CHAPTER III
MINERALS

On the whole area of 199.1 km^2, based on the survey andanalysis results, it is showed that the dominant minerals are gold mineralized formations with different forms of expression from original to placer gold. In addition to the gold mineralization outlined above, there are other occurrence of tin, tungsten, copper, lead, zinc, antimony, molybdenum, chromium, cobalt, nickel exist in the form of geochemical contours. The expression of thosemineralsenrichingthe mineralization of the investigation area (drawing's No. 4 – 2; 4 – 3; 4 – 4; 13 – 2; 13 – 3; 13 - 4).

I - GOLD MINERALIZATION:

Gold mineralization in the investigation area are manifested in two areas with different geological characteristics:

+ The gold expression of intrusive rocks.

+ The gold expression of terrigenous and metamorphic terrigenous formations...

The gold expression of intrusive rocks:

The occurrence of this gold mineralization is mainly concentrated to the north of the area in the north - northeast Noong Key Uc. Gold mineralization in this area mainly developed in the placer formations of valley located on the granitic intrusive rocks. In addition, original gold occurrence are poor.

The placers have common characteristics such as small distribution and scale, the main material are sand pebbles, gravel and on the same basis as clay loam plants. Pebbles are mostly destroyed by granite products from bedrock.

Formations typical for this placer are exposed in north - northeast area of 166.6 km^2 with coordinates limited as follows:

POINTS	COORDINATES		AREA (km^2)
	X	Y	
I	780,538.00	1,692,662.00	1.00
II	781,596.00	1,691,048.00	
III	781,140.00	1,690,763.00	
IV	780,100.00	1,692,358.00	

Valley placer is not large, developed along the streamsflow on the Permian - Triassic granitic intrusive rocks,

Thicknessof productlayer are thin. The mineral composition of the samples contain mostly placer gold

+ Magnetic induction part: magnetite - 99%, martite 1%, and other minerals.

+ The electromagnetic part: ilmenite - 55%, epidote - 28%, hematite - 5%, with garnet, limonite, poor sphel and amphibole. Some samples contain tourmaline.

+ Heavy minerals are zircon, rutin, yellowsphal, pyromocfit, pyrite and apatite.

+ The lightweight minerals are quartz and other mixing minerals.

Placer gold are in granules, angular shape. The analysis results showed significant small gold particles, particle size 1.5 x 0.6 x 0.1 mm to 0.1 x 0.1 mm Results of wash panning in the valley showed that the frequency of having gold in treated samples ranged from 1 to 45 grains of gold / 10 dm^3. Gold have bright colors, sometimes have been surrounded by iron hydroxide on the surface, as well as crystal quartz in gold particles (sample TS.133). The gold particles on the basis of single mineral morphologyshowed diversity crystals from clumping to angular form... It is cleared that they are provided close to deposition place. (Photo III - 1, 2, 3, 4)

The placer gold coincides with the wash belts from low level to higher (grade I, II and III) and is currently being exploited spontaneous (drawing No. 3 - 1).

In the northeast corner area, placer gold may partly be provided from Dak Plo original gold of nearbyVietnam territory.

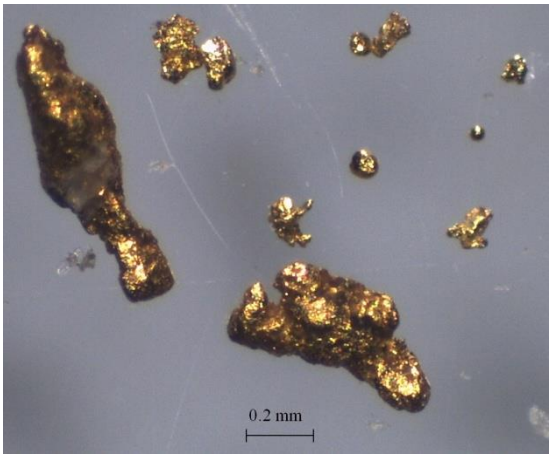


Photo III - 1: The placer gold particles of different shapes. Sample TS. 133

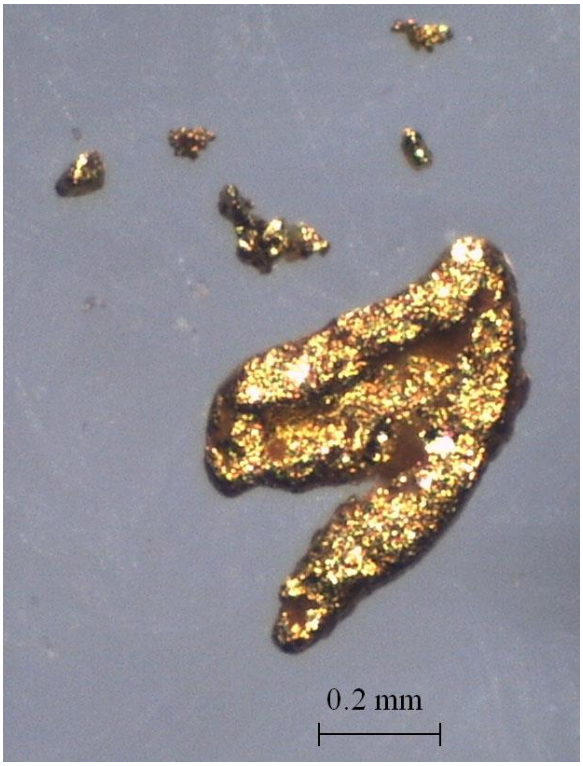


Photo S II - 2: Native gold grains having automorphic shape crystals. Sample TS. 135

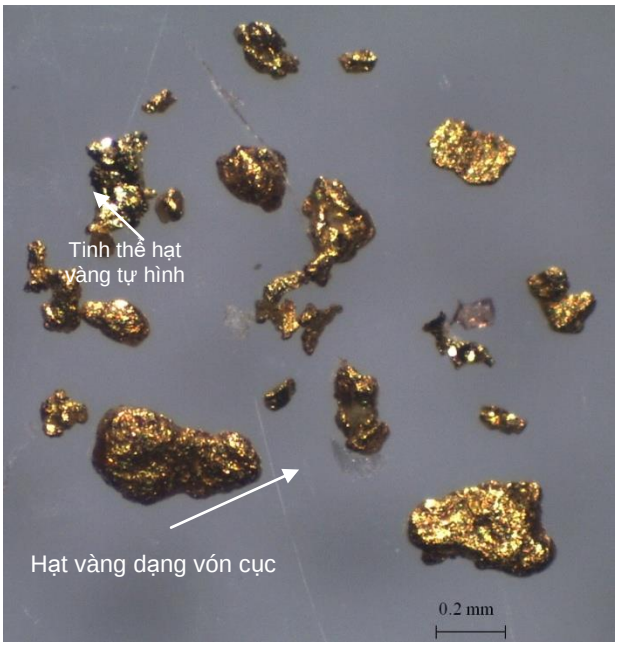


Photo III – 3 : The native gold particles in the wash TS. 137

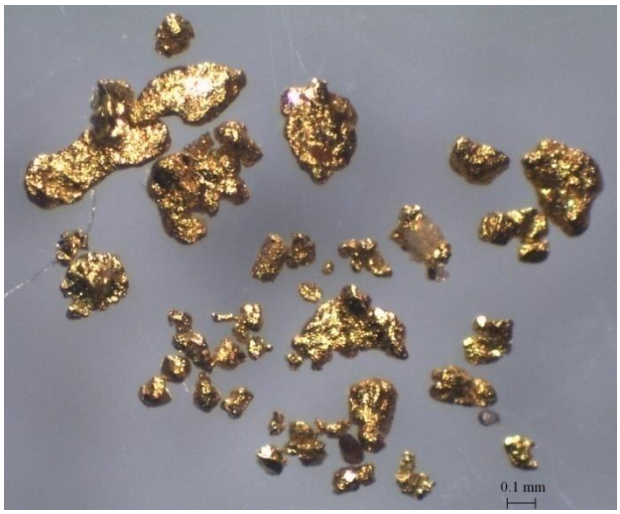


Photo III - 4: The native gold particles in the placer TS. 138

Belongs to those placers, in the valley, there are quartz point with alteration zones containing gold, panned samples gave low numbers of gold particles like the sample GA. 2195 (coordinates X - 780,803.00; Y - 1,691,500.00). Mineral composition in the pounding form consits mainly of pyrite, limonite, quartz and 01 gold grain.

