The Glover Claim Group includes the former Hek claim (presently the Glover 13 mineral claim) on which ground original exploration was carried out from 1901. As a result of the exploration completed on the Glover Claim Group ground, three mineralized zones over a strike length of 400 metres have been delineated.

The three zones are offset from each other by faults and consist of gold-bearing massive sulfides in addition to gold bearing skarn zones. Diamond drill testing of the zones has resulted in the intersection of massive sulfide mineral zones assaying up to 0.794 ounces gold per ton over a 1.2 metre section and a skarn zone assaying 0.09 ounces gold per ton over a 10.3 metre section. Diamond drill results have also indicated limited depth extent to the mineralization and limited tonnage potential due to the number and complexity of the dykes and faults which intersect the mineral zones.

## Summary (cont'd)

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A 1995 magnetometer survey over the northern portion of the Glover 13 mineral claim, in part adjacent to and northeast of the three known mineral zones, has indicated 18 magnetometer anomalies of which up to six are located along a magnetic linear indicative of favourable geology for gold mineralization. In addition, a series of old pits may correlate with the magnetic highs.

The 1998 geological mapping and sampling program on the Main Zone, one of three mineral zones located on the Hek 13 claim, resulted in the delineation of a 121 metre mineral zone of an indeterminable width, but more than three metres. The zone was traced by three outcrops along its strike with the massive sulfide content and the intensity of skarning decreasing eastward. A three metre sample from the westernmost outcrop assayed 0.238 oz/t Au.

The 1999 geological mapping and sampling of the Glover Creek adit zone disclosed low gold values within a massive sulfide skarn zone. This zone, however, may correlate with the gold bearing massive sulfide zone intersected within a drill hole 90 metres to the northeast and at a depth of 60 metres.

In the 1999 magnetometer survey, neither the Glover Creek adit zone, nor the massive sulfide zone at depth and 90 metres northeast was detected as anomalous. Bull's eye magnetometer HI's occur within the northwest sector of the survey where old trenches are known to occur in an area of intrusives with rare greenstone/andesite outcrop.

## Property

The property is comprised of three contiguously located grid-unit claims totaling 29 units. Particulars are as follows:

Claim Name	Units	Tenure No.	Expiry Date
Glover I	4	300170	June 13, 1999
Glover 11	16	307457	February 6, 2000
Glover 13	9	314726	November 18, 1999

Any legal aspects pertaining to the claims of the Glover Claim Group are beyond the scope of this report.

## Location and Access

The Glover Claim Group is located in the southern interior of British Columbia, 20 kilometres north of Grand Forks and adjacent and west of the Granby River.

Access is provided by a paved highway with the last two kilometres by an all-weather graveled road directly to the claim group.

## Water and Power

Sufficient water for all phases of the exploration program would be available from the southerly flowing tributaries of Pass Creek which bisects the property. Commercial power might be available from power lines which are located along the southeast corner of the property.

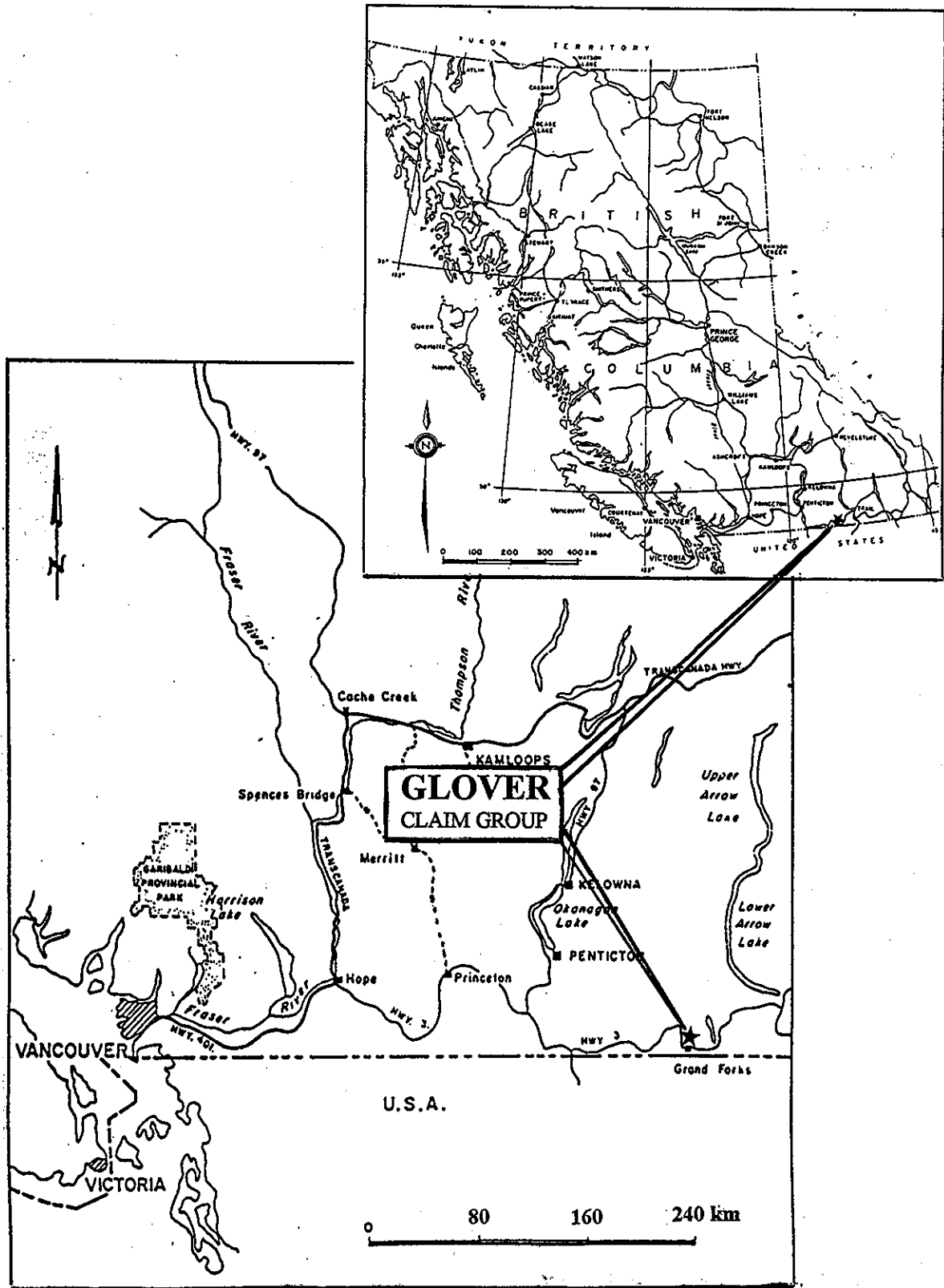


Figure 1. Location Map: Glover Claim Group

## Physiography and Climate

The property lies within the Christina Range of the Monashee Mountains which is characterized by moderate to steep forest sloped mountains to elevations of 1,950 meters. Elevations on the property range between 1200 and 600 metres. The general climate of the area is of arid summers with moderate winters which would provide a surface exploration season of up to 10 months of the year.

