Summary of 2005-2008 Drilling Results at Parys Mountain: Lithogeochemistry, Petrography and Geological Relations

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Introduction

This report draws together information gained from several field visits during the 2005-2008 period, including logging of 13 holes in the White Rock Zone (WD-series), 4 holes in the Chapel Zone (CZ-series), 4 holes in the Garth Daniel Zone (AMC-series), the results of 400 new whole-rock analyses, and petrographic features based on 40 thin sections.

The results support the previous stratigraphic and structural model outlined in Barrett et al. (1999, 2001), but also allow more detailed correlations to be made, which increases certainty in the stratigraphic sequence and the position of mineralization.

The new information has been used to update the plan map of the Chapel Zone and three sections through this zone (which is also known as the shallow Engine Zone). Three new drill holes totalling 600 m are recommended to test for the presence of shallow Engine Zone massive sulfides immediately to the southeast of the existing Chapel Zone holes. Each hole would test for two possible mineralized horizons.

An outline of recent geological results from the Garth Daniel Zone, based on drilling done in 2005-2006, is also given. This information is largely taken from a report by Barrett et al. (2006). Lithogeochemical results for the Garth Daniel Zone (holes AMC15, AMC16, AMC17 and AMC19) are included in the current report in order to facilitate comparisons with the Chapel Zone and the White Rock Zone.

CD 1 contains an Appendix of selected drill-core and petrographic photographs. All core and petrographic photographs are given on CDs 2 and 3, respectively.

Lithogeochemical Results

All results are arranged according to rock type in Table 1, and according to hole and depth in Table 2. The beginning and ending depths for the main rock intervals for all WD-series holes and all CZ-series holes are given in Table 3. Tables 1 and 2 also contain previously reported results for holes CZ1 to CZ9, WR1 and WR2, and IM7; a few of these samples have been reclassified slightly to be consistent with the currently recognized rock types. Tables 1 and 2 also include new results for (i) several older holes, mainly A13, A14, A41, IM1, IM7; (ii) short holes SI1 to SI3 drilled near a proposed decline; and (iii) 12 new outcrop samples. Table 3 summarizes the main tock types intersected in all holes drilled specifically to test the Chapel Zone and White Rock Zones. It also includes nearby holes A43, IM1 and IM5.

Most of the new samples fall clearly into the chemical groups established in our earlier studies, namely, rhyolite types A, B, C and D, high-Ti basalt, and shale, each of which has a specific stratigraphic position on the property. Due to the strong alteration, specific rhyolite types generally cannot be recognized visually – they can only be identified on the basis of the lithogeochemical results. In addition, the strong silicification in and near the White Rock Zone has produced rocks that have previously been logged as rhyolites, but which are shown by the lithogeochemical results to have had shale precursors. As a result, revision of many of the original logs has been required.

An additional rock type, termed "andesite" in Tables 1 to 3, has been defined based on several new samples collected from recent drill holes. This lithology is generally strongly altered and is invariably located in the footwall shales (according to the synclinal model for Parys Mountain). All samples but one are from the White Rock Zone; the single sample is from AMC15 in the Garth Daniel Zone. In the White Rock Zone, the andesite forms at least two intervals interpreted as sills that were emplaced a few tens of metres below the top of the shale formation. The andesite has been affected by the same alteration that the shales have experienced (silica-sulfide-sericite). Because the original major element composition is no longer preserved, it is not certain that this rock was precisely an andesite, although it has distinctly lower contents of TiO2 than the high-Ti basalt It is conceivable that it might have been derived from a mafic rock with rather low TiO_2 contents. In any case, it has distinctive immobile-element ratios that allow it to be correlated between holes.

Plan Map of Western Parys Mt.

An updated plan view of the western part of Parys Mountain is shown in Figure 1. The southern part of the diagram shows surface geological relations, while the northern part shows relations on the -280 m level. Traces of the Pen-y-mynydd Fault (PMF) and the Cross Fault are shown on both the surface and the -280 m level. Also shown for reference are the collars of the new holes in the White Rock Zone (WD1 to WD13) and two older holes (WR1 and WR2). The surface geology of the White Rock "panel" has been omitted in order to show the relations on the underlying -280 m level. The panel consists of shales, quartz-sulfide-veined shales, rhyolite B, and sulfide-bearing White Rock. Rhyolite B commonly occurs on the immediate north side of the PMF. It forms one or two intervals totalling 5 to 30 m in thickness.

Information from the new holes in the Chapel Zone (and nearby older holes such as A43 and IM5) allows the stratigraphic relations to be established throughout most of the Chapel Zone, with the exception of the rather puzzling sequence in CZ9, which lies close to a major steep fault that runs roughly north-south. Updated sections L, N and P (Anglesey Mining grid) are shown in Figures 2, 3 and 3, respectively. Apart from hole CZ9, massive sulfides in the Chapel Zone consistently lie either immediately above the surface of rhyolite C, or just below the base of rhyolite C. However, to the south of CZ11, sulfides are scarce at the lower contact, perhaps because shearing along the contact between the rhyolite mass and the Southern Shales has removed some of the original mineralization. To the north of CZ11, rhyolite C and its flanking sulfide horizons can be traced downdip to the Engine Zone on the -280 m level, and even below this.

The Chapel Zone appears to be bounded on its east by an unnamed north-south fault (Fig. 1), with the stratigraphy to the east being relatively downdropped. However, sulfides are still present to the east of this fault. The high-grade intersection in A43 is located at the upper contact of rhyolite C; a similar interval sampled by Cominco near the top of the Pen-y-nant shaft may well represent the same sulfide horizon. The area downdip of the sulfide occurrences in A43 and the shaft is untested. For this reason, it is recommended that three drill holes, each about 200 m long, be drilled in order to test for possible sulfide horizons both above and below rhyolite C. The 3 suggested holes are shown on Figure 1 (CZ14, CZ15 and CZ16).

To the east of the north-south fault, basalt is present at depth in CZ9 and A43. In these two holes, the basalt appears to cut down through rhyolite C at a low angle (elsewhere, the basalt occurs as a sheet situated between the top of rhyolite C and the overlying mass of rhyolite A). As no sulfides were encountered below rhyolite C in CZ9 and A43, it seems possible that the basalt unit might have disrupted or removed the lower sulfide horizon. However, this may not be the case further downdip to the north of these two holes. In fact, just above the -280m level, rhyolite C, massive sulfides and the basalt sheet are all present (although the basalt is here pinching out to zero).

In the Chapel and Engine Zones, rhyolite B normally occurs below rhyolite C. The upper part of CZ9, however, intersected rhyolite B above a good sulfide horizon, below which are thin units of rhyolites A and D, and finally rhyolite C. This suggests that the sulfide horizon in CZ9 is not the same one as occurs in A43, where the sulfides occur between rhyolites C and A.

Although the presence of rhyolite B well above rhyolite C in CZ9 is unusual, a thin interval of rhyolite B occurs in a similar position in CZ11, some 70 m to the northwest. This hole, like CZ9, also intersected a thin unit of rhyolite D. As these are the only two occurrences of rhyolite D in the western Parys Mountain area, it seems possible that they represent the same horizon (rhyolite D normally occurs much further to the east, where it interfingers laterally with rhyolite A).

