

EXPLORATION PROGRAM - JANUARY TO MAY, 1990

DIAMOND DRILLING, GEOPHYSICS, LINECUTTING

LOOKOUT PROPERTY  
FORT STEELE MINING DIVISION  
BRITISH COLUMBIA

LOG NO: 0620	RD.
ACTION:	
FILE NO:	

Prepared For

WHITE KNIGHT RESOURCES LTD.  
922-510 WEST HASTINGS STREET  
VANCOUVER, B.C. V6B 1L8  
(604) 681-4462

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GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,065

by: J. McDonald, B.A.Sc.  
May 22, 1990

## Summary

The Lookout vein structure is a strongly developed fault zone displaying both brittle and ductile deformation. It is ubiquitously altered and mineralized to varying degrees and has been traced over a minimum strike length of 1600 meters by trenching, geophysics, and diamond drilling. Mineralization consists of three types, massive sulfide lead, zinc, silver veining, gold copper bearing quartz veins and disseminated iron sulfides in zones of silicification. The most prominent alteration is bleaching and silicification. The structure varies from 5 to 40 meters wide with lesser fracturing and alteration for several tens of meters into the hanging and footwalls of the structure. It strikes northwest and dips steeply to moderately southwest. Drilling has tested mineralization in the structure over a 50 meter strike length and to a depth of 150 meters below its surface exposure. Significant results include 1.67% lead and 4.05% zinc over a true width of 2.6 meters, 0.644 oz/t gold over a true width of 0.6 meters, and 1.08% zinc over a true width of 0.7 meters.

The similarities in style of deformation, alteration, mineralization, and strike and dip, as well as general locations, strongly suggest that the St. Eugene, Vine vein and Lookout vein structures are all part of the same structure displaced by cross faults. Base metal and silver values are comparatively uniform along the different parts of this structure, while gold shows a distinct increase to the northwest onto the Lookout property.

Past production and exploration along the structure have indicated that zones favorable to ore development occur where the structure cuts well developed, regionally extensive, quartzite packages.

The Lookout property hosts approximately 3600 meters of strike extent on the Lookout vein structure with down dip potential of 1400 to 2000 meters. Currently, 50 meters of strike extent and 170 meters of dip extent have been tested. This small area has produced very encouraging results and indicates that there is a reasonable probability that the Lookout structure is part of the St. Eugene and Vine vein structures, and that there is an equally reasonable probability that the Lookout vein structure is host to St. Eugene type ore bodies.

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## 1.0 Introduction

The Lookout property consists of 10 mining claims (62 units) located within the Fort Steele Mining Division. A program of line cutting, geophysics and diamond drilling was conducted during the months of January through March, 1990. This work was done to test the potential for a St. Eugene type ore body in the Lookout vein structure. The Lookout structure is believed to be the faulted strike extension of the St. Eugene and Vine vein structures, which host the Vine vein and the formerly producing St. Eugene ore bodies.

## 2.0 Location and Access

The Lookout property is located approximately 12km southwest of Cranbrook, about 3.0km east of Jim Smith Lake. Access is made via the Crowsnest Highway, south from Cranbrook for about 10.0km then west along the Lumberton Road for 4.0km and north on a logging road for 3.5km. Road conditions are generally good enough to access the property by 2-wheel drive truck.

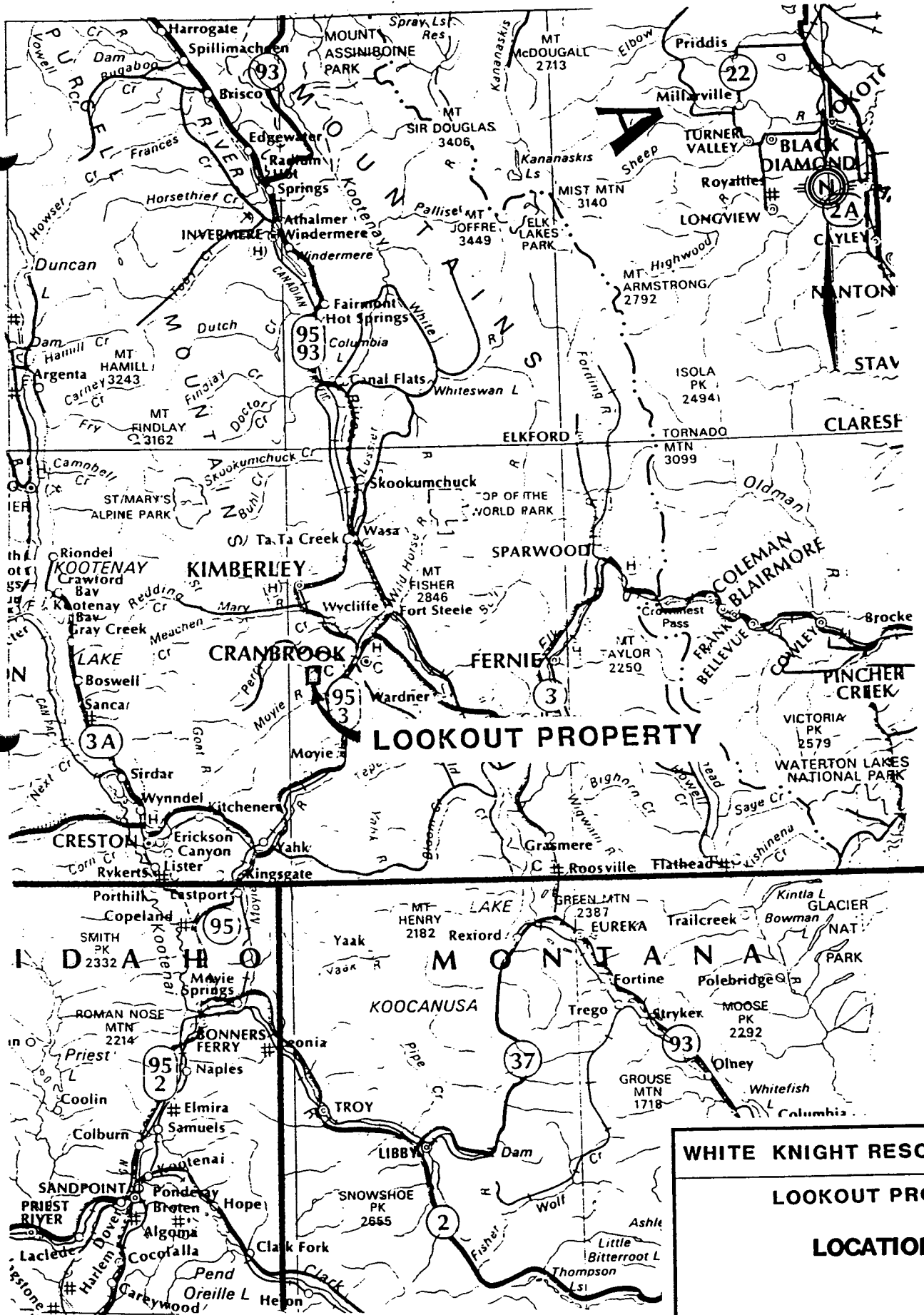
## 3.0 Physiography

The claims are covered by second growth pine, larch and fir, and topographic relief is generally moderate to steep, with maximum relief of about 660 metres. The claims are drained by Palmer Bar and Kiakho creeks which drain to the south into Moyie River.

## 4.0 Claim Status

White Knight Resources Ltd. has the option to earn a 50% interest in 10 mineral claims owned by Goldpac Investments Ltd. The claims status is as follows:

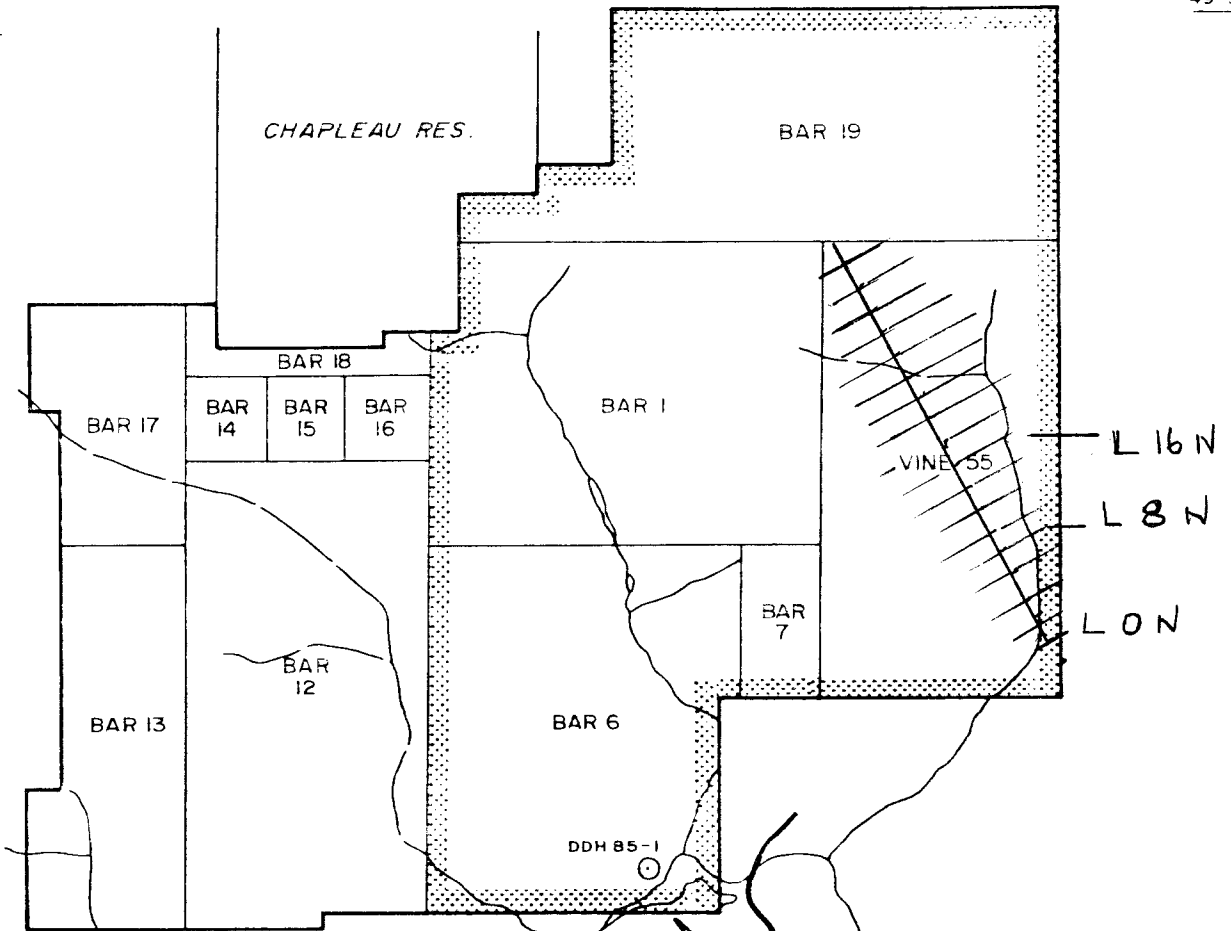
Claim Name	Record No.	Units	Expiry Date
Vine 55	1871	18	Jul 18, 1998
Bar 1	2015	20	Nov 10, 1998
Bar 6	2028	16	Dec 14, 1998
Bar 7	2029	2	Dec 14, 1998
Bar 8	2164	1	July 3, 1998
Bar 9	2165	1	July 3, 1998
Bar 10	2166	1	July 3, 1998
Bar 11	2167	1	July 3, 1998
Belleville	C.G. L. 5252	1	N/A
Lookout	C.G. L. 5254	1	N/A



<b>WHITE KNIGHT RESOURCES LTD.</b>	
<b>LOOKOUT PROPERTY</b>	
<b>LOCATION MAP</b>	
FIGURE: <b>1</b>	
<b>RAPITAN RESOURCES INC.</b>	
B.J.PRICE, M.Sc	1989

49° 30'

49° 30'



CHAPLEAU RES.

BAR 19

BAR 18

BAR 17

BAR 14

BAR 15

BAR 16

BAR 1

BAR 7

BAR 6

BAR 13

BAR 12

DDH 85-1

L 16N

L 8N

L 0N

BAR CLAIM GROUP

COMINCO VINE PROPERTY

Palmer Bar Creek

MOYIE RIVER



49° 25'

49° 25'



Optioned ground

WHITE KNIGHT RESOURCES LTD.	
BAR OPTION	
CLAIM LOCATION MAP	
Fort Steele MD, B.C.	
DATE: May, 1990.	SCALE: 1 : 50,000
NTS: B2G/5W	FIG. No. :

White Knight Resources must make property expenditures of 1.0 million dollars, \$870,000 in cash payments and 100,000 shares in share payments to earn 50% of the property. The option agreement restricts White Knight's interest to mineralization above 150 meters above mean sea level. The entire claim block is subject to a 2.5% Net Smelter Return held by the original vendors.

## 5.0 Target

The exploration target on the Lookout vein structure is a St. Eugene type massive sulfide containing lead, zinc, silver, and gold. The St. Eugene Mine operated until 1916 and produced 1.6 million tons at an average grade of 0.002 oz/t gold, 3.6 oz/t silver, 8.0% lead, and 1.0% zinc. Ore zones were formed as a ladder vein within the St. Eugene structure, a fault striking west-northwest and dipping steeply to the south.

The fault is variably mineralized and altered within which ore zones developed. Ore consisted of massive sulfides comprising argentiferous galena, sphalerite, tetrahedrite, and chalcopryrite within a gange of quartz, biotite, chlorite, amphibole, pyrrhotite, pyrite, and magnetite.

Ore zones averaged from 2.0 to 3.5 meters (up to 10 meters) wide and formed flat lying, tabular shoots preferentially where the St. Eugene structure cut thick bedded, coarse grained, arenaceous quartzites. These St. Eugene quartzites provided a good ore host because they fractured well, providing open space for ore deposition in a similar manner to ore hosts in the Cour d'Alene and Slocan mining camps. The St. Eugene quartzites are found regionally throughout the Purcell Basin about 1400 meters stratigraphically above the Lower/Middle Aldridge contact (the Sullivan Time Horizon).

Ore was delineated in the St. Eugene structure along a strike extent of 3600 meters and a dip extent of 1400 meters, indicative of a strong mineralized structure. However, as discussed above, the majority of the ore was developed where the St. Eugene structure cut the more competent, thickly bedded, coarse grained quartzites.

This same relationship is seen at the Vine property about 12 kilometers north of the St. Eugene Mine. The Vine is currently under option from Cominco Ltd. to Kokanee Explorations Ltd. Kokanee has announced a mineral inventory potential of 266,765 tons grading 0.045 oz/t gold, 0.79 oz/t silver, 0.068% copper, 2.29% lead, 1.09% zinc. This mineralization consists of galena, sphalerite, and chalcopryrite within a gangue of quartz, chlorite, pyrrhotite and pyrite. It carries significant grades over 1 to 3 meter widths. More recent work has discovered a much stronger and wider

mineralized zone at depth. Similar to the St. Eugene ore zones, this zone is developed where the Vine structure cuts thick bedded quartzites at or near the Lower/Middle Aldridge contact. Significant results from this zone include 10.70 meters grading 0.10 oz/t gold, 0.29 oz/t silver, 0.14% copper, 0.86% lead, and 0.21% zinc.

