APPENDIX A

HISTOGRAM, FREQUENCY CURVE, CUMULATIVE FREQUENCY CURVE AND INTERPRETATIVE TABLES

The appendix A correlates to the Chapter 4. They comprise 15 sets of 15 locations. Each set composes of the figures of histograms and frequency curves, the cumulative curves and descriptive tables.

Location 1 Ban Phu Din Pattana (sample nos. 1-2) and Location 2 Ban Nontoom - Taworn (sample nos. 3 - 5)

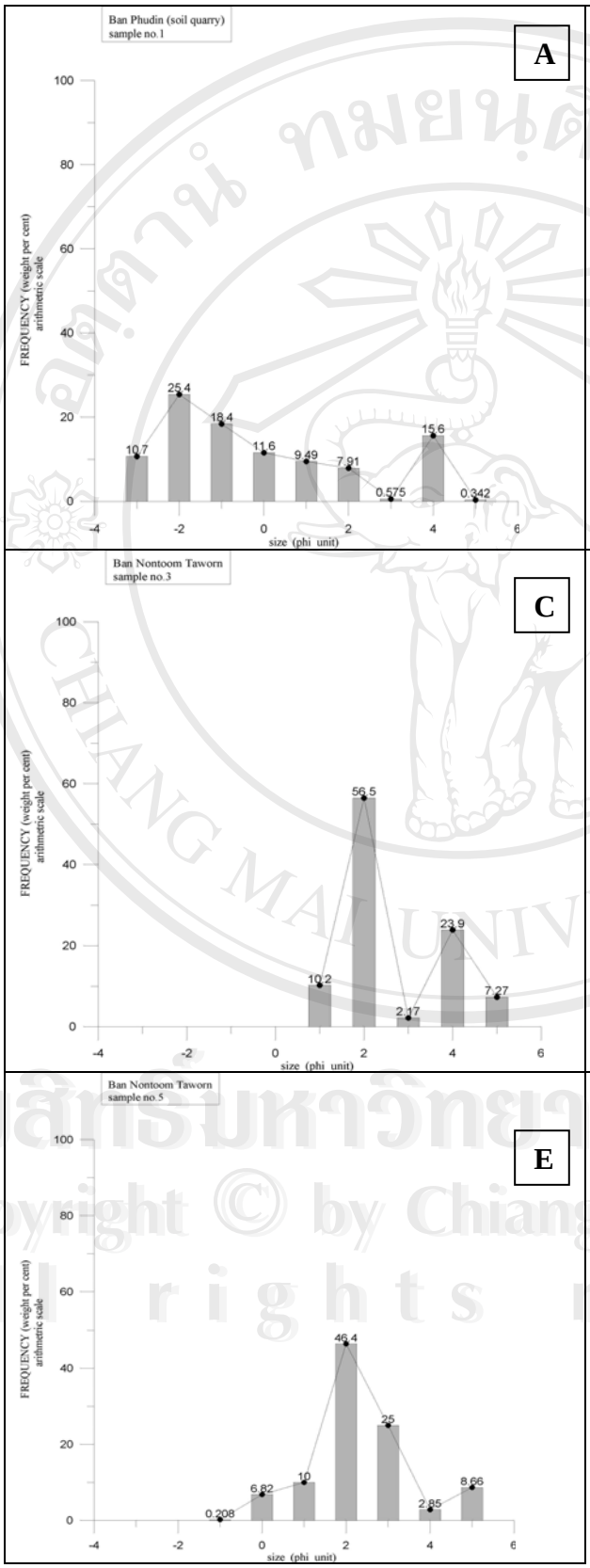


Figure 1A The histograms and the frequency curves of (A) sample no.1, (B) sample no. 2, (C) sample no. 3, (D) sample no. 4, and (E) sample no. 5.

