

Event 4046134

**ROAD ACCESS WORK AND DIAMOND DRILLING ON THE  
PAKK PROPERTY**

FORT STEELE MINING DIVISION

PAKK CLAIMS

UTM'S 551775 5489515

BCGS MAP 082F059

**Claim Owners: Super Group Holdings Ltd. and Klondike Gold Corp.**

**Operator: Klondike Gold Corp.  
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**Report by:**

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# **Road Access Work and Diamond Drilling on the Pakk Property**

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## Road Access Work and Diamond Drilling on the Pakk Property

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### 1.0 Introduction

The Pakk exploration work in 2004 involved creation of access then mobilization of a diamond drill to a site central to the property. The Pakk property is a large block of claims centered about 30 kilometres southwest of the Sullivan Mine. Access is by the St. Mary Lake road or the River road, then up Hellroaring Creek logging roads to 11 kilometres at which point a branch logging road up Jack creek leads to the mining exploration road constructed during 2004. This is an area of significant relief ranging from 1200 to 2400 metres ASL. Logging has been completed in the lower to mid ranges of Jack Creek but the higher parts of the property are sub-alpine to alpine terrain.

### 2.0 Property Definition, History and Background Information

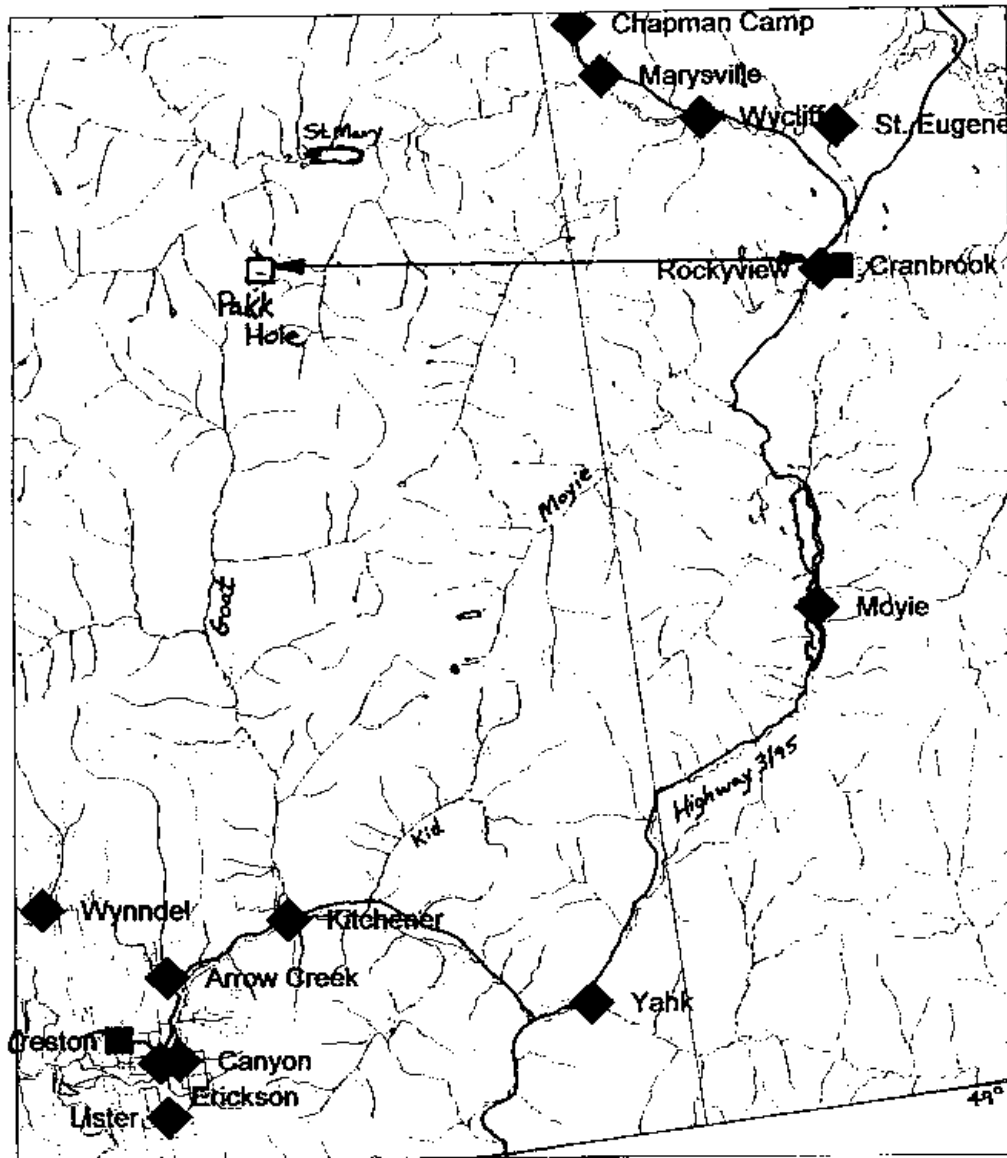
#### 2.10 Property Definition

The Pakk property is a group of 184 units located between Meachen and Hellroaring Creeks. Located on BCGS map 082F059 the claims most immediate to the drilling are:

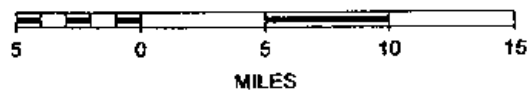
Tenure #	Anniversary Date	Area Ha
514716	June 1, 2006	733.245
515473	“	20.956
515141	“	41.911
515477	“	20.958
515475	“	20.96
515474	“	20.962
515131	“	41.93
515124	“	314.399
507066	“	628.807

#### 2.20 History of Exploration

Exploration in the Pakk claim area is focused in two eras. Early exploration focused on the copper mineralization associated with the Moyie intrusions