Therefore, in exploration in this geologic setting it is important to identify the major mineralized structures and to locate those areas of the structures that cut thick bedded, coarse grained quartzite packages.

On the Lookout property the underground and surface workings at the Lookout property are approximately 1100 meters above the Sullivan Time Horizon. This puts the favorable St. Eugene quartzites approximately 300 meters stratigraphically above the workings and about 1400 metres northwest of the trenches along strike.

## 6.0 Regional Geology

The regional geology is succinctly described by Barry Price (1989) and is paraphrased as follows:

"The property is situated in the Moyie Range of the Purcell Mountains, west of the Rocky Mountain Trench, and on the east flank of the Purcell Anticlinorium. In the Cranbrook area, the Purcell and Rocky Mountain Belt and thrust eastward during Mesozoic and Tertiary times, with Mesozoic dioritic, quartz monzonite and syenitic intrusive activity (stocks dykes and sills). Major north to northeast trending faults bound what appears to have been a Proterozoic depositional graben in an extensive clastic basin extending southward into Idaho and Montana in which the Belt-Purcell Supergroup was deposited. Reactivated (growth) faults may have had an influence on deposition of the numerous stratiform massive sulphide deposits, such as the world class Sullivan deposit and smaller North Star, Stemwinder and Kootenay King deposits in the Cranbrook-Fort Steele area. Later northeast trending faults such as the Cranbrook and Kimberley faults may have been transform faults which offset "spreading centers" which were the focus of major sedimentary exhalative deposits which were preceded by igneous activity and accompanied by areas of tourmaline and albite alteration.

### "Stratigraphy:

"Rocks in the area belong to the Purcell Supergroup of Upper Proterozoic age, and Paleozoic Cambrian to Middle Devonian sedimentary rocks, as shown in the accompanying stratigraphic column and described briefly below:



"The Fort Steele Formation is the oldest unit exposed in the region, comprising at least 2,000 meters of cyclically graded quartzites to thinly laminated siltstones. Near the top of the unit grey siltstone and argillite predominate. The Formation represents braided fluvial (Alluvial fan) deposits derived from a source area to the south. The unit is absent in the claims area but appears north of the Boulder Creek Fault in the Kootenay King-Estella mine area.

"The Aldridge Formation is a thick unit (3,500-4,500 meters) of quartzites, siltstones and argillites with graded bedding, rip-up clasts, sole marks, and other characteristics of "turbidite" deposition. The Formation is divided into Lower, Middle and Upper divisions. The lower division has a gradational contact with the Fort Steele Formation below, and consists of dark grey to black argillites, siltstones and quartzites (greywackes). The Middle Aldridge, which hosts the important Sullivan sedimentary-exhalative massive sulphide deposit, comprises thick grey quartz-wacke units interbedded with laminated siltstone, and intruded by a number of thick, laterally continuous meta-gabbro sills (greenstone). Repetitive laminations in siltstone-argillite sequences can be correlated for up to 300km along strike, and are important "marker horizons". The Upper Aldridge includes 300-400 meters of rusty weathering grey argillite and laminated siltstone, and in some places two thick shallow-water dolomite horizons.

"The Creston Formation is a thick unit (1500 meters) of green, purple, and white quartzite, siltstone and argillite of intertidal to subaerial depositional origin, characterized by mudcracks, ripple marks, rip-up clasts, lead casts and scour and fill structures. Contact with the overlying carbonate unit is gradational.

"The Kitchener Formation consists of green or grey dolomitic and green non-dolomitic siltite, grey silty dolomite, rare stromatolitic, colitic sandy dolomite, grey siltite with graded beds and rip-up debris beds. The unit was deposited in an intertidal environment. North of the Dibble Fault and in the Kimberley area, massive to amygdaloidal lava are present, and are called the Nicol Creek Formation. These are chloritized and sericitized and are accompanied by distinctive volcanic and feldspathic sandstones. This unit separates the Van Formation from the lithologically similar Gateway Formation, including light green to buff siltstone, argillite, silty dolomite, fine grained quartzite, with shallow water depositional features.

"Overlying the Nicol Creek and Gateway Formations, (depending on how deeply regional unconformities have eroded), the upper part of the Purcell Group includes the Dutch Creek Formation, about 1200 meters of grey and green argillites and quartzites, the Mt. Nelson Formation, up to 1000 meters of colitic and stromatolitic dolomites and limestones and argillites.

"A composite stratigraphic section from the Kimberley area is included.

### "Intrusive Activity

"Several large sills and dykes of Purcell age are present in the region, but only the largest ones are shown on the accompanying geological map. These are most common in the Aldridge and Fort Steele Formations, but may also be present in higher Proterozoic strata. The "Moyie Sills", predominantly gabbro in composition, have ages identical to the enclosing Aldridge strata (1433 Ma). Hoy (1983) suggests they were emplaced into uncompact water-saturated sediments. Sulphide accumulations and veins are common adjacent to sill or dyke margins, and the Moyie intrusions are suggested to be part of a thermal/hydrothermal and mineralizing event accompanying rifting in a graben controlled deep clastic basin or graben.

"Other intrusive rocks are present; porphyritic quartz monzonite stocks are present at Kiakho Creek, just north of the Lookout workings, at Reade Lake on the St. Mary Fault, north of Cranbrook, near the Estella mine, below the Kootenay King mine workings, and near East Wildhorse River. A large stock straddles the divide between Wildhorse River, Tanglefoot Creek, and Summer Lake, and occupies the core of an anticline. Composition of this body ranges from dioritic to syenitic.

"Many of the Mesozoic intrusions are associated with mineral deposits or at least have a spatial relationship.

"Regional geology is best shown by the accompanying map prepared by Hoy."

### 7.0 Property Geology

The Lookout property is underlain by Proterozoic rocks of the Middle Aldridge Formation, comprised of a turbiditic succession of quartzites, siltites and argillites and intruded by gabbroic to dioritic Moyie sills and dykes. Also intruding this succession are Cretaceous aged quartz-monzonite to syenite stocks with associated dykes and sills. The property sits on the eastern limb of a north trending, shallowly north plunging anticline. The rock strata are gently folded by this anticline and the strike on the east limb is generally northwest with shallow dips to the northeast.

Cretaceous aged intrusive activity is channelled into the Cranbrook Fault, a northeasterly striking, near vertically dipping normal fault with at least 2000 meters of displacement, north-side down. This fault places Creston sediments in contact with Middle Aldridge sediments. The Cranbrook Fault is the most prominent

structure on the property, cutting across its northern boundary. Other major faults include the Lookout vein structure and a north to northeast trending normal fault, coincident with Kiakho Creek. Displacement on the Kiakho Creek fault is west side down in the order of several tens of meters, dip on the fault is assumed to be steep. The Lookout vein structure is a mineralized fault zone which strikes northwest (310 to 320°) and dips steeply (65 to 75°) to the southwest. There is at least 3.5km of strike length of the Lookout structure on the property. There is dip slip movement on the Lookout vein structure but the sense of displacement has not been determined. However, the St. Eugene-Vine structure displays displacement west side down.

The style of deformation in the Lookout structure is both brittle and ductile, consisting of strongly developed fabric and foliation, calcite, quartz +/- gypsum veins, veinlets and cemented breccias, and clay-chlorite altered fault gouge. The structure is typified by a wide zone with varying degrees of fracturing, quartz-calcite fracture and breccia infilling, and foliation and slicken-side development. Predominant alteration in the structure consists of silicification and bleaching.

The structure is from 5 to 40 meters wide with weakly developed brecciation and fracturing up to 100 meters away from the main deformation. Deformation is similar to that found at the St. Eugene and Vine structures (Kokanee Geologists Person Comm.). The location, type of mineralization, alteration, strike and dip direction of the Lookout structure, indicate that the Lookout is the faulted strike extension of the St. Eugene and Vine vein structures.

### **7.1 Mineralization and Alteration**

Mineralization, as evidenced in trenches, underground workings, and diamond drill holes occurs as three types:

1. Lead, zinc, silver mineralization associated with veinlets and veins of galena, sphalerite, pyrrhotite, pyrite, and trace chalcopryrite. Sulfide mineralization occurs as fracture fillings and with calcite veining, and appears to be parallel to the Lookout structure. Veins of galena and sphalerite in drill holes varied from <1cm to 8cm in width and made up to 65% of the mineralized interval. This sulfide mineralization is slickensided and therefore older than some of the fault movement. This mineralization is generally restricted to the upper part of the structure, within sediments, at or near a faulted contact between sediments and a gabbro dyke or sill. The contact appears to be gradational. This is the Hangingwall Zone or 'Vein'.

2. Gold, copper, silver mineralization associated with open space infill quartz +/- calcite veins. These veins contain variable amounts of chalcopyrite, pyrrhotite, pyrite, and arsenopyrite with or without tourmaline crystals. Gold appears to be intimately associated with chalcopyrite and arsenopyrite in or adjacent to quartz-calcite veining. It is at least weakly anomalous where these minerals are greater than 2 to 3% of the sampled interval, and carries ore grade values in drill hole L.O. 90-5, and in the adit. Copper is elevated with gold. Silver shows some elevation with gold but has a closer correlation to lead-zinc mineralization.
3. Pyrite and pyrrhotite disseminations and veinlets associated with quartz-calcite veining and silicification. This mineralization is part of the alteration envelope that encompasses the lead, zinc, copper, silver and gold mineralization and pervades the Lookout vein structure.

The Lookout structure is ubiquitously altered by bleaching, quartz and quartz-calcite veins and veinlets, silicification and a late stage calcite +/- gypsum veining. The most pervasive alteration is bleaching, while silicification and veining locally obliterate primary textures. Gold-copper and lead-zinc-silver mineralization are associated with quartz and quartz-calcite veining, and silicification.

There are two mineralized zones within the larger structure. A lead-zinc-silver mineralized hangingwall zone or 'vein', and a gold-copper mineralized footwall 'vein'. The hangingwall vein varies from about 1.0 to 8.0 meters wide and appears conformable to the larger structure. It corresponds to the mineralization described above as type 1. The footwall quartz vein varies in width from less than 10cm to 1.5m. It forms part of a wider mineralized zone which is generally 4 to 6 meters wide. Near surface, the shearing in the Lookout structure is well pronounced and the footwall quartz vein pinches and swells with the structure. The footwall zone corresponds to mineralization described as type 2. The two zones are separated by about 6 meters of mafic dyke or faulted sill.

Generally, lead-zinc mineralization appears to have undergone more deformation than gold related mineralization and thus is probably older. This concurs with mineralization throughout the Purcell Basin. For example, the source for lead, zinc and silver at the St. Eugene Mine is believed to be Proterozoic aged, stratiform massive sulfides, re-mobilized from the Sullivan Time Horizon into the St. Eugene-Vine structure. Reportedly, lead isotope age dating done by Cominco supports this idea. (White Knight is currently conducting age dating analysis.) Gold, on the

other hand, is associated with much younger Cretaceous to Tertiary aged monzonitic to syenitic stocks, dykes and sills, such as copper-gold mineralization in and around syenitic intrusives on Chapleau Resources' claims north of the Lookout property.

The same relationships occur elsewhere in the Purcell Basin, for example in the Cour d'Alene mining district of Idaho, vein hosted lead, zinc, silver mineralization is widely believed to be derived from Proterozoic stratiform massive sulfides re-mobilized into deep seated structures, and at Confederate Gulch in Montana high grade gold mineralization occurs at the contact between Aldridge Formation rocks and a Cretaceous aged quartz-monzonite stock.

Lead, zinc, silver mineralization is relatively uniform across the St. Eugene-Vine-Lookout structures. Gold, however, appears to increase to the northwest towards the intrusive stock at the north of the Lookout property. As evidenced by an average grade of 0.002 oz/ton at the St. Eugene Mine, a published average of .045 oz/t Au at the Vine property, and grades between .001 to 1.539 oz/t Au at the Lookout property with an average grade of 0.27 oz/t Au along 110 feet of the Hamilton vein (part of the Lookout vein structure). The Lookout vein-structure is the most proximal and strikes into the intrusive, while the St. Eugene is the most distal with the Vine vein roughly in the middle.

## 7.2 Mineral Occurrences

There are currently three known showings on the property, the Hamilton vein, and two quartz veins, one south and one northeast of the Hamilton vein. The first quartz vein is about 800 meters south of the Hamilton vein and sits in a shear oriented 065° and dipping 80° north. This vein is about 0.7 metres wide and is hosted in quartzite. During the 1930's, a small 20 foot adit was driven in on this vein and 2 tons of material returned only trace amounts of gold or silver, as reported in a property exam by L. Telfer of Consolidated Mining and Smelting Co. The second quartz vein is located about 150 meters northeast of the Hamilton vein. This vein has not been sampled and there are no records of any sampling in the past.

The Hamilton vein sits within the larger Lookout vein structure. It strikes parallel to the larger structure, between 310° and 320° and dips about 75° to the southwest. The vein consists of massive quartz with variable amounts of pyrite, pyrrhotite, marcasite, chalcopyrite, arsenopyrite, and locally felted tourmaline crystals. The vein shows some open space infilling characteristics such as minor vugs with euhedral quartz crystals. The claims were staked in 1903 as two crown-granted claims known as the Belville Nos. 1 and 2. They were optioned to R.H. Finley in 1926 and to J. Powelson in 1939. During this time, 2 shafts 20 feet and 50 feet

deep were sunk along a sediment-diorite contact discovering lead-zinc-silver mineralization (the hanging wall zone). About 90 feet below these shafts an adit was driven in westward towards the sediment diorite contact. At 180 feet, a northwest striking shear zone was encountered and followed northwest exposing the footwall quartz vein along a 110' strike length. Results of sampling done by L. Telfer of Cominco Exploration Ltd. during 1939 are as follows:

1939 ASSAYS - HAMILTON VEIN  
(L.Telfer, Cominco Ltd.)

Distance From Contact (feet)	int.	L	Width (in)	Gold (oz/ton)	Silver (oz/ton)
6	0-12	12	26"	0.62	0.32
24	12-35	23	6"	0.02	0.22
46	35-53	18	24"	0.20	0.28
60	53-69	16	14"	0.32	0.30
78	69-83	14	12"	0.04	5.20
88	83-94	11	3"	0.02	0.26
100	94-105	11	4"	0.02	1.84
110	105-110	5	3"	0.02	Tr

Also in Telfer's report were assays for 19 other samples, presumably grab samples, taken by the optionor, Powelson. Six samples assayed from 0.44 oz/t Au to 1.55 oz/t Au with 0.34 to 0.94 oz/t Ag. The remainder assayed from trace to .05 oz/t Au. Sample results from samples taken by Gord Leask during October 1989 are as follows:

1989 ASSAYS - HAMILTON VEIN  
(G.Leask, B.A.Sc., Oct 1989)

Sample No. (feet)	Type int.	Gold (oz/ton)	Silver (oz/ton)
100653	Selected (chips from muck)	1.539	1.13
100654	Grab	0.012	0.47
100655	Grab	0.238	0.46
100656	Grab	0.013	0.22
100567	Grab	0.066	0.23
100658	Chip (across 24" SW face)	0.584	0.88
Mathematical averages		0.408	0.56

Also, during October 1989 the Hamilton vein was trenched at and immediately south of the shafts established during the 1903 to 1939 period. Two trenches were dug across the strike of the structure 50 meters apart from one another, a third and fourth trench didn't

reach bedrock. Both trenches were about 30 meters long and exposed the hangingwall and footwall mineralized veins. In trench #1, the hangingwall 'vein' consisted of veinlets, veins, and patches of sphalerite and galena. A 6 meter chip sample taken across this interval assayed as follows:

<u>Sample #</u>	<u>Type</u>	<u>Gold(oz/t)</u>	<u>Silver(oz/t)</u>	<u>Lead %</u>	<u>Zinc%</u>
100651	Chip	.004	0.63	2.14	6.41

A grab sample taken from the footwall vein in the same trench assayed as follows:

<u>Sample #</u>	<u>Type</u>	<u>Gold(oz/t)</u>	<u>Silver(oz/t)</u>	<u>Lead %</u>	<u>Zinc%</u>
100652	Grab	.002	.01	.01	.06

Trench number 2, 50 meters to the north, was extremely sheared and carried geochemically anomalous values of lead, zinc and silver.

