SMRC

INVEST IN EGYPT

EXPLORATION & EXPLOITATION

OF GOLD & ASSOCIATED MINERALS

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SMRC Overview

SMRC was established on **26** November **2012** by the decree of the Cabinet of Ministers as an Egyptian joint stock company according to Law **159** of **1981.**

The authorized capital is EGP **2 Billion** and the paid-up capital is EGP **1 Billion**.

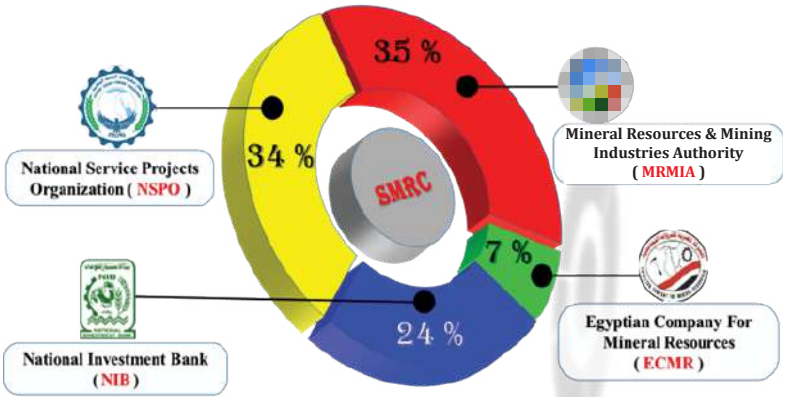
Shalateen Mineral Resources Company (**SMRC**) was established to achieve the following purposes:

1- Mineral ores exploration.

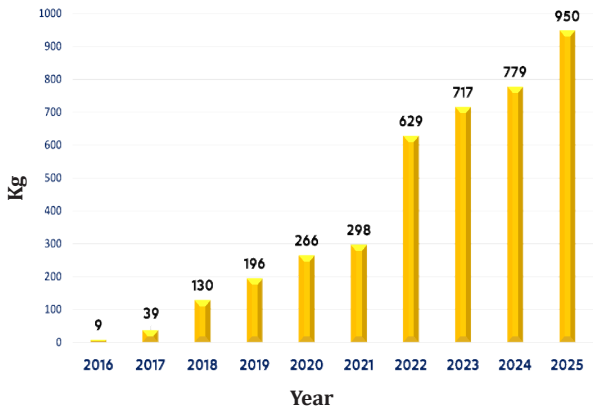
2- Exploitation of old gold mines.

3- Adding value to mineral ores.

SHAREHOLDERS



Gold Production Evolution



Our Partners

EGM EQAT GOLD MINES

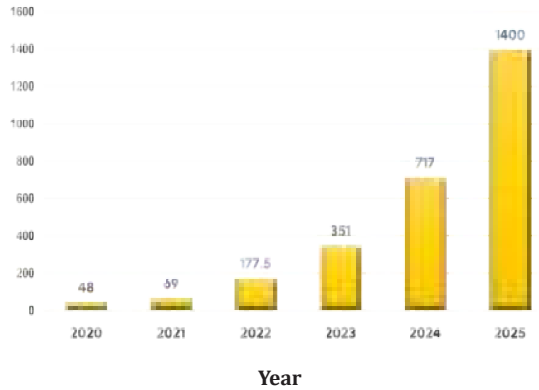
AFAQ MINING

Gold Reserve 2 Milion Ounces

Gold Resource 243K Ounces

Net Profit development

Value (Million Pounds)



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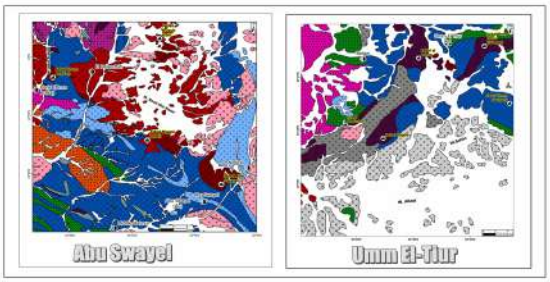
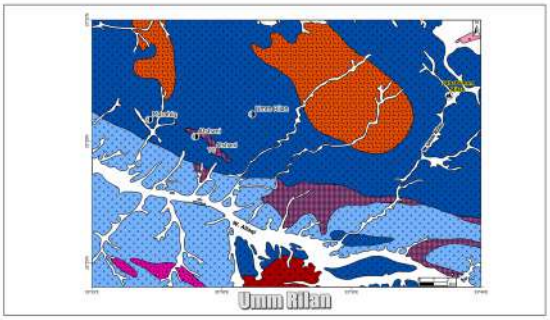
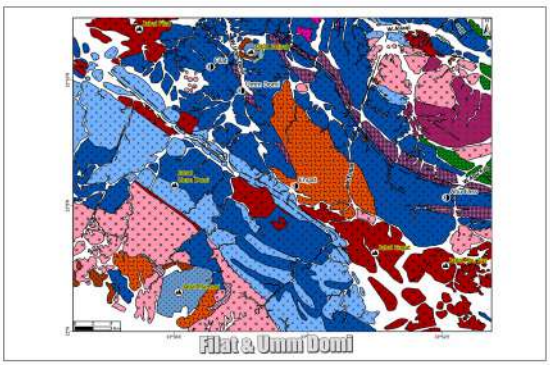
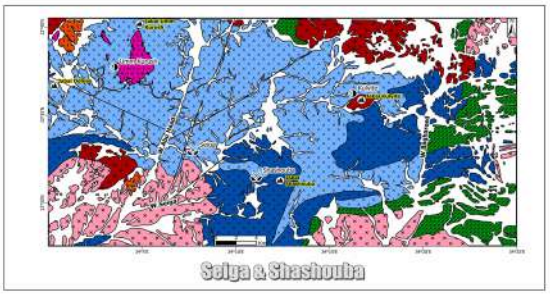
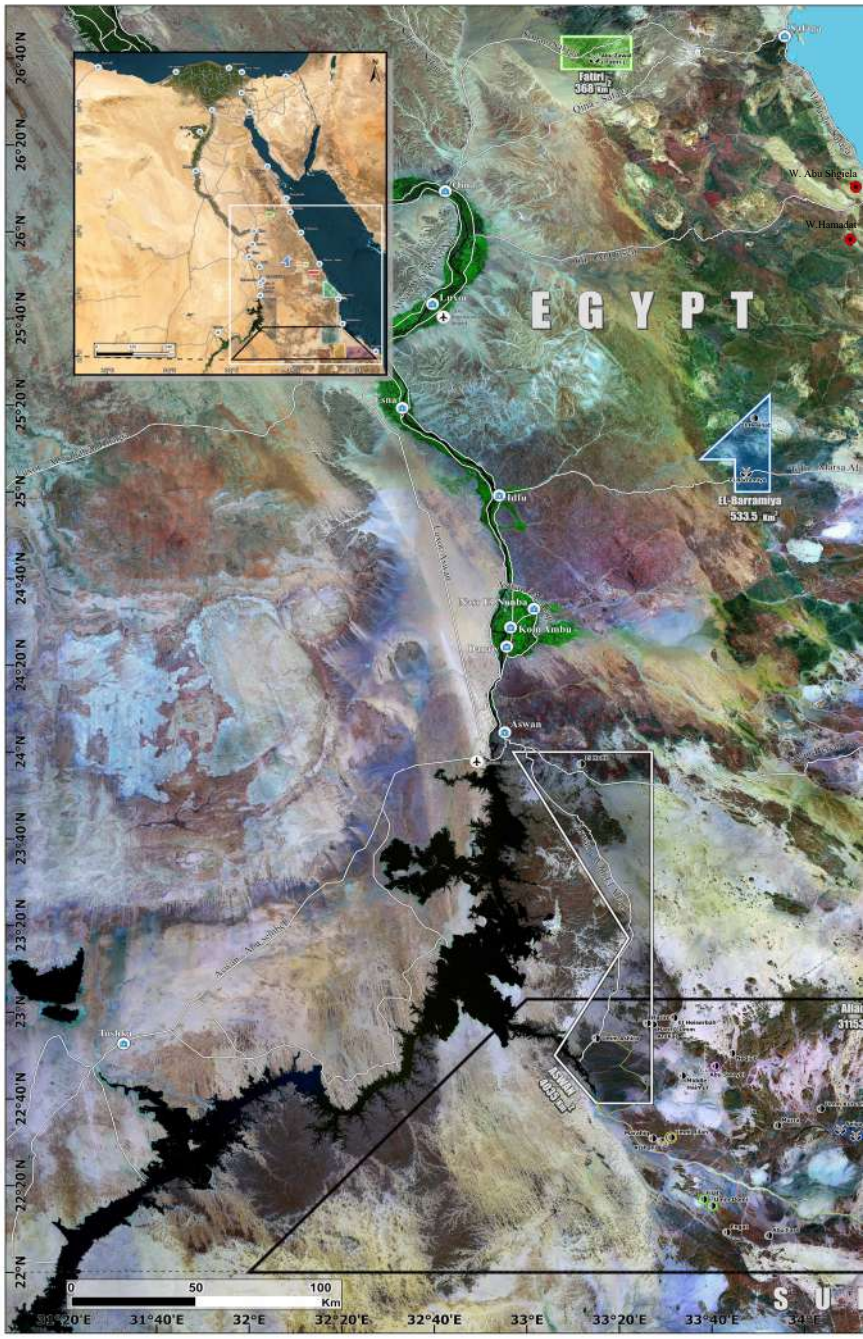
S M R C