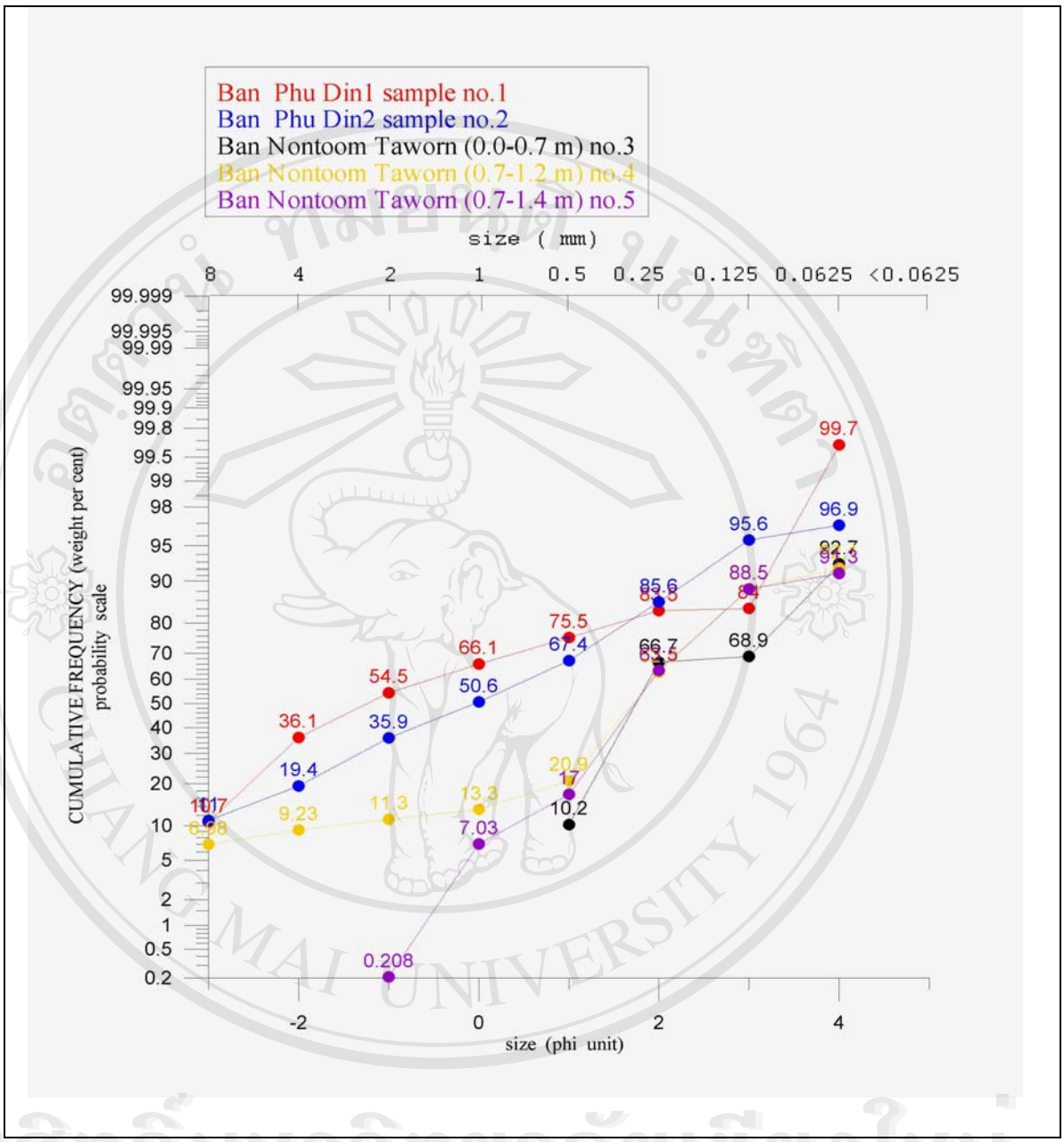


Figure 1B The cumulative frequency curves of sample nos. 1 – 5.

