

BC Geological Survey  
Assessment Report  
30087

**GEOLOGICAL REPORT ON THE JCD PROPERTY**

Mineral Claims – 556572, 557379, 570461

Fort Steele Mining Division

Trim Maps 082G011 and 021

UTM Centre 5447500N 574000E

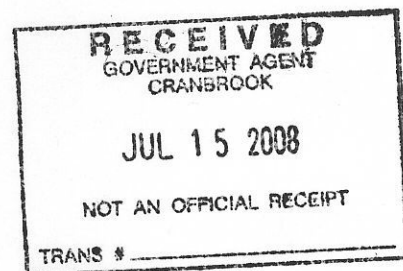
**Owner – Klondike Gold Corp.**  
711 – 675 West Hastings Street  
Vancouver, B.C.  
V6B 1N2

Operator – Same as above

**Consultant – Anderson Minsearch Consultants**  
3205 6<sup>th</sup>. St. South  
Cranbrook, B.C.  
V1C 6K1

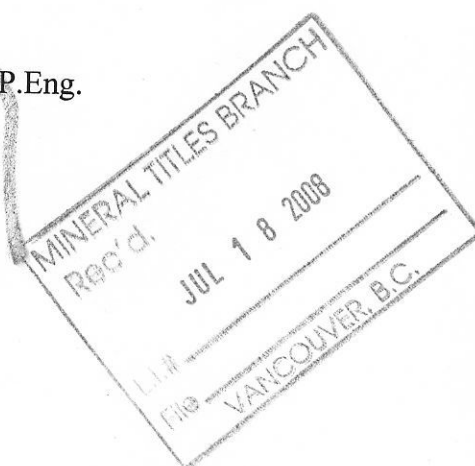
Author – Douglas Anderson, P.Eng.

Submitted – July, 2008



GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

30,087



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## **GEOLOGICAL REPORT ON THE JCD PROPERTY**

### **1.0 Introduction**

The JCD property consists of 3 claims totalling 1077.04 hectares located within the Moyie river valley about 40 air-kilometres south of Cranbrook, B.C. Centered on UTM's 5447500N and 574000E the claims include tenure numbers 556572, 557379, and 570461.

Access is gained from several directions. From the north the claims are accessed via Highway 3/95 to the south end of Moyie Lakes then up the Sundown Creek logging road to the Stone Creek turnoff then by taking several poor condition sideroads. Access can also be gained by traveling south on Highway 3/95 then crossing the Moyie road on foot, east from the Highway. Access from the south entails going to Yahk then heading east on the Hawkins Creek logging road to secondary road Mt. Mahon and proceeding about 13 kilometres north on it. The property mostly occupies a burned area due to a forest fire in 2004, thusly there was fire access trails created to fight the fire. These are undriveable at present but facilitate access by foot. Logging is present in the area with Lodgepole pine, spruce and fir being the dominant species in an area of moderate relief ranging from 900 to 1600 metres.


### **2.0 Property Definition, History, and Background Information**

The JCD property covers an area with a very short exploration history. It has been and is staked as a lead-zinc-silver prospect with the target being a Sullivan sedex-type deposit. The area was examined on a reconnaissance basis by Cominco as part of its regional exploration search. Therefore a few geological traverses were made and base of slope contour soil geochemistry completed. The area was staked by Chapleau Resources in 1992/93 and some more detailed work was done. This included prospecting, preliminary geological mapping, and a soil geochem grid. Results of this work included locating a small fragmental zone (in part tourmalinized) with gossanous float and minor lead/zinc in some outcrops. The area of interest appeared to align itself along a northwest-trend where a fault was postulated. The soil geochem documented some anomalous zinc in soils on the north end of the property.

