SUMMARY REPORT on the WATSON BAR GOLD PROPERTY

Clinton Mining Division, British Columbia

Latitude 51° 03' North
Longitude 122° 03' West

Durfeld Geological Management Ltd.
P.O. Box 4438 Station Main
Williams Lake, B.C. V2G 2V5

by:
R.M.(Rudi) Durfeld, B.Sc., P.Geo.
March 2000.

Table of Contents

Table of Illustrations -

Summary

With the objective of identifying remaining targets for epithermal gold deposits on the Watson Bar property, a review and compilation of historical data including recent geological mapping by Peter Read, relogging of diamond drill core from Zone V and PIMA analyses of core samples from the various epithermally altered zones was carried out.

Compilation of P. Read's recent mapping, detailed mapping of the known surface alteration zones and earlier mapping identified two important faults that had not been previously recognized. The most important fault is the Base Line Fault which played a key role in localizing the 1.5 kilometre long area of silicification and argillic alteration known as Zones I and II.

Relogging of core from the high-grade gold mineralization in Zone V determined that the transition from sandstone dominated lithologies to carbonaceous argillite and siltstone lithologies is transitional and stratigraphic and not a thrust fault as previously believed. Gold vein mineralization occurs in shear and fault zones parallel to carbonaceous argillite units near the contact. The shear-fault zones appear to have little movement and are likely minor or conjugate faults related to the Baseline and Slok Creek faults.

PIMA analyses of core and surface samples from several of the known epithermal alteration zones show, with the exception of Zone V, that kaolinite is the dominant alteration mineral not sericite as previously identified. This suggests that zones I, II and IV are high level, low temperature parts of the epithermal system.

Two priority targets for gold deposits remain on the Watson Bar property: the untested down plunge extension of the high-grade Zone V mineralization, and a large tonnage, bonanza-type gold deposit at depth in Zone II where the high-grade gold mineralization of Zone V is projected to intersect Zone II. As the baseline fault is a dominant structure that provided a plumbing system for large volumes of hydrothermal fluids, it is the likely location for a large tonnage gold deposit.

Testing of the down plunge extension of Zone V will require fences of closely spaced drill holes. Because the mineralization dips into the hill, holes will be long and it may be cost effective to drive an adit to provide drill stations. Evaluation of Zone II for bonanza-type gold mineralization will require several angle holes placed to intersect Zone II where the plunge extension of Zone V is projected to intersect Zone II.

c:\projects\moep\1jplan1.dgn Mar. 24, 2000 16:04:36

1. Introduction

Since the discovery in 1988 of significant gold mineralization in Zone V, considerable exploration including 9,877 metres of diamond drilling, 7,000 metres of trenching and surface mapping has been completed on the Watson Bar property. Most of the work, particularly from 1992 to the present has focussed on three zones; Zone V, Zone I and Zone IV. Although this work was documented in earlier reports no comprehensive review and property scale compilation of the data was done. In the late summer and fall of 1999, a review of all of the historical data and the relogging of several key diamond drill holes was completed to gain a better understanding of the geological controls of the gold mineralization. The purpose of this work was to assess the remaining potential of the property and identify targets for further drilling. The findings of the review are discussed in this report.

1.1 Location, Access and Physiography

The Watson Bar property covers some 2775 hectares (6875 acres) in the Clinton Mining Division. The property is 33 kilometres due west of Clinton and 7 kilometres west of the Fraser River (Figure 1). The property lies south of Watson Bar Creek and is centred on Second Creek at 51° 3' north latitude and 122° 3' west longitude. (NTS Map 92 0/1E)

The property is readily accessible from the village of Lillooet via the all-weather West Pavilion / Slok Creek logging road which at 70 kilometres bisects the property. The West Pavilion and Second Creek logging roads in conjunction with secondary cat trails provide good access to much of the property.

The property is bisected by the broad and steep Watson Bar Creek Valley and the immature and narrow "V" shaped valleys of Second Creek and its tributaries. The elevation ranges from 400 metres in Watson Bar Creek to 1,600 metres at the summits in the south.

Vegetation is characterized by open forests of mature fir and pine, with undergrowth of grasses that are typical of the dry climate (mean annual precipitation of less than 30 centimetres) in this area. In the lower elevations toward Watson Bar Creek the trees give way to sage brush, tumbleweed and grasses. Locally, in areas of recent forest fires, the forest cover consists of closely spaced immature fir and pine.

1.2 Ownership

The Watson Bar Property is comprised of 7 contiguous modified grid mineral claims totalling 111 units, covering 2,775 hectares (6857 acres). The status of these claims is summarized Table 1 and plotted as Figure 2. The year of expiry reflects work that was applied for assessment credit on July 6 and September 8, 1999. The claims are recorded in the name of R.M. Durfeld.

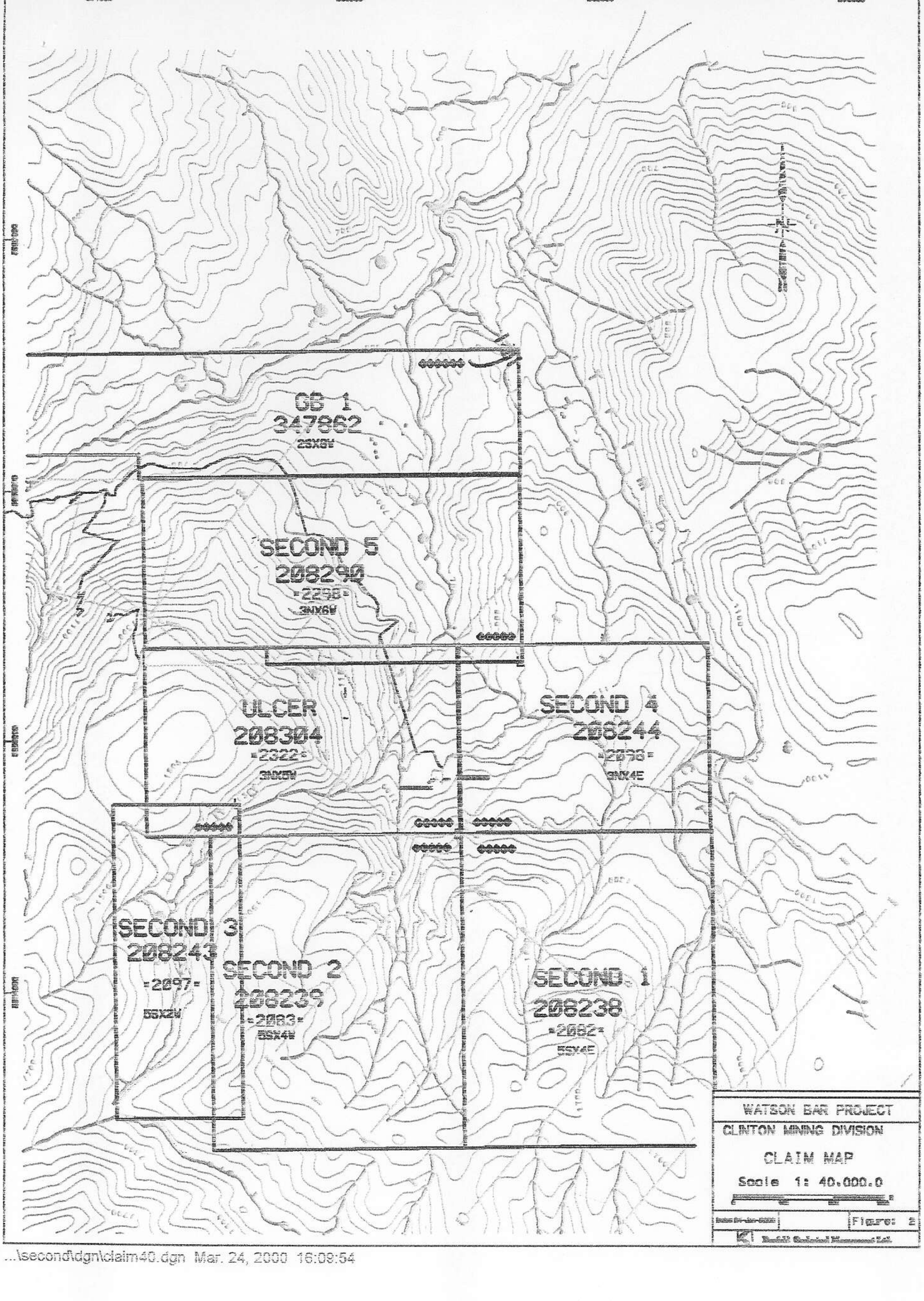
Tenure Number	Claim Name	Map Number	Work Recorded To	Mining Division	Units
208238	SECOND 1	092O01E	20010919	Clinton	20
208239	SECOND 2	092O01E	20010919	Clinton	20
208243	SECOND 3	092O01E	20001016	Clinton	10
208244	SECOND 4	092O01E	20001016	Clinton	12
208290	SECOND 5	092O01E	20050629	Clinton	18
208304	ULCER	092O01E	20050812	Clinton	15
347862	GB 1	092O01E	20010707	Clinton	16
				Total	**111**

1.3 History

The earliest work in the vicinity of the property was during the Fraser River Gold Rush when placer miners worked bars in the Fraser River. Subsequently, placer mining for gold occurred in Watson Bar Creek during the period 1860 to 1900. Adits and open cuts on the adjacent Mad claims date from this period.

Modern exploration of the property began in 1980 when E and B Exploration staked much of what is now the Watson Bar Property as the Carolyn 1 to 8 mineral claims to acquire several large alteration zones hosted by Jackass Mountain Group sedimentary rocks. E and B Exploration prospected the property and carried out contour soil and rock sampling. Dome Mines acquired the southern portion of what is now the Watson Bar Property in 1980 and subsequently prospected and soil sampled its claims.

E and B Exploration allowed their claims to lapse in 1986 and the Watson Bar Property was staked by Durfeld-McClintock in 1986 and 1987. Cyprus optioned the property in late 1987 and from 1987 to 1992 conducted soil and rock sampling, Induced Polarization surveying, trenching and diamond drilling. Cyprus terminated its option in 1992 and in 1996, Stirrup Creek Gold Ltd acquired an option on the Watson Bar Property. Stirrup Creek carried out further trenching and diamond drilling before terminating the option in mid 1999.



...\second\dgn\claim40.dgn Mar. 24, 2000 16:09:54

▸ 2. Geology

2.1 Regional Geology

The vicinity of the Watson Bar Property was mapped by H. W. Tipper (1978), Duffell and McTaggart (1952), Read (1987) and Hickson et al (1994). These workers show the area to be underlain by a Cretaceous to Tertiary sequence of sedimentary and volcanic rocks locally intruded by ~~Lower~~ Upper Cretaceous to ~~Upper~~ Lower Tertiary dykes and small stocks of granodiorite.

Cretaceous Age sedimentary and volcanic rocks are divisible into two main groups: the Early Cretaceous Age Jackass Mountain Group sedimentary rocks and the Middle Cretaceous Age Spences Bridge Group volcanic rocks. In the area of the Watson Bar Property the two units are separated by the northwesterly trending Slok Creek Fault, part of the Fraser River Fault system. The Jackass Mountain Group lies to the southwest of the Slok Creek Fault.

