# 017813 PROPERTY FILE 103F@29

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### **PROSPECTUS**

ENGLEFIELD RESOURCES LTD.
Incorporated under the laws
of the Province of British Columbia
Suite 1101, 736 Granville Street
Vancouver, British Columbia V6Z 1G3
(herein called the "Issuer")

### **NEW ISSUE**

600,000 shares at \$0.50 per share

	Price to Public	Commission	Proceeds to Issuer (1)
Per Share	\$0.50(2)	\$0.075	\$0.425
Total	\$300,000.00	\$45,000.00	\$255,000.00

- (1) Before deduction of expenses of this offering estimated not to exceed \$35,000.00.
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McDERMID ST. LAWRENCE LIMITED 1000 - 601 West Hastings Street Vancouver, British Columbia

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DATED: APRIL 20, 1987

EFFECTIVE DATE: APRIL 30, 1987

### REPORT ON THE SECURITY GOLD PROSPECT

MORESBY ISLAND, QUEEN CHARLOTTE ISLANDS

MINERAL CLAIMS: OVERPROOF, OP #1 - #6

SKEENA MINING DIVISION

LATITUDE 53°03' N LONGITUDE 132°15' W

NTS 103F/1E and 1W

PREPARED FOR: ENGLEFIELD RESOURCES LTD.

bу

GORDON G. RICHARDS, P.Eng. 5700 Forsythe Crescent Richmond, B.C. V7C 2C3

Tel.: (604) 270-6862

February 6, 1987

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### INTRODUCTION

Englefield Resources Ltd. recently acquired 100% title to the Security mineral property on Moresby Island, Queen Charlotte Islands. The writer was asked by the management of Englefield Resources Ltd. to review all available information on the property, to prepare a report on the mineral potential and make recommendations for further exploration.

The Security Property, comprised of 7 mineral claims (66 uinits) is centred on the peninsula between Security Inlet and Inskip Channel, on northwest Moresby Island, Queen Charlotte Islands. This property was a new discovery in 1978. It was staked on the results of regional and follow-up exploration programmes which indicated areas of highly anomalous gold-arsenic geochemistry within a broad regional anomaly of about 5 by 8 km. The stronger anomalies were found to be associated with a number of geological factors such as intense silica-carbonate-tourmaline alteration, quartz veining, fault structures, and a variety of potential host rocks. Recognition of good potential for the discovery of lodegold deposits led to intense exploration of the claims with expenditures totalling \$411,904.17 and including the drilling of fifteen diamond drill holes.

Upon review of all of the data, an initial exploration programme budgeted at \$30,000 should be undertaken to provide detailed geological-geochemical information on extensions of known mineralization. If results from this work are encouraging, then the Phase II exploration, budgeted at \$60,000, is recommended to define drill targets by trenching

showings and using geophysical techniques over areas of extensive overburden. Phase III drilling, if warranted, is budgeted at \$250,000 and would be based on a thorough review of all data.

### PREVIOUS WORK

There is no known history of "old" exploration in this immediate area. It is worth noting, however, that the claim block lies only 8 km NW of Mitchell Inlet, the site of the first lode-gold mine in British Columbia. The production from this mine is believed to have been 304 oz of gold and 30 oz of silver, mined from a quartz-calcite stringer system in Triassic Karmutsen volcanics. Initial work in 1979 by JMT Services Corp. included reconnaissance mapping and sampling of the claim block and identification of three gold exploration targets which were designated A-B-C zones. These targets were further delineated with more detailed mapping and sampling on a scale of 1:5000 by JMT geologists later in 1979.

In 1980 Chevron Canada Limited holding the property under option took over exploration and completed more tightly controlled and detailed geological and geochemical work in selected areas. This work was extended to most of the easily accessible potential zones on the property during 1981. Eleven test pits were drilled and blasted in a variety of different rock types to examine the extent of surface leaching in distinct environments. Mr. D. Arscott, Chevron's Project Geologist, stated in a report dated October 28, 1981:

<sup>&</sup>quot;A fairly extensive surface exploration program on the Security Inlet property during 1981 has delineated exceptionally well developed alteration zones with accompanying Au-As and Cu mineralization.

The setting includes a suite of rocks from Triassic to probable Tertiary, dominated by Triassic Karmutsen basalts, in a strongly block-faulted regime, with some localized folding.

The alternation patterns show a clear broad zoning from carbonate-hematite low in the stratigraphy and strong at the west end of the property to epidote-sericite, silicification, and finally tourmalinization higher up to the east. Locally, broad but intense "hot spots" of silicification carry geochemically anomalous Au and As, suggestive of both low-grade disseminated mineralization and possible high-grade Au, the latter within major quartz vein systems. Cu mineralization is also present in one not yet well defined area. Seven main mineralized zones have been outlined, the most significant of which (zone AI - BI) shows moderate to strong silicification over an area of 500 m by 1300 m, and incorporating a 1 to 7 metre wide quartz vein at least 550 m long. This vein displays rock geochemistry peaking at 680 ppb Au.

Suitable conditions are present for major Au deposition at Security. It may not, however, yield its Au easily. This is in consequence of the lateral and vertical size of its potentially productive host zones, the normal vagrancy of Au distribution, the possibility of surface leaching, and the difficulty of accurate sampling even with drilling. Sophisticated structural and petrographic methods will be necessary. Persistance may also be necessary."

In 1982 Chevron completed more mapping and sampling at 1:5000 scale on the A (AB zone of Chevron) and B zones, as well as on remaining accessible areas. In addition, very detailed 1:1000 scale mapping and sampling was conducted on the major quartz veins on both A and B zones.

The detailed geological work defined nine drill targets resulting in the drilling of fifteen diamond drill holes between August 30 and October 6, 1982, totalling 1163.5 metres.

Chevron terminated its option agreement on the property in 1983 and no additional work has been completed since that date.

Gimlex Enterprises Ltd. acquired a 100% interest in the Security Property on January 14, 1986 and on February 2, 1987, Englefield Resources Ltd. agreed with Gimlex to acquire full right and title by February 16, 1987.