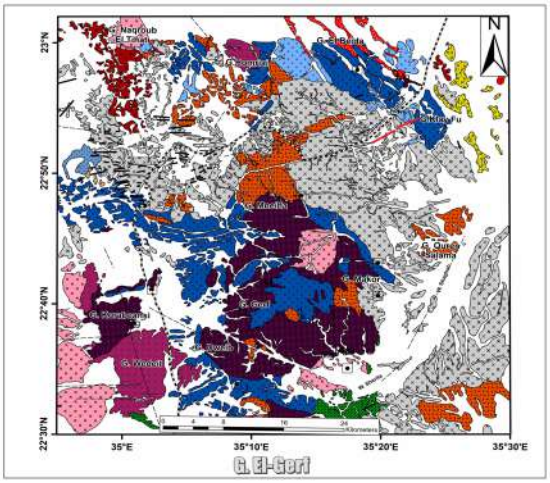


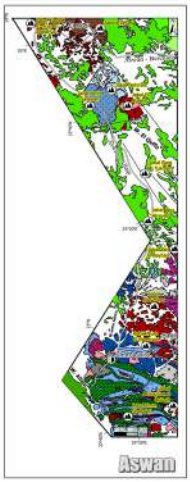


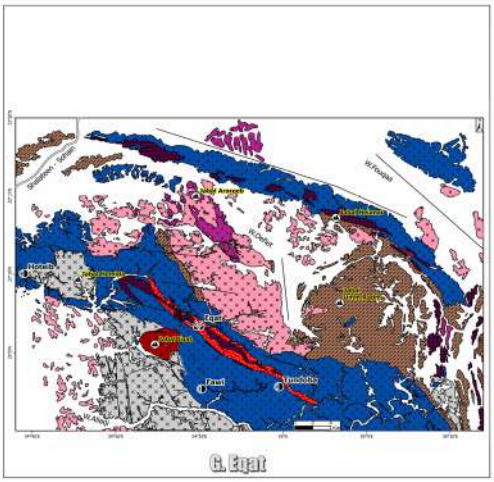












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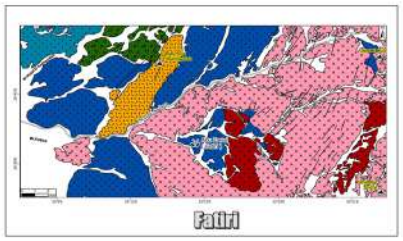
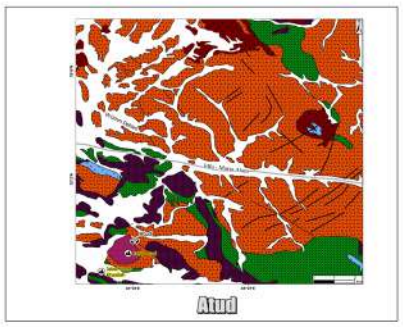
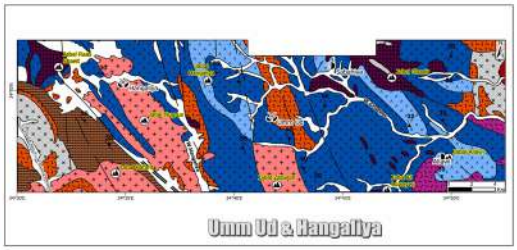
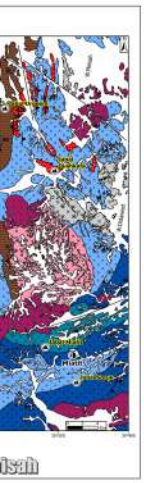
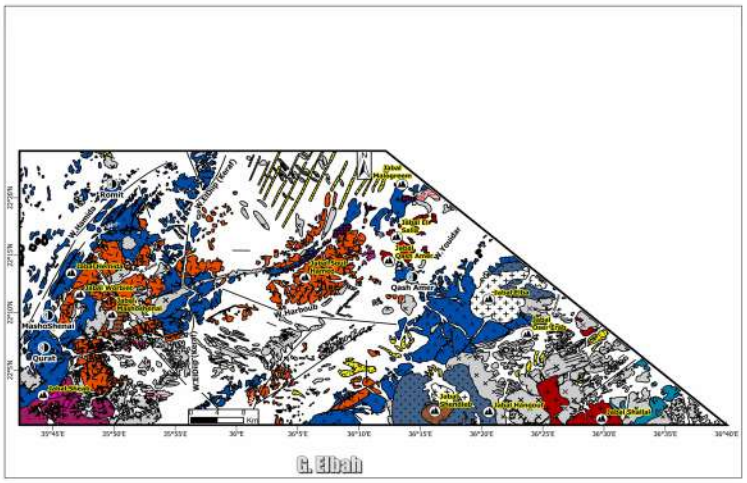
Concessions

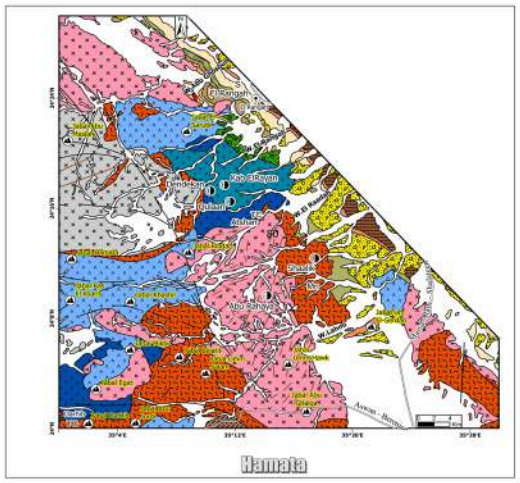












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HANGALIYA & UMM UD PROJECT

Operator : SMRC

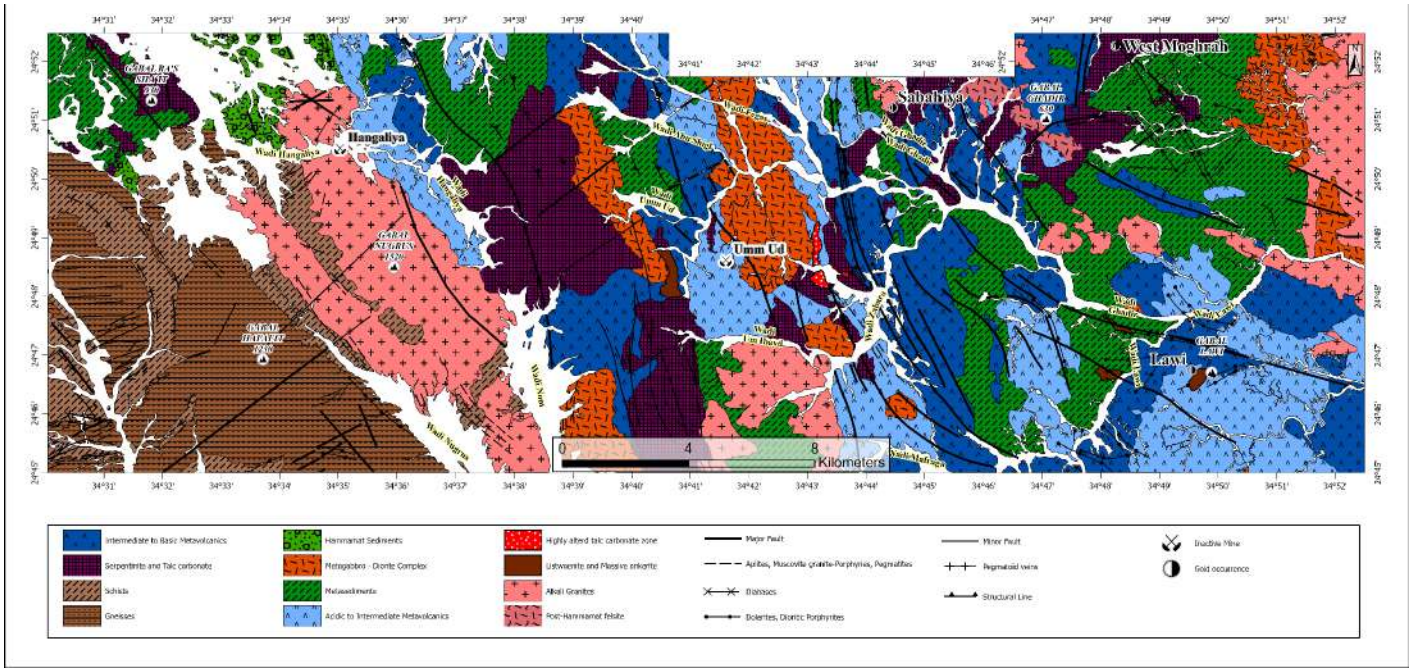
Consultant : SRK EX.

Location and Accessibility

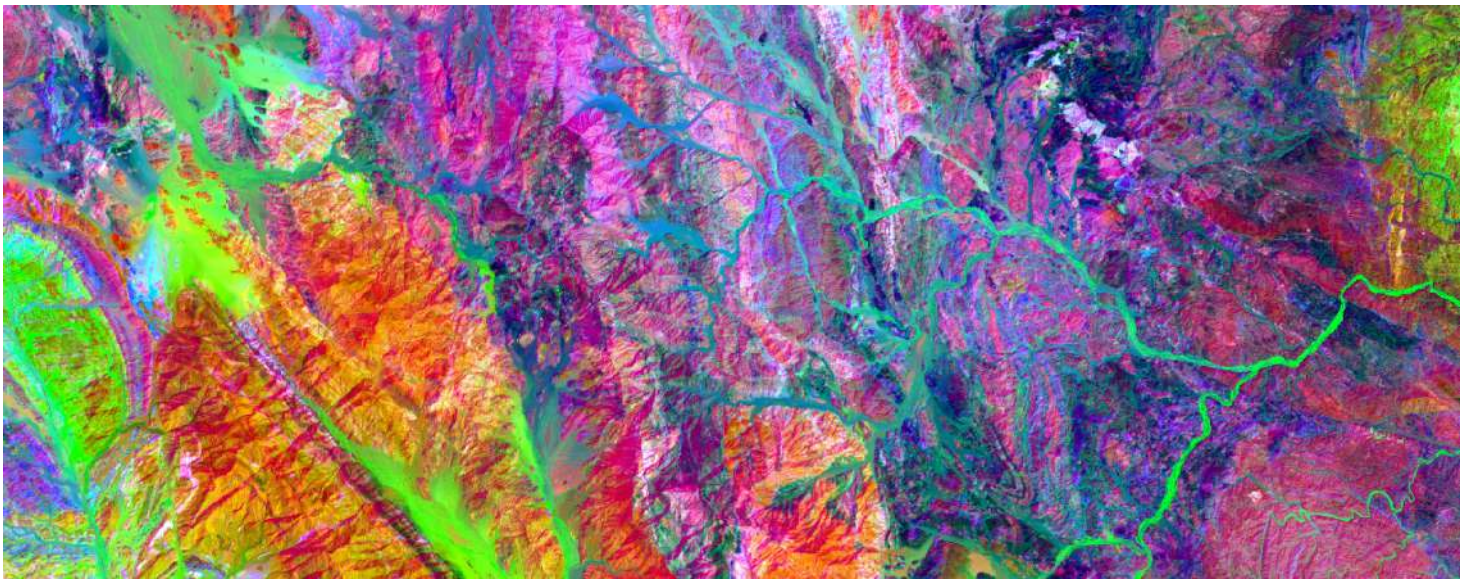
Hangaliya & Umm Ud Gold mine concession is located in the southeastern desert of Egypt. The area lies about **50 Km** south-west of Marsa Alam city. The concession can be reached from Cairo by daily, one-hour commercial airline flights to Marsa Alam city.

Hangaliya old mine is accessible through the Marsa Alam – Idfu asphaltic road for about **40 Km**, then using the El Sheikh Salem – El Sheikh Shazli asphaltic road for about **15 Km**, then through a desert track for about **7 km**.

Umm Ud old mine is also accessible using the Marsa Alam – Idfu asphaltic road for about **22 km** and through the wadi Umm Kheriga desertic track for **32 km.**



Geological map of Hangaliya & Umm Ud gold concession



Landsat-8 PCA (RGB- PC2 , PC1 and PC3) of Hangaliya & Umm Ud gold concession

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Current Exploration

•SMRC has managed with SRK EX. to put a plan for the detailed mapping and geochemical exploration of Hangaliya and Umm Ud areas through a systematic sampling plan by traversing lines across the different mineralization zones.