Duffell & McTaggart divide the Jackass Mountain Group into 3 distinct units consisting of a lower unit A comprised of up to 600 metres of non marine arkose, greywacke and lesser conglomerate and shale; a middle unit B consisting of up to 500 metres of coarse conglomerate with minor beds of greywacke and argillite; and an upper unit C of greywacke with thinly interbedded conglomerate and argillite that is at least 1,500 metres thick. Unit A and the massive conglomerate of unit B are interpreted to have accumulated in subaerial conditions as fluvial deposits that were at times inundated by the sea. Strata of Unit C locally contain marine fossils and are for the most part of marine origin. The strata of the Jackass Mountain Group have shallow to moderate dips. Folding is minor and generally inconspicuous, with the dominant structures being normal faults.

The Spence Bridge Group lies to the northeast of the Slok Creek Fault and consists of andesitic and dacitic tuffs, agglomerates and breccias with minor intercalated conglomerate and sandstone.

The youngest rocks in the property area are Eocene Age dacitic and occasional rhyolitic tuffs, breccias, agglomerates and flows.

2.2 Property Geology

The Watson Bar Property was previously mapped by McClintock and Durfeld (1988), Durfeld and Jackson (1990) and Read (1998). A compilation of the previous mapping is presented in Figure 3.

The oldest rock on the property are a thick sequence of clastic sedimentary rocks of the Lower Cretaceous Jackass Mountain Group (Units **KSs, KSd, KCg, and KAr**). Due to the paucity of outcrop, absence of distinctive marker beds and extensive faulting, no attempt was made to subdivide the Jackass Mountain Group rocks on the property. However, review of drill core, particularly that from Zone V shows the rock sequence in the northern portion of the property to consist of an upper thick-bedded sandstone-siltstone sequence transitional at depth to a sequence containing a few centimetres to 2 metre thick beds of carbonaceous and locally pyritic argillite. Conglomerate beds occur throughout the stratigraphy as beds from 2 metres to several tens of metres thick. The thickest conglomerate beds occur in the western area of the property and overlie finer grained strata of siltstone and argillite. Except for this thick unit of conglomeratc, the Jackass Mountain Group on the property most closely match Duffell and McTaggarts' unit C.

The dominant structure in the Jackass Mountain rocks are steep dipping normal faults. Some minor warping of the strata is present in the southeastern map area but is insignificant. The most prominent fault on the property is the Slok Creek Fault which juxtaposes rocks of the Spences Bridge Group against the Jackass Mountain Group rocks. The Slok Creek Fault is a multi strand fault as evident by the sliver of Spences Bridge Group dacitic tuffs lying southwest of the main fault strand. Initial mapping by Read and other government mappers showed the Slok Creek fault as a steep angle strike slip fault. More recent work by Read shows dip slip movement. The presence of the younger Spences Bridge Group rocks to the northwest of the fault implies down dropping of the strata on this side of the fault. Assuming normal movement, then the Slok Creek Fault dips steeply to the northeast.

Two other major faults cutting the Jackass Mountain Group rocks are indicated by abrupt changes in bedding attitudes. The most prominent fault is a structure named the Base Line Fault which separates northwesterly moderately southwesterly dipping strata from northeasterly trending, shallow to moderate northwesterly dipping strata. Further evidence of the fault are different lithologies on either side of the fault. On the northeast side of the fault the dominant lithologies are thick bedded greywacke and siltstones overlying a siltstone-argillite sequence. On the southwest side thick conglomerate beds occur. The Base Line Fault can be traced from the western property limit to the central grid area. In the southeastern map area, based on changes in bedding attitudes, the fault appears to form two strands. The trace of the fault, suggest it has a northeasterly dip.

The second major fault indicated by changes in bedding attitudes is a northerly trending fault which parallels South Second Creek. Strata east of the creek trends northwesterly with shallow southwesterly dips. West of the fault the strata strikes northeasterly with moderatc northwesterly dips. This fault appears to post date the Baseline Fault as the continuation of this fault appears to be displaced northwards across the South Second Creek fault.

In addition to the three main faults, there are numerous minor faults which have little or no offsets. These minor faults have two dominant directions: northerly with moderate to steep dips to either the east or west and northwesterly with shallow to moderate southwest dips. These minor faults are likely subsidiary or conjugate faults related to movement along the main faults.

The Spences Bridge Group rocks lie northeast of the Slok Creek Fault and are comprised of maroon coloured andesitic tuffs and agglomerates. Because no alteration or mineralization occur in these rocks, they have not been studied in detail.

In the south central grid area is an elliptical-shaped stock of granodiorite measuring 700 metres by 500 metres. In the central area of the stock the granodiorite is hypidiomorphic granular **(TKgd)** and becomes porphyritic towards its margin **(TKfp)**. The location of the stock at the intersection of the Baseline and South Second Creek Faults suggests these faults played a role in the location of the intrusive.

Elsewhere in the map area, dykes and sill-like bodies of latite to granodiorite porphyry are common. Dykes range in thickness from less than a metre to over 10 metres and are preferentially orientated between 090° and 120° with steep dips to the southwest and northeast. Splaying and coalescing of the dykes is common. Sills are generally thinner than the dykes but are compositionally identical. Sills for the most part are restricted to the area north of the Baseline Fault and west of South Second Creek where the strata strikes northwesterly and dips moderately southwest.

A possible distinct intrusive are quartz porphyry dykes found in the eastern property area. The quartz porphyry may be a young phase of the granodiorite or may represent intrusions related to the younger Eocene volcanic rocks.

The Eocene volcanic rocks occur north of the map area and are separated from the Jackass Mountain Group rocks by a splay of the Fraser Fault. Within the map area, they are represented by fine grained andesite, their subvolcanic equivalent and quartz porphyry dykes. A post mineralization equigranular granodiorite dyke in the west central map area is also thought to be a subvolcanic equivalent to the Eocene volcanics.

2.3 Alteration and Mineralization

Epithermal alteration is extensive within the grid area and consists of broad areas of iron carbonate alteration with localized area of intense argillic alteration cored by zones of silicification. The more intense argillization and silicification show a strong spacial relationship to the northeasterly trending Baseline and northerly trending South Second Faults. Silicification consist of both fracture filling and pervasive replacement of the rock. Quartz veins are characteristic of open space fillings, with both druse and banded textures. Vein directions are predominantly northeasterly and northerly with variable dips. Lithology controls to a large extent the style of silicification. Pervasive silicification is prevalent in the clastic sedimentary rocks of the Jackass Mountain Group, while veins more often occur in the granodiorite intrusives and feldspar porphyry dykes and sills.

Argillic alteration occurs as broad envelopes around the zones of silicification. Past work has described the alteration as a phyllic / argiilic alteration dominated by serioitization of mafic and feldspars of the host lithologies with subordinate areas of kaolinization. Below surface oxidation minor amounts of disseminated and fracture filling pyrite occur. Thicker quartz veins are mineralized with arsenopyrite, galena, sphalerite, chalcopyrite and locally stibnite. To better quantify the types of alteration, approximately 100 samples of diamond drill core and hand specimens from various alteration zones were analysed by Anne Thompson and Audrey Robetaille using the PIMA-II shortwave infrared spectrometer. Samples were selected from the altered rock and altered wall rock to veins within zones I, II, IV, V, VIII and X. It was hoped that the PIMA analyses would give an insight into the types of clay and phyllic alteration minerals present which would provide and indication of temperatures of the hydrothermal solutions responsible for the alteration. The detailed PIMA are given in the report by Thompson and Robetaille that is attached as Appendix I. The results show that with the exception of Zone V, the dominant alteration mineral is kaolinite. Illite and lesser smectite and dickite are, with few exceptions, restricted to the altered wall rocks of zone V. These PIMA data show that the broad alteration zones of zones I, II, and IV are relatively low temperature alteration assemblages while zone V is a higher temperature alteration zone. A more complete description of each of the main alteration zones follows.

Zone I

Zone I is a prominent alteration zone exposed on the bluffs on the north slope of West Second Creek. The zone straddles the trace of the Baseline Fault and is centred on a bifurcating system of northeasterly trending vertically dipping feldspar porphyry dykes. Jackass Mountain Group sandstones and siltstones adjacent to the dyke system are highly fractured and brecciated. This structural preparation permitted hydrothermal fluids to flood the rock causing a broad zone of pervasive silicification and anastomosing quartz veinlets. The surrounding wall rock, both sedimentary and intrusive is moderately to intensely kaolinized with subordinate muscovite near auriferous veins. Below the surface oxidation, minor amounts of disseminated and fracture filling pyrite are present.

The area of kaolinization and silicification in Zone I has a surface width of 200 to 300 metres and can be traced from West Second Creek into the overburden covered area separating Zone I from Zone II. The width of the zone may be exagerrated due to the presence of large blocks of silicified sandstone and siltstone that have slumped down slope from the zone into the lower slopes of West Second Creek.

Sampling of soils, surface outcrops and drill core show the area of the silicified and clay altered rocks to be strongly anomalous in mercury and arsenic, but at background levels for gold. The exception are narrow intercepts of quartz veins in the three drill holes, the best of which assayed 2.43 g/t over 1 metre. PIMA results show the wall rock to these auriferous veins to contain muscovite in addition to kaolinite.

Zone II

Zone II is the least explored of the large altered areas on the property. The zone appears to be the northwesterly extension of Zone I and like Zone I straddles the trace of the Baseline Fault. To date, one diamond drill hole (89-6) and 4 shallow trenches have tested the zone. The trenches cut a broad area of argillically altered sandstones, siltstone and feldspar porphyry with localized rib-like zones of pervasive silicification and northeasterly trending quartz vein swarms. The zone of argillic alteration and silicification is up to 300 metres wide and appears to be continuous with Zone I to the southeast and to narrow and weaken to the northwest.

Hole 89-06 was drilled on the southwest side of Zone II and intersected sections of moderately to strongly silicified and argilically altered conglomerate, sandstone and feldspar porphyry.

Sampling of the trenches and drill core from hole 89-6 showed anomalous to strongly anomalous mercury and arsenic. Gold with the exception of a quartz vein deep in 89-6 is low. Of note illite is not present in the upper part of this drill hole but is present as a minor constituent deep in the hole.

Zone IV

Zone IV is the broad area of silicification and argillic alteration situated in the upper part of South Second Creek. The zone has a general northerly trend parallel to the South Second Creek Fault. The zone is characterized by strongly kaolinized and silicified sandstones and siltstones. Several holes drilled into the zone show very low gold grades but strongly anomalous arsenic, mercury and antimony. PIMA analyses of core from diamond drill hole 98-10 show the major alteration mineral is kaolinite with occasional minor smectite.

Zone V

Most of the exploration on the Second creek property has focused on the auriferous veins of Zone V where intercepts of up to 24.45 g/T gold over 4 metres have been encountered by diamond drill holes. Previously, the Zone V vein was interpreted to be an auriferous quartz vein localized in a thrust fault separating dominantly sandstone and interbedded siltstone units from a sequence of siltstones and graphitic argillite (Cathro 1998). This interpretation was based on surface trench exposures where the vein is sheared and contains sepias or folia of slickensided graphite. In August 1999, key holes from Zone V were relogged to see if lateral continuity in rock types existed and whether a thrust fault could be identified. It was hoped that a better understanding of the structural controls would assist in tracing the down dip and on strike extensions of the Zone V vein.

