BRITISH COLUMBIA

Ministry of Energy & Mines
Energy & Minerals Division
Geological Survey Branch

BRITISH COLUMBIA GEOLOGICAL SURVEY

ASSESSMENT REPORT
TITLE PAGE AND SUMMARY

TITLE OF REPORT [type of survey(s)]   TOTAL COST $22,107.15

AUTHOR(S) Gwendolen Ditson   SIGNATURE(S) [signature]

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) NA   YEAR OF WORK 2009

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) 4342669
September 11, 2009

PROPERTY NAME NEWTON

CLAIM NAME(S) (on which work was done) NEWTON I - 208327

COMMODITIES SOUGHT Cu, Au

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN 920 050

MINING DIVISION Clinton   NTS 920/13

LATITUDE 51 ° 48.17 ' ______ "   LONGITUDE 123 ° 37.05 ' ______ " (at centre of work)

OWNER(S)
1) High Ridge Resources Inc.   2)

MAILING ADDRESS
3221 Wayne Drive
North Vancouver, B.C. V7N 4B9

OPERATOR(S) [who paid for the work]
1) Amarc Resources Ltd.   2)

MAILING ADDRESS
1020-800 W. Pender St.
Vancouver, B.C. V6C 2V6

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Diorite, feldspar porphyry, quartz feldspar porphyry, dacite and granite intrude mafic flows, volcaniclastics, felsic tuffs and felsic flows. Mineralization is associated with texturally-destructive phyllic and argillic alteration.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS 11001, 18081, 20585, 23114, 23660, 24724, 25264, 27497, 28011, 29088

(OVER)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			$22,107.15
~~Photo interpretation~~ Relogging Drill core			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ...)			
Soil			
Silt			
Rock			
Other			
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
		TOTAL COST	$22,107.15

Assessment Report on
Geological and Geochemical Work

Performed on the NEWTON Property

Located in the Clinton Mining Division

NTS: 92O/13
BCGS: 092O.072,073,082,083

BC Geological Survey
Assessment Report
31221

Centred at approximately

51^0 48.17' N Latitude
123^0 37.05' W Longitude
5,739,271 m N, 457,416 m E
UTM NAD 83, Zone 10

Owner: High Ridge Resources Inc.
Operator: Amarc Resources Ltd.
Optionor: Amarc Resources Ltd.

Tenure Numbers:

208327, 414743, 507905, 507914, 511965, 511967, 514976, 514979, 514981

Author:

Gwendolen Ditson, M.Sc., P.Geo.

December 7, 2009

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SUMMARY

The Newton property is located 108 km west-southwest of Williams Lake, B.C., on NTS map sheet 92O/13. The 229 km^2 claim group covers an area of flat to gently rolling topography centred around Newton Hill, 1.6 km northwest of Scum Lake. The property is road-accessible using Highway 20 and well-used forest service roads.

The property is operated by Amarc Resources Ltd., which has an option to acquire 80% of the property from High Ridge Resources Inc.

The earliest recorded exploration on the Newton property was in 1916, but most work on the property was conducted after 1965. Surveys conducted on the property include soils, geology, induced polarization, and magnetometer. Trenching was conducted by Rea Gold & Verdstone Gold Corp. in the period between 1990 and 1996. Drill programs by Cyprus Exploration, Taseko Mines, Verdstone Gold and High Ridge Resources were conducted between 1971 and 2006. A total of 8 percussion holes and 31 diamond drill holes have been completed on the property.

The area of interest is underlain by a window of Mesozoic rocks surrounded by overlying Cenozoic volcanics. Mesozoic rocks include Jurassic to Cretaceous calc-alkaline volcanic and sedimentary rocks. These units are intruded by Eocene feldspar porphyry.

Re-examination of the 2006 diamond drill holes has allowed the definition of five separate intrusive rock types, including diorite, feldspar porphyry, quartz feldspar porphyry, dacite dykes, and granitic stocks. These rocks intrude mafic flows and hematitic volcaniclastics, ash tuffs, and felsic flows. Strongest mineralization is associated with disseminated sulphides hosted by texturally-destructive clay-rich alteration which may be preferentially localized in volcaniclastic units. Veins are not characteristic of this mineralization.

The analysis of 75 selected samples by TerraSpec spectrometer revealed the presence of illite, kaolinite, muscovite and smectite in zones of argillic and sericitic alteration. This assemblage suggests that mineralization at Newton may have occurred in the transition zone between epithermal and porphyry environments.

Investigation of the potential for precious-metal enhanced mineralization associated with the near-epithermal environment is recommended.

INTRODUCTION

The Newton property is a Joint Venture between Amarc Resources Ltd. and High Ridge Resources Inc. Work detailed in this report consists of a field program in which the core for all holes drilled in 2006 was re-examined, and 75 selected samples were analyzed using a TerraSpec spectrometer. Core was located on site in core racks which were in disrepair and in the process of collapsing, making it a labour-intensive job. At the end of the job, core was left cross-stacked near the old racks. A total of 2,019.5 m of drill core was examined in May and June, 2009.

LOCATION AND ACCESS

The Newton property is located in west central British Columbia, in the Clinton Mining Division, on NTS map sheet 92O/13, and BCGS maps 092O.072, 073, 082 and 083. The area of the current work program is approximately 108 km west-southwest of Williams Lake, B.C., at 51º 48.17’ N Latitude and 123º 37.05’ W Longitude; or UTM Zone 10 (NAD 83) at 5,739,271 m N and 457,416 m E, as shown in Figure 1.

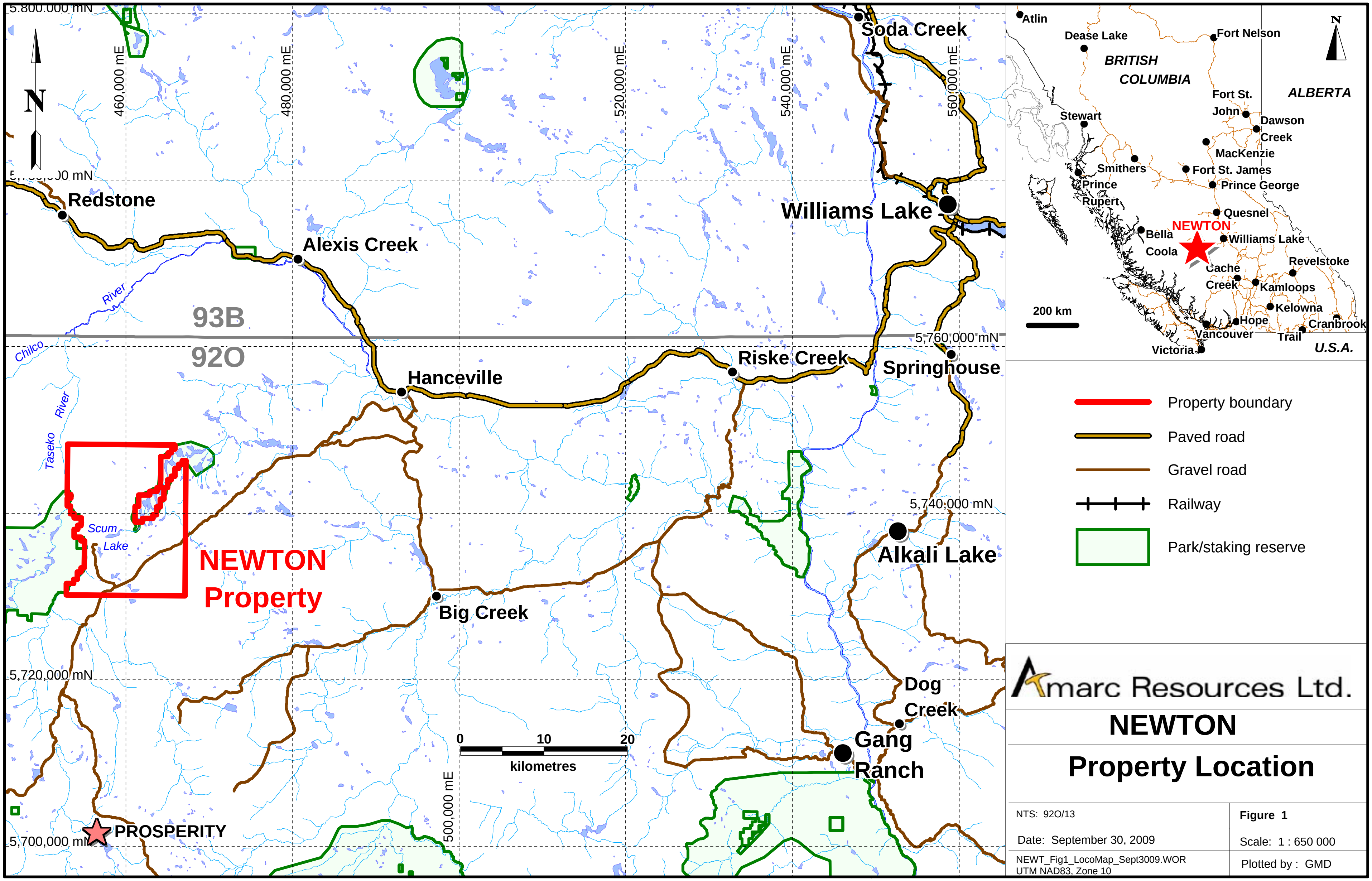
The property is road accessible via paved Highway 20 and all-weather forest service roads. Total driving time from Williams Lake to the Newton Property is approximately 2.5 hours. In good weather, it is recommended that the property be accessed from the 7000 Road, west of Alexis Creek. During winter, the Taseko Lake Road (900 Road) is recommended. Driving instructions from Williams Lake are as follows:

Using the 7000 Road west of Alexis Creek:

- Drive 90 km west on the Chilcotin Hwy (Hwy 20) to Hanceville
- Continue another 40.5 km west on Hwy 20 to the Chilco-Newton Road turn-off
- Drive 5.3 km south on Chilco-Newton Road to the Newton-Whitewater Road (7000 Road) turn-off
- Drive approximately 33 km south along the 7000 Road to an old northeast-southwest road (originally a seismic line)
- Turn right and go about 2.1 km southwest on the old seismic line road, then turn left onto another secondary road and go about 0.6 km to the core facilities

Using the 900 Road, southwest of Hanceville:

- Drive 90 km west on the Chilcotin Hwy (Hwy 20) to Hanceville
- Drive 8.7 km south on Big Creek-Fletcher Lake Road (700 Rd) – also known (in part) as the Hanceville-Canoe Creek Road – to the 900 Road
- Drive 12.7 km west on the 900 Road to the Taseko Lake Road (900 Road)
- Drive approximately 28.9 km southwest on the Taseko Lake Road (900 Road) to the Newton-Whitewater Road (7000 Rd)
- Drive approximately 9 km north along the Newton-Whitewater Road (7000 Rd), past Scum Lake



5,800,000 mN
5,780,000 mN
5,760,000 mN
5,740,000 mN
5,720,000 mN
5,700,000 mN
460,000 mE
480,000 mE
500,000 mE
520,000 mE
540,000 mE
560,000 mE
N
Soda Creek
Redstone
Alexis Creek
Williams Lake
River
93B
92O
Chilco
River
Taseko
Hanceville
Riske Creek
Springhouse
Scum
Lake
NEWTON
Property
Alkali Lake
Big Creek
Dog
Creek
Gang
Ranch
0
10
20
kilometres
PROSPERITY
Atlin
Dease Lake
Fort Nelson
BRITISH
COLUMBIA
ALBERTA
Fort St.
John
Dawson
Creek
Stewart
MacKenzie
Smithers
Fort St. James
Prince
Rupert
Prince George
Quesnel
NEWTON
Bella
Coola
Williams Lake
Revelstoke
Cache
Creek
Kamloops
Kelowna
200 km
Hope
Vancouver
Cranbrook
Trail
Victoria
U.S.A.
Property boundary
Paved road
Gravel road
Railway
Park/staking reserve
Amarc Resources Ltd.
NEWTON
Property Location
NTS: 92O/13
Figure 1
Date: September 30, 2009
Scale: 1 : 650 000
NEWT_Fig1_LocoMap_Sept3009.WOR
UTM NAD83, Zone 10
Plotted by : GMD

PHYSIOGRAPHY AND CLIMATE

The Newton property is situated in the Chilcotin Forest District of the Southern Interior Forest Region. The region has been extensively logged, and lies within an area of extensive beetle kill. The drilled area of the Newton property is open forest populated primarily by Douglas fir with minor lodgepole pine, and rare aspen. Topography is generally flat to gentle, varying from 1200 m at Scum Lake to 1375 m at the peak of Newton Hill. The Taseko River cuts through the western side of the claim area, along a deeply incised valley with a relief of 350 m at Newton Hill.

Temperatures in Williams Lake can average 18 to 22 ºC in summer and -8 to +2 ºC in winter, with maximums up to 30 ºC in summer and minimums down to -35 ºC in winter. Annual rainfall and snowfall in 2008 averaged 32.7 cm and 217 cm, respectively (Environment Canada Website http://www.for.gov.bc.ca/dja/TOC.htm).

CLAIMS

The Newton property consists of 58 claims comprising an area of approximately 22,923 hectares (Figure 2). All claims are covered by an option agreement between Amarc Resources Ltd. and High Ridge Resources Inc., through which Amarc can acquire 80% of the property from High Ridge. The work program described in this report was conducted only on tenure number 208327.

The NEWTON I, NWT 5, NWT 7, NWT 8, and 5 unnamed claims are owned 100% by High Ridge Resources Inc. The central claim, NEWTON I, was staked in 1987. The surrounding eight claims were staked in 2004 and 2005. All are presently under option to Amarc Resources Ltd., the operator, who has an option to acquire an 80% interest in the claims listed in Table 1, below.

Table 1. Claims owned by High Ridge Resources Inc.

Tenure No.	Claim Name	Date Recorded	Expiry Date	Area (ha)
208327	NEWTON I	9/14/1987	9/14/2010	500
414743	NWT 5	10/7/2004	6/19/2010	375
507905		2/25/2005	6/19/2010	699.863
507914		2/25/2005	6/19/2010	399.648
511965	NWT 7	5/2/2005	6/19/2010	399.61
511967	NWT 8	5/2/2005	6/19/2010	299.94
514976		6/22/2005	6/19/2010	559.684
514979		6/22/2005	6/19/2010	499.919
514981		6/22/2005	6/19/2010	379.783

The remaining 49 claims were staked by Amarc Resources Ltd. in 2009, and are listed in Table 2, below.

Table 2. Claims Staked by Amarc Resources Ltd. as part of the Newton Option.

Tenure No.	Claim Name	Date Recorded	Expiry Date	Area (ha)
606674	NEWT 19	6/26/2009	6/26/2010	499.8989
606675	NEWT 04	6/26/2009	6/26/2010	500.127
606676	NEWT 20	6/26/2009	6/26/2010	499.898
606677	NEWT 31	6/26/2009	6/26/2010	499.3016
606678	NEWT 05	6/26/2009	6/26/2010	500.1263
606679	NEWT 21	6/26/2009	6/26/2010	299.9376
606680	NEWT 06	6/26/2009	6/26/2010	500.1244
606681	NEWT 32	6/26/2009	6/26/2010	499.3501
606682	NEWT 07	6/26/2009	6/26/2010	500.3668
606683	NEWT 33	6/26/2009	6/26/2010	499.3498
606684	NEWT 22	6/26/2009	6/26/2010	199.8939
606685	NEWT 36	6/26/2009	6/26/2010	499.1182
606686	NEWT 23	6/26/2009	6/26/2010	499.6702
606687	NEWT 08	6/26/2009	6/26/2010	500.3687
606688	NEWT 37	6/26/2009	6/26/2010	499.1185
606689	NEWT 09	6/26/2009	6/26/2010	500.3695
606690	NEWT 24	6/26/2009	6/26/2010	299.801
606691	NEWT 38	6/26/2009	6/26/2010	499.0718
606692	NEWT 25	6/26/2009	6/26/2010	439.4779
606693	NEWT 18	6/26/2009	6/26/2010	480.5314
606694	NEWT 17	6/26/2009	6/26/2010	480.5329
606695	NEWT 34	6/26/2009	6/26/2010	459.5622
606696	NEWT 26	6/26/2009	6/26/2010	499.3194
606697	NEWT 03	6/26/2009	6/26/2010	500.1288
606698	NEWT 35	6/26/2009	6/26/2010	479.2638
606699	NEWT 02	6/26/2009	6/26/2010	500.13
606700	NEWT 43	6/26/2009	6/26/2010	299.3334
606701	NEWT 10	6/26/2009	6/26/2010	500.3709
606702	NEWT 27	6/26/2009	6/26/2010	479.3948
606703	NEWT 11	6/26/2009	6/26/2010	500.3718
606704	NEWT 44	6/26/2009	6/26/2010	399.1302
606705	NEWT 16	6/26/2009	6/26/2010	480.5359
606706	NEWT 45	6/26/2009	6/26/2010	399.1302
606707	NEWT 28	6/26/2009	6/26/2010	419.2966
606708	NEWT 15	6/26/2009	6/26/2010	240.2678
606709	NEWT 46	6/26/2009	6/26/2010	479.0008
606710	NEWT 29	6/26/2009	6/26/2010	419.1817
606711	NEWT 14	6/26/2009	6/26/2010	300.338
606712	NEWT 30	6/26/2009	6/26/2010	179.68
606713	NEWT 13	6/26/2009	6/26/2010	400.3236
606714	NEWT 31	6/26/2009	6/26/2010	379.1717
606715	NEWT 12	6/26/2009	6/26/2010	120.0586
606716	NEWT 32	6/26/2009	6/26/2010	219.4908
606717	NEWT 01	6/26/2009	6/26/2010	240.0515
615743	NEWT47	8/7/2009	8/7/2010	59.94

Tenure No.	Claim Name	Date Recorded	Expiry Date	Area (ha)
615803	NEWT 48	8/7/2009	8/7/2010	20
615843	NEWT 49	8/7/2009	8/7/2010	19.99
615863	NEWT 50	8/7/2009	8/7/2010	39.96
616023	NEWT 51	8/7/2009	8/7/2010	79.92

EXPLORATION HISTORY

The earliest known work on the Newton property occurred in 1916 when a Mr. Newton produced gold from a small shaft and some open cuts (Durfeld, 1994). No further work is reported until 1965. The following summary of the exploration history of the Newton property is taken from Assessment Report 29088, (Hantelmann, 2007). A tabular list of historical work follows (Table 3).

In 1965, South-West Potash (Amex) and K. W. Livingstone reportedly performed soil surveys with negative results.

The first documented work on Newton Hill was by Cyprus Exploration Corporation Inc., where in 1972 geological mapping, magnetometer and Induced Polarization (IP) surveys followed by 1615 m of BQ diamond drilling were completed. The IP survey delineated an elliptical anomaly encompassing a gossanous zone and identified an estimated 5% sulphide halo around Newton Hill. Results from the diamond drilling failed to identify ore grade copper mineralization, and no analyses were made for gold.

Taseko Mines acquired what were the Ski claims in 1981. Eight percussion holes were drilled totalling 2095 ft, and another 1913 ft through four diamond drill-holes were completed in 1982. Copper, gold and silver assays of selected samples did not identify any results that were considered significant at that time.

R. M. Durfeld and A. J. Schmidt acquired the rights the Newton Hill claims in 1987. A soil geochemical survey, consisting of 82 samples, and re-assaying of selected core samples from the 1972 drilling program was conducted in 1988.

In 1989, in conjunction with Rea Gold Corp., additional soil sampling was conducted. A total of 218 soil samples were collected and analyzed for copper, gold, silver, and arsenic.

From 1990 through to 1992, Rea Gold Corp/Verdstone Gold Corp. conducted geological mapping, soil sampling, trenching and diamond drilling. In 1990, an 18.5 line-mile grid was constructed and a total of 1153 soil samples subsequently collected and analyzed for copper, gold, arsenic, mercury, and molybdenum. Twelve trenches totalling 4,048 ft were excavated, and 606 rock samples were collected and analyzed.

In 1996, Verdstone Gold Corp. completed 90 m of trenching in conjunction with GPS surveying. The trenches identified anomalous copper and gold geochemical anomalies.

In 1997, Verdstone Gold Corp. conducted minor soil sampling in an attempt to infill and expand on the previously identified copper geochemical anomalies.

High Ridge Resources began working on the property in 2004, when the 1972 IP geophysical data was revisited. In 2005, High Ridge conducted a geological investigation and a total field ground magnetic survey. In 2006, 12 diamond drill holes were executed for a total of 2019.5 m of core.

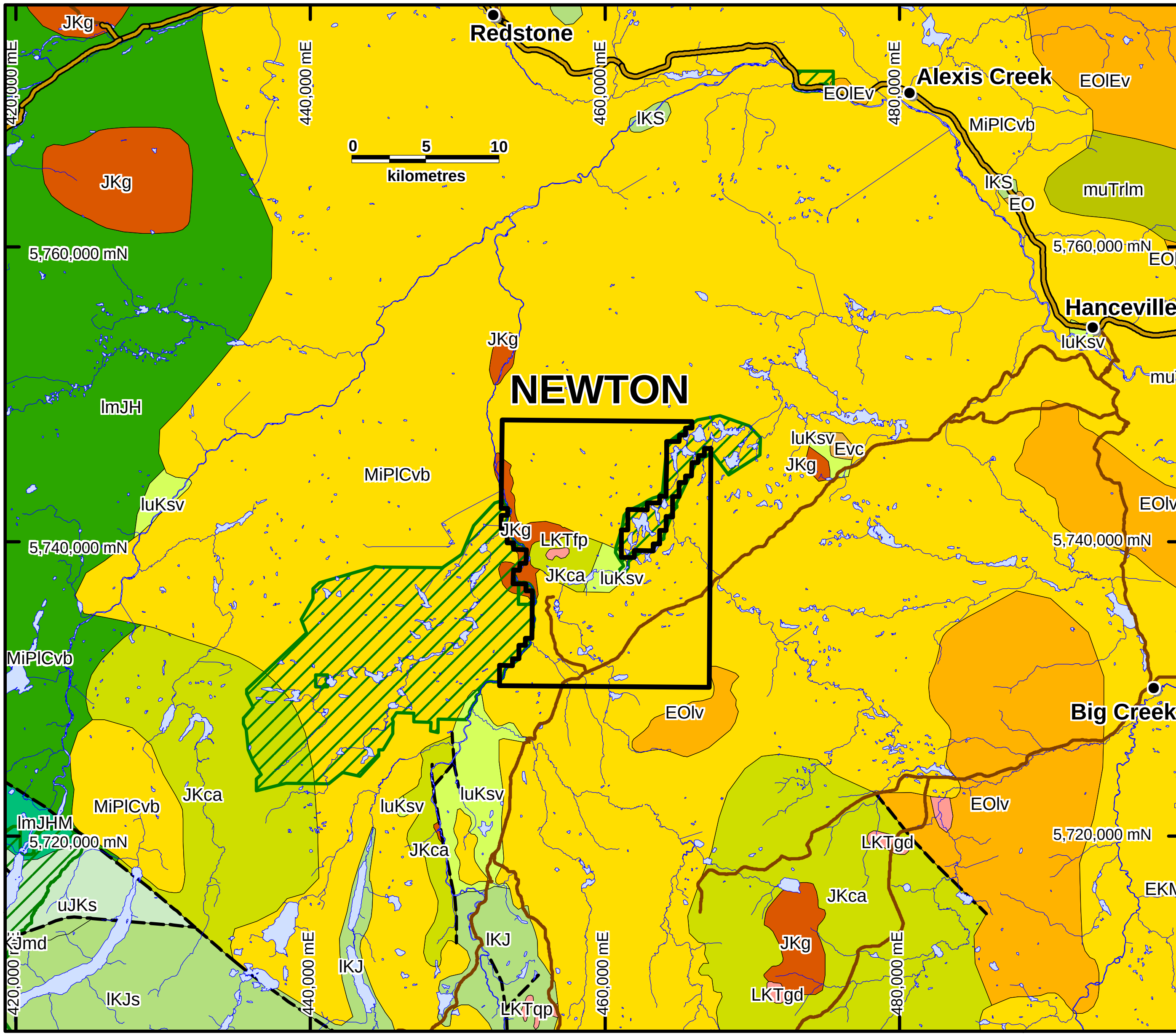
Table 3. History of exploration on the Newton claims.

Year(s)	Owner/Operator	Work done	Assessment Report(s)
1916	Mr. Newton	shaft and open cuts	
1965	Southwest Potash (Amex)	soils	
1971/2	Cyprus Exploration Corp	induced polarization, magnetometer, geology	
		10 diamond drill holes (1615 m)	
1981/2	Taseko Mines (J.R.Woodcock)	8 percussion drill holes (2095 ft)	11001
		4 diamond drill holes (1913 ft)	
1987/8	R. Durfeld, A. Schmidt	resampled/assayed soils, rock, core	18081
1989/90	Rea Gold Corporation	soils	20585
1990/4	Rea Gold & Verdstone Gold Corp	geology, soils, rocks, trenching (4048 ft), ground magnetometer, induced polarizaion	22198, 23114, 23660
		5 diamond drill holes	
1996	Verdstone Gold Corp.	minor trenching (90 m) and surveying	24724
1997	Verdstone Gold Corp.	minor infill soils	25264
2004	High Ridge Resources	revisited old induced polarization data	27497
2005	High Ridge Resources	geology, ground magnetometer, soils orientation	28011
2006	High Ridge Resources	12 diamond drill holes (2019.5 m)	29088

REGIONAL GEOLOGY

The Newton property covers a window of Mesozoic intrusive and volcanic rocks surrounded by extensive overlying Cenozoic volcanic rocks (Fig. 3). Cenozoic rocks are primarily basaltic volcanics of the Miocene to Pleistocene Chilcotin Group, but undivided Eocene to Oligocene volcanics are also present.