Also on the Lookout property is a soil geochemical anomaly identified by a limited reconnaissance soil survey conducted by Noranda Exploration Company, Limited during 1985. This soil anomaly is at the north end of the property about 3.5km northwest of the Hamilton vein, and roughly on strike with the Lookout structure. The anomaly carries values up to 400ppm zinc, 300ppm lead, and 2.8ppm silver. Gold was not analyzed. The anomaly has never been tested.

There is also another base metal showing near the south boundary of the property according to Trygve Hoy's geological map. Near the property on the adjoining claims are two areas of mineralization. About 700 meters to the east of the Hamilton vein, on adjoining claims, is a bedded sulfide occurrence called the St. Joe. It consists of thin stratiform and massive sulfide lenses with lead, zinc and silver mineralization, tourmaline alteration and intraformational conglomerate. North of the property, as mentioned, is Chapleau Resources' gold-copper mineralization associated with felsic intrusives emplaced along the Cranbrook Fault. As mentioned by B. Price (1989), a number of deep drill holes within and around the claim group have been testing the area for a Sullivan type, large tonnage, stratiform, lead, zinc, silver massive sulfide orebody. In a geological model outlined by J. Leask (1988), a graben structure having a good possibility of hosting a Sullivan type orebody has been outlined. Drill results have been very positive, intercepting zones of laminated pyrrhotite, pyrrhotite clast conglomerates, intraformational conglomerates, de-watering breccias, and zones of silicification, albitization, and tourmalinization throughout which are trace amounts of lead and zinc, all at and around the Sullivan Time Horizon. These are fairly unique features typical of those found proximal to the Sullivan ore body.

## 8.0 Exploration Program January to March 1990

During January of 1990, an exploration program was undertaken to test the potential of the Lookout structure to host a St. Eugene type ore body.

A control grid was established by cutting a 1600 meter long baseline at an azimuth of 320° with 50 meter stations and winglines at 100 meter spacing. Winglines were extended from 50 to 200 meters either side of the baseline, depending on the location of the claim boundary. Stations were established at 25 meter intervals along the winglines. All lines were flagged and blazed, and all stations were marked with pickets. The baseline was centered over the projected trace of the Lookout structure, with L 7+00N and the baseline (5+00W) centered over the hangwall vein in trench 1. Induced polarization and resistivity, magnetometer and VLF-EM geophysical surveys were conducted on parts of the grid concentrating on and south of the Hamilton vein area. Sixteen hundred meters of the baseline was surveyed by IP using 50 meter electrode intervals and 2.325 line km of IP was surveyed at 25 meter electrode intervals along the winglines. Lines 0+00N, 1+00N, 2+00N, 3+00N, 7+00N, 10+00N, and 12+00N were surveyed. The Magnetometer survey totalled 0.92 line km at 12.5m stations on lines 0+00N, 1+00N, and 7+00N. The VLF EM survey totalled 0.787 line km with 25m stations on lines 0+00N and 1+00N, and 12.m stations on line 7+00N.

The geophysical work was followed by 788.86 meters of HQ diamond drilling. All holes except L.O. 90-2 were drilled testing a 50m strike length along the Hamilton vein in the vicinity of the trenching and underground workings. L.O.90-2 was a 500m step out drilled to test a chargeability anomaly along the strike of the mineralized structure. The hole was lost due to bad ground conditions before the target depth was reached.

### 8.1 Results

The VLF-EM and IP surveys were marginally successful in delineating the Lookout structure. Interpretation is hampered due to the variation in bedrock. The sediment/gabbroic sill contact strongly influenced the IP survey, however the Lookout structure is traceable as a resistivity low within which are zones of anomalous chargeability.

A very interesting zone of anomalous chargeability about 50m wide occurs about 100 to 115 meters west of the baseline on lines 0+00N, 1+00N, 2+00N, and 3+00N. This corresponds to the strike extension of the mineralized Lookout structure exposed in trenching on lines 7+00N and 7+50N and is a target which should be tested with trenching and shallow diamond drilling.



The VLF-EM survey delineated the footwall side of the mineralized structure as a moderate to weak cross-over on all lines surveyed. The magnetometer survey was flat except for a weak anomaly about 50m west of the baseline on line 1+00N.

## 8.2 Diamond Drilling

The drill survey was successful in confirming the strength and continuity of the mineralized structure over a minimum strike length of 500 meters and a minimum dip extent of 175m. All holes except L.O. 90-2 intercepted zones of strong alteration and mineralization. L.O. 90-2 was lost due to ground conditions before it reached target depth. The mineralized intervals were geochemically anomalous, with some significant zones of enrichment carrying economic to sub-economic grades. The best values are as follows:

Hole	From	To	True Width	Au(oz/t)	Ag(oz/t)	Cu%	Pb%	Zn%
L.O. 90-4	31.60	34.30	2.6m	0.001	0.49	0.04	1.67	4.05
L.O. 90-5	27.50	28.20	0.6m	0.644	0.37	0.14	0.08	0.02
L.O. 90-6	29.86	30.86	0.7m	0.090	0.12	0.01	0.08	1.08

The drill holes, their stages and results are as follows:

**L.O. 90-1:** This hole was drilled under the Hamilton vein to test the structure below the gabbro sill, where a package of thick quartzite was projected to occur from deep hole drilling about 1200m to the southwest. Those thick quartzite units are favorable hosts for massive sulfide mineralization along the structure. The structure was not intercepted where expected since it has a slightly shallower dip (65°) than measured at surface and in the adit (75°). The structure was intercepted about 80m further down dip than expected and within a siltstone interval and not the favorable thick quartzites. The hole did intercept about 1.5m (true width) of the footwall quartz vein mineralized with pyrite, pyrrhotite, chalcopyrite, and arsenopyrite. The vein ran trace amounts of gold, weakly anomalous silver (up to 0.6 g/t) and copper (up to 1272ppm). It has the same sulfide mineralogy and open space textures as the footwall vein and is presumably the dip extension of it, thus establishing continuity to a minimum dip extent of 175m. Disperse mineralization and shearing was encountered in the upper 100m of the hole. This is part of weaker footwall deformation and mineralization encountered several tens of meters away from the main structure. Weakly anomalous copper (up to 0.11%) was encountered in this zone. The structure is generally much wider

in and around the gabbroic sill which partly hosts the mineralization at surface and in the adit. Further down dip, the structure becomes more confined in the sediments to where the main part of it is about 5 meters wide at 188.47m in L.O. 90-1.

**L.O. 90-2:** This hole was drilled 500 meters north of the main workings to test a chargeability high, resistivity low above the sill sediment contact. The hole was abandoned due to bad ground conditions in the top part of the structure. The hole confirmed the continuation of the structure 500 meters north of the surface workings.

**L.O. 90-3:** Hole L.O.90-3 was drilled along 7+40 N to test for a possible easterly to vertical dip on the Lookout structure, and to complete a test on the broad zone of anomalous chargeability on L7+00N. The hole confirmed that the structure was west dipping. A zone of mineralization was intercepted from 134 to 144.51 meters, consisting of silicification and biotite alteration with veinlets of quartz, and pyrrhotite with minor amounts of chalcopryrite and arsenopyrite. This zone grades into what appears to be a lamprophyre dyke. The bottom contact is faulted. The entire zone is footwall to, and possibly related to, the main Lookout structure. It carried geochemically anomalous amounts of copper (up to 691ppm) and zinc (206ppm).

Hole L.O.90-3 was abandoned at 203.04m because of poor ground conditions. The target depth had not been reached.

**L.O. 90-4:** L.O.90-4 was drilled along line 7+00N to test the down dip extent of mineralization exposed in trench 1 and the related chargeability. The entire hole was drilled within the Lookout structure. The structure is strongly developed from about 32 to 68 meters, with abundant fault breccia, slicken-sides and fault gouge throughout. This interval also contains the strongest alteration and mineralization. From 31.6 to 38.3 is a mineralized zone of chlorite altered sediment, calcite veins and veinlets with veins and veinlets of sphalerite, galena, pyrrhotite, pyrite and chalcopryrite. The sulfide veins vary from less than 1cm to 8cm wide and comprise up to 65% of a sampled interval. The best averaged interval assayed as follows:

<u>Hole</u>	<u>From</u>	<u>To</u>	<u>True Width</u>	<u>Au(oz/t)</u>	<u>Ag(oz/t)</u>	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>
L.O.90-4	31.6	34.3m	2.6m	0.001	0.49	0.04	1.67	4.05

This zone occurs within the gradational contact of overlying sediment and underlying gabbro sill, and corresponds to the hangingwall zone in the surface workings. Beneath this is variably altered gabbro with three "screens" or inclusions of sediment, one of which is a strongly silicified vuggy fault breccia. The vuggs are infilled with euhedral quartz and minor chlorite and biotite, suggesting they may have been mafic fragments. The fault breccia contains variable amounts of pyrrhotite, pyrite, arsenopyrite, and chalcopyrite, but contained no significant base or precious metal values. A zone of strongly silicified sediment (?) within the gabbro occurred between 50.6 and 53.7 meters. It includes quartz veinlets and veins with euhedral quartz, and disseminations of pyrite, pyrrhotite and arsenopyrite. This zone corresponds to the footwall vein and carried weakly anomalous gold from 52.15 to 53.15 meters where it ran .003 oz/t gold. The entire hole was variably altered and mineralized throughout its entire length.

**L.O.90-5:** This hole was drilled from the same set up as L.O.90-4 to test the down dip extent of mineralization in L.O.90-4. The geology in L.O.90-5 is much the same as L.O.90-4 with abundant faulting, alteration and mineralization. A major sediment-gabbro gradational contact correlates well to that found within L.O.90-4, the sediment "screens" within the gabbro are not very consistent from hole to hole, however, the vuggy fault breccia is, although it is thinner in L.O.90-5. The Hangingwall 'Vein' occurs higher in the structure than in L.O.90-4, appearing about 6 meters above the gabbro sediment contact. It consists of silicification with veinlets of quartz, quartz-calcite, pyrite, and sphalerite, also lesser veins of quartz-calcite-pyrrhotite, pyrite, chalcopyrite, and arsenopyrite. This mineralized zone was intercepted between 23.5 to 32.2 meters and contained geochemically anomalous amounts of lead, zinc, and silver. The best interval contains significant gold as follows:

<u>Hole</u>	<u>From</u>	<u>To</u>	<u>True Width</u>	<u>Au(oz/t)</u>	<u>Ag(oz/t)</u>	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>
L.O.90-5	27.5	28.2	0.6m	0.644	0.37	0.14	0.08	0.02

The footwall vein is not well developed in L.O.90-5 but may correspond to a zone of very strong silicification from 53 to 54.4 meters containing disseminated pyrrhotite and pyrite. Alteration and pyrrhotite-pyrite are ubiquitous throughout the hole.

L.O. 90-6: Hole L.O.90-6 was drilled 50 meters northwest of L.O.90-4 and L.O.90-5, to test the Hamilton Vein (or Footwall Vein), in the vicinity of the underground workings. The 'Hangingwall Vein' occurs from 27.86 to 35.86 meters and consists of weak to moderate silicification with minor quartz veinlets, pyrite-sphalerite veining and pyrrhotite disseminations. The best assay result follows:

<u>Hole</u>	<u>From</u>	<u>To</u>	<u>True Width</u>	<u>Au(oz/t)</u>	<u>Ag(oz/t)</u>	<u>Cu%</u>	<u>Pb%</u>	<u>Zn%</u>
L.O.90-6	29.86	30.86m	0.7m	0.001		.01	.08	1.08

The Footwall Vein is not readily identifiable in L.O.90-6, but it may correlate to a zone of quartz veining with pyrite, pyrrhotite and chalcopyrite mineralization from 63.75 to 67.65 meters.

### 9.0 Recommendations

The Lookout property requires further exploration to test the potential of the Lookout vein structure to host a St. Eugene type ore body. The property is host to about 3600 meters of Lookout vein structure of which 1600 meters has been delineated by geophysics and 50 meters has been tested by trenching and drilling. Effectively, there are some 3550 meters of untested strike length. The following phase one work program is recommended:

1. Grid Extension, about 2.0 kilometers of base line, flagged with 50 meters stations, and 21 line kilometers of wingline spaced 100 meters apart with 25 meter station intervals.
2. Soil sampling of the B horizon at 25 meter intervals for 100 meters either side of the projected trace of the Lookout structure, and at 50 meter intervals for the remainder of the wingline. Approximately 450 samples would be taken. Both the existing and new grid should be sampled. This would help delineate the structure and define geochemically anomalous zones within it. Soils should be analyzed for Cu, Pb, Zn, Ag, Au, As and Sb.
3. The grid and projected trend of the structure should be prospected for mineralized showings. This should include sampling of two known quartz veins and location of the base metal showing on Trygve Hoy's map.
4. Geological mapping: the grid should be mapped to identify packages of thick quartzite, these should then be projected into the Lookout structure, since it is at such intersections the ore zones developed at the St. Eugene Mine.

5. Magnetometer and VLF EM surveys should be conducted on unsurveyed existing grid and new grid to help trace the structure in areas of prohibitive overburden.
6. Trenching: About 100 meters of trenching should be conducted between stations 5+75W and 6+75W on lines 1+00N, 2+00N, and 3+00N. These areas contain anomalous chargeabilities within the projected trace of the Lookout structure. If overburden is prohibitive these zones should be tested by shallow drilling.
7. The soil anomaly identified by Noranda in 1985 should be located, prospected and trenched.

Depending on the results of the above program, a followup program is recommended:

1. Induced Polarization: I.P. surveys should be conducted over any new mineral occurrences, and geochemical soil anomalies. This will better define the area of mineralization, particularly over soil anomalies, and in the case of soil anomalies, should precede trenching if there is no mineralized outcrop to explain the anomaly.
2. Trenching: Trenching should be used to test exposed zones of mineralization and soil geochemical anomalies.
3. Diamond Drilling: Diamond drilling is recommended to test zones of significant mineralization exposed by trenching and areas where overburden prohibited the testing of targets by trenching.

