

2<sup>ND</sup> INTERNATIONAL  
MINDAT.ORG CONFERENCE  
1-12 NOVEMBER 2012, MIDELT,  
**MOROCCO**



J. Callen photo. Spirifer collection.



[www.mindat.org](http://www.mindat.org)

**PROGRAMME**

# Important information

## Phone numbers of organizers

(for emergencies only)

Agata Leszczuk: +212654617076 (Morocco)

Jolyon Ralph: +212654617084 (Morocco)

Tomasz Praszquier: +212655298827 (Morocco)

## REMEMBER:

- the programme can change during the conference;
- we do not wait for latecomers; after 15 minutes we will depart. Please adhere to the time table provided;
- your luggage will travel separately in special buses, it will be available at the evening in the hotel;
- if you have any medical problems, please contact the organizers immediately.

## Your Hotels

3I/10 - 1/11 in Marrakech - Islane or Foucauld

2/11 in Ouarzazate - Karam Fram

3/11 in Alnif - Kasbah Meteorite

4-5/11 in Erg Chebbi - Yasmina or Palmiras

6-12/11 in Midlet - Taddart

## Transfers

To book transfer to the airport after Conference contact

Agata Leszczuk, tel +212654617076 (Morocco).

# I-6 November 2012

## Pre-Conference Field Trip



G. Bijak photo.

## I<sup>st</sup> November: visit to Sidi Rahal, sightseeing in Marrakech

Note: there will be the possibility of collecting so remember to take your hammers and suitable clothes.

8.00-8.45 Breakfast in your hotel (Islane or Foucauld).

8.45-9.00 Pre-trip meeting on the terrace of Islane Hotel.

9.00 Board buses for departure. Important: each bus has its own number which corresponds to the group number on your badge. e.g; group I on the number I bus. Do not swap buses unless asked to do so by one of the organizers.

9.15-11.00 Drive to Sidi Rahal.

11.00-12.30 Arrive at Sidi Rahal, visit the quarries, and collect with the assistance of 4 local guides.

*Sidi Rahal is well known for quarries in Triassic basalt with many amethyst geodes, agates, pseudo-stalactites and perimorphs.*

12.30-13.30 Stop for lunch and drinks in the village, prepared by local dealer Ahmed.

13.30-14.30 Mini mineral show with the possibility of buying specimens from local traders.

14.30-16.30 Drive back to Marrakech.

16.30-17.00 Return to hotels for a quick refresh before the evening activities. Don't forget your camera!

17.00-19.00 Meet at the entrance to the Islane Hotel for a tour of Marrakech old town and market in 12 person groups with English speaking guides. Guides will have signs with your group number so please make sure you are in the correct group.

19.00-19.45 We will meet at the panoramic terrace with a great view for Jemaa el-Fnaa square.

19.45-20.15 Tour at Jemaa el-Fnaa square.

20.15 Return to Islane Hotel.

20.30 Dinner with traditional dance, music and henna. Coffee, tea, beer and vodka are included. Soft drinks are extra.

## 2<sup>nd</sup> November: drive through High Atlas to Ouarzazate

Note: please leave your luggage at the reception as it will be taken by luggage bus to the next hotel. Make sure your day bag contains all the essentials for the day as you will not have access to your luggage until you reach the hotel.

8.00-8.45 Breakfast in your hotel. Leave your luggage at the reception before departure.

8.45 Board buses outside the Islane Hotel.

9.00-16.00 Drive to Ouarzazate with 4 photo stops:

1st stop – 15 minutes

2nd stop – 20 minutes – mineral shop with basic toilet facilities;

3rd stop – 20 minutes – possible to use basic toilet facilities;

4th stop - 20 minutes – mountain pass Tizi'n'Tichka, basic toilet facilities.

14.00-15.00 Stop for lunch at the Palace of Tishka with tea and coffee included.  
Soft drinks are extra.

15.00-16.00 Drive to Ouarzazate.

16.00-17.00 Check into the hotel Karam Palace.

17.00-18.00 Visit to the old Kasbah Taurirt with a guides. The walk to the Kasbah starts from the Hotel lobby.

19.30 Dinner with live entertainment. Coffee and tea are included, alcoholic and soft drinks are extra.

### 3<sup>rd</sup> November: visit to Bou Azzer area

Note: it will be a long day in the field with the possibility of collecting, so remember to take your hammers and suitable clothes. A big lunch will be provided in the field and remember that next meal will be very late (around 22.00). Make sure your day bag contains all the essentials for the day as you will not have access to your luggage until you reach the hotel.

