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B.E. SPENCER ENGINEERING LTD.

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Consulting Geological Engineer

020247

REPORT

ON THE

1993 EXPLORATION PROGRAMME

INTERNATIONAL TAURUS RESOURCES INC. PROPERTY

CASSIAR, B.C.

LIARD M	INING	DIVISION	N.T.S.	104	P/5E
LATITUD	E 59°	17'	LONGITUDE	129	9°42'

FOR

HERA RESOURCES INC.

ΒY

B. E. SPENCER, P. ENG.

B. E. SPENCER ENGINEERING LTD.

JANUARY 4, 1994

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TABLE OF CONTENTS

	Page
SUMMARY AND CONCLUSIONS	1
INTRODUCTION	2
LOCATION AND ACCESS	3
HISTORY	3
GEOLOGY	4
ORE RESERVES	8
RECOMMENDATIONS	8

APPENDIX

Following Page 9

PLAN - 93-1, 93-2, 93-3 Vein Areas PLAN - 88-1, 88-2 Trench & Diamond Drill Plan PLAN - Geology 93-2 Vein System - Sable Decline SECTION - 8210E Sable Vein SECTION - 8055E Sable Vein SECTION - 7955E Sable Vein SECTION - Trench 13W - 93-1 Vein SECTION - Trench 12W - 93-1 Vein SECTION - Trench 11W - 93-1 Vein SECTION - Trench 11W - 93-1 Vein SECTION - D.D.H. 26 - 93-2 Vein System SECTION - D.D.H.'s 16, 17, 25 - 93-2 Vein System SECTION - D.D.H.'s 18, 19, 20, 24 - 93-2 Vein System SECTION - D.D.H.'s 13, 14 - 93-2 Vein System COST STATEMENT ORE RESERVE CALCULATIONS

SUMMARY AND CONCLUSIONS

International Taurus Resources Inc. owns 41 contiguous mineral claims located near Cassiar in northwestern British Columbia. A 150 ton per day mine-mill complex operated on the property from 1981 to 1988 and produced 35,000 ounces of gold from 240,000 tons of ore. The mill remains on site and in good condition.

During 1993, exploration work tested six of 42 geophysical anomalies outlined by surveys done in 1988 and 1993. This led to the discovery of two new zones and potential reserves are now estimated at 481,000 tons of .204 oz. Au/ton. Reserves are contained in structurally controlled steeply-dipping quartz veins within altered volcanics, a geological environment similar to the original Taurus orebodies. Additional diamond drilling of the new zones is proposed to more accurately define ore reserve tonnages. Contingent on the results of this programme, underground exploration and development would follow.

Most of the Taurus property is covered by overburden and has not been explored with modern exploration techniques. Geophysical induced polarization surveys on a small portion of the claims have proven to be a very effective exploration tool. It is proposed to continue trenching the currently defined anomalies and extend the geophysical coverage over the balance of the property.



INTRODUCTION

This report discusses the results of the exploration work undertaken on the gold property of International Taurus Resources Inc. located in northern British Columbia. A geophysical survey and trenching programme were completed on the claims during July 1993. At this time, the control block of shares of International Taurus Resources Inc. was held by Sable Resources Ltd. This share block was subsequently sold to Hera Resources Inc. who finished a trenching and twenty-six hole, 5,099 foot diamond drill programme undertaken during October and November, 1993.

The 1993 exploration programme evaluated induced polarization anomalies outlined by geophysical surveys completed in 1993 and 1988. Six anomalies were tested by trenching and three gold-bearing vein structures were discovered and tested in the 1993 drill programme. Two of these vein systems, the 93-1 and 93-2 zones are of potential economic significance as detailed herein.

PROPERTY

International Taurus Resources Inc. owns a 100% interest in the following contiguous mineral claims:

Claim	Record No.	Expiry Date
Copco 1 - 6	8213-8218	September 29, 1995
Atlas 1 - 12	69566-69577	March 21, 1995
Roy 1 - 4	65511-55514	September 14, 1995
Tod 7 - 8	57648-57649	October 30, 1995
Thrush	7329	September 11, 1995
Roy Fraction	8515	July 11, 1995
Hanna 9	664 (9 units)	September 19, 1996
Dor	69692	April 13, 1996
Portal l	1046 (15 units)	October 9, 1996
Portal 2	1045 (9 units)	October 9, 1996
MMl Fraction (North $\frac{1}{2}$)	1744	November 28, 1997





In addition, the Company owns the following adjacent claims which are subject to a 2.5% net smelter return royalty payable to Sable Resources Ltd.