### **3.0 Geological Mapping**

The JCD property covers an area of Middle Aldridge sediments with included Moyie intrusions which regionally occurs within the Purcell Anticlinorium. The Moyie 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 area lies in the footwall to the Moyie Fault, a major, regional right-lateral reverse fault which is part of the Rocky Mountain fold and thrust belt event. The Moyie Fault follows earlier

# JCD Property Location Map

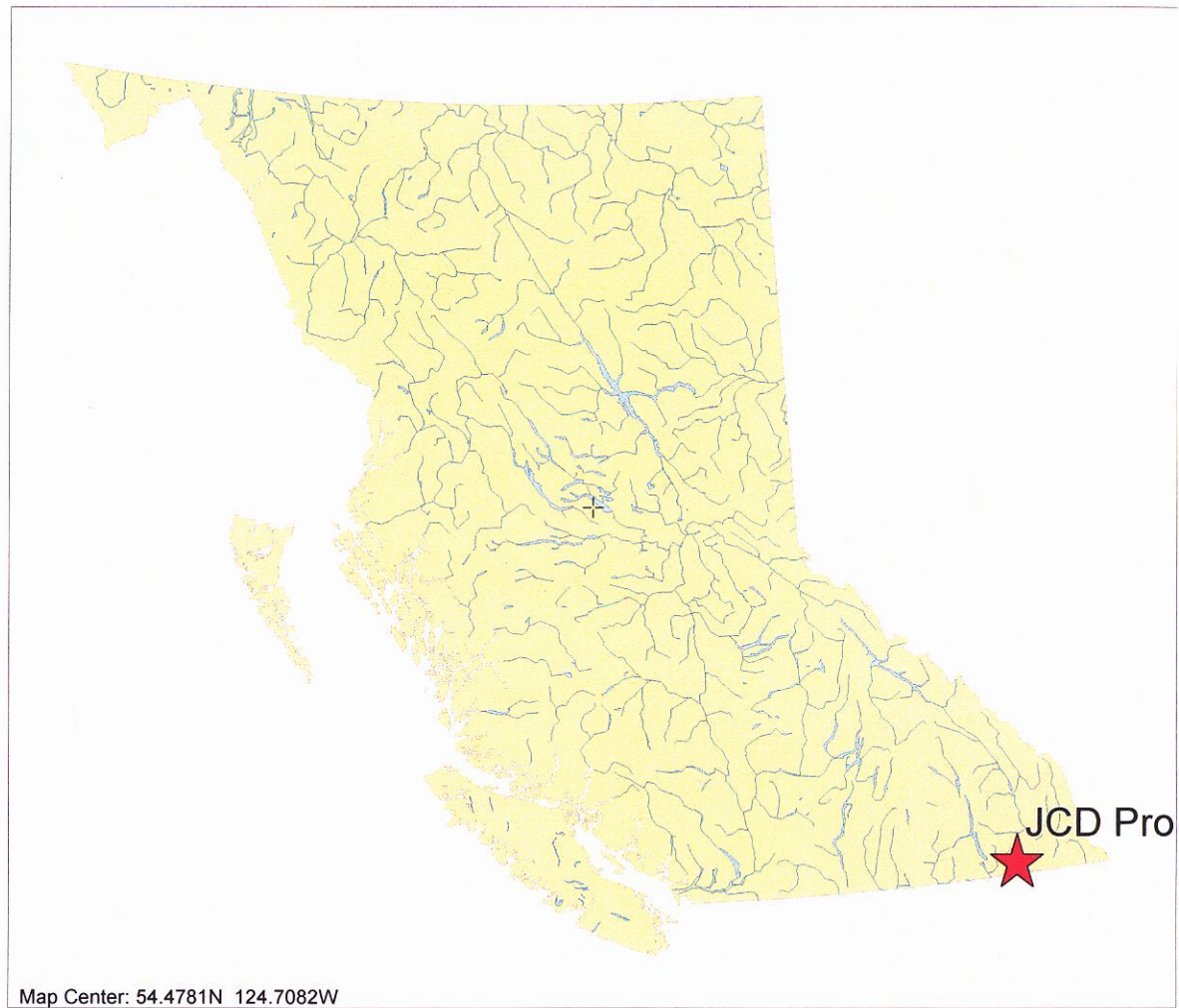
 JCD Property Location

Topographic Layers

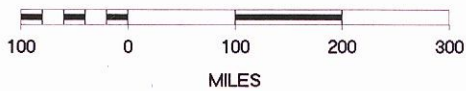
-  Lakes 1:6M
-  Rivers 1:6M

BC Border Layers

-  BC Border 1:6M



SCALE 1 : 11,432,728