Table 1 The Histograms, Frequency and Cumulative curves of the samples of location 1 -2 (sample nos. 1 – 5) (Figure 1).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
1	The histogram is the graphic representation of frequency distribution data. The line which joins from point of each peak of the bars is frequency curve, which is used for interpreting the tendency of whether normal distribution or not and characteristic of the samples. The histograms and the frequency curved were illustrated in the Figure 4.3A.	The curves of sample no.1 and no.2 are concordance. Both of them reveal gentle slopes comparing to the standard slope (the 45 ° line). It reflects the poorly sorted sediments Comparing to the plot of Vishes (1989) (Figure 4.4), the curves reflect their sediments deposited by rolling, sliding , and some parts by suspension.	Very coarse sand	Very poory sorted	Very negative phi values, coarse	Platy-kurtic
2	The sample no. 2 comprise the gravel to fine sand (size – 4 to 3 ∅) being the major mode meanwhile the fine sand to silt (3-5 ∅) being the minor mode.		Very coarse sand	Very poorly sorted	Very negative phi value, coarse	Meso - kurtic.
3	The sample No. 3 exhibits the particle size since 0-5 ∅ (very coarse sand-silt). The asymmetry-frequency curve show that they are composed of 2 subpopulations, which were presumed those had been derived from the different parent deposits.	The curve of sample no.3 reveal composing of fine particles. It reflects rather well sorted. The curve is implied the sediments deposited by saltation.	Fine sand	Poorly sorted	Very nega - tive	Platy - kurtic.

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 1 The Histograms, Frequency and Cumulative curves of the samples of location 1 -2 (sample nos. 1 – 5) (Figure 1) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
4	The sediments are composed of fine pebble to very coarse silt. It is dominant as fine sand. The curve skews to finer particles, rather leptokurtic and shows one mode reflecting 1 source.	The samples no.4 and no.5 are derived from the same bed but slightly different at the first segment of sample no. 4. The curve of sample no. 4 reflects very poorly sorted. The sediments are deposited by rolling, sliding, saltation and suspension. The curve of sample no. 5 reflects poorly sorted. The sediments are deposited by saltation and suspension.	Medium sand	Very poorly sorted	Positive phi values	Lepto-kurtic.
5	The sediments are composed of very coarse sand to very coarse silt. It is dominant as fine sand. The curve skews to finer particles, leptokurtic and shows one mode reflecting 1 source.		Medium sand size	Poorly sorted	Negative phi values	Very lepto-kurtic.

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 3 Wang Yai waterfall, Ban Lalai Noi (sample nos. 6 - 7) Location 4 and Location 5 Huai Ka Yung floodplain, Ban Lalai Noi (sample nos. 8-9 and sample nos. 10 – 11)