## History

The history of the area stems from placer deposits discovered along Rock Creek and Boundary Creek west of Grand Forks in the early 1850's.

In 1890 gold-copper deposits were discovered at Rossland, 55 km east of Grand Forks stimulating prospecting throughout the area. The following year, large low grade copper deposits were discovered near Phoenix, 13 km northeast of Grand Forks. The Phoenix district produced about 15 million tons of ore averaging slightly over 1.5% copper with significant gold and silver values. The Phoenix mine ceased operations in 1919 but was later reopened and in production to 1978.

Some of the original exploration in the immediate area of the Glover claim group was on the Pathfinder, located one km east of the Glover claim group and bordering the east side of the Granby River. An 1895 publication on the exploration of the Pathfinder states that:

"...stripped the ledge for 500 feet in length, and in one spot for 25 feet in width, and it appears to be 100 feet wide. They have made a number of cuts and sunk shafts from ten to twenty feet. They have assays of \$51 gold and 2.5 per cent copper, and have had as high as 23 per cent copper."

In 1920, "1,250 tons of ore being shipped assaying 0.43 oz Au/ton and 3.93 Ag/ton". Exploration has continued on the Pathfinder from 1983 to and including 1987. During this period diamond drilling results included intersections of:

<u>Year</u>	<u>Mineralization</u>	<u>Length</u> (feet)	<u>Assay</u>		
			<u>oz Au/ton</u>	<u>oz Ag/ton</u>	<u>%Cu</u>
1985	Massive sulfide	5.0	0.133	0.57	1.18
	Massive sulfide	2.0	0.566	0.40	0.61
1983	Silicified tuff	41.0	0.021		
	including	14.7	0.042		
	Meta-dacitic tuff	12.2	0.120		
	Dacitic tuff	2.4	1.400		
		0.2	0.128		

On the adjacent Golden Eagle claim, exploration is first mentioned in 1899 and by 1925 development consisted of "a shaft 125 deep, a crosscut tunnel 383 feet long, drifting 363 feet, as well as stoping." Shipments totaled 1,057 tons returning 238 oz Au and 2,235 oz Ag or averaging 0.225 oz Au/ton and 2.11 oz Ag/ton.



## History (cont'd)

On Carnival's Glover claim group (includes the former Hek claim), exploration has been intermittently carried out since 1901. In 1939 production from the Hek (Simpson Mine) was 364 tons of ore from which 2,593 ounces of gold and 90 ounces of silver were extracted. The Simpson is one of the few zones known on the property. Diamond drilling during the 1970's on a mineral zone southeast of the Simpson Mine returned values ranging from "75 feet of 0.07 oz Au/ton to 26 feet of 0.20 oz Au/ton". Diamond drilling by Consolidated Boundary Explorations Ltd. in 1986 intersected zones of volcanogenic stratified massive sulfide mineralization within a tuffaceous volcanic rock.

In 1986, Noranda Exploration optioned the Hek property from Consolidated Boundary and completed two phases of an exploration program. The first phase consisted of magnetometer, induced polarization, soil geochemical and geological mapping surveys completed in 1987. Reported results indicated gold mineralization to be associated with massive sulfides within highly altered meta-volcanic and sediments close to a large syenite intrusive body. The gold bearing zones are believed to be offset from one another by northeast striking faults. An IP survey delineated a number of anomalies which appear to have traced the offset intrusive/volcano-sedimentary contact for some 800 metres on the property.

The second phase of Noranda's exploration program, was completed in 1988 and was comprised of a seven diamond drill hole program. The results indicated that the mineralized zone may be comprised of two massive sulfide zones, as in DDH-HK-88-1 or predominantly a skarned zone as in DDH-HK-88-5. For a complete drill-hole analysis of results, the reader is referred to the detailed report by Gill (1988).

In 1995, 18 kilometres of grid were established over the northern half of the Glover 13 mineral claim whereupon a magnetometer survey, sampling and prospecting was completed by John Kemp of Grand Forks. In a 1995 report on the results of the magnetometer survey, J.M. Thornton, P.Geo. states that of the 18 anomalies, five or six small features lie along or near one magnetic linear in the eastern half of the survey. All anomalies exhibit less than a 40 metre strike length and are considered to arise from thin discontinuous veinlets/fracture fillings of pyrite/pyrrhotite mineralization. Thornton also states that as better gold mineralization is reported to lie on metasedimentary/syenite contacts, the series of anomalies striking N/S at 700E on the grid provide a target for detailed examination.

## Geology

The regional geology is described by J. Paxton, P.Eng. in a report on the former Glory claim which was located within four kilometres south-southwest of the Glover claims and adjacent to the east side of Granby River and the major Granby River Fault structure.

The geology is summarized as follows:

A major structure - The Granby River Fault - trends northerly through the property and separates the pre-Pennsylvanian Grand Forks Metamorphic Complex to the east from the Pennsylvanian to Tertiary rocks to the west. The Grand Forks Group are almost completely void of metallic mineral deposits. Pennsylvanian Permian rocks host a number of massive sulfide deposits plus numerous small shear zone polymetallic sulfide lenses



## Geology (cont'd)

Where rocks have been intruded by later igneous plutons, precious metal quartz veins have developed as well as small skarn type deposits. Numerous small mines in the area such as the Dentonia, Lexington, Providence and Winnipeg are of this type.