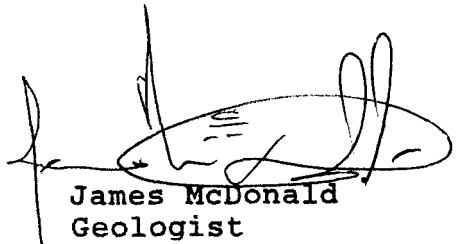
A cost break down follows:

Phase 1

Grid extension, 23 line km x \$400/line km	\$ 9,200
Soil sampling ICP + geochem Au 450 samples x \$12/sample	5,400
Rock sample assays ICP + geochem Au 200 x \$20/sample	4,000
Prospecting 10 man days x \$250/man-day	2,500
Geological mapping 20 man days x \$400/man day	8,000
Geological Assist, mag VLF operator 20 man days x \$250	5,000
VLF rental 20 days x \$25/day	500
Mag rental 20 days x \$25/day	500
Trenching operator and machine 2 days x \$600/day	1,200
Vehicle rental includes fuel 30 days x \$50/day	1,500
Meals and accommodation 2 men x 30 days x \$50/day	3,000
Expendable field supplies (soil bags, flagging, etc.)	<u>1,000</u>
	Sub total 41,800
Contingency	<u>6,200</u>
	Total \$ 49,000

Phase 2 (Dependent on success of Phase 1)

I.P. crew 10 days x \$1350/day	\$ 13,500
Mob-demob	3,000
Drilling (all inclusive) 4000 feet x \$50/foot	200,000
Trenching operator & machine 10 days x \$600/day	<u>6,000</u>
Total	\$222,500



James McDonald  
Geologist  
May 22, 1990

10.0 Statement of Costs

Assays	\$ 4,237
Consulting	39,511
Drilling	67,937
Equipment	114
Field support costs	4,061
<del>Geophysical survey</del>	<del>10,963</del>
Mapping & report preparation	263
Equipment rental	3,265
Transportation	4,063
Trenching & site preparation	5,906
Linecutting	7,500
	<hr/>
	\$ 147,820

*not in this report. T.K.*



James McDonald  
Geologist  
May 22, 1990

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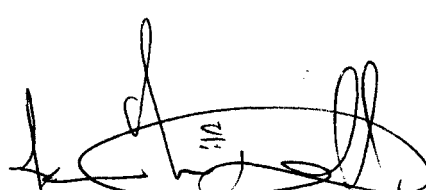
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12.0 Statement of Qualifications

I, James McDonald do hereby certify that:

1. I am a resident of British Columbia residing at #1901-4288 Grange Street, Burnaby, B.C. V5H 1P2.
2. I hold a B.Sc. Degree in Geology (1983) from the University of Alberta.
3. I have practiced my profession as a Geologist since 1983, being employed by Noranda Exploration Co. Ltd. from May 1983 to December 1987, and by Basinal Explorations Ltd. from January 1988 to the present.
4. I conducted the drill program on the Lookout property during February and March, 1990 and have based this report on personal observation, available geological data on the property and surrounding properties, and mineral occurrences and on my own experience of the regional geology gained since 1985.
5. I have no interest in the claims described in the report.
6. I am a Director and shareholder of White Knight Resources Ltd.
7. I am a shareholder of Goldpac Investments Ltd.



James McDonald  
Geologist  
May 22, 1990

A P P E N D I X 1

NA = not analyzed

Hole L.O.90-1 7+25N/4+40W Az 230° Dip -45° T.D. 233.53m

<u>From</u>	<u>To</u>	<u>Width</u>	<u>Au(oz/t)</u>	<u>Ag(g/t)</u>	<u>Cu(ppm)</u>	<u>Pb(ppm)</u>	<u>Zn(ppm)</u>
39.12	39.62	0.50m	<.001	<0.1	213.0	22	159
39.62	40.12	0.50m	<.001	<0.1	447.0	24	293
40.12	40.62	0.50m	<.001	<0.1	427.0	18	213
40.62	41.39	0.77m	<.001	<0.1	213.0	22	159
56.75	57.75	1.00m	<.001	<0.1	0.08%	NA	NA
57.75	58.75	1.00m	<.001	<0.1	0.04%	NA	NA
58.75	59.25	0.50m	<.001	0.2	0.11%	NA	NA
68.75	69.75	1.00m	<.001	0.4	0.01%	NA	NA
69.75	70.75	1.00m	<.001	0.3	0.02%	NA	NA
70.75	71.75	1.00m	<.001	<0.1	0.03%	NA	NA
188.47	188.97	0.50m	<.001	0.5	1272.0	78	31
188.97	189.47	0.50m	<.001	0.3	658.0	34	16
189.47	189.97	0.50m	<.001	0.2	47.0	30	70
189.97	190.37	0.40m	<.001	0.16	41.0	66	51

Hole L.O.90-2 11+95N/4+72W Az 50° Dip -45° T.D. 92.36m

Hole L.O.90-3 7+40N/3+65W Az 230° Dip -45° T.D. 203.4m

<u>From</u>	<u>To</u>	<u>Width</u>	<u>Au(oz/t)</u>	<u>Ag(g/t)</u>	<u>Cu(ppm)</u>	<u>Pb(ppm)</u>	<u>Zn(ppm)</u>
128.50	129.00	0.50	<.001	0.4	NA	NA	NA
129.00	129.70	0.70	<.001	0.3	NA	NA	NA
134.00	135.00	1.00	<.001	0.1	13.0	14	59
135.00	136.00	1.00	<.001	<0.1	113.0	12	80
136.00	137.00	1.00	<.001	0.2	421.0	16	127
173.00	137.70	0.70	<.001	0.3	389.0	20	116
137.70	138.14	0.44	<.001	<0.1	36.0	12	60
138.14	138.86	0.72	<.001	<0.1	244.0	16	87
138.86	139.16	0.30	<.001	0.2	438.0	16	156
139.16	140.16	1.00	<.001	0.1	532.0	14	199
140.16	141.16	1.00	<.001	0.1	691.0	14	195
141.16	142.16	1.00	<.001	<0.1	681.0	16	206
142.16	143.16	1.00	<.001	0.2	499.0	12	135
143.16	144.16	1.00	<.001	<0.1	614.0	16	175
144.16	144.51	0.34	<.001	<0.1	281.0	16	137

L.O.90-4 7+00N/5+28W Az 48° Dip -43° T.D. 79.88m

<u>From</u>	<u>To</u>	<u>Width</u>	<u>Au(oz/t)</u>	<u>Ag(g/t)</u>	<u>Cu(%)</u>	<u>Pb(%)</u>	<u>Zn(%)</u>
9.50	10.50	1.00	<.001	<0.1	<0.01	0.01	<0.01
14.63	15.63	1.00	<.001	<0.1	0.08	0.01	0.01
16.63	17.63	1.00	<.001	0.5	0.02	0.01	0.02
21.04	21.34	0.30	<.001	0.3	<0.01	0.01	0.02
24.35	25.00	0.65	<.001	<0.1	<0.01	0.01	0.03
25.00	26.00	1.00					
26.00	26.60	0.60	.005	1.6	0.16	0.02	0.08
26.60	27.60	1.00	<.001	0.2	<0.01	0.01	0.03
27.60	28.60	1.00	<.001	0.4	0.01	0.01	0.04
28.60	29.60	1.00	<.001	0.5	<0.01	0.01	0.02
29.60	30.60	1.00	<.001	0.1	<0.01	0.01	0.09
30.60	31.60	1.00	<.001	<0.1	0.01	0.01	0.03
31.60	32.50	0.90	<.001	2.6	0.06	0.12	1.08
32.50	33.00	0.50	.009	7.9	0.04	0.75	8.98
33.00	33.40	0.40	<.001	2.4	0.01	0.14	1.83
33.40	33.90	0.50	.001	47.8	0.05	4.85	4.72
33.90	34.30	0.40	<.001	35.5	0.04	3.83	5.98
34.30	35.30	1.00	<.001	0.7	0.01	0.02	0.07
35.30	36.30	1.00	<.001	0.2	0.01	0.03	0.08
36.30	37.30	1.00	<.001	0.1	0.02	<0.01	0.14
37.30	38.30	1.00	<.001	<0.1	0.02	<0.01	0.12
38.30	38.80	0.50	<.001	<0.3	0.05	<0.01	0.05
38.80	39.60	0.80	.001	<0.1	0.05	<0.01	0.10

39.60	40.40	0.80	<.001	<0.1	0.06	<0.01	0.07
40.40	40.90	0.50	.001	0.2	0.02	<0.01	0.06
40.90	41.40		.001	0.4	0.05	<0.01	0.04
41.40	41.90	0.50	.001	<0.1	0.05	<0.01	0.03
41.90	42.40	0.50	<.001	<0.1	0.04	<0.01	0.04
42.40	42.90	0.50	.001	<0.1	0.08	<0.01	0.04
42.90	43.40	0.50	.001	0.2	0.05	<0.01	0.03
43.40	43.90	0.50	<.001	0.3	0.07	<0.01	0.04
43.90	44.40	0.50	<.001	0.2	0.09	<0.01	0.08
44.40	44.90	0.50	<.001	0.4	0.02	<0.01	0.04
44.90	45.40	0.50	.001	<0.1	0.03	<0.01	0.08
48.60	49.60	1.00	<.001	<0.1	0.02	<0.01	0.07
49.60	50.60	1.00	<.001	<0.1	0.01	<0.01	0.06
50.60	51.60	1.00	<.001	0.3	0.01	<0.01	0.04
51.60	52.15	0.55	<.001	0.2	0.01	<0.01	0.04
52.15	53.15	1.00	.003	<0.1	<0.01	<0.01	0.03
53.15	53.70	0.55	<.001	<0.1	0.01	<0.01	0.05
53.70	55.00	1.30	<.001	0.3	0.01	<0.01	0.04
55.00	56.00	1.00	.001	0.4	0.02	<0.01	0.04
56.00	57.00	1.00	<.001	0.2	0.03	0.01	0.04
57.00	58.00	1.00	.001	0.3	0.01	<0.01	0.02
58.00	59.00	1.00	<.001	0.2	0.03	<0.01	0.03
59.00	60.00	1.00	<.001	0.7	0.02	<0.01	0.02
60.00	61.30	1.30	<.001	0.3	0.01	<0.01	0.01
61.30	62.30	1.00	<.001	0.5	0.01	<0.01	0.01
62.30	63.30	1.00	<.001	0.7	0.04	<0.01	0.02
63.30	64.30	1.00	<.001	0.1	0.01	<0.01	0.02
64.30	65.30	1.00	.001	0.4	0.01	<0.01	0.02
65.30	66.30	1.00	<.001	0.6	0.02	0.01	0.02
66.30	67.30	1.00	<.001	0.2	0.02	<0.01	0.03
67.30	68.30	1.00	.001	0.4	0.02	0.01	0.04
68.30	69.58	1.28	<.001	0.3	0.02	<0.01	0.03
69.58	70.00	0.42	<.001	0.2	0.05	<0.01	0.02
70.00	71.00	1.00	<.001	<0.1	<0.01	<0.01	0.03

L.O.90-5 6+00N/5+28W Az 048° Dip -54° T.D. 93.29m

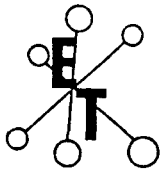
From	To	Width	Au(oz/t)	Ag(g/t)	Cu(%)	Pb(%)	Zn(%)
19.82	20.22	0.40	<.001	<0.1	0.01	0.01	0.05
23.50	24.50	1.00	<.001	0.2	<0.01	0.01	0.03
24.50	25.50	1.00	<.001	0.2	<0.01	0.01	0.03
25.50	26.50	1.00	<.001	<0.1	0.01	0.01	0.11
26.50	27.50	1.00	.001	0.3	0.01	0.01	0.02
27.50	28.20	0.70	.644	12.8	0.14	0.08	0.02
28.20	29.20	1.00	.004	<0.1	<0.01	0.01	0.01
29.20	30.20	1.00	.001	0.2	0.01	0.01	0.01
30.20	31.20	1.00	<.001	<0.1	<0.01	0.01	0.01
31.20	32.20	1.00	<.001	<0.1	<0.01	NA	NA
37.40	38.40	1.00	<.001	1.6	0.03	NA	NA
52.50	53.00	0.50	<.001	0.2	0.05	NA	NA
53.00	54.00	1.00	<.001	0.3	0.04	NA	NA
54.00	54.60	0.60	<.001	0.4	0.05	NA	NA
61.08	61.58	1.50	<.001	0.1	0.02	NA	NA
61.58	62.58	1.00	<.001	0.5	0.07	NA	NA
62.58	63.58	1.00	<.001	0.4	0.02	NA	NA
63.58	64.58	1.00	<.001	0.1	0.03	NA	NA
64.58	65.58	1.00	<.001	0.2	0.03	NA	NA
65.58	66.58	1.00	<.001	0.2	0.02	NA	NA
66.58	67.58	1.00	<.001	0.2	0.02	NA	NA
67.58	68.58	1.00	<.001	0.5	0.02	NA	NA
68.58	69.58	1.00	<.001	0.4	0.01	NA	NA
73.50	75.00	1.50	<.001	0.3	0.02	NA	NA
75.00	76.00	1.00	<.001	0.1	0.02	0.01	0.01
76.00	77.00	1.00	<.001	<0.1	0.01	0.01	0.01
77.00	78.00	1.00	<.001	0.2	0.01	0.01	0.01
78.00	79.00	1.00	<.001	<0.1	0.01	0.02	0.03
79.00	80.00	1.00	<.001	<0.1	0.01	0.01	0.02
80.00	81.00	1.00	<.001	<0.1	0.01	<0.01	0.02
81.00	81.60	0.60	<.001	0.1	0.01	0.01	0.03
81.60	82.60	1.00	<.001	0.2	0.01	<0.01	0.02
82.60	83.60	1.00	<.001	<0.1	0.01	0.01	0.02
83.60	84.60	1.00	<.001	<0.1	0.03	<0.01	0.01
84.60	85.60	1.00	<.001	0.7	0.02	0.02	0.01
85.60	86.60	1.00	<.001	0.2	0.04	<0.01	0.02
86.60	87.32	0.72	<.001	0.1	0.03	0.01	0.02
87.32	88.32	1.00	<.001	<0.1	0.03	0.01	0.02
88.32	89.20	0.88	<.001	<0.1	0.03	0.01	0.03

89.20	89.50	0.30	<.001	<0.1	0.02	0.03	0.03
89.50	90.00	0.50	<.001	0.2	0.02	0.01	0.02