# JCD Property Claim Map

## Mineral Titles Layers

-  JCD Property Tenure
-  All Mineral Tenures

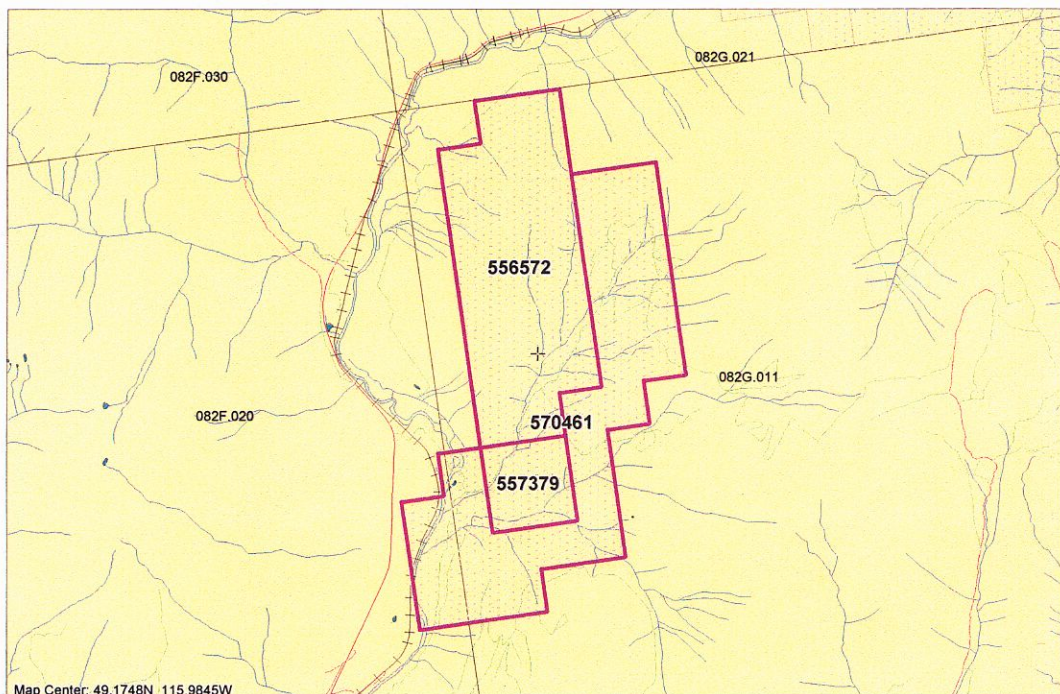
## Topographic Layers

-  Railways 1:20K
-  Roads 1:20K
  -  Gravel Road
  -  Paved Road
  -  Rough Road
-  Lakes 1:20K
-  Rivers 1:20K

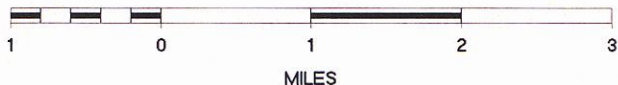
## Grid Layers

-  Grid 1:20K - labels
-  Grid 1:20K - outline

## BC Border Layers



SCALE 1 : 80,642



faults that have documented movements extending back to the Middle Proterozoic. These earlier structures controlled in part the distribution of the Middle Proterozoic through lower Paleozoic paleogeography.

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.