AAS analysis result of outcrop corresponds results in Table 1 below:

Table 1: analyzed results of Au, Ag concentrations in outcrop A. 2195

No	Samples	Elements content (ppm)		Outcrop description
		Au	Au	
1	R – A – 2159/1	0.58	0.1	Alteration zone was limonite turned red brown, patchy, pale yellow, gray, weathered strong, blanket sets, they contain thick quartz ray small circuit from 1-4 cm, opalescent color variable penetration zone team. Limonite forming soft black cattle drives, cloud
2	R – A – 2159/2	0.17	0.1	
3	R – A – 2159/3	0.37	0.1	
4	R – A – 2159/4	0.59	0.1	
5	R – A – 2159/5	0.42	0.1	
6	R – A – 2159/6	0.28	0.1	

Clearly, gold bearing mineralized zones listed above are typical bright color change of the surrounding rocks and mineralized quartz stockworks are - sulfur bearing gold, they developed in sub meridian (170 - 350^{o}). Mineralized expression width to 6 meters.

In addition to the above gold placers, on the map No 3 - 1 there are some other expression with placer gold, they are not rich but currently being exploited by local people. Gold particles in samples generally have small grain size, samples composition aren't different than placer area near Dak Plo as shown inthe image below (image III - 5, 6, 7, 8, 9, 10). Along with placer gold, on their distribution area, sometimes pyromorphite, kinovarcould be found with not much expression.

Withoverlapgeochemical coronary, under the branches of valley streams, geochemical belts are presented in the geochemical samples of localization Au of grade I and II, possibly fine grains.Perhaps here gold exists as the grained gold. Going along with the geochemical gold belt, with the Pd geochemical belt from grade I to grade III, Ag available from grade I to grade III, Hg from grade I and II (drawing No. 4 - 1).

In addition to the localization of coronary correlation with gold as Pd, Ag, Hg, there are localized coronary grade I, II, III of Sb, levels I and II of Pb, Zn grades I to, Cu (drawing No. 4 - 2).

The expression placer gold along the original gold outcrop of expression but are poor, then showed the presence of a combination of important minerals such as native gold, piromocfite, kinovar with coronary localization of Sb , Cu, Pb, Zn, Pd, Ag, Hg, and compared the native gold particles of the sample leave the details surrounding area has, shows the mineral sand is supplied from a source not far within the valley.

Obviously at different levels with the symbol shows this range is a gold bearing area.

In overall, size of the placer under Noong Key north and northeastern Australia have developed a small scale by local denudation formation characterized by strong activity in front of modern tectonics. However, the presence of this mineral sand formations in the area is investigating along with the detected position of primary gold ore shows we distributed close to supply sources, a good sign for the prospection mineralization present in the work of the next original.

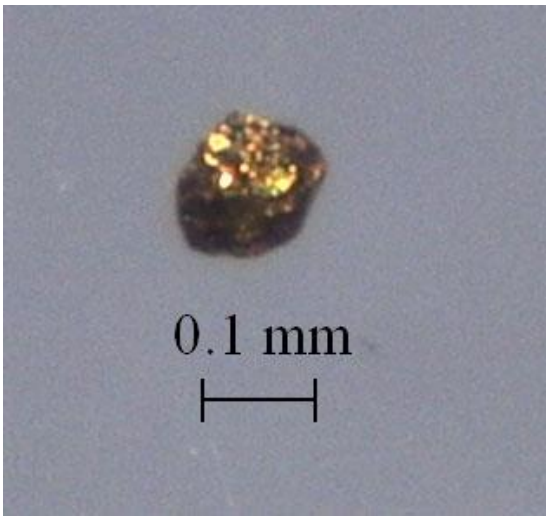


Photo III – 5 : Native gold grains having automorphic cubic crystals. Sample TS. 136

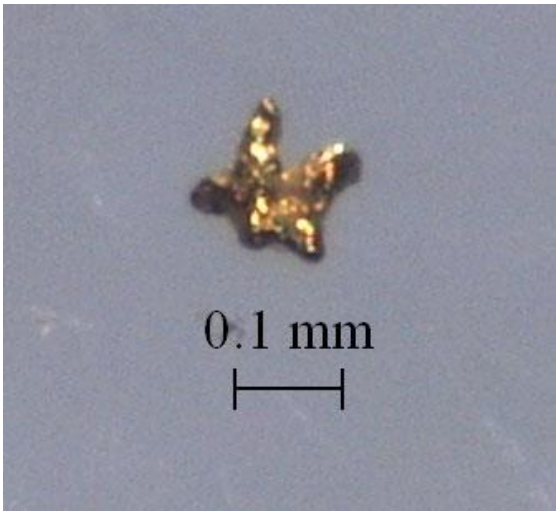


Photo III – 6 : angular gold crystals. Sample TS. 130

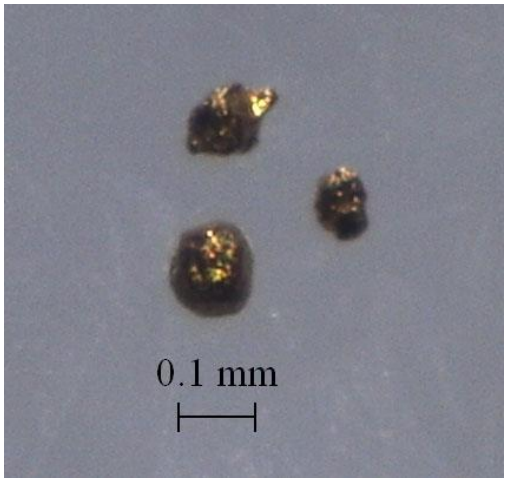


Photo III – 7 : Native gold in color crystal ofcopper - gold, in lumps form. Samples TS. 149 (Coordinates 774,581 - 1,692,718).

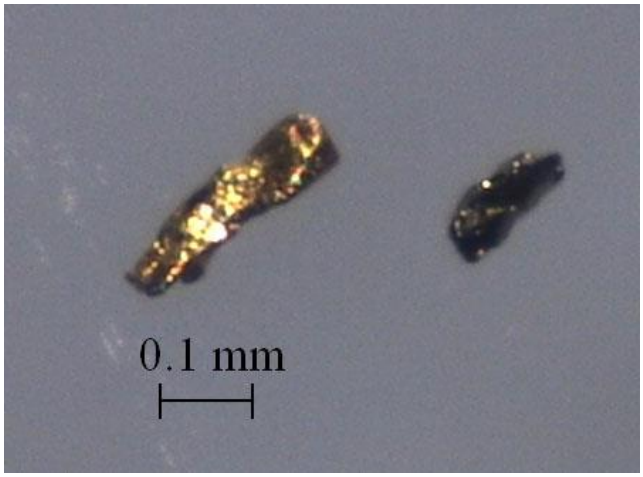


Photo III – 8 : The native gold particles with lumps form. Sample TS. 150 (Coordinates774,404.00 - 1,692,221.00)

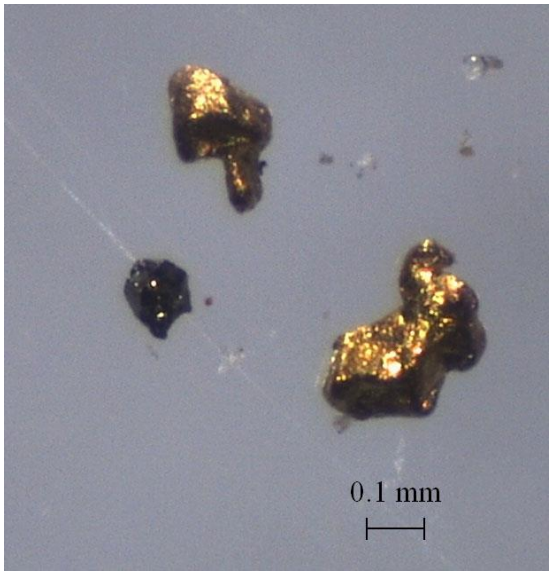


Photo III – 9 : The native gold particles with lumps form. Sample TS. 151 (Coordinates 774,699 –1,692,099)

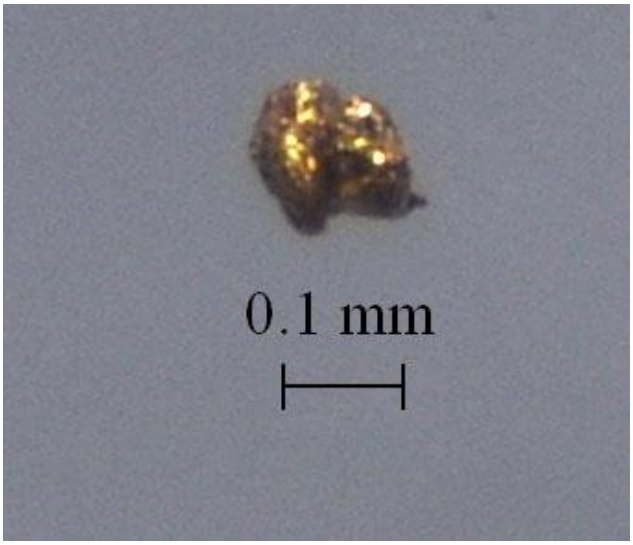


Photo III – 10 : The native gold particles with lumps form. Sample TS. 041Coordinates 778,419– 1,691,577)

Formations of mineralization gold developed on the continental and metamorphic rocks:

Gold mineralization is developed on the continental natural sand stone and metamorphosed terrigenous covers a large area and the main focus in the southern part of the area of north - northeast key Noong Australia, distributed on the sand of terrigenous clay the slabs of quartz - Sericite and older metamorphic rocks from Neoproterozoic to early Paleozoic and scope Vang Tắt Kang .

a) The creation of the southern gold mineralization 166.6 km^2 area:

In this area from north to south have discovered many important sa rims and gold geochemistry at different levels, and have found the expression of the primary gold mineralization at the southwestern extent of the area.