The Triassic sequence of conglomerates and bedded limestone are host to the major ore deposits of the area. The chalcopyrite gold hematite ore deposits of the Phoenix, B.C., Motherlode, Sunset and Oro Denora all belong to this group.

On the Glover claim group, Gill (1988), reports on the geological exploration completed by Noranda of the Hek claim group which is summarized by the writer as follows.

Unit 1 consists of rocks of the Paleozoic-Triassic volcano-sedimentary Knobhill assemblage and is comprised of four categories: fine-grained, siliceous meta-andesite and andesite conglomerates (unit 1a); hornfelsed siltstones, fine-grained to medium-grained quartzites and fine-grained quartz-feldspar-biotite gneisses (units 1b, 1c and 1d).

Unit 2 consists of various phases of the Jurassic Nelson intrusive whereas unit 3 and unit 4 comprises the comagmatic Coryell intrusive which underlies most of central portion of the Hek grid.

Units 6, 7 and 8 are a host of Tertiary dyke rocks and are the last intrusive phase represented in the grid area. These dykes intrude all rock types with the latite and trachyte dykes predominating. The orientation pattern of the dyke rocks is generally northeast-southwest and northwest-southeast.

## Alteration

The predominant alteration, as indicated from the drill hole intersections, is of skarned andesites and hornfelsed sediments of the Knobhill group in association with semi-massive to massive zones of pyrite/pyrrhotite containing gold. In the andesites the skarn may be represented by variable degrees of siliceous, green, white andesite skarn associated with variable degrees of massive sulphides. The skarns may also exhibit moderate to intense biotite, varying degrees of calc-silicate and garnet alteration.

## Structure

A major structural break, the Granby River Fault, trends northerly, correlates in part with the Granby River and is within one kilometre east of the eastern border of the Glover claim group. The Fault, which extends northward from Washington, also forms the eastern edge of the Republic Graben, a major structural block which hosts many productive mineral zones including the Knob Hill Gold Mine of northern Washington, one of the leading gold producers of the United States.

On the Glover claim group, northeast linear trends of magnetic lows, representing probable fault zones, have offset the sulfide zones at least twice in a south-southwest direction.

## Mineralization

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According to Gill (1988), mineralization on the Hek property is concentrated to the irregular contact zone between the Coryell syenite intrusive and the Knobhill volcano-sedimentary package. There are two distinct mineralized zones exposed on the property. The Main Zone is located between 100+30E and 101+60E at approximately 100+55N with the Eastern Zone located between 101+90E and 102+70E at 99+75N. Both the zones consist of semi-massive to massive pyrite and pyrrhotite and occur in highly epidote and biotite altered greenstones and sediments. These sulfide zones trend east-west and dip moderately to the north, not unlike the attitude of the Knobhill rocks.

A third mineralized zone, designated as the Glover Creek Zone, and as indicated from previous drill results, is located at depth on Line 98+50E, 101+35N. This Zone is also hosted within hornfelsed sediments and altered greenstones in close proximity to the Coryell syenite intrusive. Gill (1988) has calculated this Zone with an approximate attitude of 098/57N and oriented at 092/51N.

Gill (1985), reports that the three zones are separated by pronounced structural breaks and are offset from one another in an en echelon fashion. However, no evidence exists in the field to explain these breaks although the dominant northeast-southwest trend of the dyke swarm may in fact represent underlying structures. These fault zones can be traced along linear trends of magnetic lows. The Tertiary dykes are also reported to parallel these magnetic lows.

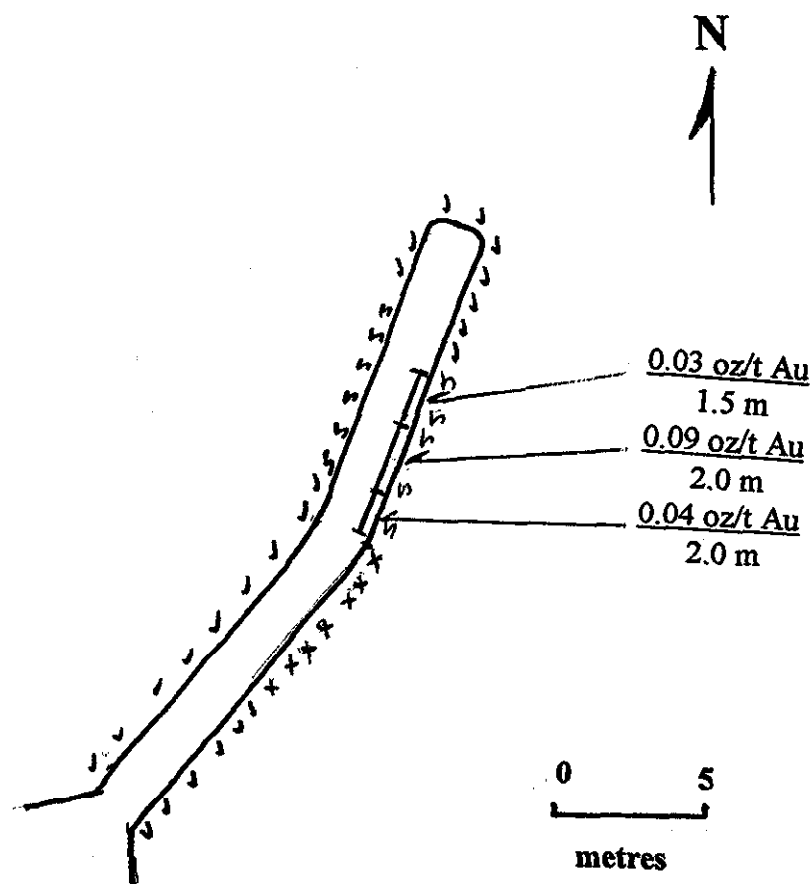
The 1988 Noranda drill hole intersections have indicated mineral values in association with both massive sulfides and skarns. In DDH-HK-88-1 a 1.2 metre section of massive sulfide contains 0.794 opt Au whereas in DDH-HK-88-5 a 10.3 metre section of andesite skarn contains 0.09 opt Au. Gill (1988) concludes that although assays taken from drill core indicate that some fairly respectable gold grades exist in these zones, it is also apparent that the mineralization has limited depth extent as seen in DDH-HK-88-2, 4 and 7.