SCALE 1 : 500,000



**PAKK PROPERTY**

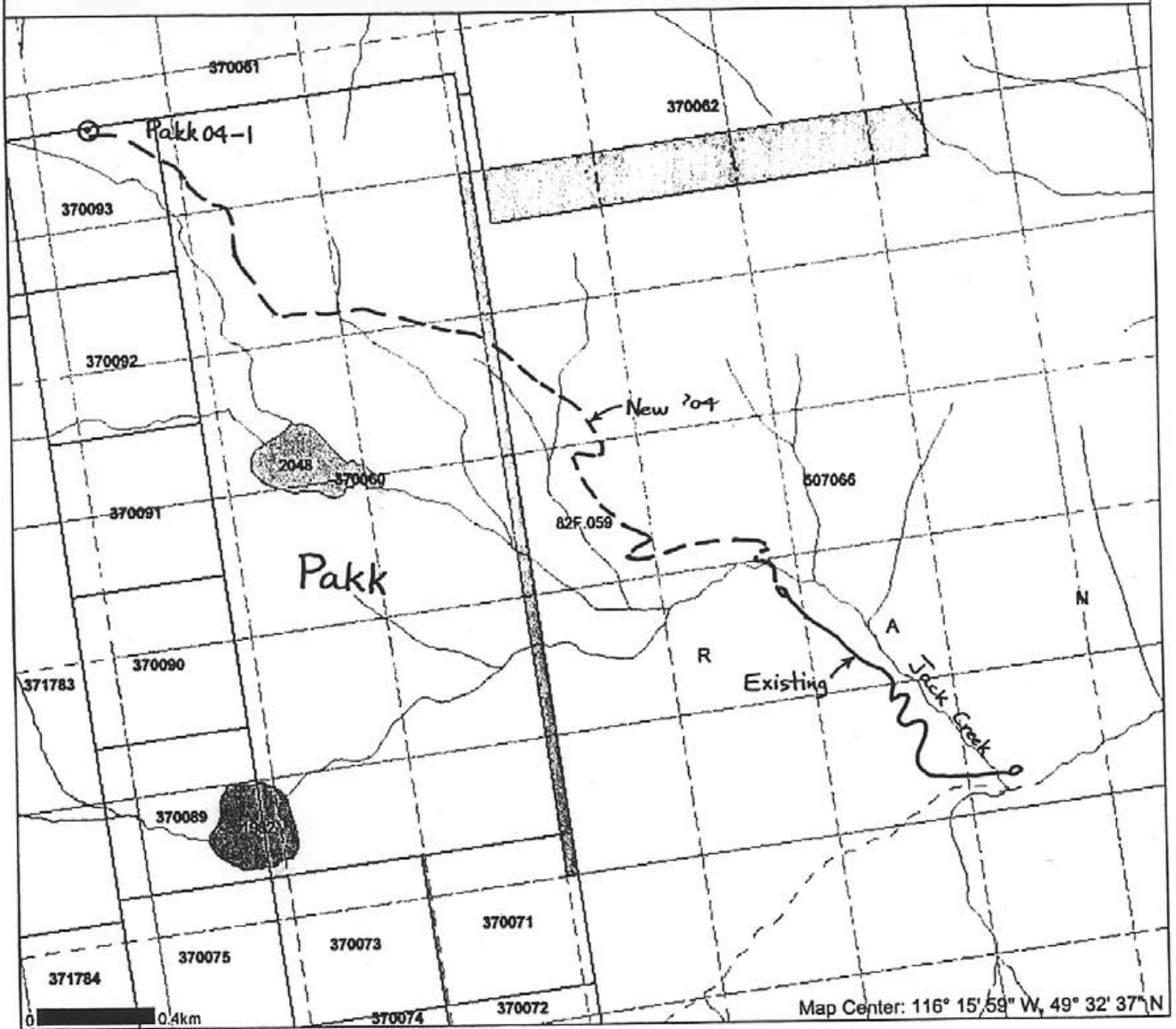
**LOCATION MAP**

BCGS: 082F059

SCALE: 1:500000

FIGURE: 1

Map created Fri Jun 17 14:41:15 PDT 2005



## PAKK PROPERTY

### CLAIM MAP – Road Access and Drill Hole Location

BCGS: 082F059

SCALE: 1:20000

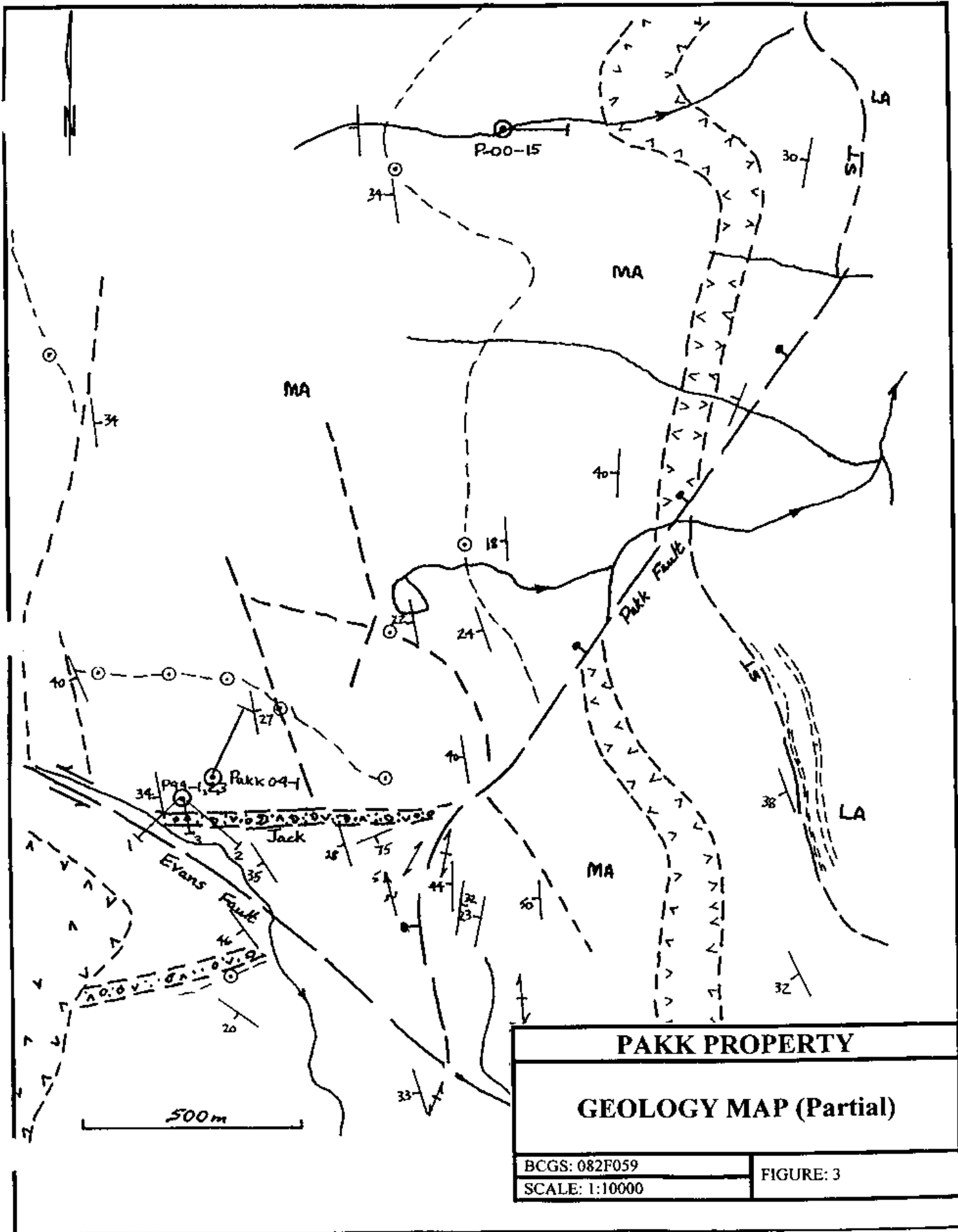
FIGURE: 2

on the west side of what is now the Pakk property. Known mineralization occurred in at least three separate areas – chalcopyrite and pyrrhotite in quartz or quartz-calcite veins all within or bounding Moyie gabbro intrusions. There was excavation work on several sites with adits but none proved of any size based on the work done. Long lapses in exploration was followed in the eighties by Cominco Ltd. work in this part of the St. Mary block. Initially work focused to the north of Pakk where the Lower to Middle Aldridge Contact was established and some Sullivan Indicators were found including a large fragmental body and lead-zinc in the soil. This work was complemented by a UTEM survey and two drill holes on the flanks of the St. Mary valley. Subsequent to this work Minnova explored the south side of the Cominco ground with Pulse EM, soil geochem and drilling of two holes intersecting the Lower Middle Aldridge contact but without sufficient interest created to continue. In 1994/95 Cominco Ltd. shifted exploration further south into the south flowing drainage of Jack creek. This work entailed mapping, soil geochem, and UTEM geophysics. A single hole was