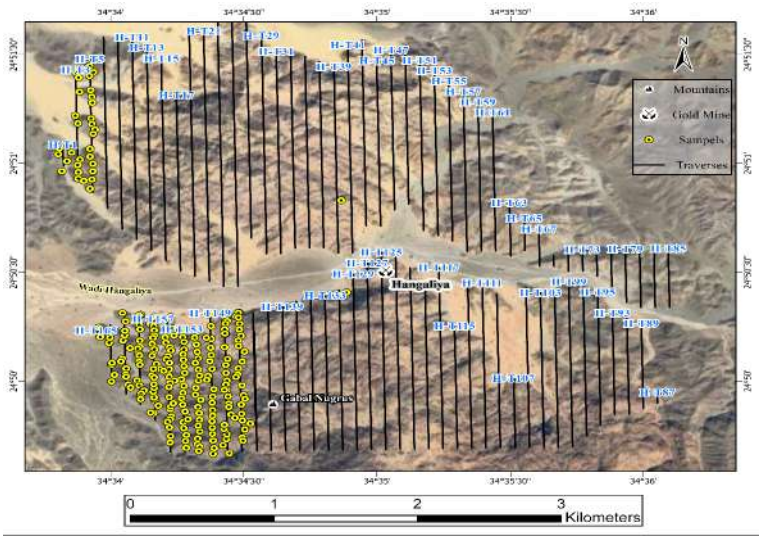
•The results of the exploration work for the year 2025 (At Hangaliya area, 14 traverses are finished with a total length of **11600** meters - At Umm Ud area, 7 traverses are finished with a total length about **6 kilometers**) reflect high gold content in the quartz veins and reasonable gold content in the alteration zones with average concentrations ranging from **0.4 to 28 g/t.**

2026 exploration plan is summarized as follows:

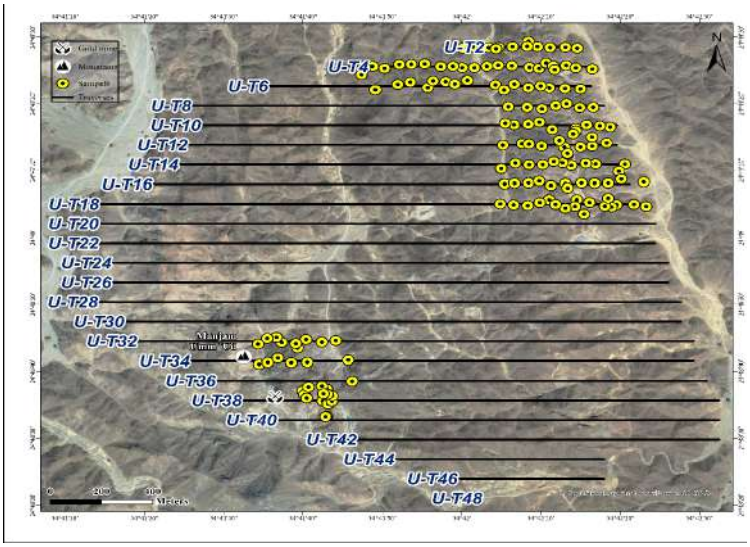
•Complete the mapping and sampling plan with a total number of **43** traverses and **1105** samples at the northern Hangaliya old mine, in addition to **40** traverses and **964** samples at the southern Hangaliya old mine.

•Complete the mapping and sampling plan in Umm Ud old mine with a total number of **24** traverses and **971** samples.

•Delineating the structures and trends of mineralized zones to design the exploration drilling program, followed by the evaluation drilling program.



Satellite image showing the traverses and collected samples at Hangaliya Gold mine area.



Satellite image showing the traverses and collected samples at Umm Ud Gold mine area.

Field photos at Hangaliya Old Gold Mine area

Field photos at Umm Ud Old Gold Mine area

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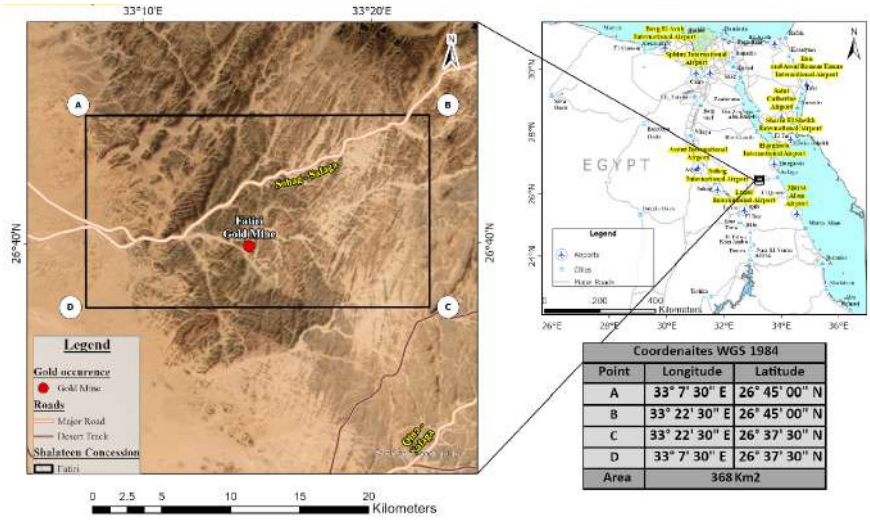
FATIRI CONCESSION



Coordenaites WGS 1984		
Point	Longitude	Latitude
A	33° 7' 30" E	26° 45' 00" N
B	33° 22' 30" E	26° 45' 00" N
C	33° 22' 30" E	26° 37' 30" N
D	33° 7' 30" E	26° 37' 30" N
Area	368 Km2	

Location and Accessibility map of Fatiri concession

Location and Accessibility

Fatiri gold concession is located in the Central Eastern Desert of Egypt . The area lies about **70 Km** west of Safaga city. The area is accessible through Sohag– Safaga asphaltic road for about **40 Km** then using Qena – Safaga asphaltic road for about **30 Km**.

The gold concession can be reached from Cairo by daily, one-hour commercial airline flights to Hurghada and then to the south by paved highway to the Red Sea port city of Safaga and west along Highway 44 towards the city of Qena. Driving time from Hurghada to Fatiri gold concession is about two hours. Access exists to the area via unimproved, desert-gravel tracks northward from the small Bedouin village located at Km 85 on the Safaga – Qena paved highway (Highway 44).

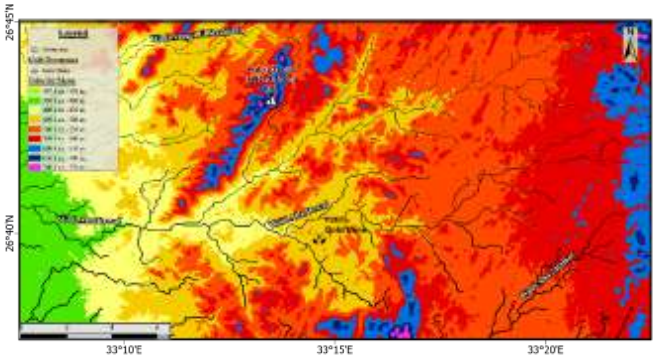
Style of mineralization

The gold deposit at Fatiri old gold mine is expressed by three modes of occurrence: silicified shear zone, altered felsite dykes (**FD**), and auriferous Quartz. All occurrences are associated with wall rock hydrothermal alteration zones within granodiorite and/or metavolcanic rocks.

1- Silicified shear zone: The silicified shear zone separates between both granodiorite and metavolcanic blocks; it is extending for about 300 meters length, trending NNW-SSE and dipping 70° to west direction.

2- Altered felsite dykes (FD): The altered felsite dykes (FD) are found as set of several parallel to subparallel gently dipping and highly altered bodies.

3- Auriferous quartz: The auriferous quartz occurs as subordinate lensoidal shape, dissects the granitic rocks. It is massive, milky white in color with an average thickness of about **25 cm**, trending NNW-SSE and dipping **40° W**.



Digital Elevation Model of Fatiri concession

Adit at Fatiri gold mine

Malachite staining within alteration zone

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Geological Setting

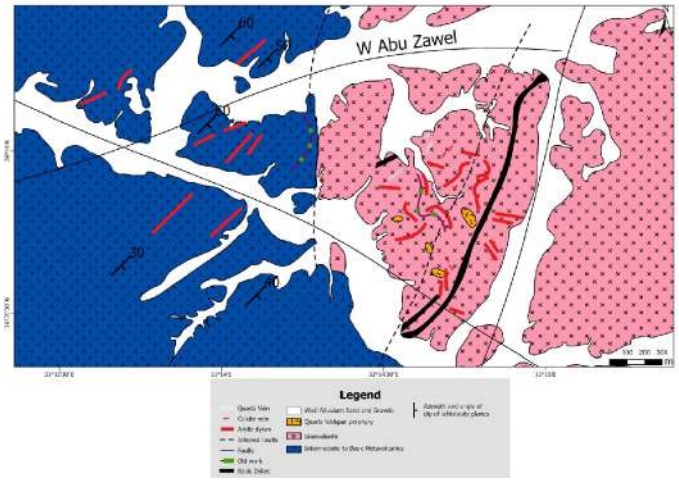
The area is covered by metavolcanic and volcano-clastic associations (meta-tuffs and pyroclastics) which intruded by series of granodiorite batholiths along shear zones.

Shearing is clearly postdated by the intrusion of granite and characterized by mylonitic and highly altered grey granite as well as intergrowth of hornfelsic rocks as a result of the granitic invasion. The concentration of shear zone along the contact between metavolcanics and granodiorites resulted from the difference in strength between those rock types.

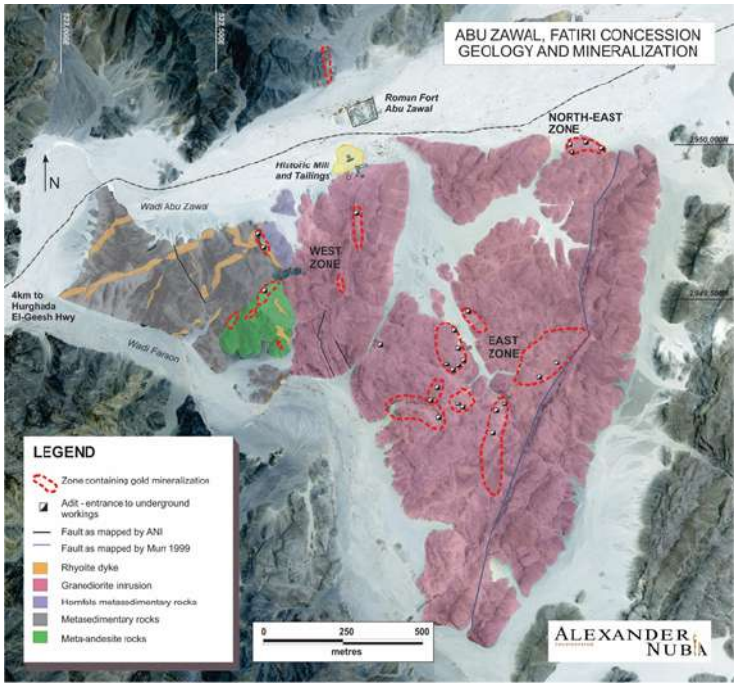
Structural Setting

The general structural setting of Abu Zawal area was studied by Alexander Nubia Inc. (1st Quarter, Gonzalez, 2015).