+ Formations of placer gold:

Formations placer gold in this range encountered in the eastern part valley area and detailed within 1 / 10,000 the southwestern part.

Placer gold belongs to the development of the valley stream and upstream tributaries and streams Dak chirps. Here the newly discovered gold placers, however within the upper valley Dak chirps small signs of exploitation of the local population (drawing No. 5). Contain placer gold area is limited to the geographical coordinates:

POINTS	COORDINATES		AREAS (km^2)
	X	Y	
I	779,400.00	1,672,946.00	1.57
II	779,948.00	1,672,132.00	
III	779,756.00	1,670,895.00	
IV	778,902.00	1,670,921.00	
V	778,909.00	1,671,372.00	
VI	779,352.00	1,671,385.00	
VII	778,724.00	1,672,516.00	

Valley of the main development platform metamorphic rocks Neoproterozoic age Coinciding with the development position is placer alluvial valleys have developed in large flowing lines and no more steps left, with the SHOW higher than the current flow over 10 - 15 meters, a place strongly eroded, left leg more levels high.

Composition floor cornerstone product is the quartz pebbles and gravel metamorphosed terrigenous. In the valley, quartz boulder-size, located on the continental rocks and metamorphic materials. Thickness of the product layer formed placer generally not large by growing on geomorphic terrain denuded areas.

The results of analysis of samples of the coronary critical sa sa significant degree III, the second component is ilmenite, monazite, some tourmaline, garnet, xenotime, leicoxen, hematite, zircon, tremolite, gold, sphel quartz.

In this part of the left have sizable amount magnhetit. Sometimes in form with epidote.

Gold mineral granules (0.1 x 0.1, 0.3 x 0.4, 0.5 x 0.8 mm), diversity of morphology as the samples have been treated, is expressed through the image (image III - 11, 12, 13, 14) .

Belong to the scope of the downstream tributaries and streams, the gold particles still have the edge, clean and bright color as the sample (TS. 134, TS. 040, TS. 200 and the sample stream TS branch. 202) with special spot gold particles reflected by the image III - 13, 14. Obviously versus gold particles from

sample retirement incentives, which exist as yet been grinding a lot, showing close supply - including the form of a flowing Dak Chiep main line.

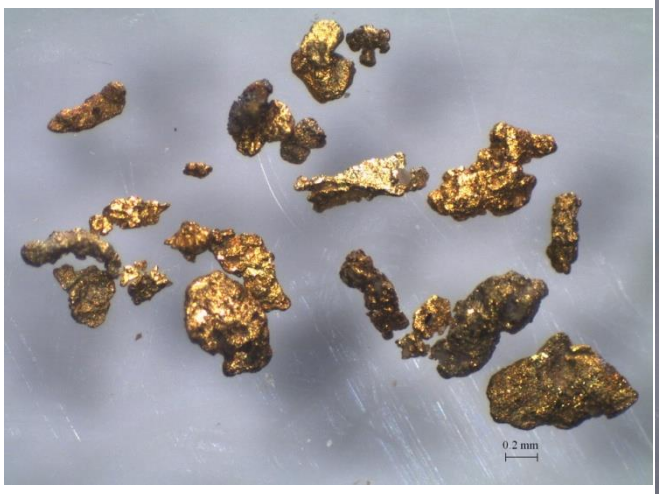


Photo III - 11: The placer gold particles attached to upstream tributaries and streams Dak chirps. Form TS. 213.

Coordinates 778.278 - 1,673,622

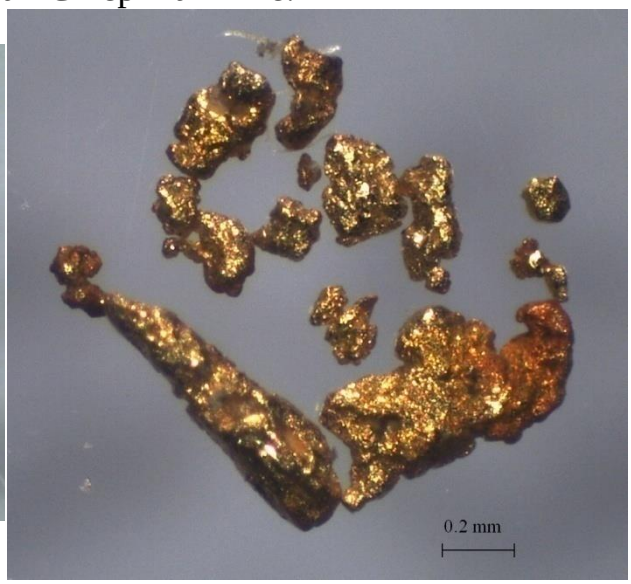


Photo III - 12: The placer gold particles attached to upstream tributaries and streams Dak chirps. Form TS. 106.

Coordinates 778.562 - 1,669,965

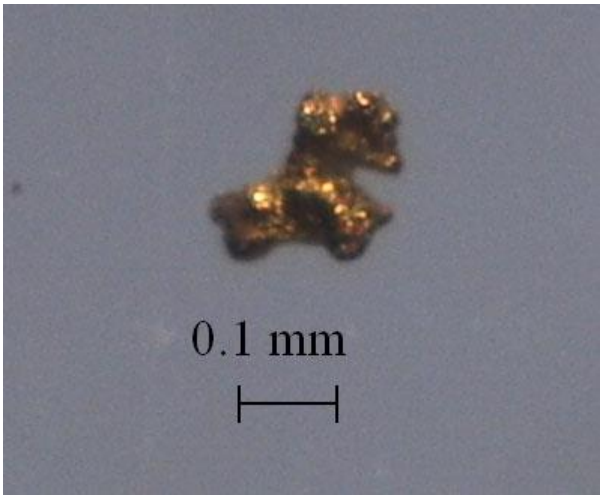


Photo III - 13: The placer gold particles attached to upstream tributaries and streams Dak chirps.

Form TS. 039.

Coordinates 779.657 - 1,667,448

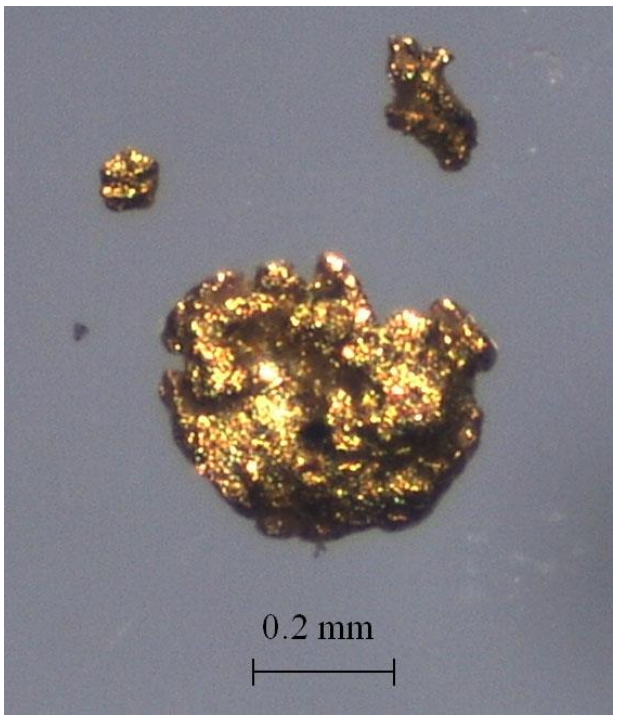


Photo III - 14: The placer gold particles attached to upstream tributaries and streams Dak chirps. Form TS. 100.