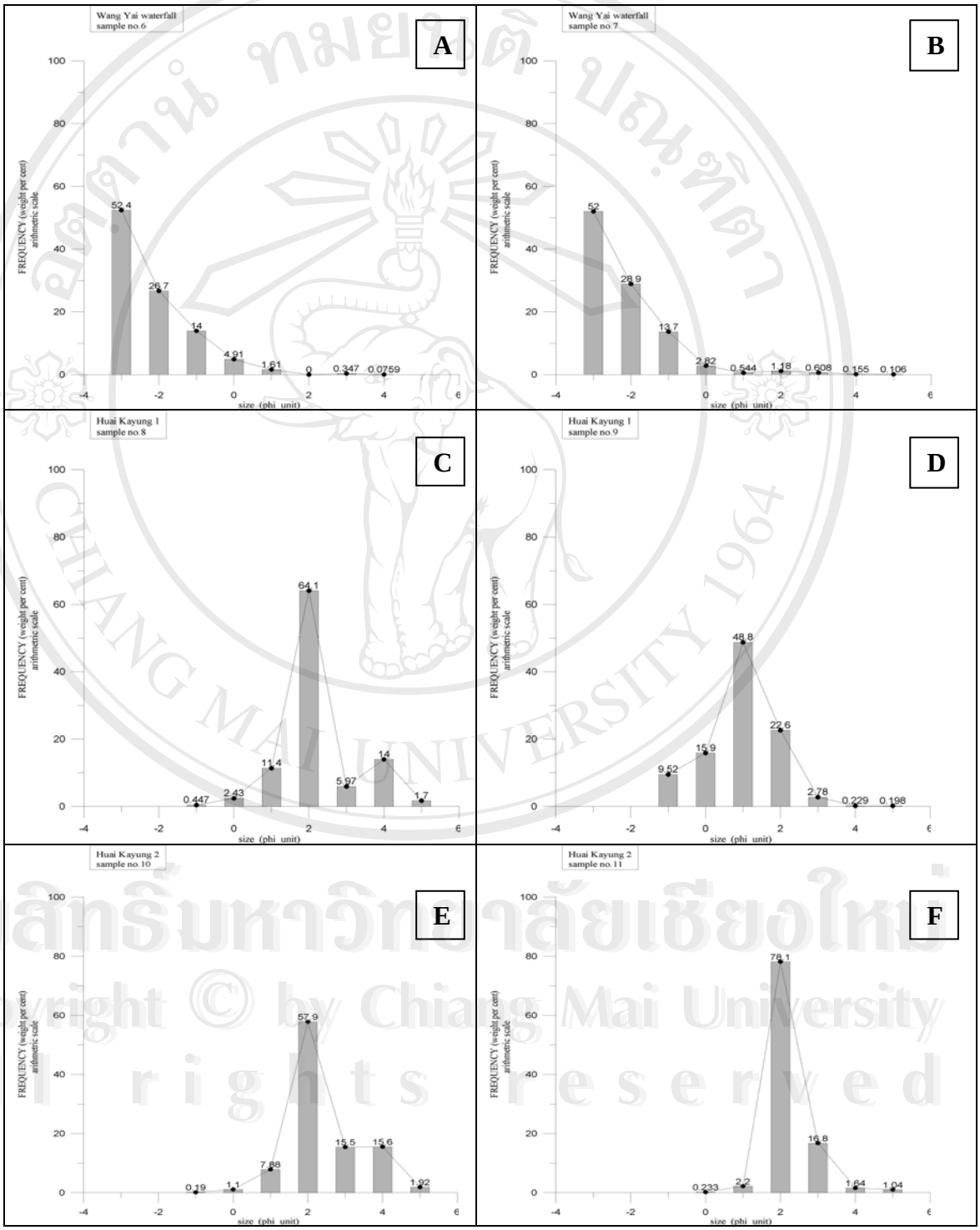


Figure 2A The histograms and the frequency curves of (A) sample no. 6, (B) sample no. 7, (C) sample no. 8, (D) sample no. 9, (E) sample no. 10 and (F) sample no. 11.

