

Mineralogical Society of New South Wales Oberon Field Trip November 2017

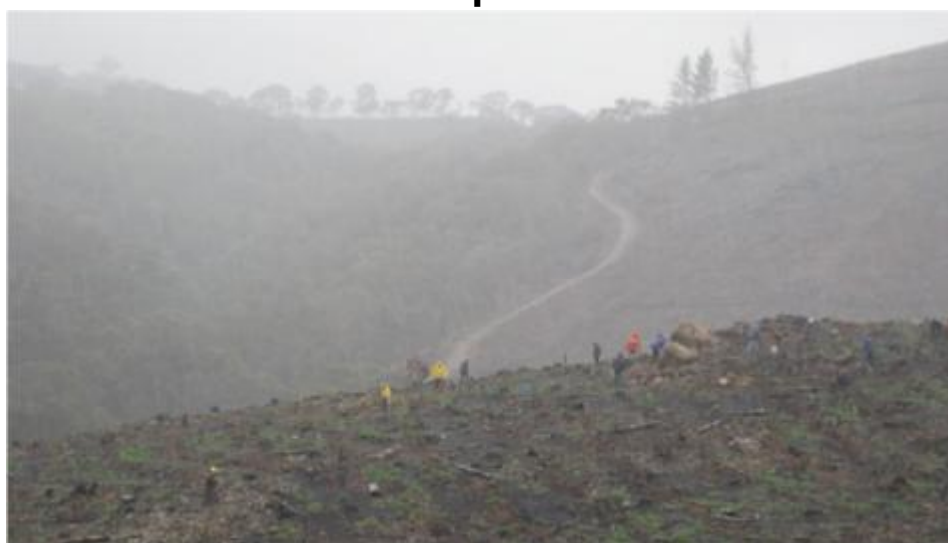


Figure 1 The weekend was spread over two days, the forecast was for rain. It proved correct.
Wet weather program = dry weather program + raincoat.
Seventeen members accepted the challenge and came up in twelve cars.

Saturday 18th November



Figure 2 Hornfels Slab and polished cabochon.
Photo & specimen: Doug Austen

It was wet. At Lowes Mount, members focused on four locations. The Vesuvianite area showed minerals but they were harder to find. Specimens of grossularite garnet, diopside with epidote, actinolite and green feldspar continued to be found both at the Vesuvianite site and the lower car park.

The area of Scheelite at the road cutting had been bulldozed by the reforestation process but a nearby site produced some small specimens.

An area by the creek produced 1-2mm flakes of molybdenite with generous scatterings of chalcopyrite and pyrrhotite.

One exposed area on a ridgetop produced a grossular – andradite garnet in a calcareous hornfels tactite.



Figure 3 Drusy quartz.
Photo & specimen: Denis O'Brien

Mineral specimens found by members included:

Mineral	DA	HB	EZ/TZ	DO'B	GP	DM	Others
Actinolite			X	X		X	$\text{Ca}_2(\text{Mg,Fe})_5\text{Si}_8\text{O}_{22}(\text{OH})_2$
Diamond	??		??		??		C
Drusy quartz				X			SiO_2
Epidote	X	X		X			$\text{Ca}_2(\text{Fe,Al})_3(\text{SiO}_4)_3(\text{OH})$
Greenstone	X	X	X	X			(Green feldspar)
Grossular-andradite							$\text{Ca}_3\text{Al}_2(\text{SiO}_4)_3$ $\text{Ca}_3\text{Fe}_2(\text{SiO}_4)_3$
Ilsemanite				X			$\text{Mo}_3\text{O}_8 \cdot n\text{H}_2\text{O}$
Mud	X	X	X	X	X	X	
Olivine (v peridot)		X					$(\text{Fe,Mg})\text{SiO}_4$
Scheelite			X	X			CaWO_4
Vesuvianite	X			X		X	$\text{Ca}_{10}\text{Mg}_2\text{Al}_4(\text{SiO}_4)_5(\text{Si}_2\text{O}_7)_2(\text{OH})_4$
Vug with xls	X			Drusy			
Wollastonite			X			X	CaSiO_3

Observations made on minerals collected and some questions to be verified:

- Can crystals from Kessey's be scratched by diamonds?
- Drusy quartz on closer inspection showed tiny blue crystals in the yellow crystalline matrix.
 - The best crystals resemble the pyramidal shape of spinel from the guidebooks.
 - They are microscopic but may be of interest if they are blue spinel.
- One piece under short wave UV showed lots of small bright, whitish blue fluorescent specks, which is probably scheelite.
- XRD results proved that a specimen was **Ilsemannite**. $\text{Mo}_3\text{O}_8 \cdot n\text{H}_2\text{O}$
- XRD results proves that a specimen was **wollastonite**. CaSiO_3



Figure 4 Group at the Vesuvianite skarn



Figure 5 Epidote
Photo & Specimen: Denis O'Brien

We went to the Oberon RSL for dinner.

Sunday 19th November

Sunday saw the group at the Ponderosa Pipe. While on top of the hill, we received a message from a member that he had arrived at Oberon at 10:00 am from the east as we left westward. SMS messages were sent (but not received). The group decided to have lunch at Black Springs at 11:45 am. The member appeared at 12:15pm. In the meantime, all the group bar five left for the sapphire diggings at Sapphire Bend. When the Black Springs group re-joined them, more buckets of pay-dirt were seen to be

loaded to be worked on at home. The Group moved out for a 9km drive through Vulcan State Forest, first stopping at Knotts Creek Diamond Deposit, then continuing to Kessey's Road diamond prospect. The site was found easily by some. Sledge hammers appeared in force and many rocks were smashed. Diamonds here are about 10 pointers. There are 100 points per carat which means that these diamonds were very small. Glassy pockets were found. Some vugs had interesting arrangements of balls of calcite. The day ended with all saying that they had collected interesting specimens but that the company was better!