Programmes and expenditures completed on the property by the various opertators to date are on file with the Ministry of Mines and are summarized as follows:

Dates	Operator	Expenditure	Programme
Aug 15, 1979	JMT Services	\$ 14,043.01	Geology-Geochemistry
Dec 15, 1979	JMT Services	15,093.07	Geology-Geochemistry
Sept 15 1980	Chevron	29,353.83	Geology-Geochemistry
Oct 18, 1981	Chevron	60,671.65	Geology-Geochemistry- Trenching
Dec 30, 1982	Chevron	292,742.61	Geology-Geochemistry- Trenching, Diamond Drilling.
			or itiling.

Total expended on property \$ 411,904.17

### LOCATION, TOPOGRAPHY AND ACCESS

The Property covers the mountainous peninsula between Security Inlet and Inskip channel some 40 km southwest of Sandspit. Slopes are steep and rocky and the minor drainages tend to be steep-walled waterfall creeks that are difficult to traverse. Vegetation is typical hemlock-spruce-cedar rain forest to elevation 2000 feet with cypress swamps and brushy alpine vegetation above.

The claims cover a rough, narrow and nearly treeless scrub cedar and pine plateau some six km long and the adjacent steep (40°) heavily forested slopes. Terrain negotiability on foot below the plateau cannot be considered easy and in places is difficult. The overall relief of the property is 890 m.

The climate is typical of West Coast rain forest, with a yearly precipitation (mainly September to May) of up to 500 cm. Despite the amount of rainfall, water is not always abundant at higher elevations which drain quickly during dry spells. There are several small lakes, however, which are not shown on the 1:50,000 topographic map.

Access at present is by boat or aircraft from Sandspit or Queen Charlotte City. A road is planned to Security Cove by MacMillan-Bloedel to connect with the existing Deena road and Sandspit, but construction dates have not yet been finalized. In 1985 this road had been completed to within about 5 miles of the Property.

### MINERAL CLAIMS

The Property consists of the OVERPROOF and OP #1--#6 mineral claims described below and shown on accompanying claim map. Assessment work is due on all of these claims in 1987.

<u>Name</u>	Record No.	Units	Record Date	(Month)
OVERPROOF	677	4	July 28	1978
OP #1	673	2	11 11	, 13,0
#2	674	12	u u	11
#3	675	12	11 14	и
#4	676	6	u u	11
#5	678	15	H H	14
#6	679	15	11 11	11

### **GEOLOGY**

### a) General

The general stratigraphy of the property is as follows:

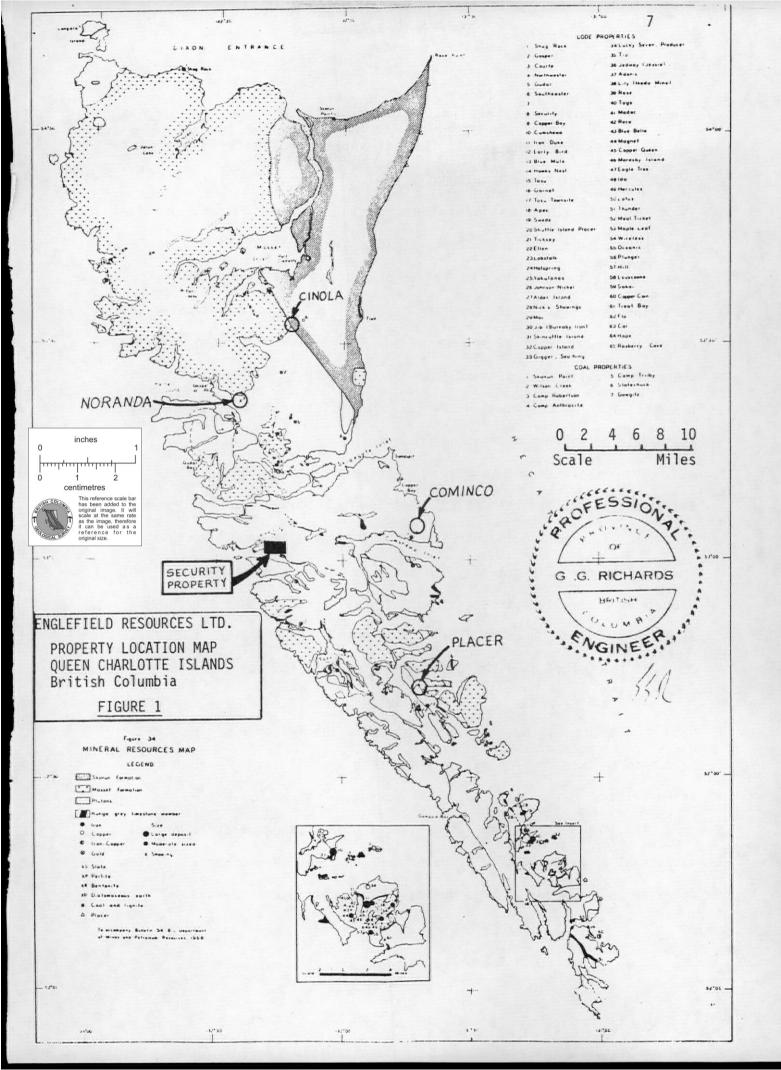
Age	Formation	Lithologies
Tertiary	Masset Fm.	Rhyolilte flows and dykes, intrusive gabbros, dacite porphyry plug and dykes, and feldspar porphyry dykes.
U. Cretaceous	Queen Charlotte Group	Fine grained carbonaceous siltstones.
Jurassic	Yakoun Fm.	Andesite tuffs and volcanic sandstones
	Kunga Fm.	Massive grey and finely bedded black limestones and black thinly bedded argillite.
Triassic	Karmutsen Fm.	Submarine massive and pillowed basalts massive and amygdaloidal subaerial basalts, and interflow sedimentary rocks.

The Security property is underlain primarily by basalts of the Triassic Karmutsen Formation.

The lower part of the succession is made up of massive and amyg-daloidal flows that range in colour from green to hematitic maroon and purple. Vesicles have been infilled with calcite, chlorite and quartz.