Detailed logging of the holes showed the overlying sandstone sequence consists of 1 to 3 metre thick beds of greywacke which commence as coarse grained to grit-size base fining upward to siltstone and mudstone. Internally, these greywackes contain cross and graded bedding. The mudstone top of each bed is in turn overlain by another greywacke bed which shows a similar coarse to fine grained grading. In general, the thickness and grain size of the greywacke beds increases up section and decrease down section towards the underlying siltstone-argillite sequence. The transition to the underlying unit is arbitrary set where the argillite or mudstone unit exceed 30 centimetres and with the first appearance of framboidal pyrite and carbonaceous mudstone. Faulting or shearing of the carbonaceous argillite beds occurs throughout the section of inerbedded argillite and siltstone and there is no single fault separating the upper package of greywacke and siltstone from the lower package of argillite and siltstones. Hence, there is no evidence of significant movement along the faults in the lower package. It appears more likely that the faults and shearing in the argillite units are minor faults related to or conjugate to the Slok Creek Fault and / or the Baseline Fault. Similarly oriented faults to those in Zone V were mapped near the Slok Creek Fault and elsewhere on the property. As the strata at Zone V have parallel strike and dip to the minor faults associated with the Slok Creek Fault, it is not surprising that movement on the minor faults in Zone V would be bedding parallel to stratigraphy and the breaks would occur along the carbonaceous argillite units. These bedding parallel structures may also have controlled the emplacement of the feldspar porphyry sills which occur throughout the section.

The auriferous quartz veins of Zone V occur in and adjacent to bedding parallel faults in the upper part of the argillite-siltstone sequence. Thickness of the veins is variable from a few centimetres to tens of metres. However, the veins do display a lensoidal pinch and swell in surface exposures and bifurcates, breaking across stratigraphy between fault planes. Plotting of vein thicknesses shows a 215° plunge to the thickest part of the mineralized vein system (Figure 4). The mineralization remains open and untested in this direction.

Step out holes 98-06 and 9-04 drilled along strike to the northwest and southeast respectively show the vein in Zone V continues, albeit thinner and lower grade, toward Zone I and Zone VII.

The auriferous veins in Zone V differ from the veins in other zones by the absence of a broad zone of argillic alteration and pervasive silicification in the wall rock of the vein and a higher pyrite and arsenopyrite content. Texturally, Zone V vein differ in having coarse cockscomb textures rather than the massive to chalcedonic quartz typical of the other zones. Samples of wall rock and vein material from several drill holes and surface trenches were analysed by a PIMA II spectrometer. The results show illite and chlorite to be prevalent minerals adjacent to veins and in the altered zones and suggest higher temperature hydrothermal solutions formed the alteration in Zone V.

▸ 3. Geophysics

During the period 1988 to 1989 Allan Scott Geophysics surveyed 56 line kilometres of Induced Polarization surveys on the Watson Bar Property. Further processing of the data by inversion should be considered as it may help in better understanding the structures which control mineralization.

▸ 4. Discussion

A review of data collected on the Watson Bar Property has identified two previously unrecognized faults which have important roles in both the localization of the intrusives and epithermal-style mineralization on the property. The most important fault is the Baseline Fault which traverses the property from the southeast to northwest. It is most obvious from West Second Creek to the western property boundary where it is evidenced by abrupt changes in the orientation of the strata and the lithologies. The Baseline Fault parallels the Slok Creek Fault and is likely related to this fault.

The broad northwesterly orientated areas of silicification and argillic alteration of Zone I and II overlie the trace of the Baseline Fault and it is speculated that the fault provided a plumbing system which fed hydrothermal fluids into the sedimentary and intrusive rocks. Sampling of soils, surface outcrops and drill core from Zones I and II show strongly anomalous levels of mercury and arsenic, but with a few exceptions, low gold values. PIMA analyses of drill core from the altered rocks show the dominant alteration mineral other than quartz is kaolinite and suggests that the alteration present in Zones I and II are the upper, lower temperature part of an epithermal system. Better gold grades may occur at depth.

Based on relogging of drill core, Zone V, which lies northeast of Zone II, is believed to occur in a conjugate fault to the Slok Creek and Baseline Faults (Figure 5). Zone V may represent a deeper, higher grade portion of the epithermal system. Evidence for this is its lower topographic position, higher sulphide content and implication by PIMA analyses of higher temperature clay minerals. The thickest part of Zone V vein system has a southwesterly (215°) plunge towards Zone II and its extension remains untested. In addition to potential to expand the size of the high-grade gold mineralization in Zone V, there is a possibility that a significantly larger body of mineralization may occur where the down dip extension of Zone V connects with Zone II at depth. As Zone II is a much larger area of alteration associated with a major structure, if a large deposit is present, it will occur at depth in Zone II (Figure 5).

Zone IV, like Zones I and II, appears to be the lower temperature, upper part of an epithermal deposit associated with the northerly trending South Second Creek Fault. The absence of significant gold mineralization in holes drilled to date implies that gold mineralization, if present will be deep. Zone IV is considered a third priority target.

▸ 5. Conclusions and Recommendations

Two priority targets remain on the Watson Bar Property. One target is the still open southwestern plunge extension of the high grade vein mineralization in Zone V. Of higher priority is the potential target for a large-tonnage gold deposit where the down plunge extension of Zone V mineralization meets the down dip extension of Zone II.

Testing of the down plunge extensions of Zone V will require fences of drill holes placed across the projected plunge of the zone. As Zone V mineralization dips into the hill side, drilling from surface will require long holes. Consideration of driving an adit to provide access for drilling the extension should be considered as an alternative to drilling from surface.

The priority target is a large tonnage gold deposit at the junction of Zone V mineralization with Zone II. Testing this target will require 3 or 4 angle holes placed to intersect Zone II where it meets Zone V. Drill hole 89-06 was drilled on the southwest side of the Baseline Fault and appears to have drilled away from the mineralization with depth implying an northeast dip to the fault. Since the dip of the Baseline Fault is poorly constrained, further surface work including trenching is required to better define the location and dip of the structure prior to drilling. Inversion of the Induced Polarization data may help in resolving the location and dip of the fault. Further, more systematic PIMA analysis of core samples of alteration and mineralization from the zones will also assist in the understanding of the mineralization.

6. Bibliography

Cathro, M.S., Durfeld, R.M. and Ray, G.E. (1997): Epithermal Mineralization on the Watson Bar Property (92O/01E), Clinton Mining Division B.C.; *B.C. Ministry of Energy, Mines and Petroleum Resources,* Geolgical Fieldwork 1997, Paper 1998-1.

Duffell, S. and McTaggart, K.C. (1952): Ashcroft Map Area, BritishColumbia; *Geological Survey of Canada*, Memoir 262, 122 pages.

Durfeld, R.M. (1990): Report on Diamond Drilling, Watson Bar Project; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 19777.

Durfeld, R.M. (1992): Report on Trenching and Diamond Drilling, Watson Bar Property; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 22497.

Durfeld, R.M. (1996): Drilling and Trenching Report on the Watson Bar Mineral Project; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 24676.

Durfeld, R.M. and Jackson, A.W. (1990): Report on Geology, Geochemistry, Trenching Induced Polarization and Diamond Drilling, Watson Bar Project; *Unpublished Internal Report for Cyprus Gold (Canada) Ltd.*

Durfeld, R.M. and McClintock, J.A. (1987): Geological and Geochemical Report on the Second Claim Group; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 16879.

Hickson, C.J., Mahoney, J.B. and Read, P.B. (1994); Geology of the Big Bar Map Area B.C.; in Currenct Research 1994A, *Geological Survey of Canada*, pages 143-150.

Liningston, K.W. (1982): Geological and Geochemical Report, Watson Bar Project; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 10381.

McClintock, J.A. and Durfeld, R.M. (1988): Geological and Geochemical Report on the Second Claim Group; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 17473.

Price B.J., Liningston, K.W. and Howell, W.A. (1981): Watson Bar Geological and Geochemical Report; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Assessment Report 9462.

Read P.B. (1997): Unpublished Geological Map of the Watson Bar Property.

Trettin, H.P. (1961): Geology of the Fraser River between Lillooet and Big Bar Creek; *B.C. Ministry of Energy, Mines and Petroleum Resources*, Bulletin 44, 109 pages.

Tipper, H.W. (1978): Taseko Lakes (92O) Map-Area; *Geological Survey of Canada*, Open File 534.

Warren, H.V. (1982): The Significance of a Discovery of Gold Crystals in Overburden; in Precious Metals in the Northern Cordillera; Levinson A.A. editor, *The Association of Exploration Geochemists*, pages 45-51.

Warren, H.V. and Hajek, J.H. (1973): An Attempt to Discover a "Carlin-Cortez" Type of Gold Deposit in B.C., *Western Miner,* Number 46, pages 124-134.

Appendix I - Alteration Characteristics Watson Bar, B.C., by Petra Science Consultants.

ALTERATION CHARACTERISTICS: WATSON BAR, B.C.

PIMA Short-wave Infrared and Petrographic Analysis

November 18, 1999

Prepared for: Rudi Durfeld
Durfeld Geological Management Inc.
P.O. Box 4438, Station Main
Williams Lake, British Columbia
V2G 2V5

PROFESSIONAL PROVINCE OF A. J. B. THOMPSON BRITISH COLUMBIA GEOSCIENTIST
18/11/99

PetraScience Consultants Inc.

3995 W. 24th Avenue
Vancouver, B.C. V6S 1M1 Canada
phone/fax: 604.222.4642 anne@petrascience.com

Summary

A set of approximately 100 drill core and hand samples was received from Rudi Durfeld of Durfeld Geological Management Inc. for spectral analysis on October 22, 1999. No geologic or spatial information was made available for the sample set. The goal of the work was to determine the alteration minerals present using the PIMA-II short-wave infrared spectrometer.

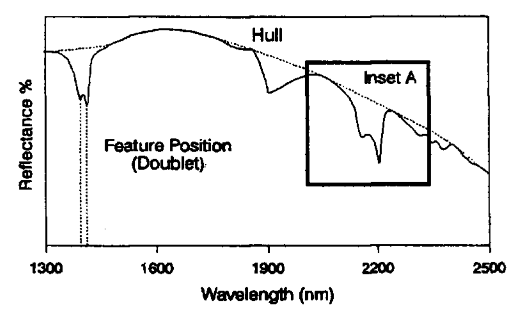
Anne Thompson and Audrey Robitaille in the PetraScience office, Vancouver, B.C, carried out the analysis and interpretatien. A variety of minerals are present in the sample set, including kaolinite, dickite, illite, smectite, chlorite, dolomite, Fe-dolomite, calcite, gypsum, scorodite, and quartz. The variation in mineralogy suggests that zoning patterns may be present. More extensive sampling and PIMA analysis may help delineate targets within the property dependent on correlation between geochemical results and the alteration mineralogy.