As stated, the JCD claims are underlain entirely by Middle Aldridge siliciclastic sediments of thin to medium (dominant) to thick bedded, argillites to wackes to quartzitic wackes to quartz wackes with bedforms reflective of Bouma-style turbidites. AE or ACE turbidites dominate the section. The sediments are all fine-grained with only the bases to some quartzites medium grained. Pyrrhotite is a common constituent as small grains within the bases of the beds which produces rusty weathering rocks in recently exposed areas. Older outcrops are a mixture of grey and rusty weathering sequences. On the property, stratigraphically older outcrops in the south are dominated by thick bedded quartzites which are recognized as part of the lower section of the Middle Aldridge. The existence of Middle Aldridge marker units was previously documented but additional stratigraphic control has been provided by new occurrences. These marker beds allow stratigraphic positioning within the Middle Aldridge and provide an estimate of the depth to the Lower to Middle Aldridge contact (ie Sullivan Time). Also common within the Aldridge Formation are Moyie intrusions primarily as crudely stratabound sills but also as dykes. These quartz diorite to gabbro bodies are found on the JCD property as sills of various thicknesses.

The sediments with included sills are broadly folded with the core of the JCD occupying an open, north-south oriented syncline. The topography on the property and the north-plunging syncline allow for older stratigraphy to be exposed to the south. The NNE trending Yahk fault projects through the core of the property and stratigraphic evidence supports the presence of the fault which has not been seen in outcrop yet. It is likely a normal fault with west side down an estimated 300 metres. The other significant structure is a northwest trending fault which is seen as a 60 metre-wide zone of silica and albite alteration with local chlorite breccia developed along it. Previous operators documented tourmalinite and fragmental along the strike of this structure but the location of these features has not been established by present mapping. Movement on the fault appears to be down on the north, with a left lateral component as well.

#### **4.0 Summary and Conclusions**

The JCD property is underlain entirely by Middle Aldridge sediments with included Moyie intrusions. It is established because of the presence of the marker beds that at surface the property lies about 600 to almost 1000 metres above Sullivan Time in the north and as little as 400 metres in the south. The Lower to Middle Aldridge contact is not recognized on the property. Two significant faults are recognized to date, the regional NNE Yahk fault and an intersecting NW oriented fault which has been the locus for abundant alteration across quite a wide zone.

The property requires additional mapping to further define the structural elements and locate any Sullivan Indicators which may be present. Prior operators completed a modest soil grid over the northern portion of the property, this needs to be expanded over lower stratigraphy to the south and east on the property.

#### **5.0 Itemized Cost Statement**

Anderson Minseach Consultants – Geological Mapping @ \$500/d	\$4655.00
Truck use 4x4 at \$75/d plus \$0.75/km	972.75
Report Preparation – 2 days at \$500/d	<u>1000.00</u>
Total Cost	\$5627.75

#### **6.0 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.

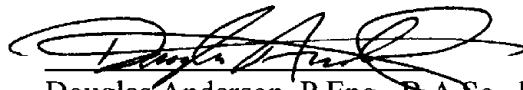
I graduated from the University of British Columbia in 1969 with a Bachelor of Applied Science in Geological Engineering.

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 11day of July, 2008

A handwritten signature in black ink, appearing to read "Douglas Anderson", written over a horizontal line.

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



**KLONDIKE GOLD CORP.**  
TSXV:KGC

**Geology of the  
JCD Property, Purcell Supergroup  
Southeastern BC**

Geology by D. Anderson, 2007

Scale: 1:50,000  
NAD 1983  
UTM ZONE 11



**LEGEND**

**Middle Proterozoic**

- Mylonite, siliceous gabbro
- Middle Allochthon - quartz monzonite, amphibolites
- Lower Middle Allochthon - medium to thick bedded
- Middle Allochthon marker unit
- bedding
- fault
- drill location