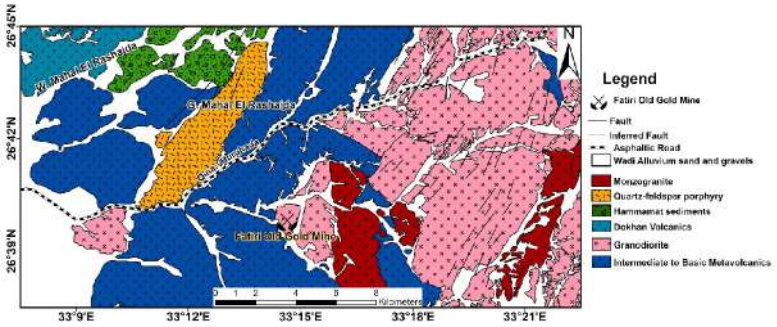
Abu Zawal, gold mineralization occurs in a series of shallow-dipping NE trending and steeply-dipping NW trending quartz veins that cross-cut meta-andesite host rocks to the west and granodiorite host rocks in the east and northeast.



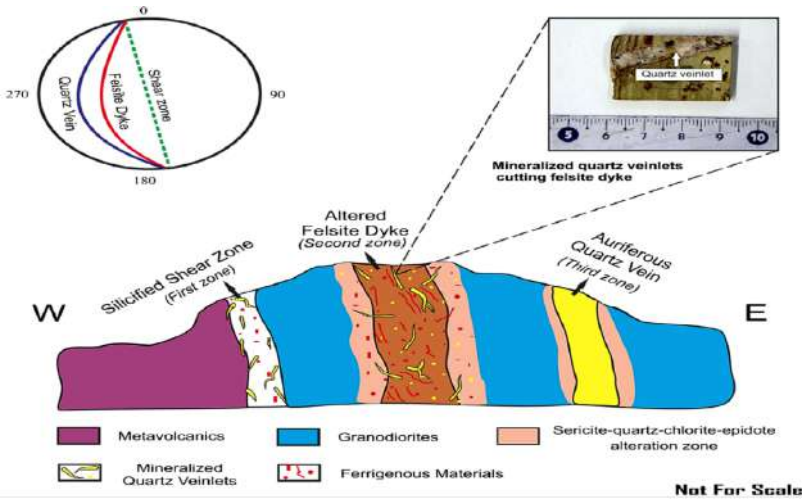
Detailed geologic map of Fatiri old gold mine



Satellite image showing Abu Zawal Geology and Mineralized Zones outlined for follow-up work as marked by the numerous underground adits on the project area by Alexander Nubia



Geological map of Fatiri gold concession



Schematic cross section diagram with stereographic projection showing the orientation and geometrical relationships between the different ore bodies and the surrounding country rocks by Abd El Monsef et al. (2020)

Mining History

Abu Zawal old gold mine is reached by a gravel track about **4.5 km** long, southeast of the newly constructed Sohag – Safaga Highway. Surface finds (pottery, stone mills) date the earliest occupation at Abu Zawal to the New Kingdom (**~1550-1070 BC**), In this period, preference was given to mining the wadi alluvium, as indicated by the extensive settlements stretching across the wadi courses, in particular along Wadi Faraon. In the Ptolemaic Period (**~300-30 BC**), mining continued in the area, with extraction continuing from wadi alluvials and also from primary veins in the Fatira mountains (**East Zone**), with mine tailings below.

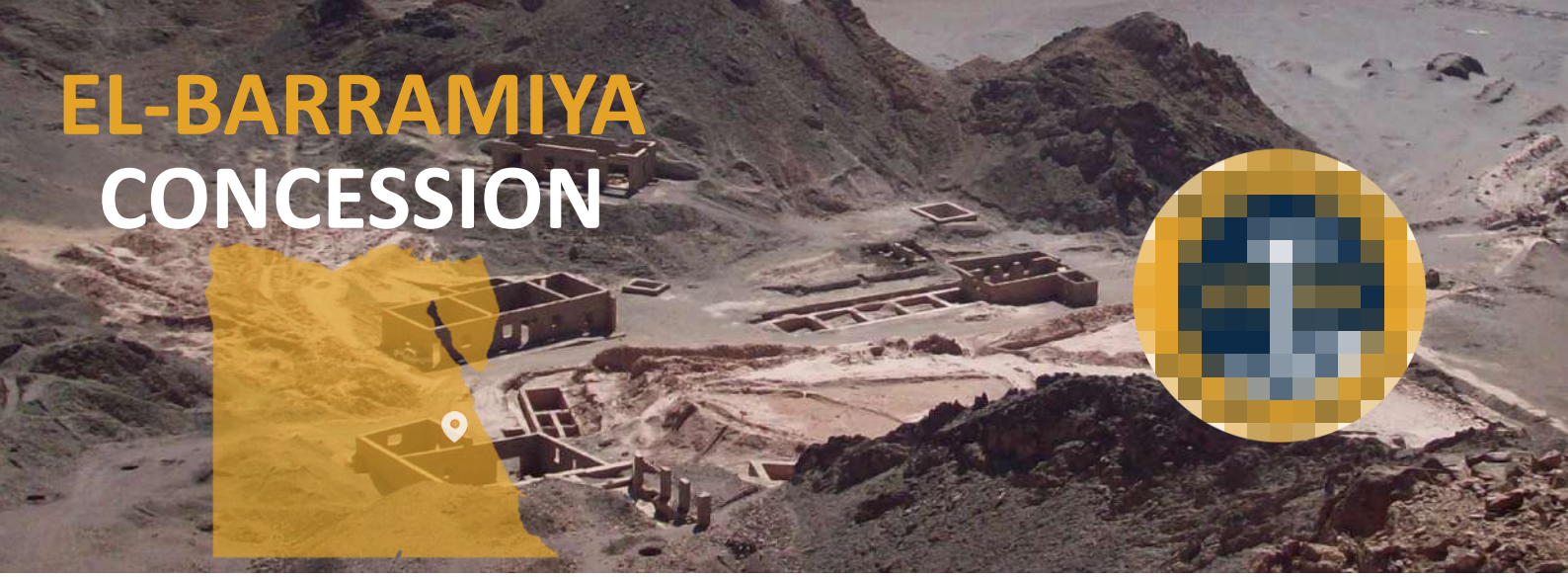
During 1902-1905, the Fatiri Exploration Company mined the deposit in shallow workings along several sub-parallel NS trending mineralized zones dipping 15°-25°W (at **West Zone**) and milled the product on site. Gold was extracted using cyanide leach, as is evident by the basins at the modern processing plant.

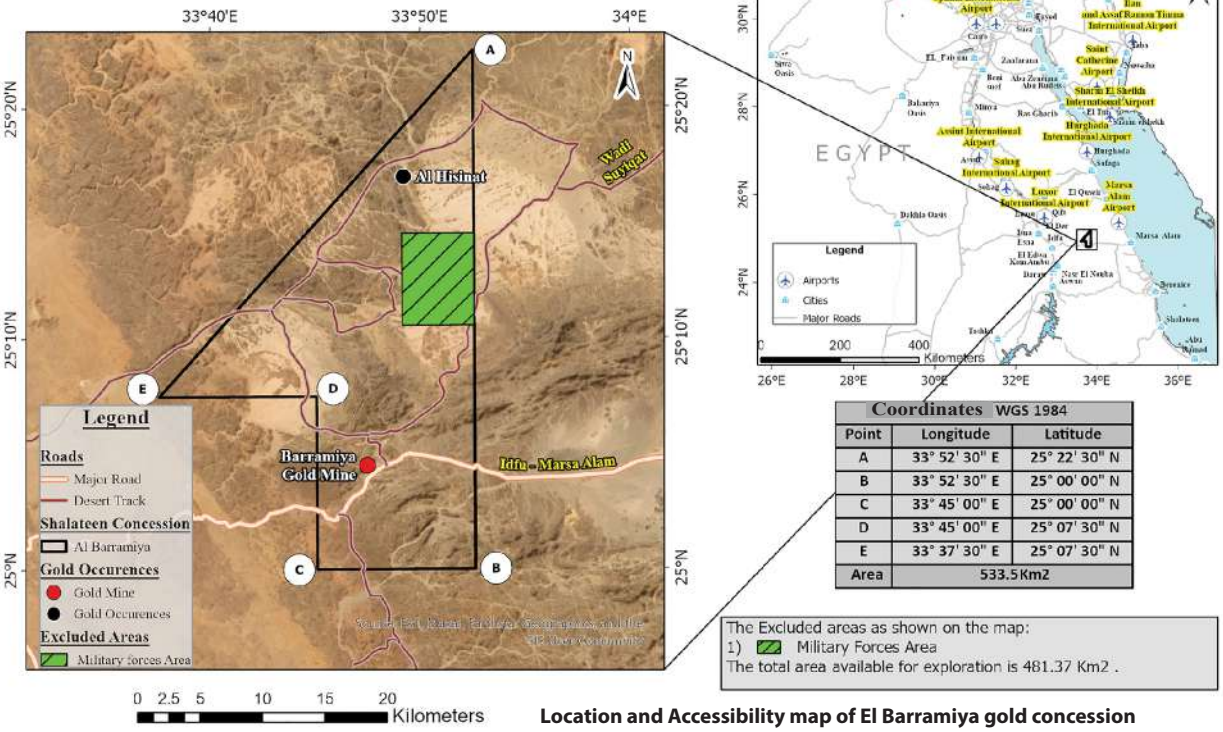
Alexander Nubia INC., carried out detailed geological mapping and geochemical sampling at Abu Zawal of mineralized zones at surface and underground, waste dump piles and tailings during **2009, 2011** and **2012** . The Company has accurately located all showings, pits, trenches and underground workings.

The tailings below the historic mine at Abu Zawal were channel sampled (14 samples) by Alexander Nubia INC. and tailings returned assay results with grades ranging from **0.2** to **4.20** g/ton Au, averaging **1.19 g/ton** Au. These tailings cover a surface area of **0.65** hectares (80m by 80m) and average 3 to 4 meters in height. The gold grades of the tailings suggest significant (**>5** g/ton Au) gold grades from the mined veins in West and East zones.

In 2014 by Alexander Nubia INC., executed a program of detailed rock chip and channel sampling at Abu Zawal for an additional **177** samples. Gold mineralization at Abu Zawal can be separated into three target areas: East Zone (avarage **8.34 g/t Au**) with a high value of **16.9 g/t Au**, West Zone(**0.224 g/t** Au to **4.20 g/t** Au, averaging **1.19 g/t** Au.) and Northeast Zone(**6.12 g/t** Au).

EL-BARRAMIYA CONCESSION





Coordinates WGS 1984		
Point	Longitude	Latitude
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B	33° 52' 30" E	25° 00' 00" N
C	33° 45' 00" E	25° 00' 00" N
D	33° 45' 00" E	25° 07' 30" N
E	33° 37' 30" E	25° 07' 30" N
Area	533.5Km2	

The Excluded areas as shown on the map:
1) Military Forces Area
The total area available for exploration is 481.37 Km2 .

Location and Accessibility map of El Barramiya gold concession

Location and Accessibility

El- Barramiya concession is located in the Central Eastern Desert of Egypt and covers about **533.5** Km2 . The area lies on the asphaltic road connecting Idfu city on the Nile to Marsa Alam city on the Red Sea coast and lies approximately **90** km east of Idfu, **105** km west of Marsa Alam city. The area is accessible by Marsa Alam – Idfu asphaltic road, about **105** km through Wadi El Barramiya and Wadi El Meyah.