According to Massey, *etal*. (2005), the Scum Lake area is underlain by four Mesozoic rock units. The easternmost unit is Lower to Upper Cretaceous marine sedimentary and volcanic rocks (luKsv) described as “Well-stratified chert and volcanic-clast conglomerates; sandstone, siltstone and mudstone; volcanic breccia and lahar; volcanic-plutonic-clast conglomerate.” Underlying this unit to the west are Jurassic to Cretaceous calc-alkaline volcanic rocks (JKca) described as “Andesite beccia, tuffs and flows; dacite; welded tuff; minor quartz-phyric rhyolite, argillaceous tuff and sedimentary rocks.” Intruding these rocks is a small Late Cretaceous to Paleogene feldspar ± biotite porphyry intrusion (LKTfp). The most westerly unit is variably foliated Jurassic to Cretaceous granodiorite, diorite and quartz diorite (JKg), which occupies a large part of the Taseko River valley in this area.



N

Claim boundary

Park or staking reserve

Paved road

Gravel road

Note: Legend on Figure 3b

Geology: Massey, N.W.D., etal., 2005

Amarc Resources Ltd.

NEWTON

Regional Geology

NTS: 92O/13	**Figure 3a**
Date: November 23, 2009	Scale: as shown
NEWT_Fig3_RegGeol_Oct0509.WOR UTM NAD 83, Zone 10	Plotted by : GMD

INTRUSIVE ROCKS

LATE CRETACEOUS TO PALEOGENE

LKTgd
granodiorite

LKTfp
feldspar porphyry

JURASSIC TO CRETACEOUS

JKg
Quartz diorite, granodiorite,
tonalite, diorite

STRATIFIED ROCKS

MIOCENE TO PLEISTOCENE

MiPlCvb
Chilcotin Group
basaltic volcanic rocks

EOCENE TO OLIGOCENE

EOlv
undivided volcanic rocks

EOCENE

EO
Ootsa Lake Group
rhyolite, felsic volcanic rocks

LOWER CRETACEOUS TO UPPER CRETACEOUS

luKsv
marine sedimentary and volcanic rocks

LOWER CRETACEOUS

lKJ
Jackass Mountain Group
undivided sedimentary rocks

UPPER JURASSIC TO LOWER CRETACEOUS

uJKs
undivided sedimentary rocks

JURASSIC TO CRETACEOUS

JKca
calc-alkaline volcanic rocks

LOWER JURASSIC TO MIDDLE JURASSIC

lmJH
Hazelton Group
undivided volcanic rocks

MIDDLE TRIASSIC TO UPPER TRIASSIC

muTrlm
limestone, marble, calcareous
sedimentary rocks

Amarc Resources Ltd.

NEWTON

Regional Geology Legend

	Figure 3b
Date: October 5, 2009	
NEWT_Fig3_RegGeol_Oct0509.WOR UTM NAD83, Zone 10	Plotted by : GMD

Hickson (1993) and Hickson and Higman (1993) describe the volcanic rocks in this area as feldspar-phyric dacite, andesite, lapilli tuff, rhyolite flows and minor intercalated sediments. Hickson also reported the presence of extensive alteration, disseminated pyrite, and quartz veins up to 15 mm wide in exposures along the Taseko River valley and on Newton Hill.

PROPERTY GEOLOGY

Property geology has been shown in previous reports (Howell, 2005a, 2005b) to consist of a series of generally east-west trending Eocene felsic intrusions cutting Cretaceous volcaniclastic and sedimentary rocks, surrounded by overlying Miocene volcanics (Fig. 4). The geology map was created prior to the 2006 drill program, and new information from that drilling suggests that the extent of Miocene volcanic rocks shown on this map is inaccurate. These rocks were not identified in any of the holes that were drilled into the projected location of Miocene volcanics, suggesting that Cretaceous volcanics and Eocene intrusive rocks are more extensive than what is shown on Figure 4.

The following description of lithologies at Newton Hill is based on the examination of drill core from the 2006 diamond drill program. No surface geological mapping was done. Aside from the descriptions presented below, downhole columns illustrating geology and Au, Ag and Cu assay values (Appendix A) and hand-drawn graphic logs (Appendix B) were also produced. The drill core was examined by Dr. James Oliver, Ph.D., P.Geo.

Volcanic and Supracrustal Rocks

Fine-Grained Mafic Flows

Drill holes collared in the eastern half of the property often collar in very fine-grained to weakly plagioclase phyric mafic flows. These rocks have modest magnetic susceptibilities, are non-vesicular, and contain only sporadic textures suggestive of autogenous flow breccias.

Hematitic Volcaniclastics, Ash Tuffs, and Glassy Maroon Felsic Flows

This sequence is characterized by the presence of abundant re-worked lithic and volcanic fragments, by its brick red to maroon color, and by its very high magnetic susceptibility, often over 50 to 100 SI units. The sequence also contains an exceptionally hard, compact, hematitic felsic flow unit. Rocks with pseudo-ignimbritic textures are also identified. The bulk of the data suggests that this sequence is generally flat-lying, with either very shallow west or east dips. The approximate surficial extent of this rock package can probably be defined on a detailed magnetic survey.

Proximal to their contacts with quartz feldspar porphyry intrusions (described below), these rocks become significantly clay-silica-mica-altered, demagnetized, and may carry significant gold-copper concentrations, Plate 1.

Plate 1. Clay-silica altered subaerial volcaniclastics. This unit may be one of the principle hosts to strong mineralization in holes 06-12 and 06-03.

Intrusive Rocks

Diorites to Quartz Diorites

These intrusions are likely pre-mineral and typically form lower grade intervals. Core-indicated intrusive widths are in the 50–100 m range, Plate 2.

Plate 2. Foliated quartz diorite to diorite.

Feldspar Porphyries

These dykes are mineralized at modest levels. They are characterized by well-developed 0.75-1.0 mm scale plagioclase phenocrysts (10-15%), locally lesser hornblende laths (5-8%), minor biotite, and less than 5% free quartz. The large, 350-400 m thick, central felsic intrusive band noted at the Newton hill peak is largely a feldspar porphyry intrusion, Figure 4. These intrusions are likely syn- to slightly post-mineral.

Quartz Feldspar Porphyries

Quartz phyric intrusions are volumetrically subordinate to feldspar porphyry intrusions, but they may have a closer spatial relationships to higher grade mineralized zones. The most southerly 100–150 m wide felsic band on the property scale map is dominantly this intrusive type. Quartz feldspar porphyry intrusions are identified in both drill holes 06–12 and 06–03, Plate 3.

Plate 3. Fine-grained quartz porphyritic dyke. Blue-green aggregates are a clay-sericite assemblage, and small dark flecks are iron-copper-gold sulphides/sulphosalts. This alteration style is common in higher grade mineralized zones.

Glassy Apple Green Dacitic Dykes

These dykes have exceptionally fine-grained matrices, are uniformly sericitized and carry generally low, less than 3%, disseminated pyrite. They are likely pre-mineral, but are volumetrically very minor.

Granitic to Granodiorite Stocks

The regional geological base shows a large granodiorite stock, several kilometres square, located northwest of Newton Hill. This intrusive body is likely pre-mineral, is interpreted to be Cretaceous in age, and may be spatially related to the development of propylitic alteration assemblages which develop with increasing intensity as the southern contact of the stock is approached.

Structural Characteristics

Drill hole data suggests that two significant fault generations are identified, post-mineral and syn-mineral faults.

Post-mineral faults are well-defined by the development of yellow-green montmorillonite assemblages and low pyrite content. They may have significant offsets, since core intercepts locally exceed 10 m. The orientations of these faults have not been determined because of the limited number of drill core pierce points.

Syn-mineral faults are characterized as strongly clay-altered zones with elevated pyrite content. These structures have a loose association to mineralized zones, but the bulk of mineralization is not controlled by them.

Alteration and Mineralization

Three styles of mineralization and alteration are documented at Newton Hill, propylitic alteration, stockwork quartz-sulphide veins, and uniform disseminations.

Propylitic Alteration

Quartz-epidote-pyrite assemblages are well-developed in mafic volcanic rocks (Plate 4). They increase in intensity away from the main gold mineralized zones and toward the northern granodiorite stock. Sheeted veins are locally identified with this alteration style.

Plate 4. Propylitic alteration assemblages in the hangingwall to the mineralized zone in DDH 06-12. The volcanic rock shown here is altered by epidote-calcite-chlorite and is cut by small barren pyritic veinlets.

Stockwork Quartz-Sulphide Veins

Mineralized zones within quartz feldspar porphyry intrusions are locally associated with narrow, black, sulphide-rich and likely inclusion-rich veins. These veins have weak alteration halos, and when present, they appear to be clay-rich. Secondary K-feldspar halos were not identified (Plate 5).

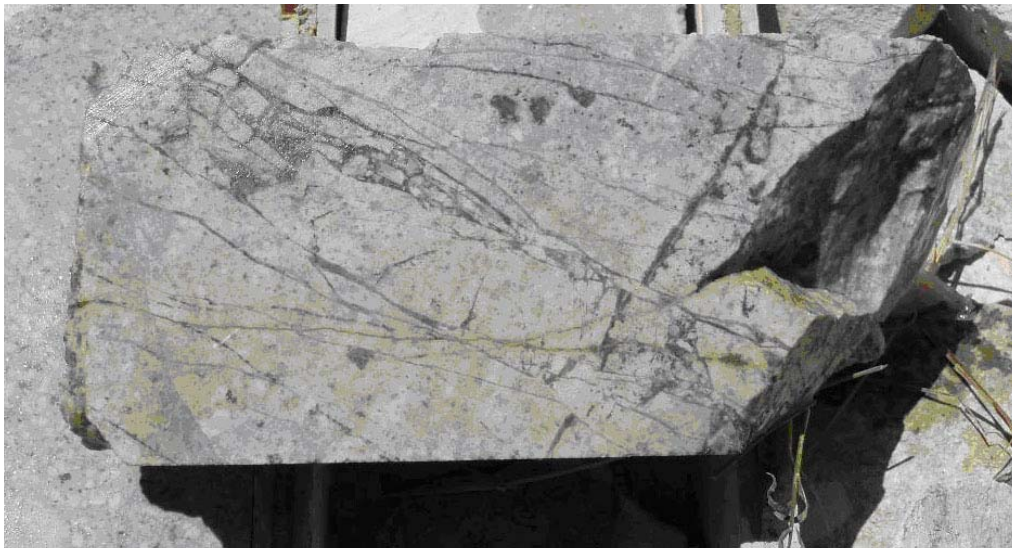


Plate 5. Stockworking black silica-sulphide veins in quartz feldspar porphyry host.

Uniform Disseminations of Fe-Au-Cu-Zn Sulphides, Tellurides and Sulphosalts

The strongest mineralized zones at Newton are associated with small, pin-head disseminations of black to yellow sulphides. Pyrite in these intervals is commonly light silver in colour, and may be arsenical pyrites. These metallic aggregates have no vein association. They are, however, associated with zones of intense texturally-destructive alteration which may be preferentially localized to volcaniclastic units and best developed in the hanging and footwall contacts to quartz feldspar porphyry dykes, Plate 6.

Plate 6. Strong sericite alteration in mineralized zone of DDH 06-12.

TERRASPEC ANALYSES

Seventy-five samples were collected for TerraSpec spectrometer analysis from six drill holes. The objective was to determine the nature of the clay assemblages and gain a better understanding of the hydrothermal system. TerraSpec analyses were conducted by Kim Heberlein, P.Geo. Her report, including stacked spectral data, a mineral identification chart, and specifications are included in Appendices C, D and E.

A summary of the results is presented in Table 4, below.

Table 4. Summary of alteration in drill holes as determined by TerraSpec analyses.

Drill Hole	# Samples	Alteration	Dominant Alteration Mineralogy
06-02	16	argillic/sericitic	illite, kaolinite
06-03	14	sericitic	muscovite, illite
06-04	12	argillic overlying sericitic	illite, muscovite, smectite, kaolinite
06-05	9	mainly argillic	illite, smectite, kaolinite
06-11	10	sericitic surrounded above and below	illite, kaolinite, smectite

Drill Hole	# Samples	Alteration	Dominant Alteration Mineralogy
		by argillic	
06-12	14	argillic overlying sericitic	smectite and kaolinite overlying muscovite and illite

Alteration mineralogy of epithermal systems has been summarized by Hedenquist, *etal*. (1996). Figure 5 illustrates the relationship between hydrothermal minerals, temperature of deposition, and fluid acidity. Illite is formed at temperatures above 200^{o}C, and smectite is generally formed at temperatures lower than 200^{o}C. However, both minerals are formed by fluids of neutral pH. Kaolinite is associated with high acidity fluids at low to moderate temperatures.

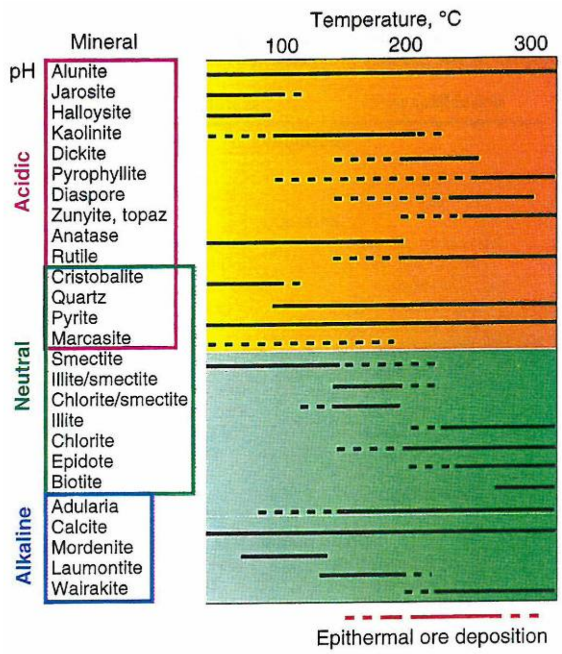


Figure 5. Hydrothermal mineral temperature stability. From Hedenquist, *etal*., 1996.

A schematic representation of the distribution of hydrothermal alteration associated with high and low sulphidation systems is shown in Figure 6, below. Newton falls in the area between low sulphidation and the steam-heated overprint. This setting could occur in the transition zone between epithermal and porphyry environments.

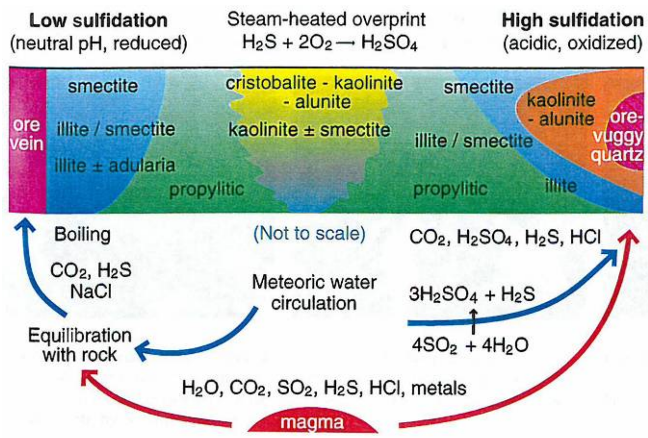


Figure 6. Schematic distribution of hydrothermal alteration. From Hedenquist, *etal*., 1996.

CONCLUSIONS

The major supracrustal units encountered in the 2006 drilling include fine-grained mafic flows and hematitic volcaniclastics, ash tuffs, and glassy maroon felsic flows. These rocks are intruded by diorites, feldspar porphyries, quartz-feldspar porphyries, dacitic dykes, and granitic stocks. Both syn-mineral and post-mineral faults were identified. Mineralization occurs primarily as disseminations in volcaniclastic units associated with texturally-destructive alteration.

Terraspec analyses of selected samples recognized both sericitic and argillic alteration. The illite/kaolinite/muscovite/smectite association places mineralization at Newton in the low sulphidation transition zone between epithermal and porphyry environments.

RECOMMENDATIONS

Further work is recommended to evaluate the potential of the Newton property to host precious metals-enriched mineralization that might be found in the near-epithermal environment.

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STATEMENT OF QUALIFICATIONS

I, ***Gwendolen May Ditson***, do hereby state that:

1. I am a Compilation Geologist working for Amarc Resources Ltd., with offices located at 1020 – 800 West Pender Street, Vancouver, B.C.
2. I am a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, holding License Number 20135.
3. I am a graduate of the University of Southern California (B.S., 1974), and the University of British Columbia (M.Sc., 1978).
4. I have 27 years of experience as an exploration geologist, and have worked in Canada, the United States, Chile, and Mexico.
5. I am the author of this report, and am also responsible for the technical figures.

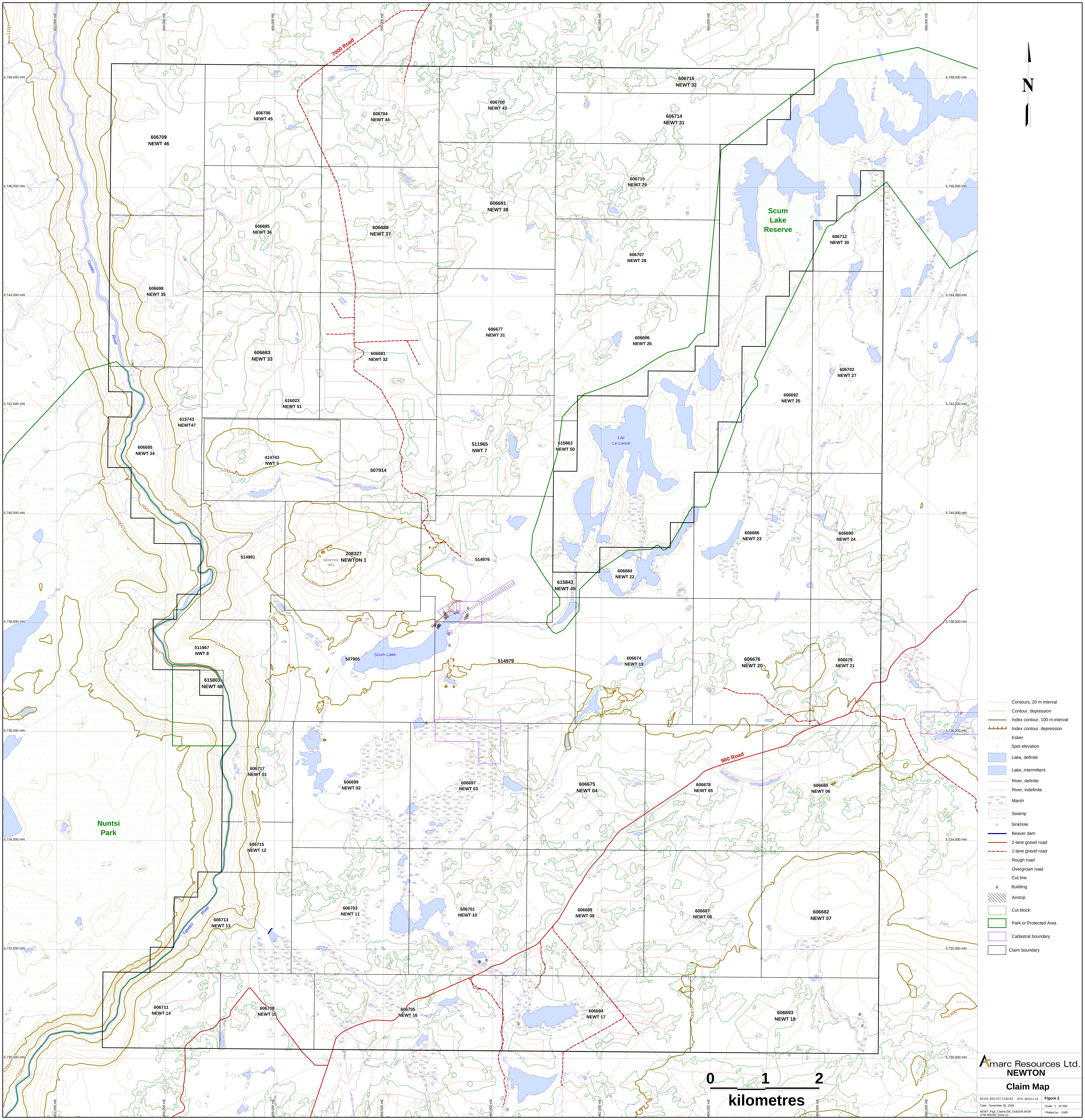
Signed ~~on~~ the 7th day of December, 2009

PROFESSIONAL
PROVINCE OF
G. M. DITSON
BRITISH COLUMBIA
GEOSCIENTIST

Gwendolen May Ditson, M.Sc., P.Geo.

STATEMENT OF COSTS

Exploration Work type	Comment	Days	Rate	Subtotal	TOTALS
Personnel (Name)* / Position	**Geological Days (list actual days)**	**Days**	**Rate**	**Subtotal**	
Jim Oliver, Geologist	May 13,14, Jun 2-7,9,11,12,22,24-26,29	12.25	$863.00	$10,571.75	
Mark Rebagliati, Geologist	May 13,14	2	$1,293.00	$2,586.00	
				$13,157.75	**$13,157.75**
Office Studies	**List Personnel (note - Office only, do not include field days)**				
Supervision					
Mark Rebagliati, Geologist		0.3	$ 1,293.00	$387.90	
Report preparation					
Gwendolen Ditson, P.Geo.		4.0	$750.00	$3,000.00	
Mark Blackmore, Graphics		2.0	$600.00	$1,200.00	
				$4,587.90	**$4,587.90**
Geochemical Surveying		**No.**	**Rate**	**Subtotal**	
PIMA analyses & report	Terraspec		$0.00	$2,258.79	
Soil			$0.00	$0.00	
Rock			$0.00	$0.00	
				$2,258.79	**$2,258.79**
Transportation		**No.**	**Rate**	**Subtotal**	
Airfare	Williams Lake-VCR, return (CMRebagliati)		$0.00	$397.00	
Taxi			$0.00	$97.82	
truck rental		8.00	$80.00	$640.00	
kilometers			$0.00	$0.00	
fuel for rented truck				$355.24	
				$1,490.06	**$1,490.06**
Accommodation & Food		**No.**	**Rate**	**Subtotal**	
Hotel		5.00	$38.00	$190.00	
Hotel		1.00	$118.75	$118.75	
Hotel		1.00	$91.80	$91.80	
Meals				$51.95	
Groceries				$114.08	
				$566.58	**$566.58**
Miscellaneous					
Telephone			$0.00	$0.00	
				$0.00	**$0.00**
Equipment Rentals					
Field Gear (Specify)			$0.00	$0.00	
				$0.00	**$0.00**
Freight, rock samples					
Courier charges				$46.07	
				$46.07	**$46.07**
TOTAL Expenditures					**$22,107.15**