Main assay results for new holes in the Chapel Zone

Hole, depth	*Width*	*Cu %*	*Pb %*	*Zn %*	*Ag ppm*	*Au ppm*
CZ10: 61.9-62.5 m	**0.60 m**	**4.23**	**13.28**	**22.61**	**84**	**0.38**
CZ10: 198.3-201.3	**3.00 m**	**1.24**	**3.91**	**6.13**	**54**	**1.87**
CZ11: 56.0-57.3	**1.30 m**	**0.60**	**4.75**	**7.78**	**54**	**0.19**
CZ11: 165.3-166.7	**1.40 m**	**1.78**	**8.06**	**14.95**	**50**	**0.59**
CZ13: 156.65-158.4	**1.75 m**	**1.97**	**9.17**	**16.14**	**51**	**1.40**

Stratigraphic relations in the White Rock Zone

The lithologies of the White Rock Zone comprise, in ascending stratigraphic order, that is from west to east:
(1) Shales of likely Ordovician age;
(2) Shales with increasing proportions of quartz-sulfide veining upwards;
(3) Intercalations of white-rock, shale and semi-massive to massive sulfides;
(4) Rhyolite B (altered and with disseminated sulfides).

Rhyolite B is not present in all of the WD holes. Either it originally thinned to zero locally, or it has been tectonically removed by the PMF.

There is no lithogeochemical or petrographic evidence that White Rock has replaced rhyolite. Rather, the White Rock is an amalgamation of irregular quartz masses, discordant quartz-sulfide crustiform veins, and pockets of hydrothermal breccia that formed within the shales. Where the "andesite" unit is present within the shales, it too is cut by quartz-sulfide veins (and is sericitized). Some of the White Rock likely formed directly on the seafloor by discharge of relatively cool hydrothermal fluids, while some clearly formed within shales up to a few tens of metres below the paleo-seafloor. It is clear that multiple generations of quartz-rich veins crossed the shales (and each other). At least some of the White Rock formed by deposition of silica and lesser sulfides into open space fissures, as shown by presence of crustiform banding and quartz coxcomb structures. The hydrothermal breccias contain broken, rotated angular clasts of White Rock and silicified shale in a matrix of sulfides.

Semi-massive sulfides in the White Rock Zone typically consist of quartz plus heavy disseminations, patches and veins of sulfides. Locally, however, intervals of massive sulfide up to a few metres thick are present. These may have been deposited on the paleo-seafloor, as they are closely comparable to bluestone beds in the Engine Zone, both in terms of sulfide textures and metal grades. The intersection in WD-8 in particular is of interest, as it contains the same type of high Ag and Au contents that are found in the Engine Zone on the 280 m level. The Cu contents of the massive sulfides in the White Rock zone are, however, generally lower than the best Cu grades in the Engine Zone (and Garth Daniel Zone). This points towards generally lower fluid temperatures during deposition of sulfides in the White Rock Zone.

Main assay results for new holes in the White Rock Zone

Hole, depth	*Width*	*Cu %*	*Pb %*	*Zn %*	*Ag ppm*	*Au ppm*
WD1: 42.9-47.5 m	**4.60 m**	**0.64**	**5.06**	**9.25**	**49.5**	**0.96**
including	**1.80 m**	**1.64**	**12.92**	**23.64**	**127**	**2.26**
WD2: 44.0-49.0	**5.00 m**	**0.15**	**1.08**	**2.10**	**25**	**0.31**
WD3: 26.1-49.5	**23.40 m**	**0.17**	**1.04**	**2.22**	**40**	**0.72**
including	**3.00 m**	**0.22**	**1.58**	**3.51**	**82**	**1.32**
WD4: 26.4-34.9 m	**8.50 m**	**0.63**	**5.78**	**10.02**	**59**	**0.47**
WD4: 41.0-45.0 m	**4.00 m**	**1.07**	**7.08**	**10.18**	**98**	**0.45**
WD5: 13.5-14.4 m	**0.90 m**	**2.32**	**7.22**	**17.44**	**129**	**0.11**
WD6: No significant results						
WD7: 16.8-23.9 m	**7.10 m**	**0.34**	**1.71**	**2.99**	**20**	**0.11**
WD7: 46.8-53.9 m	**7.10 m**	**0.41**	**2.97**	**4.76**	**23**	**0.20**
WD7: 72.8-79.9 m	**7.10 m**	**0.11**	**1.52**	**3.07**	**39**	**0.71**

WD8: 61.8-63.8 m	**2.00 m**	**0.25**	**3.27**	**5.70**	**62**	**0.62**
WD8: 63.8-70.8 m	**7.00 m**	**1.07**	**7.79**	**13.68**	**207**	**4.37**
WD8: 72.7-76.6 m	**3.90 m**	**0.69**	**5.26**	**9.62**	**74**	**1.19**
WD9: 14.05-17.45 m	**3.40 m**	**0.79**	**3.30**	**6.10**	**58**	**0.25**
WD9: 30.9-33.7 m	**2.80 m**	**0.86**	**5.84**	**8.72**	**45**	**0.22**
WD9: 35.1-37.7 m	**2.60 m**	**0.52**	**4.16**	**5.05**	**21**	**0.22**
WD9: 53.2-54.8 m	**1.60 m**	**0.51**	**6.17**	**7.64**	**39**	**0.39**
WD9: 66.75-72.2 m	**5.45 m**	**0.43**	**4.70**	**8.49**	**38**	**1.55**
WD10: 21.2-30.2 m (vertical hole)	**10.95 m**	**1.29**	**7.39**	**13.84**	**121**	**2.31**
WD10: 34.15-53.8 m	**19.65 m**	**0.78**	**4.84**	**8.21**	**59**	**0.42**
WD11: 119.0-127.3 m	**8.30 m**	**0.85**	**2.98**	**5.56**	**29**	**0.38**
WD11: 127.3-132.7 m	**5.40 m**	**0.66**	**5.51**	**10.46**	**69**	**1.97**
WD12: 53.3-55.0 m	**1.70 m**	**0.78**	**2.13**	**6.51**	**83**	**0.26**
WD12: 126.2-127.9 m	**1.70 m**	**0.29**	**7.63**	**8.98**	**29**	**0.14**
WD12: 150.4-153.7 m	**3.35 m**	**0.47**	**2.93**	**5.45**	**30**	**0.36**
WD13: 172.5-175.0 m	**2.50 m**	**0.81**	**5.11**	**7.61**	**22**	**0.20**
WD13: 183.0-185.0 m	**2.00 m**	**0.31**	**2.50**	**4.47**	**18**	**0.17**

Pen-y-Mynydd Fault (PMF) and Cross Fault

The PMF was recognizable in all the WD holes except WD-3, either as a zone of broken and quartz-veined core (in places with only partial recovery), or as a sheared contact between contrasting rock types such as rhyolite and shale. Near the surface, the fault plane appears to be almost parallel to the lithological strike, which in this area is roughly SW-NE. At depth, in the Engine Zone, the fault is discordant to the main lithological units. This is best explained if the White Rock panel of stratigraphy represents an overturned syncline limb that has become somewhat detached from the “keel” and has been thrust towards the southwest, although probably not more than 50-100 m given the general equivalence of rock types in both the White Rock and Engine Zone sequences. The Cross Fault is a later east-west fault that cuts across the PMF and displaces the main rock units in the western part of Parys Mountain, including the mineralized zones, but probably not by more than a few tens of metres.