Gold Mines and Occurrences

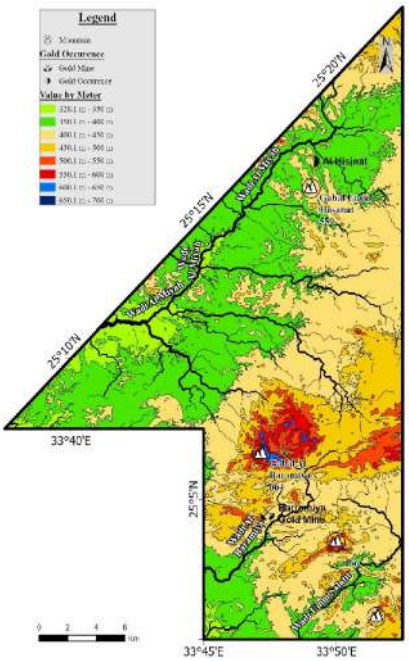
1. El Barramiya old gold mine

El- Barramiya mine is known as the center of gold mining from ancient times.
El- Barramiya deposit is known to consist of four veins, namely Main Lode (**1.34- 2.76** g/ton), Taylor's Reef (**16. 5** g/ton.) , Caunter Lode (**1.09 to 2.22** g/ton), and New Caunter Lode (**2.58-3.94** g/ton) which were worked out at different **14** periods of time. Apart from that, there are some smaller intersecting and parallel veins which form one veined system of **18 – 20** meters in thickness.

2. El Hisinat gold occurrence

The area is covered by basic metavolcanics, acidic metavolcanics, serpentinite, gabbro – diorite, granodiorite and granite , all of these rock units are cutting by felsic and mafic dykes.

The quartz veins are distributed in five sites, some quartz veins show pinch and swell phenomenon. The thickness of the quartz veins varies from (**0.5 m to 2 m**), length (**10 m – 150 m**), they are milky and smoky and characterized by the presence of iron oxides (hematite and limonite). The gold content varies between **0.25** to **5.9** ppm



Digital Elevation Model of El Barramiya gold concession

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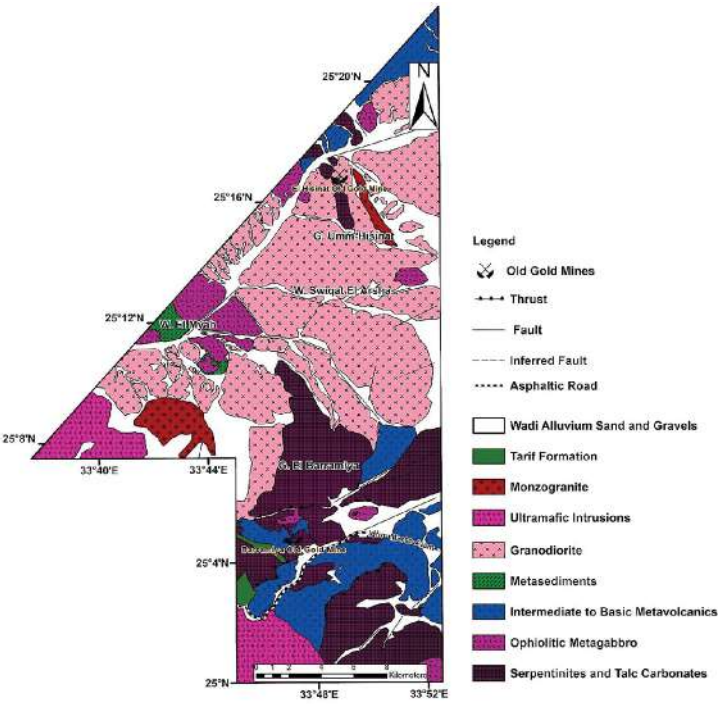
Geological Setting

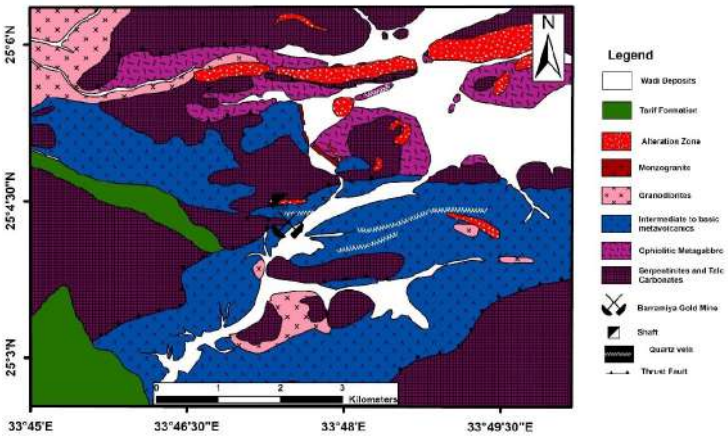
El- Barramiya old gold mine is set in a sequence of principally Metavolcanics and Metavolcaniclastics, Serpentinites and talc carbonate rock units with low amounts of metasedimentary rocks locally distributed as schists .

These Metavolcanics are occasionally quartzitic, carbonaceous and hematitic (after pyrite) shales containing recrystallized and subsequently brecciated siliceous modules probably representing syn-depositional chert and chemical precipitates occur in the sequence.

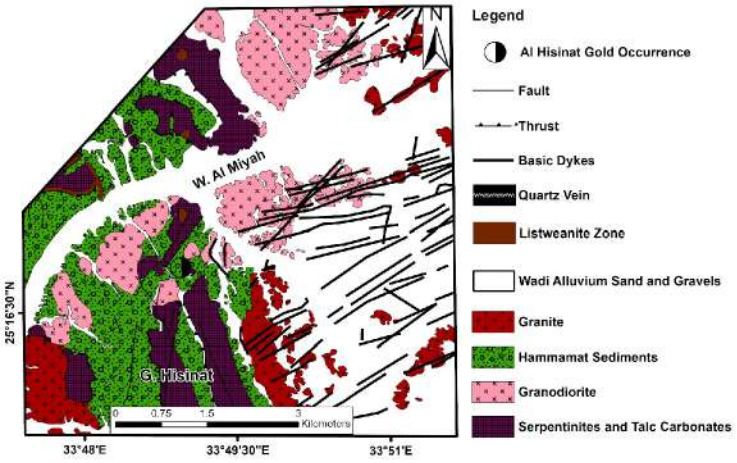
The area of the deposit is composed of schists represented by calcareous and graphitic varieties. The schists are cut by several systems of fractures, which, in places, form long fracture zones. The latter are commonly conformable with the regional schistosity of the rock. Quartz veins of the Barramiya deposit are confined to these systems and zones of fractures. The veins, especially the auriferous ones, mostly occur in graphitic schist.



Geological map of El Barramiya gold concession



Detailed geological map of El Barramiya old gold mine



Detailed geological map of El Hisinat gold occurrence

Tailing and English buildings in El Barramiya old gold mine

Structural Setting

Structurally, the old mine area has controlled by movement along a major bifurcating east-northeast striking shear zone.The shear zone typically comprises a crushed breccia of variable silicified and hematized talc carbonate and carbonaceous schistose rocks with numerous generations of quartz veining.The gold mineralization is distributed through the altered and brecciated rocks in filling the shears and is also concentrated within the massive quartz structures.

Mining History

El- Barramiya old gold mine is known as the center of gold mining from ancient times. The Barramiya old gold mine was first worked during pharonic times. These workings were discovered in **1903** and modern mining started in **1904** with the sinking of shaft and lateral development on lodes intersected by the shaft. The mining was mostly concentrated on the **Main** and **Caunter Lodes**. Later on, the mine was operated by a number of companies.

In **1906**, Egypt and Sudan Mining Company started exploitation.

In **1909**, the work was continued by another company, Barramiya Mining and Exploration Company Ltd., while connecting the shaft with the Caunter Lode, a new non exposed vein, the so-called "**Taylor's Reef**", was discovered.

In the end of **1918**, the mine was abandoned owing to increase of costs of operation at deep horizons, transport handicaps and low gold price. **1561.5 kg** of fine gold were produced for the period of **1907-1918**.

During the **mid-1970's** exploration by companied EGSMA – Techno export (USSR) team outlined the following reserve **8,500,000** tons at an average grade **3.54** g/ton.This work was expanded by an EGSMA exploration team in the early 1980's who published reserves **16,100,000** tons at **1.21** g/ton

In March 1986 and according to the agreement between EGSMA and Minex Minerals Egypt Limited, Minex commissed Robertson Research International Limited (RRI) to prepare and undertake the first stage of projected three-part program at Barramiya, which lead to confirm the thicknesses of reported in depth mineralization by further sampling which help in making correlations between samples within particular zones.

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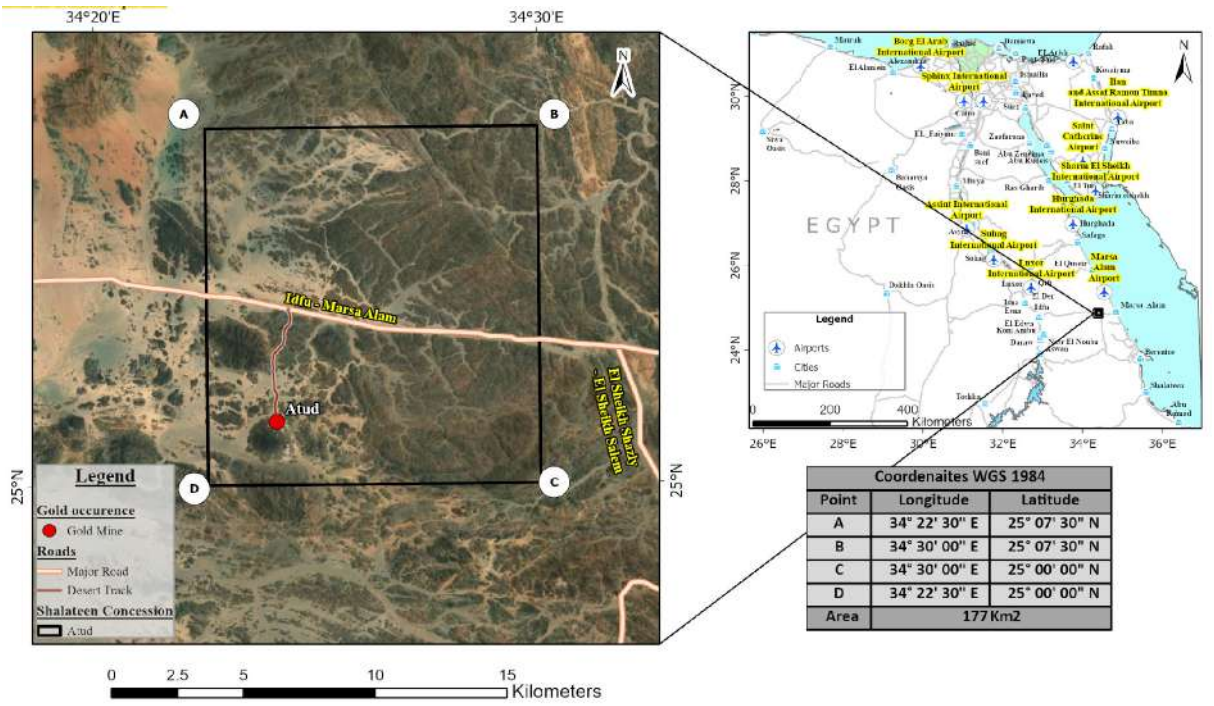
Atud
CONCESSION



Coordenaites WGS 1984		
Point	Longitude	Latitude
A	34° 22' 30" E	25° 07' 30" N
B	34° 30' 00" E	25° 07' 30" N
C	34° 30' 00" E	25° 00' 00" N
D	34° 22' 30" E	25° 00' 00" N
Area	177 Km2	

Location and accessibility map of Atud gold concession

Location and Accessibility

Atud old gold mine area is located in the central part of Eastern Desert of Egypt. The mine is situated at **170 Km** east of Idfu city at the Nile Valley **58 Km** west of Marsa Alam city on the Red Sea and about **5 Km** south of the Idfu-Marsa Alam Highway.