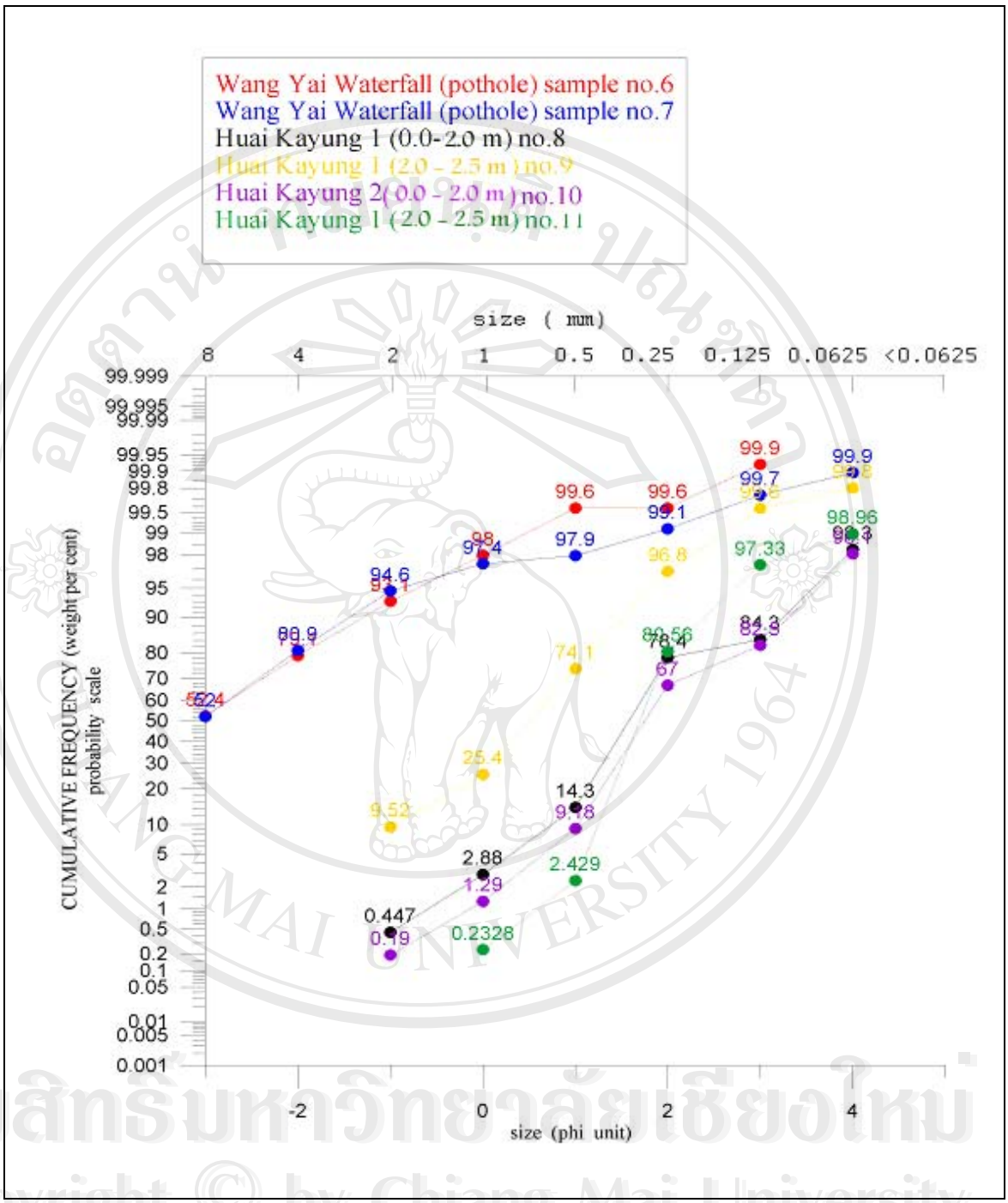


Figure 2B The cumulative frequency curves of sample nos. 6 – 11.

Table 2A The Histograms, Frequency and Cumulative curves of the samples of location 3 (sample nos. 6 – 7) (Figure 2).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
6	The histogram and the frequency curve of the sample no.6 and no.7 have almost the same pattern. Most of particles are pebble to coarse sand, minor in very less amount of medium to very fine sand. Not normal distribution, but the frequency curves of the samples illustrate one mode of the particles. It may hypothesize that the sediments, concluding the gemstones discovered in the potholes, had derived from one source, and the minor of particles which is smaller size than the very fine sand grain, is removed out greatly. The frequency curve still shows the leptokurtic characteristic indicating well sorting.	Both of the curves are concordance. They are rather smooth. However, the curve of sample no.6 is slightly different that the coarse sand - very fine sand has a little more than of sample no. 7. Their gentle slopes indicate the deposition by rolling and sliding.	Gravel size	Poorly sorted	Negative phi values	Meso - kurtic
7			Gravel size	Poorly sorted	Symme -trical phi values	Meso - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 2B The Histograms, Frequency and Cumulative curves of the samples of location 4(sample no. 8 – 9) and location 5 (sample no. 10 – 11) (Figure 2)