Basalt Sheet

A sheet of basalt, generally ranging from 5 to 25 m thick, is present in much of the western part of the Engine Zone, from surface down to about 250 m BMD. It is commonly concordant with stratigraphy and located at the top of rhyolite C (and below rhyolite A). In the area of section P, however, it crosses rhyolite C at a low angle. Although massive sulfides usually occur above rhyolite C and below the basalt sheet, they occur at the top of the basalt in H3 and PM079. The latter hole records the deepest occurrence of the basalt; at about 250 m BMD, the basalt pinches out, leaving rhyolite C. On the 280 m level, rhyolite C itself pinches out within the main massive sulfide lens.

Main Mineralized Horizons

All mineralized intersections encountered in the recent drilling can be assigned to either the overturned White Rock Zone or the right-way-up Shallow Engine Zone (= Chapel Zone). The overall package of mineralized rocks in the White Rock Zone bears a strong resemblance to the so-called North Central Zone, which in the synclinal model occurs on the overturned northern limb of the Parys Mountain syncline. In both areas, White Rock, stockwork-veined shales, altered rhyolite B and local massive sulfide lenses are present. In the western part of Parys Mountain, the PMF has generally placed rhyolite B in the overturned limb against rhyolite A of the right-way-up sequence, although a few metres of shale may intervene. However, it is likely that the original stratigraphic sequence was shale followed upwards by a package of White Rock and rhyolite B that hosts essentially all of the stratiform mineralization, followed by rhyolite A which contains polymetallic sulfide veins in places. The thickness of the White Rock shows considerable lateral variation.

The new CZ holes drilled in the Shallow Engine Zone encountered sulfide lenses either immediately above or below the rhyolite C body. The positions of the sulfide lenses tie in well with the geological relations shown in Chapter 5 of Barrett et al. (1999).

The one exception remains the massive sulfide horizon encountered in hole CZ9. It does not appear to correlate with the massive sulfide horizon in nearby hole A43, which is located at the upper contact of rhyolite C (and below rhyolite A). In CZ9, rhyolite B occurs above the sulfide horizon. It is not clear if the CZ9 sulfide horizon is a stratigraphically anomalous, or simply lies within a small fault block and is tectonically out of place. There is no drilling to the east-southeast of CZ9 area apart from old hole A24, which was collared near the basalt lens, and therefore probably did not cross any of the rocks stratigraphically above rhyolite C. Unfortunately, there is no summary drill log for A24 in Bill Charter's compilation, nor does this hole appear in his assay compilation (although it may have been unmineralized). It is therefore recommended that three holes be drilled in the area east-southeast of CZ9, in order to determine how the sulfide horizons in CZ9, A43 and the Pen-y-Nant shaft fit together, and if they can be traced downdip. The holes would not have to be deeper than 100 m to intersect the top of rhyolite C. If the holes were drilled to 200 m, they should also, in theory, intersect the sulfide horizon that lies below rhyolite C. However, as mentioned earlier, it is possible that the basalt sheet locally crosses this lower contact, which might have removed any sulfides that were present.

Garth Daniel Zone

Four new holes were drilled in 2005-2006 across the contact between rhyolites and the Northern Shales, between 4450E to 4850E (Fig. 5A). This area, which contains several levels of mineralization, is now termed the Garth Daniel Zone. The objective was to explore for extensions of the polymetallic sulfide intervals intersected in two old holes, H-30 and A-15, drilled more than 30 years ago by CIGOL and Cominco, respectively. These polymetallic sulfides occur in highly altered shales and tuffs along the northern margin of the rhyolites, and originally were termed the North-Central Zone in order to distinguish them from deep Engine Zone sulfides that occurred on the southern margin of the rhyolites.

Lithogeochemical results for the Garth Daniel Zone are given in Tables 1 and 2. Based on these results and core logging, various volcanic units have been identified and correlated. Most holes in the Garth Daniel Zone started in the Northern Shales and were drilled steeply to the south; they encountered White-Rock, a polymetallic sulfide horizon, rhyolite B, rhyolite A, and finally a second horizon of polymetallic sulfides, before terminating in presumed Southern Shale.

A longitudinal section at about 5250N is shown in Figure 5B. In the Garth Daniel Zone as a whole, the lithological units generally dip moderately steeply to the north. In the synclinal model advocated here, these rocks form part of a fold limb that is overturned towards the south. In this model, the sulfides of the North-Central Zone and the deep Engine Zone represent the same initial stratigraphic level. The widespread Cp-Py-Qtz veins that occur within the Northern Shales (known as the Northern Copper Zone) are interpreted as the stockwork to the North-Central Zone sulfides. A few holes passed at mid-depths through two or three repetitions of rhyolites and shale; it is suggested that this is due to local offsets along faults parallel to the axial plane of the syncline. This effect seems to be strongest near the inferred “keel” of the syncline.

Geological Relations

High-grade polymetallic sulfides previously assigned to either the North-Central Zone or the Engine Zone occur within very similar geological packages of strongly altered shales and volcaniclastic beds of rhyolite B. In the synclinal model, the polymetallic sulfide horizon of the North-Central Zone (on the inverted northern limb) is essentially the same horizon as the Engine Zone (on the right-way-up southern limb). The drillholes shown in Figure 5A, which were all collared in the Northern Shales and drilled steeply to the south, would have passed though the synclinal axis at some point, but not through the Central Shales which occupy the core of the syncline, as they do not extend this deeply.

In the paleo-seafloor model favoured here, rhyolites of lowest Silurian age originally were erupted onto a thick sequence of mid-Ordovician shales (chemical types N and X) and a local veneer of lowest Silurian shales (chemical type C). Three main types of rhyolite were emplaced: a thin unit of rhyolite B that is coeval with the polymetallic sulfide beds of the Engine Zone and the sulfides of the White Rock Zone; a sill-like lens of rhyolite C that was probably intruded just below the surface of the shales; sheet of high-Ti basalt; a thick body of massive rhyolite A; and finally the lower Silurian Central Shales (towards the east, rhyolite A passes into rhyolite D, which represents a separate but coeval volcanic vent). The basalt sheet was emplaced just after rhyolite C, but before rhyolite A. The sulfides at the top of rhyolite C were part of the Engine Zone mineralization prior to its being split apart by rhyolite C. Both the basalt and rhyolite C are restricted to the western part of Parys Mountain.

Main assay results for new holes in the Garth Daniel Zone

Hole, depth, zone	*Width*	*Cu %*	*Pb %*	*Zn %*	*Ag ppm*	*Au ppm*
AMC-15 254.50 – 264.20 m White Rock (CYD)	**9.70 m**	**0.48**	**<0.01**	**<0.01**	**<5**	**0.04**
AMC-15 292.65 - 301.55 m Veins in Rhyolite B	**9.00 m**	**1.59**	**<0.01**	**0.06**	**<5**	**0.02**
AMC-15 366.25 - 366.45 m North-Central Zone	**0.20 m**	**8.39**	**8.51**	**15.23**	**<5**	**0.06**
AMC-15 562.70 - 565.20 m Engine Zone	**2.50 m**	**6.34**	**11.94**	**22.26**	**887**	**0.46**

AMC-16 298.50 – 322.50 m White Rock (CYD-1)	**24.0 m**	**0.65**	**0.21**	**0.40**	**7**	**0.26**
AMC-16 389.70 – 399.1 m White Rock (CYD-2)	**9.4 m**	**1.40**	**0.10**	**0.20**	**7**	**0.16**
AMC-16 529.00 – 529.35 m Engine Zone	**0.35 m**	**2.19**	**4.18**	**7.81**	**20**	**0.08**