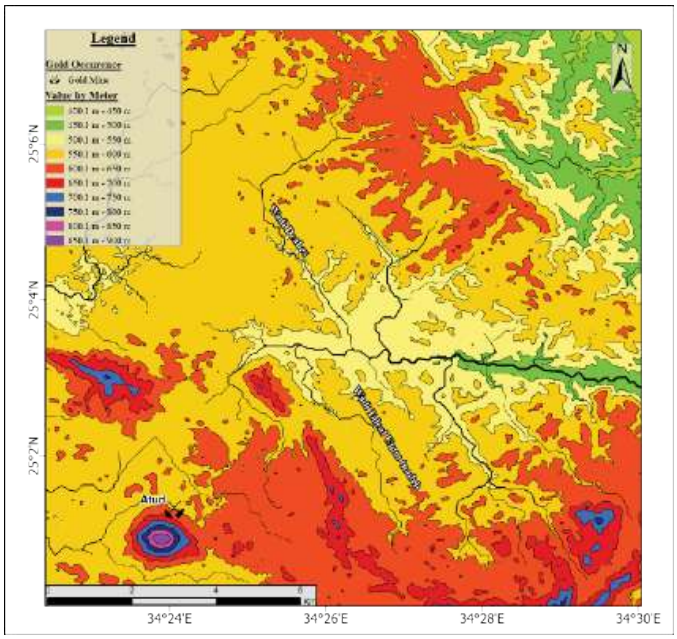
Gold Mines and Occurrences

There are three sites known as the "**Main Atud** ", "**Eastern Atud- I** "and "**Eastern Atud- II** ".

The Main Lode is exposed in outcrop over a distance of more than **100 m** striking NNW and dipping W at approximately **40°**. The host rock is medium to coarse grained diorite.The gold content up to **13.7 g/t** Au from surface samples.

Eastern Atud I. The prospect is situated **1.5** km E of the Atud mine. It consists of a single vein of dark blue-grey quartz which can be traced on a low hill for about 120m and in the adjoining wadi for more than 200m. Southern shaft were reported to have a gold content from traces to **12.3 g/t Au.**

Eastern Atud II. The prospect is located **2.5** km SE of the Eastern I and consists of two quartz veins cropping out on two more or less parallel chains of hills some 200m apart. Five samples from vein outcrops yielded from nill to **35.3 g/t Au**.



Digital Elevation Model of Atud gold concession

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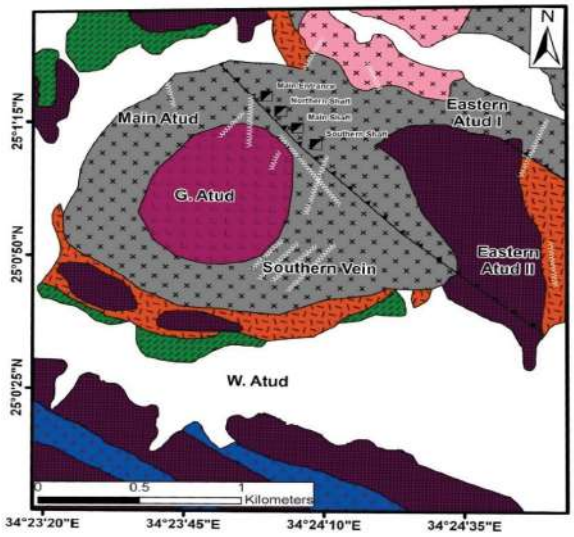
Geological Setting

Atud old gold mine area is dominated by a Metagabbro- Diorite Complex together with subordinate Serpentinite-Talc Carbonate, Metasediments and metavolcanic rocks, as well as Granodiorite and younger Gabbro rocks.

Style of Mineralization

Quartz Veins: Atud Gold-bearing quartz veins occur as fracture filling in the Neoproterozoic dioritic rocks and along their contacts with the Metagabbro.The mineralization in Atud gold mine area is of a disseminated type and related to hydrothermal veins that occupy pre-existing fractures (open space filling type).

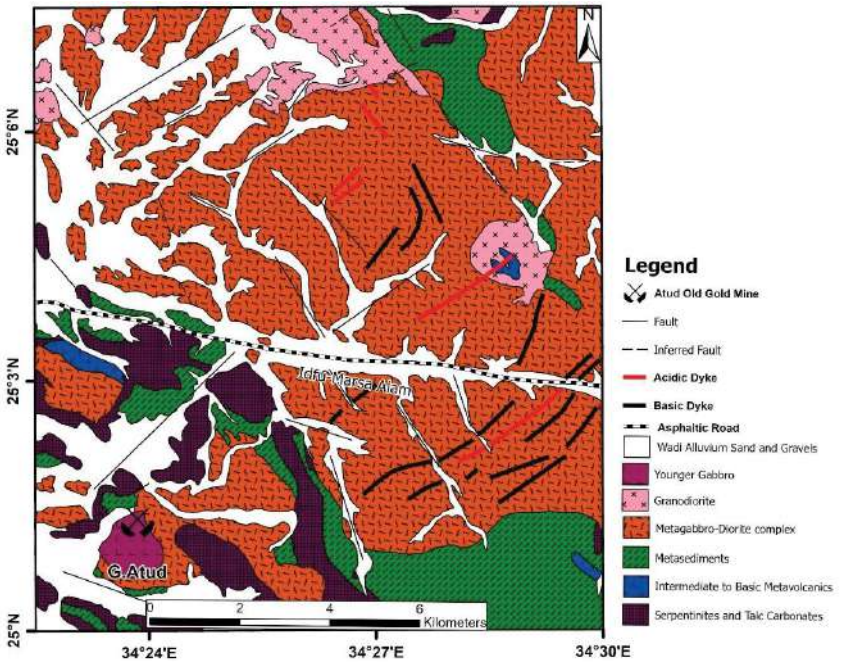
Alteration Zones: The alteration zones seem to have been formed though metasomatism in the diorite separates the zones: **(1)** Chlorite and calcite ,**(2)** Albite and ankerite and **(3)** Albite, muscovite and kaolinite zone. Contacts between veins and wall rock are commonly sharp and occasionally outlined by carbonate, chlorite and iron



Detailed geological map of Atud gold mine.

Excavations at Atud old gold mine

The main adit and inclined shaft at Atud old Gold mine



Geological map of El Atud gold concession

Structural Setting

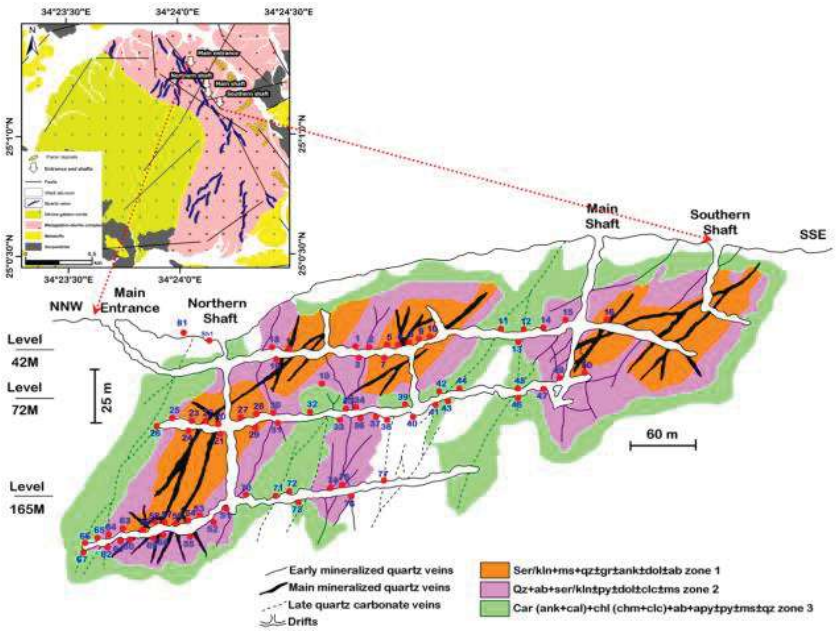
Joints are conspicuous at the Atud gold mine area and trend in four directions: NNW–SSE, NW–SE, NE– SW and NNE–SSW. The cross-cutting relationship of the joint systems show that the older joint system is trending N2°–32°W and dipping 25°NE – 44°SW while the younger is trending N10°–52°E and steeply dipping 37°– 47°NW. the shears and is also concentrated within the massive quartz structures.

Mining History

Atud area was mined during Pharonic times but no one has been produced from this area since then. Between **1953** and **1969**, Egyptian Geologic Survey and Mining Authorities (EGSMA) performed underground prospecting work in the Main Atud site through three expeditions.

Drifting was carried out on three levels along strike of the main lode (**NNW– SSE**) for a total length of **690**m.

These levels were connected by inclined shafts down the dip of the lode for a total length of 230 m. Other small shafts and some pits were made at East Atud-I and East Atud-II



Longitudinal cross-section showing the undrground levels of Atud old gold mine after Harraz (1999).