Coordinates 779.501 - 1,671,249

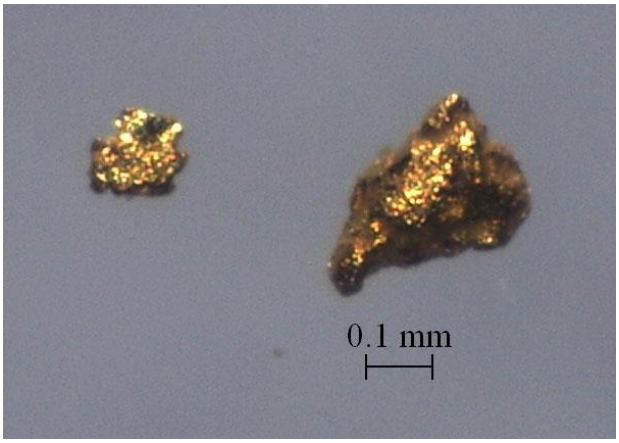


Photo III - 15: The placer gold particles attached to the main stream source Dak chirps. Form TS. 200.
Coordinates 776.655 - 1,675,950

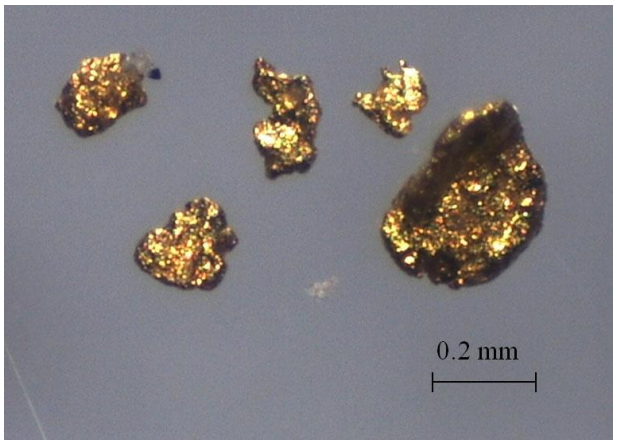


Photo III - 15: The placer gold particles attached downstream tributaries and streams Dak source chirps. Form TS. 202.
Coordinates 776.097 - 1,675,890

+ Occurrence of original gold formationsin the southwest area:

Expression original gold met within the southwestern part of the area of 166.6 km2 concentrated in tile coordinates as follows (drawing No. 8):

POINTS	COORDINATES X (m)	COORDINATES Y (m)
I	771,000.00	1,667,000.00
II	773,500.00	1,667,000.00
III	773,500.00	1,665,000.00
IV	771,000.00	1,665,000.00

- ***Features of the geological structure:***

Join in geological structures occurrence area gold mineralization is the ancient stone age from young to the following

+ The age metamorphic sedimentary Cambrian - Ordovician:

Formations day lithostratigraphic order from the bottom up, including:

The lower portion: Mainly quartz plates - Sericite pan thin layer, distribution west of the area detailed survey 1/10,000, moved up on the set of stone powder, claystone alternating thin layers of quartzite.

High Part: mainly quatit layered thick, bright color to the white stone. Size of the formations revealed find distribution at the high southeast area. They live on government formations quartz plates - Sericite and flour, claystone above.

+ Formations of bright color dykes :

The creation of this distribution atc cut through the area developers have complained of low, under the high part of the stratigraphy, undiscovered formations.

Dai bright color development agencies systematically destroy the meridian á main lithological composition as a result of deep core samples drilled the unaltered parts of kaolin particles of mainly Anbit fairly small. Thickness of the dyke ranges from 6 to 8 meters, with room under the south they develop into two

parallel branches, there is room to create a tropical mixture contaminated with surrounding rocks. In this formation, sometimes with sulfur circuits which edge or filling in them carry gold with volatile content (image III - 2).

+ The Cenozoic formations :

These formations are mainly pebble, quartz and sand foundation clay powder form and alluvial formations shelf alu - proluvi follow the mainstream.

In our high shelf, formerly placer mining was nearly exhausted.

+ Features of destructive fault system and folding:

On the map the general structure, through the highway track suit existence of persistent contraction shows the system destroys the Asian meridian system is the most powerful and destructive they are channels for the magmatic ascent.

Destroy and complicate the system is the system destroys the latitudinal direction, we cut and shifts the system above the track distance is up to 6 meters. Near the destruction zone, lying by the stone is reversed, with almost steep place as seen in outcrop A. 002 (Photo III - 17).

Photo III - 17: The north trending faults á meridian. VL. A.002. Coordinates X - 772.706, Y - 1,666,807

Features fold within this area shows not develop folds bring regional scale, we just buckled folds developed in the fracture system or near the fault structures created monoclinal there was a steep place. The manifestation of unclear folds (see drawing No. 8).

- ***Characteristics of gold mineralization development:***

Mineralization in the area primarily occurrence of gold mineralization with various formations.

- Gold mineralization developed in the dyke bright color composition is Anbit

- Development of gold mineralization in quartz veins - pyrite with limonite goods

+ Gold mineralization is developed in bright colors dyke system:

This type mineralization developed in a dyke system extending in sub meridian as stated. Dyke component is Anbit weathered white caolanh infiltration into pyrite or pyrite in their small vessels (Photo III - 18).

Photo III - 18: Trace Route A.0012 present northern part of the gold bearing dyke

Analytical results AAS determination of Au in them are shown in Table III - 1 below.

The southern section, we exposed on a long stretch of nearly 700 meters. In this range, dyke developed into two branches, with the system subparallel fault line cut and do not move much. Structure dyke bodies have different occurrence, the edge we have limonite and pyrite layers sheathed with seats mixture injected into formations (Photo III - 19)

Table II - 1: content of Au in the forming dykes

SAMPLES	COORDINATES		CONCENTRATIONS Au (ppm)	NOTES
	X	Y		
R-A.0012/1	772790	1666336	6.03	Dyke
R-A.0012/2			18.71	
R-A.0012/3			14.43	
R-A.0012/4			28.24	
R-A.0015/1	772572	1666492	1.23	Mixed zones with surrounding rocks
R-A.0015/2			0.19	

Photo III – 19 : Body bag pyrite circuit fringe bangs that dyke was mixed infection with surrounding rocks in outcrop SK. 059. Coordinates X - 773.099, Y - 1,664,981

Surrounding the dyke, the results of the analysis of geochemical samples and are essential sa express gold bearing with high rank, such as sediment geochemical samples.

Results showed significant sa small gold particles, bright colors, sometimes with stick limonite. Overall gold crystal edge, we completely close the supply point, in accordance with the results analyzed above AAS as photo illustration III – 20, 21. 22, 23, below.

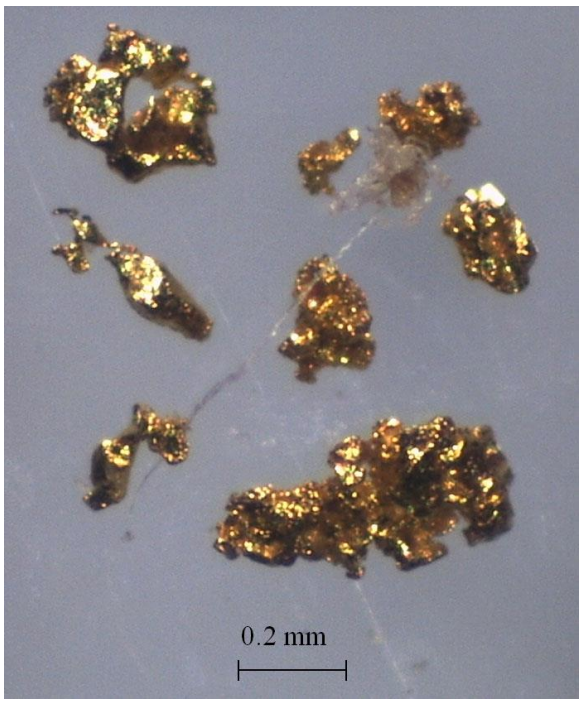


Photo III - 20: The yellow crystal of gold - north dyke section. AH sample. 001
Coordinates X - 772,760.00; Y - 1,666,664.00