Claim	Record No.	Expiry Date
Mack l - 4	515-518	October 2, 1994
Highgrade	929	November 2, 1994
Hillside	928	November 2, 1994
Hopefull l - 4	523-526	October 2, 1994
MMl Fraction (South $\frac{1}{2}$)	1744	November 28, 1997

LOCATION AND ACCESS

Liard Mini	ng District	N.T.S.	104 P/5E
Latitude	59°17'	Longitude	129°42'

The former town of Cassiar is 8 kilometers west of the claims via a branch road off Highway 37 which transects the claims. The Cassiar branch is 117 kilometers north of Dease Lake and the junction with the Alaska Highway is 120 kilometers to the north. Watson Lake, Yukon Territory is a further 21 kilometers east of the Alaska Highway junction. Watson Lake is serviced by scheduled airlines and is the main supply center for the region.

HISTORY

The Cassiar-McDame Lake area has been explored for placer and lode vein gold deposits since 1874 and has experienced several periods of boom activity related to the fluctuations in gold prices. On the Taurus property, underground exploration and development was done in 1961 on the upper level. In 1978, mining and milling operations were commenced by the Erickson Gold Mining Corporation on the ground now owned by Cusac Industries Ltd.





In 1981, milling operations commenced on the Taurus property and continued to 1988. The Plaza Mining Corporation also commenced milling operations in 1981 with ore mined by open pit methods at the Vollaug vein. Plaza went into bankruptcy in 1982 and Sable Resources Ltd. acquired their claims adjacent to the Taurus ground and recently sold this ground to Taurus These claims were explored by an induced polarization geophysical survey in 1988 and trenching and diamond drilling of anomalies outlined by the 1988 survey led to the discovery of the 93-1 and 93-2 gold-bearing veins.

GEOLOGY

The region is underlain by sediments and volcanics of the Carboniferous-Permian Sylvester Group and the most recent mapping of the area is that of L. Diakow and A. Panteleyev published in Geological Fieldwork 1981 and 1982 by the Ministry of Energy, Mines and Petroleum Resources, Province of British Columbia. As indicated by this work, low angle thrust faults and normal east-west striking faults are the dominant structural features. Gold-bearing quartz veins are localized by both the thrust and normal faults.

At the Taurus property, production totalled some 240,000 tons averaging 0.15 oz. Au/ton and was derived from steeply dipping veins striking east-west. Four veins varying from a few inches to five feet in width were mined along a 950 foot strike length to a depth of 300 feet. The gold-bearing veins were truncated along strike by steeply dipping north-south faults and at depth by a low-angle fault dipping 30° to the east. The quartz veins occur in greenstones and have extensive wall rock halo's of pyrite and bleached to ankeritic alteration. Gold values occur in both the quartz and adjacent altered volcanics.

The low angle thrust fault is believed to be the most important



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Flaure 1. Geology of the McDame map-area.

SYLVESTER GROUP (MISSISSIPPIAN TO ? PERMIAN)

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SOME CHERT, INCLUDES PORPHYRITIC FELD-SPATHIC ANDESITE FLOWS (AND ? SILLS) CHERT, TUFFACEOUS CHERT, INCLUDES SOME ARGILLITE; IN NORTHEAST WELL-LAYERED CHERT-PHYLLITE, TUFFACEOUS CHERT, RIB-

BONNED CHERT, AND ARGILLITE

GREENSTONE-CHERT ASSEMBLAGE: MASSIVE

PALE TO DARK GREEN ANDESITE FLOWS, TUFF,

IN PART FINE-GRAINED DYKES AND SILLS,

- 1
 - ARGILLITE, SILTSTONE, CHERT, QUARTZITE, LIMESTONE, PEBBLE CONGLOMERATE, TUFF; INCLUDES NUMEROUS DIABASE AND ANDESITE



BASALT: WIDESPREAD PILLOWS, SOME BRECCIA, TUFF, AND MINOR ARGILLITE; IN SOUTHEAST, ABUNDANT BRECCIA, TUFF, AND SMALL LIME-STONE PODS ないないであると



SILTSTONE, ARGILLITE, GREYWACKE, PEBBLE CONGLOMERATE, QUARTZ ARENITE, CALCAR-EOUS SILTSTONE, LIMESTONE

VEIN SYSTEM

feature controlling ore deposition. The sediments underlying the thrust have been extensively silicified and quartz veins are also localized in the thrust plane, indicating this was the main channel for gold-bearing hydrothermal solutions. Deposition occurs in the steep fracture system eminating from the thrust channel and the associated alteration of the greenstones is more extensive near the thrust plane. Gold deposition and alteration appear to be restricted to a vertical range of some 400 feet above the thrust fault.