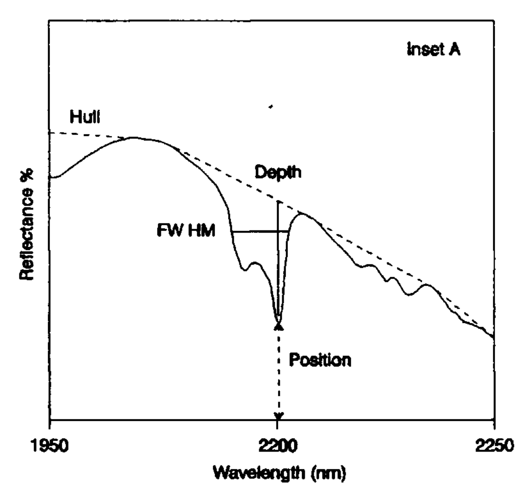
This report contains a summary table of the alteration minerals observed in the samples, a description of the short-wave infrared method and details of the PIMA analyses for each sample.

Method

The objective of the analysis was to determine the style of alteration (with particular emphasis on clays and sulfates). The PIMA short-wave infrared spectrometer was chosen as a fast and efficient method of determining the major alteration minerals present. The short-wave infrared (SWIR) technique is extremely sensitive to alteration minerals such as clays, carbonates and selected sulfates, particularly alunite and jarosite. SWIR analysis is also sensitive to elemental substitution and changes in order or crystallinity in minerals. In hydrothermal-ore deposits, these changes may be indicators of temperature variations in the alteration halo.

Short-wave infrared spectroscopy detects the energy generated by vibrations within molecular bonds. These bonds have bending and stretching modes within the 1300 to 2500nm region of the electromagnetic spectrum. The observed absorption features are manifestations of first and second overtones and combination tones of fundamental modes that occur in the mid-infrared region. SWIR is particularly sensitive to certain molecules and radicals, including, OH, H_2O, NH_4, CO_3, and cation-OH bonds such as Al-OH, Mg-OH and Fe-OH. The positions of the features in the spectrum and their characteristic shapes are a function of the molecular bonds present in the mineral. Variations in chemical composition may be detected as the wavelength positions of features shift consistently with elemental substitution. SWIR spectroscopy is partly sensitive to crystallinity variations, but may not detect primary changes in the lattice structure. A typical spectrum consists of several absorption features. The figure below illustrates the various aspects of an absorption feature, including wavelength position, depth and width (full height, half width maximum). The outline of the hull or continuum is also shown.





Audrey Robitaille
Anne J.B. Thompson, P.Geo.

Minerals can be distinguished not only on the basis of distinctive features and wavelength positions, but also on character of the profile (without hull subtraction). Mineral identification is based on wavelength positions, intensity and shape of absorption troughs and the overall shape of the entire spectrum.
The short-wave infrared wavelength region is not suitable for most anhydrous silicates. In addition, it is difficult to identify minerals present in amounts less than 5%, unless the sample is a simple mixture with quartz and the mineral is highly reflective. Infrared reflectivity varies between mineral species. In mixtures of infrared-active minerals the dominant and typically most reflective mineral is easily identified, however as a general rule, 10% or more of a mineral must be present for positive identification. Where low reflectance minerals are present, recognition may require 20% or more of the mineral in the sample (e.g. carbonate, chlorite).

The PIMA-II is a commercial field instrument built by Integrated Spectronics Pty. Ltd. in Australia. The instrument has an internal light source, allowing collection of laboratory quality data in the field. In addition, internal calibration allows for comparison of data from one year to the next. The instrument is capable of measuring a variety of sample types, including rocks, chips, powders and liquids.

Alteration Mineralogy - Spectral Characteristics

Alteration minerals observed with the PIMA short-wave infrared spectrometer include: chlorite, dolomite, Fe-dolomite, dickite, kaolinite, illite, smectite, gypsum, scorodite and quartz. Comments on the general characteristics of each of the major minerals identified and examples of representative spectra from the Spectral Library, SPECMIN™ follow below. Positive identification of these minerals typically requires the presence of greater than 5% in the sample. The major minerals present are:

Chlorite: The presence of iron in chlorite results in a strong positive slope from 1300-1900nm. Chlorite occurs intermixed with montmorillonite and illite, which obscures several of the features. However, a plateau or small feature at 2256-58nm is characteristic of the mineral.

Dolomite (Fe): Chemical variation in the carbonate group of minerals is gauged by a shift in the position of the major feature as a function of the cation present. The dominant feature varies widely including magnesite (Mg) at 2300 nm, dolomite (Mg, Ca) at 2320 nm, calcite (Ca) at 2330 nm and rhodochrosite (Mn) at 2360 nm.

Dickite: Dickite is the higher temperature polymorph of kaolinite and may be more closely associated with mineralization. The identification of dickite in the spectra is based on the separation of distinctive doublets near 1400 nm and 2200nm.

Gypsum: Represents alteration of anhydrite or weathering of sulfides within the core. Gypsum has a distinctive pattern, but is highly absorptive and many obscure other minerals.

Illite: The spectral pattern for illite has distinctive single features in the 1400 and 2200 regions, and it commonly contains more water than muscovite.

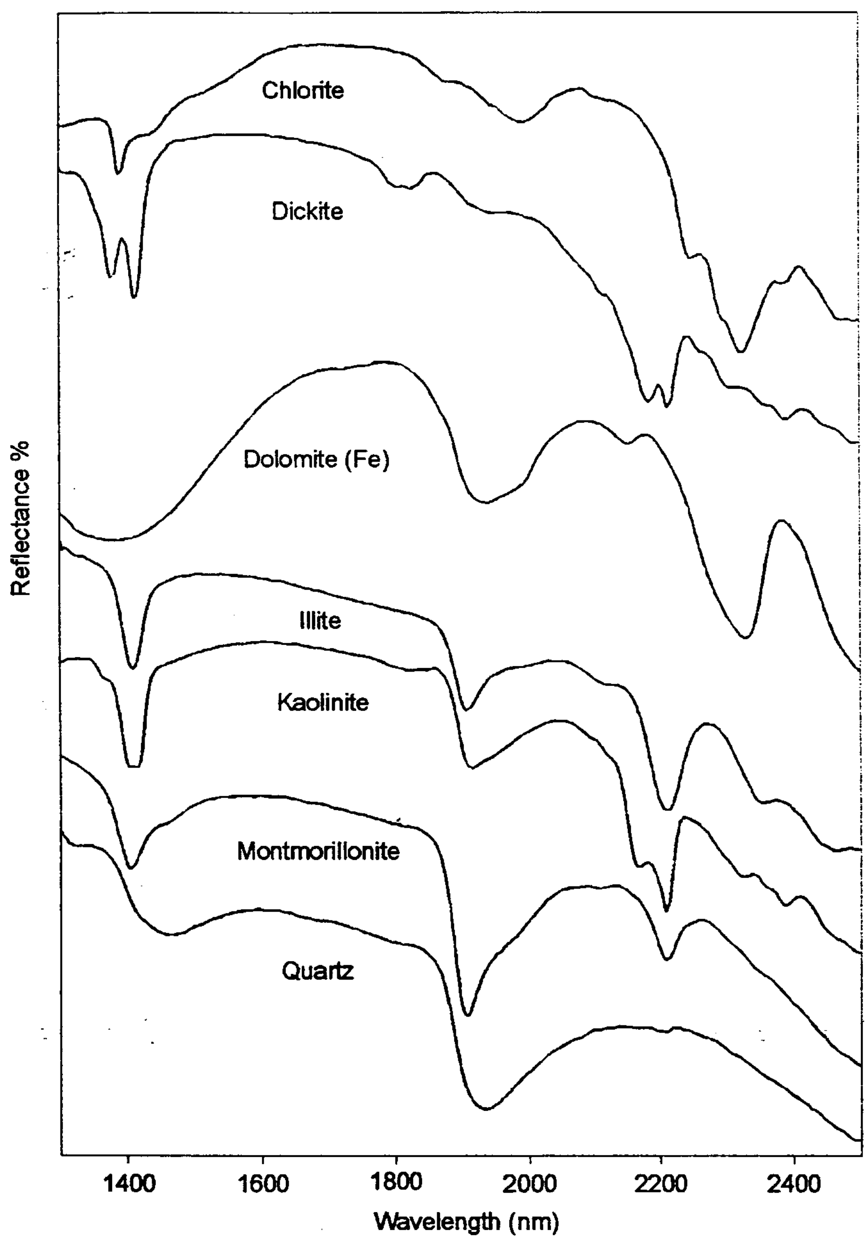
Illite, Illite-Smectite: The spectral pattern has distinctive single features in the 1400 and 2200 regions, and it commonly contains more water than muscovite. The 2200 band position may be related to changing Al content of the mineral, which is thought to represent temperature variation. Precise temperatures however are not assignable to the band positions. Broadly, illites with a position in the 2196 to 2202 range may be higher temperature than illite with a position near 2207 or higher.

Kaolinite: Distinctive doublets in the 1400 and 2200nm regions identify kaolinite.

Quartz/Silica: Low temperature quartz has a broad, but distinctive pattern, and was apparent in a few of the samples. Quartz was identified wherever possible with certainty, however, it is not always possible to separate hydrothermal quartz and quartz in the host rocks. Hand sample descriptions are best for determining the distribution of vuggy silica and silicified zones.

Scorodite: Scorodite has an extremely low, absorptive pattern with few features, however, small characteristic features occurs in the region of 1450 nm and 1955 nm.

Smectite (Montmorillonite): The most common smectite-group mineral appears to be montmorillonite, however, some patterns are suggestive of beidellite. A large, deep-water feature at 1900nm is typical of smectite-group minerals.