drilled in the upper reaches of Sinclair Creek in 1995. In 1999, Super Group Holdings became interested in the area because of the presence of Sullivan Horizon and much improved access. Prospecting led to the discovery of mineralized float of tourmalinized fragmental in the Jack Creek drainage. Subsequent mapping and prospecting established the source of the float higher in the drainage and three short holes were drilled on the gabbro-fragmental dyke complex. Drilling also tested Sullivan Horizon further south in the area of soil geochem anomalies. This deeper hole drilling was negative. More mapping established the presence of significant synsedimentary faulting and deepening of the Cominco hole intersected laminated Sullivan Horizon rocks and footwall fragmental in 2001. In late 2003 Klondike Gold optioned the property leading to the work described in this report.

### **3.00 Regional Geology**

The St. Mary area is central to the Purcell Anticlinorium, a broad generally north-plunging structure in southeastern B.C. that is cored by Middle Proterozoic Purcell Supergroup rocks and flanked by Late Proterozoic Windermere Group or Paleozoic sedimentary rock.

The Purcell Supergroup comprises an early synrift succession, the Aldridge Formation, and an overlying generally shallow water post-rift or rift fill



sequence which includes the Creston and Kitchener Formations and younger Purcell rocks.

The Aldridge is the oldest formation of the Proterozoic Belt-Purcell Supergroup. The Supergroup is a thick sequence of terrigenous clastic, carbonate, and minor volcanic rocks of Middle Proterozoic age. The basal Aldridge Formation, as exposed in Canada, is siliciclastic turbidites about 4000 meters thick. It is informally divided into the Lower, Middle, and Upper members. To the north and east in the basin, the Lower Aldridge, the base of which is not exposed, is about 1500 meters of rusty weathering (due to pyrrhotite), thin to medium bedded argillite, wacke and quartzitic wacke generally interpreted as distal turbidites. The Sullivan orebody occurs at the top of this division. To the south and west in the basin in Canada, the upper part of the Lower Aldridge is dominated by grey weathering, medium to thick bedded quartz wackes considered to be proximal turbidites. The Lower Aldridge is commonly host to a proliferation of Moyie intrusions, principally as sills. The Middle Aldridge is about 2500 meters of grey to rusty weathering, dominantly medium bedded quartzitic wacke turbidites with periodic inter-turbidite intervals of thin bedded, rusty weathering argillites some of which form finely laminated marker beds (time stratigraphic units correlated over great distances within the Aldridge/Prichard basin). There are several Moyie intrusions as sills within the Middle Aldridge including two of the most consistent, laterally extensive sills. The Upper Aldridge is about 300 meters of thin bedded to laminated, rusty weathering, dark argillite and grey siltite often in couplet-style beds.