The higher topographic and stratigraphic levels along the ridge tops and plateau are underlain by dark green pillowed and massive basalts with occasional tuff horizons. Pillows are well developed in some areas with rims of quartz and epidote and interpillow dallosite breccia.

Several parts of the property are underlain by limestones, argillites and to a lesser extent by cherts. Some of these, particularly the argillites and cherts on the slope at the south east end of the B



zone, are almost certainly interflow sediments, while others, such as the limestones along the Inskip Channel shore, are quite likely down dropped blocks of Kunga limestone.

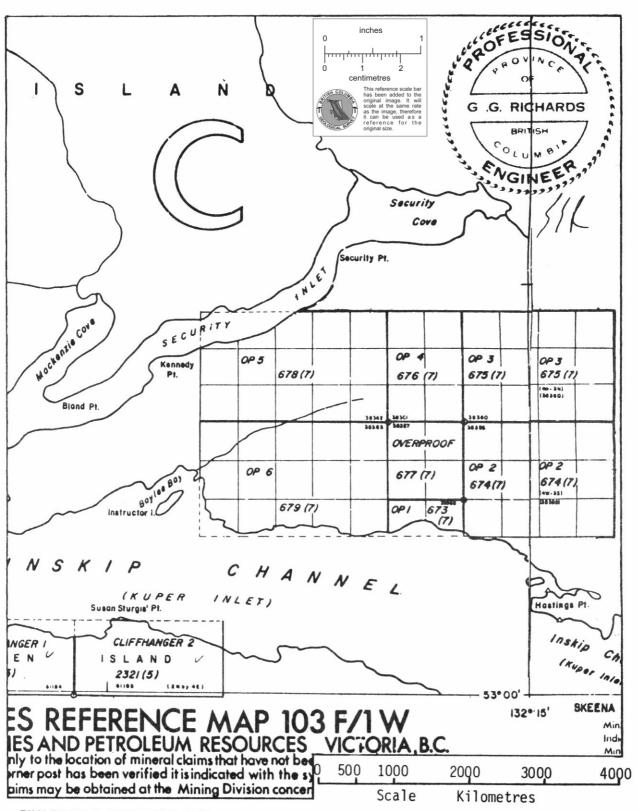
Andesite tuffs and sandstones of the Jurassic Yakoun Formation were only found in Hastings Creek. This occurrence most likely represents a fault bounded block or sliver of Yakoun Formation.

The Tertiary Masset Formation is represented by both intrusive and extrusive rocks. A large area of the B zone is underlain by rhyolite and gabbro, while much of the C zone is underlain by a plug of porphyritic dacite. In addition, numerous dykes of basalt, felspar porphyry and dacite porphyry occur on the property.

The rhyolite of the B zone is fine grained, intensely fractured and displays a well developed foliation, which is interpreted as flow banding. The gabbro is intrusive into the rhyolite and although it is now fault bounded, it probably formed a large plug at one time. The gabbro is generally coarse grained and massive except near the contacts with the rhyolite and as dykes and sills within the rhyolite. At these contacts the gabbro is fine to medium grained and foliated.

This gabbro plug, or one like it, may be the source of numerous basaltic dykes in the A and B zones, while the feldspar porphyry dykes so common on the property may be feeders to a now largely eroded sheet of rhyolite.

The wide extent and large size of some of the quartz veins indicates that an extensive, multiphased and long lived hydrothermal system operated in the Security area during Tertiary or later times.



ENGLEFIELD RESOURCES LTD.

CLAIM MAP - SECURITY PROPERTY OVERPROOF and OP MINERAL CLAIMS QUEEN CHARLOTTE ISLANDS, British Columbia

FIGURE 2

Quartz veins occurring along generally north trending faults, are associated with carbonitization of basalts and may be associated with either the dacite porphyry or the feldspar porphyries as a heat source.

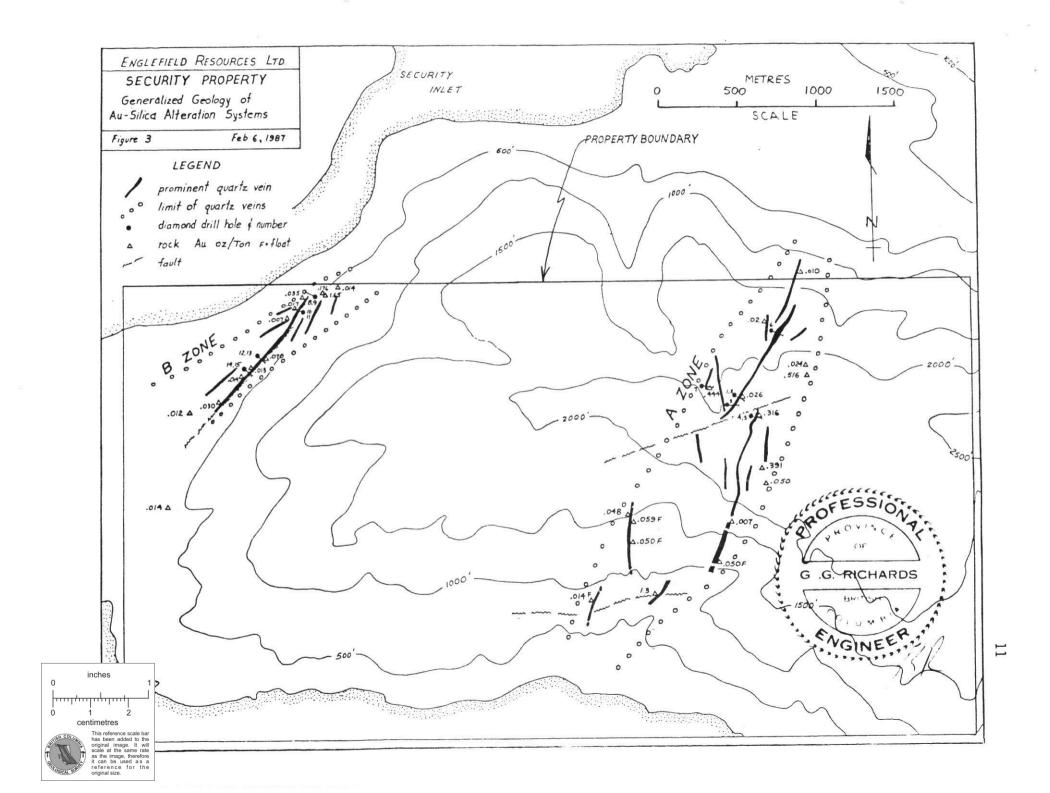
Structure of the Security property is dominated by a complex array of faults. There are two prominent fault orientations,—northerly and easterly trending sets. The northerly trending faults range from north to northnortheast in orientation. These faults have localized the felsic dykes and major quartz veins and are offset by a younger set of northeasterly to easterly trending faults.