L.O.90-6 7+50N/5+25W Az 48° Dip -72° T.D. 86.58m

<u>From</u>	<u>To</u>	<u>Width</u>	<u>Au(oz/t)</u>	<u>Ag(g/t)</u>	<u>Cu(%)</u>	<u>Pb(%)</u>	<u>Zn(%)</u>
26.86	28.86	1.00	<.001	0.1	0.01	0.01	0.23
28.86	29.86	1.00	<.001	0.3	<0.01	0.02	0.33
29.86	30.86	1.00	.001	4.2	0.01	0.08	1.08
30.86	31.86	1.00	<.001	0.1	0.01	0.01	0.09
31.86	32.86	1.00	<.001	<0.1	0.01	-	-
32.86	33.86	1.00	<.001	<0.1	<0.01	-	-
33.86	34.86	1.00	<.001	0.2	<0.01	-	-
34.86	35.86	1.00	<.001	0.3	<0.01	-	-
40.65	41.65	1.00	<.001	<0.1	<0.01	-	-
41.65	42.65	1.00	<.001	<0.1	<0.01	-	-
42.65	43.65	1.00	<.001	0.1	<0.01	<0.01	<0.01
43.65	44.66	1.01	<.001	<0.1	<0.01	0.01	0.03
63.75	64.75	1.00	<.001	0.2	0.20	-	-
64.75	65.75	1.00	<.001	<0.1	0.01	-	-
65.75	66.75	1.00	<.001	<0.1	<0.01	-	-
66.75	67.75	1.00	<.001	0.2	0.08	-	-
86.15	86.58	0.43	<.001	0.3	0.04	-	-

A P P E N D I X 2



# ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

MARCH 1, 1990

## CERTIFICATE OF ANALYSIS - ETK90-36

WHITE KNIGHT RESOURCES  
922 - 510 W. HASTINGS  
VANCOUVER, B.C.  
V6B 1L8

SAMPLE IDENTIFICATION: 23 CORE samples received February 27, 1990

ET#	DESCRIPTIONS	AU(G/T)	AU(OZ/T)	AG	AS	BI	CD	CO	CU	MN	MO	PB	SB	SN	W	ZN
36 - 1	29651	<.03	<.001	.4												
36 - 2	29652	<.03	<.001	.3												
36 - 3	29653	<.03	<.001	.1	5	<5	<1	13	76	408	7	14	<5	<20	<10	59
36 - 4	29654	<.03	<.001	<.1	70	<5	<1	30	113	308	4	12	<5	<20	<10	80
36 - 5	29655	<.03	<.001	.2	55	<5	<1	42	421	684	8	16	5	<20	10	127
36 - 6	29656	<.03	<.001	.3	270	<5	<1	103	389	922	8	20	<5	<20	<10	116
36 - 7	29657	<.03	<.001	<.1	30	<5	<1	18	36	385	5	12	<5	<20	10	60
36 - 8	29658	<.03	<.001	<.1	15	<5	<1	24	244	598	5	16	5	<20	<10	87
36 - 9	29659	<.03	<.001	.2	5	<5	<1	89	438	1222	1	16	<5	<20	10	156
36 - 10	29660	<.03	<.001	.1	45	<5	<1	67	532	1041	<1	14	<5	<20	<10	199
36 - 11	29661	<.03	<.001	.1	10	<5	<1	58	691	1004	<1	14	10	<20	10	195
36 - 12	29662	<.03	<.001	<.1	25	<5	<1	70	681	1096	5	16	20	<20	10	206
36 - 13	29663	<.03	<.001	.2	15	<5	<1	53	499	808	4	12	10	<20	10	135
36 - 14	29664	<.03	<.001	<.1	115	<5	<1	54	614	1071	12	16	15	<20	10	175
36 - 15	29665	<.03	<.001	<.1	25	<5	<1	25	281	816	8	16	5	<20	20	137
36 - 16	29666	<.03	<.001	<.1	10	<5	<1	79	455	1582	3	34	15	<20	20	256
36 - 17	29667	<.03	<.001	<.1	20	<5	<1	52	447	1370	6	24	10	<20	10	293
36 - 18	29668	<.03	<.001	<.1	20	<5	<1	63	427	1236	4	18	15	<20	10	213
36 - 19	29669	<.03	<.001	<.1	45	<5	<1	57	213	993	16	22	5	<20	<10	159
36 - 20	29670	<.03	<.001	.5	540	<5	<1	46	1272	119	10	78	10	<20	<10	31
36 - 21	29671	<.03	<.001	.3	1295	<5	<1	10	658	99	10	34	<5	<20	<10	16
36 - 22	29672	<.03	<.001	.2	3885	<5	<1	26	47	358	10	30	10	<20	10	70
36 - 23	29673	<.03	<.001	.6	745	<5	<1	13	41	227	10	66	<5	<20	<10	51

90-3

90-1

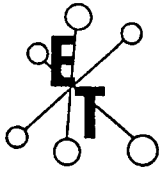
NOTE: < = less than  
Values in ppm unless otherwise stated.

CC: WARREN BAUCK  
507 14TH.AVE. SOUTH  
CRANBROOK, B.C. VIC 2X9

*Jutta Jealouse*  
ECO-TECH LABORATORIES LTD.  
JUTTA JEALOUSE  
B.C. CERTIFIED ASSAYER

SC90/MIS1





# ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

MARCH 7, 1990

## CERTIFICATE OF ANALYSIS ETK 90-41

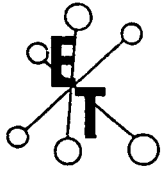
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WHITE KNIGHT RESOURCES  
922, 510 W. HASTINGS ST.  
VANCOUVER, B.C.  
V6B 1L8

SAMPLE IDENTIFICATION: 70 CORE samples received March 5, 1990

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ET#	Description	Au (g/t)	Au (oz/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
41 - 1	29601	.04	.001	<.1	.08	<.01	.04
41 - 2	29602	.04	.001	.2	.05	<.01	.03
41 - 3	29603	<.03	<.001	.3	.07	<.01	.04
41 - 4	29604	<.03	<.001	.2	.09	<.01	.08
41 - 5	29605	<.03	<.001	.4	.02	<.01	.04
41 - 6	29606	.03	.001	<.1	.03	<.01	.08
41 - 7	29607	<.03	<.001	<.1	.02	<.01	.07
41 - 8	29608	.05	.001	<.1	.01	<.01	.06
41 - 9	29609	<.03	<.001	.1	.02	.01	.07
41 - 10	29610	<.03	<.001	.2	.01	<.01	.10
41 - 11	29611	<.03	<.001	.4	.02	<.01	.07
41 - 12	29612	<.03	<.001	<.1	.01	<.01	.07
41 - 13	29613	<.03	<.001	<.1	.01	<.01	.06
41 - 14	29614	<.03	<.001	.3	.01	<.01	.04
41 - 15	29615	<.03	<.001	.2	.01	<.01	.04
41 - 16	29616	.12	.003	<.1	<.01	<.01	.03
41 - 17	29617	<.03	<.001	<.1	.01	<.01	.05
41 - 18	29618	<.03	<.001	.3	.01	<.01	.04
41 - 19	29619	.03	.001	.4	.02	<.01	.04
41 - 20	29620	<.03	<.001	.2	.03	.01	.04
41 - 21	29621	.03	.001	.3	.01	<.01	.02
41 - 22	29622	<.03	<.001	.2	.03	<.01	.03
41 - 23	29623	<.03	<.001	.7	.02	<.01	.02
41 - 24	29624	<.03	<.001	.3	.01	<.01	.01
41 - 25	29625	<.03	<.001	.5	.01	<.01	.01
41 - 26	29626	<.03	<.001	.7	.04	<.01	.02
41 - 27	29627	<.03	<.001	.1	.01	<.01	.02
41 - 28	29628	.03	.001	.4	.01	<.01	.02
41 - 29	29629	<.03	<.001	.6	.02	.01	.02
41 - 30	29630	<.03	<.001	.2	.02	<.01	.03



# ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

WHITE KNIGHT RESOURCES

MARCH 7, 1990

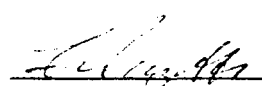
ET#	Description	Au (g/t)	Au (oz/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)
41 - 31	29631	.03	.001	.4	.02	.01	.04
41 - 32	29632	<.03	<.001	.3	.02	<.01	.03
41 - 33	29633	<.03	<.001	.2	.05	<.01	.02
41 - 34	29634	<.03	<.001	<.1	<.01	<.01	.03
41 - 35	29635	<.03	<.001	<.1	.01	.01	.05
41 - 36	29636	<.03	<.001	.2	<.01	.01	.03
41 - 37	29637	<.03	<.001	.2	<.01	.01	.03
41 - 38	29638	<.03	<.001	<.1	.01	.01	.11
41 - 39	29639	.03	.001	.3	.01	.01	.02
41 - 40	29640	22.09*	.644	12.8	.14	.08	.02
41 - 41	29641	.15	.004	<.1	<.01	.01	.01
41 - 42	29642	.03	.001	.2	.01	.01	.01
41 - 43	29643	<.03	<.001	<.1	<.01	.01	.01
41 - 44	29674	<.03	<.001	<.1	<.01	.01	<.01
41 - 45	29675	<.03	<.001	<.1	.08	.01	.01
41 - 46	29676	<.03	<.001	.5	.02	.01	.02
41 - 47	29677	<.03	<.001	.3	<.01	.01	.02
41 - 48	29678	<.03	<.001	<.1	<.01	.01	.03
41 - 49	29679	.18	.005	1.6	.16	.02	.08
41 - 50	29680	<.03	<.001	.2	<.01	.01	.03
41 - 51	29681	<.03	<.001	.4	.01	.01	.04
41 - 52	29682	<.03	<.001	.5	<.01	.01	.02
41 - 53	29683	<.03	<.001	.1	<.01	.01	.09
41 - 54	29684	<.03	<.001	<.1	.01	.01	.03
41 - 55	29685	<.03	<.001	2.6	.06	.12	1.08
41 - 56	29686	.32	.009	7.9	.04	.75	8.98
41 - 57	29687	<.03	<.001	2.4	.01	.14	1.83
41 - 58	29688	.03	.001	47.8	.05	4.85	4.72
41 - 59	29689	<.03	<.001	35.5	.04	3.83	5.98
41 - 60	29690	<.03	<.001	.7	.01	.02	.07
41 - 61	29691	<.03	<.001	.2	.01	.03	.08
41 - 62	29692	<.03	<.001	.1	.02	<.01	.14
41 - 63	29693	<.03	<.001	<.1	.02	<.01	.12
41 - 64	29694	<.03	<.001	.3	.05	<.01	.05
41 - 65	29695	.03	.001	<.1	.05	<.01	.10
41 - 66	29696	<.03	<.001	<.1	.06	<.01	.07
41 - 67	29697	.03	.001	.2	.02	<.01	.06
41 - 68	29698	.04	.001	.4	.05	<.01	.04
41 - 69	29699	.03	.001	<.1	.05	<.01	.03
41 - 70	29700	<.03	<.001	<.1	.04	<.01	.04

L.O. 90-4

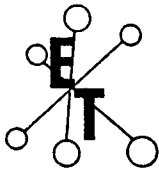
L.O. 90-5

L.O. 90-6

NOTE: < = less than  
\* = METALLICS SCREENED AND SAMPLE ASSAYED

  
ECO-TECH LABORATORIES LTD.  
Frank J. Pezzotti, A.Sc.T.  
B.C. Certified Assayer

c/o Warren Bauck  
c/o Basinal Exp.  
FAX: VCR



# ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

MARCH 9, 1990

## CERTIFICATE OF ANALYSIS ETK 90-43

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WHITE KNIGHT RESOURCES  
922, 510 WEST HASTINGS STREET  
VANCOUVER, B.C.  
V6B 1L8

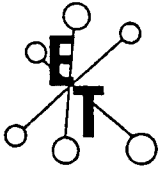
ATTENTION: TERRY ELDRIDGE

SAMPLE IDENTIFICATION: 55 CORE samples received March 7, 1990

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ET#	Description	AU (g/t)	AU (oz/t)	AG (g/t)	CU (%)	PB (%)	ZN (%)
43	- 1	29644	<.03	<.001	<.1	<.01	
43	- 2	29645	<.03	<.001	1.6	.03	
43	- 3	29646	<.03	<.001	.2	.05	
43	- 4	29647	<.03	<.001	.3	.04	
43	- 5	29648	<.03	<.001	.4	.05	
43	- 6	29649	<.03	<.001	.1	.02	
43	- 7	29650	<.03	<.001	.5	.07	
43	- 8	39301	<.03	<.001	.4	.02	
43	- 9	39302	<.03	<.001	.1	.03	
43	- 10	39303	<.03	<.001	.2	.03	
43	- 11	39304	<.03	<.001	.2	.02	
43	- 12	39305	<.03	<.001	.2	.02	
43	- 13	39306	<.03	<.001	.5	.01	
43	- 14	39307	<.03	<.001	.4	.01	
43	- 15	39308	<.03	<.001	.3	.02	
43	- 16	39309	<.03	<.001	.1	.02	.01
43	- 17	39310	<.03	<.001	<.1	.01	.01
43	- 18	39311	<.03	<.001	.2	.01	.01
43	- 19	39312	<.03	<.001	<.1	.01	.02
43	- 20	39313	<.03	<.001	<.1	.01	.01
43	- 21	39314	<.03	<.001	<.1	.01	<.01
43	- 22	39315	<.03	<.001	.1	.01	.01
43	- 23	39316	<.03	<.001	.2	.01	<.01
43	- 24	39317	<.03	<.001	<.1	.01	.01
43	- 25	39318	<.03	<.001	<.1	.03	<.01
43	- 26	39319	<.03	<.001	.7	.02	.02
43	- 27	39320	<.03	<.001	.2	.04	<.01
43	- 28	39321	<.03	<.001	.1	.03	.01
43	- 29	39322	<.03	<.001	<.1	.03	.01
43	- 30	39323	<.03	<.001	<.1	.03	.01

Frank J. Pezzotta, Certified Assayer



# ECO-TECH LABORATORIES LTD.

ASSAYING - ENVIRONMENTAL TESTING

10041 East Trans Canada Hwy., Kamloops, B.C. V2C 2J3 (604) 573-5700 Fax 573-4557

WHITE KNIGHT RESOURCES

MARCH 9, 1990

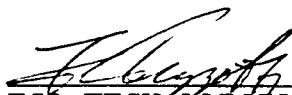
ET#	Description	AU (g/t)	AU (oz/t)	AG (g/t)	CU (%)	PB (%)	ZN (%)
43	- 31 39324	<.03	<.001	<.1	.02	.03	.03
43	- 32 39325	<.03	<.001	.2	.02	.01	.02
43	- 33 39326	<.03	<.001	.1	.01	.01	.23
43	- 34 39327	<.03	<.001	.3	<.01	.02	.33
43	- 35 39328	.03	.001	4.2	.01	.08	1.08
43	- 36 39329	<.03	<.001	.1	.01	.01	.09
43	- 37 39330	<.03	<.001	<.1	.01		
43	- 38 39331	<.03	<.001	<.1	<.01		
43	- 39 39332	<.03	<.001	.2	<.01		
43	- 40 39333	<.03	<.001	.3	<.01		
43	- 41 39334	<.03	<.001	<.1	<.01		
43	- 42 39335	<.03	<.001	<.1	<.01		
43	- 43 39336	<.03	<.001	.1	<.01	<.01	<.01
43	- 44 39337	<.03	<.001	<.1	<.01	.01	.03
43	- 45 39338	<.03	<.001	.2	.02		
43	- 46 39339	<.03	<.001	<.1	.01		
43	- 47 39340	<.03	<.001	<.1	<.01		
43	- 48 39341	<.03	<.001	.2	.08		
43	- 49 39342	<.03	<.001	.3	.04		
43	- 50 39343	<.03	<.001	<.1	.08		
43	- 51 39344	<.03	<.001	<.1	.04		
43	- 52 39345	<.03	<.001	.2	.11		
43	- 53 39346	<.03	<.001	<.1	.03		
43	- 54 39347	<.03	<.001	.3	.02		
43	- 55 39348	<.03	<.001	<.1	.03		

↑ 70-5  
↓ 70-6

↑ L.O. 70-6  
↓ L.O. 70-1

NOTE: < = LESS THAN

CC: WARREN BAUCK  
507 - 14TH AVENUE SOUTH  
CRANBROOK, B.C.  
FAX: VANCOUVER  
SC90/KOK1

  
ECO-TECH LABORATORIES LTD.  
FRANK J. PEZZOTTI, A.Sc.T.  
B.C. Certified Assayer

A P P E N D I X 3





















.TD.