#### **4.00 Property Geology and Summary of Work Done**

The Pakk property covers dominantly Middle Aldridge division sedimentary rocks with included Moyie sills and dykes. The east side of the claims do cover some Lower Aldridge rocks and Sullivan Horizon in outcrop or subcrop. The package of Lower Aldridge – Sullivan Horizon – Middle Aldridge is generally west-dipping with the combination of rising topography and dip meaning Sullivan Horizon gets progressively deeper to the west. Middle Aldridge markers have been extensively mapped in this block providing good stratigraphic control on the property.

Structurally the Pakk is more complex than initially appeared to be the case. Located in the hangingwall to the regional St. Mary fault, the Lower Aldridge through Middle Aldridge sediments and intrusives are displaced



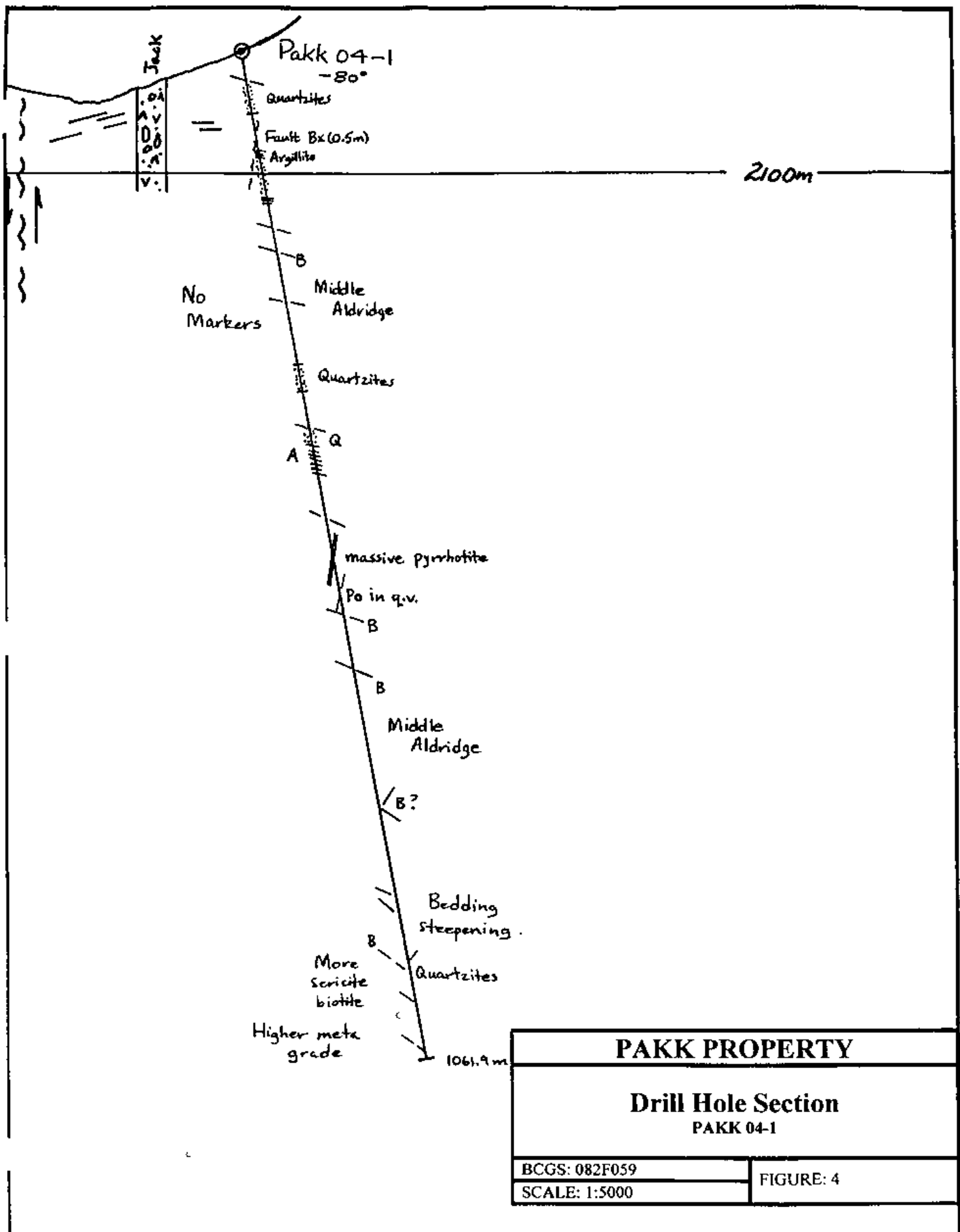
along east-west, northwest, and northeast trending faults which have translational movements up to about one kilometer. The down-dip component appears to be several hundreds of metres. The northeast-striking Pakk fault has been established as a syndepositionally active structure which influenced sedimentation within this active sub-basin at about Sullivan Time and later. The entire package is also folded on various scales with dominant north-south fold axes.