Main assay results for new holes in the Garth Daniel Zone (continued)

Hole, depth, zone	Width	Cu %	Pb %	Zn %	Ag ppm	Au ppm
AMC-17 **257.70 – 261.9 m** **White Rock (CYD)**	**4.2 m**	**1.05**	**0.02**	**0.04**	**<5**	**0.10**
AMC-17 **342.70 – 343.10 m** **Sulfides in Rhyolite A**	**0.40 m**	**5.43**	**5.35**	**12.21**	**33**	**0.06**
AMC-17 **432.70 – 436.50 m** **Sulfides in Shale C**	**3.80 m**	**1.99**	**0.08**	**0.59**	**11**	**0.09**
AMC-17 **493.60 – 494.65 m** **Engine Zone (upper)**	**1.05 m**	**1.05**	**3.33**	**7.96**	**29**	**<0.01**
AMC-17 **496.60 – 502.10 m** **Engine Zone (lower)**	**5.50 m**	**3.73**	**6.06**	**12.51**	**78**	**0.37**
AMC-17 **525.50 – 529.60 m** **Footwall shale veins**	**4.10 m**	**1.49**	**0.03**	**0.04**	**5**	**0.01**
AMC-19 **296.00 – 298.2 m** **White Rock (CYD)**	**2.2 m**	**1.53**	**0.07**	**0.16**	**4**	**0.11**
AMC-19 **318.60 – 320.2 m** **North Central Zone**	**1.60 m**	**2.72**	**9.95**	**18.31**	**39**	**0.48**
AMC-19 **331.4-344.5 m** **White-Rock Zone**	**13.10 m**	**0.74**	**0.59**	**1.24**	**11**	**0.37**
AMC-19 **495.20 – 502.60 m** **Engine Zone (veins)**	**7.40 m**	**0.83**	**0.09**	**0.10**	**6**	**0.05**

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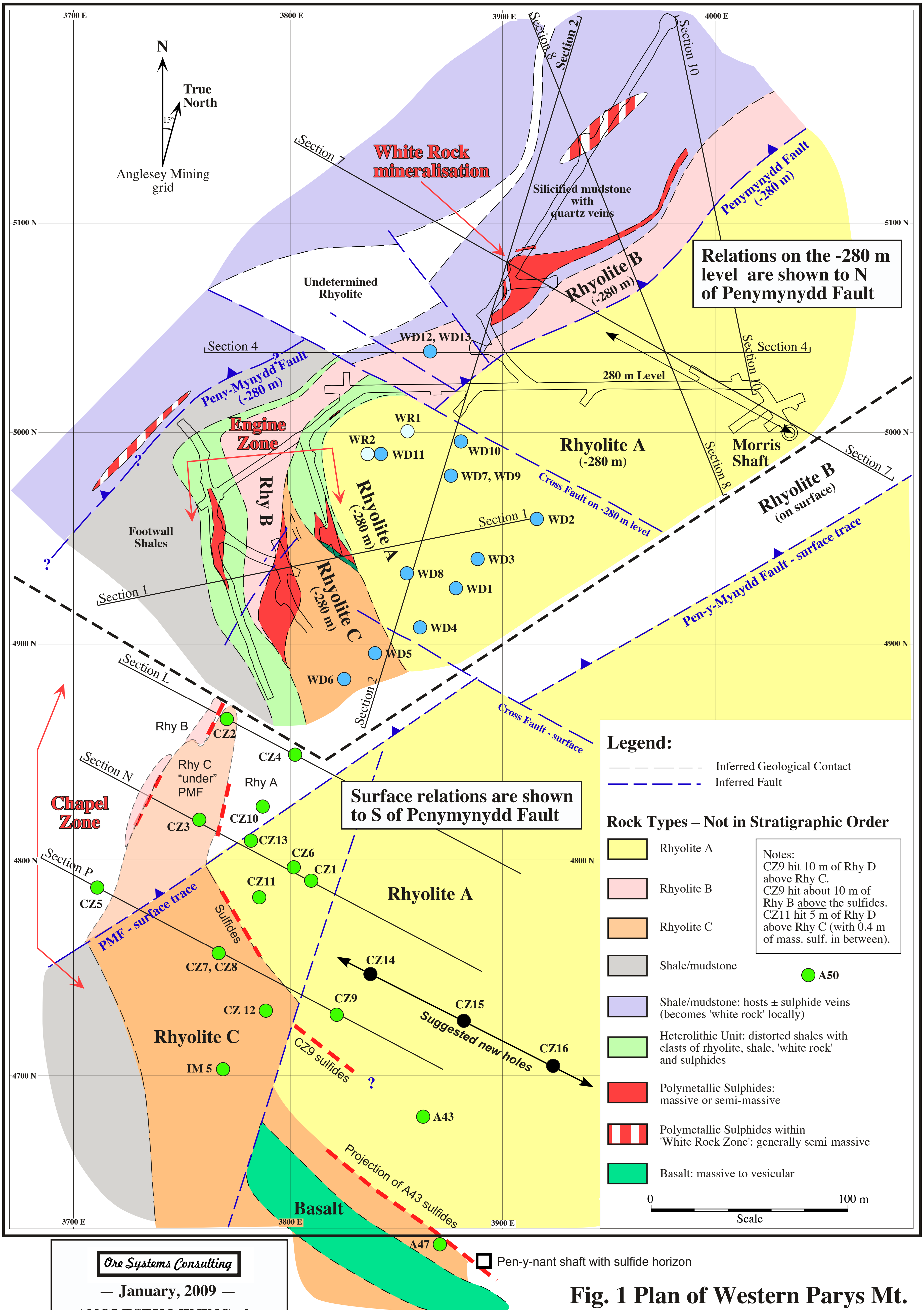

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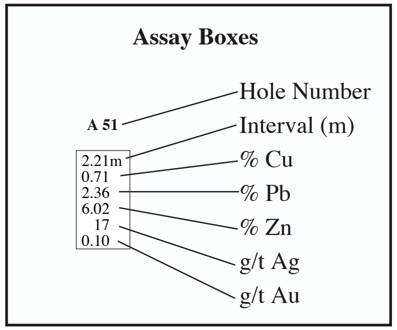
Fig. 1 Plan of Western Parys Mt.