## 1999 Exploration Program

### Geological Mapping & Sampling

The mapping and sampling program was carried out on the Glover Creek Zone adit located at L98+20E, 100+89N in reference to Noranda's 1988 grid. The actual Glover Creek Zone, located at L98+50E, 101+35N is a massive sulfide zone which was tested by Noranda's drill hole DDH-HK-88-1. Gill (1988) reports that two separate sulfide zones were intersected, one of which was 1.25 metres of massive sulfides bounded by an andesite skarn and which assayed 0.794 opt Au. The intersection was at a depth of 65 metres at L99+00E, 101+30N or approximately 90 metres northeast of the Adit.

Mapping of the 23 metre long adit (Figure 3) disclosed a variably mineralized skarn zone hosted by a variably altered to skarned andesite. The skarn extends from a dioritic intrusive exposed for five metres along the central portion of the adit. The skarn mineralization, consisting of up to 25% pyrite, pyrrhotite and malachite adjacent to the diorite, decreases distally to disseminated sulfides. Three chip samples were taken across the mineralized zone. The results, as shown on Figure 3, indicate that the skarn contains low gold values with the highest value being 0.09 opt Au across 2.0 metres.



### Legend

S S S Skarn  
x x x Diorite

—|— Sample Site  
v v v Volcanics

**Figure 3.** Geology and sample results - Glover Creek Zone adit (Figure 1 for location).

### Magnetometer Survey

The purpose of the magnetometer survey was to detail and isolate indicated magnetometer anomalies that were delineated by Noranda from a general magnetometer survey over and within the Glover Creek Zone.

The Noranda magnetometer results within this area indicates a magnetic low with a 125 metre northeasterly trending magnetic dyke within 30 metres south of Noranda's 1988 massive sulfide-gold diamond drill hole intersection.

## **Magnetometer Survey (cont'd)**

### ***Instrumentation and Theory***

The magnetometer survey was completed by John Kemp of Grand Forks utilizing a Scintrex ENVI magnetometer - serial # 9310050.

All rocks contain some magnetite from very small fractions of a percent to several percent, and even several tens of percent in the case of magnetic iron deposits. The distribution of magnetite or certain characteristics of its magnetic properties can be used in exploration for magnetic related mineral deposits or as geological mapping such as in locating contact zones between rock types containing varied amounts of magnetic minerals.

The anomalies from naturally occurring rocks and minerals are due chiefly from the presence of the most common magnetic mineral magnetite, or of related minerals including limonite and pyrrhotite.

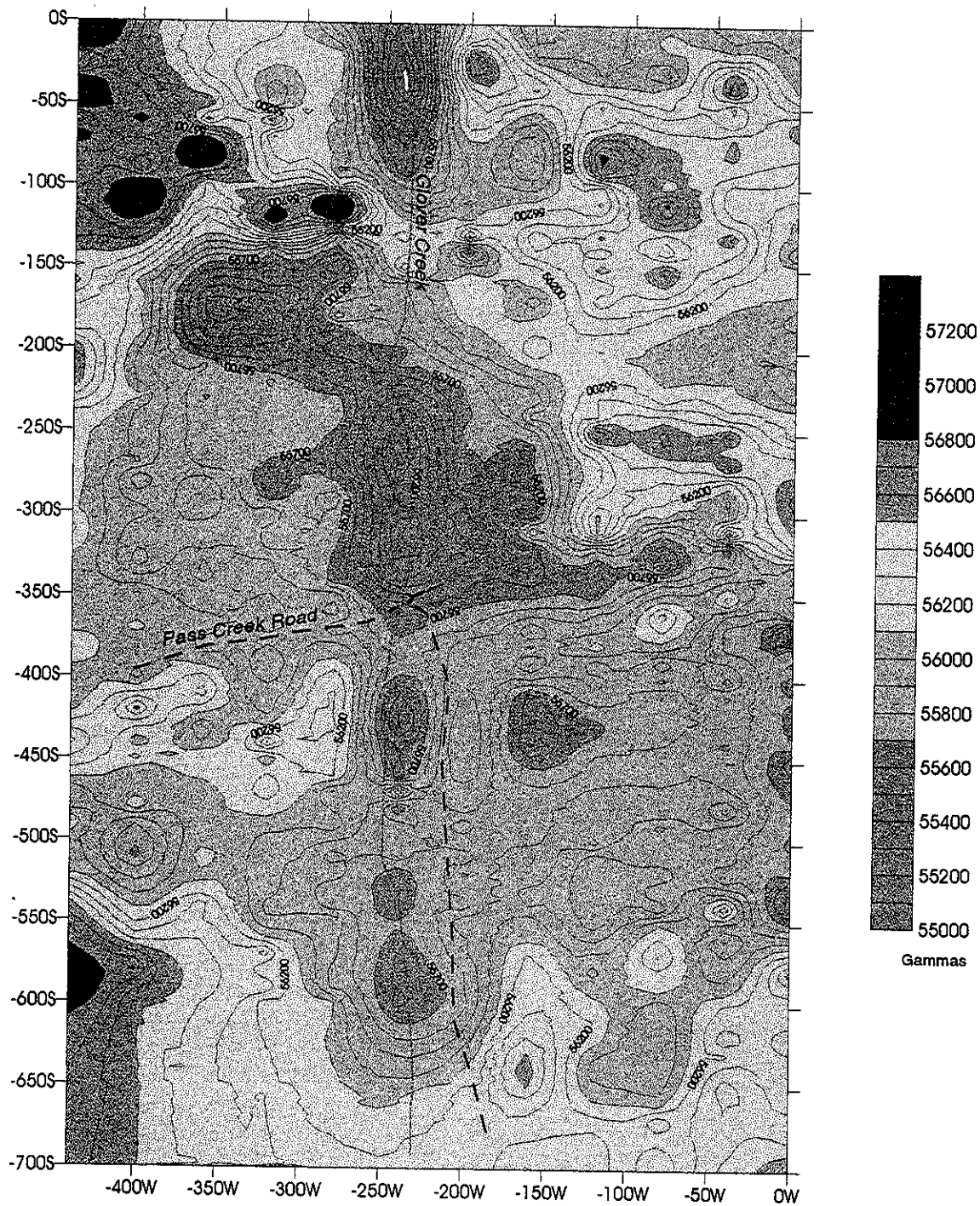
Magnetic anomalies in the earth's magnetic field is caused by two different kinds of magnetism; induced and remanent. Induced magnetization refers to the action of the field on the material wherein the ambient field is enhanced and the material itself acts as a magnet. The proportion of magnetism is related to the magnetic susceptibility of the material. Typically, more basic igneous rocks have a higher susceptibility than the acid igneous rocks; the latter in turn have a higher susceptibility than sedimentary rocks.