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
8	The histogram of sample nos.8 and 10 which both of them from the bank have the similar histograms. They are composed of 2 modes, the medium sand size and the very fine sand size are dominant. Totally, the curves have tendency to the negative skewness (finer sizes), showing low energy deposition 2 modes of the histogram and frequency curve reflecting 2 sources. It is hypothesized the sources of the particles are derived both from the running - water, and sheet washing from the decayed surface of higher hard rocks.The sample nos.9 and no.11 from channel deposits are slightly different. The curves are almost normal distribution, showing one mode implying one source.	The samples can be separated following the similarlity of locations: the sample no. 8 and sample no.10 are also the banks of the stream whereas the samples no. 9 and no. 11 are also in – channel sediments. The curves of sample no.8 and no.10 are accordant. Each of them reveals 2 breaks. First segment is almost moderately sorted. The sediments are deposited by rolling and sliding. The second segment shows gentle slope, reflecting well sorted. The sediments are deposit by rolling and sliding. The third segment reflects poorly sorted. The sediments are deposited by suspension. The samples no. 9 and no.11 exhibit normal distribution. The curve of sample no. 9 reflects rather	Medium sand	Poor sorting	Strongly positive, coarse	Very lepto - kurtic
9			Coarse sand	Poor sorting	Symme -trical	Lepto -kurtic
10			Medium sand	Poor sorting	Negative phi values, coarse	Lepto - kurtic
11			Medium sand	Moder -ately well sorting	Negative phi values, coarse	Very lepto - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 2B The Histograms, Frequency and Cumulative curves of the samples of location 4(sample nos. 8 – 9) and location 5 (sample nos. 10 – 11) (Figure 2) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
11 (cont.)	Although they have tendency to be the finer particles the samples have mixing of the gravel to coarse sand dominantly, even though the sample no.9 reveals coarse sand size dominantly and the sample no.11 reveals medium sand size dominantly. In comparison, the location of the sample no.8 and no.9 should have high energy than of the sample nos.10 and no.11 during deposition because the coarser paticles are more quantity here	poor sorted whereas of sample no.11 skews to well sorted. The sample no. 9 has some very fine pebble in the composition but not in sample no. 11. It is possible that the location of sample no.9 has higher energy during deposition. In conclusion, their sediments are deposited mostly by saltation and suspension.				

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 6 Ban Khok Charoen (sample nos. 12 – 14)