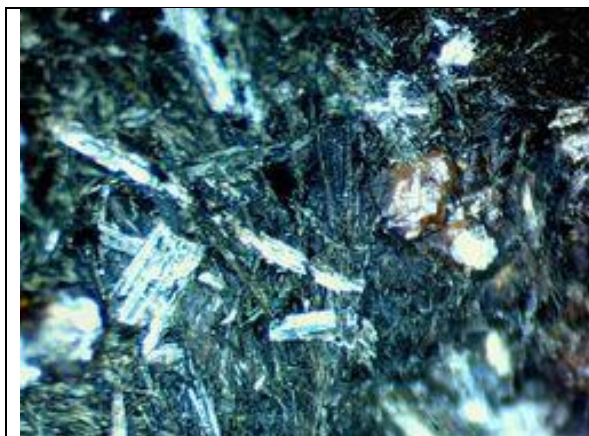


Figure 6 Epidote with Actinolite.
Photo & specimen: Denis O'Brien (FOV 6mm)



Figure 7 Vesuvianite
Photo and specimen: Denis O'Brien (FOV 6mm)

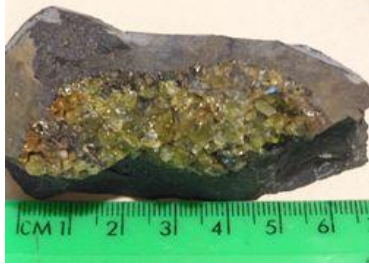


Figure 8 Epidote from the Ponderosa Pipe. Photo & specimen: Denis O'Brien



Figure 9 Vesuvianite. Photo and specimen: Denis O'Brien

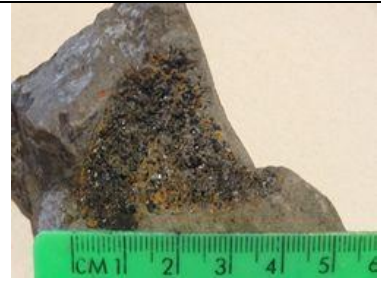


Figure 10 Glossular Andesite garnets. Photo & specimen: Denis O'Brien

We all found reasonable specimens.

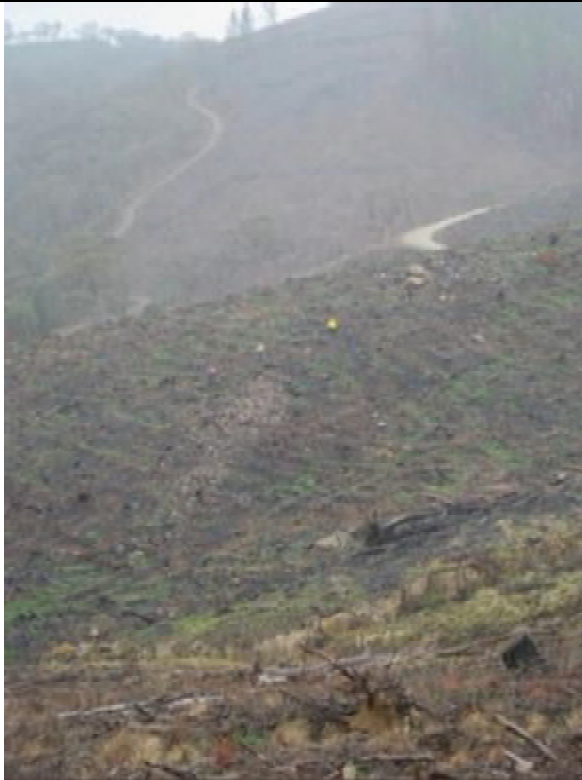


Figure 11 Skarn displaying line of strike



Figure 12 The upper car park



Figure 13 The lower car park



Figure 14 Drusy Quartz

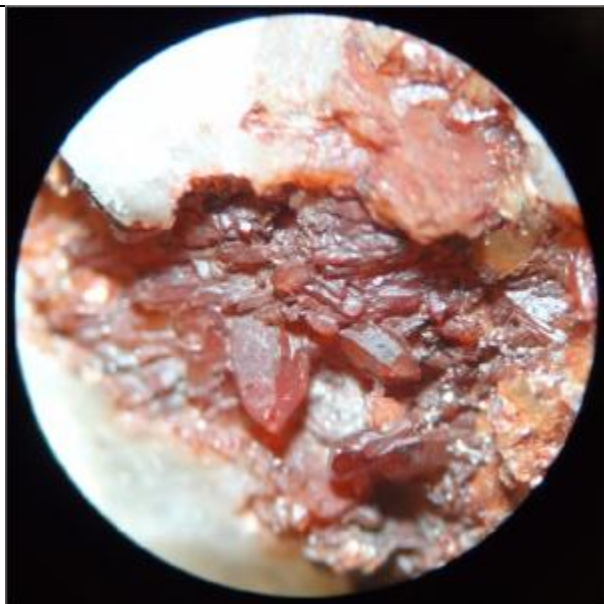


Figure 15 Quartz with iron staining