7.00-7.45 Breakfast. Leave your luggage at the reception.

7.45 Board buses.

8.00-11.00 Travel to Bou Azzer with 1 photo stop (15 minutes).

11.00-17.30 Visit to Bou Azzer. We will divide into 4 groups and visit Bou Azzer Center (photos only), Aghbar dumps (famous for roselite, roselite-beta, wendwilsonite, talmessite), Oumlil Est quarry (famous for karibibite, schneiderhohnite, scorodite), Agoudal quarry and dumps (famous for cobaltoan calcites, erythrites, roselite-beta), Ait Ahman (famous for gersdorffite).

*Bou Azzer is one of the world most famous localities for cobalt-arsenic-silver minerals. Over 220 mineral species are known from this area which categorizes this locality as one of the most diversified mineral localities in the world and is the type locality for seven species: arhbarite, irhtemite, maghrebite, nickelaustinite, nickeltalmessite, wendwilsonite, and of course bouazzerite. The Bou Azzer area is also renowned for producing the some of the world's best Erythrites, roselite and roselite-beta group minerals, skutterudite, gersdorffite and allargentum along with many good quality specimens of rare species such as cobaltaustinite, cobaltlotharmeyerite, cobaltarthurite, karibibite, saintfeldite and schneiderhöhnite.*

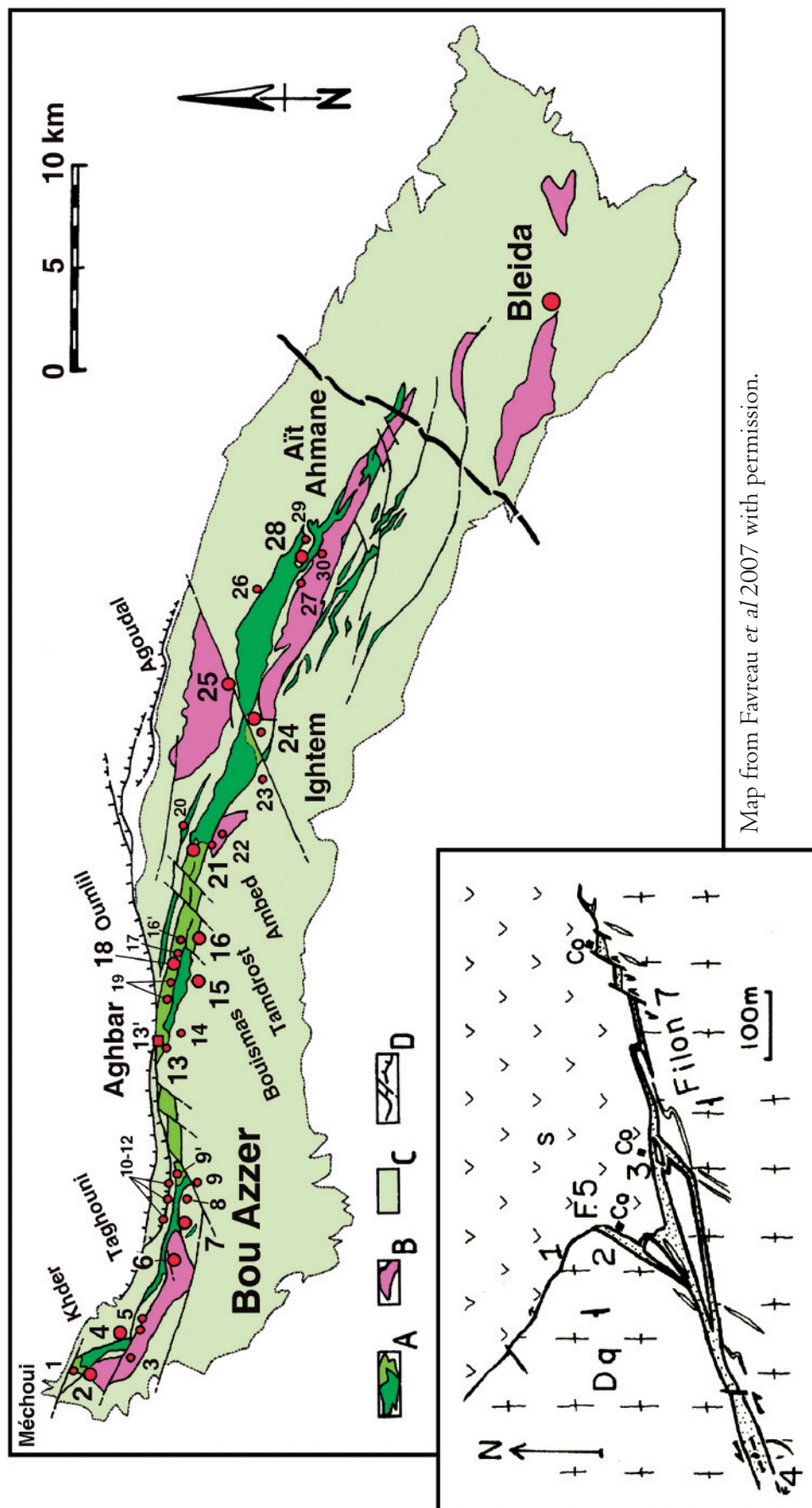
17.30-21.00 Drive to Kasbah Meteorite Hotel.