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900 Road
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606706 NEWT 45
606704 NEWT 44
606700 NEWT 43
606714 NEWT 31
606709 NEWT 46
606710 NEWT 29
606691 NEWT 38
606685 NEWT 36
606688 NEWT 37
606707 NEWT 28
606712 NEWT 30
Scum Lake Reserve
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606696 NEWT 26
606683 NEWT 33
606681 NEWT 32
606702 NEWT 27
616023 NEWT 51
606692 NEWT 25
615743 NEWT47
606695 NEWT 34
414743 NWT 5
507914
511965 NWT 7
615863 NEWT 50
Lac Le Lievre
606686 NEWT 23
606690 NEWT 24
514981
NEWTON HILL
208327 NEWTON 1
514976
606684 NEWT 22
615843 NEWT 49
511967 NWT 8
507905
Scum Lake
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606679 NEWT 21
615803 NEWT 48
606717 NEWT 01
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Nuntsi Park
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606687 NEWT 08
606682 NEWT 07
606713 NEWT 13
Taseko River
606711 NEWT 14
606708 NEWT 15
606705 NEWT 16
606694 NEWT 17
606693 NEWT 18
N
0 1 2
kilometres
Contours, 20 m interval
Contour, depression
Index contour, 100 m interval
Index contour, depression
Esker
Spot elevation
Lake, definite
Lake, intermittent
River, definite
River, indefinite
Marsh
Swamp
Sinkhole
Beaver dam
2-lane gravel road
1-lane gravel road
Rough road
Overgrown road
Cut line
Building
Airstrip
Cut block
Park or Protected Area
Cadastral boundary
Claim boundary
Amarc Resources Ltd.
NEWTON
Claim Map
BCGS: 92O.072,73,82,83 NTS: 92O/11-14
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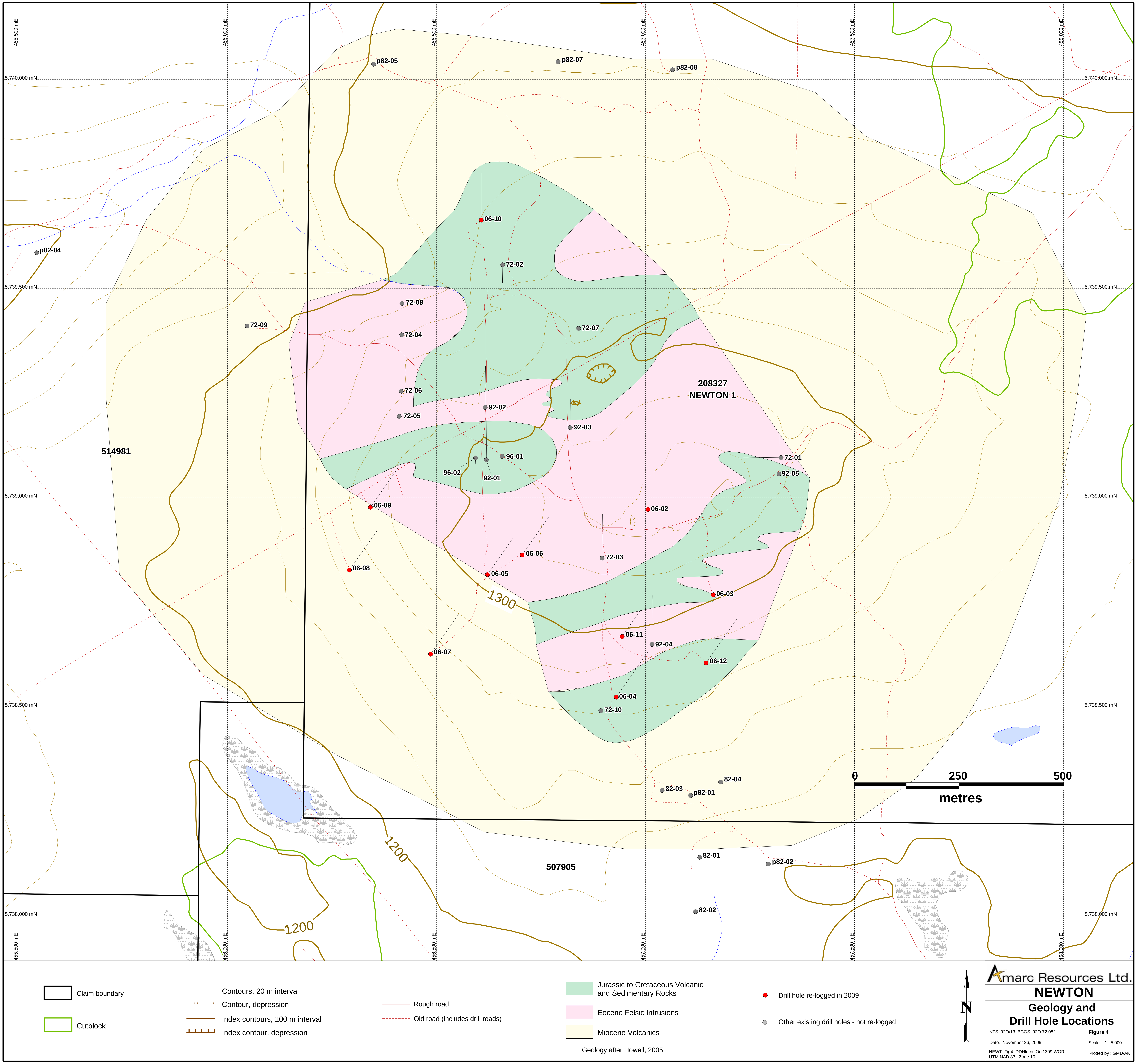
Plotted by : GMD



455,500 mE
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p82-05
p82-07
p82-08
p82-04
06-10
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92-03
208327
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92-04
06-07
06-12
06-04
72-10
82-04
82-03
p82-01
1200
82-01
p82-02
507905
82-02
0
250
500
metres
Claim boundary
Cutblock
Contours, 20 m interval
Contour, depression
Index contours, 100 m interval
Index contour, depression
Rough road
Old road (includes drill roads)
Jurassic to Cretaceous Volcanic and Sedimentary Rocks
Eocene Felsic Intrusions
Miocene Volcanics
Geology after Howell, 2005
Drill hole re-logged in 2009
Other existing drill holes - not re-logged
N
Amarc Resources Ltd.
NEWTON
Geology and
Drill Hole Locations
NTS: 92O/13; BCGS: 92O.72,082
Figure 4
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Scale: 1 : 5 000
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UTM NAD 83, Zone 10
Plotted by : GMD/AK

APPENDIX A

DOWNHOLE COLUMNS

casing	
OVER	overburden
D, mD, QD, DFP	Diorite, microdiorite, quartz diorite. Weakly altered and likely post-mineral.
QFP, FP	Quartz feldspar porphyry and feldspar porphyry dykes
Qhp, QhFP	Hematitic quartz hornblende plagioclase phyric diorite to quartz diorite
Idp	Intermediate dacite porphyry dykes; glassy, apple-green, pre-mineral.
Fhtc, hMct	Hematitic felsic tuff and hematitic quartz porphyritic felsic tuff (minor hematitic mafic crystal tuff)
Flp, Fagg	Felsic lapilli tuff to felsic agglomerate
Ftq	Felsic ash tuff with local small quartz eyes
Ff	Hematitic felsic flow
Mf, Mt	Mafic flows and plagioclase phyric flows, mafic tuff
VCE	Coarse epiclastics, sometimes hematitic
flt	fault

Note that the geology shown in these columns is from Jim Oliver's June 2009 re-logging of 2006 holes.

Amarc Resources Ltd.

NEWTON

Downhole Column Legend (re-logged holes)

Date: October 14, 2009

NEWT_DDHrelogcolumnLEGEND_Oct1409.WOR

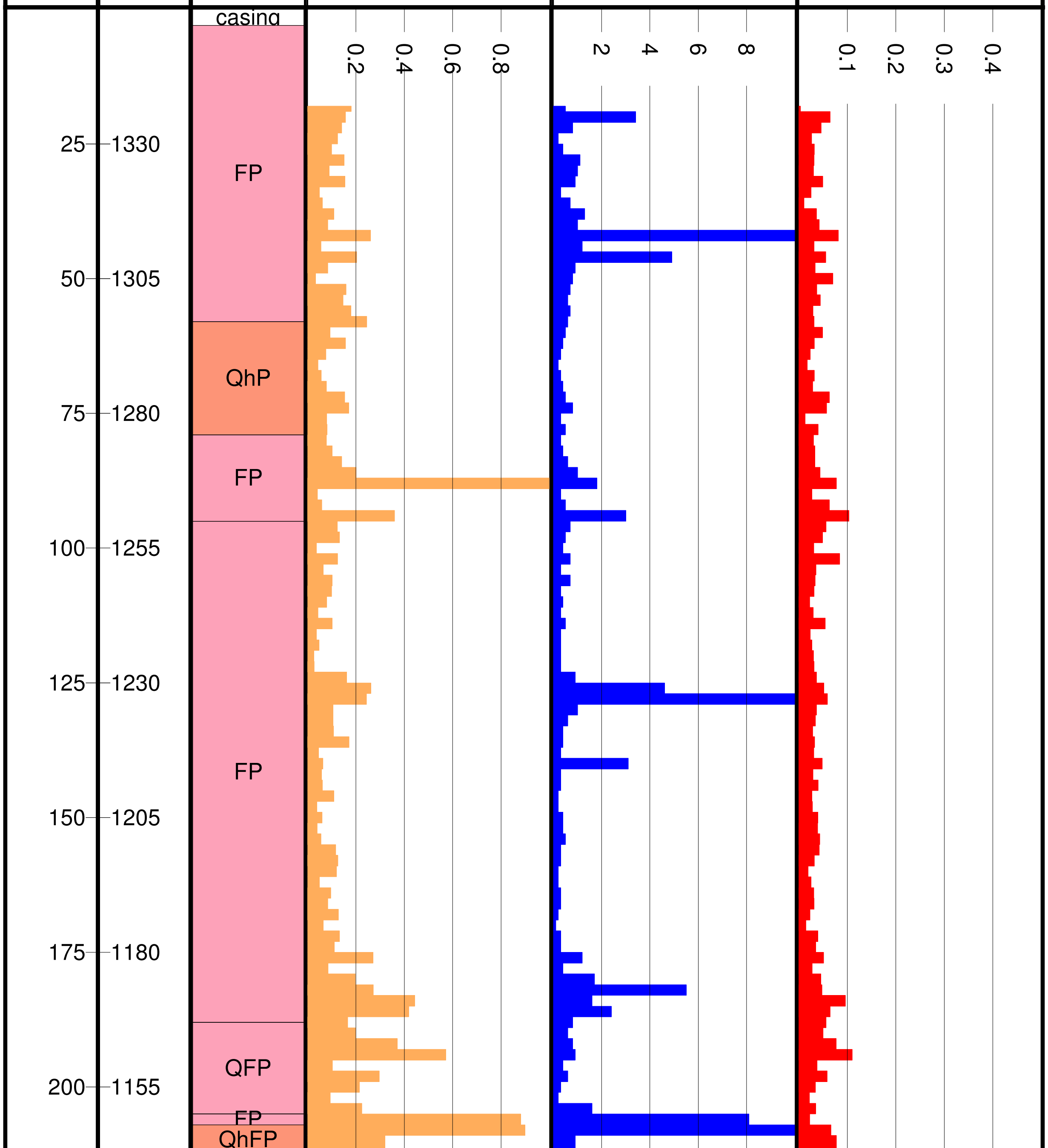
Plotted by : GMD

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-02	AZIMUTH :0	DIP :-90	LENGTH :212.5

LOCATIONX :457006	LOCATIONY :5738972	LOCATIONZ :1355

Depth At	Elevation	Rock Code	AU_G/T	AG_G/T	CU_%



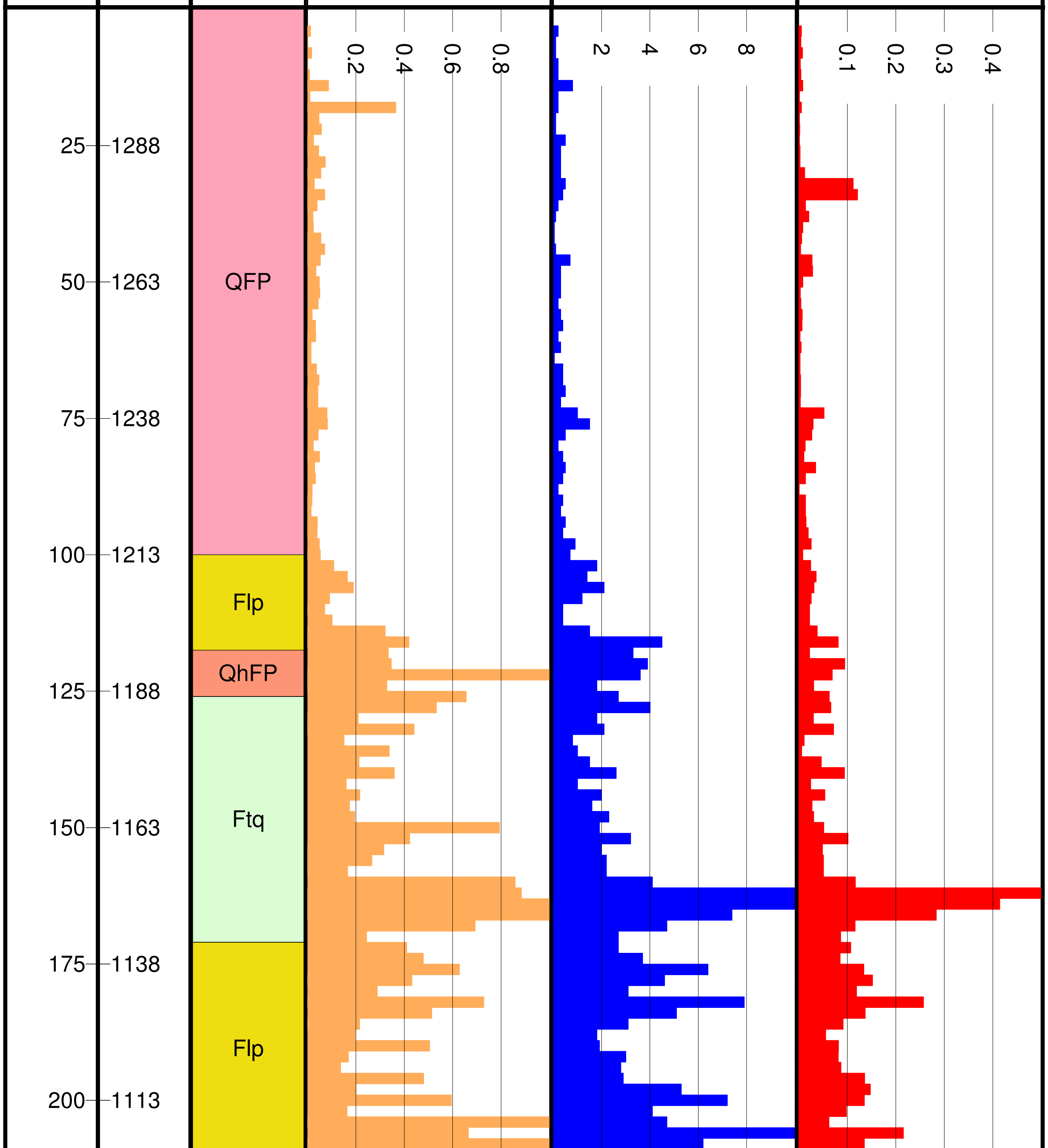
Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-03	AZIMUTH :0	DIP :-87	LENGTH :210

LOCATIONX :457162	LOCATIONY :5738768	LOCATIONZ :1313

Depth At	Elevation	Rock Code	AU_G/T	AG_G/T	CU_%



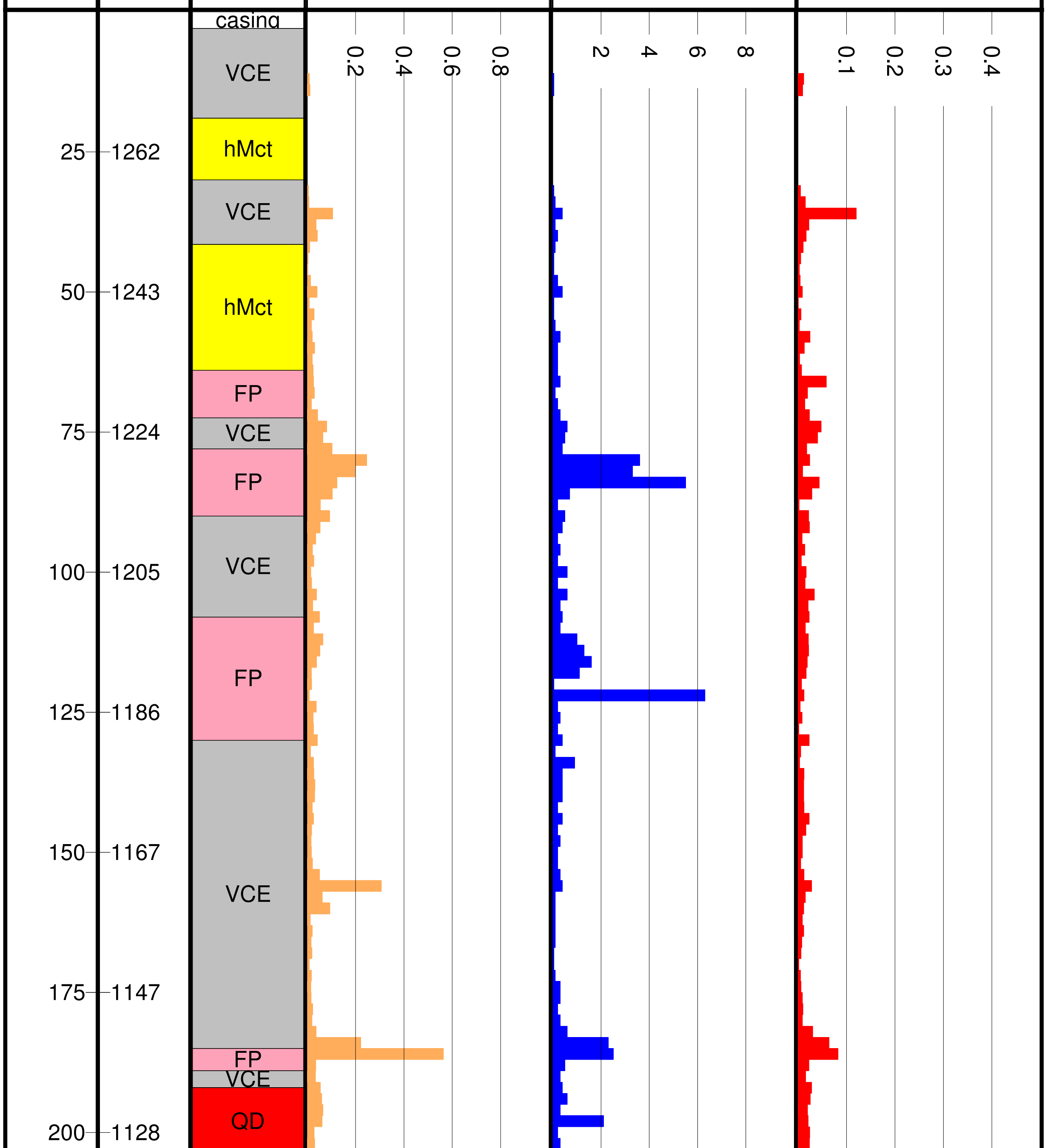
Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-04	AZIMUTH :35	DIP :-50	LENGTH :204

LOCATIONX :456930	LOCATIONY :5738523	LOCATIONZ :1282

Depth At	Elevation	Rock Code	AU_G/T	AG_G/T	CU_%

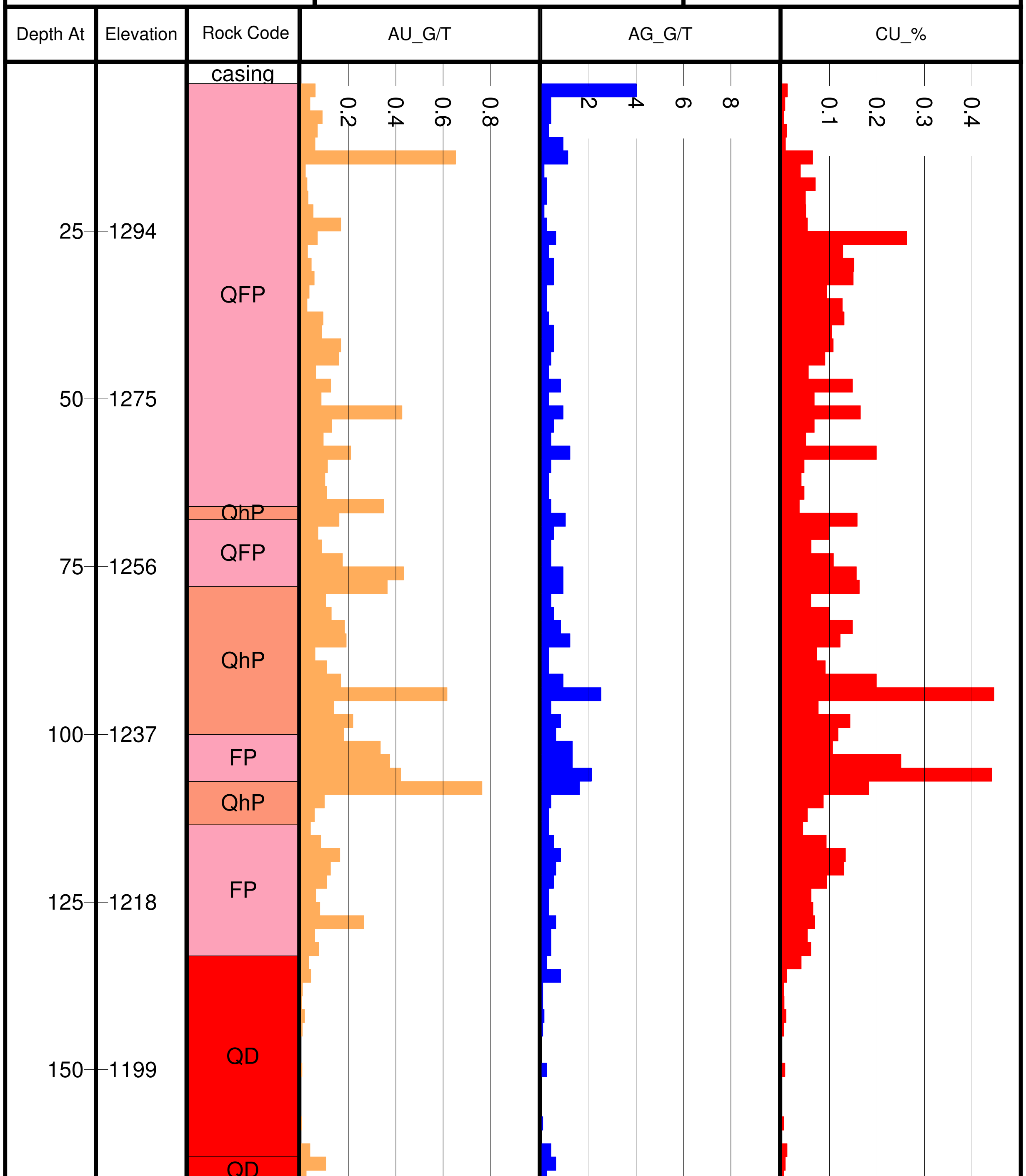


Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-05	AZIMUTH :35	DIP :-50	LENGTH :167

LOCATIONX :456622	LOCATIONY :5738816	LOCATIONZ :1314

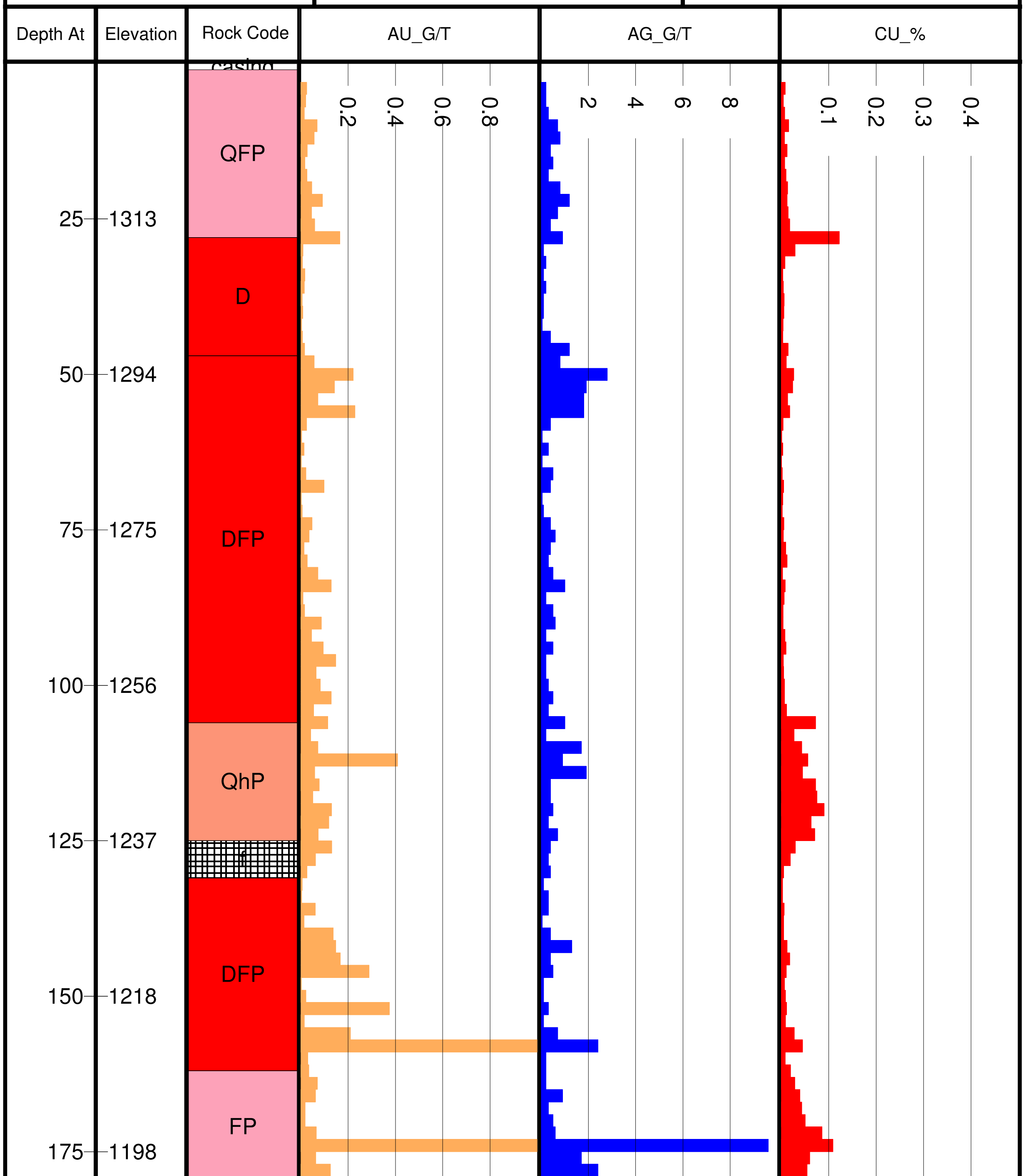


Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-06	AZIMUTH :35	DIP :-50	LENGTH :180