Details regarding the property which have and will continue to focus exploration efforts include Sullivan Time in surface outcrops and to increasing depths to the west. The character of Sullivan Time changes dramatically across the Pakk fault from a simple interface of Lower Aldridge to Middle Aldridge sediments to a thick fragmental footwall capped by about 15 metres of laminated subwacke characteristic of a Sullivan sub-basin facies. The second feature of interest (on a mineral potential basis) is a gabbro dyke complex at least one kilometer long which is located within the Middle Aldridge an estimated 3300 feet above Sullivan Horizon. This dyke incorporates gabbro patches and remnants as well as sediment fragmental, alteration such as tourmalinite, and sulphides. Interpretation of this feature suggests it is a gabbro dyke with xenoliths of Sullivan Indicators. The most likely source for the sulphides, fragmental and tourmalinite is Sullivan Horizon.

In 2004 a single drill hole was drilled to a depth of 1061.9 metres before being closed down by weather conditions. This hole was possible after creation of 3.4 kilometres of access road up the Jack Creek drainage.

## **5.0 Road Access Construction**

A contract was awarded to Apex Geoscience Consultants of Nelson as the licenced geotech to do the road layout. The creation and routing of a road was difficult but necessary due to drill rig size, the cost of helicopter-supported drilling and the fact the drill hole was deep and would take some time to finish. The road was started from a drill road established in 2001 in the drainage of Jack creek. It forded the creek and climbed steadily with five switchbacks from about 1700 metres ASL to 2200 metres ASL. A total length of about 3.4 kilometres the road was a challenge and quite expensive to build taking about three weeks.



## 6.00 Drilling Results

Upon completion of the road, a diamond drill rig of Britton Brothers Drilling was dragged up the road and installed at a site in the absolute headwaters of Jack Creek. The target was Sullivan Horizon at a projected depth of about 3200 feet. The hole was collared at -80 degrees on an azimuth of 025 degrees. The target depth was estimated from surface marker locations and included one gabbro sill. The hole was collared in middle Middle Aldridge sediments and cored them to the total depth of 1061.9 metres. The hole was not completed to Sullivan Horizon because weather and ground conditions forced us to evacuate the drill before too much snow accumulated. The hole inexplicably did not intersect two of the major markers expected in this part of the stratigraphy. In addition, a gabbro sill known to occur farther to the north was not cored.

## 7.00 Summary and Conclusions

The drill hole did not reach the targeted Sullivan Horizon. Some expected markers were not cored and this can only be attributed to more rapid deposition in this part of the sub-basin where thickening of the basal Middle Aldridge is known to occur. At 1061.9m now, it is anticipated the hole will need to reach 1300 metres when drilling resumes in 2005. This is an estimate only because of the lack of marker control and because an expected gabbro sill has not been intersected.

## 8.00 Itemized Cost Statement

Diamond Drilling Cost – Britton Bros.	104072.39
Pighins Welding – cats for moving	5064.32
Anderson Minsearch Geological Consulting	1788.50
Mallard Logging – heavy equipment hauling	1282.64
Wayne Jackaman – geological/geochem	253.33
Mallard Logging – road building with backhoe	30599.70
High Grade Geological Consulting	5463.70
Trygve Hoy management	336.90
Klondike Gold misc. office overheads	<u>17416.06</u>
Total	= \$166277.54

### 9.00 Author's Qualifications

I, Douglas Anderson, Consulting Geological Engineer, have my office at 3205 6<sup>th</sup>. St. South in Cranbrook, B.C., V1C 6K1.

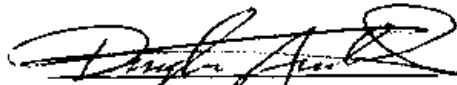
I graduated from the University of British Columbia in 1969 with a Bachelor of Applied Science in Geological Engineering.

I have practiced my profession since 1969, predominantly with one large mining company, in a number of capacities all over Western Canada and currently within southeastern B.C. as a mineral exploration consultant.

I am a Registered Professional Engineer and member of the Association of Professional Engineers and Geoscientists of B.C., and I am authorized to use their seal which has been affixed to this report.

I am also a Fellow of the Geological Association of Canada.