Several large areas of sedimentary rocks on the north shore of Inskip Channel appear to be fault dropped blocks of Triassic limestones and argillites. Other limestones, argillites and cherts are probably interflow sediments, although these have not been distinguished in the field.

No attempt has been made to tie the separate mineralized zones together in terms of structure.

### b) Potential Gold Mineralization A Zone

The A zone is a 700 m wide by 3000 m long zone of numerous quartz veins and quartz breccias that are anomalous for gold (see Figure 3). Dykes of rhyolite and feldspar porphyry are also coincident with the zone although they also outcrop beyond the limits of quartz. On the plateau (see Figure 3) where most detailed work has been done, the zone contains a prominent quartz vein up to 10 m wide and traceable for about 1400 metres. The vein consists of quartz breccia, heavy quartz veining and stockwork cutting primarily basalt but also rhyolite in the northern



end of the vein. Several other less continuous and narrower quartz veins occur within the A zone.

South of the plateau, on the steep south facing hillside, rock exposure is much less and silica zones are more difficult to follow. Four such zones have been found to date but there has been no detailed work on these mineralized zones occurring on the steep sidehill. A particularly interesting silica zone occurs at about the 700 foot contour where a north northeast silica zone cuts an east-west major fault with Kunga Formation massive grey limestone and calcareous argillite preserved against it. Silicified float sampled by the writer in May 1979 returned a value of 3140 ppb Au (0.1 oz/T). Follow-up examination in August 1979 by Mr. C. Harivel, a geologist employed by JMT Services Corp., located a 1.5 m. wide zone of jasperoid which was chip sampled and assayed 1.3 oz./ton Au. No follow-up of this occurence has been done. Exposure in this area is poor although overburden is thought to be shallow, making hand trenching an obvious follow-up method for the showing. Occurrence of overburden on the hillside is a common problem in tracing silica zones both directly by mapping outcrops and indirectly using soil sampling.

Besides the 1.3 oz./Ton result, rock chip samples collected from quartz veins and silicification on the hillside ranged up to 1855 ppb Au (.05 oz/ton Au). On the plateau individual rock chips range up to .516 oz/ ton Au with many other samples assaying over .02 oz/ton Au.

Diamond drill results from the seven holes on the plateau returned generally much lower gold results than were found on surface although the quartz veins tested were found to be similar in texture and width to those found on surface. The highest gold value was 900 ppb Au in hole

#4. As the holes were all shallow, intersecting the vein within 90 m of surface, vertical zoning of gold grade is not considered to have been tested. Several deeper holes on this quartz vein will be required to test for increasing gold grades with depth. Many more drill holes will be required to test for discontinuous pods of ore grade mineralization.

### c) Potential Gold Mineralization B Zone

The silica-pyrite alteration system known as the B zone is some 300 m wide and over 900 m in length (see Figure 3). Within it, numerous complex fault related quartz veins and breccia zones occur but work to date has been focused on a prominent breccia vein structure measuring up to 12 m wide. This vein structure is at least 900 m in length and appears to be localized along a fault crosscutting Karmutsen volcanics and interflow lenses of limestone, argillite and chert as well as rhyolites and gabbro of younger Tertiary age. Clasts of all of these rock types as well as quartz vein and silicified materials have been identified in the breccia-vein complex indicating a multi-stage history of faulting, brecciation and hydrothermal activity. Chalcedony occurs as both an early and late stage mineral indicating low temperature of quartz deposition. The gabbro intrusions appear to post-date some of the faulting and may coincide in time with the latest phases of alteration and mineralization.

Results of soil samples collected over the B zone are generally low (less than 20 ppb Au) with only a few samples of up to 50 ppb Au on the Chevron grid and a few samples of up to 220 ppb Au on the JMT grid.

In both surveys, soil geochemistry was clearly a poor guide to mineralization.

Numerous rock chips of quartz veins and breccias collected from surface exposures throughout the B zone are highly anomalous for gold with the highest value of 1.65 oz/ton Au. Rock chips of quartz veins and breccias yielded the highest values and mapping the distribution of veins, breccias and silicification with accompanying rock chip sampling is considered the best tool for further geological-geochemical exploration.

The diamond drill programme completed by Chevron in 1982 was directed towards evaluation of the main quartz vein complex lying along the northeast trending fault. Four holes drilled to depths up to 76 m from 2 setups 160 m apart intersected this structure and gave good samples towards the southwest-central part of the B zone as mapped by Chevron. The entire zone was strongly anomalous for gold with values in the 50-500 ppb range in association with strong brecciation and silica and pyrite at 3-15% levels. Holes 82-13 and 82-15, vertical holes from the two southwesterly setups yielded 1 m sample intervals of 6300 and 6200 ppb Au respectively (equivalent to 0.20 oz/ton Au). One of the angle holes 82-12 returned a value of 2000 ppb Au (0.07 oz./ton Au) over 1 m. All of these higher values were obtained from the hanging wall immediately adjacent to the vein breccia complex.

The four other holes at the B zone were drilled in the northeast sector some 350 m or more from the holes described above. In addition to being distant from the southwest drill area, they were far less effective in testing the mapped extension of the main vein breccia zone.

Of the four holes drilled in the northeast, two encountered drilling problems in gabbro intrusions near the projected vein complex and were stopped, one was directed at a secondary target and one appears to have been stopped short of the vein breccia complex. Some anomalous values were obtained but results were generally lower than to the southwest.