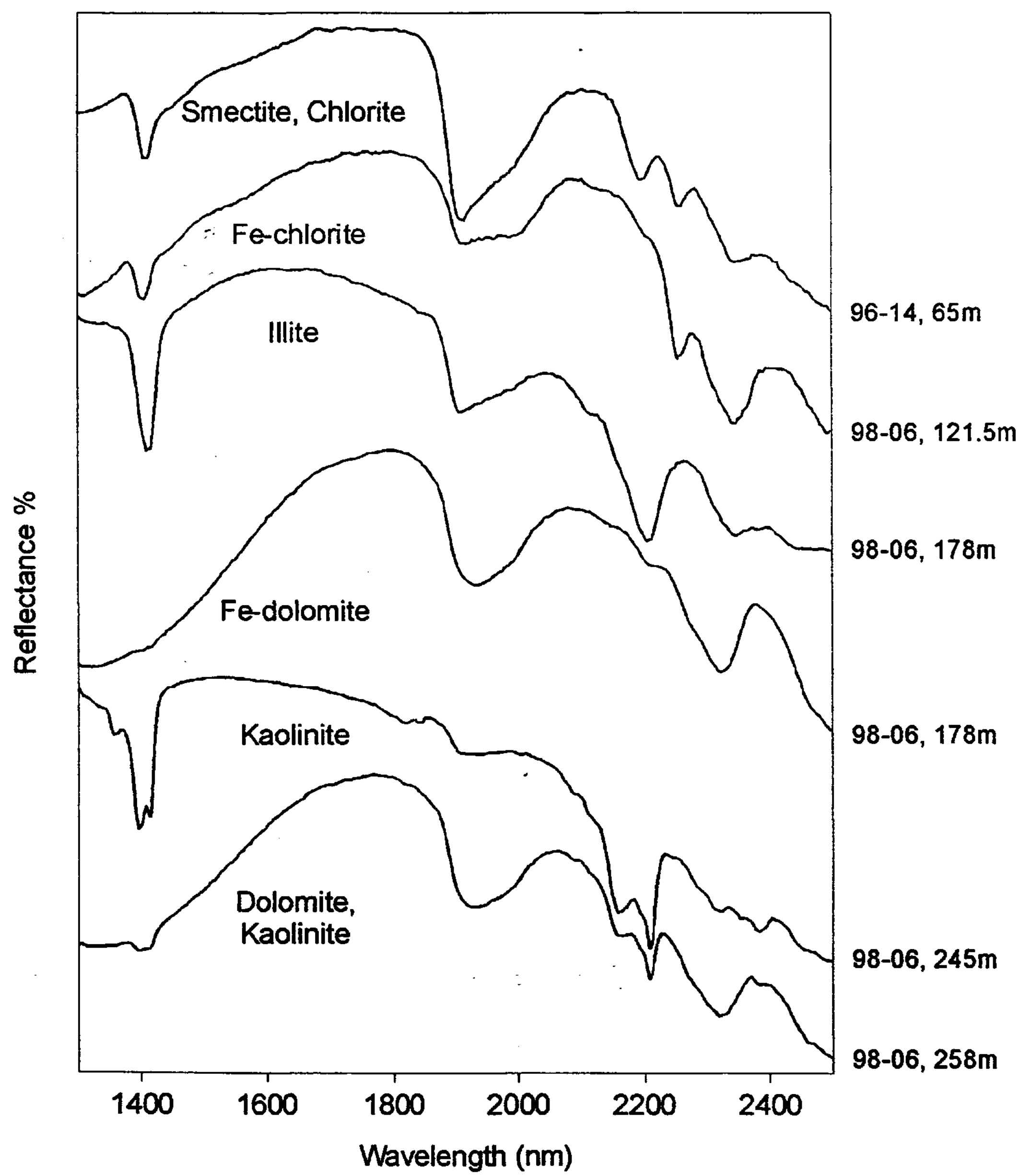
Audrey Robitaille
Anne J.B. Thompson, P.Geo.

Summary Table of PIMA Results and Stacked Plots

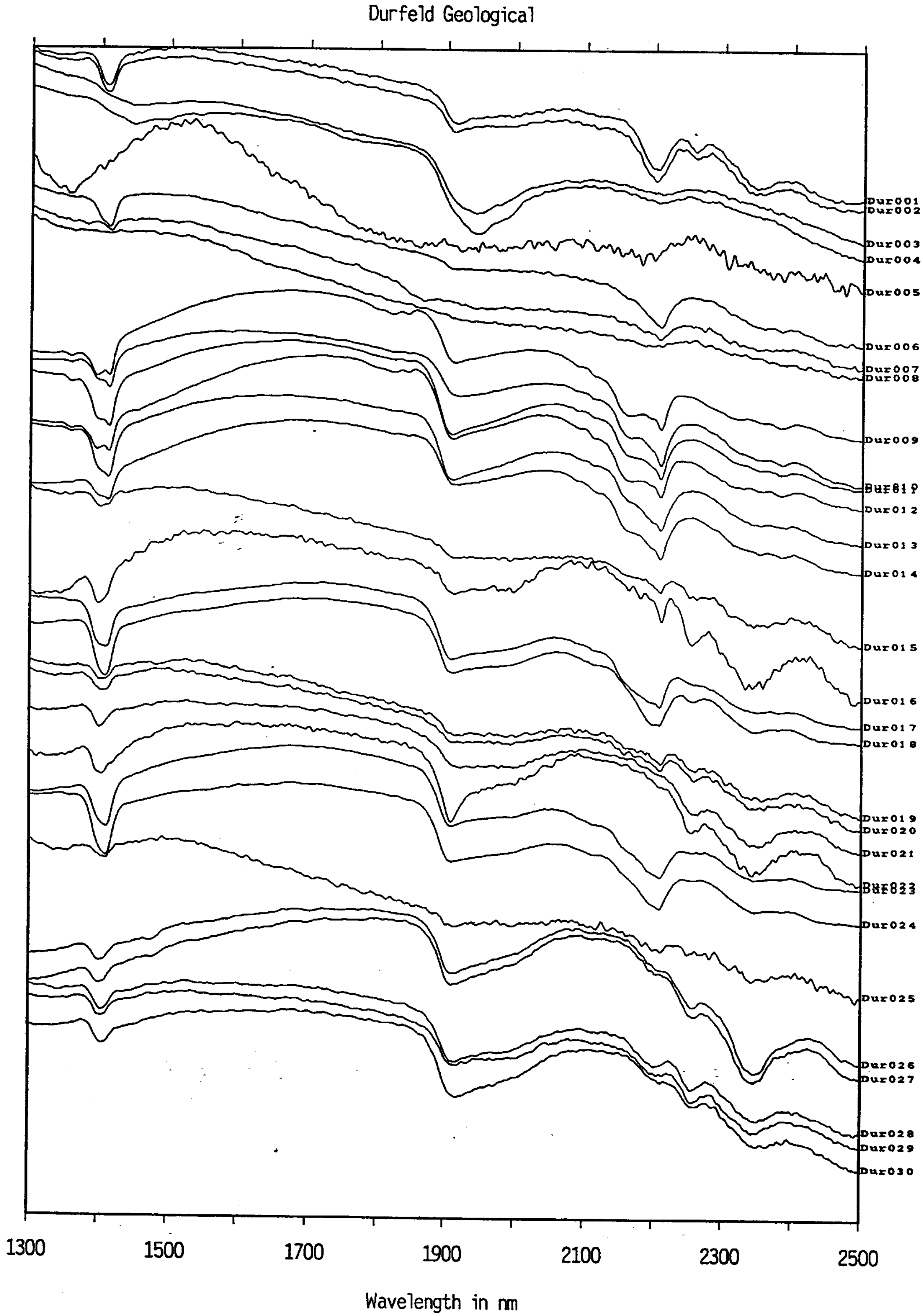
The following sections detail the results of the PIMA analysis. Examples of representative spectra from the data set and stacked plots of all the spectra follow a table of the complete results.

The samples all have more than one analysis in order to account for variations in individual samples, or low reflectance that required re-sampling over a longer interval.

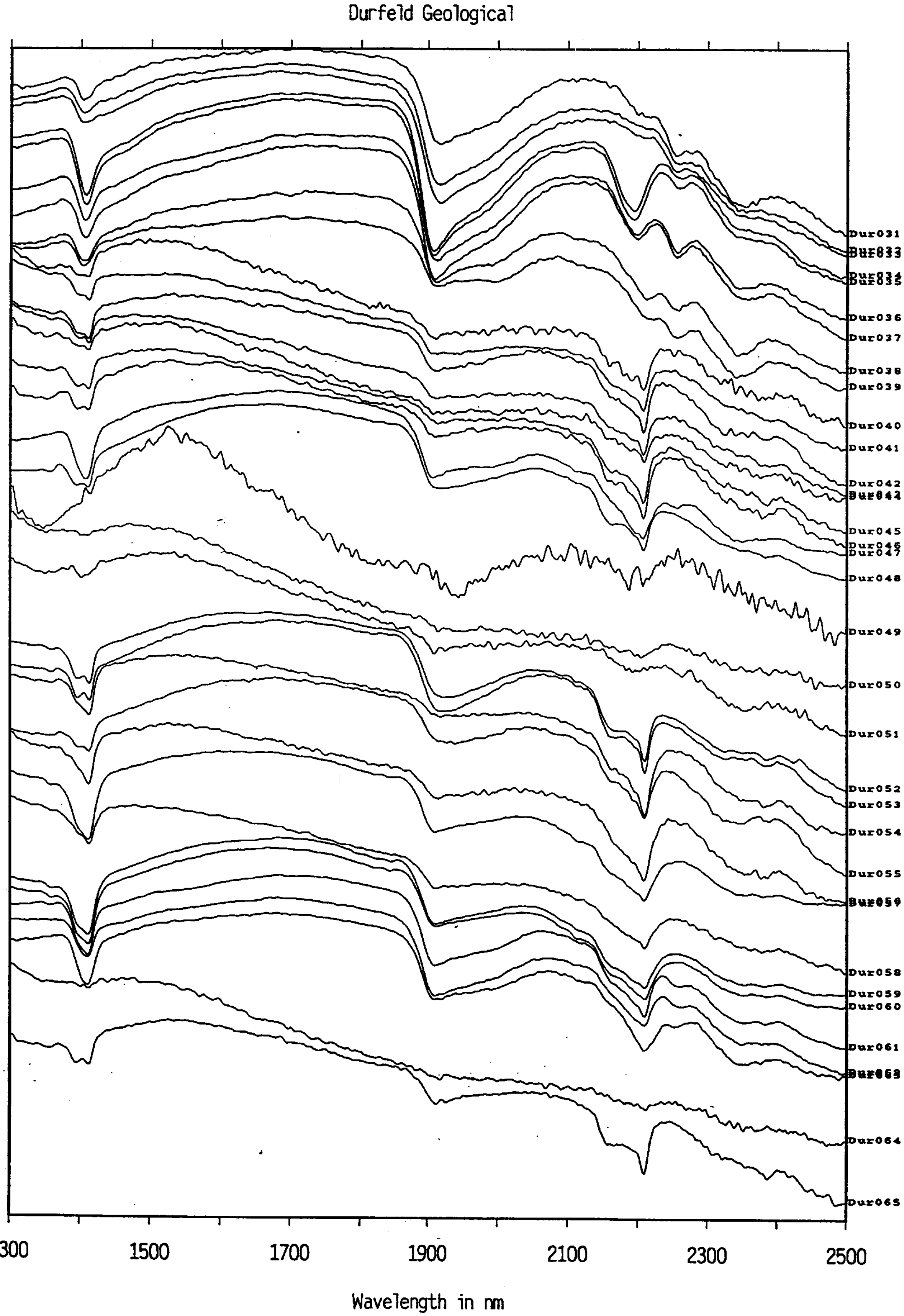
Plots in this report were generated using the Integrated Spectronics developed program, PIMAVIEW and SPECWIN™.



Audrey Robitaille
Anne J.B. Thompson, P.Geo.