LOCATIONX :456705	LOCATIONY :5738863	LOCATIONZ :1333



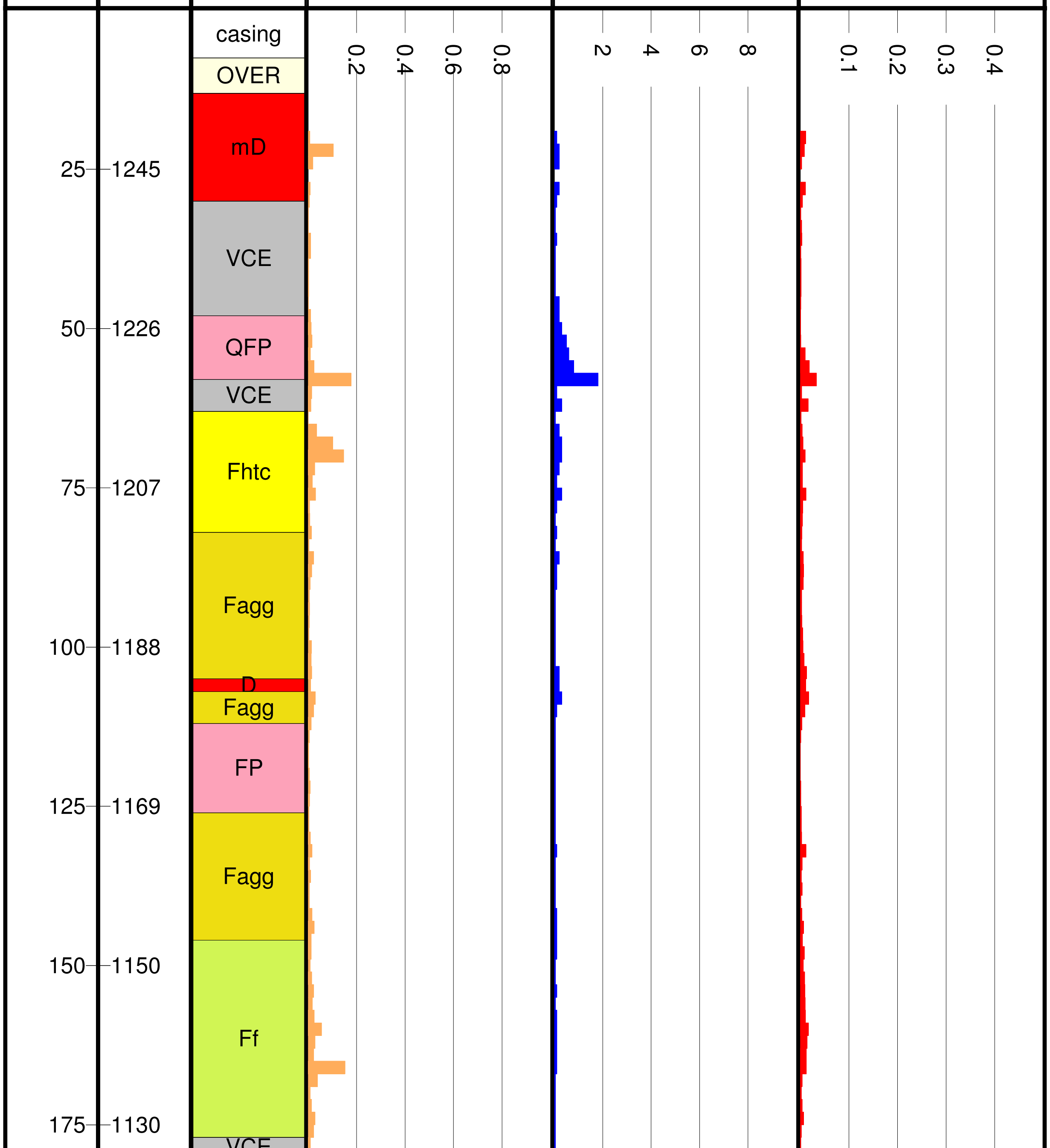
Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-07	AZIMUTH :35	DIP :-50	LENGTH :180

LOCATIONX :456486	LOCATIONY :5738626	LOCATIONZ :1265

Depth At	Elevation	Rock Code	AU_G/T	AG_G/T	CU_%

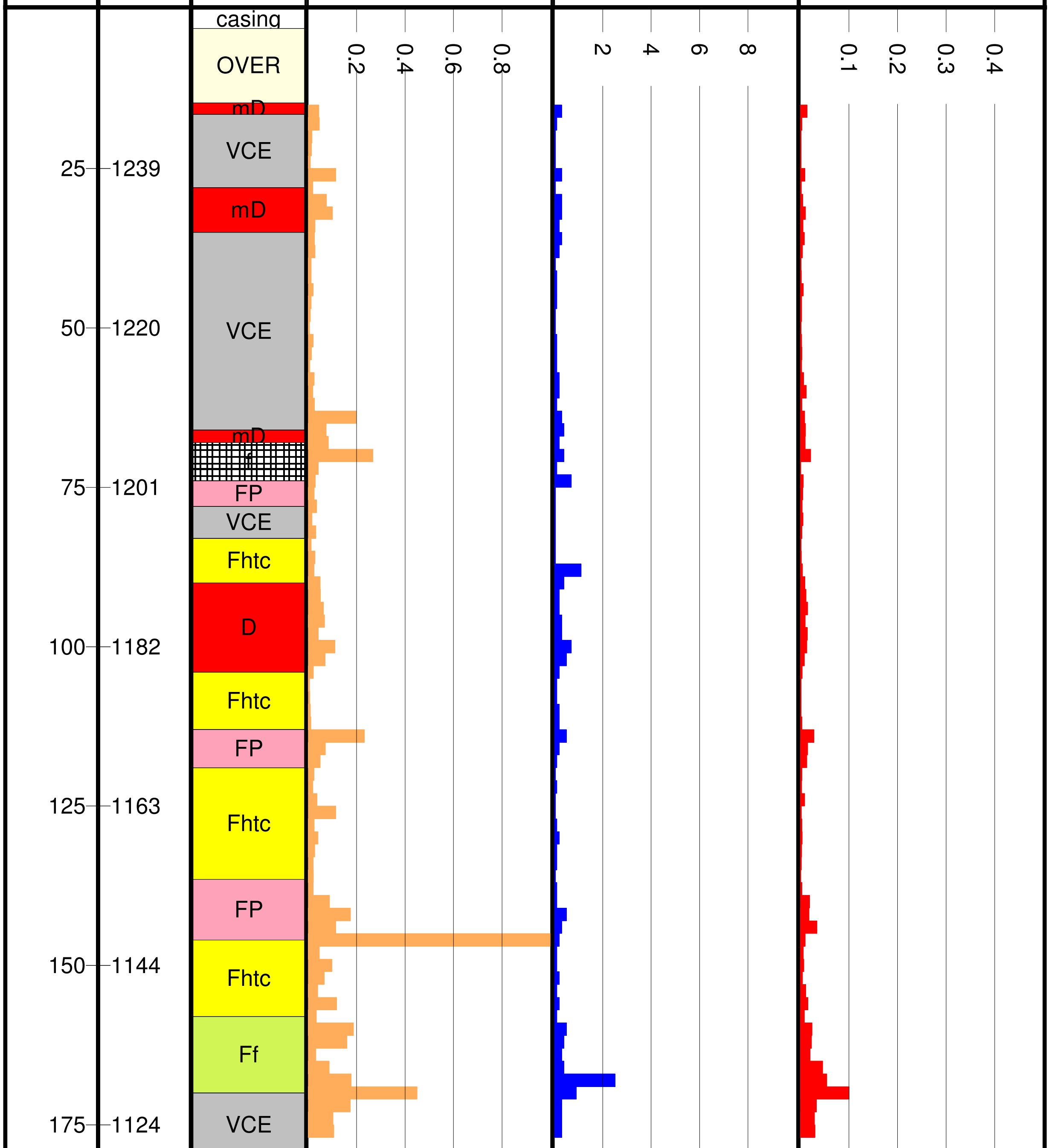


Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-08	AZIMUTH :35	DIP :-50	LENGTH :177
LOCATIONX :456292	LOCATIONY :5738827	LOCATIONZ :1259	

Depth At	Elevation	Rock Code	AU_G/T	AG_G/T	CU_%

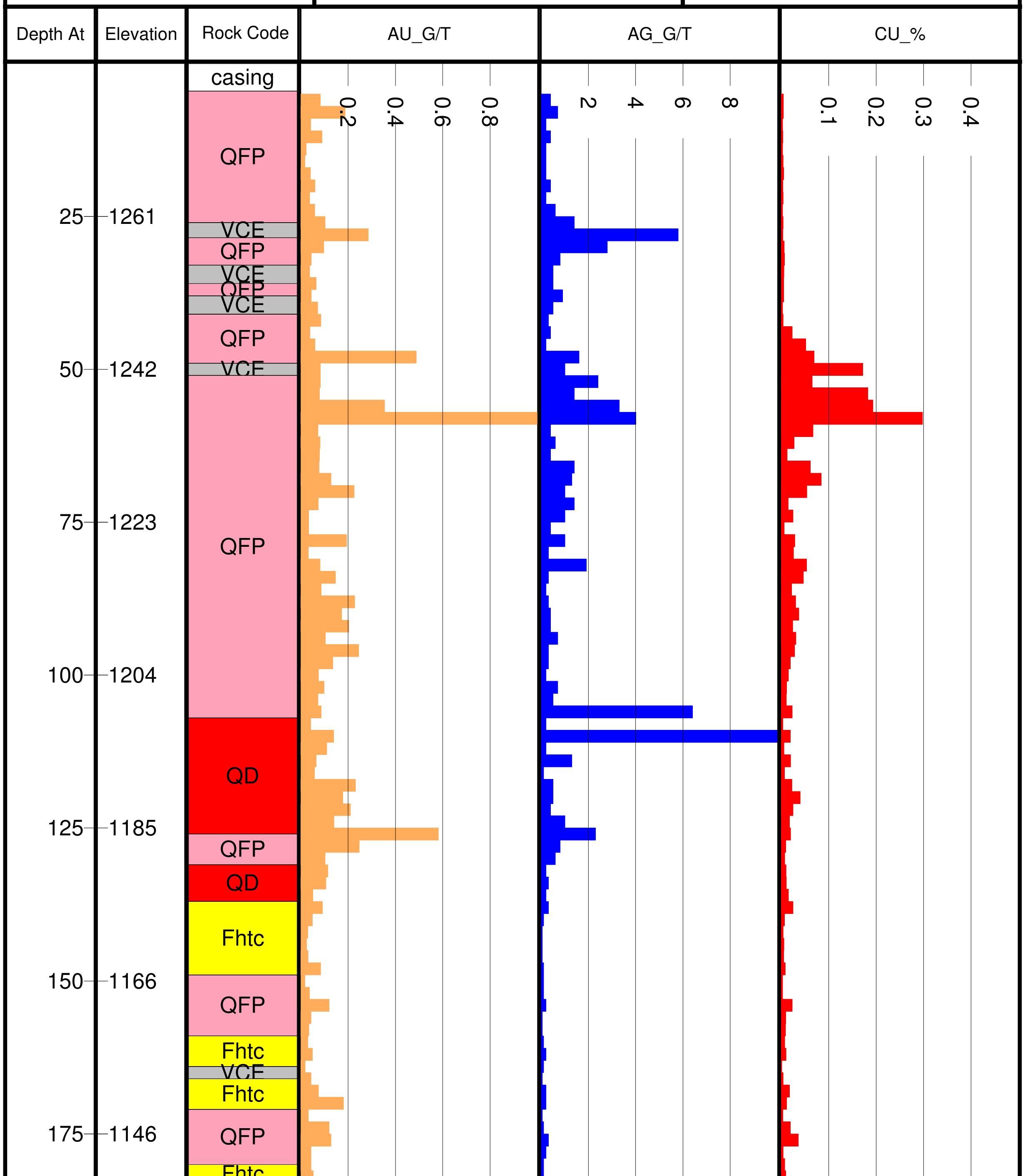


Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-09	AZIMUTH :35	DIP :-50	LENGTH :183

LOCATIONX :456342	LOCATIONY :5738977	LOCATIONZ :1281

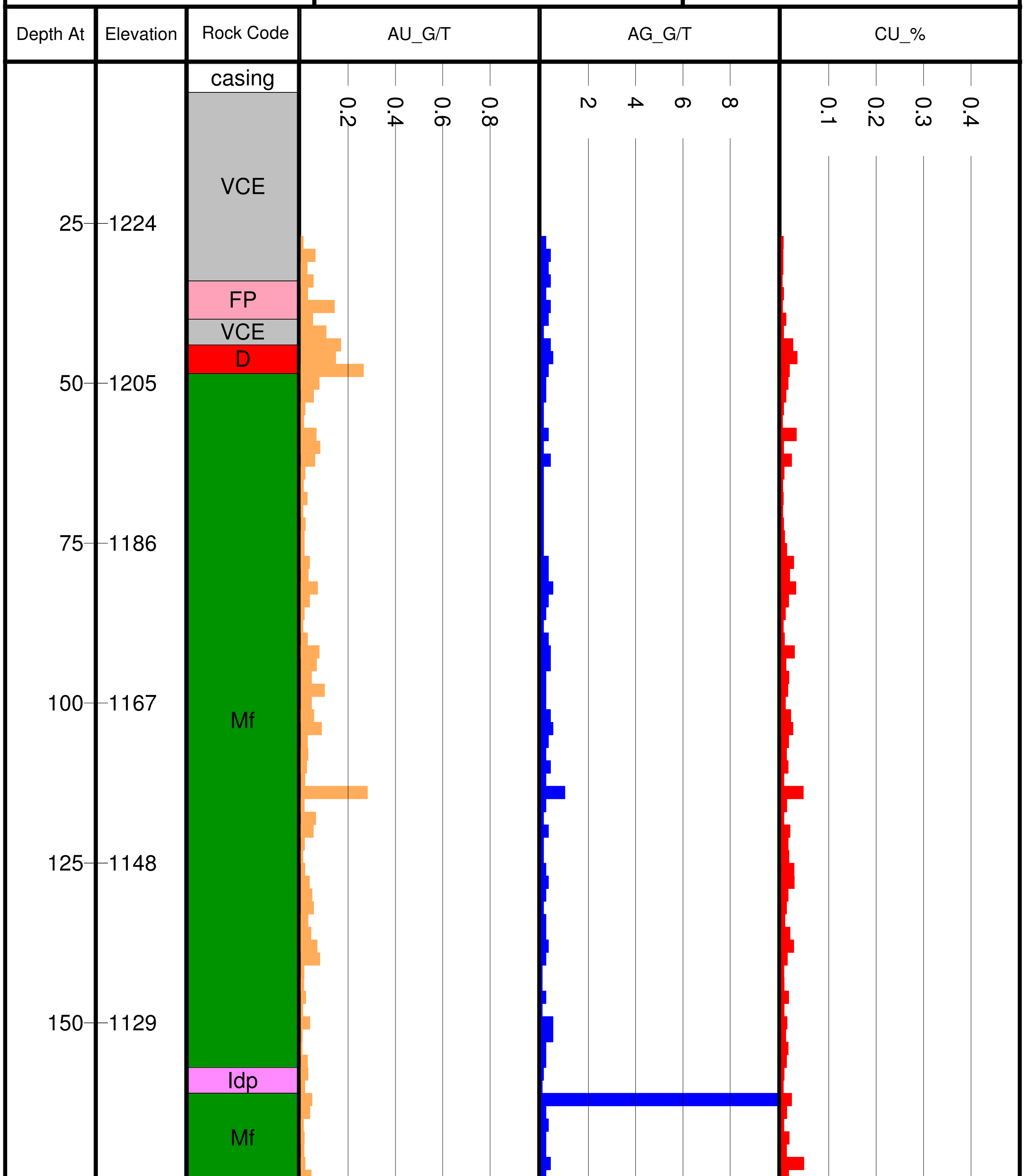


Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-10	AZIMUTH :0	DIP :-50	LENGTH :175

LOCATIONX :456607	LOCATIONY :5739664	LOCATIONZ :1244



Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-11	AZIMUTH :35	DIP :-50	LENGTH :121

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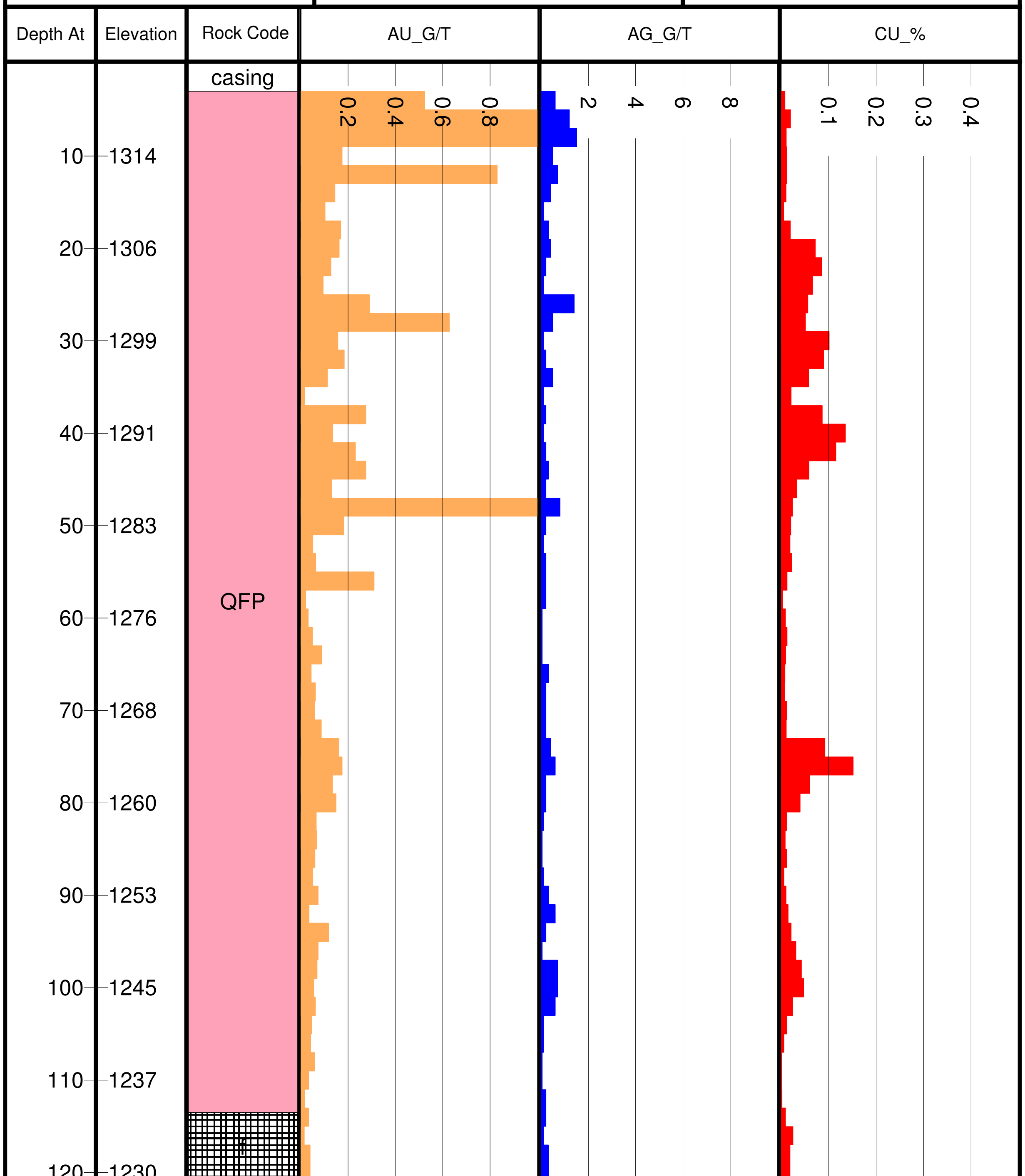


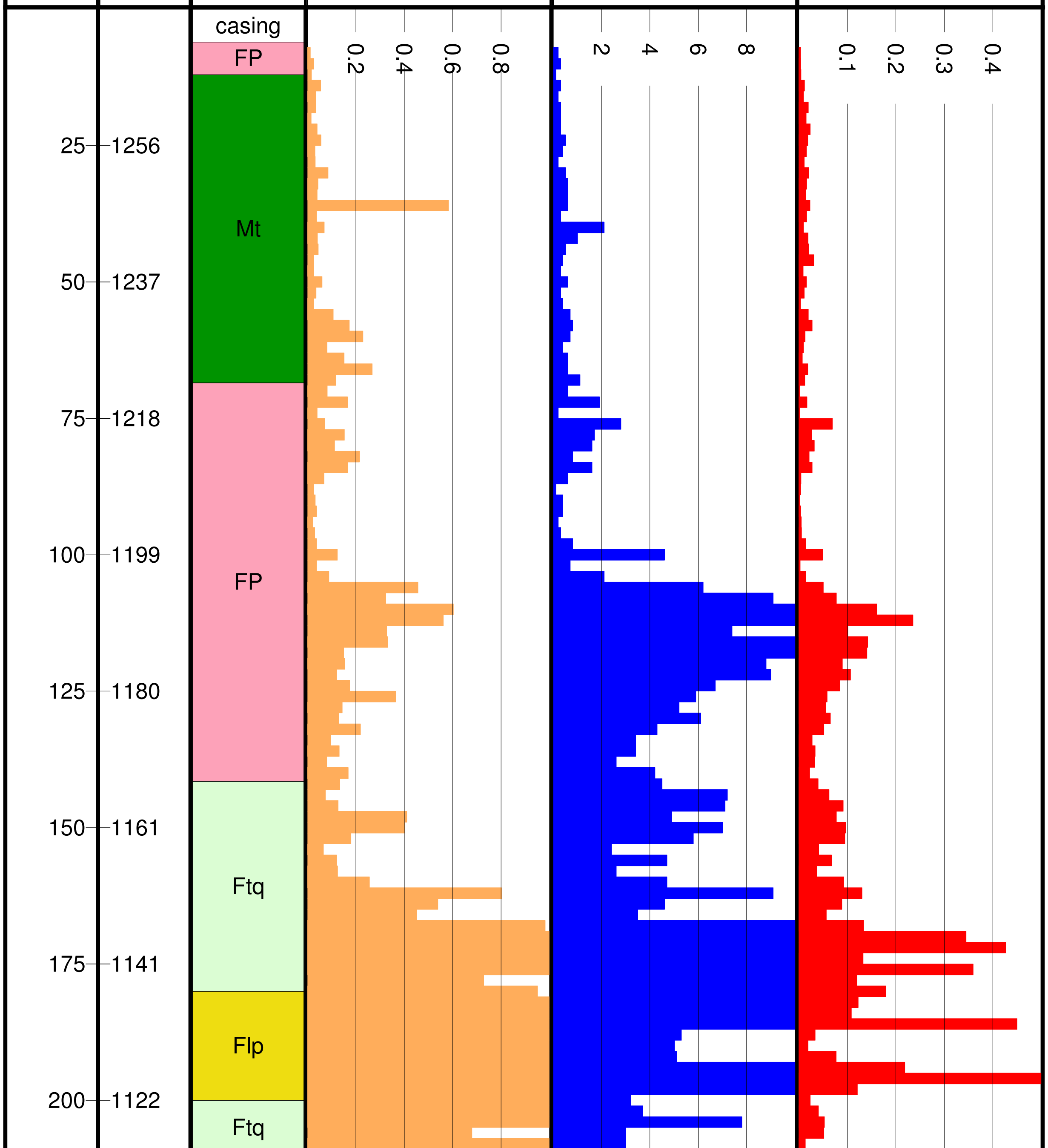
Scale as Shown in Meters	30 November 09	By EDT / GY

NEWTON PROJECT- 2006 Holes Re-logged by J. Oliver

HOLE-ID :06-12	AZIMUTH :35	DIP :-50	LENGTH :210

LOCATIONX :457145	LOCATIONY :5738605	LOCATIONZ :1276

Depth At	Elevation	Rock Code	AU_G/T	AG_G/T	CU_%



Scale as Shown in Meters	30 November 09	By EDT / GY

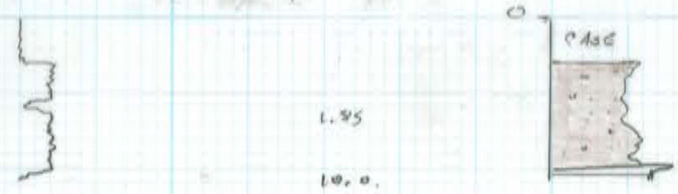
APPENDIX B

ORIGINAL GRAPHIC LOGS

Olim June 4-09

KS. P M. S SI

06-01-01A: 0-21 m's. (abandoned)



- Bleached cream to yellow cream clay altered, ve's.
- average grain size 5.0 m, well rounded bordering on epiclastics

EOH 21 m. : 20-21 m: Purple v.f.g. strongly magnetite, mafic dyke good hematite, silica "mossy v.f.g. epi style.

No penetrative features.

DPA 06-2.

- light cream f.g. F.P. Moderate KS alteration.
- sporadic cream scale qtz py veinlets.

→ healed (?) open space clay breccias. No 2nd silica mtx.
- samples begin @ 15 m.

→ sporadic xtno's? visible for FP ∅ flow?; v.f.g. homogeneous, locally pink mtx

- note significantly enhanced sheeted veins below 21 m's.
- two vein types: - qtz
  - hem +/- g.
- abundant euhedral mtx py associated with * stwk
- FP ex: ≈ tonalite to Q.D.

@ ≈ 60 m's Δ in litho (?) or alteration. Coarse crowded feldspar porphyry; onset of weakly ... ?; KS ....
- no change in grade.
- Py remain strong. Abundant but slightly f.g. stwk veinlets.
- corresponds to a marked spike in SI, euhedral magnetite +/- qtz

FP: Intense stwk development
- abundant black hematite; sporadic ... stain
- note hematite > sulphide.