The ends of the B zone are poorly defined by mapping done to date and additional mapping is required to limit the extent of alteration and mineralization. Pyrite occurs as disseminations and fracture fillings within all rock types of the B zone and its occurrence indicates that induced polarization and/or VLF electromagnetic geophysical surveys could prove useful in exploration of this zone. A magnetometer survey would probably be useful for delineating the extent of gabbro intrusions.

Good potential for commercial grade gold mineralization exists and should be followed in either direction and between the ore grade intercepts in holes 82-13 and 82-15 and consideration should be given to testing deeper extensions as well.

### CONCLUSIONS

The property contains two large gold-silica alteration systems, the A zone and B zone that should be explored further.

The A zone measures 700 m by 3000 m and contains a quartz vein that is up to 10 m wide traceable for 1400 m. Associated dykes occur with the quartz all within Karmutsen greenstone. The northern two-thirds of the zone well exposed on a plateau, has been mapped in detail, trenched and been tested with seven shallow diamond drill holes. Rock

chips from this portion of the zone assay as high as .516 oz/ton but in general high gold values are spotty. Exposures may represent a relatively high level of deposition based on the occurrence of chalcedony. Occurrence of ore near surface can probably be ruled out by the detailed work to date but vertical zoning of gold provides a model that could lead to sizeable lode gold mineralization occurring at depth.

Quartz veins in the other one-third of the zone cut both Karmutsen greenstones and Kunga limestone and argillite. Mineralization in this part of the zone is poorly exposed but does indicate ore grade mineralization exists. At one locality, limestone altered to jasperopid returned an assay of 1.3 oz/ton Au. This portion of the zone requires more mapping and because it lies on a hillside with fifteen hundred feet of relief, it may provide a test for vertical zoning of gold grades.

The B zone occurs in an area of more complex geology. Karmutsen greenstone with interflow tuffs and sediments is overlain by Tertiary rhyolite all of which have been intruded by gabbro plugs and dykes and dacite dykes. A swarm of complex quartz veins and breccia includes a quartz vein structure up to 12 m in width and over 900 m long that has been mapped in detail and had eight reconnaissance diamond drill holes completed on it. Results of the drilling have indicated ore grade mineralization (0.20 oz/ton Au) over 1 m widths in two adjacent drill holes. The quartz zone is open on each of its ends and has not been mapped in detail other than as described above. The drill holes with the 0.20 oz/ton Au assays are 160 m apart.

G .G. RICHAPPS

### RECOMMENDATIONS

I recommend that a work programme be undertaken on the A and B zone with an initial Phase I budget of \$30,000. Initial work to be carried out in Phase I consists of installation of 100 m x 50 m grids covering the southern extension of the A zone on a steep, but accessible side-hill where a number of good showings are known to occur, and on both extensions of the B zone. Mapping and rock chip sampling on a scale of 1:1000 or more detailed is to be completed by an experienced geologist in both of these areas, in order to determine size and extent of mineralization.

Upon completion of Phase I, I recommend that an independent engineer evaluate the results to determine if additional work is warranted and make recommendations for this work. This Phase II work would likely include intermediate grid lines and mapping as required, followed by hand trenching of the showings and projected extensions of mineralization. Geophysical surveys might also be recommended based on Phase I mapping and drill information on file, to explore areas of cover and down dip extensions of known mineralization. Phase II is budgeted at \$60,000.

I further recommend that upon completion of Phase II, an evaluation of all data by an independent engineer be done to determine if results are sufficiently encouraging to warrant drilling and, if so, to propose a drill programme for Phase III work, budgeted at \$250,000.

Respectfully submitted.

Gordon G. Richards, P.Eng.

RICHMOND, B.C., February 6, 1987.

# **BUDGET--SECURITY PROPERTY**

Phase	<u>I</u>			
	Mobilization crews (Vanc-Sandspit-Van Helicopter - 6 hrs @ \$500/hr A Zone3 man crew 14 days @ \$1,000/d B Zone3 man crew 7 days @ \$1,000/d Maps and Reporting	ay*	2,000 3,000 14,000 7,000 4,000	
		Total	\$ 30,000	
<u>Phase</u>	II			
	Geology Mobilization crew (Vanc-Sandspit-Vanc Helicopter - 6 hrs @ \$500/hr Trenching and Mapping, A and B Zones 16 days @ \$1,000/day* Maps and Reporting	)	2,000 3,000 16,000 2,000	
	Geophysics Mobilization crew and equipment Helicopter - 10 hrs @ \$500/hr Surveys Reports Engineering Review		3,000 5,000 25,000 2,000 2,000	
		Total	\$ 60,000	
Phase	III			
	Diamond Drilling: 5000 feet @ \$50	Total	\$ 250,000	
*Basis	Geologist Supervisor 1 x \$300 Linecutter/Labourer 2 x \$150 Food and camp costs 3 x \$ 50 Geochem Assay Contingency	300 300 150 200 50 \$ 1,000/day	G.G. RICHARDS	********

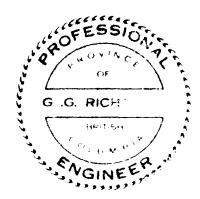
### STATEMENT OF QUALIFICATIONS

- I, Gordon G. Richards, of Richmond, in the Province of British Columbia, DO HEREBY CERTIFY THAT:
  - 1. I am a Consulting Geological Engineer with offices at 5700 Forsythe Crescent, Richmond, British Columbia, V7C 2C3; Telephone 270-6862.
  - 2. I am a graduate of The University of British Columbia with degrees of B.A.Sc. 1968 and M.A.Sc. 1974.
  - 3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
  - 4. This report is based on my personal knowledge of the property from examinations during the periods June 30 to July 2, 1978 and May 8 to 15, 1979 and general knowledge of gold prospects on the Queen Charlotte Islands.
  - 5. I have no interests in Englefield Resources Ltd. or in the property reported on herein, nor do I expect to receive any.
  - 6. I hereby consent to the use of this report by Englefield Resources Ltd. in a prospectus or any other document that may be required by any regulatory authority.

Dated at Vancouver, British Columbia, this ninth day of February,

1987.

Gordon G. Richards, P.Eng.