21.00-21.30 Registration in Kasbah Meteorite Hotel.

*Some of you will stay in comfortable Berber tents (with electricity inside, heated if needed). There are 16 toilets in the hotel and 6 showers plus an additional 6 mobile showers.*

22.00 Dinner in Moroccan Room with live music. Beer and vodka included. Soft drinks are extra.

## Geology and mines in the Bou Azzer area



Ore deposits in the Bou Azzer area (after Leblanc, 1975). Red dots indicate the deposits. Legend: A = basic rocks (dark green)=serpentine; lighter green = rhyolitic tuffs and gabbros); B = quartz diorite; C = Precambrian volcanics and dolomites; D = fault zones (thrust faults and overturned strata). Inset: Plan view at the surface, showing the Veins 5 and 7 at Bou Azzer, at the brecciated contact between serpentine (s) and quartz diorite (Dq). Mines: 1 - El Gir; 2 - Méchoui; 3 - Moghazni; 4 - Khder; 5 - Nickéline, ore veins; 6 - Taghouni (Tarouni); 7 - Bou Azzer, Veins 5 and 7; 8 - Baron Reservoir (south); 9 - Bou Azzer-East; 10 - Bou Azzer (Vein 2); 11 - Serpentine E Bou Azzer; 12 - Baron Reservoir (east); 13 - Aghbar; 14 - Aghbar-East, I5 - Bouismas; 16 - Tamdrost; 17 - Oumlil, northern edge; 18 - Oumlil (main vein); 19 - Oumlil-North (löllingite lenses); 20 - Ambed I; 21 - Ambed II; 22 - Ambed III+III-East; 23 - Ightem SW; 24 - Ightem; 25 - Agoudal; 26 - Vein 60; 27 - Aït Ahmane/SW, löllingite vein; 28 - Aït Ahmane, Veins 54-57; 29 - Aït Ahmane, Vein 51; 30 - Aït Ahmane, Vein 52.

## 4<sup>th</sup> November: fossil localities, sightseeing, drive to Erg Chebbi dunes

Note: there will be the possibility of collecting so remember to take your hammers and suitable clothes. Make sure your day bag contains all the essentials for the day as you will not have access to your luggage until you reach the hotel.

8.00-8.45 Breakfast. Leave your luggage at the reception.

8.45 Board buses.

9.00-9.15 Drive to Alnif, a famous fossil location specializing in trilobites.

9.15-9.45 Stay in Alnif, free time.

9.45-10.45 Drive to Jebel Issimour.

10.45-11.40 Visit Jebel Issimmour to see workings for trilobites with possibilities to collect.

11.40-12.30 Drive to Mcissi.

12.30-14.30 Lunch and fossil show at Mcissi with local trilobite preparers and fossil dealers.

14.30-16.30 Drive to the Yassmina Hotel and Palmiras y Dunas (600 meters one from another), on the edge of dunes Erg Chebbi.

16.30-17.00 Registration in the hotels.

*Some of you will stay in Berber tents near Yassmina Hotel (with electricity and 2 “field” toilets in the camp. There are also full facilities with several toilets and showers in the Yassmina Hotel).*

17.00-18.50 Free time.

18.50 For those who stay in Palmiras y Dunas – buses will take you to Yassmina Hotel.

19.00 Dinner with live traditional music in Yassmina Hotel. Coffee, tea, beer and vodka included. Soft drinks are extra.

## 5<sup>th</sup> November: visit to Taouz, exploring Erg Chebbi dunes

Note: There is a high likelihood we will be collecting in EXTREMELY DIRTY (Mn-oxides) places and conditions so remember to take clothes that you can destroy/don't wish to wear again on the trip. Don't forget to take hammers.

6.50 For those who stay in Palmiras y Dunas – buses will take you to Yassmina hotel.

7.00-7.45 Breakfast in Yassmina.