## DIAMOND DRILL LOG

Ft. / M.		Rec'y	Rock Type / Alteration	Mineralization / Structure	Sample Length		Sample No.	Assays						
					From	To								
0		4.57	Casing.											
4.57		29.2	Gabbro Sill. Sheared to 18.8m, quartz veins and chloritic fault gouge.	4.57m to 18.8m Fault zone, minor quartz veins 3 to 15cm wide throughout, sheared with chloritic gouge. 12.9m to 18.8m strongly sheared. Foliated. 15.7 to 15.9 Broken quartz pebbles (Qtz. vein breccia).										
29.2		35.9	Quartzite, medium and coarse grained, bleached with minor thin interbeds of siltstone.											

Company:  
White Knight Resources Ltd.  
Goldpac Investments Ltd.

Property: Lookout

N.T.S.: 82G/5W

Elevation:

Depth: 203.4m

Core Size: H.Q.

Logged By: G.Leask/J.McDonald

Bearing: 230°

Dip: -045°

Page 1 of 10

Collared:

Completed:

L.O.  
Hole No.: 90-3

Coordinates:

7+40N/3+65W

Project:









LTD.

DIAMOND DRILL LOG

Company:	Property: Lookout	Core Size:	Page 5 of 10	Hole No.: L.O. 90-3
	N.T.S.:	Logged By:	Collared:	Coordinates:
	Elevation:	Bearing:		
Project:	Depth:	Dip:	Completed:	

Ft.	M.	Rec'y	Rock Type / Alteration	Mineralization / Structure	Sample Length		Sample No.	Assays						
					From	To								
109.2	115.38	87%	Siltstone and mudstone. Thinly bedded to laminated. Biotitic siltstone (pseudo-marker).	Po dissemination. Convoluted bedding and ripple bedding. 115.15 to 115.38 strongly albitized with Po stringers.										
115.38	121.70		Quartzite thin to medium interbeds with mudstone/siltstone tops. 118.4	Albitized, convoluted bedding.										
121.7	126.83		Siltstone and mudstone. Thin interbeds. Siltstone is moderately biotitic.											



















TD.

DIAMOND DRILL LOG

Company:	Property: Lookout	Core Size: HQ	Page 4 of 7	Hole No.: L.O. 90-4
	N.T.S.:	Logged By:		
	Elevation:	Bearing:	Collared:	Coordinates:
Project:	Depth:	Dip:	Completed:	

Ft.	M.	Rec'y	Rock Type/Alteration	Mineralization/Structure	Sample Length		Sample No.	Assays						
					From	To								
		82%		Moderately silicified. Py 4 to 8%, Po, subhedral Py coarse grained.	38.8	39.6	29695							
				As above 3 cm qtz vein	39.6	40.4	29696							
				As above Py 5 to 11%, well developed fabric/foiliation.	40.4	40.9	29697							
				trace Aspy Fabric @ 40° for C.A.										
				As above 8cm quartz vein	40.9	41.4	29698							
				As above	41.4	41.9	29699							
		71%		As above	41.9	42.4	29700							
42.5	47.6		Quartz wacke silicified with gabbro gradational contacts.	As above Py 4 to 10%	42.4	42.9	29601							
				As above	42.9	43.4	29602							
				As above	43.4	43.9	29603							
				As above	43.9	44.4	29604							
				As above with minor fault gouge	44.4	44.9	29605							
				As above	44.9	45.4	29606							
		99%		As above	45.4	45.9	29607							
				As above	45.9	46.4	29608							



LTD.

## DIAMOND DRILL LOG

Company:			Property: Lookout		Core Size: HQ		Page 6 of 7		Hole No.: 90-4					
Project:			N.T.S.:		Logged By:		Collared:		Coordinates:					
			Elevation:		Bearing:		Completed:							
			Depth:		Dip:									
Ft.	M.	Rec'y	Rock Type / Alteration	Mineralization / Structure	Sample Length		Sample No.	Assays						
					From	To								
		94%		55 to 68.3 Fault breccia and gouge Vuggy breccia.	56.00	57.00	29620							
				Silicified fragments, vuggs may have been fragments	57.00	58.00	29621							
		93%		of mafic rock. Some fragments contain Aspy. Vuggs infilled with euhedral	58.00	59.00	29622							
				quartz ±Aspy, ±Cpy, and Py.	59.00	60.00	29623							
		33%		Strongly silicified throughout Aspy disseminations < 1 to 3%	60.00	61.30	29624							
				As above	61.30	62.30	29625							
		96%		As above with appearance of veinlets	62.30	63.30	29626							
				of Po, Py, ±Cpy, ±Aspy, about 3 per meter	63.30	64.30	29627							
		100%			64.30	65.30	29628							
65.2	68.3	77%	Flotite Altered Sediment	Moderately silicified. Flotitic. Calcite filled fault breccias	65.30	66.30	29629							
				66.3 to 68.3 Strong silicification Some quartz veinlets Po 3-6%	66.30	67.30	29630							
				Py ±Cpy seams < 1%	67.30	68.30	29631							
68.3	70.1	77%	Gabbro	Silicified Po ±Cpy 3-5%	68.30	69.58	29632							
		92%	Most core lost for above interval is here	69.58 to 70 Fault brecciated quartz vein with lesser calcite. Drag folded Sulfides < 1%	69.58	70.00	29633							















LTD.

## DIAMOND DRILL LOG

Company:			Property: Lookout		Core Size: HQ		Page 6 of 7		L.O. Hole No.: 90-5		
Project:			N.T.S.:		Logged By:		Collared:		Coordinates:		
			Elevation:		Bearing:		Completed:				
			Depth:		Dip:						
Ft. / M.	Rec'y	Rock Type / Alteration	Mineralization / Structure	Sample Length		Sample No.	Assays				
				From	To						
72.6	75.0		Altered Gabbro. Medium and coarse grained gabbro grades downward into silicified zone.								
			Weak biotite alt'n. Calcite veining. Sulfides <1 to 2%	73.5	74.0	39308					
75.0	81.6	93%	As above weaker alt'n.	Very strong quartz flooding (veins and gangue). Epidote alt'n of mafics. Fine to very fine grained Po veinlets and blebs also Py veinlets. Trace Cpy, ZnS. Later and lesser calcite veining. Sulfides 3 to 8%. Veins and siliceous zones at 60° to 70° and 35° to 45° to C.A.	74.0	75.0	39309				
		90%			76.0	77.0	39310				
					77.0	78.0	39311				
		100%			78.0	79.0	39312				
					79.0 80.0	80.0 81.0	39313 39314				
				81.5 to 81.6 Qtz-ZnS vein at 40° to C.A.	81.0	81.6	39315				









LTD.

## DIAMOND DRILL LOG

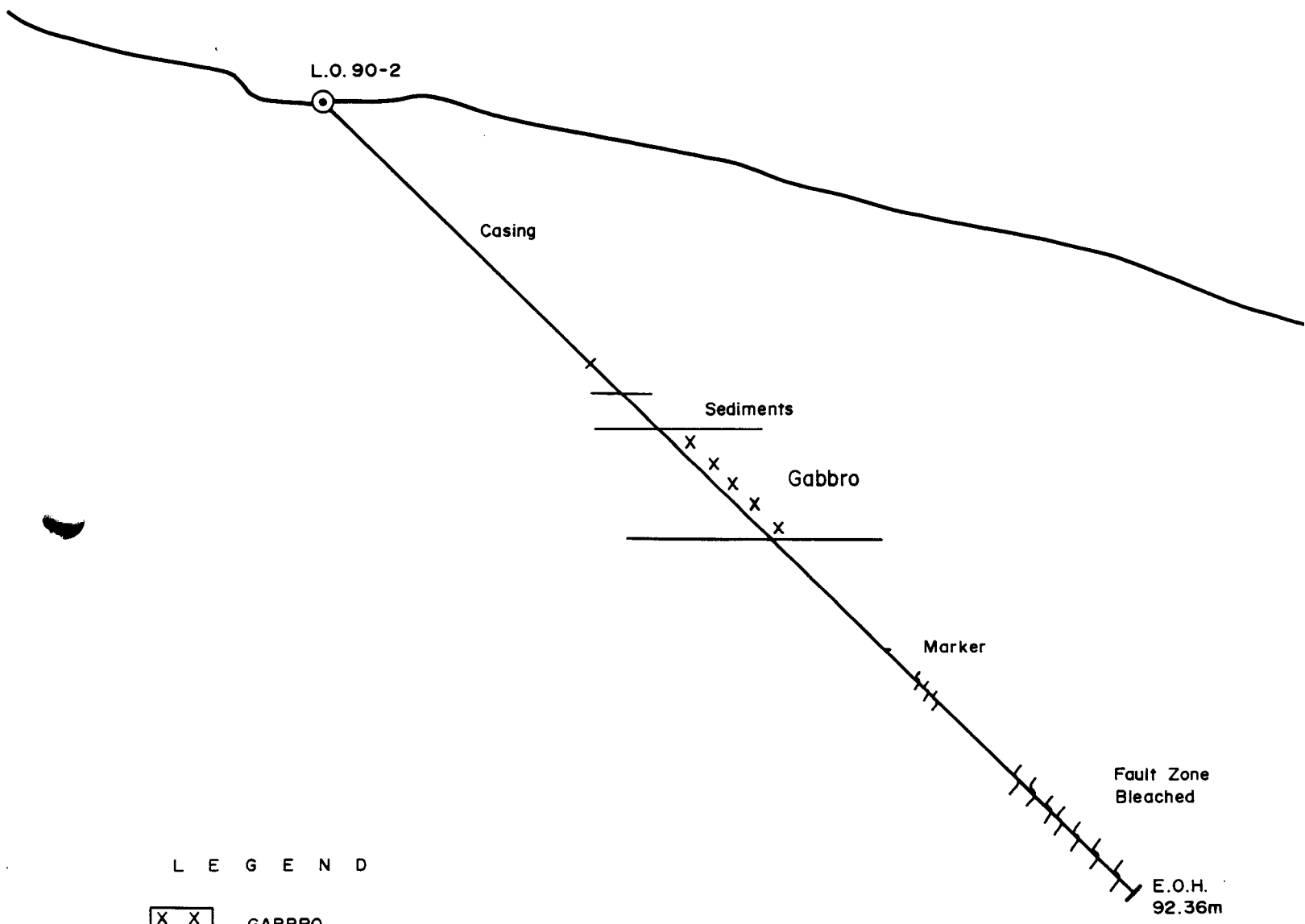
Company:			Property: Lookout		Core Size: HQ		Page 3 of 5		L.O. Hole No.: 90-6		
Project:			N.T.S.:		Logged By:		Collared:		Coordinates:		
			Elevation:		Bearing:		Completed:				
			Depth:		Dip:						
Ft.	M.	Rec'y	Rock Type/Alteration	Mineralization/Structure	Sample Length		Sample No.	Assays			
					From	To					
26.1	34.5		Quartzite, thick bedded to massive, dark grey.	Weakly silicified by qtz flooding. Minor sulfides. Broken and rubbly.							
		100%		Weakly silicified. Po fractures. Qtz-ZnS vein. ZnS < 1% overall. Po and ZnS dissem. throughout. Po 2 to 4%. Qtz-ZnS vein 40° to C.A.	27.86	28.86	39326				
					28.86	29.86	39327				
		75%		As above minor veinlets of ZnS ≤ 1cm wide	29.86	30.86	39328				
				Moderately silicified, minor dissem. Po 1 to 3%	30.86	31.86	39329				
		86%		Veinlets of quartz, biotite, amphibole, coarse garnet, calcite and minor Po (1 to 6%).	31.86	32.86	39330				
					32.86	33.86	39331				
34.5	44.50	87%	Quartzite, silty quartzite, and siltstone. Thin and lesser medium interbeds.	Bedding to C.A. 45° Very fine grained pyrite 2 to 3%.	33.86	34.86	39332				
					34.86	35.86	39333				





A P P E N D I X 4

— 5+00W — 4+75W — 4+50W — 4+25W — 4+00W



L E G E N D

- X X GABBRO
- SEDIMENT
- FAULT. DUCTILE DEFORMATION OR GOUGE
- DRILL HOLE COLLAR & TRACE



<b>WHITE KNIGHT RESOURCES LTD.</b>	
<u>LOOKOUT PROPERTY</u> LOOKOUT VEIN SECTION 12+00N LOOKING N.W.	
DATE: May, 1990	FIG.
DRAWN BY: J.M. McDonald / LGC	
SCALE: 1 : 500	

- 5+25W  
/7+50N

- 5+00W

- 4+75W

L.O. 90-6

Quartzites  
and Siltstones

metres	Au oz/t	Ag oz/t	Cu%	Pb%	Zn%
29.86-30.86	0.001	0.12	0.01	0.08	1.08

Silicified  
ZnS  
ZnS  
Po

Adit

Po, Py  
& Aspy

Po, Cpy

Qtz veinlets  
Po, Cpy

Gabbro

E.O.H.  
86.58m

L E G E N D



GABBRO



SEDIMENT



FAULT. DUCTILE DEFORMATION OR GOUGE



FAULT. BRECCIA BRITTLE DEFORMATION



DRILL HOLE COLLAR & TRACE

Aspy

ARSENOPYRITE

Cpy

CHALCOPYRITE

Po

PYRRHOTITE

Py

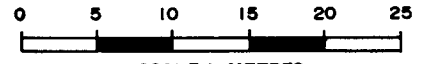
PYRITE

Qtz

QUARTZ

ZnS

SPHALERITE



WHITE KNIGHT RESOURCES LTD.

LOOKOUT PROPERTY

LOOKOUT VEIN

SECTION 7+50 N

LOOKING N.W.

DATE: May, 1990


DRAWN BY: J.M. McDonald /LGC

SCALE: 1 : 500


FIG.