→ trace Cu Ox
- hematitic FP protolith, slightly purple coloured mtx.

→ pervasive clays,

→ > 10% f.g. Py; Jelled green mtx; tonalitic protolith
- hematite dust ↓ below 128.

- hematite low, bleached pale cream clay rich mtx. Crowd FP's.
- f.g. quenched mtx
- net Py < 3%

- low primary mafic content; f.g. quenched light cream mtx, vein g markedly decreases
- clay sericite ↑.

→ late fault, yellow green clays.

Abundant well formed clay altered feldspars.

QHP ↓ QFP - definitive ↑ in small euhedral Qtz eyes net [?] *, euhedral to very f.g. Py ≈ 3-5%, note no Δ in SI, sporadic weak stockwork. Potentially altered FP?
- 3-6% ...ded Qtz; plagio replaced by "brown" amorphous mineral.

QFP

FP: → clay with fault gouge zone,

EOH 212.5

→ protolith (?) silica flooded, ... Py, possible QHFP but not definitive, possible ... FR

DDH 06-03 Drilled in HQ.

? VS P H $ SI.

QFP - Abundant >10% f.g. Qtz. No evidence of mafics. Low veins.
- sporadic matrix +/- vein sulphide.
- tan to buFF

QFP: depth of surface oxidation 26 m's.

1) $ stable, probably QFP proto, minor bx's
2) - rounded >10% qtz phenos; silicified mtx, 3% Py clots.
- very weak vein development, note Py +/- black sulphide? non-magnetic.
2) sporadic ghosted fragments;
Shear: very heavy Py coats fracturing
1) Possible intrusion breccia. 20% 1-3.0 cm mixed well rounded fragments.
- persistent heavy qtz grains; bleached yellow-cream. Py 3%.
- weak vein development.
2) clean euhedral qtz-eyes @ 58 m's
QFPx - bleached cream; very low vein development
- 2-5% diss. Py.
2) xenoliths persist but ↓ to 73 m, good mtx qtz eyes: intrusion bx's.
1) - Frags out; bleached cream QFP, good rounded but euhedral silicified mtx QFP, 2-3% Py.
- sporadic hi $: Py veins
1) Frags in QFPx. sporadic sheeted veins.
2) onset of brownish tan alteration and ↑ Py to 4%. Abundant small euhedral Qtz grains.
(3)
1) Flp: felsic lapilli sized fragmental, abundant 5-10 cm sized, locally
2) minor hematitic frags, pale grey-cream mtx. shear.
intrusion breccia. Again note 3 grades 0.75 mm Qtz eyes, altered in heavy Fault. 121-125 m. QFP protolith
- Buff to cream-tan potential silicified VS altered felsic ash tuFF.
- rare fragments. distinctive white plagio pheno's cut.
- diss Py 2%; well formed Qtz eyes 4-5%. 1-2 mm's
Flow or ignimbrite lamination @ 144. Unclear as to whether lam. are primary or secondary. No preserved Qtz eyes.
1) sporadic frags.
2) v.f.g. no significant vein development.
sporadic green-Kakhi fiamts
devitrif: ignimbrite lam clearly visible @ 166 m's.

Note small frags also noted. potentially silicified VCG?? @ 166.

Flp. 1) Onset of abund sub-angular frags.
- abundant 2nd mtx SiO2.
Py 2-3% as disseminations; veins very rare.
Ep aggregate; no veins. heavy mtx tan silica.
rare small mm scale frags.
no significant veins; note blk oxides, persistent ignib. lamina.

EOH: 210 m's.

- aggregates of chalco flanked by a dark grey $
- sulvoside with Qtz; no vein Qtz.

(5) Heavy 2nd silica. Potentially VCG protolith. No obvious veins.

(6) No obvious frags; obliterate "ash" or bedding replacement texture

(7) 'Wormy' replacement texture, no qtz eyes. No veins. Discrete aggregates Py disseminations.

(1) Frags grained, locally gritty to sandy; brown FeOx; VS to Unlikely crystal tuFF, probable QhP
- weak veinlets, sporadic FeO3 - CuO

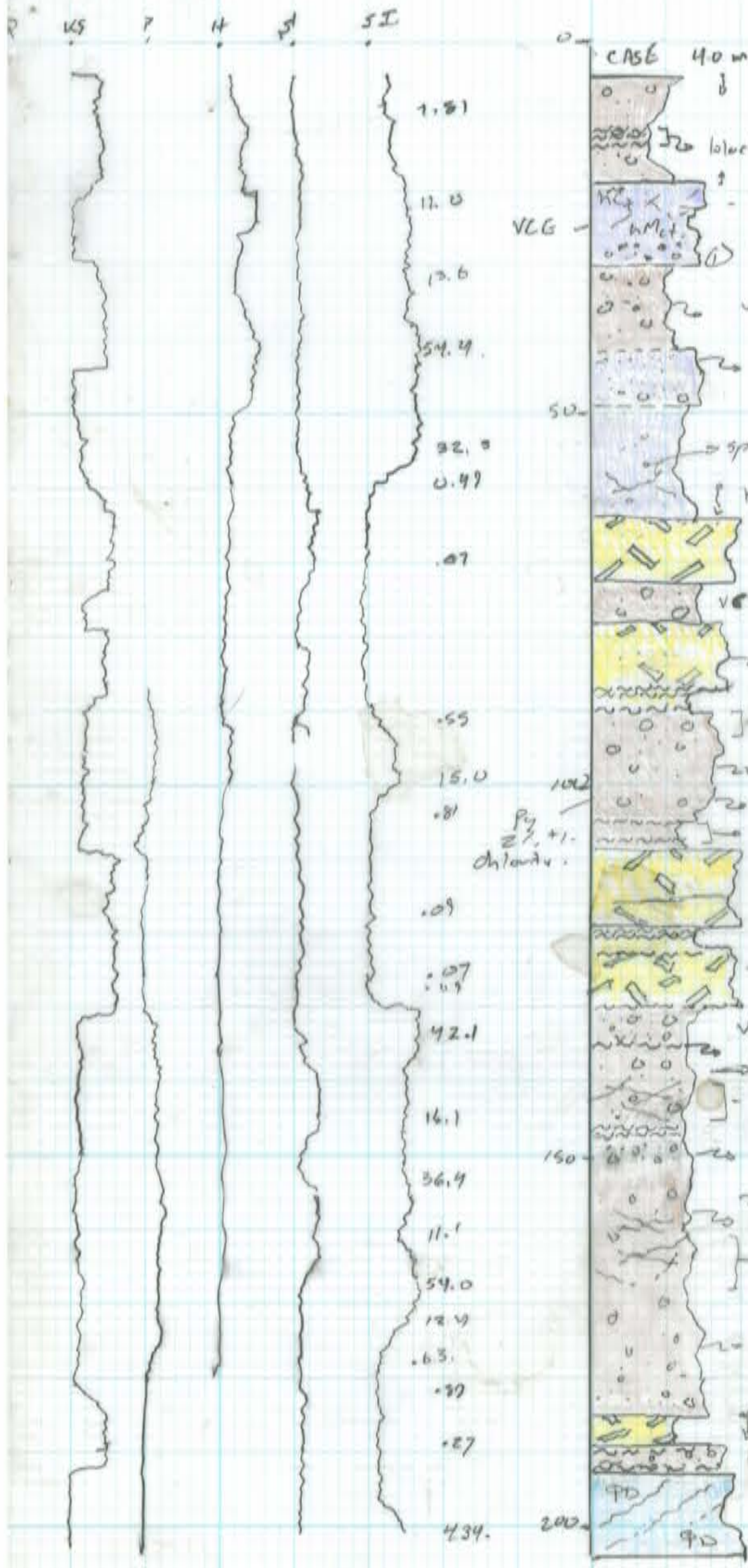
(2) enhanced structure +/- Py @ 160
no Δ in litho.

(3) Potentially pervasively silicified VCG.

(4) BuFF-cream lam's, tx destruction alteration. No preserved Qtz eyes.

DDH 06-04 NEWTON Hill

(1) Note lithic Frags are equivalent to the pervasively bleached lithic Frags noted in pervasively bleached 06-12 + 06-3.



- porous, sandy epiclastics; locally sub hematite clay altered bleached, moderately to poorly sorted epiclastic.

blocky broken core.

- Hematitic mafic crystal tuff. Abundant sub-mm, rounded plagio. Unsplit core.

(1) - sporadic FeOx +/- orange fractures, grades downward into hematitic c.s. epiclastic. up-hole yazzie.

very spotty clay alteration. No change in protolith

dark purple crystal tuff underlain by coarse VCE 1% diss Py 3-5% mag.

sporadic pyrite veinlets

KS alteration ↑ towards FP contact

FP: grey mtx, note green CuOx near upper contact. tan buff groundmass mtx; no fine ϕle (xtals) Py 4%.

VEC

VFs intensely KS altered dyke. Py: 4-5%; sporadic Py veins.

FP.

Strong faulting, blocky core; yellow orange clays.

muddy kaolin clay zone.

VCE; but much ↓, weak propylitic assemblage.

green-brown VEC.

muddy green kaolin fault; VEC pod, 3% euhedral Py in fault.

FP heavy clay-sericite overprint. Intensity of KS ↑ down hole. 2% Py. Note locally sheeted and silica replacement.

heavy clay gouge development.

propylitic FP but with complex SiO2 replacements.

VCE

muddy kaolin fault

typically purple.

minor low SiO2 vein development; Py hematite +/- chlorite schody. Py increases to 5-6%.

Py & ?%, weak propyl! No KS.

Muddy brown to purple VC-E.

good propylitic altering Py 4-6%, Py weakly flattened by clasts.

entrained

persistent 2-4% Py; hard compacted dark grey to brown-purple VEC. Spences Bridge Group Assemblage ??

Rapid ↑ in clay alteration with narrow bleached FP dyke.

VEC, blocky faulted ground, heavy clays.

foliated hornblende, 2-3%, heavy shearing + clay development @ upper contact.

EOH 203 m ½

DDH 06-05 Newton Hill.

CASE 3.0 m.

- QFP: heavy KS. Higher qtz +/- mafic? than "normal" FP greater crystallinity in QFP. Abundant blue CuOx across joints. (Ab or very weak w/ sd).
- ox / s stable, 1-2% diss Py & rare veins.
- Py +/- black sulphide mm scale veinlets, weak ? halo.
- bleached cream, persistent strong QS alteration. Note generally enhanced discrete vein development compared to 03, #2, 04. DDH'S.
- plagio altered to yellow green sericite.
- veinlets locally contain qtz.
- tightly packed Feldspathic mtx; persistent sericitized apple green plagio

< 2.0 m'
Brown matrix QP dyke. Elevated hematite +/- brown oxides
minor mm scale Py veinlet
- persistent sub mm to mm fracture
All plagio replaced by brown oxides.
QFP - may contain altered primary biotite.
- QHP may have elevated Py: 2-3% as mV's +/- disseminations.
QHP is an alteration front = QFP, plagio replaced by FeOx +/- "clay" not sericite.
generally weaker matrix clays.

- bleached yellow-cream plagio, persistent minor stwk veins.
- tan matrix plagio, sporadic mV's. Py 2-3%. No CuOx.
- tan to yellow cream, transitional alteration to QHP unit. Definitive ? contacts 2-4% euhedral biotite
- bleached yellow cream plagio, locally light to dark grey silica veinlets. Py ~2% largely as disseminations.

Dio to QDrm. Note: exceptional sharp alteration contact suggests D-QD is post-mineral.
- felted, non-aligned mtx.

~30-40% mafics, < 5% Qtz phenos. Non-foliated.

late fault. QD protolith ✓✓: Protolith external to fault is a definitive diorite.

EOH 167 m's.

DDH 06-6. Newton Hill.

- Bleached blocky FP.
- sporadic mm sized qtz eyes.
- Heavy clay failures; very similar to fault at 06-5 EOH.
- grey-black m.g. diorite.
- D-FP: tan to buff, [KS] lower in 06 than in 05. Primary phenos clearly visible.
- overall hi $ and lower KS, ↑SI = < alteration.
- dissem Py 3-4%, veins very poorly developed.
- D-FP: DD? exceptionally homogeneous, light tan; plagio weakly replaced by brown FeOx-complex.
  rock appears vaguely like a plagio phyric diorite??, possible relation to diorite ∅?; < 1% diss Py.
- grey-green volume of FP: diorite FP. very limited rx alter. No obvious fine qtz, Py < 2%. Very rare veins.
  grain size diminution
- transitional unit to QhFP
- Crowded plagio, altered to brown oxides.
- note: re-appearance of Qtz veins. DFP also post-mineral. ~3-4% diss Py.
- contorted at fault contact
- Green-yellow, contorted late fault, locally black patina.
- Sporadic plagio pheno's, minor Cal veinlets; no Qtz veinlets.
- 25% blurred chloritized mafics; < 10-15% FeOx altered plagio. No few qtz. Py < 0.5%?
  - No Qtz veining
- Millimetre matrix mineral; chloritized hornblende
- Abrupt onset of clay assemblages. Bleached white. 30% adds this & simplify KS altered DFP.
- f.g. tan to buff mtx. Sparse Py?? Qtz veins.
- B 2%.
  - discrete small 0.25-0.75 mm plagio. 15-20% blurred, chloritized mafics.

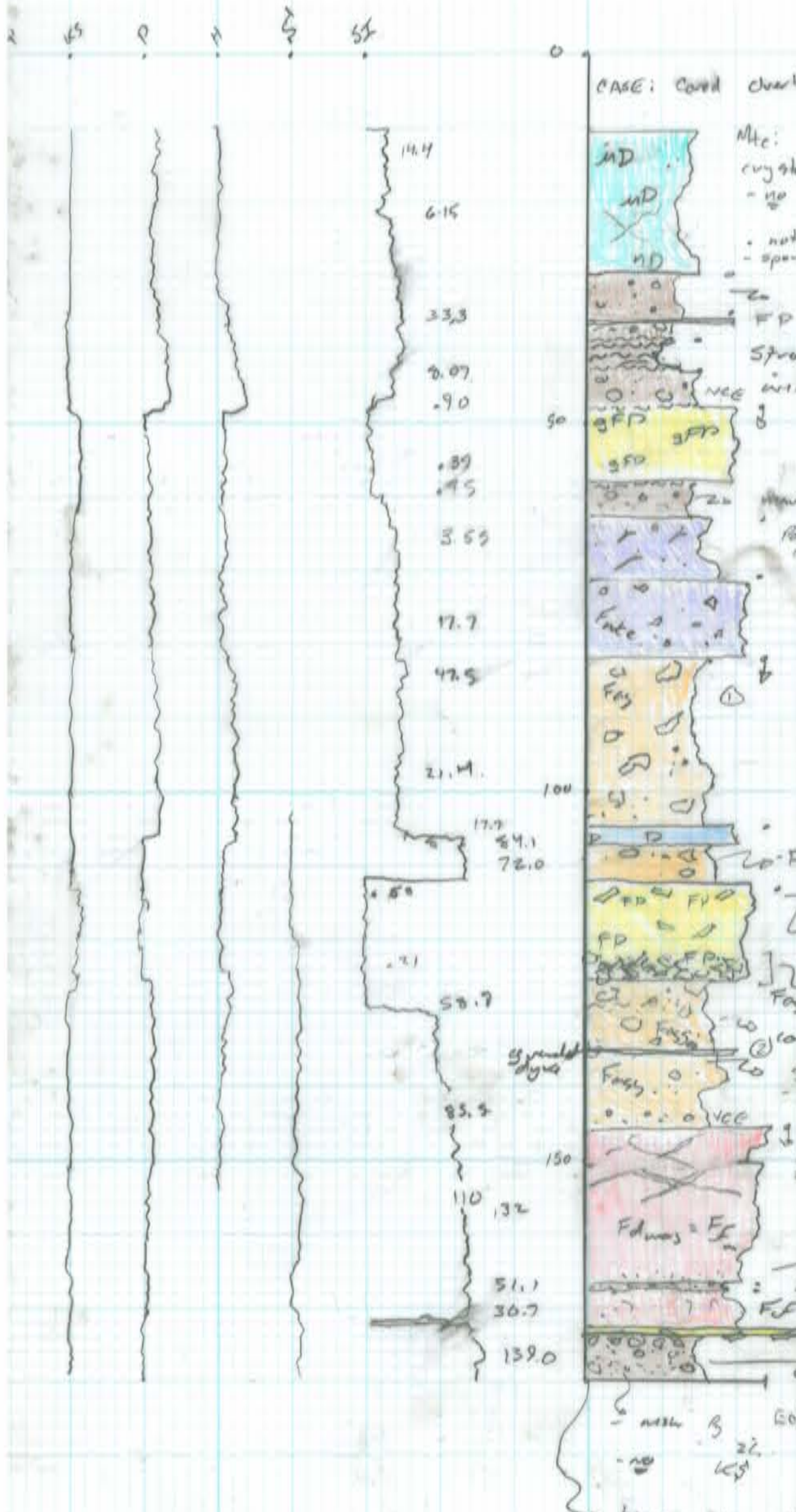
EOH 180 m's

NB Overall rx alteration levels on 06-5 + 06-06 Section line significantly lower than on 06-12, 06-3, 06-4 section line.

J. Olin June 5-6/09

J. Oliver June 6-07

DDH 06-07. NEWTON HILL.



CASE: Cored Overburden

Mtc: green f.g. < 0.5 mm mtx; good FeOx on ∅'s. Rx is either f.g. crystal tuff or marginal ∅ of dioritic intrusion
- no plagio ∅'s.
- note ↓ grain size towards vc contact 50% prob rx = µD.
- sporadic chlorite propylitic veins.

- grey to maroon VC's.
- FP

Strong clay fault zone, purple VCE's porphyritic 1-2% Py associated with calcitic veins.

orange tan altered plagio. Distinctive mm sized euhedral Qtz.

- maroon VCE's

Pale to medium green, locally purple mtx, fine grained, competent; dacitic ?? crystal tuff

Purple plagio phyric, felsic (hematitic rich) hard crystal LFFs. 15% 0.75 cm blocky to rounded feldspars NO significant clay alter. Py 1-2%, weak propylitic.
- "Fhte"
① - rx locally contains minor < 5% cm scale fragments.

Compact, medium green, 35-40% mafics, f.g. diorite dyke.

- Fagg; very angular hematitic frag's. Intensely magnetitic dyke and fragmented.

- tan to cream FP, qtz < 5%, 15% chloritized - sulphidized mafics
- sporadic veinlets.

- Fagg intrusion bx @ lower contact

- complex extrusive intrusive forms; is FP co-eval with Fagg?
② - glassy very hard mtx,
- weak propylitic very no VES alteration.

↓ Fdm (Magnetite, dark grey felsic dykes.

↓ Purple grey v.f.g. aphanitic dykes. Resistant very high SS. sporadic py-chl veins.
- no flow bands, no vesicles. Ff; note pyritic fractures @ 171 m's. +/- weak Py

→ slight bleaching @ upper contact
: Narrow < 1.0 m. Ff

. light tan feldspar ∅ dykes, < 1 cm
→ rounded cm scale, clast supported VCE
→ S0: 60°.

- weak Py EOH 180
- no 2% KS

blue-purple strongly mag.

① Felsic flow - agglomerate strongly hematitic
- hardness > 6; chain saw file.
- subrounded plagio out.
- locally flow; devitrification bands
- may locally grade into mm lp sized fraction; typically angular frags.

② Very f.g. aphanitic dykes cut section, 135-156 m true 3g more has a hardness of > 6.0. Frags begin to move into VCE fields. Slightly more transport
weak propylitic alter.

June 6- 09.

DDH 06-08 Newton Hill

CASE: Cased Overburden

- MD: maroon, F.g. m-diorite at collar. Weak propylitic alteration.
- VCE: purple grey mtx; abundant plagio phyric frags. Average clast size ≈ 0.5-1.0 cm. Py < 1.0%. borders on crystal tuff.
- ① oxidation +/- clays at minor faults.
- Muddy medium green, abundant cm scale clasts, minor pyritic veinlets, 2x propylitic alteration.
  - NOTE: compared to DDH 06-07; KS assemblages are elevated.
- Bleached muddy grey-green crystal tuffs to VCE's: Modest propylitic alteration, Py ~1-2%. abundant 0.5-0.75 cm frags, moderate clay alteration, locally bordering on crystal tuff, Py ...
  - MD @ contact.
- Major fault. Purple to muddy grey protolith, most likely VCE's, elevated clays + clay gouge.
- Creamy tan FP dyke, 5% cubic Py, moderate to strong KS. No free ... gypsum.
- ② purple, maroon, patchy cream veins + alteration. Siliceous hematitic tuff, Py < 1%, ...
- wavy flow like tex's @ upper contact.
- MD: Felted green matrix, mod to weak propyl.
- DFP: Hard competent, grey-cream mtx, abundant chloritized hbls., Py 1-2% diss, weak veins.
- purple hematitic felsic tuff, crystal. Sub-rounded plagio; 15%.
- Buff to khaki FP dykes, rare veins. No significant clay development. Py 5-6%.
- Fhtc: hematitic felsic crystal tuff.
- No obvious frags but abundant small sub-rounded plagio, no KS.
- Py-silica veins @ dyke contact.
- Tan to cream FP dyke, weak KS, 3-5% diss Py.
- competent hematitic purple crystal tuff may contain rare incidental fragments.
  - locally cut by py-epi-chlorite veins.
- FwF possible vitric flow @ 166.
- v.f.g. cryptic, sporadic devitrification tx's. locally welded texture.
- VCE abundant matrix supported frags, persistent propylitic alter; no clays.

EOH 177

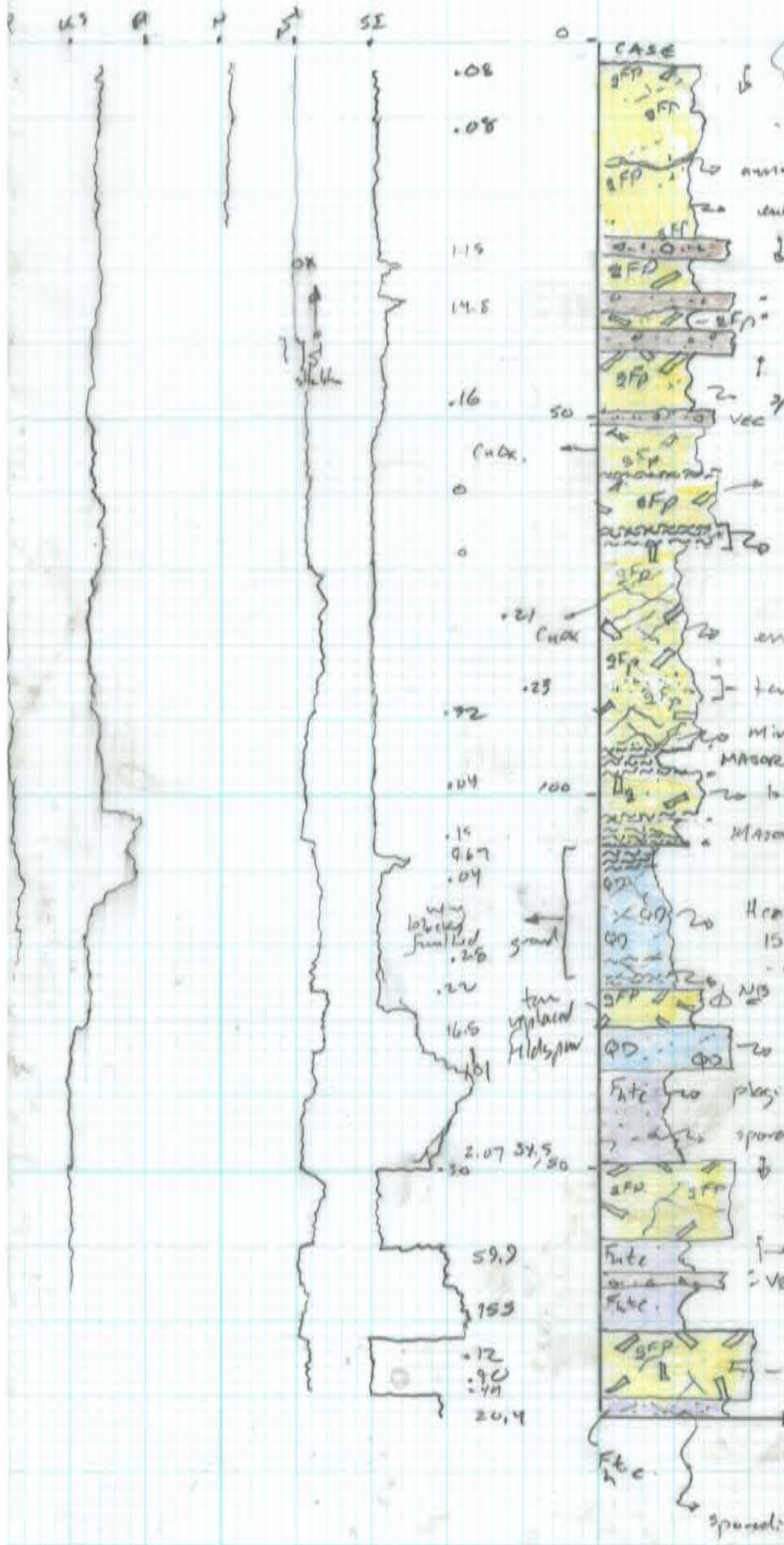
→ enhanced veining. Proximity to FP dyke ??

① Very fine grained, felted texture, medium green m-diorite. Py < 1% sporadic propylitic veins.
- no KS.