7.45 We will be using 4WDs for this leg of the trip as the roads are quite rough. It is not necessary to travel in a specific vehicle but each one is limited to 5 per car.

8.00-10.00 Drive to Taouz with 2-3 photo stops on the way.

10.00-11.30 Visit Taouz. We will visit workings with the possibility of buying some specimens and collecting (it will be extremely dirty because of Mn-oxides!!!).

*For years Taouz has been an area where mineralized veins of galena and baryte have been mined. They are rich in Mn, Fe and Pb mineralization with the Taouz veins filling fault zones in the Paleozoic sedimentary rocks. One of the biggest and most important veins in the area is Vein 12 – over 500 meters long and up to 2-3 meters wide. It is the source of the very well known hematite “glasskopf” pseudo-stalactites made of Mn-Fe oxides and hydroxides, mottramite and finally for the most highly desired vanadinites and cerussites.*

11.30-12.15 Drive to ancient rock carvings featuring some that are probably more than 1,000 years old. An excellent photo opportunity!

12.15-13.15 Lunch at this location.

13.15-15.40 Drive to another side of the dunes with photo stops and then drive back to Yassmina and Palmiras y Dunas hotels.

15.40-16.20 Opportunity to refresh and change.

16.20 For those who are staying in Palmiras y Dunas, buses will take you to Yassmina Hotel.

16.30-18.30 In front of Yassmina Hotel we will form caravan of about 120 camels (1 camel per person). We ride to the top of dunes to watch sunset.

19.00 Dinner with party and live Berber music. Coffee, tea, beer and vodka included, soft drinks are extra.

## 6<sup>th</sup> November: visit to Jorf, drive through High Atlas to Midelt

Note: there will be possibility of collecting so take hammers and suitable clothes. Make sure your day bag contains all the essentials for the day as you will not have access to your luggage until you reach the hotel.

7.50 For those who are staying in Palmiras y Dunas – leave your luggage at the reception of your hotel before going to breakfast. Buses will take you to Yassmina Hotel.

8.00-8.45 Breakfast in Yassmina Hotel.

8.45 Board buses.

9.00-10.30 Drive to Erfoud.

10.30-11.30 Visit to the fossil “factories”. It will be possible to watch fossil preparation, polishing etc.

11.30-13.00 Drive to Hamedia Quarry, known widely as Jorf.

13.00-15.00 Visit in Hamedia Quarry with opportunities for self collecting. Lunch will be provided in the quarry after arrival.

*Hamedia Quarry works one of many hydrothermal veins in the area usually rich in baryte, however, Hamedia is different because of its richness of fluorite which is the main goal of exploitation. Among mineral collectors it is famous for well crystallized fluorite crystals associated with baryte. Crystals of the fluorite in extreme situations reach over 10 cm on edge!*

15.00-19.00 Travel to Midelt through Goulmima and Rich – a real picturesque drive through High Atlas.

19.00-20.00 Checking in the Taddart Hotel and free time.

20.00 Dinner. Coffee, tea, beer and vodka included. Soft drinks are extra.

# 7-9 November 2012

## Conference

From 6th to 12th November we will be staying for the duration in the Taddart Hotel in Midelt.



J. Elliot photo.

**7<sup>th</sup> November: I<sup>st</sup> Conference day, mineral show**

8.00-8.45 Breakfast.

9.00-12.00 Opening session and presentations (45 minutes + 15 minutes time for questions).

9.00 Jolyon Ralph - *12 Years of Mindat.org*

10.00 Tom Praszker - *Mibladen - the most famous Moroccan Locality*

11.00 Georges Favreau - *Mines and minerals of the Bou Azzer district*

12.00-12.45 Visit to the hotel museum of minerals guided by the owner of the museum and president of Midelt, Rachid Adnane.

12.45-13.20 Free time.

13.20 Boarding buses.

13.30-14.00 Drive to Mibladen village where we will spend the rest of the day.

14.00-17.30 Mineral show in a community building. In several rooms around patio there will be around 30 dealers.

14.00-15.00 Lunch in the same place. Lunch will be prepared for us by the families of the dealers who sell at the show.

17.30-18.30 Socializing time.

18.30-19.30 Dinner prepared by the women of Mibladen.

19.30-20.15 Drive to the hotel.