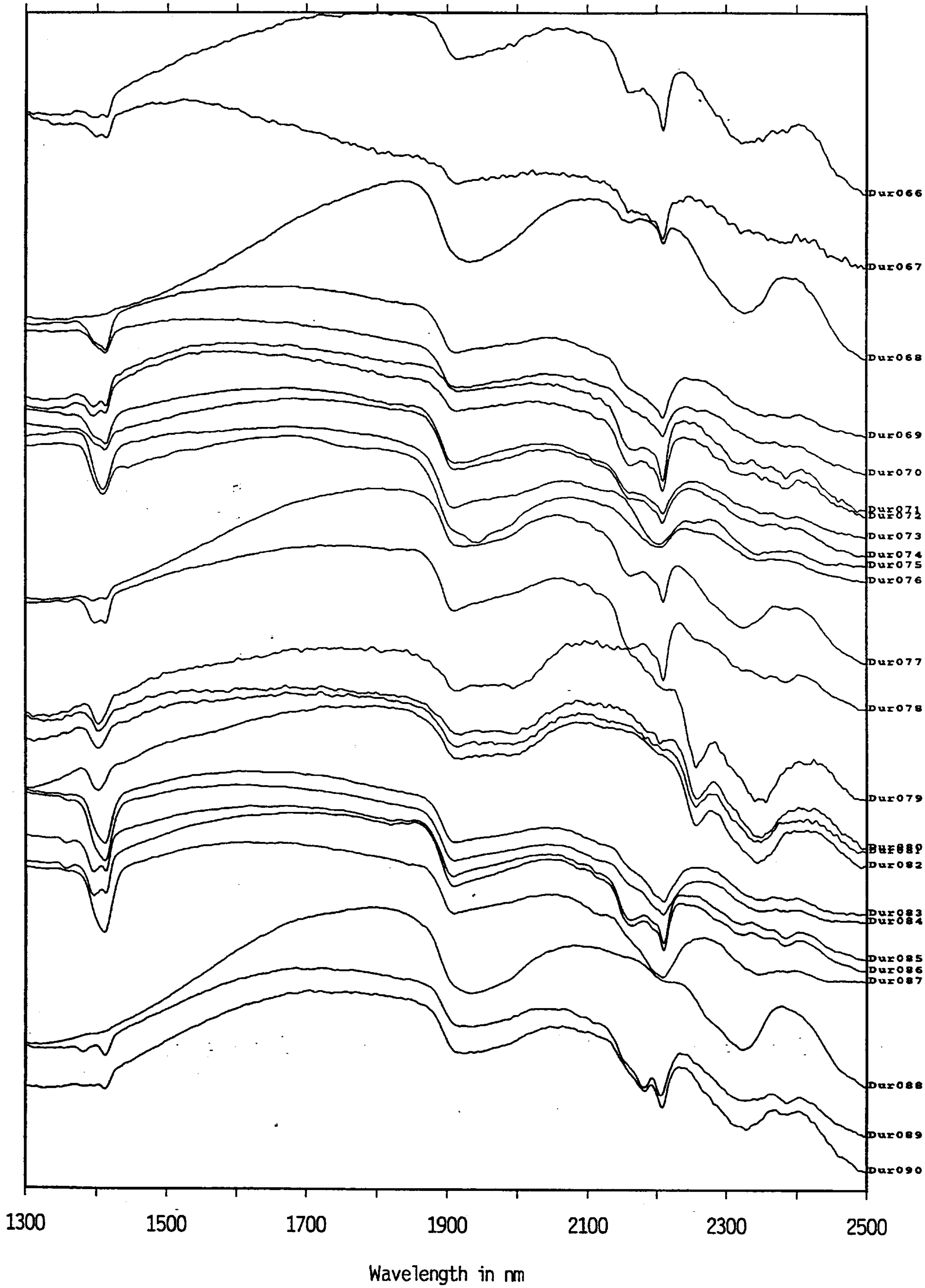

Durfeld Geological
Dur001
Dur002
Dur003
Dur004
Dur005
Dur006
Dur007
Dur008
Dur009
Dur010
Dur011
Dur012
Dur013
Dur014
Dur015
Dur016
Dur017
Dur018
Dur019
Dur020
Dur021
Dur022
Dur023
Dur024
Dur025
Dur026
Dur027
Dur028
Dur029
Dur030
1300
1500
1700
1900
2100
2300
2500
Wavelength in nm

STACK OUT

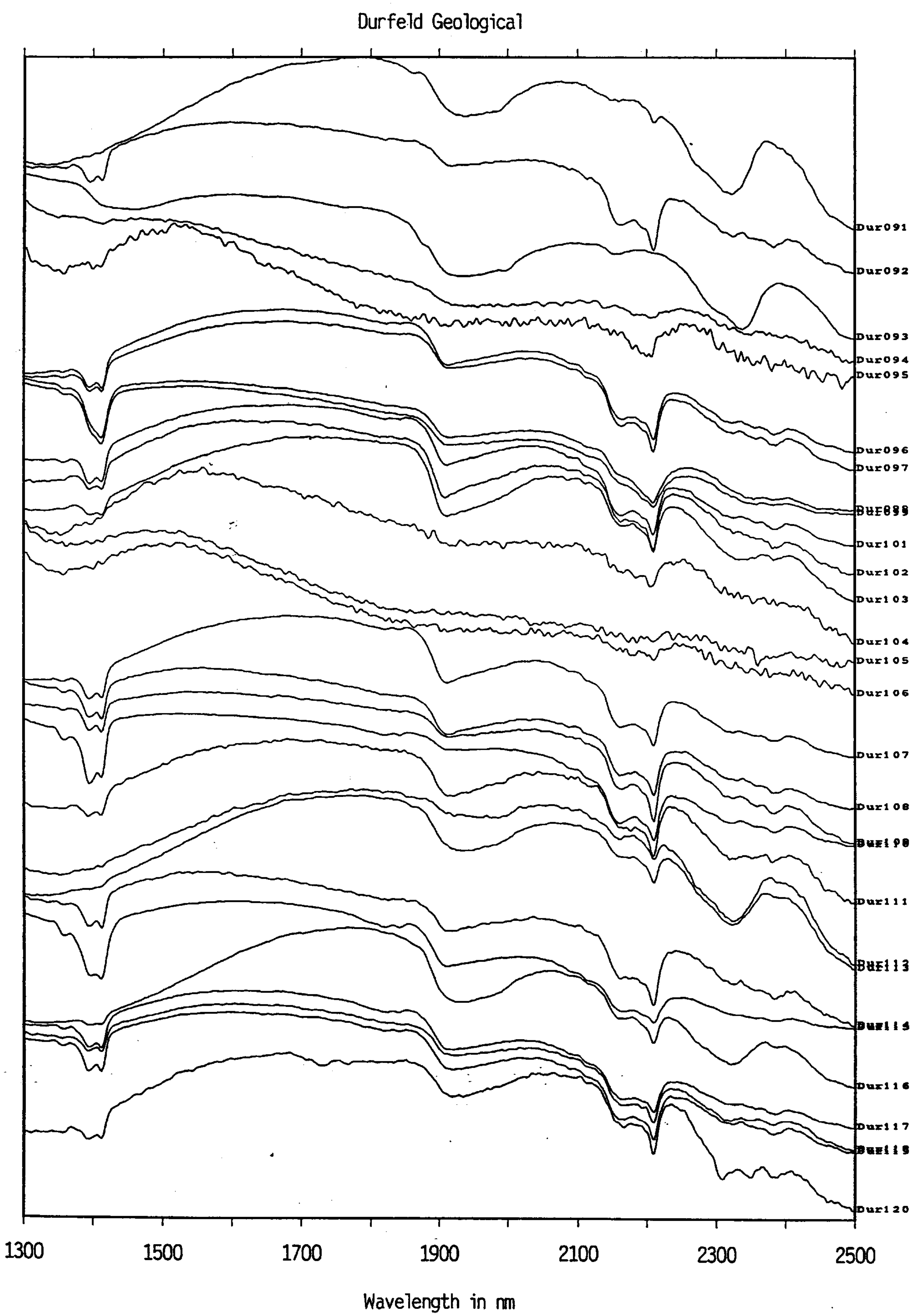

Durfeld Geological
Dur031
Dur035
Dur036
Dur037
Dur038
Dur039
Dur040
Dur041
Dur042
Dur045
Dur047
Dur048
Dur049
Dur050
Dur051
Dur052
Dur053
Dur054
Dur055
Dur058
Dur059
Dur060
Dur061
Dur064
Dur065
1300
1500
1700
1900
2100
2300
2500
Wavelength in nm

STACK OUT

Durfeld Geological

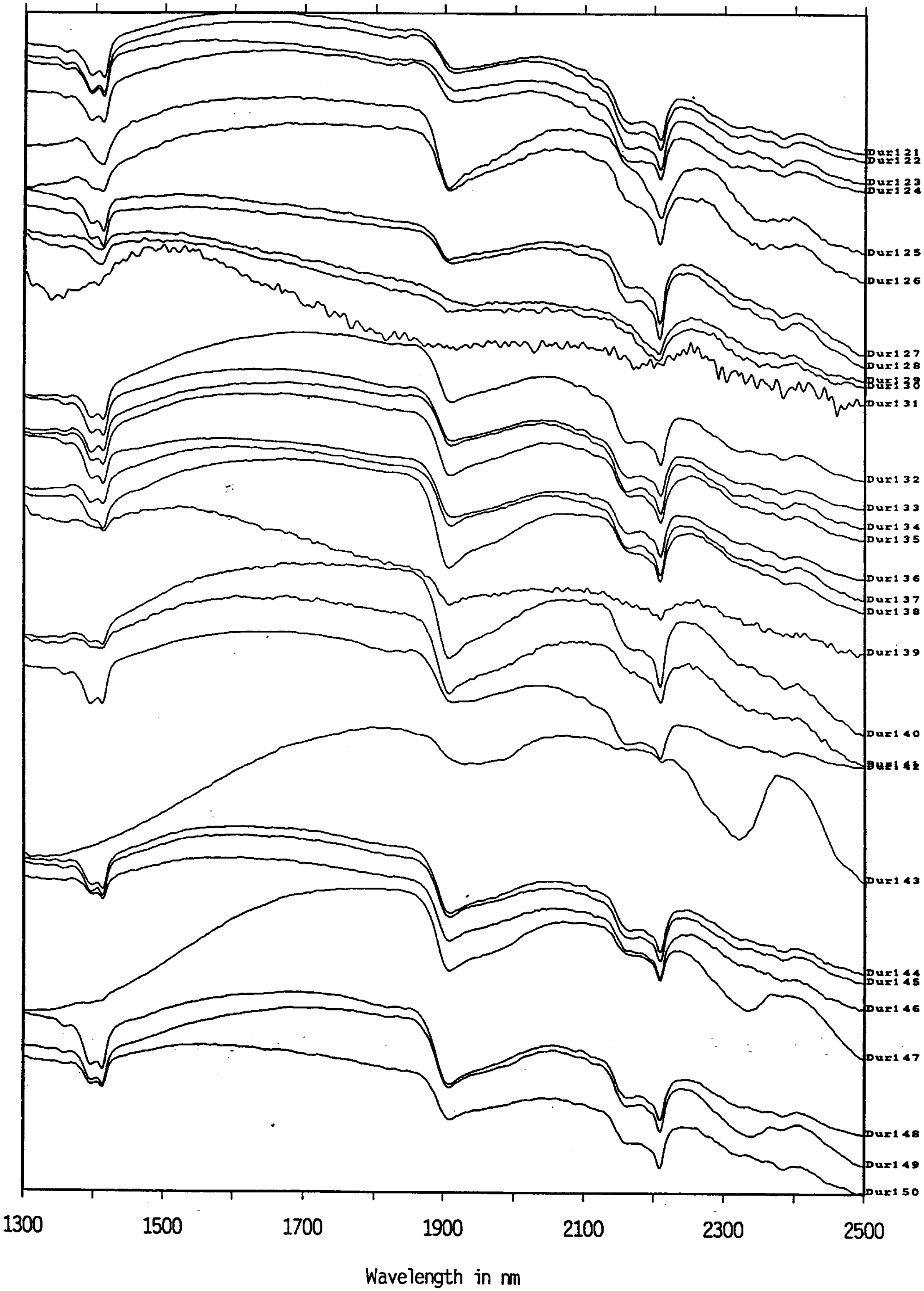


STACK OUT


Durfeld Geological
Dur091
Dur092
Dur093
Dur094
Dur095
Dur096
Dur097
Dur101
Dur102
Dur103
Dur104
Dur105
Dur106
Dur107
Dur108
Dur111
Dur116
Dur117
Dur120
1300
1500
1700
1900
2100
2300
2500
Wavelength in nm