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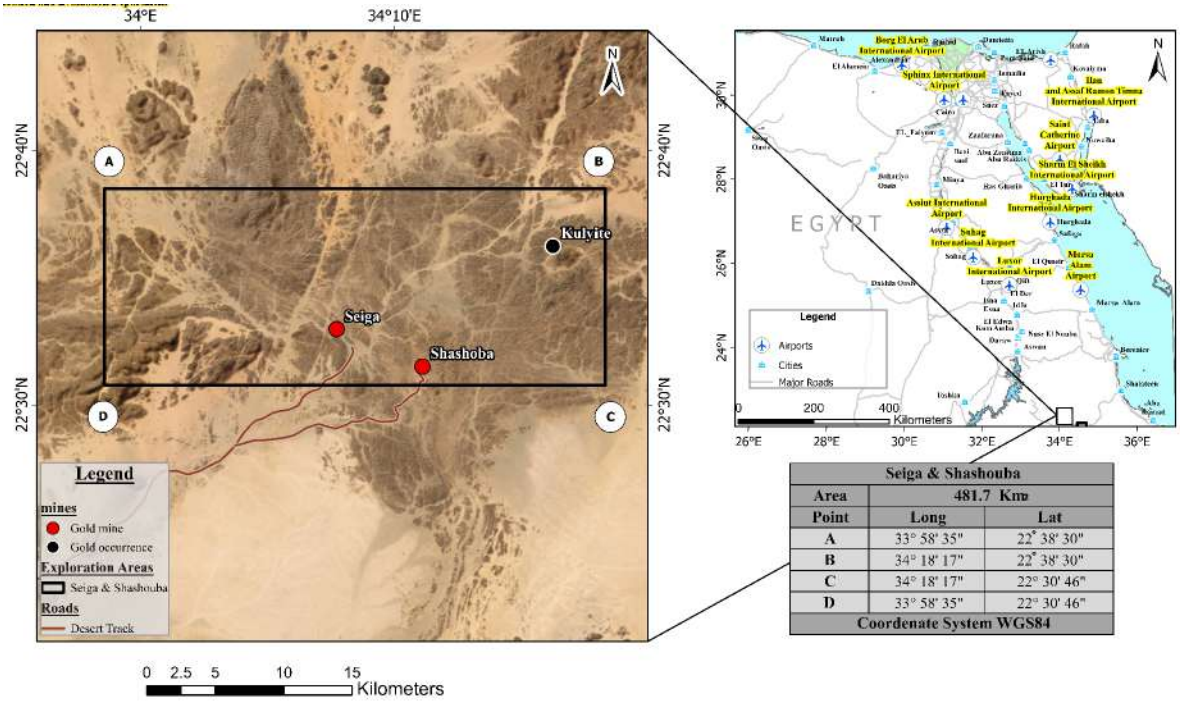
SEIGA AND SHASHUBA AREA



Seiga & Shashouba		
Area	481.7 Km²	
Point	Long	Lat
A	33° 58' 35"	22° 38' 30"
B	34° 18' 17"	22° 38' 30"
C	34° 18' 17"	22° 30' 46"
D	33° 58' 35"	22° 30' 46"
Coordenate System WGS84		

Location and accessibility map of Seiga and Shashuba gold area

Location and Accessibility

Seiga and Shashouba gold area is located in the Southern Eastern Desert of Egypt . The area lies about more than 250 Km southeast of Aswan city. The area can be reached from Cairo by daily, one-hour commercial airline flights to Aswan city. The area is accessible through Aswan – Allaqi asphaltic road for about **110** Km, then using a desertic track for about **170** km through Wadies El Qulib, Umm Arakah and El Allaqi .

Gold Mines and Occurrences

The area contains two old gold mines (**Seiga and Shashuba**) and one gold occurrence (**Kulyite**).

Seiga Gold Mine

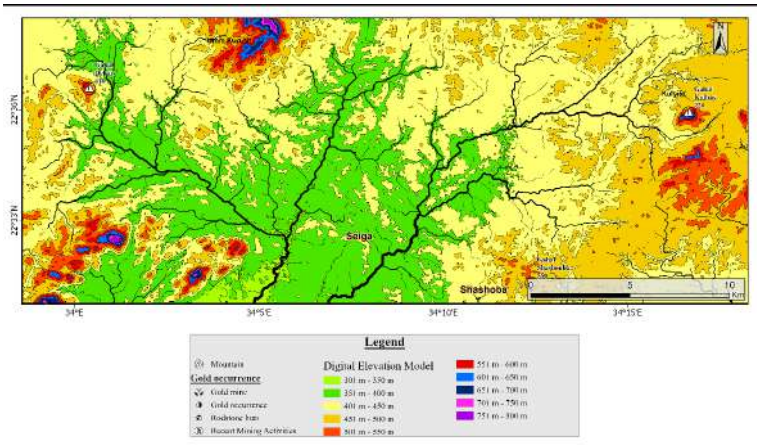
Exploration work made by Gippsland Co. revealed gold range (**2.6 – 8**) g/t Au for some samples collected from intensely altered sericite schists.

Shashuba Gold Mine

The gold content ranging from **0.88** to **4.2** g/t Au with an average of **2.2** g/t Au.

Kulyite Gold Occurrence

The gold content varies from **0.3** to **1.9** g/ton Au.



Digital Elevation Model of Seiga and Shashuba gold area

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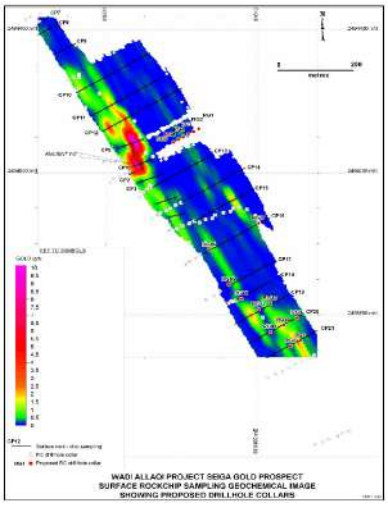
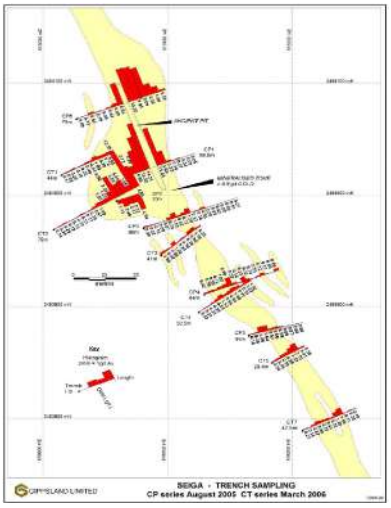
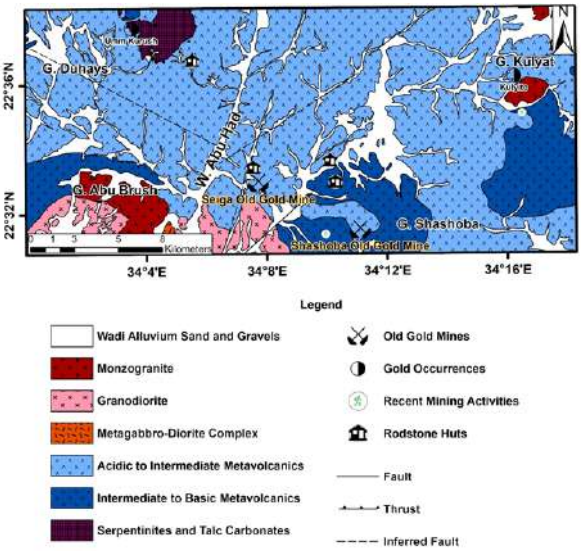
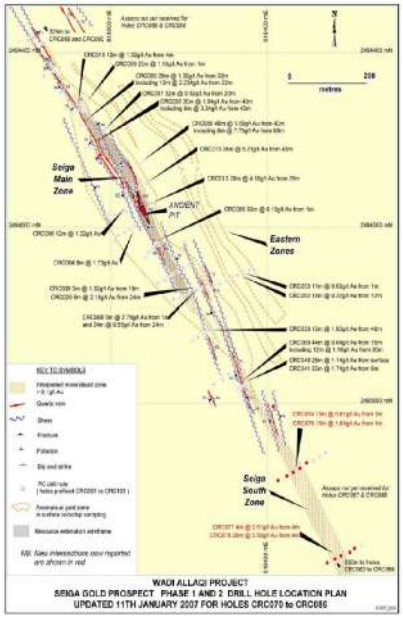




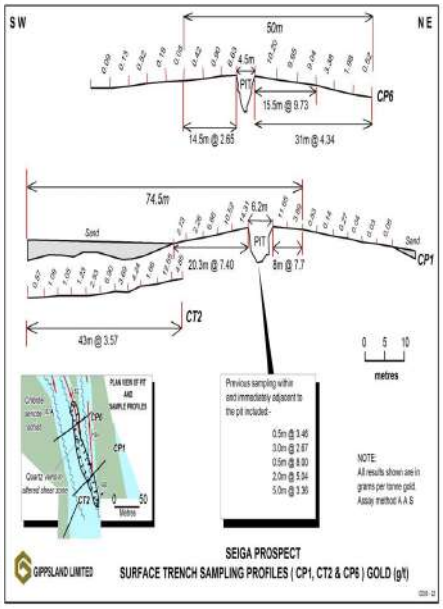
The sampling identified two zones of mineralization located east of the main zone over an interpreted strike length of approximately 800m.



Regional geological map of Seiga & Shashouba gold mines modified after Mostafa, M. et. al, 2004



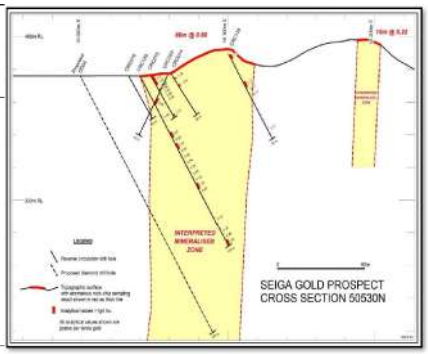
Seiga trenches & samples results



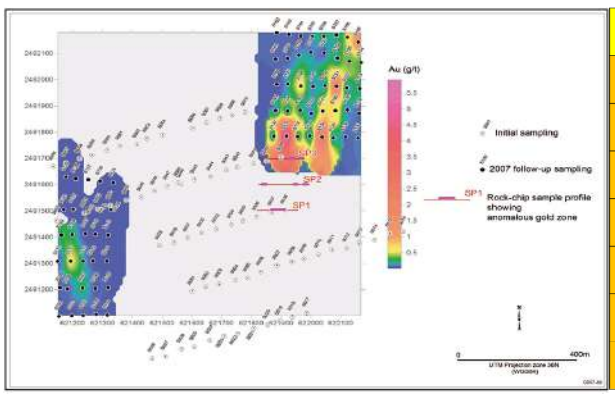
Seiga Trenches

Cut-off (g/t)	Tonnes (Mt)	Au-uncut (g/t)	Au-10g/t cut (g/t)	Au (oz)
1	0.8	3	2.5	76,000
0.7	1.1	2.3	2	85,000
0.5	1.5	1.7	1.6	93,000
0.4	1.9	1.6	1.4	98,000

Mineral resource estimation (inferred)



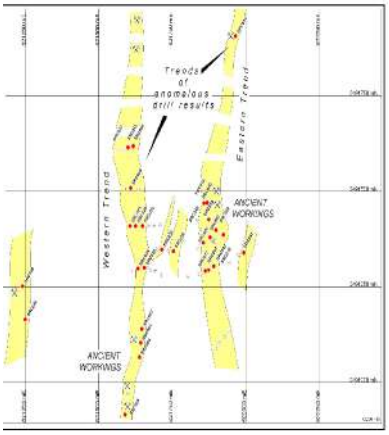
Gippsland Co. exploration (drilling) 45 hole



Results of rock chip sampling (Gippsland Co.)