**8<sup>th</sup> November: 2<sup>nd</sup> Conference day**

**8.00-8.45** Breakfast.

**9.00-13.00** Presentations:

- 9.00 Dimitry Tonkacheev - *New data about sulphides from VHMS deposit, Tsumeb, Namibia*
- 10.00 Knut Edvard Larsen - *The Minerals of Langesundfjorden district, Norway*
- 11.00 Cal Graeber - *Mexican Minerals*
- 12.00 Ray Hill - *Field Collecting in Jamaica*

**13.00-14.00** Lunch.

**14.15-18.15** Presentations:

- 14.15 Jolyon Ralph - *Introducing Gemdat.org*
- 15.15 Georges Favreau - *Tachgagalt - source of the rare Mn minerals*
- 16.15 Miro Ng - *The Stone of Chinese Culture: Fei Cui (Jadeite Jade) - Classification & Varieties*
- 17.15 Penny Williamson - *New mineral displays at the University of Wollongong, Australia.*

**18.15-20.00** Free time.

**20.00** Dinner and party in the hotel. Coffee, tea, beer and vodka included. Soft drinks are extra.

## 9<sup>th</sup> November: 3<sup>rd</sup> Conference day

8.00-8.45 Breakfast.

9.00-13.00 Presentations:

- 9.00 Georges Favreau - *Imiter - the biggest silver mine in Morocco*
- 10.00 David Joyce - *The Cobalt Silver Mining Area, Ontario, Canada*
- 11.00 Olav Revheim - *Evje/Iveland pegmatite minerals*
- 12.00 Mark Mauthner - *Yukon gold crystals*

13.00-14.00 Lunch.

14.15-18.15 Presentations:

- 14.15 John Magnasco - *Twining in minerals*
- 15.15 Peter Lyckberg - *A world tour of gem pegmatites*
- 16.15 Dimitry Tonkacheev - *A famous mineral deposit from the Russian Federation*
- 17.15 Tomasz Praszker - *3rd International mindat.org Conference - where and when?*
- 18.00 Conference closing remarks.

18.20 Board buses.

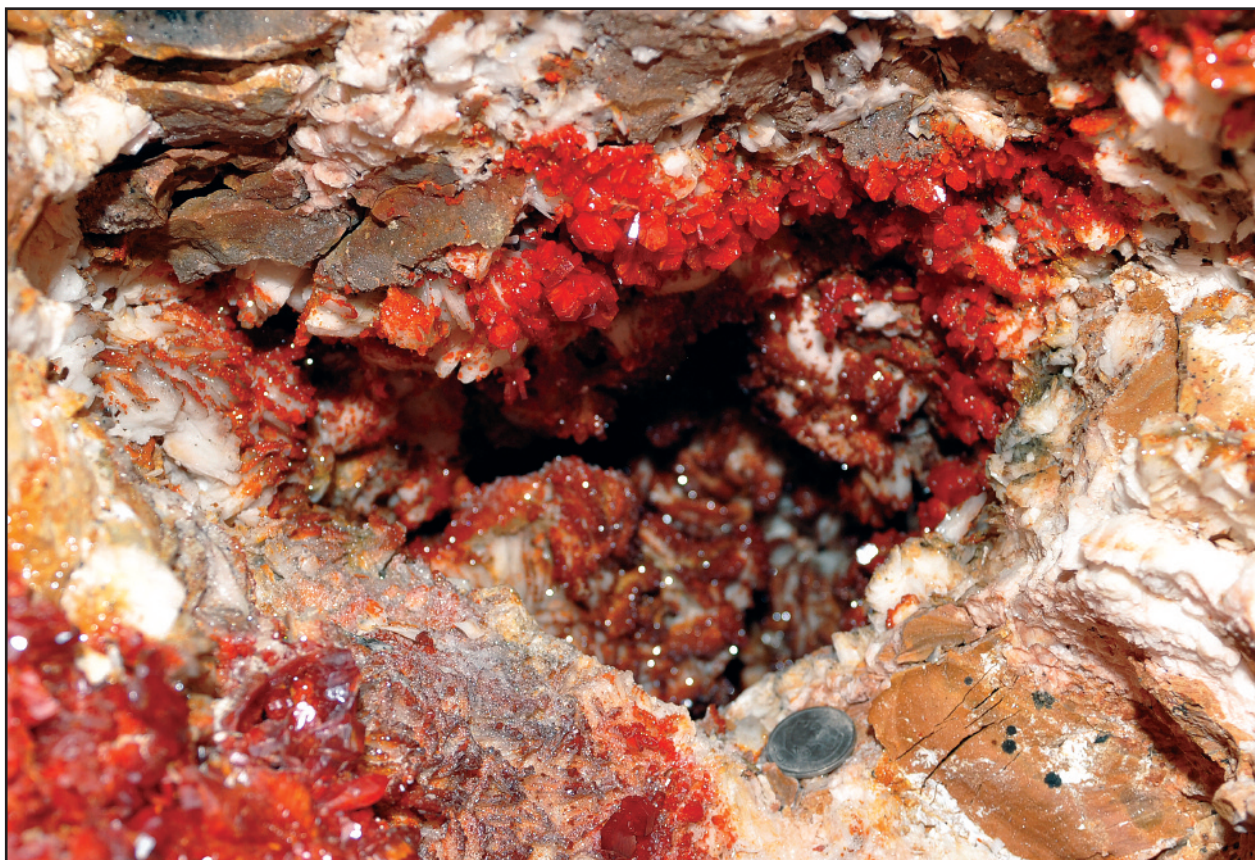
18.30-19.15 Drive to a secret place for the exclusive party.