Dated this 11<sup>th</sup> day of June, 2005



Douglas Anderson, P.Eng., B.A.Sc.,  
FGAC  
Consulting Geological Engineer

## DRILL HOLE RECORD

**PAKK PROPERTY – 2005**

**DDH. PAKK -04-1**

Location: On the Pakk 35 claim in the upper headwaters of Jack Creek about kilometers southwest of the Sullivan Mine.

Total Length: 1061.9 metres.

Commenced: Sept. 26/04

Drill Contractor: Britton Bros. Drilling

Core size: NQ Casing: 6m

UTM's 551775 5489515

Elevation: 2225m

Collar dip: -80° to 025°

Logged by: DA/DLP

Objective: To test Sullivan Time

From - To

- |        |        |  |
|--------|--------|--|
| 6      | 63m    | Middle Aldridge – thin to medium bedded quartzitic wacke dominate alternating with thin bedded wackes. No thick QW. Argillaceous quartzites. Q:A=75:25 Gets darker and more argillaceous towards base. Bedding at 65 to ca. By 20m at 80° to ca. Planar to disrupted beds. Concretions within the quartzites with biotite, quartz, garnet and calcite. Few scattered qv. |
| 63     | 103.1  | Dominated by variably colored/altered quartzitic wackes. Thin bedded wackes are less common/obvious and altered. Bedding less obvious – at 80°; locally down to 35 and 75-76.5m. 77.2m narrow shatter zone (fractured); 88.9 – 89.3m fault breccia at 5° to ca. Greenish due to chlorite.  |
| 103.1  | 108.75 | Dominated by thin bedded wackes with subordinate, medium bedded quartzitic wacke. Q:A=30:70 Bedding at 77 to 80° to ca. Ground is fractured.   |
| 108.75 | 150.1  | Reverts to quartzitic wacke dominated section with a few thin bedded wackes. Thin beds not distinct within the turbidites. Bedding at 70 to ca. Greenish chloritization. Mottling of quartz wackes where fractured. Fine biotite ubiquitous. Around 145 – 146.5 pale greenish sericitic alteration. Occasional narrow quartz vein.                                       |

- 150.1 154.0 Argillaceous inter-turbidite of darker wacke/subwacke. Some lesser QcW – grey sands of irregular pattern within the brown mud. Bedding at 65 to 70. Biotite.
- 154 252.7 Middle Aldridge = typical alternating AE or ACE grey QW to QcW turbidites with short I/T intervals of wacke to subwacke. Quartzites are medium to bordering on thick but not excessive thicknesses. Planar to disrupted wackes. Bedding at 75° to ca. Very fine biotite in wackes. Concretions continue. A few scattered qv at low angles to ca. 213.8-214.5m qv; qv with sideritic dolomite and greenish sericitic alteration 238.5 – 240m.
- 252.7 315.0 Quartzitic wacke with interbedded wacke to 307.3m; then more quartzitic with some quartz wacke to 296m; reverts to QcW with wackes to 300m; then more quartz wackes again with less QcW/W to 312m; then interbedded again to 315m. Thin beds to start with wavy to distorted beds with flames, SSd, and rip-ups. Wackes are totally altered to fine sericite and biotite. Thick quartzites with bedding at 70° with silicified, sericitic, and biotitic. Rare subhedral pink garnets. At 292.m a 3cm vein with quartz, calcite, pyrrhotite. Bedding at 312m at 70° to ca.
- 315 354m To 319.8m mainly quartz wacke with wackes as turbidite tops. Thick to very thick bedded. Fine to medium grained with some graded beds. Beds planar. Tourmaline needles weakly disseminated throughout 327 to 330m; some in qv also. 319.8 to 324m is thin to medium bedded QcW/brown subwackes, mostly as tops to turbidites. Then 324 to 354m typically thick to very thick bedded QW with occasional breaks to brown subwacke inter-turbidite. Bedding at 70° to ca. Only weakly disseminated pyrrhotite as usual.
- 354 384.7m Medium bedded QcW units and wackes, more homogenized package than is normal. Bedding at 75° to ca. Two narrow qv at 355.2m with pyrite, trace sphalerite. At 363m more quartz wacke – medium to

thick beds except for 378.1 – 380.3m which is more thin bedded and argillaceous. Fractured 364 – 365.5m only. Fine biotite in wackes. Pyrrhotite along bases to some beds.