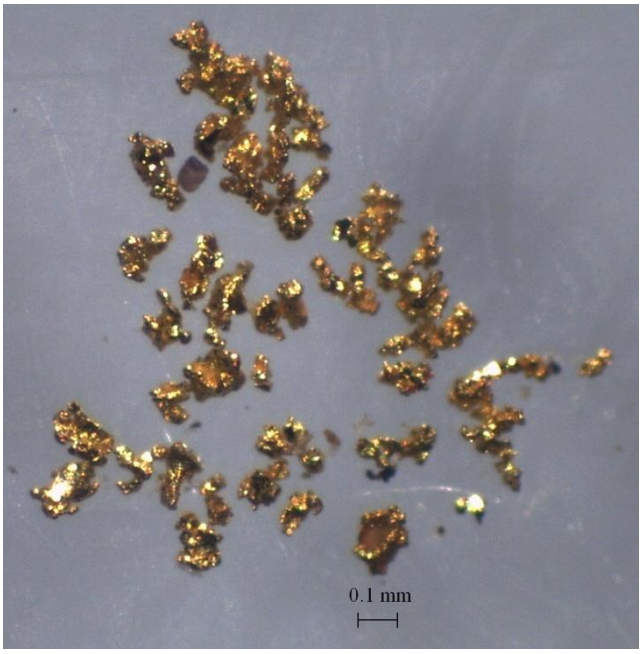


Photo III – 21 : The yellow crystals of gold - north dyke section. Sample AH. 002.
Coordinates X - 772,757.00; Y - 1,666,401.00

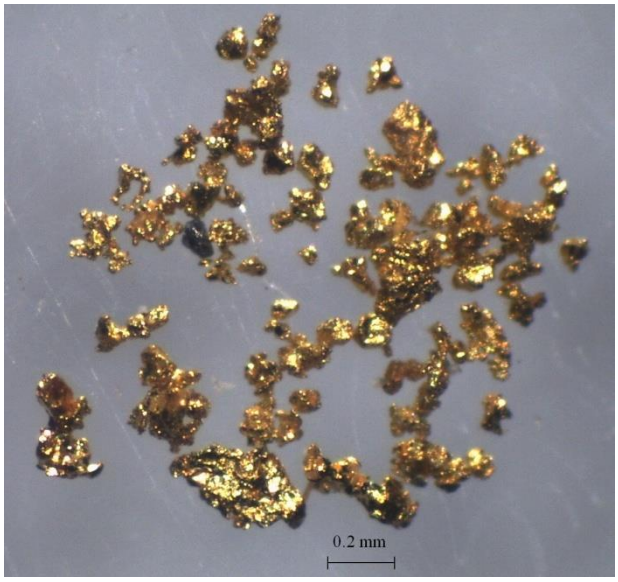


Photo III – 22 : The yellow crystals of gold - north dyke section. Sample AH. 003.
Coordinates X - 772,894.00; Y - 1,666,557.00

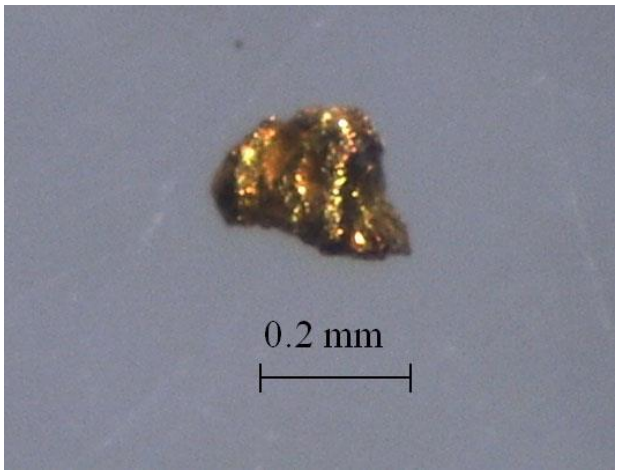


Photo III – 23 : The yellow crystals of gold - the southern part dyke. Sample AH. 007.
Coordinates X - 772,627.00; Y - 1,665,758.00

+ Gold mineralization exists within quartz veins - sulfur:

Gold mineralization of formations distributed in pyrite rich quartz veins to limonite weathered west distributed detailing area southwest of the scope and the quartz veins containing pyrite relative distribution north of the bright colored intrusive dyke above.

Southwest is covered body pyrite rich quartz veins weathered limonite forming part thoroughly high, sometimes as gotit, we constantly adjust with collective blade cut quartz - Sericite. Ore body thickness is quite large, over 20

meters (photo III - 24) and extending the controlled along nearly 900 meters under the north - northeast.

Photo III – 24 : A body of quartz - pyrite weathered into gotit and limonite

VL. SK. 009. Coordinates X - 770.858, Y - 1,665, 972

Results of analysis of the mineral sample trench by AAS method for concentration is shown in Table III - 2 under:

Samples	Au (ppm)	Samples	Au (ppm)	Samples	Au (ppm)
R-A. 1021/1	0.17	R-A. 1021/13	<0.10	R-A. 1021/25	0.10
R-A. 1021/2	0.10	R-A. 1021/14	<0.10	R-A. 1021/26	<0.10
R-A. 1021/3	0.12	R-A. 1021/15	0.10	R-A. 1021/27	<0.10
R-A. 1021/4	0.10	R-A. 1021/16	0.11	R-A. 1021/28	0.10
R-A. 1021/5	0.13	R-A. 1021/17	<0.10	R-A. 1021/29	0.10
R-A. 1021/6	<0.10	R-A. 1021/18	0.10	R-A. 1021/30	0.10
R-A. 1021/7	0.17	R-A. 1021/19	<0.10	R-A. 1021/31	0.11
R-A. 1021/8	0.15	R-A. 1021/20	0.34	R-A. 1021/32	0.10
R-A. 1021/9	0.10	R-A. 1021/21	0.40	R-A. 1021/33	0.13
R-A. 1021/10	<0.10	R-A. 1021/22	0.13	R-A. 1021/34	0.16
R-A. 1021/11	<0.10	R-A. 1021/23	0.10	R-A. 1021/35	0.17
R-A. 1021/12	0.19	R-A. 1021/24	<0.10		

Analysis results showed that gold content is not high, can the weathering process large amounts of gold free zone has moved down below - secondary

enrichment zone. By results of geochemical analysis of samples of sediment flow has reached levels of up to 0.5 space - 0.2 ppm.

Apart from the limonite ore body expression above, to the west of them, there exists a body limonite - quartz tuning with slate surround (VL. A.1023B) 4 meters thick develop in the 340o's composition limonite, gotit red brown. Results analyzed by AAS method for the expression levels higher, finishing at less than 0.5 ppm as Table III - 3 under

Table III - 3: The content of Au in the forming limonite - gotit of outcrop A.1023B

SAMPLES	COORDINATES		CONCENTRATIONS Au (ppm)	NOTES
	X	Y		
R-A.1023B/1	771,310	1,665,631	0.19	Quartz body limonite - goethite
R-A.1023B/2			0.20	
R-A.1023B/3			0.13	
R-A.1023B/4			0.10	
R-A.1023B/5			0.21	

The northern part of the survey area, developed under sub meridian fault, in the northern part of the dyke is the circuit itself quartz - pyrite (poor) exhibit contains gold.

Body quartz - pyrite developed in sub meridian in the clay powder sand formations with organic material width of 0.5 to 1 meter fluctuate, plug rather stand (drawing No. 8). Results analyzed by AAS method for content as a result of RA form. 0006/1 - 0:58 ppm, R - A. 0006/2 - 0:10 ppm.

In addition to the expression of the gold at the outcrop and the dyke, in this context, under the collective quartz plates - sericte thin bedded, contains quartz chips nhot low sulfur content, analytical results showed that jaw joint Au amount higher than the other formations in the area. However, the results obtained show that these are occurrence of gold mineralization.

b) Expression of gold mineralization in the area of Vang Off Kang::

Expression of gold mineralization within the surveyed Vang Tắt Kang detailed 1 / 10,000 in an area of 13 km^2(Drawing N^o 14, 17), are limited in geographic coordinates (UTM Zone 48 coordinates, longitude 105o Indianthailand axial zone 6^o projector):

POINTS	COORDINATES		AREAS (km^2)
	X	Y	
I	758,000.00	1,667,000.00	13
II	760,000.00	1,667,000.00	
III	760,000.00	1,662,000.00	
IV	757,000.00	1,662,000.00	
V	757,000.00	1,665,000.00	
VI	758,000.00	1,665,000.00	

- ***Geological Structure of Vang Tắt Kang:***

The metamorphic sedimentary formations:

Off Peak area Kang mostly metamorphosed sedimentary rocks Cambrian age - Ocdovic with lithological characteristics are as follows:

+ The low is the conglomerate set quartz cement clay - Sericite layered thick bright colors to gray under their own distribution west of the area, constitute collective marks have lying monoclinal.

+ Move up to the top is thin bedded quartzite files sen sandwiched in layers of quartz plates - Sericite.

Owned by quartz plates - Sericite sometimes with lenses thick black limestone approximately 5-10 meters sandwiched in them.

Mafic - intermediate intrusive formations:

To make this possible in the form of rolling out small distribution area west of detailed investigation.