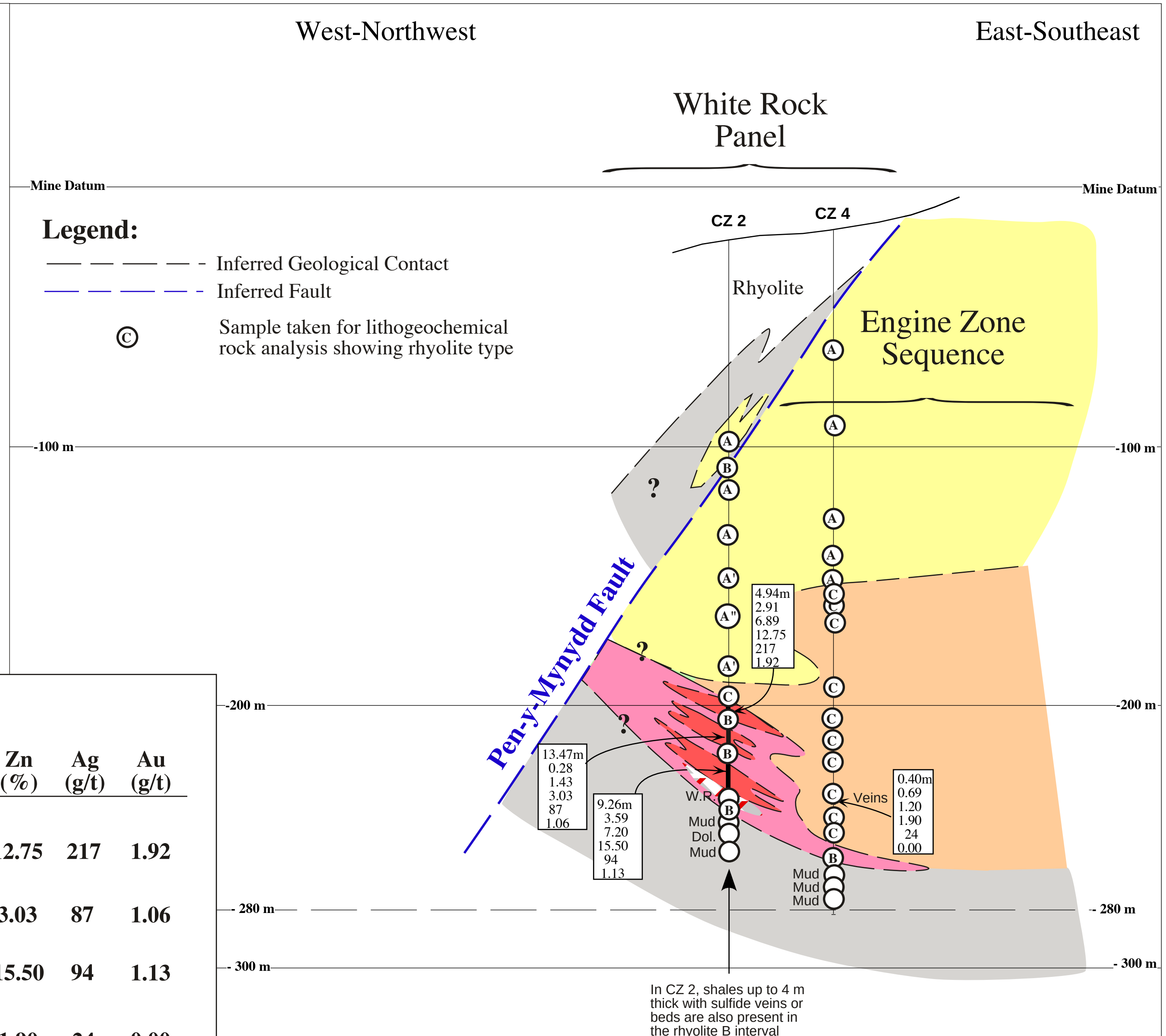
Rock Types – Not in Stratigraphic Order

- Rhyolite A
- Rhyolite B
- Rhyolite C
- Rhyolite D1 and/or D2
- Shale/Mudstone
- Shale/mudstone – hosts quartz ± sulphide veins (becomes 'white rock' locally)
- Heterolithic Unit: distorted shales with clasts of rhyolite, shale, 'white rock' and sulphides
- Polymetallic Sulphides: massive or semi-massive
- Polymetallic Sulphides within 'White Rock Zone': generally semi-massive
- Basalt: massive to vesicular



Intersections of Note:

Zone	Hole No.	Interval (m)	Uncorrected Width (m)	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)
Upper Engine?	**CZ 2**	**179.16 - 184.10**	**4.94**	**2.91**	**6.89**	**12.75**	**217**	**1.92**
Middle Engine?	**CZ 2**	**185.43 - 198.90**	**13.47**	**0.28**	**1.43**	**3.03**	**87**	**1.06**
Lower Engine?	**CZ 2**	**202.65 - 211.91**	**9.26**	**3.59**	**7.20**	**15.50**	**94**	**1.13**
Veins in rhyolite	**CZ 4**	**219.50 - 219.90**	**0.40**	**0.69**	**1.20**	**1.90**	**24**	**0.00**



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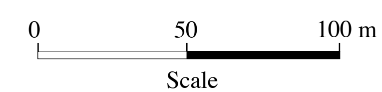


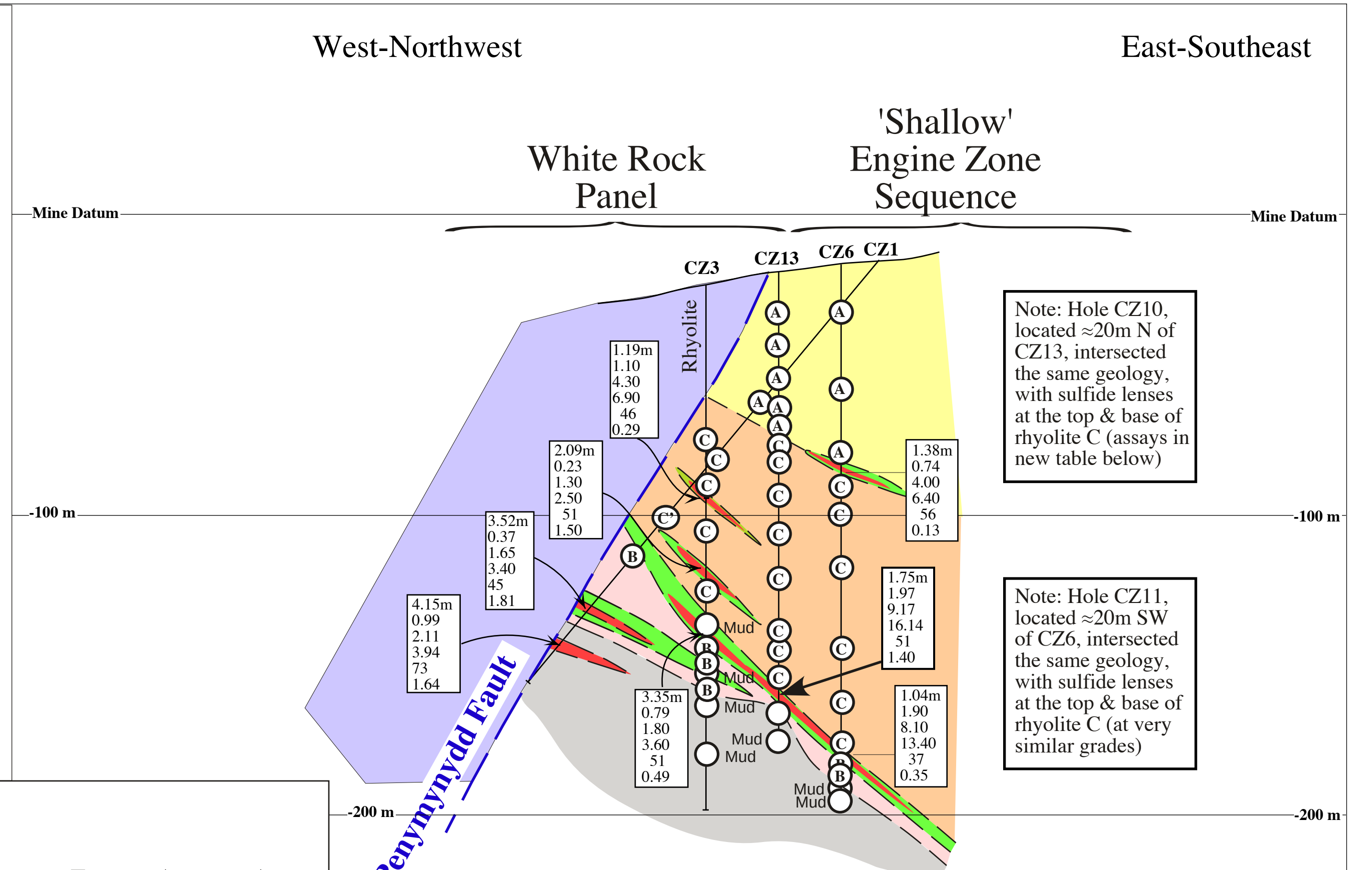
Figure 2: Parys Mountain Section L (updated)