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# REPORT ON PLACER GOLD POTENTIAL OF THE TWELVEMILE CREEK PLACER LEASE

NO. PL-7334

# SIXTY MILE RIVER DISTRICT YUKON TERRITORY

LATITUDE 64°04' N LONGITUDE 140°34' W

NTS 116/C2

Prepared for: ENGLEFIELD RESOURCES LTD.

bу

GORDON G. RICHARDS, P.Eng. 5700 Forsythe Crescent Richmond, B.C. V7C 2C3 Telephone: (604) 270-6862

February 6, 1987

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Figure 2 CLAIM MAP	5

### INTRODUCTION

ENGLEFIELD RESOURCES LTD. recently acquired by agreement the mineral rights to a Placer Lease on Twelvemile Creek, in the Sixty Mile River drainage in Yukon Territory. The writer was asked by Englefield Resources Ltd. to review available information on the creek and surrounding area and to prepare a report on the placer gold potential of the Lease and make recommendations for evaluating that potential.

The Twelvemile Creek Placer Lease is situated in an area of numerous placer gold producing creeks that have been mined for much of the past one hundred years, using hand mining techniques, bucket line dredges and more recently "cat" mining methods. Twelvemile Creek has not been mined by modern "cat" mining methods other than a small test cut done about five years ago which yielded some 150 ounces of gold, thereby indicating the possibility of finding an economically viable placer gold deposit within the drainage.

Based on this information, a modest testing programme of \$30,000 is proposed to confirm the existence of economic or near economic grade placer gold gravels. If this testing is successful, additional exploration totalling \$120,000 is recommended to be done throughout the length of the creek, followed, if this second phase is successful, by another \$250,000 of detailed exploration to prove several years mining reserves. A thorough review should be done after each phase of exploration in order to outline the detail of the next phase of exploration.

### LOCATION AND ACCESS

The property is located along the bottom five miles of Twelvemile Creek, a south flowing tributary on the north side of Sixty Mile River. From Dawson City, it is accessible by Top of the World Highway and seven miles of dirt road, leading to the lower part of the Lease near the confluence with Sixty Mile River. Dawson City has daily air service and highway freight service from Whitehorse.