# LEGEND — REGIONAL GEOLOGY, PROPERTY GEOLOGY

## PLEISTOCENE AND RECENT


 TILL GRAVEL, SAND AND ALLUVIAL DEPOSITS


## LOWER CRETACEOUS

 K<sub>g</sub> QUARTZ MONZONITE, GRANODIORITE

## DEVONIAN (?)

### FAIRHOLME GROUP


 D<sub>f</sub> DARK GREY TO BLACK, FINE-GRAINED FOSSILIFEROUS LIMESTONE, LOCAL NODULAR CHERT BEDS; BASE COMMONLY MARKED BY A FLUVIAL COBBLE CONGLOMERATE OVERLAIN BY A MEDIUM TO COARSE-GRAINED SANDSTONE


 D<sub>p</sub> PEAVINE CONGLOMERATE  
COBBLE TO COARSE BOULDER, POLYMIC TIC PARACONGLOMERATE, WITH SILT TO SAND MATRIX; MASSIVE TO MODERATELY WELL BEDDED


## MIDDLE PROTEROZOIC

 p<sub>Em</sub> MOYLE INTRUSIONS  
METADIORITE TO METAGABBRO SILLS AND LOCALLY DYKES


## PURCELL SUPERGROUP


 p<sub>Er</sub> ROOSVILLE FORMATION  
GREY TO BLACK ARGILLITE WITH INTERCALATED GREEN SILTSTONE; GREEN SILTY ARGILLITE WITH THIN MAUVE SILTSTONE INTERLAYERS, OCCASIONAL THIN DOLOMITE, STROMATOLITIC DOLOMITE, AND CONGLOMERATE LAYERS


 p<sub>Ep</sub> PHILLIPS FORMATION  
THIN-BEDDED PURPLE AND RED ARGILLITE, SILTSTONE AND QUARTZITE; MINOR GREEN SILTSTONE INTERLAYERS NEAR BASE

 p<sub>Eg</sub> GATEWAY AND SHEPPARD FORMATIONS  
UPPER (THIN-BEDDED, FINELY LAMINATED GREEN SILTSTONE, MINOR PURPLE ARGILLITE)  
MIDDLE (GREEN, BROWN, AND REDDISH BROWN SILTSTONE AND QUARTZITE, INTERBEDS OF GREEN AND PURPLE ARGILLITE; DIAGNOSTIC SALT CRYSTAL CASTS THROUGHOUT)  
LOWER (SHEPPARD FORMATION) THIN-BEDDED DOLOMITE, STROMATOLITIC DOLOMITE, MAUVE, GREY, AND GREEN SILTSTONE, DOLOMITIC SILTSTONE, AND QUARTZITE, COBBLE-BOULDER POLYMIC TIC PARACONGLOMERATE AT BASE


## PURCELL SUPERGROUP (CONTINUED)

 p<sub>Enc</sub> NICOL CREEK FORMATION  
PURPLE AND GREEN, AMYGDALOIDAL AND VESICULAR BASALT, LOCALLY PORPHYRITIC (PLAGIOCLASE PHENOCRYSTS), INTERLAYERED GREEN TUFF BEDS AND THIN-BEDDED, COMMONLY GRADED, GREEN AND PURPLE SILTSTONE LAYERS. Incl: PURPLE VOLCANICLASTIC SILTSTONE AND SANDSTONE


 p<sub>Evc</sub> VAN CREEK FORMATION  
THINLY LAMINATED PALE GREEN AND PURPLE SILTSTONE AND SHALE, CHARACTERISTICALLY REDDISH ORANGE WEATHERING THIN-BEDDED PURPLE AND RED ARGILLACEOUS LIMESTONE; GREEN SILTY QUARTZITE; MINOR ARGILLACEOUS LIMESTONE NEAR BASE

 p<sub>Ek</sub> KITCHENNER FORMATION  
MEDIUM TO DARK GREY SILTY AND ARGILLACEOUS DOLOMITE, DOLOMITIC ARGILLITE, AND ARGILLACEOUS LIMESTONE; GREY SILTY DOLOMITE WITH BLACK ARGILLACEOUS PARTINGS; MINOR GREEN SILTSTONE AND ARGILLITE

p<sub>Ek</sub>: PALE YELLOWISH GREEN SILTSTONE AND ARGILLITE WITH INTERLAYERED BUFF-WEATHERING DOLOMITIC SILTSTONE AND ARGILLITE, MINOR DARK GREY LIMY ARGILLITE

 p<sub>Ec</sub> CRESTON FORMATION  
LIGHT TO MODERATE GREEN SILTSTONE AND ARGILLITE, LESSER GREY, LIGHT BROWN, AND PURPLE-TINGED SILTSTONE AND ARGILLITE, WHITE QUARTZITE; MINOR BUFF-WEATHERING DOLOMITIC SILTSTONE

p<sub>Ec</sub>: GENERALLY RUSTY WEATHERING LIGHT TO DARK GREY SILTSTONE, ARGILLITE, AND SILTY QUARTZITE, LENTICULAR-BEDDED DARK GREY SILTY ARGILLITE; INTERLAYERED GREEN SILTSTONE AND GREY ARGILLITE

 p<sub>Ea</sub> ALDRIDGE FORMATION  
p<sub>Ea</sub>, (UPPER ALDRIDGE): THINLY LAMINATED, RUSTY WEATHERING, LIGHT TO DARK GREY ARGILLITE AND ARGILLACEOUS SILTSTONE

p<sub>Ea</sub>, (MIDDLE ALDRIDGE): THIN TO THICK BEDDED GREY QUARTZITE WACKE INTERLAYERED WITH LAMINATED SILTSTONE; SILTSTONE AND RUSTY WEATHERING ARGILLITE DOMINATE NEAR TOP

p<sub>Ea</sub>, (LOWER ALDRIDGE): RUSTY WEATHERING SILTSTONE AND QUARTZITE WITH INTERBEDS OF SILTY ARGILLITE; INTERLAYERED RUSTY WEATHERING QUARTZITE WACKE AND SILTSTONE NEAR TOP

## SYMBOLS

ROCK OUTCROP .....\*

GEOLOGICAL CONTACT  
DEFINED, APPROXIMATE, ASSUMED .....

FAULT DEFINED,  
APPROXIMATE, ASSUMED .....

THRUST OR REVERSE FAULT .....

NORMAL FAULT .....

FOLD AXIAL TRACE  
ANTICLINE (OVERTURNED) .....

SYNCLINE (OVERTURNED) .....

BEDDING INCLINED, OVERTURNED .....

TOPS UNKNOWN .....

FLOW STRUCTURE IN VOLCANIC ROCKS .....

FOLIATION, CLEAVAGE .....

LINATION .....

MINOR FOLD AXIS (SHOWING VERGENCE) .....

SMALL SHEAR (SHOWING DIPI) .....

MINERALIZED VEIN (SHOWING TREND) .....

HAIR, PROSPECT, OR OCCURRENCE .....

SILT SAMPLE LOCATION .....

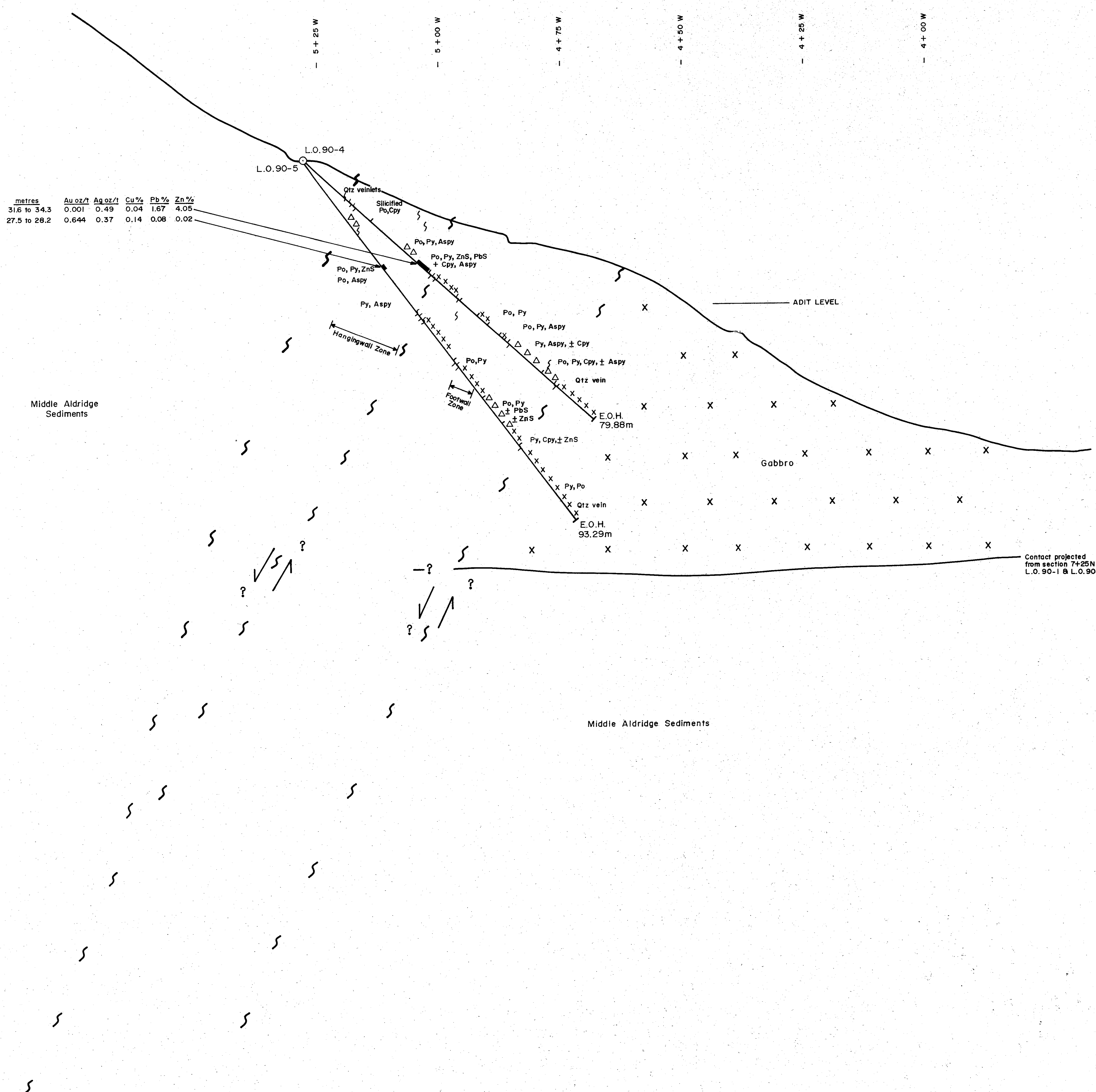
EDGE OF MAPPING .....

TOPOGRAPHIC CONTOUR (500 FOOT INTERVAL) .....

ROAD HARD SURFACE .....

LOOSE OR STABILIZED SURFACE .....

LAKE .....



metres	Au oz/t	Ag oz/t	Cu %	Pb %	Zn %
31.6 to 34.3	0.001	0.49	0.04	1.67	4.05
27.5 to 28.2	0.644	0.37	0.14	0.08	0.02

- L E G E N D
- X X GABBRO
  - SEDIMENT
  - ~ FAULT, DUCTILE DEFORMATION OR GOUGE
  - △ △ FAULT, BRECCIA BRITTLE DEFORMATION
  - DRILL HOLE COLLAR AND TRACE
  - GEOLOGIC CONTACT
  - Aspy ARSENOPYRITE
  - Cpy CHALCOPYRITE
  - PbS GALENA
  - Po PYRRHOTITE
  - Py PYRITE
  - Qtz QUARTZ
  - ZnS SPHALERITE

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

# 20,065

0 10 20 30 40  
Scale in metres

WHITE KNIGHT RESOURCES LTD.

LOOKOUT PROPERTY

LOOKOUT VEIN

SECTION 7+00N

LOOKING N.W.

DATE: May, 1990 REVISION: \_\_\_\_\_  
DRAWN BY: J.M. McDonald / LGC  
SCALE: 1 : 500

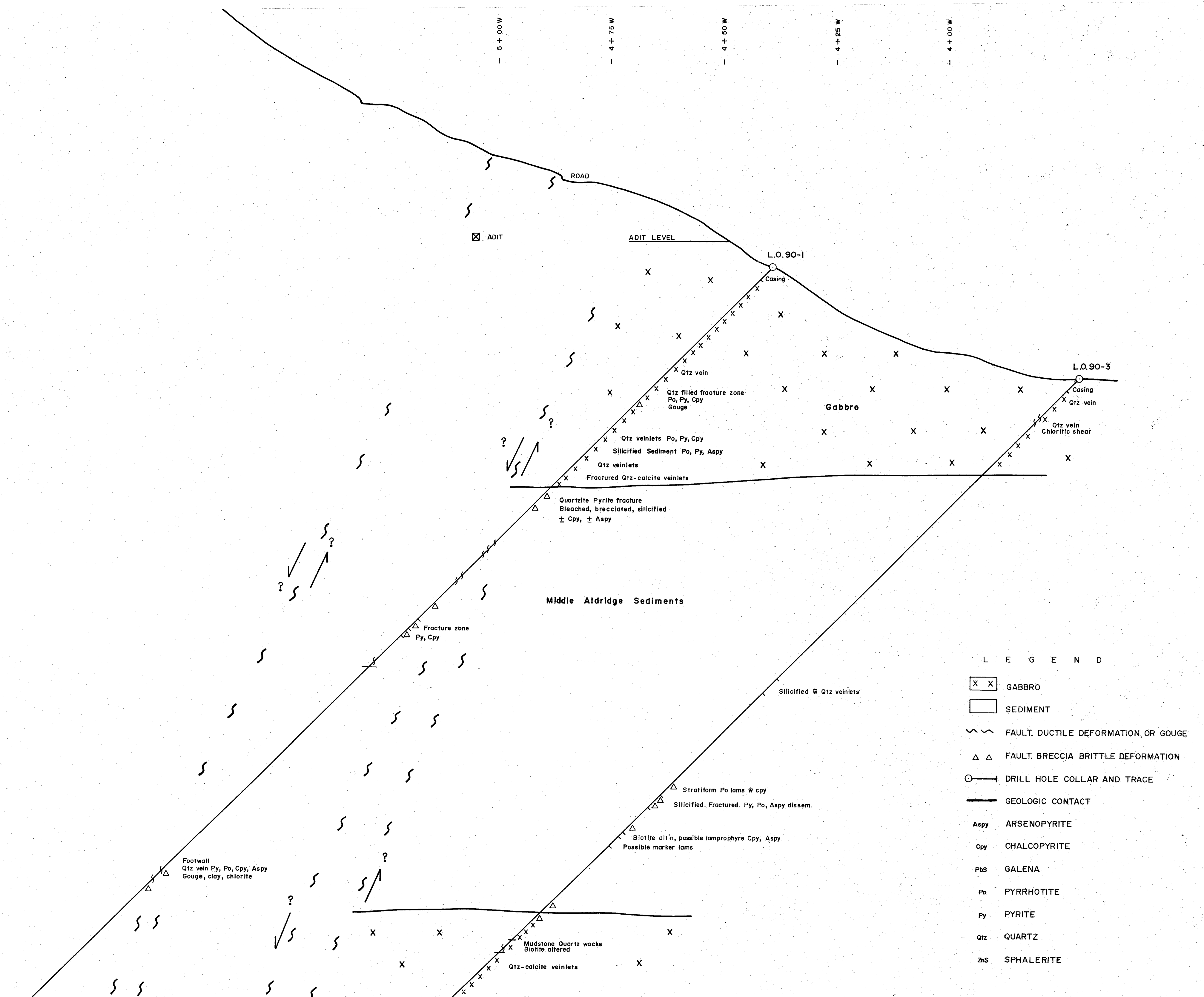
FIG. A

X X X

X X

X X

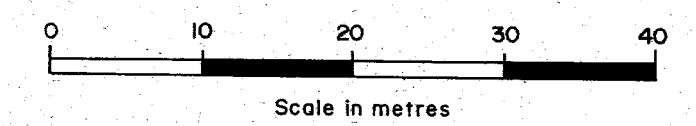




- L E G E N D
- X X GABBRO
  - SEDIMENT
  - ~ ~ FAULT, DUCTILE DEFORMATION OR GOUGE
  - △ △ FAULT, BRECCIA BRITTLE DEFORMATION
  - — DRILL HOLE COLLAR AND TRACE
  - GEOLOGIC CONTACT
  - Aspy ARSENOPYRITE
  - Cpy CHALCOPYRITE
  - PbS GALENA
  - Po PYRRHOTITE
  - Py PYRITE
  - Qtz QUARTZ
  - ZnS SPHALERITE

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,065



WHITE KNIGHT RESOURCES LTD.