② Crowded purple VCE.

J. Oliver : June 6-08.

DDH 08-09



→ good 0.5 mm euhedral qtz eyes.

{ Classic, pale cream, strongly bleached FP. Modest sheeted hematite veinlets.
- no preserved sulphides.

→ amorphous low T qtz-veins.

→ euhedral 0.5 mm qtz ~ 2-3% by volume, F-g. buff aphanitic mtx.

{ Porous altered VEC, tan colored mtx, note grading lithic not intrusive frags.

: silicified replaced VEC

↑ ~3-4% diss Py; persistent very small f.g. qtz eyes.
→ sporadic hematitic veinlets

VEC intensely silicified by alteration

→ intense KS alteration; generally poor vein development, 3-4%. Py diss.'s. diagnostic qtz eyes.

]→ strong fault, gFP protolith locally crushed yellow greasy shears.

→ enhanced pyritic v-v's heavy clay alteration, Py to 4%.

]- tan discoloration; persistent qtz eyes < 3% -5% by volume.

→ Minor stockwork Qtz veins.

MAJOR FAULT gFP protolith

→ bleached cream gFP- 1-2% diss Py

. MAJOR Fault, pale white to cream protolith.

→ Heavily sheared, no evidence in poorly preserved core for VEC. 80% prob. intrusive, 15% hb laths, variable H 4-5, - moderate KS; KS stronger in gFP unit.

NB definitive QD type crystalline intrusive protolith. Fragment Py elevated 4-5%,

→ 15% amphibole. KS alteration markedly decreases.

→ plagio poorly preserved. Dark purple maroon, v.f.g.
→ sporadic box's Fhte → Fhf best unit description. No obvious v's.

↕ BUFF to tan
- small well formed euhedral Qtz-eyes, sporadic Py veinlets.
- sulphide veinlets have weak SiO_2 selvages.

|→ v.f.g. hard, maroon to purple.

: VEC well developed but narrow, light grey rounded VEC., 4% mtx Py; very low KS

↑ tan plagio altd ??; 2-3% Py, weak stock; weak clay alteration
- intensely silica rich mtx, proto contains both plagio + amphib. phenos.

: dark grey-maroon, hard, highly magnetic, v.f.g. probable crystal tuff. Weak clay alteration.

EOH 183 m's.

sporadic sulphide veinlets.

① Tan to buff gFP; good euhedral qtz eyes. Py ~1-3%, bleached silica veins

DDH 06-10 J. Oliver June 7-09.

Newton Hill

cored Chilcotin Basalt Till: S.I 2.99.

Buff to cream, VEC. Moderate clay alteration. Good crowded 0.5-0.75 cm clastic fragments.

Very blocky broken core, light tan. Appears to be a VEC unit. Note sporadic amphibole phenos.

Feldspar +/- hb plagic dyke. yellow green feldspars. Modest pyritic mv's. Low silica 3-4% Py. Note

- Blocky broken core coarse VEC; green not maroon matrix 1-2% diss Py.
- locally clots of epi - Py. Again very blocky broken ground.

Mf = μD? strong sheeted veins; heavy propylitic alteration. epi-py. f.g. Felted mtx no definitive incrusted fx's.

→ no porphyritic, f.g. probable "andesite", trace hematite, Py < 2% no xts.

- f.g. medium green non-vesicular non-porphyritic mafic Flow.

- heavy white clay-cal fracture, strong shearing throughout.

Small plagio phenos become slightly more obvious., SI decreases in Fault Zones

→ f.g. matrix, good white Qtz +/- Cal - Py - epi veins, Py ≈ 2-3%

- epi veins may contain albite ??

- f.g. Mf. Note superb propylitic alteration well developed sheeted veins, good epi. Diss +/- vein py 1-3%.

- No Ca phases.

→ early healed Bx frags ≠ VEC, locally very small bimodal plagio.

Heavy shearing

→ persistent stock veins

propylitically veined Mf

3-4 m wide blocky shear

→ f.g. dark green, no 2nd frags, local tect. bx's.

→ cm scale epi veinlets are common.

Idp: ≠ FP. - Very f.g. medium to apple-green dyke. Plagio phenos are < 0.5 mm; 3-5% by volume

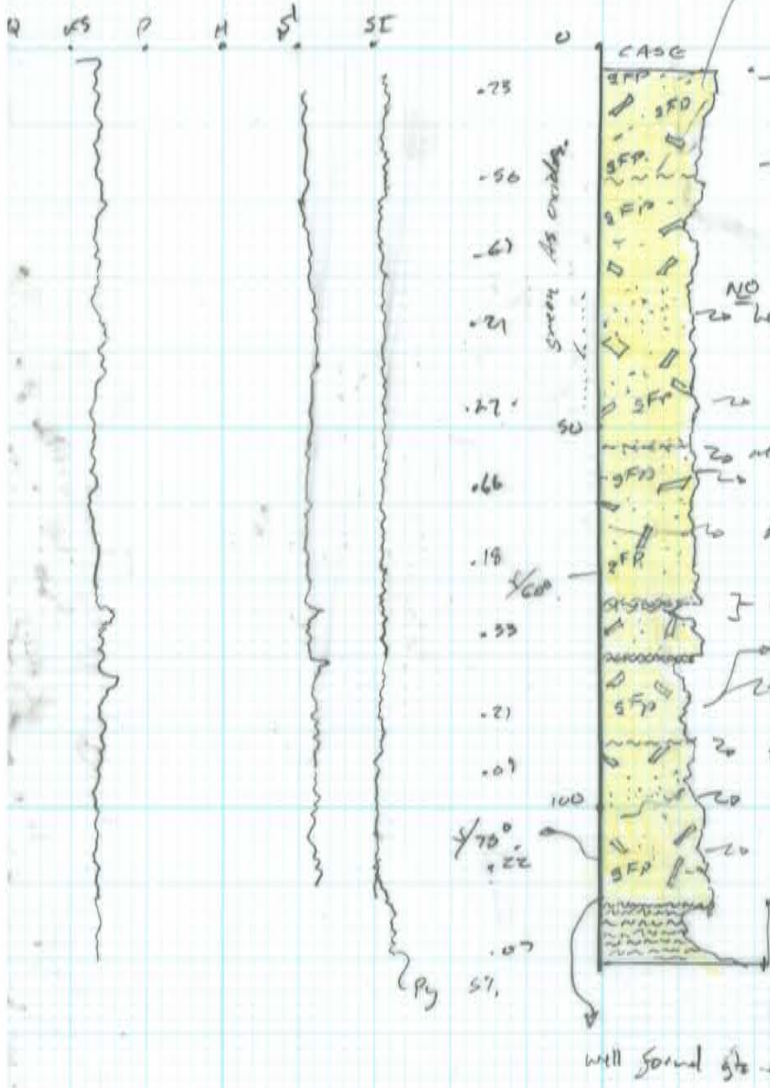
Mf: stock prop veins slightly denser. - no fuso stz, modest = slightly diminished propylitic alt.

→ locally "blotchy" cm scale epi aggregates.

EOH 175.

DDH 06-11 J. Oliver June 7-09

NEWTON HILL.



highest Au grade. track sheeted vein zone.

Note unusual blue-green clay clots, dumortierite ???

- Bleached QFP: Good mm scale Qtz plumes. Note mm scale extensional veins @ 45° to CA.
- 3-4% ; 0.5-0.75 mm Qtz eyes. Locally blue-clay assemblages. Generally veins overprinted by montmorill(?). CuOx
- persistent KS. No prop. Generally weak veins.

NO FV in this unit, simple blue-grey clay sulphide overprint. Net Py ↑ to 2 to 3%. Plume's easily recognizable.

sporadic quartz grains. Note occassional black oxides.

minor fault; tan bleaching.

very sporadic qtz grains.

minor black veinlets, good qtz eyes @ 63.8.

- persistent KS, py 1.5-2%.

clay enhanced shear

good qtz eyes to 1.0 mm, 3-4%. veined B.

No change in litho. Moderately clay altered QFP. Weaker vein development down borehole. Au controls: extensional black veins, massive KS - Φ +/- B diss.

slightly blocky core.

c.g. clots + aggregates of persistent blue grey clays. Py 4% as disseminations.

sheared blocky core. Note Green-yellow post-mineral clays (?). Structure is not mineralized.

- ↑ veined py ↑ + Au. Last bx contains > 7-8% B but no grade.

DDH 06-12 (HQ)

(1) Very large plagio. > 3.0 mm; below 12 m plagio ↓ to ≈ 1.0 mm.

(2) Small buff green plagio visible below the fault no Δ in lithology f.g. non qtz Ø feldspar Ø.

(3) Green-yellow, most ?? alteration; Fta protolith.

(4) Definitive ash size qtz grains.

- (1) good euhedral plagio +/- qtz. NO obvious qtz eyes. - orange buff weathering; oxidized.
- FP: bordering on Tonalite. Moderate FeOx fracture.
- (2) FP → T: Note crowded mm scale plagio = crystal tuff ?? w/ mafic tuff
- 2-3% diss Py; v.f.g. plagio rich mtx, sporadic Qtz-Py-Ep. veins.
- typically sub-mm non-aligned, non-fragmented tuffaceous mtx.
- sporadic pyritic veinlets.
- (3) no free qtz grains, white Py gougeate.
- Minor shear, enhanced magnetite development.
- typically low silica Py veinlets.
- (9) Intense to destructive ws. Heavy euhedral Py. - large 5x10 cm intrusive frags @ upper contact for 2-3 m's - no obvious qtz eyes.
- (10) no qtz-eyes. - bleached uniformly cream - sporadic veins, persistent frags + pseudo frags.
- Alte (ws ↓), easier protolith recognition, definite bleached FP. minor shear
- (11) 6-8% diss Py; plagio ≈ large 2-3 mm buff orange alter - very blocky ground.
- Fta? No recognizable protolith exceptionally heavy ws. No veins. - no obvious planes.
- yellow arsenical oxides.
- (12) spotted Py-cp?-black sulphide, and [S] decreases
- possibly clay altered v.f.g. Fta
- well defined qtz plagio; no obvious free qtz.
- (13) v.f.g. moderately pyritic Fta or tuff. green-khaki clays.
- grey matrix; abundant dark grey black S. green alte
- (14) increase in S v.v.?; no silica selvages euhedral Py average 3%; black S. No veins.
- Fta - intense texturally destructive alteration, locally preserved ignimbrite bands. NO preserved quartz eyes. NB no significant vein development. sporadic yellow oxides
- (5) (16) vein protolith xtal/lithic lithics, note locally silica vugs, frags.
- (6) Flp - FE. No vein development.
- (7) Fta "banded" bleached ignimbrites or rhyolitic flows. - abundant xtal cryst's drops on - no qtz veins, density of brown sulphides aggregate decreases.

(13) Sandy euhedral silica bands + some locally v.f.g. qtz eyes

(14) - No primary tx's, pale cream, sub-mm, orange qtz +/- ??, - locally pseudo-frags. - no obvious Ø plagio shards or qtz-eyes.

(15) Possibly grey lithic frags. Intense mtx silica, f.g. quartz. - uniform sulphide trace + black disseminations

(16) likely high odds protolith is a silicified VC, abundant sulph

(8) Good purple alteration, and very similar to DDH 06-10 Mafic - lowest phase - shale 7-8 m the mafic flow fault

(9) Possible intense breccia, rare qtz eyes +/- fluorine ??

(10) Alteration bands, intense white SiO₂, rare qtz eyes, "white" texture destructive

(11) Good euhedral qtz eyes, brown alteration bands.

(12) - No primary tx's, no veins, white v.f.g. silica clay +/- cream plagio. No qtz eyes - alteration bands.

(5) All "Frags" appear to be clastic in origin lithic quartz wackes. No definitive intrusive frags.

(6) High grade interval is a definite Flp-Ft no veins, stacked 3-5% brown to tan euhedral gougate

(7) Sparse ...b, medium green dike.

17 - Small 0.25 mm qtz grain ..., heavy silica replacement bands - pale to crumbling v.f.g. pale cream tx.

APPENDIX C

TERRASPEC REPORT AND STACKED SPECTRAL DATA

Kim Heberlein
21146 Stonehouse Avenue
Maple Ridge, B.C.
Canada V2X 8L9
Tel: 778-228-5231
604-466-2087

Amarc Resources Inc.,
1020 - 800 West Pender Street,
Vancouver B.C.
V6C 2V6
Ph. 604 684-6365.

23 July 2009

Attn: Jim Oliver, Diane Nicolson, Mark Rebagliatti
Re: Terraspec Spectral Analysis (KH133/Amarc)

Terraspec spectral analysis was run on 75 drill core samples (DDH06-2,3,4,5,11,12). The results are shown on the attached excel spreadsheet. The raw and processed spectral data are included in .sco format in the zip file. The quality of the spectral data was good to excellent. A couple of samples gave low readings probably due to the presence of significant sulphides. The spectral data has also been compiled as stack plots of each drill hole, together with reference spectra from the SPECMIN database for comparison.

Alteration minerals found include muscovite, illite, smectite, kaolinite, chlorite, carbonate, ?silica (based on water feature), gypsum, probable turquoise, hematite, goethite and jarosite. Alteration ranges from argillic to "sericitic".

Muscovite and illite fall in the "normal" Al composition range (2200 to 2209 nm wavelengths) with some small variation (See 2200 wavelength feature on excel sheet). The muscovite generally carries water ("sericite"). Illites are well crystallized.
Kaolinite is generally moderately well crystallized and is associated with illite or smectite.
Smectites include montmorillonite and nontronite. Nontronite seems to be associated with fractures.
Chlorite features are usually too weak to indicate composition. Where it is possible to identify them, they seem to be Fe>Mg.
Carbonates include calcite and Fe-carbonate.
Gypsum is poorly developed.

Drill Hole Alteration Summary: (see stacked data sheets)

DDH06_2: The entire hole is in high-crystalline illite to muscovite with kaolinite. Chlorite and carbonate are present in trace amounts. Composition of the chlorite is not identifiable. The carbonate is Fe-bearing. Hematite is present at 99 to 113 m. Nontronite is present on a fracture at 69m. Alteration is borderline argillic to sericitic.

DDH06_3: The entire hole shows muscovite/illite ("sericitic" alteration) with trace kaolinite and chlorite. Goethite is present at the top. Minor smectite at 93m is montmorillonite and probable trace nontronite. Probable silica is indicated at 72m and 144 to176m. Minor gypsum occurs towards the bottom of the hole.

DDH06_4: Argillic alteration (kaolinite-smectite) down to 21.5m. Below this is muscovite ("sericite") to 120m with trace kaolinite and chlorite. Composition of the muscovite is normal but is slightly higher Al content than the previous holes (range 2194 to 2205nm). Highest Al content noted is at 45m. Where composition of chlorite can be picked up, it's Fe chlorite. Carbonate seems to include Fe-bearing and calcite. From159 to 178m is again clay alteration (smectite-kaolinite-illite). At189m is a muscovite interval.

DDH06_05: Alteration is mainly argillic (illite-smectite-kaolinite) with minor Fe-Mg chlorite and Fe carbonate and calcite. Illite composition is "normal" but at the lower end of the Al content range (2207 to 2210nm). Smectites include montmorillonite and nontronite, which is associated with fractures. A bluegreen Cu stained fracture at 16.5 appears to be turquoise rather than malachite/azurite.
At 96m is one sample with "sericitic" alteration.

DDH06_11: Starts in well crystallized illite with kaolinite, goethite and minor jarosite at top. At 28.4m and 47 m, nontronite and montmorillonite smectites are present. From 63.8 to 96 m is a sericitic interval. Composition for the illite and muscovite is "normal" (2206-7nm for the illite, 2199 to 2205nm for muscovite). Below this is argillic alteration (smectite-illite). Trace chlorite is present throughout.

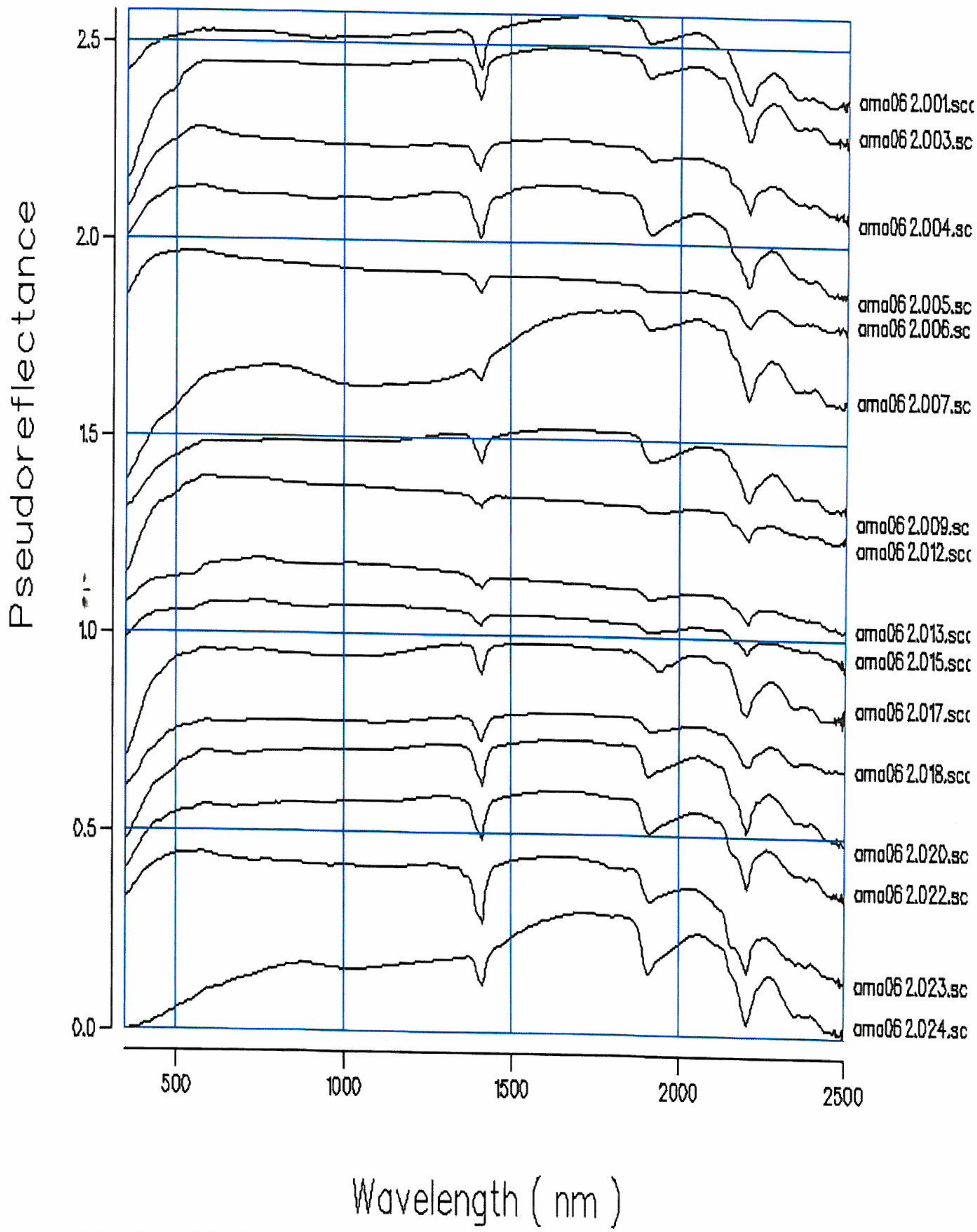
DDH06_12: Starts in argillic alteration (smectite-kaolinite trace chlorite) with goethite at top of hole. Carbonate present is Fe-bearing. The smectite is montmorillonite. From 69 to 102 m is sericitic alteration (illite-muscovite). Composition is in the "normal" range (2201 to 2206nm). Trace kaolinite, chlorite and Fe carbonate is present. Poorly developed gypsum is seen at intervals from 81m down. From 125m down, muscovite of "normal" composition is present (2201-2203nm). Large round water features indicate possible silica; this interferes with seeing possible water content of the muscovite.

An attempt was made to match the alteration to the drillhole sections that were sent to me, but I had to abandon it due to unclear information.

If you have any questions regarding the interpretation, please don't hesitate to contact me.