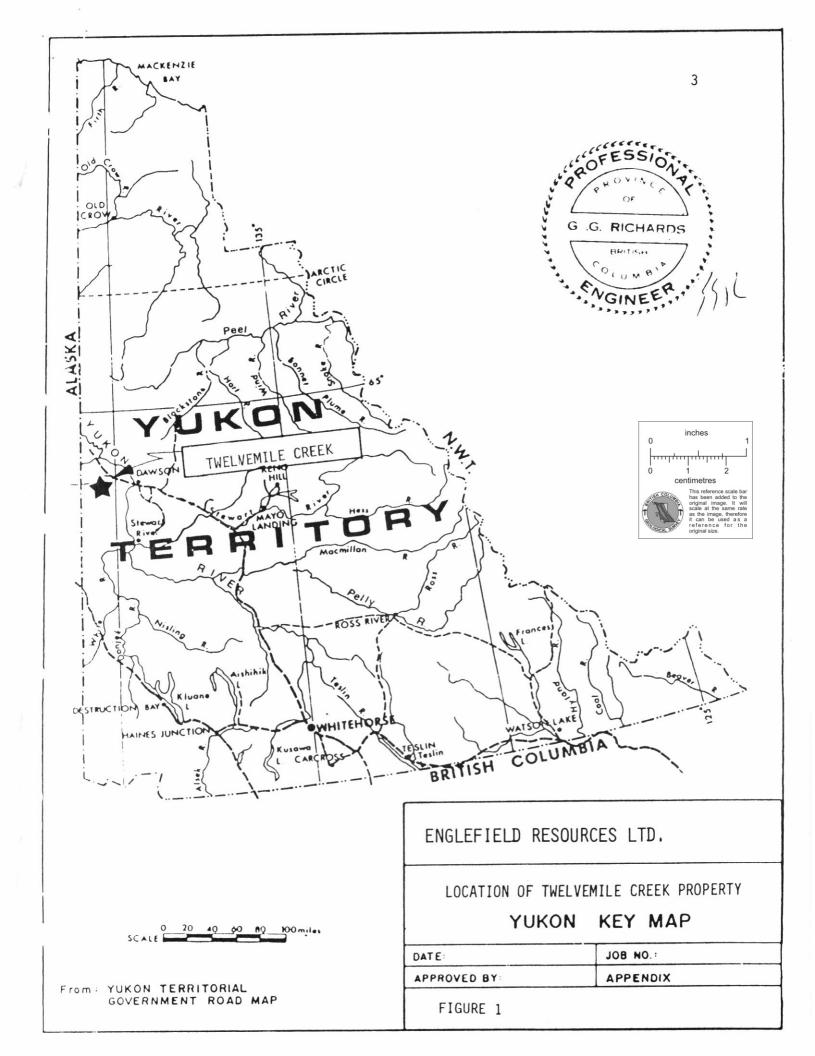
### **TOPOGRAPHY**

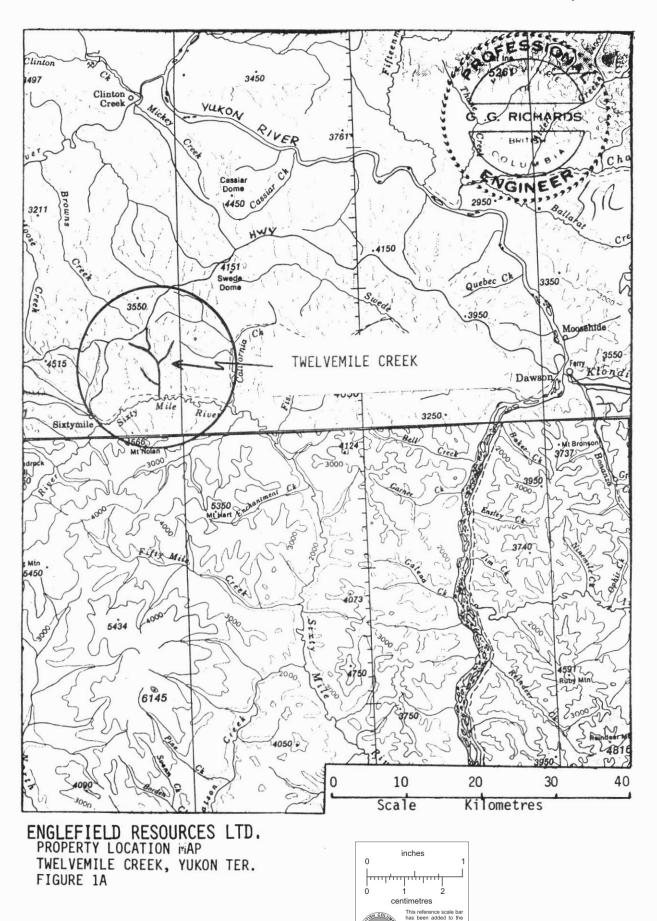
The topography of the region is characterized by moderate to steeply sloping hills ranging in elevation from 2000-4000 feet above sea level. This part of the Yukon is unglaciated and characterized by broad flat-floored valleys with the current drainage weakly incised. Disected gravel bench formations are relicts of ancient river channels at higher elevations. These are common in the Sixty Mile area and are present on at least the lower two miles of the property.

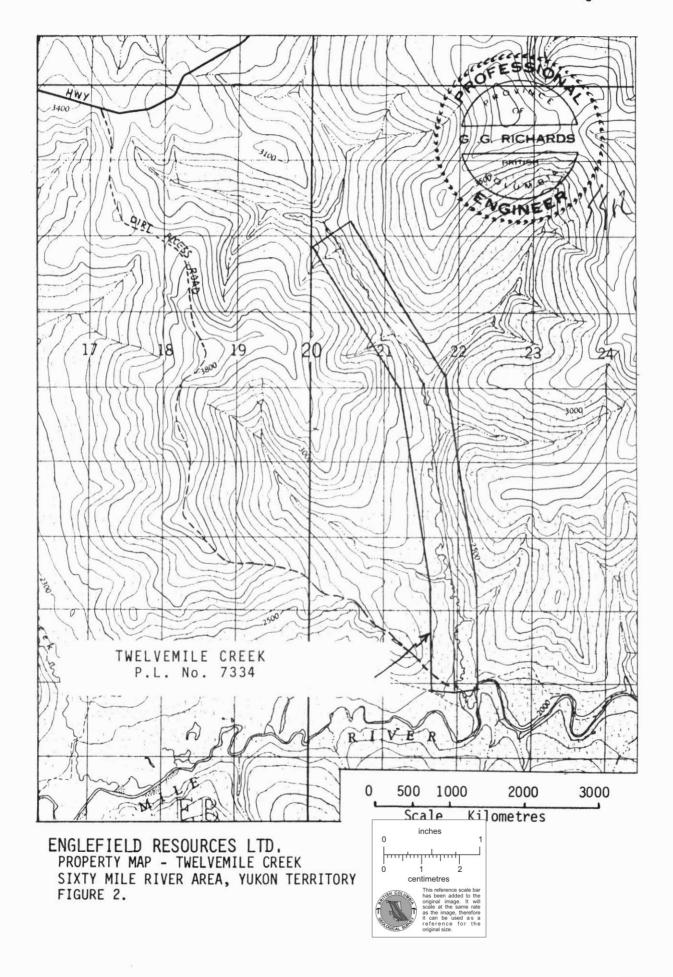
The property is in an area of perma-frost which thaws naturally to depths of 2-3 feet in the summer, and freezes again in the winter. Much of the terrain on the lower slopes and valley floor is covered by a thick insulating blanket of moss, and supports an open spruce forest. Upper slopes are largely grass and brush covered.

### PROPERTY

The property consists of a single 5-mile Placer Lease, No. PL-7334, recorded in the name of John E. Brown of Dawson City, Yukon.







Assessment work to the value of at least \$5,000 is due before the anniversary date, April 10, 1987.

### PLACER POTENTIAL

"Discovered before the Klondike, the Sixty Mile River area was also not glaciated. The valley of the Sixty Mile River is wide and the river gravels and gravels on nearby benches have been worked extensively near the confluences of Miller and Glacier Creeks. The valley and bench gravels of tributary creeks Big Gold, Little Gold, Glacier, Miller, and Bedrock have also produced gold. The tributary creeks have reasonably steep gradients, and are contained in relatively narrow V-shaped valleys. As with the Klondike and South Klondike area, there are few large boulders in the gravel. The gravel is covered by black muck, except in the Sixty Mile River valley. The tributary valleys are more narrow than in the Klondike and South Klondike areas due to their relatively immature nature, and the deposits are smaller. They are, however, still large deposits by placer standards" (R.L. Debicki, 1986).

Twelvemile Creek is adjacent to the placer creeks mentioned above and had a baseline survey done in 1914 by Kitto (R.L. Debicki, 1983) indicating it was probably worked to some degree in that time period. Evidence of that work exists in the form of old cabins at the mouth of Twelvemile Creek (John Brown, personal communication).

Sixty Mile River is staked solidly from the Miller Creek-Big Gold Creek drainages downstream well past the mouth of Twelvemile Creek. California Creek is the next creek down the Sixty Mile River entering from the same side as Twelvemile Creek and it too is staked solidly. Gold production from creeks in the Sixty Mile River drainage during the period 1978 to 1984 can be summarized from Debicki (1986) as follows:

Creek		Raw ounces
Miller Creek Sixty Mile River Glacier Creek Little Gold Creek Big Gold Creek Matson Creek Ten Mile Creek		20,061 27,622 2,467 3,694 1,653 7,221 12,916
	Total	75,634

Total gold production from all of the above creeks is many times the numbers listed above, considering the area has been extensively mined since the 1890s.