The remanent magnetism is often the predominant magnetization (relative to the induced magnetization) in many igneous rocks. The remanent mineralization is important in geological mapping.

Magnetic minerals may also occur in association with sulfide bearing zones or may be decomposed through the action of dynamic or thermal metamorphism. Thus the survey results could indicate lithology, structure, alteration patterns, and most significantly, mineral zones in a favourable geological environment.

### ***Survey Procedure***

Initially, a grid was established with a 400 metre long base line oriented at 075° with 11 cross lines spaced at 40 metres at right angles to the base line. Stations were established at 10 metre intervals along the cross lines and designated with the appropriate grid coordinates on red flagging at each station. The centre of the grid was approximately at the Glover Creek Zone adit. The magnetometer field readings were stored within the memory of and subsequently transferred to a disk for final plotting. Geo-Comp Graphics Inc. of Vancouver plotted the results utilizing a Surfer computer program. These results are shown on the accompanying maps designated as Figures 4 & 5 as an isomagnetic contour map and as a 3D interpretive view map. The raw data is included herein as Appendix II.



Envi Mag (Scintrex)

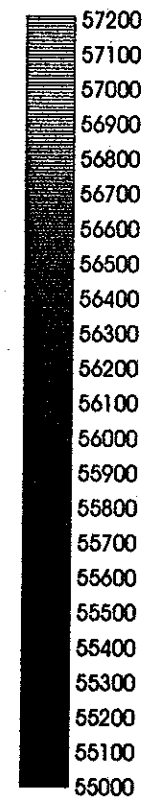
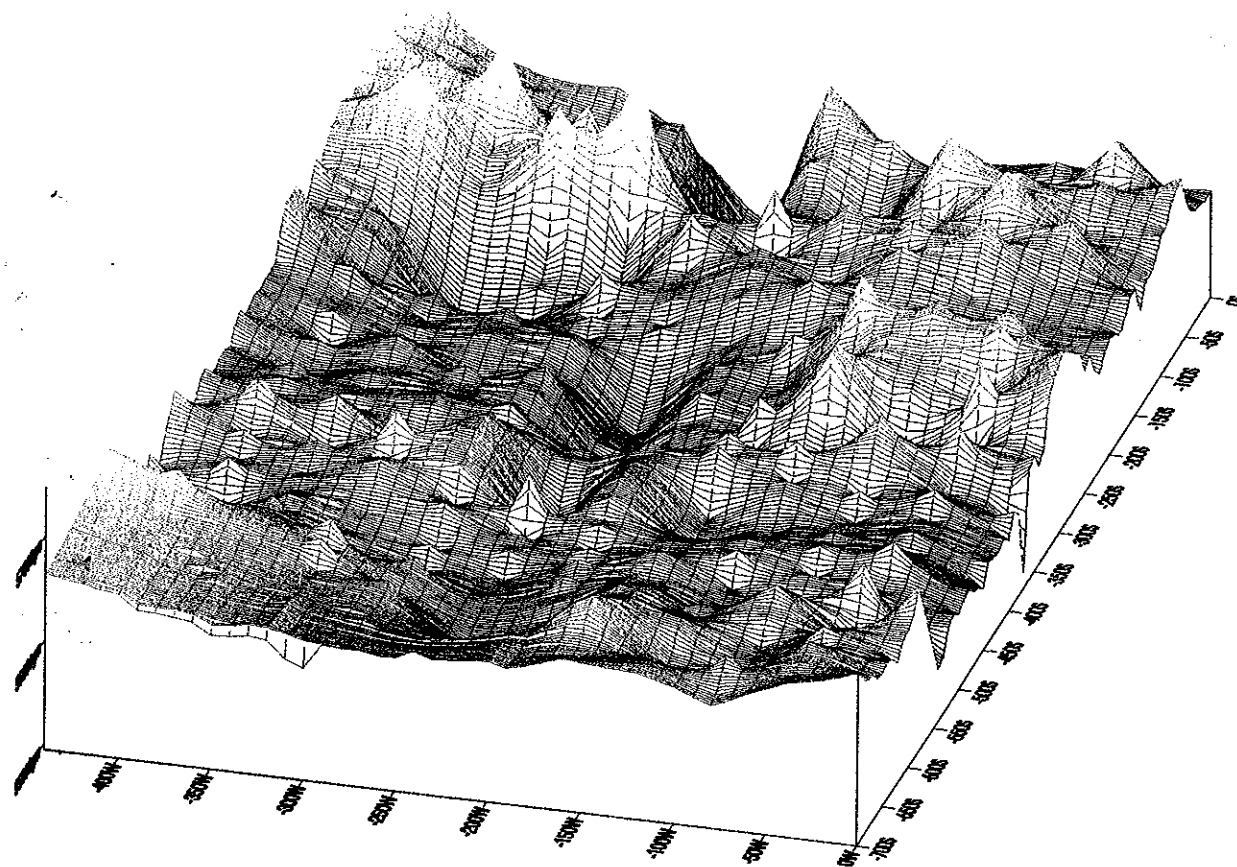
0m 50m 100m 150m 200m