The thrust encountered in the Taurus mine area or a parallel structure has also been encountered west of the mine by drilling in 1987 and 1993 and is also exposed at surface south of the junction of Troutline and Quartzrock Creeks. North of this junction in Quartzrock Creek canyon a 200 foot thick zone of barren quartz and ankerite overlie the thrust. This zone is believed to strike west onto the Hopefull mineral claims where limited trenching in 1984 exposed weak gold-bearing quartz veins in altered greenstones. The 1988 I.P. South Grid survey also identified 8 high priority anomalies in this area, which have only been partially tested by three diamond drill holes. Further exploration in this area is recommended.

The 1988 I.P. survey also outlined 33 high priority anomalies in the Main Grid area which covers the western extension of the Taurus mine vein system. In 1988, trenching and five diamond drill holes tested one anomaly which discovered the 1988-1 and 1988-2 veins. In 1988, a small open pit mined a portion of the 1988-2 vein and produced 2,900 tons assaying .06 oz. Au/ton. The vein structure was more complicated than anticipated which resulted in high dilution and lower ore grades. In 1993, two of the 1988 trenches which had no assay data were mapped and sampled and the zones were re-appraised. The 1988-1 vein contains a block of potential ore included in the current reserve estimates.

During 1993, the I.P. survey was extended west of the Main Grid on ground optioned from Cusac Industries Ltd. and the gap between



the Main and Southwest Grids was tested on lines at 400 foot centers. No significant anomalies were outlined on the Cusac ground and the option has been terminated. One anomaly - 93-1, immediately south of the Main Grid, was identified and partially tested by three trenches with negative to inconclusive results. Four additional 1988 high priority anomalies were tested by trenching in 1993 and this work discovered the 1993-1 and 1993-2 vein systems as well as the west extension of the Sable or 1993-3 vein. These three veins were further tested by diamond drilling during October and November, 1993 and potential ore reserves have been defined in the 1993-1 and 1993-2 vein systems.

The geology of the 93-1, 2 and 3 zones is shown on Plate 1 and also by diamond drill sections contained in the appendix. The interpretation is based on trench and drillhole data only as the entire area is overlain by three to twenty feet of over-The 93-1 zone consists of two parallel veins striking at burden. N30°W with steep variable dips. The 93-1 vein has been traced over a strike length of 820 feet and varies from two to thirteen feet in width. The western portion of the vein contains the best gold values on the contacts with weaker mineralization in the The 93-1 south vein has been traced over a strike length core. of 1,000 feet but a 250 foot gap is present in the center of the zone where trenching did not reach bedrock. Both veins are truncated to the west by an east-west break inferred from the overall data. It is believed that the 93-1 and 93-2 zones are younger than the east-west striking veins and developed in tension fractures created by block faulting.

The 93-2 zone consists of five sub-parallel veins which, like the 93-1 zone are truncated to the west by an east-west fracture. The veins strike at 110° from this fracture over strike lengths of 220 feet to 800 feet and terminate to the east at their intersection with a series of other east-west fractures as exposed by the Sable decline. The intersection of these fracture systems have the potential for comparatively wide steeply plunging pipe-like zones as suggested by D.D.H.'s 93-17 and 93-25. The 93-2 A vein appears



to be the richest and strongest of the veins as it continues to the east at its junction with the other fracture system and then resumes a 110° strike and remains open in this direction.

The 93-3 zone is the western extension of the #1 vein exposed in the Sable decline. Trenches and diamond drill holes extended this east-west striking structure 600 feet west of the decline where the vein pinched to a 1 foot width. Individual assays on this vein are of interest but the average value is not currently economic and no reserves are carried in this zone. It may have potential below the depth explored to date, if a relationship between the gold distribution and the thrust fault indicates richer mineralization near the thrust.