Rock Types – Not in Stratigraphic Order

- Rhyolite A
- Rhyolite B
- Rhyolite C
- Rhyolite D1 and/or D2
- Shale/Mudstone
- Shale/mudstone – hosts quartz ± sulphide veins (becomes 'white rock' locally)
- Heterolithic Unit: distorted shales with clasts of rhyolite, shale, 'white rock' and sulphides
- Polymetallic Sulphides: massive or semi-massive
- Polymetallic Sulphides within 'White Rock Zone': generally semi-massive
- Basalt: massive to vesicular

Assay Boxes

A 51 — Hole Number
2.21m — Interval (m)
0.71 — % Cu
2.36 — % Pb
6.02 — % Zn
17 — g/t Ag
0.10 — g/t Au



Intersections of Note:

Zone	Hole No.	Interval (m)	Uncorrected Width (m)	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)
Middle Engine?	CZ 1	147.75 - 151.27	3.52	0.37	1.65	3.40	45	1.81
Lower Engine?	CZ 1	163.85 - 168.00	4.15	0.99	2.11	3.94	73	1.64
Upper Engine?	CZ 3	67.36 - 68.55	1.19	1.10	4.30	6.90	46	0.29
Upper Engine?	CZ 3	92.43 - 94.52	2.09	0.23	1.30	2.50	51	1.50
Middle Engine?	CZ 3	113.59 - 116.94	3.35	0.79	1.80	3.60	51	0.49
Upper Engine?	CZ 6	68.95 - 70.33	1.38	0.74	4.00	6.40	56	0.13
Middle Engine?	CZ 6	164.17 - 165.21	1.04	1.90	8.10	13.40	37	0.35

New Intersections of Note:

CZ-10: 61.9-62.5m:	0.60m @	4.23	13.28	22.61	84	0.38
CZ-10: 198.3-201.3m:	3.00m @	1.24	3.91	6.13	54	1.87
CZ-11: 56.0-57.3m:	1.30m @	0.60	4.75	7.78	54	0.19
CZ-11: 165.3-166.7m:	1.40m @	1.77	8.06	14.95	50	0.59
CZ-13: 156.65-158.4m:	1.75m @	1.97	9.17	16.14	51	1.40

- 280 m
- 300 m

Legend:

- Inferred Geological Contact
- Inferred Fault
- (C) Sample taken for lithogeochemical rock analysis showing rhyolite type

0 50 100 m
Scale

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Figure 3: Parys Mountain Section N (updated)

Rock Types – Not in Stratigraphic Order

- Rhyolite A
- Rhyolite B
- Rhyolite C
- Rhyolite D1 and/or D2
- Shale/Mudstone
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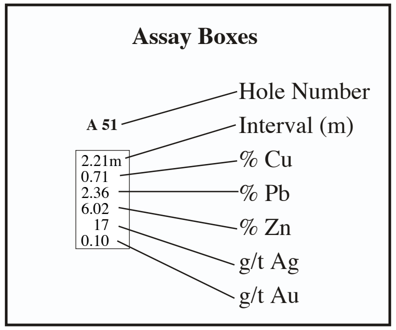
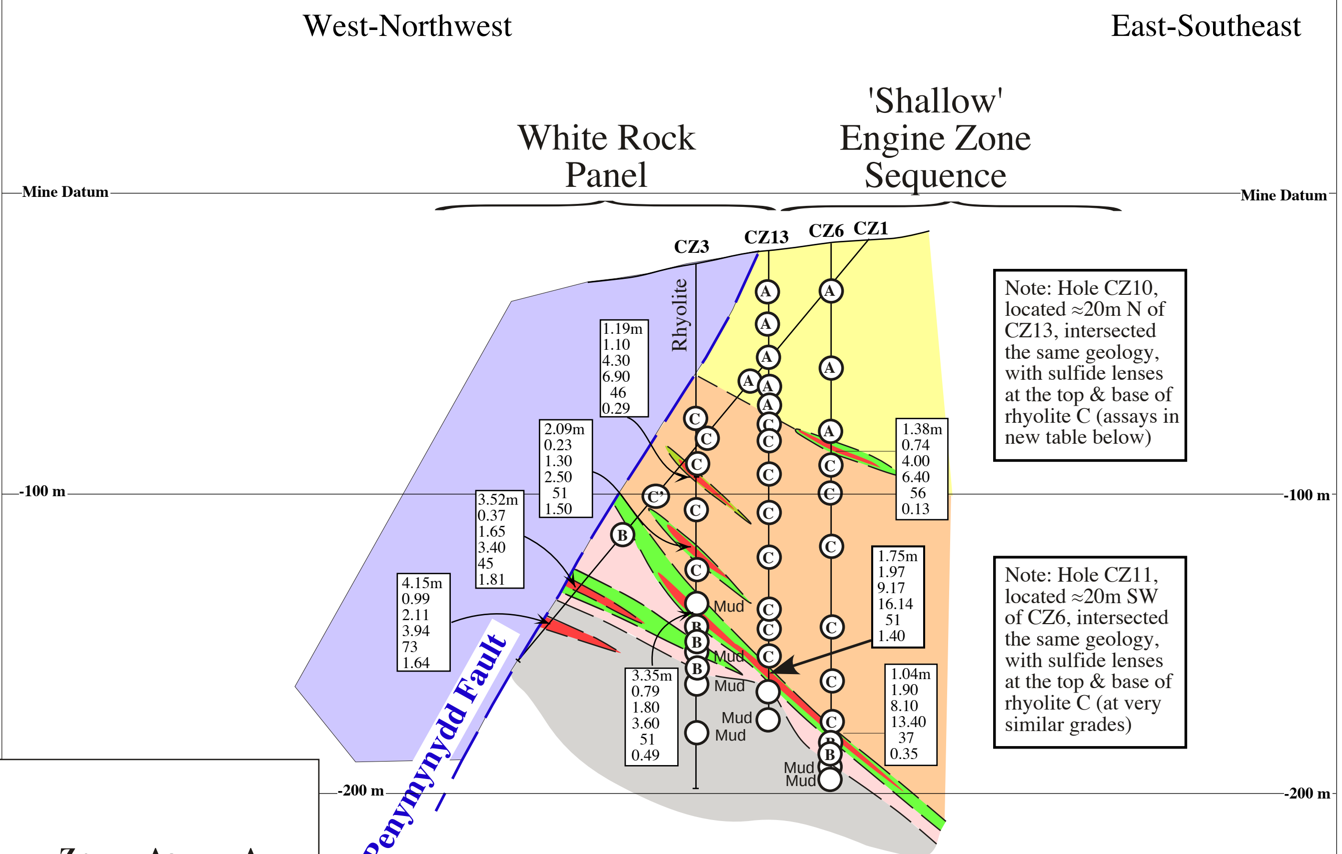
- Basalt: massive to vesicular