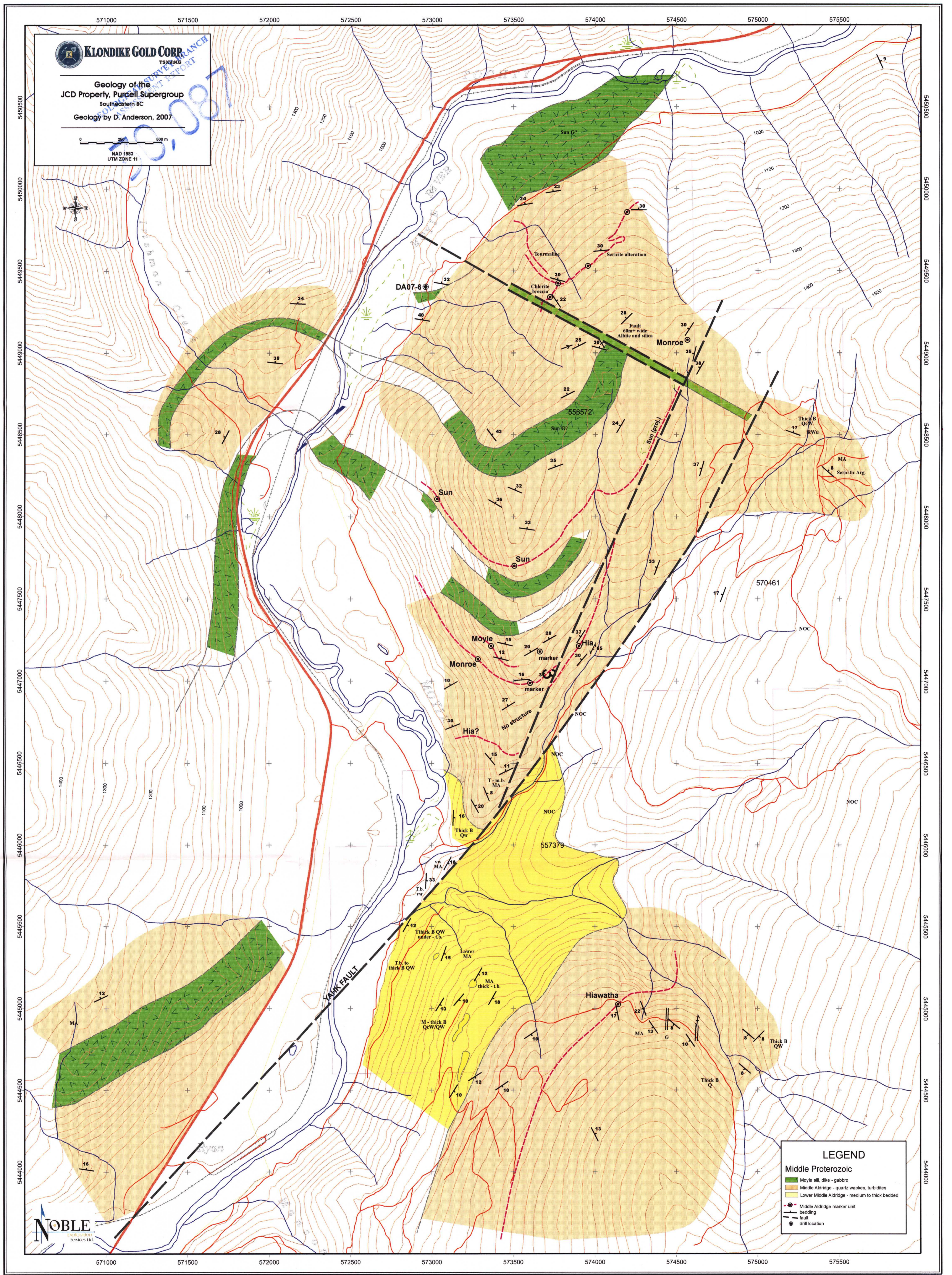
**KLONDIKE GOLD CORP.**  
TSX:KGC

**Geology of the JCD Property, Purcell Supergroup**  
Southeastern BC

Geology by D. Anderson, 2007

0 250 500 m

NAD 1983 UTM ZONE 11



**LEGEND**

**Middle Proterozoic**

- Moyle sill, dike - gabbro
- Middle Aldridge - quartz wackes, turbidites
- Lower Middle Aldridge - medium to thick bedded
- Middle Aldridge marker unit
- bedding
- fault
- drill location