Gray stone, formed mostly Dolerite. On a general geological map, they are arguably among Permian age.

The Quaternary unconsolidated sediments:

hese formations are primarily derived alluvial and alu - proluvi, eluvial formations and distribution deluvial not much.

They are the cornerstone of quartz, quartz gravel, shale distribution in the higher shelf (I, II) and high mudflats along the main flow. The top section has classes silty clay containing less organic matter.

Characteristics of fault and fold:

The fault within any actual observations showed that there are two main systems are:

+ System phoenix a fault meridian stretching south pollination Vang Vang range Off Off on Kang and continued north. Along this main fault is the valley of the hydrological system in the region.

+ System fault west northwest - south southeast fault system was younger, we cut and shifts the fault system á meridian above and shifts the collective mark the hotel pebble floor space (the lottery 17). This fault system is established on the basis of monitoring the distribution of the final episode in the stratigraphic Cambrian Hotel - Ocdovic.

In general structure boat average, shows the entire area is considered as a single structure ngheng east plugged with lithostratigraphic orderly transition with several of the stone,

+ The height of the structure is the fine - grained rock is transformed into quartz plates - sericite

+ The lower back is the collective creation of coarse grained pebble floor space convenient.

- ***Characteristics of gold mineralization development:***

Off in the domain Vang Kang, expression of gold mineralization have better developmental characteristics of hydrothermal mineralization. In this placer formations with the scope expanded valleys and streams flowing over the steps are wide range Off Kang Vang center and is a closed valley downstream so favorable deposited for the placers, including placer gold.

Material mainly large base of quartz under hydrothermal circuit, along with the raw materials of the continent destroyed surrounding rocks. High grinding of materials no larger, longer angular quartz foundation. Thickness of large shelves are factors shows the potential of placer in them.

Belonging to this range, placer prospect is mainly distributed in the east and southeast - where the terrain large accumulation.

In the results of the form deals a flowing sa significant and suggests steps placer gold grains are generally angular shape, they are transported far less than the supply.

Gold particles are smaller, ranging from 0.1 mm to 0.4 - 0.5 mm Bright yellow color, sometimes clinging particles of quartz and limonite filling in with them. Synthesis of gold sa major form of the branch stream shows gold particles quite edgy and diverse in morphology, size as the illustrations below

+ Features section placer gold particles streams branching off Kang Vang scope: (Photo III - 25,26,27,28,29,30,31,32)

On the illustrations for placer formation of clear streams upstream tributaries gold particles morphological diversity from clumping, to form droplets and twigs are angular, they are provided close to where deposited.

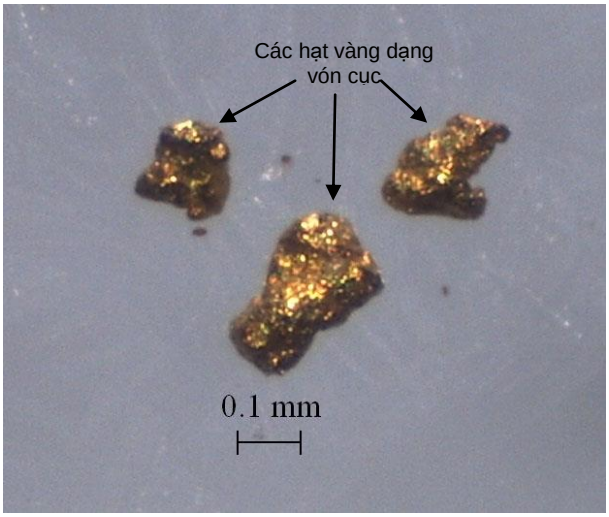


Photo III – 25 : The gold particles with lumps form under the stream inthe west upstream of Vang Tắt Kang tributaries. Sample TS.03
Coordinates: X - 758,284.00, Y - 1,666,426.00

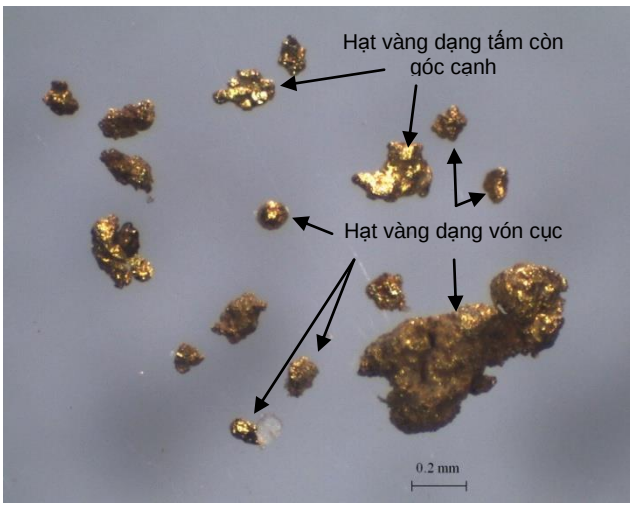
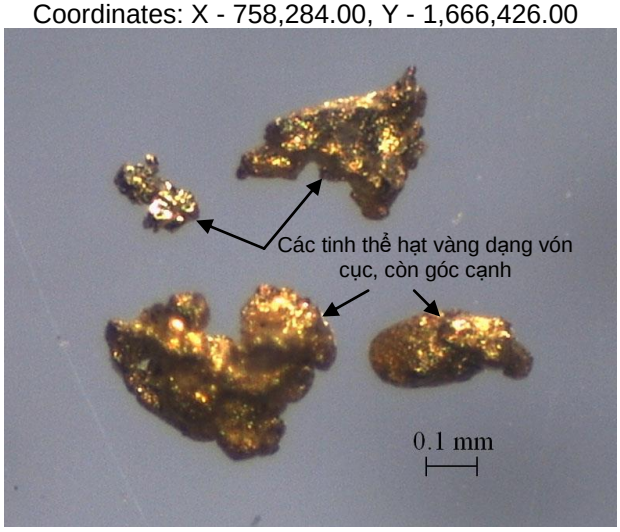
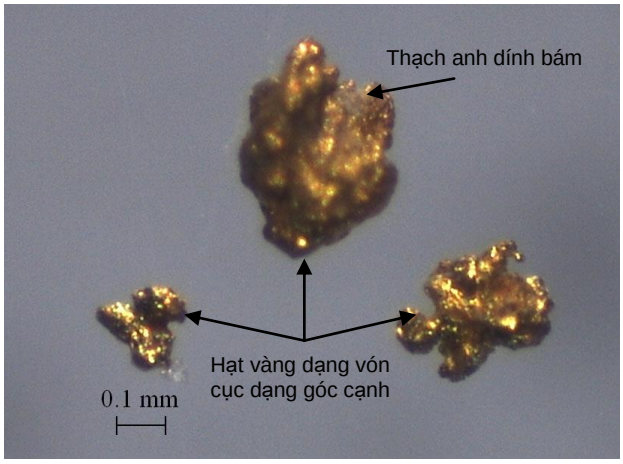


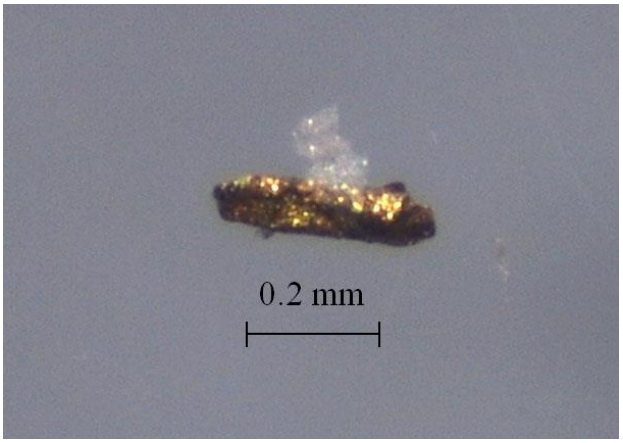
Photo III – 26 : The gold particles with lumps form under the stream inthe south upstream of Vang Tắt Kang tributaries. SampleTS.10
Coordinates: X - 759,070.00, Y - 1,662,384.00



Ảnh III – 27 : The gold particles with with lumps form under the stream inthe south upstream of Vang Tắt Kang tributaries. Sample TS. 11.
Coordinates: 759,340.00, Y - 1,662,330.00



Ảnh III – 28 : The gold particles with lumps form under the stream inthe south upstream of Vang Tắt Kang tributaries. SampleTS. 12
Coordinates: 759,687.00, Y - 1,662,212.00



PhotoIII – 29 : The gold particles with lumps form under the stream inthe south upstream of Vang Tắt Kang tributaries. SampleTS. 40
Coordinates: 757,178.00, Y - 1,664,184.00