The geology of the 1988-1 and 2 zones is shown on Plate 2. Five diamond drillholes collared at 200 foot centers and sixteen trenches tested a 900 foot strike length of this zone in 1988. This work exposed a 250 foot width of pyritic ankerite with ribs and horses of unaltered greenstone. Mineralization is contained in the altered wallrock and quartz veins, if present, are generally barren. Most of the zones show an erratic distribution of gold values along their N70°E strike but two have reasonably consistent values. Potential reserves are estimated for the 1988-1 and 1988-1 south The 1988-2 vein was mined by a small open pit and this veins. work showed the values in this zone occur west of a small crossfault where a quartz stockwork some 25 feet in width and 40 feet in length developed. East of the fault a horse of unaltered volcanics with much narrower veins on the flanks extends for 200 feet where the gold values weaken. No reserves are carried in this block but it may warrant further work at a later date. The extensive alteration and widespread mineralization in this area suggest large scale open pit possibilities may exist. As a first step in exploring this, all of the core from the drillholes in this area should be assayed.



ORE RESERVES

Tabulated below are the geological or potential ore reserves for the mineralized zones tested to date. Details pertaining to these estimates are contained in the appendix of this report.

Zone	Tonnage	Oz. Au/Ton
88-1	70,000	.24
88-1 South	50,000	.16
93-1	200,000	.162
93-1 South	70,000	.20
93-2 A	32,000	.419
93-2 B	30,000	.157
93-2 C	17,000	.246
93-2 D	12,000	.221
Total	481,000	.204

The above estimates are based on fairly limited information. In particular, the thrust fault which limits the vertical depth of the zones has not been established for the 1988-1 or 1993-1 zones. The higher grade 93-2 veins show a wide range of gold values. Assays have been cut to 1 oz. in the above estimates. A higher density of sampling is required to confidently estimate the grade of a deposit of this nature. Further work on these zones is definitely warranted and as discussed below.

RECOMMENDATIONS

The 1993 exploration work identified two new vein systems with sufficient tonnage potential to resume production at the 150 ton per day mill on the property. Additional drilling is required to confirm these potential reserves prior to a production decision and to this end a 5,000 foot drill programme is proposed. This drill programme whould establish some 80,000 tons of indicated ore which can be mined above the elevation of the Sable decline. In addition, several deeper holes should be drilled on the 93-1



vein to establish the location of the thrust fault and confirm that the mineralization extends to this structure.

The 1988 geophysical survey outlined 41 high priority targets of which seven have been tested. Trenching is proposed to evaluate the remaining anomalies.

Previous exploration on the property has been limited to the areas where outcrops were present. Most of the property is unexplored. Geophysical surveys should be undertaken to initiate exploration on the rest of the property.

The existing geological information on the property is contained in numerous maps of variable scales. This data should be reviewed and compiled on a single set of maps to provide a better overview of the property.

January 4, 1994

Bruce E. Spencer, P. Eng.

ORE RESERVE CALCULATIONS

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<u>88-1 Vein</u>		
Trench	True Width	Oz. Au/Ton
Stn 48 24W Stn 49 Stn 50 22W D.D.H. 88-8 D.D.H. 88-9 Stn 55 20W	4.0' 4.1 4.0 5.0 9.4 7.3 4.4 5.0 2.0	.167 .362 .734 .430 .208 .104 .121 .004 .311
Average Grade Width Strike Length Depth Tonnage	24 - 5.5' - 500' - 300' - 300 x 500 x 5.5/12 = 70,000 t	cons

88-1 South Vein

Trench	True Width	<u>Oz. Au/Ton</u>
Stn 49 22W Stn 50 Stn 55 D.D.H. 88-8	5.0' 4.3 5.0 4.0 4.3	.169 .156 .308 .069 .112
Average Grade Width Strike Length Depth Tonnage	160 - 400' - 4.97' - 300' - 300 x 400 x 4.97/12 = 50,0	00 tons



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Trench	True Width	Oz. Au/Ton
13W 12 11 10 9 8 7 & 50 7 D.D.H. 93-1 D.D.H. 93-2 D.D.H. 93-3 D.D.H. 93-4 D.D.H. 93-5 D.D.H. 93-6 D.D.H. 93-7	10.9' 8.2 12.3 9.1 13.6 7.0 6.3 4.0 12.1 7.7 9.4 11.8 7.6 5.6 8.5	.161 .365 .179 .047 .246 .151 .040 * .171 * .050 .098 .112 .107 .248 .195 .183
Average Grade Width Strike Length Depth Tonnage * not included in	165 - 9.51' - 725' - 350' - 725 x 350 x 9.51/12 = 200,000 ================================	tons ====
93-1 South Vein		
Trench	True Width	Oz. Au/Ton
15	9.5'	.382
14 (no sample) 13 D.D.H. 93-1 D.D.H. 93-2 D.D.H. 93-5	11.5 3.5 5.3 5.6	.129 .297 ** .264 ** .089
Average Grade Width Strike Length Depth Tonnage	200 - 8.8' - 300' - 325' - 300 x 8.8 x 325/12 = 70,000 to ========	ns ==
note cottated	TH ZONG	