- 384.7 416.7m More argillaceous section to 401.5m with thin to weakly laminated wackes – predominantly an inter-turbidite zone with some thin to m.b. QcW. Then to 411.7m a quartz wacke section followed by argillaceous units again to 416.7m. Biotite in the argillaceous rocks. Bedding at 70° to ca. With the laminated sediments some narrow pyrrhotite seams. QV at 401.2m with po at 15° to ca.
- 416.7 478.5m Middle Aldridge continues – dominated by quartz wackes to 436.3m with thick amalgamated beds then thin to medium bedded QcW and wackes to 441.8m reverting to QW/QcW with medium to thick beds to 478.5m. Bedding at 73 then 68 then by 448.6m at 35° to ca. By 451.5 back to 60°. Alteration not unusual. No structure of note. Towards base, more disseminated po in some quartzites. QV at 449.8 to 450.5m with biotite clots, pyrite on fractures.
- 478.5 508.6m Somewhat different interval – more homogeneous, brown QcW section with poor bedding representation. A mixing of lithologies. Some separable thick bedded QcW. Bedding at 58. Biotite only.
- 508.6 671.0m Typical Middle Aldridge with medium to thick bedded QcW to QW dominant with intervening 561.9 to 570.5m of argillaceous sediments with brown, thin bedded to laminated character. Q:A= 70:30. Good bedding clarity at 85 to ca dropping to 55 to 60° with depth. Planar to disrupted beds. Biotite chief alteration. 525.25-528.3m some qv at 10-15° with massive, magnetic pyrrhotite/minor chalcopyrite; some internal brecciation within massive sulfide patches. 573-573.55m qv at 15° with some massive py and minor Cp. 611-614 more po with a few lams and patches. 617-618.5m elevated po in

argillaceous rocks. 639-640m po lams and disseminations. 650.9 – 651.5m qv with biotite and sericite intense along margins. 660m 15cm thick qv with coarse biotite.

- 671 822m Again a Middle Aldridge section not to different from above – quartzitic wacke dominated interval then more interbeds of wacke/subwacke 675- 679.3m then reverts to QcW interval again to 822m. So quartzitic intervals are thick to very thick bedded with the intervening more argillaceous interval medium to very thin bedded. Bedding starts out at 55° then lessens to 35 to 45° by 760 metres. Silicification of quartzites with biotite and sericite alteration of the wackes. 657m 2 cm qv with minor po; then lower pyrrhotite with rare sphalerite in widely scattered, bedding parallel qv with chlorite and calcite. At 764.5m qv with po and tourmaline needles. At 779m 10cm thick qv with pyrite and biotite cut core at 60°.
- 822 947.4m Alternating packages of thin to very thin bedded wackes and subwackes 822 – 830.4m and 865.2 – 874m and 941 – 947.4m with thick to very thick bedded quartz wacke to quartzitic wacke zones. Bedding at 830m is 36° to ca. At 872m at 32; by 892m at 60°; 919m at 45 to ca; at 942m at 20° to ca. Bedding planar to disrupted with some soft sediment deformation and rip-up clasts. Interval 874 to 941m is fractured. Wackes are biotite and sericite altered. Most qv are scattered through between 822 to 830.4m – bedding parallel qv, 1 to 2cm thick with occasional patch of pyrrhotite. At 875.5m quartz-chlorite vein 5 cm thick cuts core at 32° with minor po.
- 947.4 1022.4m Two intervals of typical MA quartzitic wacke to quartz wacke, medium to very thick bedded with much less wacke/subwacke with intervening thin bedded wacke dominated zone from 1005.3 to 1008m. Bedding is at 36 to 40 degrees to 1005.3m. Wackes throughout are altered



to biotite and or sericite. Quartzites contain concretions with biotite, quartz, albite, calcite and pink garnet.

Towards base scattered blebs of po then 2cm thick band of po at 1015m. Bedding at 1020m at 38° to ca.

1022.4 1029.3 Mainly quartzitic wacke then 1026-1029.3m is thin to very thin bedded subwacke with wavy, ball and pillow structures. Thick quartzites are silicified appearing while subwackes are recrystallized to muscovite.

1029.3 1061.9m Quartzitic wacke with minor thin bedded wackes. Units are AE turbidites of the Middle Aldridge. Bedding is at 37° to ca at 1044.5 and 1061m. Wackes are altered to muscovite but with some quartz grains preserved. 1040.5 to 1044.5m late yellowish muscovite alteration of parts of QcW. At 1039.2m a 3 cm band of po is bedding parallel. Thin, wispy po band near 1060m.

End of Hole.