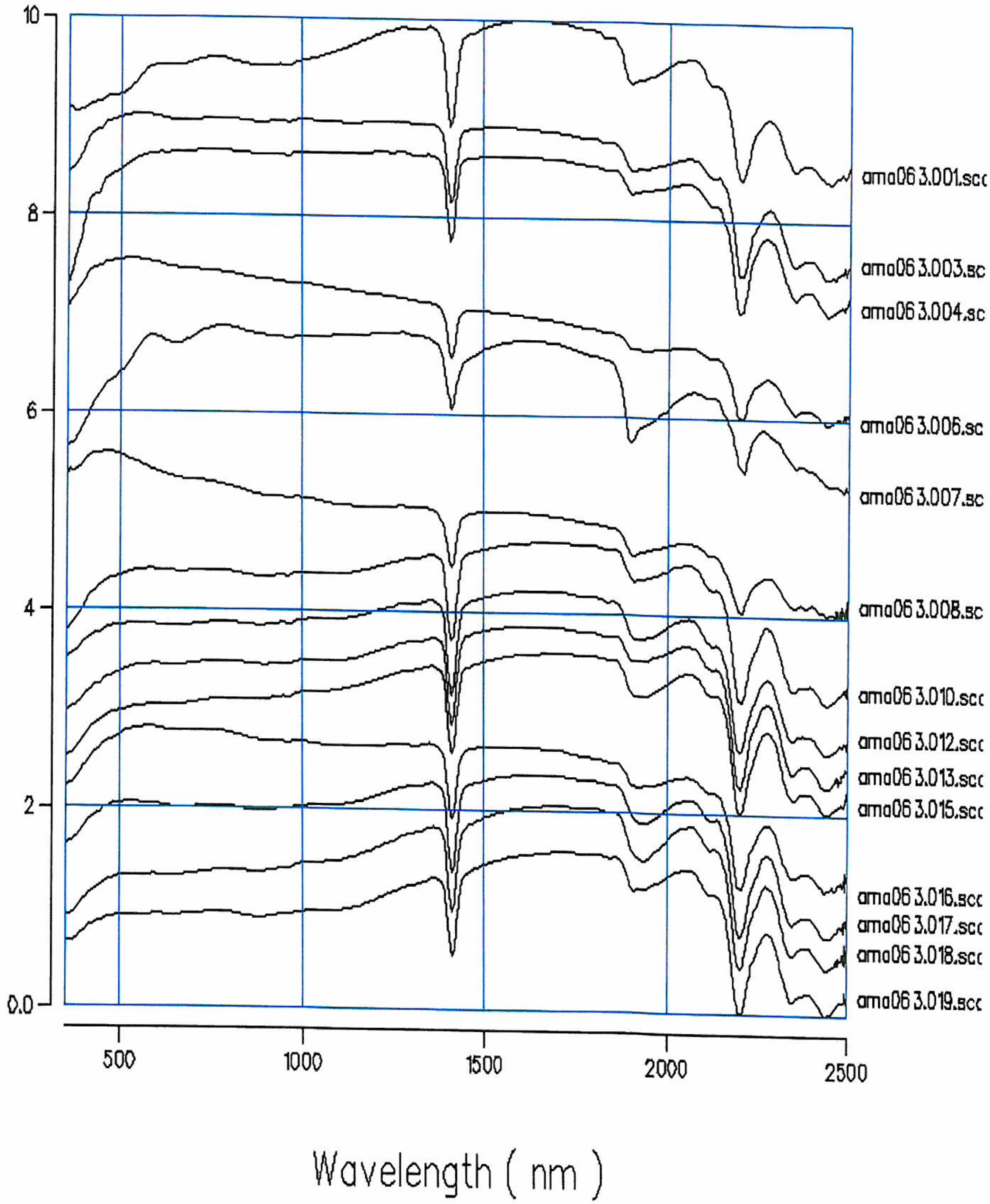
Yours truly,

Kim Heberlein, P.Geo.
kheberlein@shaw.ca



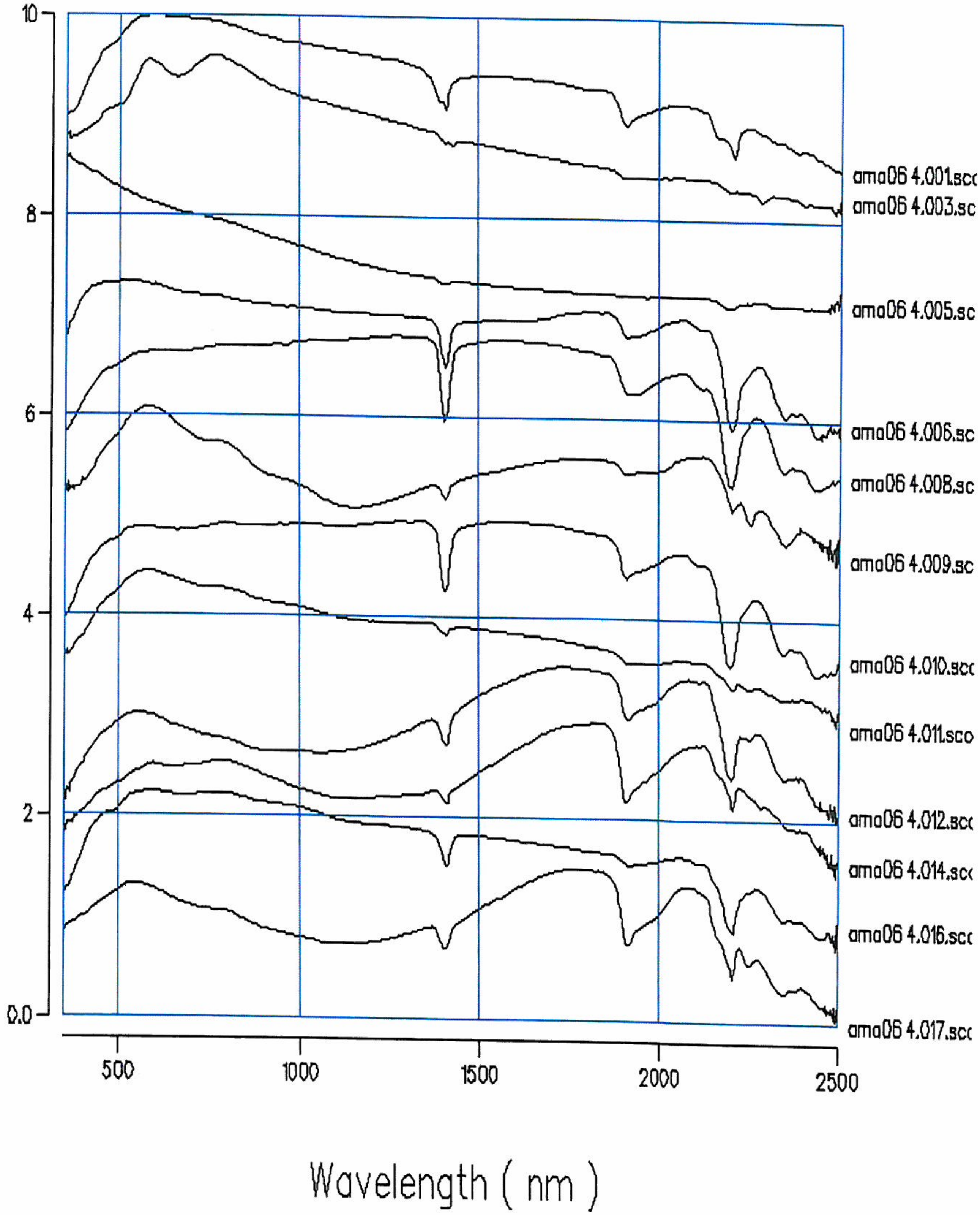
DDH06_2 Stacked spectral data

KH133 TSP ANALYSIS

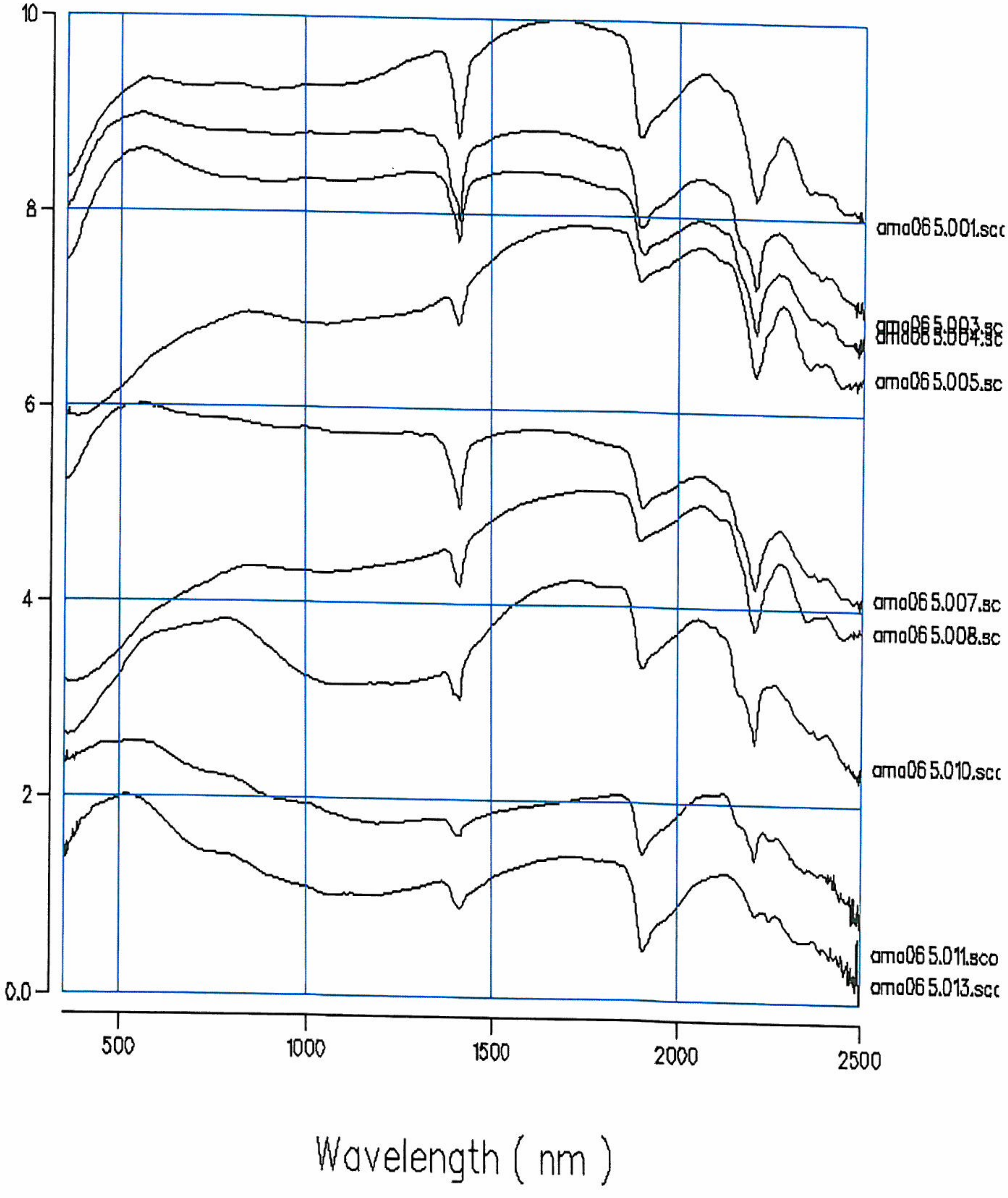


DDH06-3 STACKED SPECTRAL DATA

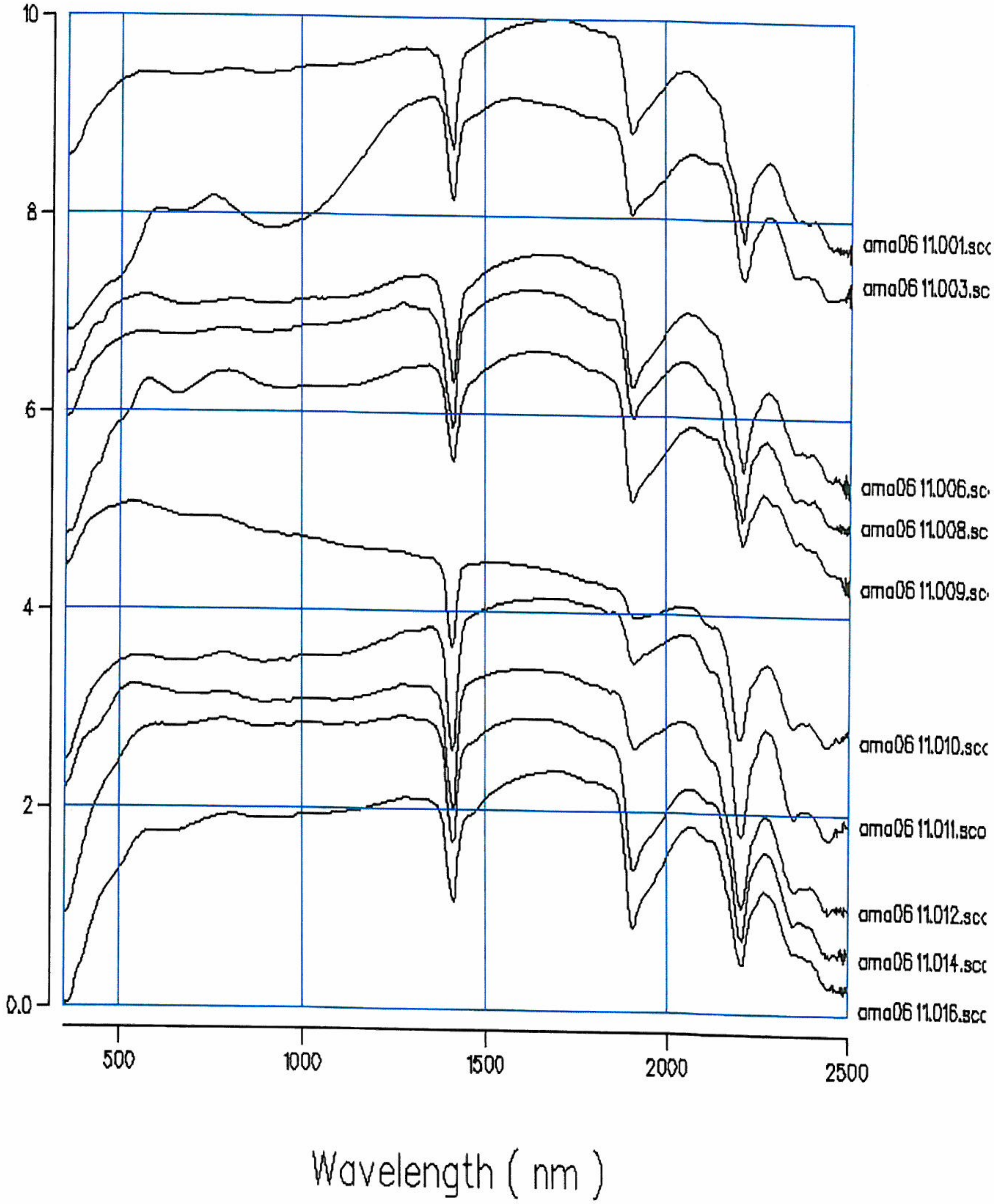
KH133 TSP ANALYSIS



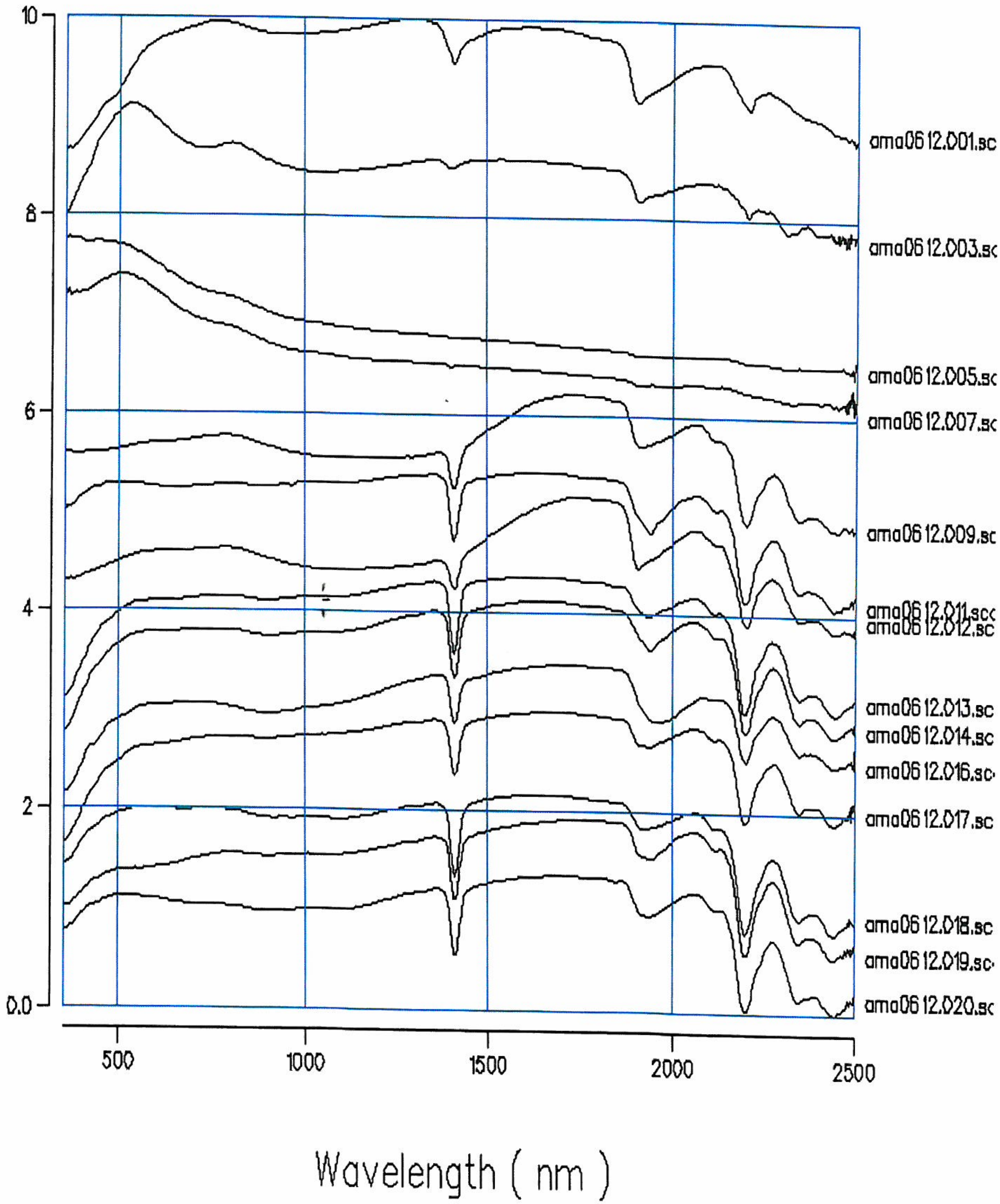
DDH06-4 STACKED SPECTRAL DATA



DDH06-5 STACKED SPECTRAL DATA

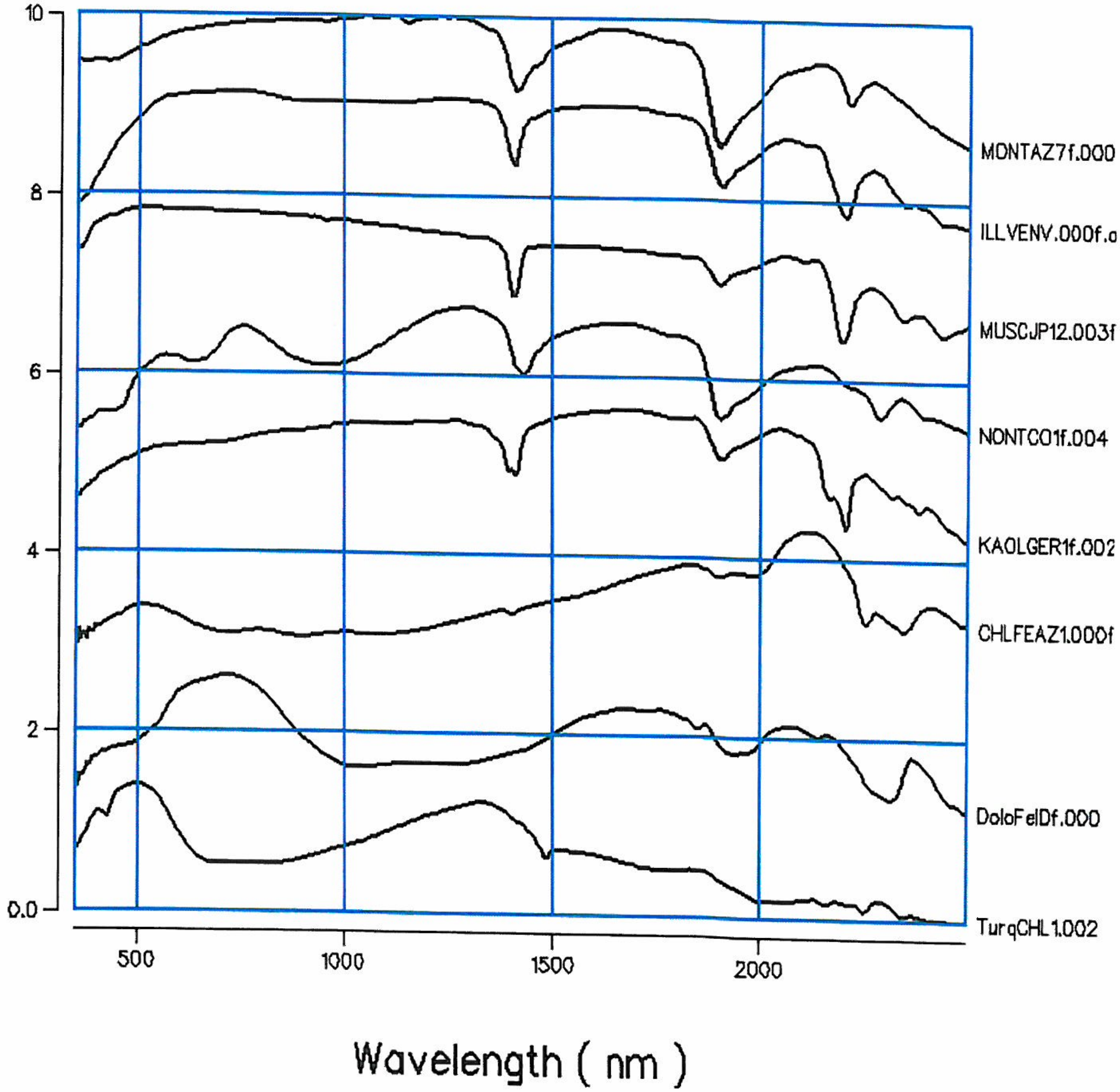


DDH06-11 STACKED SPECTRAL DATA



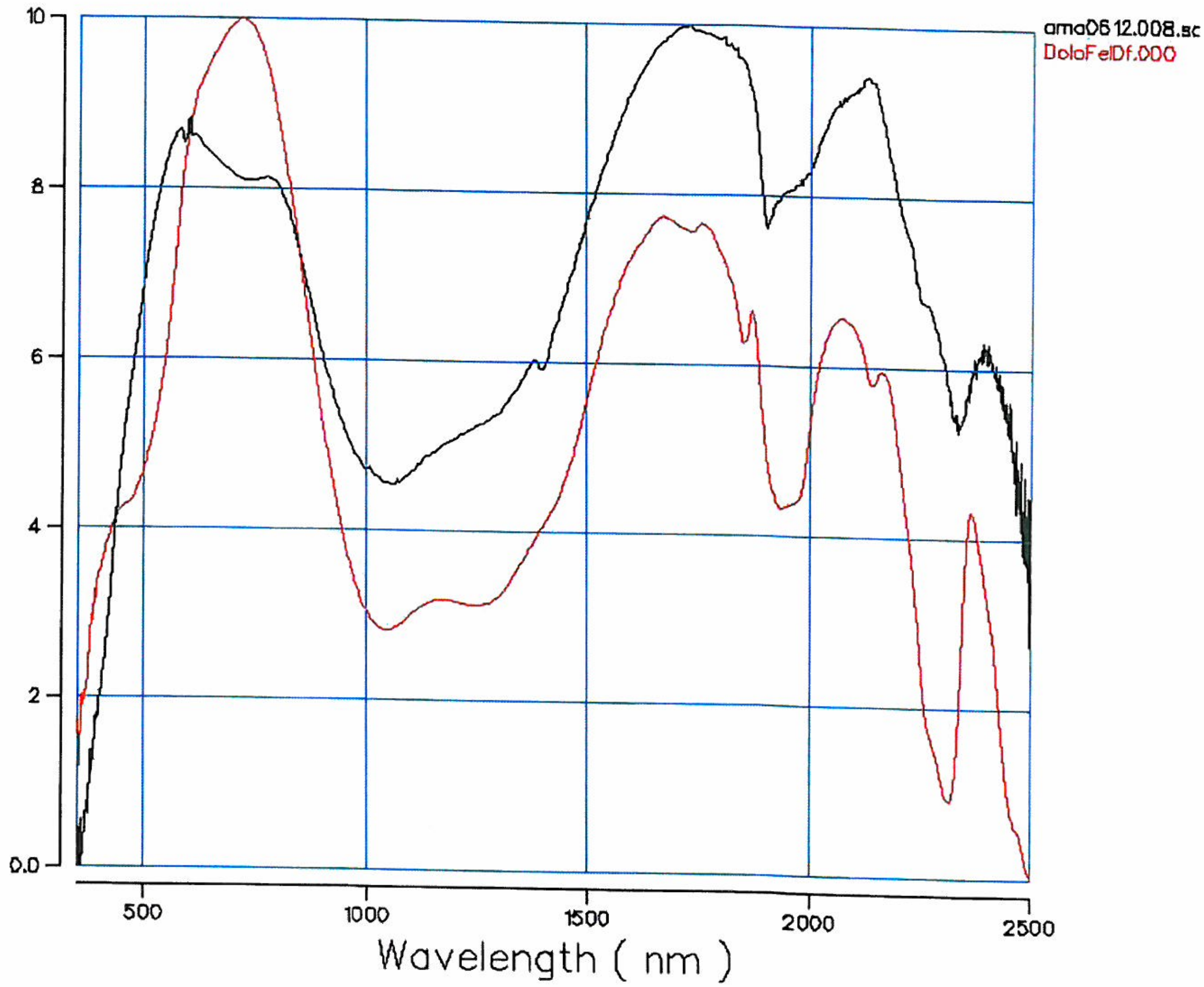
DDH06-12 STACKED SPECTRAL DATA

KH133 TSP ANALYSIS



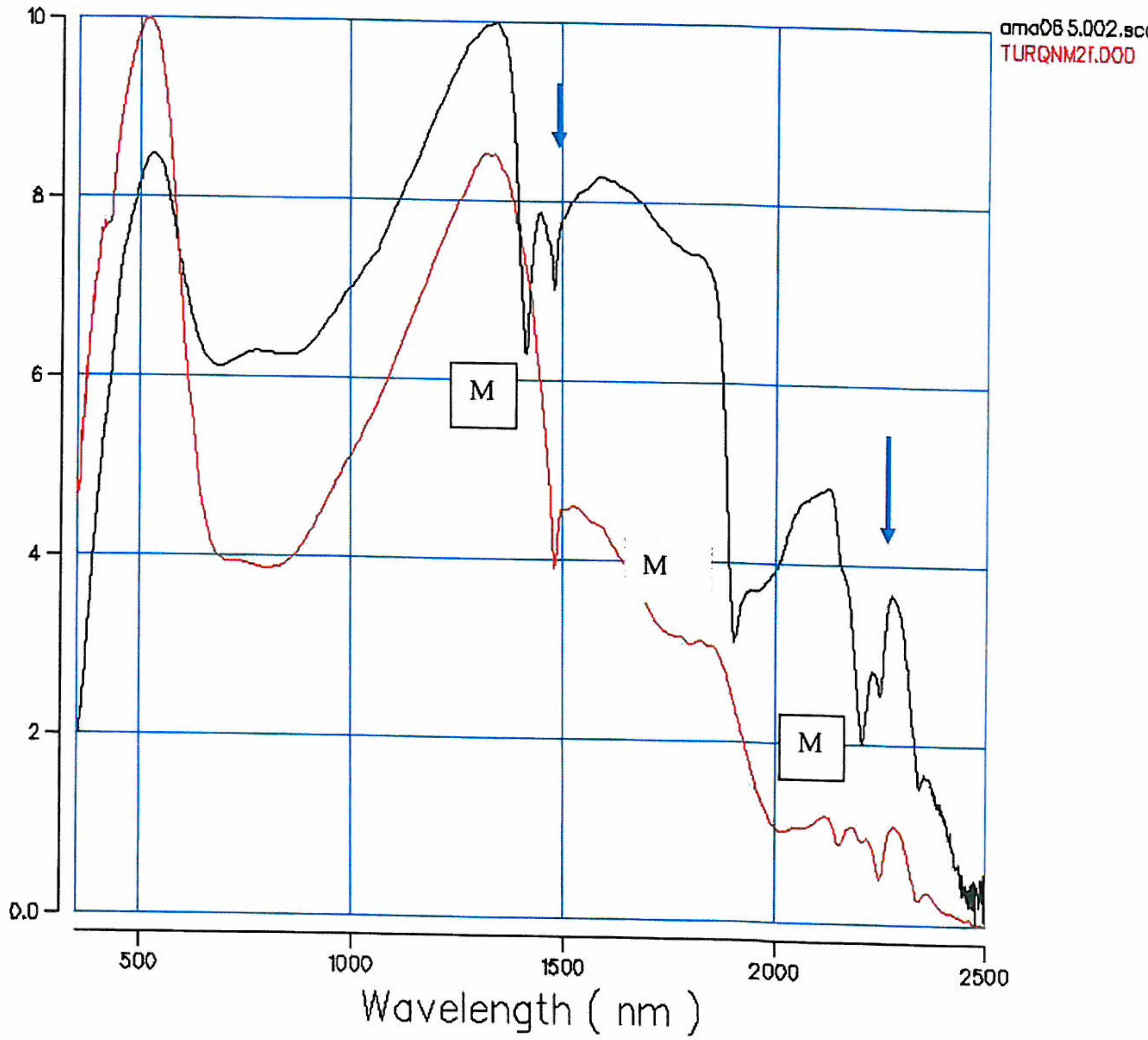
SAMPLE SPECTRA FROM SPECMIN (SII) DATABASE FOR COMPARISON

KH133 TSP ANALYSIS



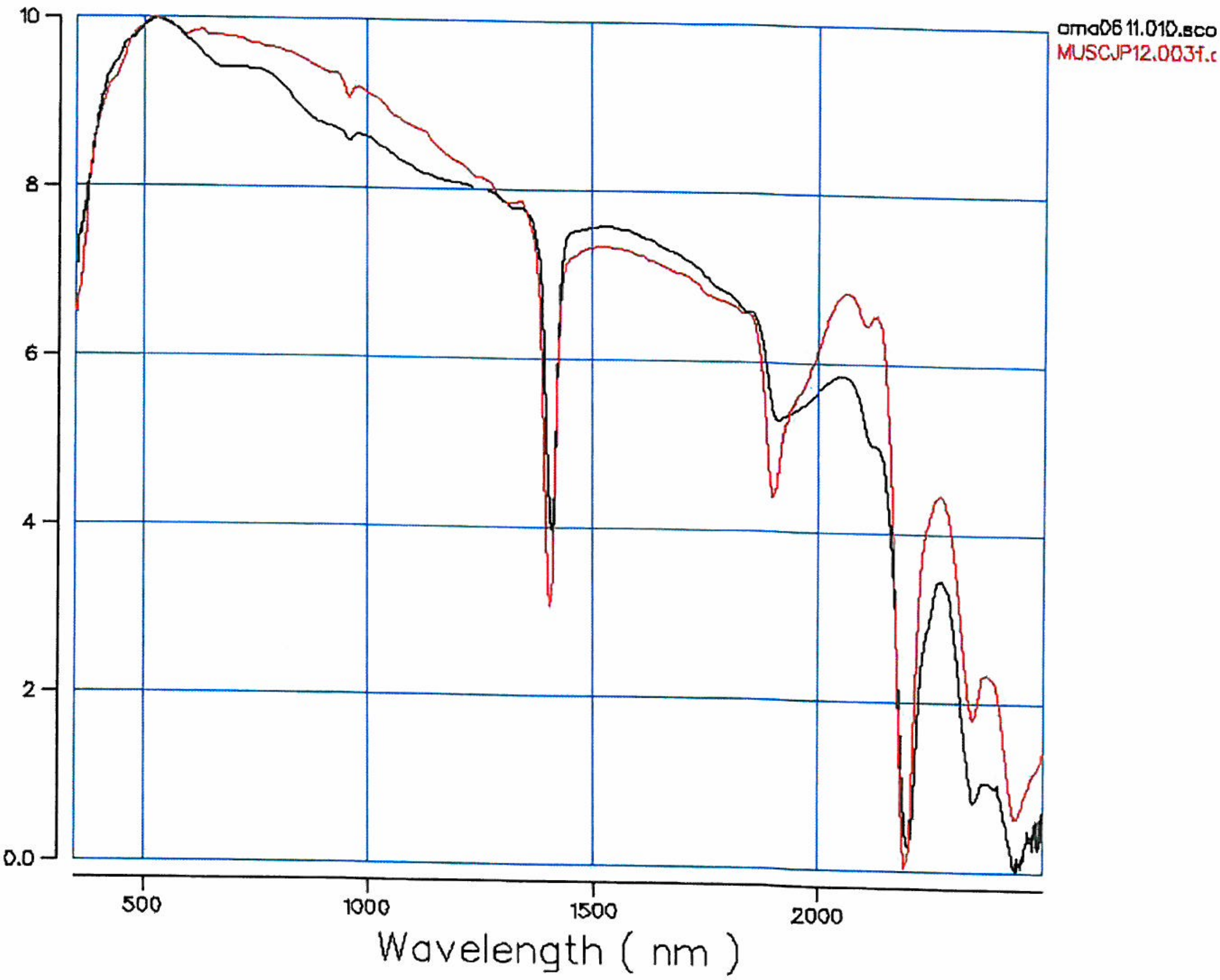
Carbonate present is Fe-carbonate – best match here is for an Fe-bearing dolomite, but it could also match ankerite or siderite.