19.15-23.00 Party in a secret place outdoors! Remember to wear your best clothes. Coffee, tea, beer and vodka included. Soft drinks are extra.

# 10-12 November 2012

## Post-Conference Field Trip

From 10th to 12th November we will be staying for the duration in the Taddart Hotel in Midelt.



J. Gajowniczek photo.

## 10<sup>th</sup> November: visit in Mibladen area

Note: there will be possibility of the collecting so take hammers and suitable clothes.

8.00-8.45 Breakfast.

8.45 Board buses.

9.00-9.30 Drive to Mibladen area.

9.30-17.00 Visit to Mibladen. We will be divided into 3 groups and will visit ACF workings (not suitable for those who suffer from claustrophobia!) for about 2 hours, Lidal for another 2 hours, a gypsum working for about 30 minutes, dinosaur traces for about 30 minutes and Les O for about 1 hour. Packed lunch with lunch will be given around 13.00 in the field.

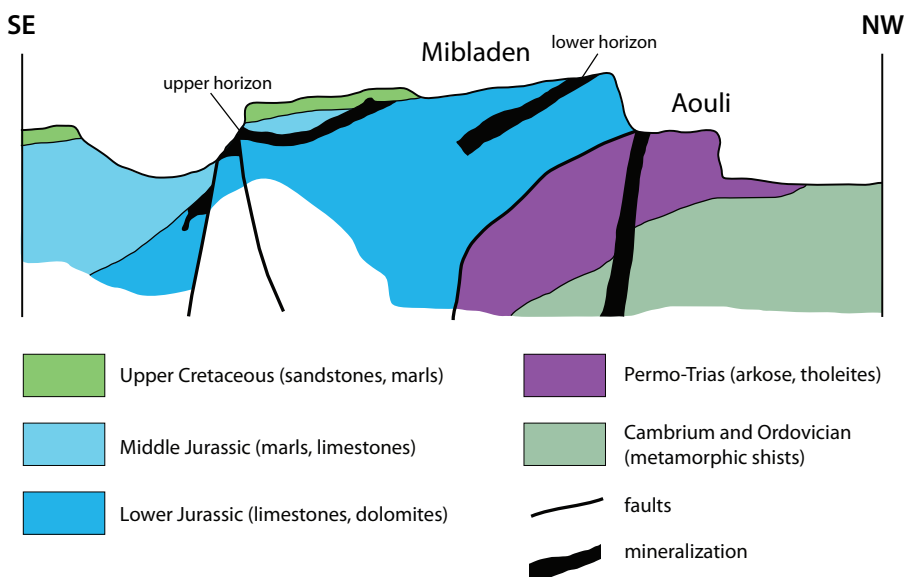
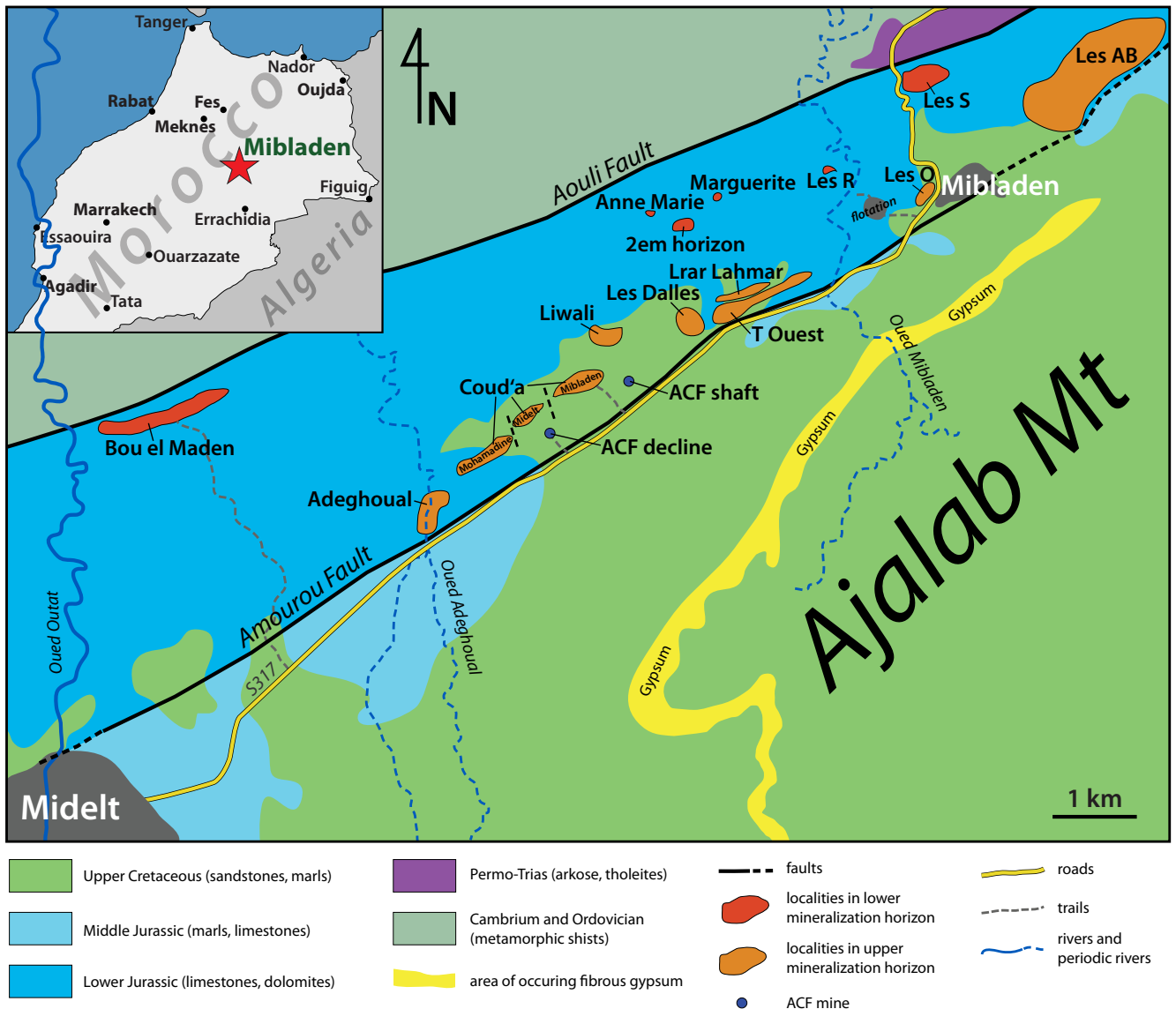
*Mibladen is the best known Moroccan locality, famous for beautiful vanadinites. Mineralization in this area occurs usually as baryte or baryte-galena veins, groups of which form concordant horizons in the Jurassic host rocks (limestones, dolomites and marls). The vein thicknesses range from a couple of centimeters to almost a meter