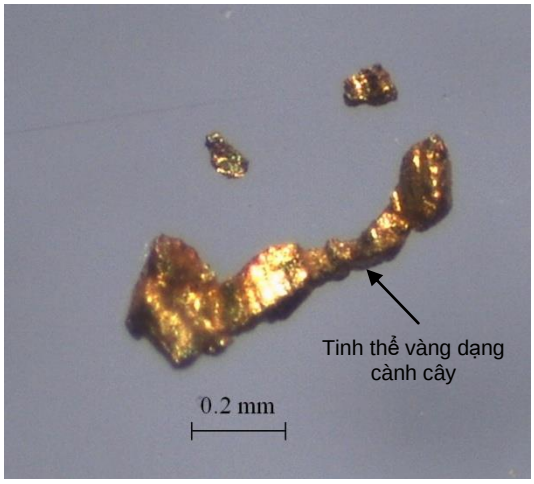
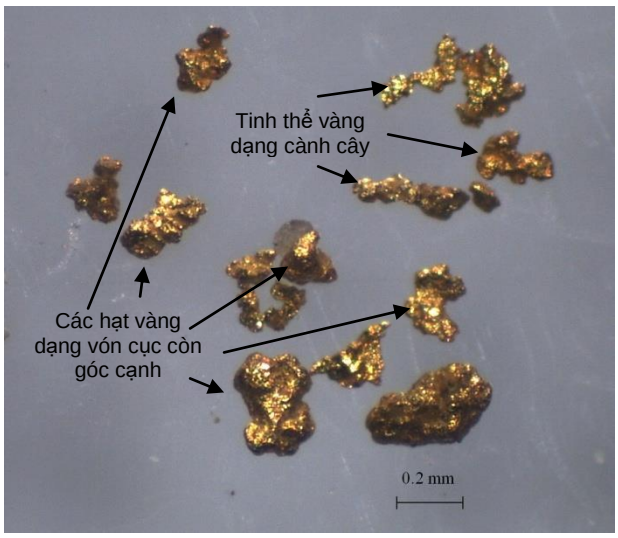


Photo III – 30 : The gold particles with lumps form under the stream inthe south upstream of Vang Tắt Kang tributaries. SampleTS.42
CoordinatesX - 757,043.00, Y - 1,664,811.00



PhotoIII – 31 : The gold particles with lumps form under the stream inthe west upstream of Vang Tắt Kang tributaries. SampleTS. 37.
Coordinates: 757,151.00, Y - 1,662,836.00

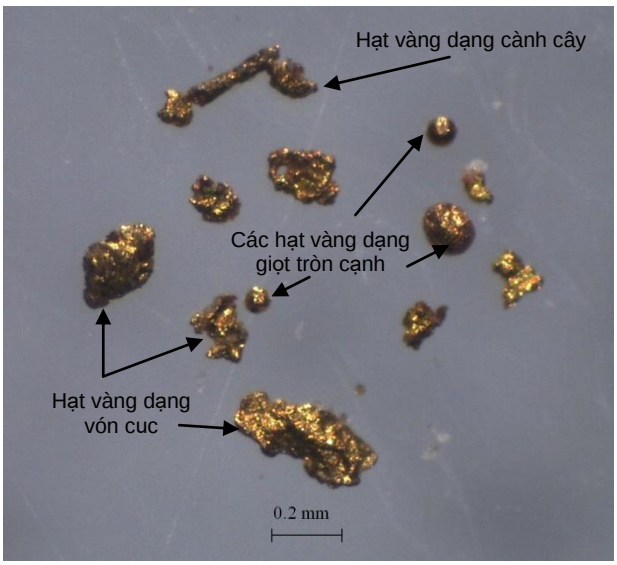
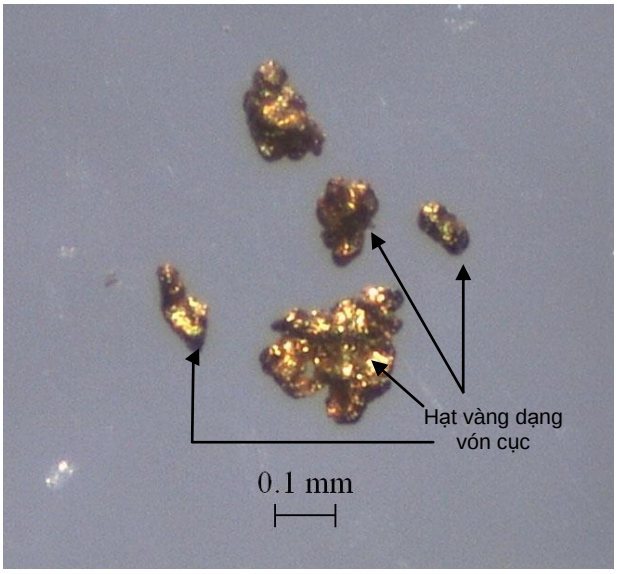


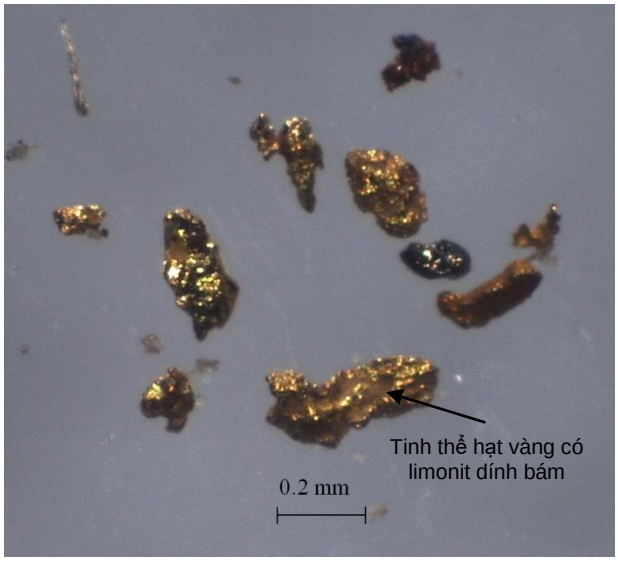
Photo III – 32 : The gold particles with lumps form under the stream inthe center upstream of Vang Tắt Kang tributaries. SampleTS.34
Coordinates: X - 758,363.00, Y - 1,663,900.00

+ Features gold particles attached to the main valley and shelves:

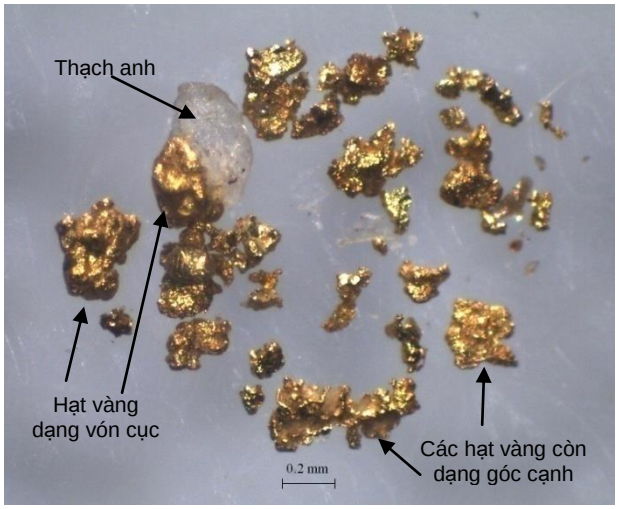
Like with placer gold particles in the small valley. During the shelf and alu-proluvi formations of the mainstream, the gold particles are provided from the stream above still retain their shape, showing no road transport as far as the illustrations below (image III - 33, 34, 35, 36)



PhotoIII – 33 : The placer gold particles belong to the Vang Tắt Kang main valley in lots form. Samples TS. 02.
Coordinates X - 758,562.00, Y - 1,665,846.00



PhotoIII – 34 : The placer gold particles belong to the Vang Tắt Kang main valley in sharp form. SamplesBH. 002.
Coordinates X - 757,490.00, Y - 1,662,895.00



PhotoIII – 35 : The gold particles with lumps form under the downstream in Vang Tắt Kang, sharp quartz
Sample BH. 005.
Coordinates X - 757,098.00, Y - 1,662,979.00

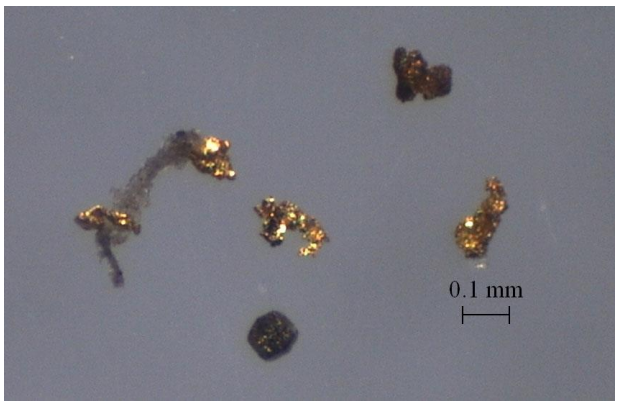


Photo III – 36 : The gold particles near Vang Tắt Kang. Sample TS.30
Coordinates: X - 758,368.00, Y - 1,664,583.00

+ Features of original gold mineralization:

In Vang Off scope Beijing, have discovered a number of expressions containing primary gold mineralization, which are sulfur-containing quartz veins of limonite have weathered gold panned samples gave results fairly rich gold particles, however AAS analysis course content confirmed the presence of gold in them.