KH133 TSP ANALYSIS



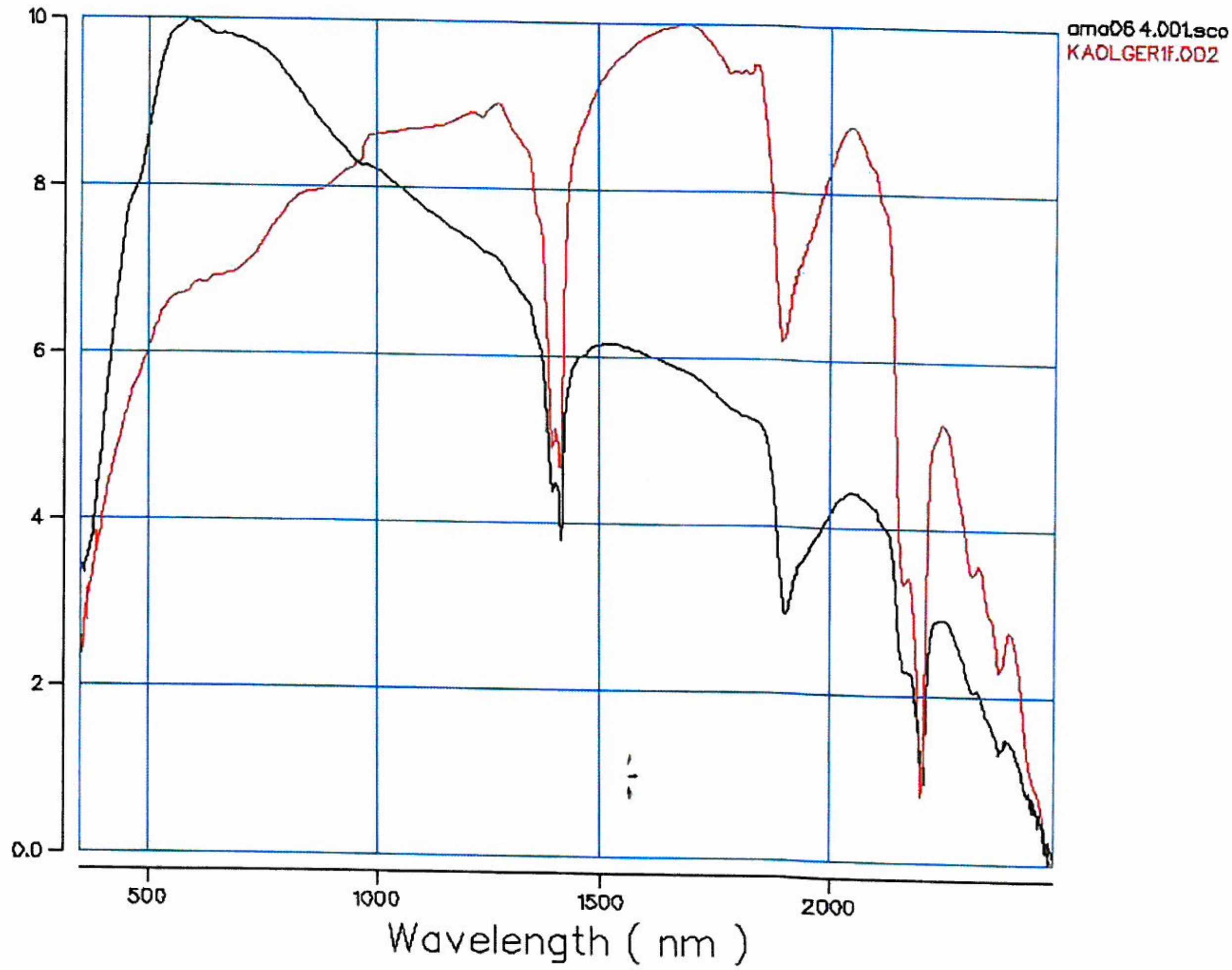
"Cu stained fracture - malachite" - Best match is actually with turquoise.
Second component is montmorillonite (M).

KH133 TSP ANALYSIS



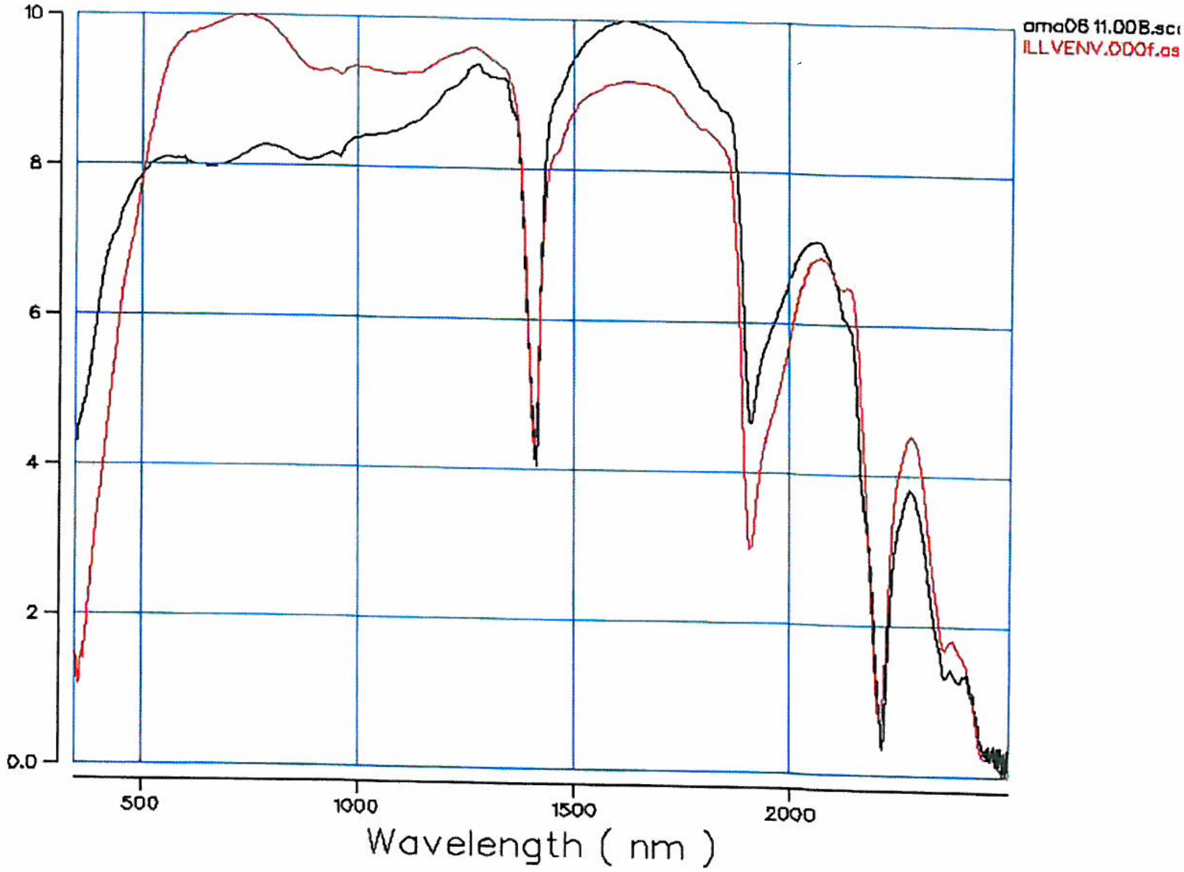
Muscovite present is hydrous – "sericite"

KH133 TSP ANALYSIS



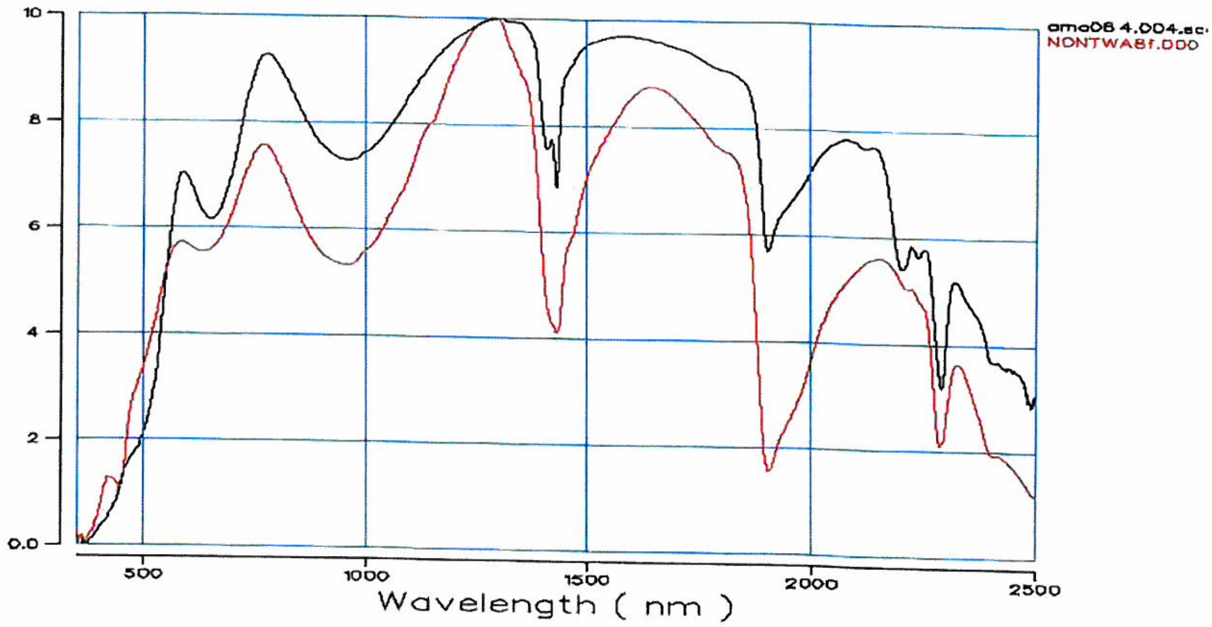
Kaolinite present is moderately well crystalized and is commonly associated with smectite and/or illite.

KH133 TSP ANALYSIS



Montmorillonite

KH133 TSP ANALYSIS



Smectite present include montmorillonite and nontronite.

APPENDIX D

TERRASPEC MINERAL IDENTIFICATION TABLE

TSP SPECTRAL ANALYSIS
KH133

Hole ID	EXT	DEPTH FROM	2200 WAVE	other WAVE	MUS	ILL	SME	KAO	CHL	CAR	GOE	HEM	SIL	JAR	GYP	COMMENTS
*NB "F" SIGNIFIES READING TAKEN FROM FRACTURE SURFACE																
AMA06_2	001	15	2207		X	x		tr	?							LT.GREY/WHITE FS
	002	15F	2207			x								X		LIM. FRACT
	003	21	2206		X	x		x								
	004	27.5	2207	569E		x		X	?							LT.GREY/WHITE SPECKLED/QV
	005	33	2207	569E		X		x	tr							LT.GREY/WHITE SPECKLED/REDDISH BANDING
	006	43	2206	565E	X	x		tr	?				?			LT.GREY HARD/SOFT SPECKLED
	007	59.5	2208		x	x		X		?Fe						PALE BUFF SOFT
	008	59.5F	2207			X		x								STRINGER
	009	69	2207			X		x	x				?			PALE BROWN MOD. HARD
	010	69F	2208	757E	x	X		x		?Fe	?					DK.GY BROWN PATCHES
	011	69F	2207	2288		x	X	x								FRACT. Nontronite and montmorillonite smectites.
	012	82	2207	596E	x	x		X	tr							GREY HARD/BUFF SOFT SPECKLED
	013	99	2207			X		X				749				GREY PINK HARD/QSTWK
	014	99F	2207			X		x	x							FRACT
	015	113	2207			tr		X				749				GREYPINK/WHITE SOFT SPECKLED
	016	113F	2207	545E		x		X	tr							FRACT
	017	123	2201		X			tr	tr						x	PALE GREY VAR.HARD
	018	129	2206		X	x		tr	tr							GREY/GREEN PATCHY
	019	129F	2207		x	x		x	tr	?						FRACT
	020	147	2207			X		X	tr							OFFWHITE SOFT/Q STRING
	021	147F	2207			x		X	tr							FRACT
	022	168	2207	545E		x		X	tr							OFFWHITE HARD/QSTRING
	023	181	2207	545E		x		X	tr							LTGREY/OFFWHITE SPECKLED SOFT
	024	196	2207			X		x	?	?						PALE BEIGE SOFT
AMA06_3	001	12	2201		X	x		?			772					GREY HARD/PINK SPECKLED
	002	12F	2203		x	X					757	?				HEM FRAC
	003	35	2199		X	x			tr							OFFWHITE MOD. SOFT
	004	59	2199		X	tr										CREAMWH SOFT
	005	59F	2197		X	x		tr								BLACK/SUS. Strong Fe slope.
	006	72	2201		X			tr					x			OFFWHITE MOD. SOFT
	007	93	2206			x	X									OFFWHITE SOFT/LIM SPECKLES. Montmorillonite, tr.nontronite.
	008	105	2204		x	X		tr	tr							GREY HARD/SUS
	009	105F	2205			X		x								FRACT
	010	121	2203		X				tr				tr			GREY SOFT/BN SPECKLED
	011	121F	2201		X			tr		?			tr	?		SUS/BROWN PATCH
	012	144	2201		X			tr	tr				x			PALE BROWN SOFT
	013	152.5	2201		X			tr	tr				x			PALE BROWN SOFT
	014	152.5F	2197		X	tr		tr							?	BROWN/BUFF. Strong Fe slope.
	015	166	2201		X			tr	tr				x			PALE BROWN SOFT
	016	176	2201		X			tr	tr				x			PALE BROWN/GREY MOTTLED/HARD
	017	187	2203		X			tr	tr						tr	PALE BROWN SOFT
	018	197	2201		X				tr						x	GREY/OFFWH.SOFT
	019	209	2203		X	x			tr				tr			GREY/PALE BROWN SOFT
AMA06_4	001	8	2207	600E			tr	X								PALE BN/GREY SPECKLED SOFT

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TSP SPECTRAL ANALYSIS
KH133

Hole ID	EXT	DEPTH FROM	2200 WAVE	other WAVE	MUS	ILL	SME	KAO	CHL	CAR	GOE	HEM	SIL	JAR	GYP	COMMENTS
*NB "F" SIGNIFIES READING TAKEN FROM FRACTURE SURFACE																
	002	8F	2207				X	X			768					LIM. FRACT. MONTMORILLONITE
	003	21.5	2197	2286			x	x								DK. GREY HARD. MONTMORILLONITE AND NONTRONITE
	004	21.5F	2195	2285			X	?								LIM. FRACT. MONTMORILLONITE/NONTRONITE
	005	45	2194		x			tr					?			DK. GREY MOD.SOFT/SUS. WEAK SPECTRUM
	006	65	2203	530E	X	x		tr							?	LT.GREY SOFT
	007	65F	2205		X	x		tr	tr							FRACT
	008	81	2199		X			tr	tr				x			OFFWHITE SOFT
	009	98	2209	2255	X	x			X	?Fe						GNGY/BROWN MOTTLED SOFT. FE CHLOR?
	010	120	2199		X	x		?	tr							OFFWHITE VAR.SOFT
	011	145	2207	2255		x		x	x							GNGY MOD.SOFT. FE CHLORITE
	012	159	2205	2249		X		tr	x	Fe						DK.BNGY HARD/SUS. ?FE-MG CHLORITE/FE CARB
	013	159F	2207			x	x	X	tr							FRACT
	014	178	2207	2288		x	X	x		tr						GY/BROWN MOTTLED HARD. MONT./NONTRONITE
	015	178F	2205	592/768E		x	X	tr	?	tr						FRACT
	016	189	2206		X	x		x	tr							GREY VAR.HARD
	017	202	2207	2252			X	tr	x	x						DK.GY/BROWN MOTTLED MOD.HARD. FE CHLORITE
AMA06_5	001	16.5	2207			x	X	tr	x							GREY/PINK MOTTLED HARD/SUS/MAL. FRACTD
	002	16.5F	2207	1481			X									CU STAIN FRACT. ?Turquoise
	003	33	2206	560E		x		X								OFFWHITE SOFT
	004	49	2206	560E		x		X	?							OFFWHITE MOD.SOFT/GREEN
	005	67	2207	850E		X		tr	tr	?						PALE BROWN/BROWN SPECKLED HARD
	006	67F	2207	2287			X	tr	?	?						FRACTURE. MONTMORILLONITE/NONTRONITE
	007	78	2206			x		X								OFFWHITE MOD.HARD
	008	96	2207	858E	x	X		tr	?	?						PALE BROWN/BROWN SPECKLED HARD
	009	96F	2209	2289			X									BROWN FRACT. NONTRONITE/WEAK MONTMORILLONITE
	010	115	2207	792E		x		X		x						LT.BNGREY HARD. PROB. FE CO3 IN VIS?
	011	123	2207	2249			x	X	x	tr						LT.BNGREY HARD/WH.SPECKLED. FE-MG CHLORITE
	012	123F	2210			X		?	tr	x						DUSTY FRACT
	013	139	2207	2249			X		x	Fe						GY/WHITE SPECKLED HARD. FE CARB
AMA06_11	001	6	2207			X		x	tr							OFFWH/GY WHSPECKLED SOFT
	002	6F	2207			x		X			756		?	x		GREY QV SELV/LIM
	003	15.7	2206			X		?	?		763					GYBROWN MOD.SOFT
	004	15.7F	2207			X		?			764					PALE BROWN SOFT
	005	15.7F	2207			X			tr							GREEN HARD PATCHES
	006	28.4	2207			X		tr	tr							LT.GY/WHITE MOD.HARD/QSTRING
	007	28.4F	2207	2285		tr	X	x								FRACTURE. MONTMORILLONITE/NONTRONITE
	008	35	2206			X		x	tr							PALE BROWN SOFT/GREY MOTTLED. MONT/NONTRONITE
	009	47	2207	2285			X	x	?							PALE BROWN SOFT/GREY MOTTLED. MONT/NONTRONITE
	010	63.8	2199		X	x			tr							LT.GY HARD/BUFF SPECKLED
	011	84	2205		X	x		tr	tr							LT GY HARD/BUFF SPECKLED
	012	96	2207		X	x		tr	tr							LT GY HARD/WH SPECKLED
	013	96F	2207			X		x	tr							FRACTURE
	014	111.5	2206			X	x	tr	tr							BNGY MOTTLED MOD.SOFT
	015	111.5F	2206			x	X	tr	tr							FRACTURE

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TSP SPECTRAL ANALYSIS
KH133

Hole ID	EXT	DEPTH FROM	2200 WAVE	other WAVE	MUS	ILL	SME	KAO	CHL	CAR	GOE	HEM	SIL	JAR	GYP	COMMENTS
*NB "F" SIGNIFIES READING TAKEN FROM FRACTURE SURFACE																
	016	119	2207			x	X		tr							PINKISH/GY SPECKLED FRACTD
AMA06_12	001	10	2206				X	x	tr		776					BROWN/WHITE FS SOFT
	002	10F	2204				X	x	tr		757	?				FRACTURE
	003	25	2205	2320			x	tr	x	Fe						GREENGREY SOFT
	004	25F	2206				X	x	tr		768					FRACTURE
	005	45		2320						x						GREENGREY HARD. V.WEAK SPECTRA. prob. carbonate
	006	45F	2205				x		tr	Fe						BROWN FRACTURE
	007	60		518E, 2324					tr	x						GREENGREY HARD. WEAK SPECTRA. prob. carbonate
	008	60F		2334			tr			Fe						FRACTURE
	009	69	2203		x	X		tr	tr	Fe			?			OFFWHITE HARD/BN SPECKLED BX
	010	69F	2205		?	X		x	tr	Fe						BROWN/GREY SPECKLED BAND
	011	81	2201		X	x			tr						x	LT.GY MOD.SOFT
	012	102	2206			X		tr	tr	Fe						LT.GYBN MOD.SOFT
	013	125	2201		X				tr						x	LT.GY SOFT
	014	142	2202		X				tr						x	LT.GY SOFT
	015	142F	2205		x	X		tr	tr	x						FRACTURE
	016	143	2201		x								x			BUFFGREY SOFT. Large water feature.
	017	160	2201		X										tr	OFFWHITE
	018	180	2202		X				tr				x			LT.GY SOFT
	019	186.7	2201		X				?						x	LT.GY SOFT
	020	201.5	2202		X				tr				?		x	LT.GY SOFT
	021	201.5F	2203		X			tr	tr				x			FRACTURE

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APPENDIX E

TERRASPEC INSTRUMENTATION

The TerraSpec is a portable, rugged high resolution spectrometer made by Analytical Spectral Devices, Inc. (ASD) of Boulder, Colorado. This spectrometer covers the visible-near infrared (VNIR)-shortwave infrared (SWIR) wavelength range (350 to 2500 nm). Measurements are taken at $1/10^{th}$ second intervals, allowing for rapid collection of large amounts of data. Resolution is 3 nm between 350-100 nm, and 6 nm between 1000-2500 nm. Sampling is done at 1.4 to 2 nm intervals and resampled to 1 nm intervals. Calibration is external.

Spectroscopic analysis of rocks by a Terraspec spectrometer is an efficient method of analyzing for a number of key alteration minerals, in particular those which are not readily identifiable by the human eye. The wide range of wavelengths covered by the TerraSpec analyzer allows identification of most clays, common alteration minerals such as carbonates, chlorites and certain sulphates, various iron-bearing minerals, and rare earth elements. These minerals can be quickly identified and alteration zoning outlined. By running analyses on select samples, the focus of exploration can be rapidly fine-tuned. The TerraSpec spectrometer requires minimal non-destructive sample preparation.

The above information is courtesy of Kim Heberlein, KH Spectral Analysis, Maple Ridge, B.C.