**CARNIVAL RESOURCES LTD.**

GLOVER CLAIM GROUP

**MAGNETOMETER SURVEY**

**Figure 4**



**CARNIVAL RESOURCES LTD.**

GLOVER CLAIM GROUP

**MAGNETOMETER SURVEY**

**3D Interpretive View Figure 5**

### **Discussion of Results**

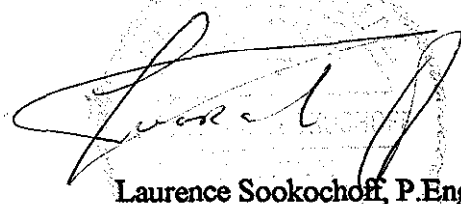
In the magnetometer survey the mean reading was 56,300 gammas with an upper value of 57,300 gammas and a low value of 55,000 gammas. A reading below 55,700 gammas was classified as a magnetic LO and a reading above 56,800 gammas was classified as a magnetic HI. Based on the above parameters, the magnetic survey revealed an irregular shaped 100 metre wide by 250 long LO located within the north central portion of the survey and trending at 330° and for the most part centred over the Glover Creek valley. The southern limits of the LO enclose the Glover Creek adit, the location of which corresponds to the 57,500 gamma contour line, and the DDH 88-1 surface projected intersection 100 metres northeast of the adit. Geologically, Gill (1988) indicates this area within the Knob Hill Group in contact with a syenite of the Coryell Intrusives. Structurally, Gill (1988) indicates northeasterly trending faults, two of which are 150 metres apart and bound the Glover Creek Zone, adit and DDH 88-1 zone. The magnetometer results, in the Glover Creek Zone area appeared to delineate the geological contact and in some cases the indicated fault zones which may correlate with the contacts.

### **Conclusions**

The Glover Creek adit skarn zone is a typical skarn zone known to occur on the Glover Claim Group. Where some of the skarn zones on the property contain significant values in gold, the Glover Creek adit skarn zone contains only minor gold values and thus may not warrant additional exploration. However, should the adit skarn zone may be related to the massive sulfide - skarn? intersected by Noranda's DDH 88-1 (0.70 opt Au for 1.5 metres) and at a depth of 60 metres 90 metres to the northeast, the zone may be of exploration interest. In order to test the extent of the zone for its potential economic gold content, exploration should be performed by diamond drilling with a proposed intersection 25 metres above the DDH - 1 intersection.

As the Glover Creek adit skarn zone nor the DDH 88-1 massive sulfide zone at depth zones occur within magnetic LO's, any large skarn zone should be apparent by a magnetic HI. The zones were not defined by the magnetometer results and therefore they may be limited in extent. The only definitive HI's in the survey area were bull's eye HI's localized in the northwest corner with one in the south. The northwest HI's are within an area mapped as predominantly intrusives and rare outcrops of the Knob Hill Group greenstone/andesite. Thus the geology in this area is conducive to skarn development and warrants investigation.

Respectfully submitted  
Sookochoff Consultants Inc.



Laurence Sookochoff, P.Eng.

April 30, 1999  
Vancouver B.C.

**Glover 13 Claim  
Statement of Costs**

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The field work on the Glover 13 Claim was carried out between January 25, 1999 and February 4, 1998 to the value as follows:

L. Sookochoff, P.Eng.	
2 man days @ \$500.	\$ 1,000.00
J. Kemp (Geophysical)	
2 man days @ \$200.	\$ 400.00
J. Kemp (Grid)	
2 man days @ \$200.	\$ 400.00
4 x 4 rental	
4 days @ \$50.00 plus gas & km	282.50
Car rental:	
2 days @ \$40.00 plus gas & km	142.50
Mag rental	250.00
Room & board:	
2 man days @ \$100.00	200.00
Assays	82.65
Results, maps & compilation	350.00
Report, xerox, & printing	<u>750.00</u>
	 \$ 3,857.65



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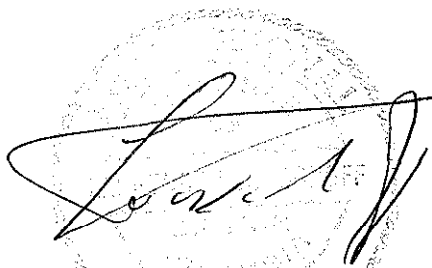
### Certificate

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and principal of Sookochoff Consultants Inc. with offices at Suite 1027, The Standard Building, 510 West Hastings Street, Vancouver, BC V6B 1L8.

I, Laurence Sookochoff, further certify that:

- 1) I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
- 2) I have been practicing my profession for the past thirty-three years.
- 3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4) The information for this report is based on information as itemized in the Selected Reference section of this report and from work the writer has completed on the Glover (Hek) property since 1980.
- 5) I do not have any direct or indirect interest in the property described herein nor any interest in the securities of Carnival Resources Ltd.

A circular embossed seal is visible behind the signature. The seal contains the text "ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF BRITISH COLUMBIA" around the perimeter and "REGISTERED PROFESSIONAL ENGINEER" in the center.

Laurence Sookochoff, P. Eng.

Vancouver, BC  
April 30, 1999

*Sookochoff Consultants Inc.*

Appendix I

**ASSAY CERTIFICATE**

## GEOCHEMICAL ANALYSIS CERTIFICATE

Sookochoff Consultants Inc. PROJECT GLOVER File # 9900353

1027 - 510 W. Hastings St, Vancouver BC V6B 1L8 Submitted by: L. Sookochoff



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Tl	Hg	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppm	ppm	ppb
E 81351	21	1578	21	161	8.6	7	6	436	7.66	38	<8	<2	5	15	.7	3	<3	87	.56	.040	10	13	1.21	8	.11	<3	1.73	.04	.24	2	<5	1	1030
E 81352	20	1836	88	152	16.1	9	6	535	9.91	31	<8	7	3	15	.9	<3	<3	75	.53	.050	7	24	.82	13	.08	<3	1.41	.03	.22	<2	<5	1	3200
E 81353	10	2429	187	433	13.2	13	14	1237	14.27	74	<8	<2	<2	20	3.2	<3	<3	84	.58	.091	3	11	1.48	35	.05	<3	2.45	.02	.38	<2	<5	<1	1400
E 81354	9	1439	119	324	11.7	14	8	1301	15.89	68	<8	5	<2	26	2.1	<3	5	108	.48	.102	4	32	1.67	42	.06	<3	3.17	.01	.47	<2	<5	<1	2870
RE E 81354	10	1393	110	317	10.1	14	8	1280	15.43	60	<8	3	<2	25	1.5	<3	<3	108	.48	.100	4	26	1.68	43	.06	<3	3.17	.02	.48	<2	<5	<1	3980