thick while the thickness of the horizons varies from 10 to 20 meters. When galena and baryte are both present in the vein the first forms the external parts and the baryte fills the central parts of the vein. Different horizons produce various types of mineral specimens. There are two really important types of occurrences – the one producing vanadinites and the other producing cerussites and wulfenites. What is interesting is that these minerals never occur together, even if both horizons are very close. Both types of mineralization usually contain baryte. The cerussite-wulfenite type of mineralization occurs in lower horizons while vanadinite mineralization is in the upper ones.*

17.00-17.30 Drive back to the hotel.

17.30-20.00 Free time.

20.00 Dinner with grill by the swimming pool or inside in case of cold weather. Coffee, tea, beer and vodka included. Soft drinks are extra.

## Geology and workings in the Mibladen area



Geological map and cross-section by T. Praszkie, basing on Agard J. *et al* 1952 and Emberger 1965.

## Vertebrates (dinosaurs and related) traces from Mibladen



*Anchisauripus* sp.  
Trace of Theropod  
from Coelophysoidea  
superfamily.



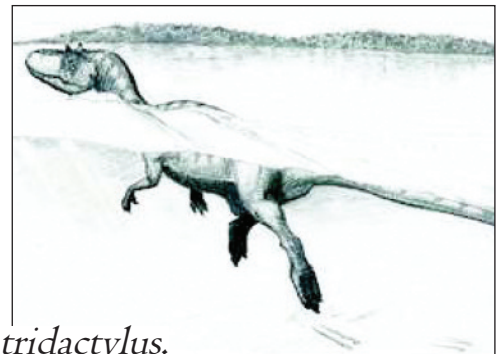
*Kayentapus* sp.  
Trace of a big  
Theropod from  
Coelophysoidea  
superfamily.