Intersections of Note:

Zone	Hole No.	Interval (m)	Uncorrected Width (m)	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)
Middle Engine?	CZ 1	147.75 - 151.27	3.52	0.37	1.65	3.40	45	1.81
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Upper Engine?	CZ 3	67.36 - 68.55	1.19	1.10	4.30	6.90	46	0.29
Upper Engine?	CZ 3	92.43 - 94.52	2.09	0.23	1.30	2.50	51	1.50
Middle Engine?	CZ 3	113.59 - 116.94	3.35	0.79	1.80	3.60	51	0.49
Upper Engine?	CZ 6	68.95 - 70.33	1.38	0.74	4.00	6.40	56	0.13
Middle Engine?	CZ 6	164.17 - 165.21	1.04	1.90	8.10	13.40	37	0.35

New Intersections of Note:

CZ-10: 61.9-62.5m:	0.60m @	4.23	13.28	22.61	84	0.38
CZ-10: 198.3-201.3m:	3.00m @	1.24	3.91	6.13	54	1.87
CZ-11: 56.0-57.3m:	1.30m @	0.60	4.75	7.78	54	0.19
CZ-11: 165.3-166.7m:	1.40m @	1.77	8.06	14.95	50	0.59
CZ-13: 156.65-158.4m:	1.75m @	1.97	9.17	16.14	51	1.40

- 280 m
- 300 m

Legend:

- Inferred Geological Contact
- Inferred Fault
- (C) Sample taken for lithogeochemical rock analysis showing rhyolite type

0 50 100 m
Scale

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Figure 3: Parys Mountain Section N (updated)

Rock Types – Not in Stratigraphic Order

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Assay Boxes

A 51 – Hole Number
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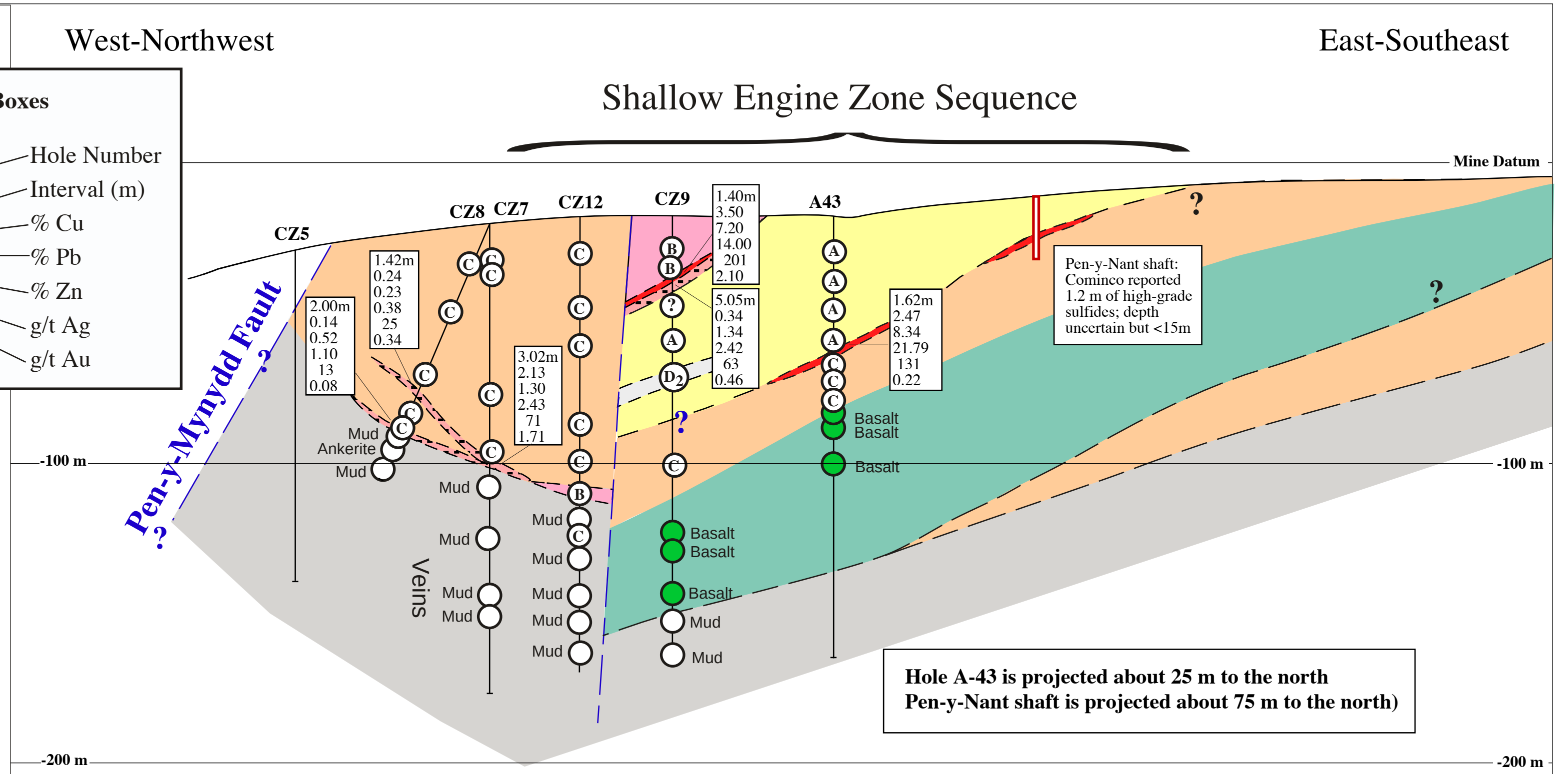

Intersections of Note:

Hole No.	Interval (m)	Uncorrected Width (m)	Cu (%)	Pb (%)	Zn (%)	Ag (g/t)	Au (g/t)
CZ 7	80.48 - 83.50	3.02	2.13	1.30	2.43	71	1.71
CZ 7	142.13 - 146.13*	4.00	0.61	1.07	1.75	31	0.27
CZ 8	59.05 - 60.47	1.42	0.24	0.23	0.38	25	0.34
CZ 8	76.45 - 78.45	2.00	0.14	0.52	1.10	13	0.08
CZ 9	21.33 - 22.74	1.41	3.50	7.20	14.00	201	2.10
CZ 9	22.74 - 27.78	5.04	0.34	1.34	2.42	63	0.46
A 43	47.21 - 48.83	1.62	2.47	8.34	21.79	131	0.22

* Veins in footwall shales

Legend:

- Inferred Geological Contact
- Inferred Fault
- Ⓒ Sample taken for lithogeochemical rock analysis showing rhyolite type

0 50 100 m
Scale

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Figure 4: Parys Mountain Section P (updated)