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<u>93-2 A Vein</u>		
Trench	True Width	Oz. Au/Ton
<u>West</u> TrB D.D.H. 93-18 D.D.H. 93-19	4.2' 4.3 3.75	.147 .023 .043
No reserves		
Central TrC D.D.H. 93-16 D.D.H. 93-17 TrG TrD D.D.H. 93-26 TrF Average Grade Width Strike Length	2.0' 2.3 5.5 2.0 4.5 2.75 4.0 644 uncut and .410 cut - 3.29' - 270'	2.876 .309 .102 1.318 .172 1.363 .168
Dępth Tonnage	- 250' - 270 x 3.29 x 250/12 = 18,5 ====	000 tons
South TrG TrD TrF D.D.H. 93-26 TrE	1.0 5.0 2.5 5.5 2.0	.176 *** .154 .905 .854 .698
Average Grade Width Strike Length Depth Tonnage *** deleted	608 - 3.75' - 180' - 250' - 180 x 3.75 x 250/12 = 14, ===	000 tons
TOTAL	32,500 tons @ .628 uncu 32,500 tons @ .495 cut	ıt

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Trench	True Width	Oz. Au/Ton
14S	2.0'	.257
D.D.H. 84-8	2.1	.530
D.D.H. 93-13	5.6	.050
D.D.H. 93-14	10.2	.118
125	5.5	.247
D.D.H. 93-18	4.9	.028
D.D.H. 93-19	2.5	.169
TrB	3.0	.049
D.D.H. 93-16	6.6	.105
D.D.H. 93-17	3.75	.087
D.D.H. 93-25	4.25	.409

							======	====
Tonnage	-	320 x	4.58	х	250/12	=	30 , 500	tons
Depth	-	250'						
Strike Length	-	320'						
Width	-	4.58'						
Average Grade	-	.157						

93-2 C Vein

Trench	True Width	Oz. Au/Ton
12S	3.5'	.350
D.D.H. 84-12	2.5	.290
D.D.H. 93-13	4.2	.234
D.D.H. 93-14	1.0	.104
D.D.H. 93-18	2.8	.054
D.D.H. 93-19	3.5	.133
TrB	4.0	.071
D.D.H. 93-16	4.5	.084
D.D.H. 93-17	3.75	.185
D.D.H. 93-25	5.6	.417
TrC	2.0	.172
Average Grade	- 246	
Average braue		

							======	====
Tonnage	-	240 x	3.48	х	250/12	Ξ	17,400	tons
Depth	-	250'						
Strike Length	-	240'						
Width	-	3.48'						
Average Graue		.240						

Trench	<u>True Width</u>	Qz. Au/Ton
D.D.H. 84-7	2.0'	Trace
D.D.H. 84-12	3.75 or 6.0	.216 or .130
TrB	1.0	.311
D.D.H. 93-18	2.8	.116
D.D.H. 93-19	6.0	.100
D.D.H. 93-24	4.5	.121
D.D.H. 93-20	2.0	.103
D.D.H. 93-16	2.1	.046
D.D.H. 93-25	14.0	.045 ****

Tonnage	$-200 \times 4.0 \times 180/12 = 12,000 \text{ tons}$
Depth	- 180'
Strike Length	- 200'
Width	- 4.0'
Average Grade	221

**** 40% core loss

COST STATEMENT

1993 Trenching and Diamond Drill Programme

			<u>Cost/Foot</u>
1.	Diamond Drilling		
	 D.J. Drilling November 15, 1993 Invoice November 17, 1993 Invoice 	77,221.59 51,747.30	
		128,968.89	25.29
2.	Assaying		
	- Acme Laboratories	7,351.80	1.44
3.	Geology & Transportation		
	- W. Howell - Drilling	5,885.00	
	- B.E. Spencer - Drilling - Trenching	12,336.63 4,859.88	
		23,081.51	3.57
4.	Trenching & Reclaimation		30.30
	 D.J. Drilling October 15 - 24, 1993 and 		
	November 2 - 5, 1993	27,431.98	
	TOTAL PROJECT COSTS	186,834.18	
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SABLE VEIN DDHs 84-13, 93-11 & 93-12

linch = 20 feet



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SECTION 8055 E SABLE VEIN DDHs 93-8,93-9 & 93-10 1 inch = 20 feet









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L	3
Γ	4
Γ	40