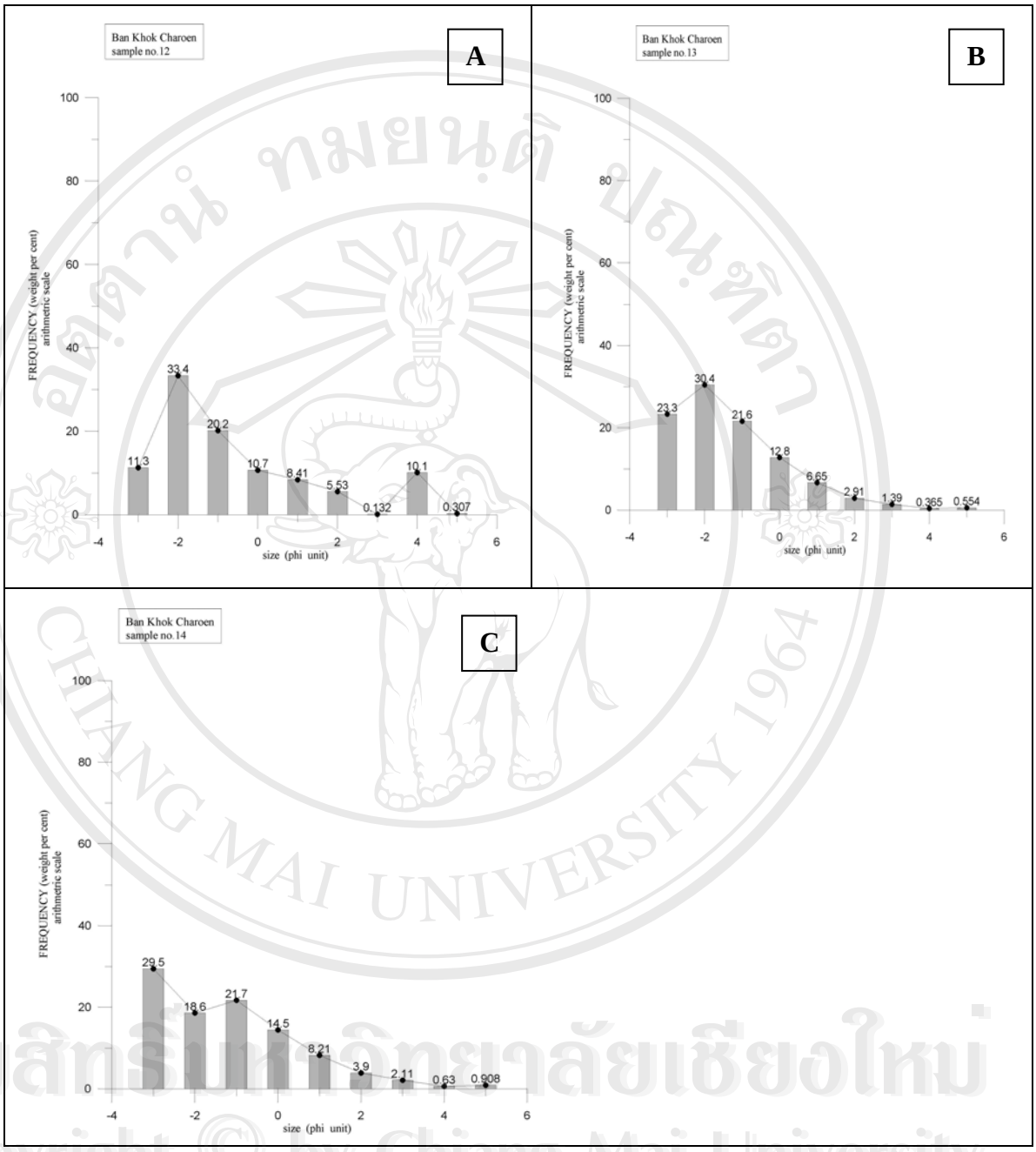


Figure 3A The histograms and the frequency curves of (A) sample no. 12,. (B) sample no. 13 and (C) sample no. 14.