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 2-2-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND MASSIVE SULFIDE AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS &gt; 1%, AG &gt; 30 PPM &amp; AU &gt; 1000 PPB

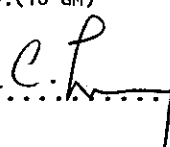
- SAMPLE TYPE: ROCK AU\* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM)

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: FEB 2 1999

DATE REPORT MAILED:

Feb 15/99

SIGNED BY:  .D. TOYE, C.LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Appendix II

**MAGNETOMETER FIELD READINGS**

West	South	gammas	0	-170	56038.2	-40	-330	55788.4
0	-700	56613.3	0	-160	56166.0	-40	-340	56030.8
0	-690	56493.7	0	-150	56157.4	-40	-350	56247.1
0	-680	56368.3	0	-140	55880.8	-40	-360	55890.2
0	-670	56364.0	0	-130	56069.5	-40	-370	55752.9
0	-660	56250.5	0	-120	56073.3	-40	-380	55775.3
0	-650	56224.1	0	-110	56137.2	-40	-390	55916.6
0	-640	56262.3	0	-100	56292.1	-40	-400	56030.7
0	-630	56213.3	0	-90	56290.2	-40	-410	55790.6
0	-620	56104.6	0	-80	56420.8	-40	-420	55842.4
0	-610	56235.0	0	-70	56501.3	-40	-430	55834.0
0	-600	56259.9	0	-60	56550.2	-40	-440	55926.7
0	-590	56325.6	0	-50	56256.5	-40	-450	55797.7
0	-580	56556.2	0	-40	56084.2	-40	-460	55861.2
0	-540	55440.3	0	-30	56007.8	-40	-470	55926.9
0	-530	55484.5	0	-20	55995.9	-40	-480	56132.1
0	-520	55696.5	0	-10	55946.6	-40	-490	55866.0
0	-510	55739.9	0	0	55976.8	-40	-500	55806.0
0	-500	55672.8	-40	0	55938.0	-40	-510	55848.6
0	-490	55713.6	-40	-10	55995.0	-40	-520	55694.4
0	-480	55753.9	-40	-20	56169.0	-40	-530	55978.3
0	-470	55655.5	-40	-30	56578.1	-40	-540	56380.7
0	-460	55617.9	-40	-40	56668.6	-40	-550	55974.0
0	-450	55536.1	-40	-50	56180.0	-40	-560	55789.2
0	-440	55719.7	-40	-60	56233.6	-40	-570	55899.1
0	-430	55679.4	-40	-70	56510.7	-40	-580	55952.9
0	-420	55661.2	-40	-80	56519.7	-40	-590	56044.9
0	-410	55711.4	-40	-90	56424.8	-40	-600	56207.6
0	-400	55625.9	-40	-100	56257.1	-40	-610	56266.1
0	-390	55822.8	-40	-110	56225.8	-40	-620	56368.3
0	-380	55723.1	-40	-120	56333.6	-40	-630	56176.4
0	-370	55094.3	-40	-130	56579.9	-40	-640	56363.1
0	-360	55982.6	-40	-140	56411.7	-40	-650	56452.1
0	-350	56063.4	-40	-150	56332.4	-40	-660	56402.6
0	-340	55886.4	-40	-160	56178.8	-40	-670	56399.9
0	-330	55988.2	-40	-170	56137.3	-40	-680	56351.7
0	-320	56411.2	-40	-180	56053.4	-40	-690	56379.5
0	-310	56516.1	-40	-190	56031.9	-40	-700	56423.3
0	-300	56586.5	-40	-200	56027.7	-80	-700	56125.1
0	-290	56642.4	-40	-210	55996.4	-80	-690	56151.1
0	-280	56547.7	-40	-220	56114.2	-80	-680	56251.9
0	-270	56445.3	-40	-230	56115.9	-80	-670	56382.4
0	-260	56372.7	-40	-240	56259.9	-80	-660	56057.9
0	-250	56131.5	-40	-250	56636.4	-80	-650	55953.9
0	-240	56203.6	-40	-260	56446.1	-80	-640	55910.2
0	-230	55976.4	-40	-270	56625.0	-80	-630	55895.7
0	-220	55875.9	-40	-280	56134.6	-80	-620	55931.1
0	-210	55997.4	-40	-290	55986.7	-80	-610	55923.6
0	-200	56059.8	-40	-300	56000.9	-80	-600	55927.1
0	-190	56030.3	-40	-310	56586.9	-80	-590	56125.9
0	-180	55948.4	-40	-320	55623.9	-80	-580	56170.5