LOOKOUT PROPERTY

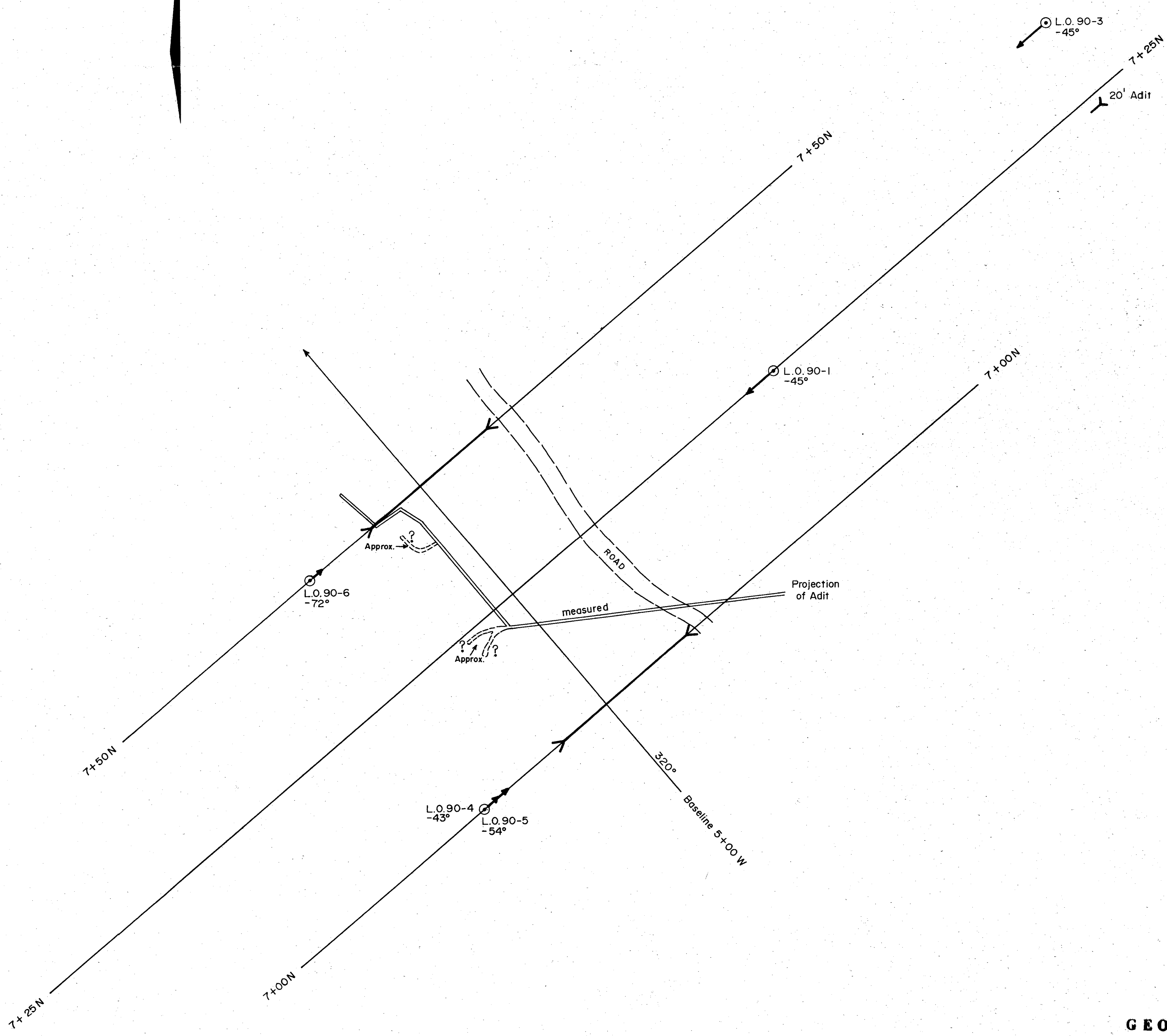
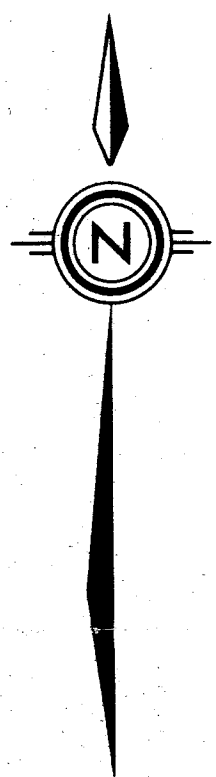
LOOKOUT VEIN

SECTION 7 + 25N

LOOKING N.W.

DATE: May, 1990 REVISIONS:  
DRAWN BY: J.M. McDonald / LGC  
SCALE: 1 : 500

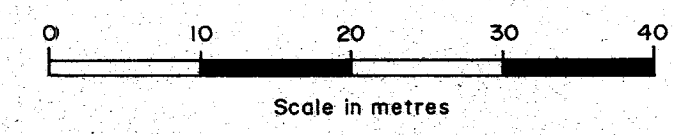
FIG. B



- LEGEND
- ⊙ → DRILL HOLE COLLAR & TRACE
  - > TRENCH

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

20,065

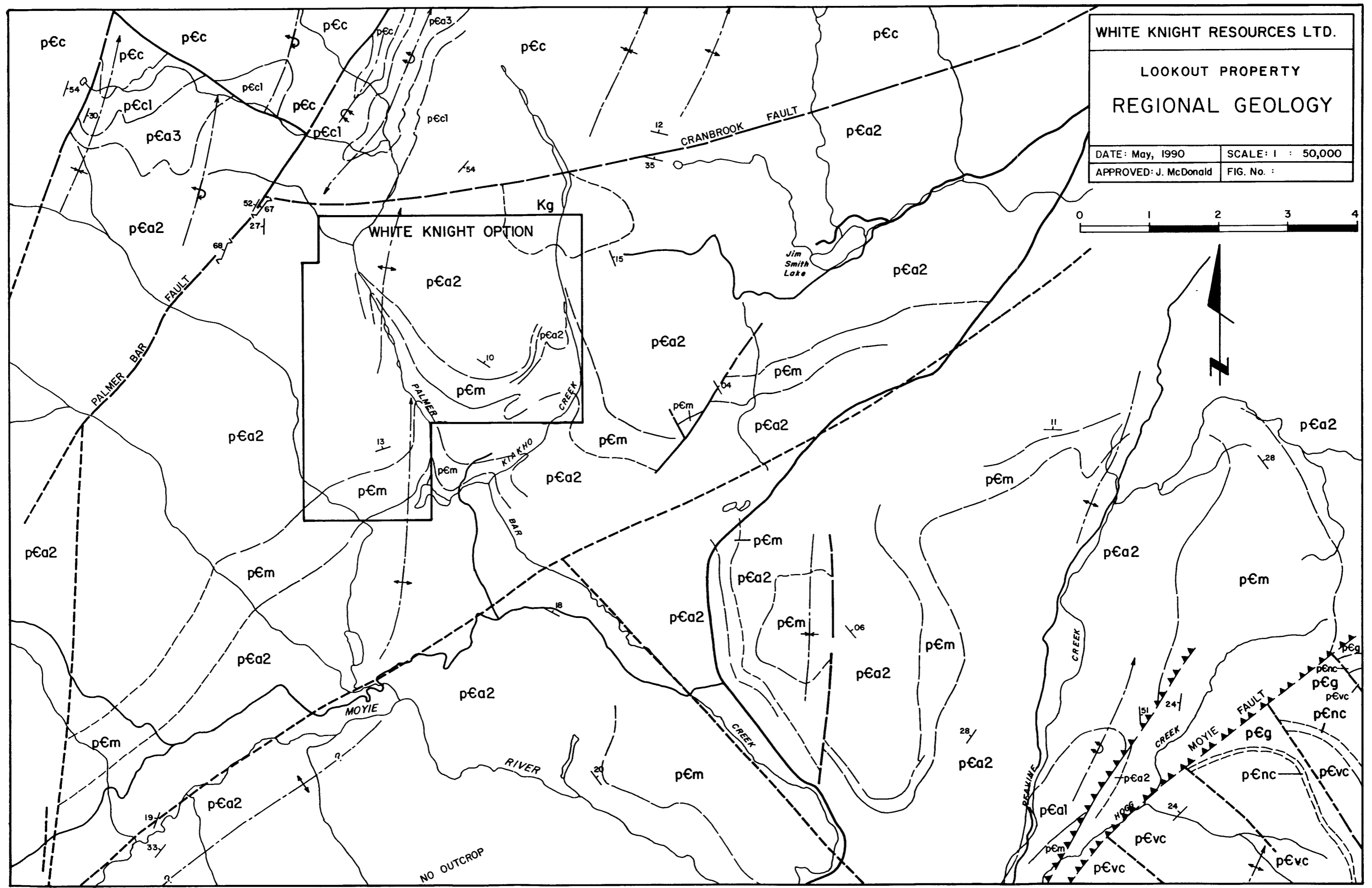
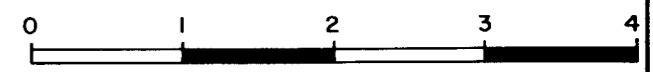


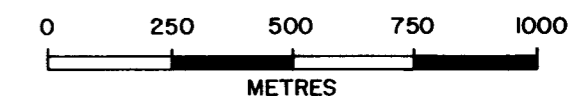
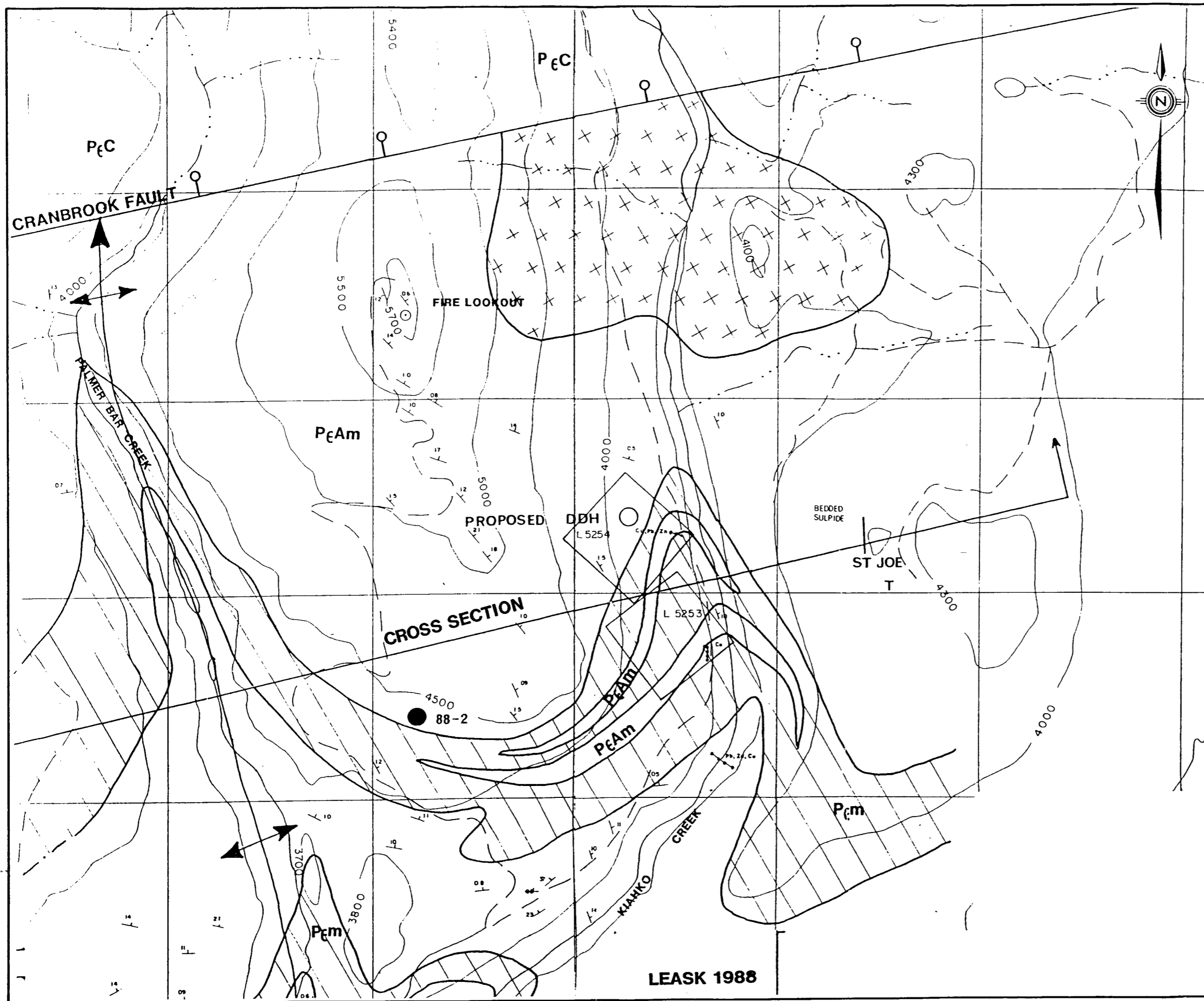
WHITE KNIGHT RESOURCES LTD.	
LOOKOUT PROPERTY	
PLAN MAP, HAMILTON VEIN	
DRILL HOLES & TRENCHES	
DATE: May, 1990	REVISED:
DRAWN BY: J.M. McDonald / LGC	
SCALE: 1 : 500	FIG. C

WHITE KNIGHT RESOURCES LTD.

LOOKOUT PROPERTY  
REGIONAL GEOLOGY

DATE: May, 1990      SCALE: 1 : 50,000  
APPROVED: J. McDonald      FIG. No. :





WHITE KNIGHT RESOURCES LTD.	
LOOKOUT PROPERTY	
PROPERTY GEOLOGY	
DATE: May, 1990	SCALE: 1 : 15,000
APPROVED: J. McDonald	FIG. No. :

LEASK 1988