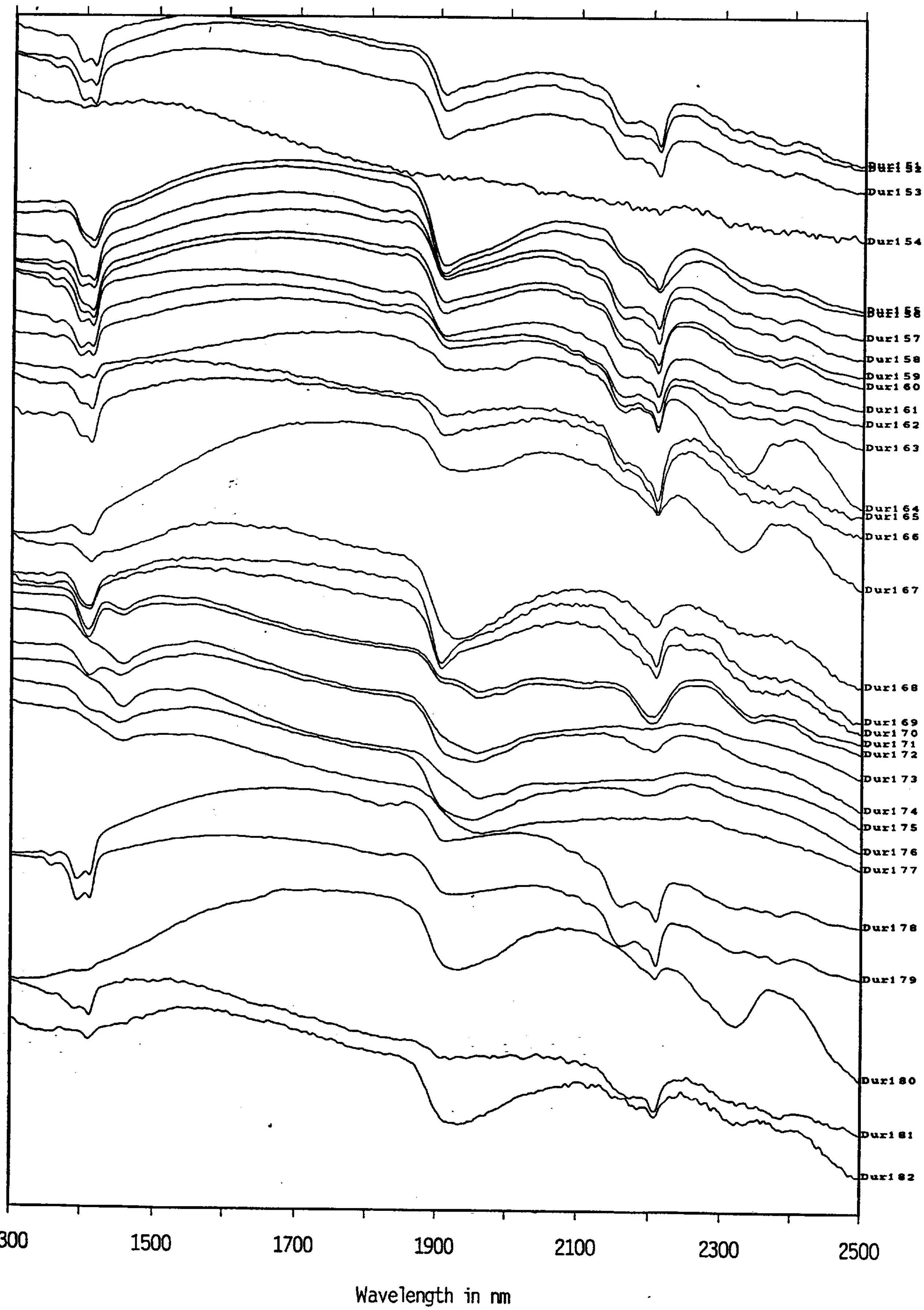
STACK OUT

Durfeld Geological



STACK OUT

Durfeld Geological



STACK OUT

Spectra ID	Drill Hole	Metre	Major Mineral	Minor Minerals	SWIR Feature	Description
Dur001	DDH 89-1	29	illite	chlorite, carbonate	noise	fine-grained grey/carbonate vein
Dur002	DDH 89-1	29	illite	chlorite, carbonate	noise	fine-grained grey/carbonate vein
Dur003	DDH 89-1	32	quartz	clay, ?gypsum		white quartz/Watson Bar-Zone V
Dur004	DDH 89-1	32	quartz	gypsum, clay		white quartz/Watson Bar-Zone V
Dur005	DDH 89-1	62	u/r		noise	black carbonaceous material
Dur006	DDH 89-06	67.5	kaolinite	illite, carbonate	poorly crystalline	Watson Bm./centimeter-scale band
Dur007	DDH 89-06	67.5	kaolinite	?carbonate, quartz	poorly crystalline	Watson Bm./minor ankerite
Dur008	DDH 89-06	67.5	u/r		poor pattern	Watson Bm./minor ankerite
Dur009	DDH 89-06	68	kaolinite		crystalline	red to brown matrix
Dur010	DDH 89-06	68	kaolinite			25-millimeter white clast
Dur011	DDH 89-06	150	kaolinite	illite		fine white-grey groundmass
Dur012	DDH 89-06	150	kaolinite	illite	crystalline	fine white-grey groundmass
Dur013	DDH 89-05	166	kaolinite	illite	poorly crystalline	millimeter-scale quartz vein/trace clay
Dur014	DDH 89-06	166	kaolinite	illite	poorly crystalline	millimeter-scale quartz vein/trace clay
Dur015	DDH 96-11	10	Mg-chlorite	kaolinite, ?carbonat	noise	fine dark grey groundmass
Dur016	DDH 96-11	10	Mg-chlorite	illite	noise	fine dark grey groundmass
Dur017	DDH 96-11	22	illite, kaolinite	chlorite (shoulder)		fine buff groundmass
Dur018	DDH 96-11	22	illite	chlorite		fine buff groundmass
Dur019	DDH 96-11	22	chlorite	?kaolinite, carbonat	noise	brownish matrix/clasts
Dur020	DDH 96-11	22	chlorite	?kaolinite, carbonat	noise	mm-scale green clasts/brown matrix
Dur021	DDH 96-11	79	Mg-chlorite			fine grey groundmass
Dur022	DDH 96-11	79	chlorite	?analcite	sharp H_20 feature	fine grey groundmass
Dur023	DDH 96-11	109	illite	kaolinite, chlorite		fine light grey groundmass
Dur024	DDH 96-11	109	illite	kaolinite, chlorite		grey groundmass/Fe-oxides
Dur025	DDH 96-11	109	?chlorite	?quart/clay	noise	grey groundmass
Dur026	DDH 96-11	221	chlorite		feature @ 1476nm	white phenocryst/grey matrix
Dur027	DDH 96-11	221	chlorite			white phenocryst/grey matrix
Dur028	DDH 96-11	213	chlorite		gypsum	fine-grained grey groundmass
Dur029	DDH 96-11	213	chlorite		gypsum	fine-grained grey groundmass
Dur030	DDH 96-14	29.5	chlorite	?smectite		fine grey-white groundmass
Dur031	DDH 96-14	29.5	chlorite	?smectite		fine grey-white groundmass
Dur032	DDH 96-14	35	?smectite	chlorite		fine-grained light brown groundmass
Dur033	DDH 96-14	35	?smectite	chlorite		fine-grained light brown groundmass
Dur034	DDH 96-14	42	smectite, illite	chlorite		grey clay-rich sample
Dur035	DDH 96-14	42	smectite	chlorite		grey clay-rich sample
Dur036	DDH 96-14	65	smectite, illite			fine grey-green groundmass
Dur037	DDH 96-14	65	smectite, illite	chlorite		fine grey-green groundmass
Dur038	DDH 97-03	16	chlorite	illite		grey phenocryst/light grey matrix
Dur039	DDH 97-03	16	chlorite			grey phenocryst/light grey matrix
Dur040	DDH 97-08	74	kaolinite	?quartz	noise	fine grey groundmass
Dur041	DDH 97-03	74	kaolinite	?quartz	poorly crystalline	brown altered zone
Dur042	DDH 97-03	74	kaolinite	?quartz	feature @ 2300nm	millimetre-scale white veinlets
Dur043	DDH 97-03	106	kaolinite	?quartz	noise	thinly laminated/brownish
Dur044	DDH 97-03	106	kaolinite	?quartz	noise	thinly laminated/brownish
Dur045	DDH 97-03	118	kaolinite	?quartz		fine-medium grey groundmass
Dur046	DDH 97-03	118	kaolinite	??carbonate	noise	minor brownish alteration/weak
Dur047	DDH 97-03	148	illite	chlorite, kaolinite		fine grey groundmass
Dur048	DDH 97-08	148	kaolinite		poorly crystalline	fracture coating/clay & Fe-oxide
Dur049	DDH 97-03	185.4	u/r		noise	graphite/scale-scale sulfide veins
Dur050	DDH 97-06	186.2	?clay		noise	boudinaged quartz veins
Dur051	DDH 97-06	218	clay		noise	fine-grained grey groundmass
Dur052	DDH 97-08	42	kaolinite	quartz		rusty to tan groundmass/quartz
Dur053	DDH 97-03	42	kaolinite	quartz		rusty to tan groundmass/qt.
Dur054	DDH 97-08	162.8	kaolinite	?muscovite		salt-pepper groundmass
Dur055	DDH 97-08	162.8	kaolinite	?muscovite		irregular white veins
Dur056	DDH 97-08	163	kaolinite	muscovite		graphitic/trace buff clay
Dur057	DDH 97-08	198	kaolinite	?carbonate	poorly crystalline	white-grey groundmass/pyrite
Dur058	DDH 97-08	198	kaolinite	?carbonate	poorly crystalline	white-grey groundmass/pyrite vein
Dur059	DDH 97-08	200.5	kaolinite	?carbonate		white-grey groundmass/clay
Dur060	DDH 97-08	200.5	kaolinite	?carbonate		white-grey groundmass/clay
Dur061	DDH 98-03	95.2	illite	chlorite, kaolinite		white phenocryst/grey-green matrix
Dur062	DDH 98-03	95.2	illite	chlorite, kaolinite		white phenocryst/grey-green matrix
Dur063	DDH 98-03	137.2	illite	chlorite		fine grey groundmass/drill oil

Audrey Robitaille
Anne JB Thompson, P.Geo.