-80	-570	56307.6	-80	-60	56349.4	-120	-440	55740.4
-80	-560	56214.6	-80	-50	56176.9	-120	-450	55829.5
-80	-550	56093.9	-80	-40	56179.2	-120	-460	55819.7
-80	-540	55715.7	-80	-30	55862.6	-120	-470	55946.2
-80	-530	55885.7	-80	-20	56065.0	-120	-480	55982.4
-80	-520	55729.2	-80	-10	56155.8	-120	-490	55933.6
-80	-510	55840.5	-80	0	56044.5	-120	-500	56028.8
-80	-500	55872.8	-120	0	55966.4	-120	-510	55714.2
-80	-490	55766.5	-120	-10	55952.5	-120	-520	55741.3
-80	-480	56005.3	-120	-20	55981.1	-120	-530	55723.2
-80	-470	55967.6	-120	-30	55987.7	-120	-540	55737.4
-80	-460	55828.8	-120	-40	56153.9	-120	-550	55752.8
-80	-450	55905.5	-120	-50	56420.2	-120	-560	55885.2
-80	-440	55797.4	-120	-60	56300.2	-120	-570	56029.9
-80	-430	55744.9	-120	-70	56606.8	-120	-580	55975.9
-80	-420	55741.6	-120	-80	56842.8	-120	-590	56068.3
-80	-410	55689.9	-120	-90	56778.9	-120	-600	56129.0
-80	-400	55928.1	-120	-100	56150.7	-120	-610	56203.0
-80	-390	55720.3	-120	-110	56086.4	-120	-620	56172.5
-80	-380	56043.8	-120	-120	56253.0	-120	-630	56017.6
-80	-370	56209.4	-120	-130	56529.2	-120	-640	55965.6
-80	-360	56350.9	-120	-140	56331.7	-120	-650	56029.3
-80	-350	56051.3	-120	-150	56554.4	-120	-660	56120.7
-80	-340	55877.8	-120	-160	56310.2	-120	-670	56235.4
-80	-330	55367.3	-120	-170	56463.8	-120	-680	56331.3
-80	-320	55536.2	-120	-180	56289.3	-120	-690	56358.6
-80	-310	55731.7	-120	-190	56194.9	-120	-700	56348.3
-80	-300	56128.5	-120	-200	56097.2	-160	-700	56408.0
-80	-290	56222.4	-120	-210	56141.4	-160	-690	56365.6
-80	-280	56286.5	-120	-220	56195.2	-160	-680	56269.6
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-80	-260	56589.1	-120	-240	56299.6	-160	-660	56342.3
-80	-250	56630.0	-120	-250	56803.9	-160	-650	56504.9
-80	-240	56440.0	-120	-260	56288.1	-160	-640	56563.2
-80	-230	56162.6	-120	-270	56165.3	-160	-630	56508.3
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-80	-210	56052.7	-120	-290	56317.6	-160	-610	56328.6
-80	-200	56071.3	-120	-300	56526.7	-160	-600	56276.0
-80	-190	56115.9	-120	-310	56520.5	-160	-590	56288.3
-80	-180	56138.2	-120	-320	55820.7	-160	-580	56235.3
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-80	-160	56509.0	-120	-340	55630.0	-160	-560	56083.7
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-80	-100	56465.8	-120	-400	55935.1	-160	-500	55869.3
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-80	-80	56578.4	-120	-420	55740.7	-160	-480	55868.7
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-160	-460	55769.9	-200	-40	56388.8	-200	-550	55988.9
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-160	-440	55485.5	-200	-60	56284.2	-200	-570	55874.9
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-160	-410	55552.9	-200	-90	56006.2	-200	-600	55747.7
-160	-400	55902.1	-200	-100	56050.7	-240	-600	55578.0
-160	-390	56111.5	-200	-110	55990.3	-240	-590	55599.3
-160	-380	55883.3	-200	-120	56079.9	-240	-580	55630.8
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-160	-360	55862.6	-200	-140	55547.6	-240	-560	55687.0
-160	-350	55694.1	-200	-150	56050.1	-240	-550	55705.1
-160	-340	55559.9	-200	-160	56200.2	-240	-540	55652.9
-160	-330	55553.6	-200	-170	56147.9	-240	-530	55649.3
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-160	-280	55633.5	-200	-220	55712.7	-240	-480	55597.4
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-240	-70	55456.0	-280	-430	56322.4	-320	-270	55681.2
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-240	-50	55124.9	-280	-450	56220.7	-320	-250	55803.3
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-240	0	55153.2	-280	-500	55906.7	-320	-200	55587.0
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-280	-40	56110.3	-280	-550	56002.3	-320	-150	55569.1
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-280	-130	55801.2	-320	-570	56441.8	-320	-60	56579.8
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-280	-160	55632.0	-320	-540	55880.7	-320	-30	56081.8
-280	-170	55758.8	-320	-530	55960.5	-320	-20	56130.0
-280	-180	55954.1	-320	-520	55929.6	-320	-10	56201.5
-280	-190	55534.7	-320	-510	55971.7	-320	0	56280.2
-280	-200	55675.7	-320	-500	55964.0	-360	0	56306.2
-280	-210	55528.2	-320	-490	56057.6	-360	-10	56289.4
-280	-220	55560.4	-320	-480	56163.5	-360	-20	56317.4
-280	-230	55730.9	-320	-470	56254.8	-360	-30	56248.7
-280	-240	55772.8	-320	-460	56203.2	-360	-40	56395.6
-280	-250	55686.3	-320	-450	56012.7	-360	-50	56595.1
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-280	-270	55601.7	-320	-430	56103.9	-360	-70	56762.0
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-280	-290	55867.6	-320	-410	55968.9	-360	-90	56778.0
-280	-300	55772.1	-320	-400	55852.0	-360	-100	56372.2
-280	-310	55773.6	-320	-390	55810.4	-360	-110	56360.9
-280	-320	55706.5	-320	-380	55903.9	-360	-120	56192.6
-280	-330	55672.1	-320	-370	56034.8	-360	-130	56113.2
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-360	-150	55660.7	-400	-550	56177.0	-400	-40	56688.4
-360	-160	55468.1	-400	-540	56079.1	-400	-30	56557.7
-360	-170	55297.3	-400	-530	55948.3	-400	-20	56635.5
-360	-180	55298.5	-400	-520	55834.1	-400	-10	56550.2
-360	-190	55330.4	-400	-510	55663.5	-400	0	56613.7
-360	-200	55513.6	-400	-500	55724.5	-440	-11	57476.3
-360	-210	55807.7	-400	-490	55804.4	-440	-20	56441.4
-360	-220	55782.2	-400	-480	56184.5	-440	-30	56522.6
-360	-230	55687.9	-400	-470	56029.4	-440	-40	57167.1
-360	-240	55737.9	-400	-460	56001.4	-440	-50	57086.8
-360	-250	55779.2	-400	-450	56229.6	-440	-60	56403.8
-360	-260	55699.6	-400	-440	56034.9	-440	-70	56998.0
-360	-270	55747.7	-400	-430	56224.6	-440	-80	56632.2
-360	-280	55940.4	-400	-420	56541.3	-440	-90	56607.4
-360	-290	56000.6	-400	-410	56204.6	-440	-100	56678.9
-360	-300	55945.1	-400	-400	55958.1	-440	-110	56720.7
-360	-310	55858.5	-400	-390	56050.6	-440	-120	56617.6
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-360	-350	55953.0	-400	-350	56116.9	-440	-160	56552.9
-360	-360	55995.8	-400	-340	55923.6	-440	-170	56355.6
-360	-370	56040.5	-400	-330	55746.4	-440	-180	56260.5
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-400	-570	56630.8	-400	-60	56832.9	-440	-450	56291.3
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-440	-470	55940.1
-440	-480	55935.0
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-440	-500	56020.7
-440	-510	56083.6
-440	-520	56070.0
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