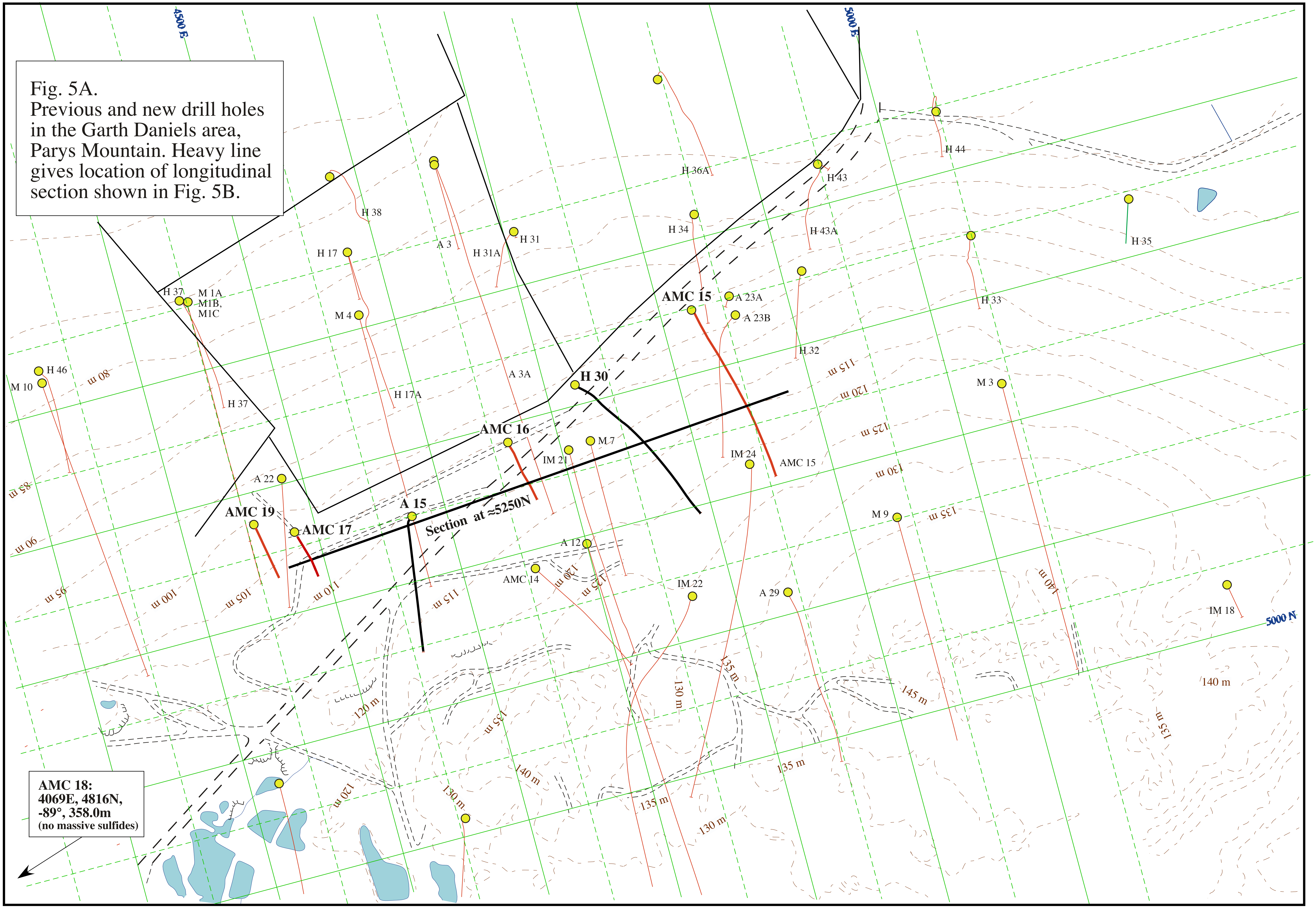
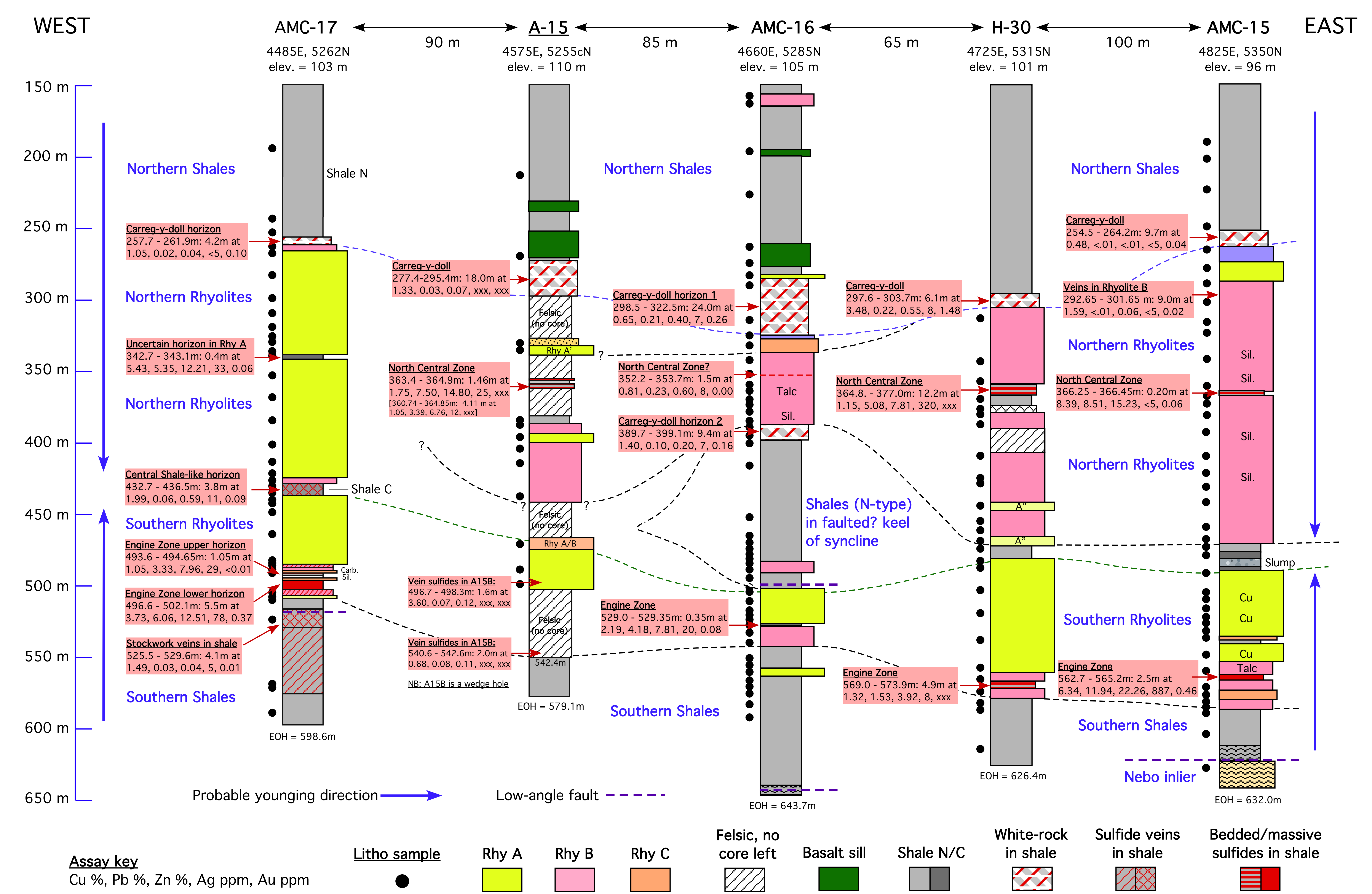


Fig. 5A.
Previous and new drill holes in the Garth Daniels area, Parys Mountain. Heavy line gives location of longitudinal section shown in Fig. 5B.



All holes logged and sampled by Tim Barrett and Steve Tennant. Interpretation of lithogeochemical data and stratigraphic correlations were carried out by Tim Barrett and Steve Tennant.

Fig. 5B   Longitudinal section at ≈5250N   March 10, 2006