Mr. John Brown, a well known miner in the Klondike area, who presently mines on lower Dominion Creek, learned of the potential of Twelvemile Creek from Mr. G. Horae of Dawson City. According to Mr. Brown, Mr. Horae told him that about five years ago, Mr. Horae built a road from the Top of the World Highway to the mouth of Twelve Mile Creek where he established a small camp for carrying out a testing program. He mined a small test cut on a right limit bench near the mouth of Twelve Mile Creek producing about 150 ounces of gold. Deposits on the bench, which was about 50 feet above the creek and about 150 feet wide, were comprised of a thin layer of muck overlying five or six feet of gravel. Other smaller tests further up the creek also yielded some gold. Although this initial testing yielded encouraging results, personality conflicts among the several partners prevented them from continuing with the project. Mr. Brown was shown pictures of the operation and the gold produced.

In early spring of 1986, Mr. Brown staked a five mile Lease on Twelvemile Creek. He recognized the bench on the right limit of the Creek that extended at least one and one-half miles up the creek, a possible left limit bench somewhat obscured by ice and snow in the valley, a few of the test pits of which he had been told by Mr. Horae and the test pit on the right limit bench near the mouth of the creek. He also observed the access road into the creek and several old cabins near the mouth of the creek that probably date back to the hand mining era near the turn of the century.

The bench along the lower reaches of Twelvemile Creek is a common feature of all the creeks in this section of the Sixty Mile River drainage (S.R. Morison, D.I.N.D. Whitehorse, personal communication). In fact, Mr. S.R. Morison has found that "the highest concentrations of placer gold appear to be in the tributary terrace levels of Miller and Glacier Creeks." He believes the same pattern of gold distribution and occurrence of benches will be found in adjoining creeks. The bench on lower Twelvemile Creek previously tested by Mr. Horae is probably just such an example and should be the prime target for further testing. The creek level is the other obvious target and both warrant testing along their length.

### CONCLUSIONS

Twelvemile Creek is in an area of several placer gold creeks that have a long history of producing considerable gold. Recent testing five years ago is reported to have yielded about 150 ounces of gold from a small mining cut on a bench near the creek mouth. These encouraging results should be confirmed and if proven to be true, then a more thorough exploration program of the entire drainage should be undertaken in three phases as follows:

Phase I: \$30,000 - March and June of 1987

Phase II: \$120,000 - July and August of 1987

Phase III: \$250,000 - August to October 1987.

### RECOMMENDATIONS

Three phases of exploration are recommended on the Placer Lease #PL-7334. Phase II and Phase III would be undertaken only if the preceding phase was considered to be encouraging enough to warrant further work after an engineering review. Details of the recommended program are as follows:

<u>Phase I</u>: \$30,000. This program provides for the stripping to gravel in an area of  $150' \times 300'$  adjacent to the existing small mining cut on the right limit bench. This work would be done by dozer prior to April 10, 1987 and would thereby meet the assessment work requirement on the property.

In June test sluicing of the stripped area would be carried out using a dozer, small hoe or loader and a simple single run sluice box and small pump. Reconnaissance mapping of at least the

lower three miles of the creek should be carried out at this time to determine width of creek between base of slope, width and length of any benches, occurrence and distribution of old cabins and shafts and any other pertinent data. Recommendations could then be made as to a Phase II if warranted.

<u>Phase II</u>: \$120,000. This program would provide for trenching, test pitting and test sluicing at 20 - 40 sites and should provide high enough sample density to roughly define areas of bench or creek gravel with potential economic gold grades. It should permit selection of areas for more detailed sampling in Phase III.

<u>Phase III</u>: \$250,000. This final phase of the program should be aimed at blocking out two to three years of mining reserves. Drains would be established as required and cross-trenches cut and test sluiced at about 300 foot intervals. This sampling program would allow for a production decision to be made with a high degree of confidence.

Respectfully submitted.

Gordon G. Richards, P.Eng.

RICHMOND, B.C., February 6, 1987.



# **BUDGET**

# Phase I: \$30,000

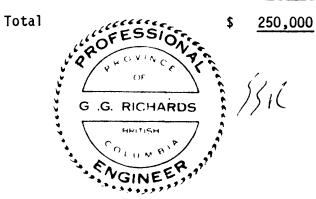
Mob-demob dozer and equipment	6,000
Open road and haul in equipment	2,000
Strip area to be tested	5,000
Sluice cut 300' x 150' x 5'7 days at \$2,000/day	14,000
Map creek	1,500
Report	1,500
·	
Total	\$ 30,000

# Phase II: \$120,000

Mob-demob backhoe Dozer 25 days x 10 hrs x \$150/hr including operator and fuel	3,000 37,500
Backhoe 25 days x 10 hrs x \$150/hr including operator and fuel	37,500
Foreman 35 days x \$250/day Helper 35 days x 150/day Supplies, food Sluice box, truck, pump, trailers, tanks, rentals Report Contingency	8,750 5,250 5,000 15,000 2,000 6,000
Total	\$ 120,000

# Phase III: \$250,000

Dozer 60 days x 10 hrs x \$150/hr including operator and fuel	90,000
Backhoe 60 days x 10 hrs x \$150/hr including operator and fuel	90,000
Foreman 70 days x \$250/day	17,500
Helper 70 days x \$150/day	10,500
Supplies, food	10,000
Sluice box, truck, pump, trailers, tank rental	20,000
Report	2,000
Contingency	10,000



### STATEMENT OF QUALIFICATIONS

- I, Gordon G. Richards, of Richmond, in the Province of British Columbia, DO HEREBY CERTIFY THAT:
  - 1. I am a Consulting Geological Engineer with offices at 5700 Forsythe Crescent, Richmond, British Columbia, V7C 2C3; Telephone 270-6862.
  - 2. I am a graduate of The University of British Columbia with degrees of B.A.Sc. 1968 and M.A.Sc. 1974.
  - 3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.
  - 4. Although I have not visited the Twelvemile Creek property, I have for the past three years been directly involved in a placer gold mine in the Yukon Territory and understand the type of deposit sought. I visited Miller Creek in the Sixty Mile area in 1986, and inspected the mining operation in progress there.
  - 5. I have no interests in Englefield Resources Ltd. or in the property reported on herein, nor do I expect to receive any.
  - 6. I hereby consent to the use of this report by Englefield Resources Ltd. in a prospectus or any other document that may be required by any regulatory authority.

Dated at Vancouver, British Columbia, this ninth day of February,

1987.

Gordon G. Richards, P.Eng.