Sample_ID	area	Au
A098165	Shashouba	0.015
A098166	Shashouba	0.805
A098167	Shashouba	0.872
A098168	Shashouba	39.9
A098169	Shashouba	0.822
A098170	Shashouba	1.305
A098171	Shashouba	1.15

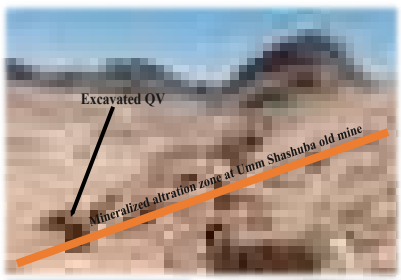
Recent visit 2024 (SMRC)



Shashuba mineralized zones – Drilling plan (Gippsland Co. project)

Hole	From (m)	Interval (m)	Gold (g/t)
SRC001	12	4	4.65
SRC002	16	4	0.94
SRC003	8	4	0.72
SRC005	4	12	0.51
SRC006	16	32	2.2
SRC007	12	48	1.93
SRC008	40	4	1.33
SRC012	0	12	0.26
SRC014	8	20	0.94
SRC017	4	8	1.06
SRC018	4	16	0.33
SRC023	0	4	2.11
SRC024	16	4	2.35
SRC025	32	4	2.62
SRC030	28	2	6.91
SRC032	8	12	0.26
SRC034	0	28	0.74
SRC035	20	13	0.94
SRC039	36	8	0.5
SRC040	28	4	4.6

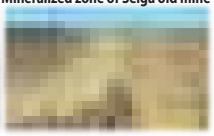
Shashuba drilling (gold assay results) – 40 hole



Mineralized zone of Seiga old mine

General view & old houses of Umm Shashuba old mine

Underground old workings of Seiga old mine



General view & old houses of Seiga old mine

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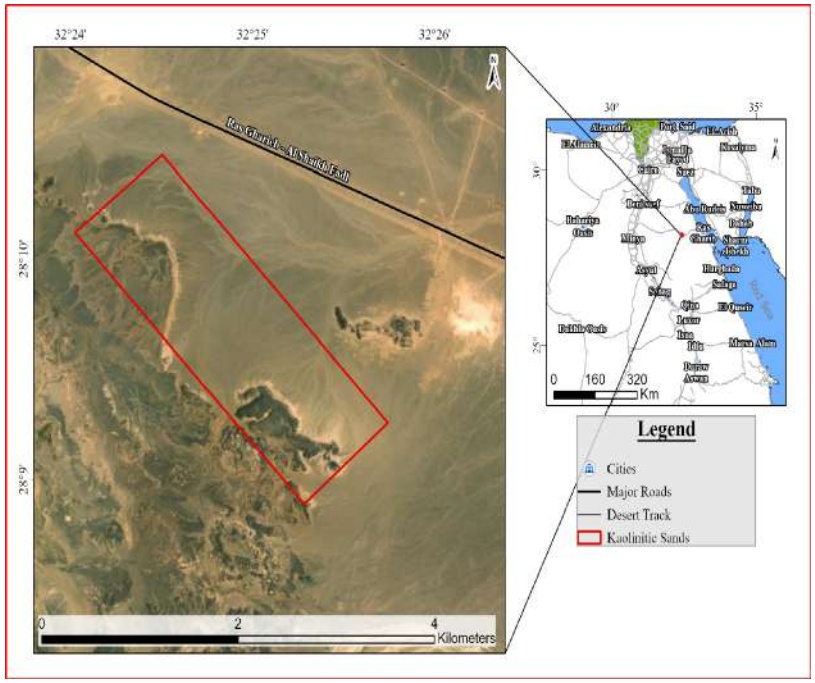
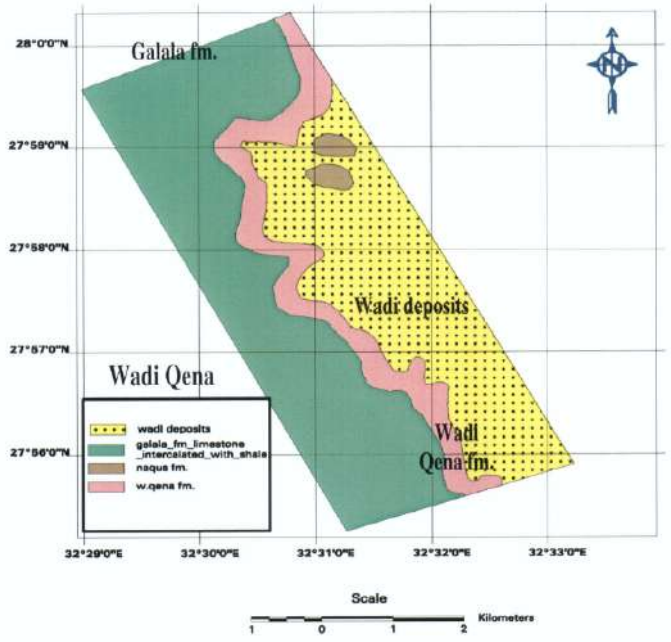
WADI QENA AREA



Location map of Kaolinitic Sands, Wadi Qena



Geological map of Wadi Qena area

Location and Accessibility

The area is located in the North Eastern Desert occupying an area about **400** Km2. The area can be accessed through the main transportation network and asphaltic roads till reaching Ras Gharib city, then heading west along Ras Gharib-Sheikh Fadl asphaltic road for **50 Km,** then taking a desertic track to the south along Wadi Qena.

This can make the area to be easily accessible and also for the ease of transportation of the ore deposit for exporting through Red Sea ports.

Ore Reserve

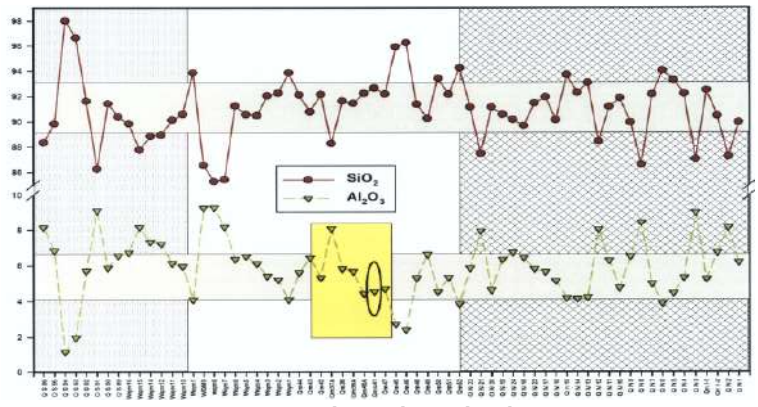
The geological ore reserve in various areas is estimated to be **258 Million Tons** (**206 Million Tons**) of White Sands (Silica Sands) and **35 Million Tons of Kaolin** which is located as a sticking material covering sandstones or as a widespread regular small pockets and lenses.

The percentage of kaolin in sandstone reaches approximately **8%** and is characterized by a high purity degree with low percentages of titanium and iron oxides. Also characterized by high brightness and luster which exceeds **75%.**

A number of semi industrial experiments are carried out to produce Kaolin:

High degree (**Kaolin I**) is produced which is characterized by a high alumina percentage reaching **38%** and **Kaolin II** reaching **34%** and **Kaolin sands** with **99%.**

	Yield wt.%	SiO_2	TiO_2	Al_2O_3	Fe_2O_3	MnO	MgO
Feed S.	100	90.69	0.09	6.71	0.015	> 0.01	0.01
Sand Conc.	80.5	99.81	0.035	0.07	0.007	>0.07	0.07
Kaolin I	9	46.56	0.79	38	0.42	0.01	0.07
Kaolin II	4.2	47.78	0.62	37.34	0.34	0.01	0.07
Kaolin Sand	6.2	58.68	0.64	29.36	0.38	0.01	0.07



SiO2 & Al2O3 relationship diagram

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S. No.	1	2	3	4	5	6	7	8	9	10
TiO_2	91.95	89.65	90.55	87.25	91.12	87.45	91.12	91.45	90.15	87.02
TiO_2	0.17	0.15	0.38	0.37	0.11	0.20	0.19	0.23	0.27	0.17
Al_2O_3	5.65	6.45	6.35	8.15	4.65	7.95	5.87	5.82	6.75	9.01
Fe_2O_3	0.09	0.09	0.09	0.10	0.04	0.06	0.05	0.08	0.08	0.07
MnO	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MgO	<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01
CaO	0.16	0.43	0.19	0.34	0.50	0.17	0.13	0.26	0.18	0.12
Na_2O	<0.01	0.10	0.02	0.06	0.03	0.30	0.37	<0.01	0.06	0.10
K_2O	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
P_2O_6	0.07	0.07	0.09	0.09	0.05	0.05	0.05	0.07	0.05	0.05
CI	<0.01	<0.01	0.03	0.09	0.05	0.41	0.05	<0.01	0.09	<0.01
SO_3	0.06	0.90	0.20	0.70	1.70	0.14	0.06	0.11	0.05	0.03
L.O.I	1.61	1.77	1.74	2.52	1.56	2.81	1.88	1.71	2.05	3.18

Raw material chemical analysis

Size (micron)	W %
+630	9.5
-630+125	77.5
-125+40	9
-40	4
Total	100

Results of sieve analysis of wet technological samples

Grain size contents	-630+125 micron	-125+40 micron	-40 micron
SiO_2 %	97.21	81.75	41.41
TiO_2 %	0.08	0.86	1.44
AL_2O_3 %	1.59	11.3	32.55
T Fe_2O_3 %	0.027	0.36	0.56
CaO_2 %	0.1	0.62	0.99
MnO %	< 0.01	< 0.01	< 0.01
P_2O_5 %	< 0.01	0.11	0.19
L.O.I %	0.53	3.78	11.63

Results of XRF analysis for the dry products

Grain size Contents	-630+125 Micron	-125+40 Micron	-40 Micron
SiO2 %	98.12	83.86	48.45
TiO_2%	0.08	0 . 6	1.28
Al_2O_3%	0.98	10.45	35.55
T.Fe_2O_3 %	0.03	0.17	0.57
CaO %	0.07	0.39	0.59
MnO	<0.01	<0.01	0.01
P_2O_5 %	<0.01	0.03	0.21
L.O.I %	0.32	3.5	12.56

Results of XRF analysis for the wet products.

Results of Kaolin Separation

The following table shows the results of separated kaolin and XRD chemical analysis for the fraction **-630 +125** micron after attrition using Hydro cyclone equipment. According to these results we can produce high grade kaolin **Grad I** with Al_2O_3 **38.10%** and with weight ratio **35.14%**, this can used in paper industry, and we produce kaolin **Grade II** with Al_2O_3 about **36.60%** with weight ratio **18.02%.**

In addition the mixed produce with weight ratio **46.84%** and contain silica content about **75.65%** and Al_2O_3 **16.01%** and this can be used in ceramic industries.

	Kaolin I	Kaolin II	Mixed kaolin and sand
Product %	35.14	18.02	46.84
SiO_2%	44.95	47.36	75.65
TiO_2%	1.10	1.05	1.02
AL)$_3$%	38.10	36.60	16.10
T.Fe_2O_3%	0.84	0.55	0.25
MnO %	<0.01	<0.01	<0.01
P_2O_5%	0.27	0.16	0.02
L.O.I %	13.73	12.97	5.63

Results of Kaolin Separation

Field photos showing dry processing of kaolinitic sands

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