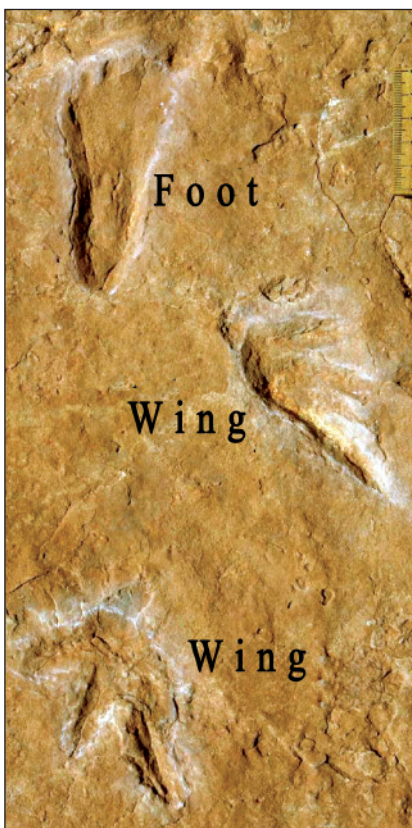
## Vertebrates (dinosaurs and related) traces from Mibladen



*Parabrontopodus* sp.  
Trace of early Sauropod.



*Characichnos tridactylus*.  
Trace of swimming Theropod.



*Pteraichnus* sp.  
Trace of Pterosaur.



## 11<sup>th</sup> November: visit to Aouli and Sidi Ayed

Note: there will be possibility of collecting so take hammers and suitable clothes.

8.00-8.45 Breakfast.

8.45 Board buses

9.00-10.00 Drive to Aouli.

*Aouli is an old mining center located in spectacular gorge. The name "Aouli" is widely used for the specimens in the area but in fact they come from much further away, usually Sidi Ayed or Sidi Said.*

*Sidi Ayed is an old mine and system of trenches located on big baryte-fluorite vein. It is especially famous for specimens of the yellow fluorite associated with malachite and azurite.*

10.00-10.30 Photo-stop near the Aouli mine.

10.30-12.00 Drive to Sidi Ayed.

12.00-16.00 Visiting Sidi Ayed and possibility of the self collecting. You will get packed lunch with your lunch.

16.00-18.00 Drive back to the hotel.

18.00-20.00 Free time.

20.00 Traditional Moroccan evening with dinner and party. Coffee, tea, beer and vodka included. Soft drinks are extra.

## 12<sup>th</sup> November: visit to Kerrouchen

Note: there will be possibility of collecting so take hammers and suitable clothes.  
Transfers to the airport start this day.

7.00-7.45 Breakfast.

7.45 Board buses.

8.00-10.00 Drive to Kerrouchen.

*Kerrouchen is known for great azurite and malachite specimens. Small quarries operate here in well bedded (probably lower Jurassic) dolomites and marls. The main goal of mining is a roughly 1 meter thick complex of layers containing small cavities with malachite and azurite crystals. It is interesting that the primary malachite and primary azurite never occur together in one layer. Malachite is usually formed as sprays of needle-like crystals, more or less regular. Size of the sprays can reach 10 cm. Their color is usually vivid green with medium luster. Frequently the malachite has partly or completely pseudomorphed the azurite crystals. Azurite occurs in many habits from acicular through prismatic to blocky crystals. The more elongated crystals often form sprays. Usually the best specimens display crystals only up to 5 cm. Luster of the crystals is medium or good, color usually dark blue. Unfortunately, quarries are deep and recovering specimens gets more and more difficult. This frequently underestimated locality seems to slowly be coming to the end of its production.*

10.00-12.00 Visit in agates locality with the possibility of collecting.

12.00-13.00 Drive to azurite-malachite locality.

13.00-16.00 Visit in azurite locality with the possibility of the collecting. Probably mini mineral show. Packed lunch with lunch will be given after arrival.

16.00-18.00 Drive back to Midelt.

18.00-20.00 Free time.

20.00 Dinner with traditional Berber music. Coffee, tea, beer and vodka included, soft drinks extra paid.

## 13<sup>th</sup> November: transfers to the airports

Breakfast and transport back to airport. You will get packed lunch to eat on the way.



J. Scovill photo.