Spectra ID	Drill Hole	Metre	Major Mineral	Minor Minerals	SWIR Feature	Description
Dur064	DDH 98-03	137.2	clay		noise	fine-grained grey drill core
Dur065	DDH 98-04	97.2	kaolinite			laminated/clays-scale/clays.
Dur066	DDH 98-04	97.2	kaolinite, carbonate			cross cutting tan veinlet
Dur067	DDH 98-04	162.7	kaolinite	?carbonate	noise	medium-grained/grey/clays
Dur068	DDH 98-04	162.7	Fe-dolomite	kaolinite		cross cutting carbonate vein
Dur069	DDH 98-04	162.8	kaolinite	?illite		white phenocryst/grey matrix
Dur070	DDH 98-04	162.8	kaolinite	?illite	poorly crystalline	white phenocryst/grey matrix
Dur071	DDH 98-04	170.6	kaolinite		crystalline	fine-grained tan groundmass
Dur072	DDH 98-04	170.5	kaolinite		crystalline	fine-grained tan groundmass
Dur073	DDH 98-04	181.9	kaolinite			chalky groundmass/trace quartz
Dur074	DDH 98-04	181.9	kaolinite			chalky groundmass/tan veins
Dur076	DDH 98-05	123.6	illite	chlorite		white phenocrysts/grey matrix/clay
Dur076	DDH 98-05	123.6	illite, gypsum	chlorite		white phenocrysts/mm-scale rusty vein
Dur077	DDH 98-06	15	Fe-dolomite	kaolinite		2-cm quartz vein/tan vein selvage
Dur078	DDH 98-06	15	kaolinite	chlorite		fine-grained groundmass/Fe-oxides
Dur079	DDH 98-06	92	chlorite			fine-grained grey core sample
Dur086	DDH 98-06	92	chlorite	illite		fine-grained grey core sample
Dur081	DDH 98-06	121.5	chlorite			fine grey groundmass/breccia
Dur082	DDH 98-06	121.5	Fe-chlorite			fine grey groundmass/breccia
Dur083	DDH 98-06	151.5	illite	kaolinite (tr.)		pale grey groundmass/clay
Dur084	DDH 98-06	161.5	illite	kaolinite (tr.)		pale grey groundmass/clay
Dur085	DDH 98-06	162	kaolinite		crystalline	fine buff groundmass/carbonate vein
Dur086	DDH 98-06	162	kaolinite		crystalline	fine buff groundmass/carbonate vein
Dur087	DDH 98-06	178	illite		2208	fine-grained/pale grey/mm-scale veins
Dur086	DDH 98-06	178	Fe-dolomite		reference	scale-scale white carbonate vein
Dur089	DDH 98-06	181	dickite	arbonate (?dolomite)		pale brown to grey zone
Dur090	DDH 98-06	181	dickite	arbonate (?dolomite)		irregular white veining
Dur091	DDH 98-06	185.75	Fe-dolomite	clay (tr.)		scale-scale white carbonate vein
Dur092	DDH 98-06	185.75	kaolinite		crystalline	fine-grained grey groundmass
Dur093	DDH 98-06m	187.5	calcite	quartz		irregular white carbonate vein
Dur094	DDH 98-06m	187.5	clay	quartz	noise	fine-grained/grey/sulfide
Dur095	DDH 98-06m	189	clay		noise	dark grey/scale-scale carbonate veins
Dur096	DDH 98-06m	190	kaolinite			fine buff groundmass/breccia
Dur097	DDH 98-06m	190	kaolinite			fine buff groundmass/breccia
Dur098	DDH 98-06m	205	kaolinite, illite	?carbonate	poorly crystalline	fine buff core sample
Dur099	DDH 98-06m	205	kaolinite, illite	?carbonate	poorly crystalline	fine buff core sample
Dur100	DDH-98-06	215.3	kaolinite			fine-grained, buff clays
Dur101	DDH 98-06m	215.3	kaolinite		crystalline	fine-grained/buff/clays
Dur102	DDH 98-06m	227.5	kaolinite	?carbonate		breccia/buff fragment/grey matrix
Dur103	DDH 98-06m	227.5	kaolinite	carbonate		breccia/buff fragment/grey matrix
Dur104	DDH 98-06m	231.5	clay		noise	fine grey groundmass
Dur105	DDH 98-06m	231.5	?clay		noise	fine grey groundmass
Dur106	DDH 98-06m	231.6	clay		noise	fine grey groundmass
Dur107	DDH 98-06m	240	kaolinite	?carbonate		fine-grained buff zone
Dur108	DDH 98-06m	240	kaolinite			fine-grained grey zone
Dur109	DDH 98-06m	245	kaolinite			fine-grained buff core sample
Dur110	DDH 98-06m	245	kaolinite	no H2O	reference	fracture coating/white clay
Dur111	DDH 98-06m	248.1	kaolinite	unknown phase		grey groundmass/scale-scale veins
Dur112	DDH 98-06m	248.1	Fe-dolomite	kaolinite		cm scale white vein/breccia
Dur113	DDH 98-06m	255.6	Fe-dolomite	kaolinite		thinly laminated/carbonate
Dur114	DDH 98-06m	255.6	kaolinite			grey-buff/laminated
Dur115	DDH 98-06m	258	kaolinite			grey matrix/white phenocryst
Dur116	DDH 98-06m	258	kaolinite, Fe-dolomite			white phenocryst/carbonate veins
Dur117	DDH 98-07	57.7	kaolinite			white-buff groundmass
Dur118	DDH 98-07	57.7	kaolinite			white-buff groundmass
Dur119	DDH 98-07	70	kaolinite		crystalline	fine grey groundmass/clay
Dur120	DDH 98-07	70	kaolinite	unknown phase	extra features	black material/thin veins
Dur121	DDH 98-07	75	kaolinite			breccia/grey matrix/mm-scale fragments
Dur122	DDH 98-07	75	kaolinite			breccia/grey matrix/mm-scale fragments
Dur126	DDH 98-07	77.4	kaolinite			grey matrix/scale-scale fragment/clay
Dur124	DDH 98-07	77.4	kaolinite			grey matrix/scale-scale fragment/clay
Dur125	DDH 98-09	98.8	illite, carbonate	kaolinite		rounded fragment/grey matrix
Dur126	DDH 98-09	98.8	kaolinite	carbonate		rounded fragment/grey matrix

Audrey Robitaille
Anne JB Thompson, P.Geo.

Spectra ID	Drill Hole	Metre	Major Mineral	Minor Minerals	SWIR Feature	Description
Dur127	DDH 98-09	40.5	kaolinite			tan clays/Fe-oxide
Dur128	DDH 98-09	40.5	kaolinite			tan clays/Fe-oxide
Dur129	DDH 98-09	45	illite	?carbonate	poorly crystalline	grey groundmass/fine
Dur130	DDH 98-09	45	illite	?carbonate	poorly crystalline	grey groundmass/fine
Dur131	DDH 98-09	46	u/r		noise	black/carbonaceous
Dur132	DDH 98-10	10	kaolinite			fine grey groundmass/Fe-oxides
Dur133	DDH 98-10	10	kaolinite			fine grey groundmass/Fe-oxides
Dur134	DDH 98-10	19	kaolinite			fine buff groundmass
Dur135	DDH 98-10	19	kaolinite			fine buff groundmass
Dur136	DDH 98-10	21.5	kaolinite			rusty brown zone/fine
Dur137	DDH 98-10	21.5	kaolinite			fine-grained/buff zone
Dur134	DDH 98-10	34	kaolinite	smectite	poorly crystalline	buff zone/fine-grained
Dur139	DDH 98-10	34	clay	quartz	noise	grey zone/fine-grained
Dur140	DDH 98-10	39.5	kaolinite	smectite.		fine-grained grey groundmass
Dur141	DDH 98-10	39.5	kaolinite	smectite	poorly crystalline	fine-grained grey groundmass
Dur142	DDH 98-10	43.8	kaolinite	?carbonate		white groundmass/laminated
Dur143	DDH 98-10	43.8	Fe-dolomite		reference	grey laminated bands
Dur144	DDH 98-10	51.6	kaolinite			buff-orange groundmass/pyrite
Dur145	DDH 98-10	51.6	kaolinite			buff-orange groundmass/pyrite
Dur146	DDH 98-10	69.8	kaolinite		poorly crystalline	fine light grey groundmass
Dur147	DDH 98-10	69.8	dolomite	kaolinite		crystalline fracture coating
Dur148	DDH 98-10	72	kaolinite			white chalky groundmass
Dur149	DDH 98-10	72	kaolinite	arbonate (?dolomite)		white chalky groundmass
Dur156	DDH 98-10	78.6	kaolinite			grey groundmass/white phenocrysts
Dur151	DDH 98-10	78.6	kaolinite			grey groundmass/white phenocrysts
Dur152	DDH 98-10	101	kaolinite			grey groundmass/Fe-oxides
Dur153	DDH 98-10	101	kaolinite			grey groundmass/Fe-oxides
Dur154	DDH 98-11	25	u/r		noise	grey groundmass/Fe-oxides
Dur155	DDH 98-11	51	kaolinite, illite/smectite		poorly crystalline	fine-grained grey groundmass
Dur156	DDH 98-11	51	illite/smectite	kaolinite	poorly crystalline	fine-grained grey groundmass
Dur157	DDH 98-11	61.5	kaolinite			white chalky groundmass
Dur158	DDH 98-11	61.5	kaolinite			white chalky groundmass
Dur159	DDH 98-11	101	kaolinite	illite		fine-medium-grained/white clay
Dur160	DDH 98-11	101	kaolinite	illite		fine-medium-grained/white clay
Dur161	DDH 98-11	129	kaolinite			white chalky coating
Dur162	DDH 98-11	129	kaolinite			fine-grained white groundmass
Dur163	DDH 98-11	157	kaolinite			coarse buff fragment
Dur164	DDH 98-11	157	kaolinite, dolomite			white matrix/carbonate /Fe-oxides
Dur165	DDH 98-11	198	kaolinite		noise	fine-grained grey/granular
Dur166	DDH 98-11	198	kaolinite		noise	fine-grained grey/granular
Dur167	DDH 98-11	212	Fe-dolomite	kaolinite		white carbonate veins/graphite
Dur168	DDH 98-11	212	quartz	te/smectite, ?carbonate		grey quartz/massive
Dur169	DDH 98-11	240	illite/smectite	chlorite, kaolinite		fine-grained grey groundmass
Dur170	DDH 98-11	240	kaolinite, smectite			fine-grained grey groundmass
Dur171	Zone 5		illite, scorodite			Main trench/Watson Bar
Dur172	Zone 5		scorodite			Main trench/Watson Bar
Dur173	Zone 5		scorodite, illite			coarse white bladed crystals
Dur174	Zone 5		scorodite			coarse white bladed crystals
Dur175	Zone 5		scorodite	quartz		coarse white bladed crystals
Dur176	Zone 5		scorodite			white quartz vein/dark grey groundmass
Dur177	Zone 5		scorodite	?quartz		grey rock sample/cavity/Fe-oxides
Dur178	Zone 4		kaolinite			coarse buff-tan fragment/rusty matrix
Dur179	Zone 4		kaolinite			fine-grained rusty to orange matrix
Dur180	Zone 4		Fe-dolomite	tr. Illite		slabbed rock/grey-rusty groundmass
Dur181	Zone 4		dickite		noise	slabbed rock/grey-rusty groundmass
Dur182	Sample 4		quartz	dickite, ?+	noise	grey quartz/uniform/Fe-oxides

Audrey Robitaille
Anne JB Thompson, P.Geo.