From the range north to the south has established the position of the following expression

- Expression mineralization in quartz plates set - Sericite great thickness, they are regular tropical quartz tuning circuits with surrounding rocks, the thickness generally ranged from 3 to 6 meters we follow the main development of á meridian rupture and plug poured on eastern slope angles ranging from 50 to 70o, 80o particularly there is space. The results of analysis of samples of the retirement incentives and AAS ore route point is shown in Table III - 4 below.

Table II - 4: The results of analysis of gold content in the outcrop of Vang Tắt Kang.

SAMPLES	COORDINATES		CONCENTRATIONS Au (ppm)	NUMBERS OF GOLD GRAIN IN PAN SAMPLE	NOTES
	X	Y			
A.024	758,796.00	1,666,967.00	0.23	1 hạt	VL.A- 023
A.020/1	758,679.00	1,666,871.00	0.40	56 hạt	VL. A - 020
A.020/2			0.15		
A.020/4			0.17		
A.007/3	758,613.00	1,665,982.00	0.19	5 hạt	
A.007/5			0.15		VL. A-007
A.400/1-1	758,772.00	1,665,125.00	0.29	1 hạt	VL. A – 400/1
A.400/1-2			0.27		
A.400/1-3			0.15		

A.400/1-4			0.17		
A.231/1	757,221.00	1,664,157.00	0.12		VL. A-231
A.231/2			0.10		
A.231/3			0.11		
A.231/5			0.11		
A.231/6			0.10		
A.039/1	758,422.00	1,662,924.00	0.11	2 hạt	VL. A-039
A.039/2			0.12		
A.039/3			0.10		
A.051/1	758,171.00	1,662,025.00	0.23		VL. A-051
A.051/2			0.12		
A.051/3			0.13		
A.051/4			0.15		

- *Characteristics of the gold particles panned samples:*

The gold particles within panned samples gave Vang Tắt Kang we are granules, similar to the gold particles sa matter of form. Results indicate single gold mineralization has bright colors as the picture below illustrates (Photo III - 37, 38)

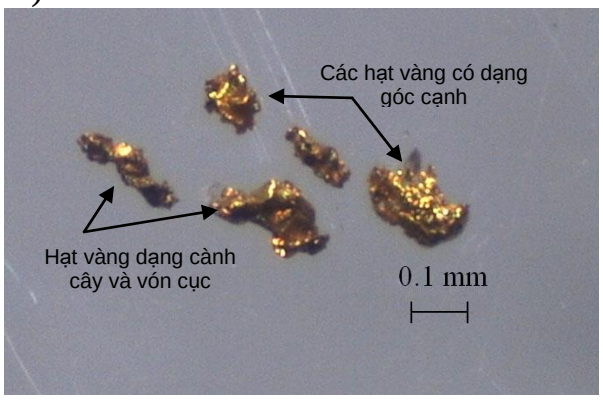


Photo III – 37 : The gold particles in pan
Sample : A. 050.
Coordinates: X – 759,768.00, Y – 1,662,650.00

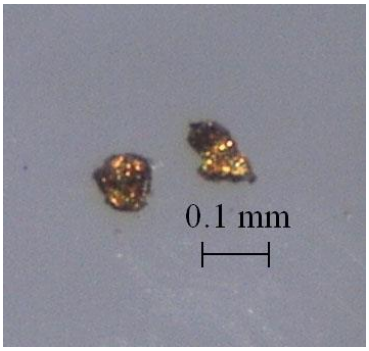


Photo III – 38 : The gold particles in lots form .
Sample : A. 103
Coordinates: X - 758,317.00, Y – 1,663,157.00

Thus, the general definition shows under Vang Tắt Kang with the primary gold mineralization expression, obviously, they are controlled by a system fault generally related to Asian meridian and the mineralized zone closely linked with the quartz schist zone - sericite microchip containing quartz - sulfide.

The original seed in panned samples gave gold and placer formations in this range, very similar, suggesting supplies placer very close to the mineralized zone.

II – OTHER MINERAL OCCURRENCE:

On the results of joint investigations entire 199.1 km^2 licensed area, the figures showed that in addition to the objects associated with gold mineralization as Mo, Bi, Sb, Hg, Pd, Pb, Zn, Cu in geochemical sediment samples.

On the figures have shown the presence of Sn, W just updated by geochemical data related to tropical local greisen (see drawing No. 4 – 3, 13 – 3; 12 - 3). In this, there are mutant form position with a high content of Sn, W, as shown in Table III - 5.

Table III - 5: Anomaly of Sn content in the geochemical samples

Sample	X (m)	Y (m)	Concentration Sn (ppm)	Notes
BD.211	777578	1678597	15	Northern Area
BD.66	757115	1661806	32	Vang Tắt Kang area
BD.72	756184	1663462	33	
BD.68	758306	1662266	34	
BD.70	756271	1662210	37	
BD.67	757859	1662042	40	
BD.63	758323	1665100	42	
BD.62	759260	1665121	49	
BD.71	756110	1662215	49	
BD.64	757040	1662677	49	
BD.65	757459	1661730	53	
BD.61	759132	1665160	54	

Sang Vang under Off, the expression of elemental tin in the form mentioned above, there have sometimes appeared in the presence of caxiterit with poor expression, can they relate to the formation of acid intrusive hydrothermal Highway not?.

The only expression of tungsten in the form of the analysis of geochemical samples and their main focus of the first area 166.6 km^2, particularly at locations with bright colored dyke expression is shown in the table III - 6:

Table III - 6: Anomaly of W content in the geochemical samples

Samples	X (m)	Y (m)	W Concentration (ppm)	Notes
BD.001	772572	1665518	5.88	166,6 km^2 area
BD.105	779312	1668097	5.91	
BD.002	772893	1666690	7.78	

In addition to the above expression, there should be the expression of Ni, Cr, Co, at the local level as a high content of tables III - 7, 8, 9 under:

Table III - 7: Anomaly of Ni content in the geochemical samples

Samples	X (m)	Y (m)	ConcentrationNi (ppm)	Notes
BD.01	758450	1665255	74	Vang Tắt Kang area
BD.02	758324	1666426	103	
BD.03	758521	1666561	90	
BD.06	758778	1662660	87	
BD.08	759716	1662519	100	
BD.32	758317	1663874	77	
BD.62	759260	1665121	408	
BD.64	757040	1662677	256	
BD.65	757459	1661730	307	
BD.66	757115	1661806	296	
BD.036	773083	1666270	120	166.6 km^2 area

Table III - 8: Anomaly of Cr content in the geochemical samples

Samples	X (m)	Y (m)	ConcentrationCr (ppm)	Notes
BD.09	758111	1662085	128.01	Vang Tắt Kang area
BD.41	756601	1665646	134.56	
BD.02	758324	1666426	135.35	
BD.64	757040	1662677	431.72	
BD.65	757459	1661730	457.57	
BD.66	757115	1661806	479.62	
BD.62	759260	1665121	574.05	
BD.035	771577	1666105	132.53	166,6 km^2 area
BD.210	777845	1678608	146.76	
BD.007	777441	1666124	170.10	
BD.211	777578	1678597	183.09	
BD.036	773083	1666270	202.24	

Table III - 8: Anomaly of Co content in the geochemical samples

Samples	X (m)	Y (m)	Co concentration (ppm)	Notes
BD.109	774636	1673553	24.00	166,6 km^2 area
BD.101	779583	1671275	26.82	
BD.113	776048	1682355	26.95	
BD.64	757040	1662677	30.32	Vang Tắt Kang area
BD.66	757115	1661806	35.41	
BD.65	757459	1661730	37.63	

In summary, over 199.1 km^2 area in northeast scope Noong Key Ục and Vang Tắt Kang, based on the results of the geochemical analysis and mineral occurrence, the gold existence areclearly main occurrence, other accompanied minerals are only in the mirrored expression