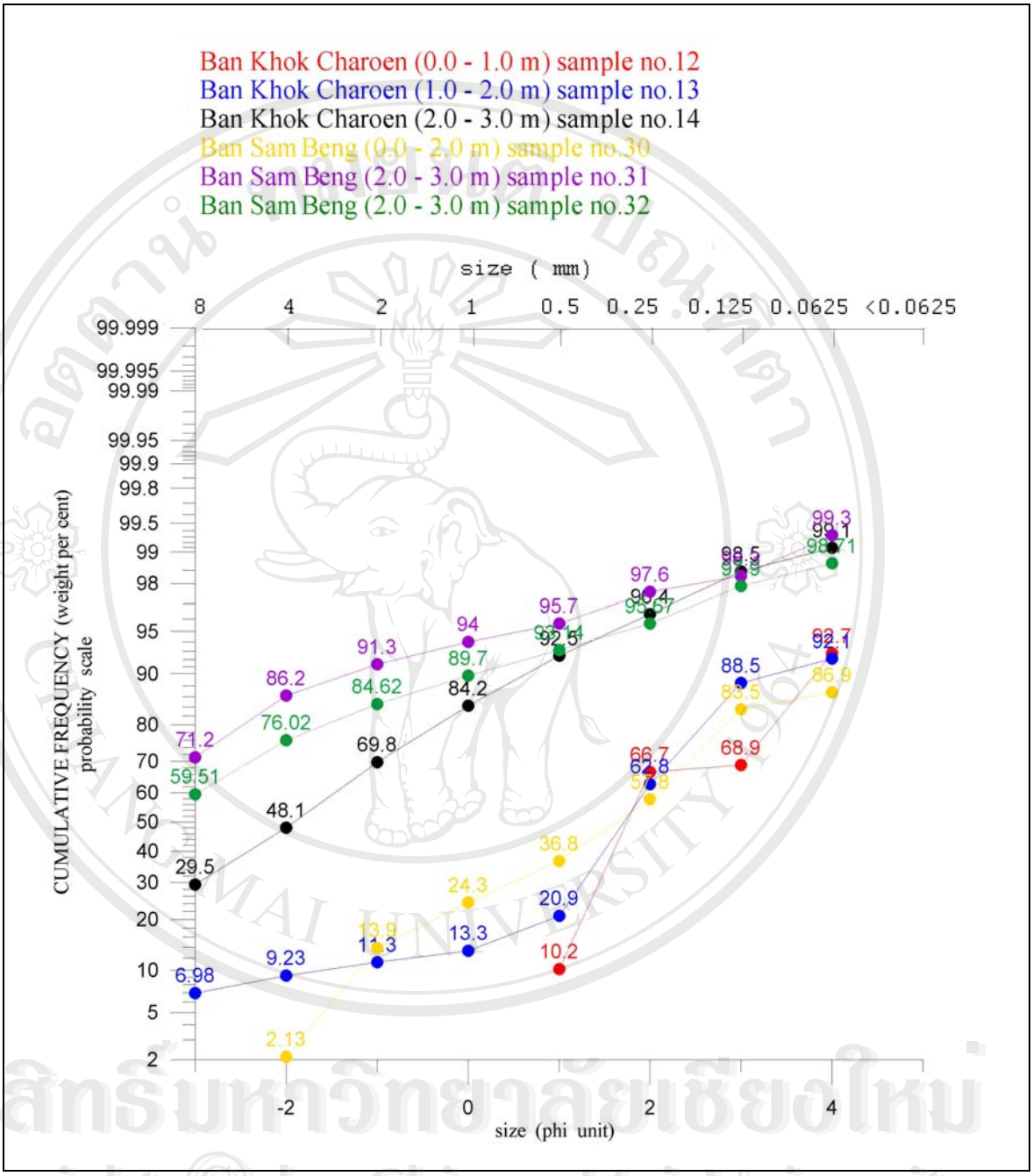


Figure 3B The cumulative frequency curves of sample nos. 12 – 14 and sample nos. 30 - 32 which are the similar deposits. They are plotted for comparison.

Table 3 The Histograms, Frequency and Cumulative curves of the samples of location 6 (sample nos. 12 – 14) (Figure 3).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
12	The curve of sample no.12 shows 2 modes of the particles. The peaks occur at granule size mainly and very fine sand size minority whereas the sample no.13 shows only one mode which peaks at granule size. It is hypothesized that the sediments of the sample no.12 were derived from 2 sources, own residual-basaltic soil and the flood plain deposit or sheet washing whereas the deeper sediments of sample no.13 is derived from only own residual-basaltic soil. The particles of sample no.14 has tendency to have 2 modes which peak at pebble size and granule size but not different much in percentile and the curve skew to coarser grain. On the other hand the amount of gravel to coarse sand is more than the amount of smaller particles. It can explain that the coarse particles come from the own broken rocks.	The samples no. 12 - 14 came from the section of a basaltic outcrop. The curves of them show some different parts. The dominant case is the distribution of sizes. The sample no. 12 has the member from medium sand – very fine sand. The curve reveals poor sorted. The depositional mechanism cannot be stated decisively. Most of particles should come from in – situ weathering. The sample no.13 consists of the coarse to fine particle. The curve reflects poor sorting. Most of particles should come from in – situ weathering. The curve of sample no. 14 cluster in same position of comparing samples no. 31 – 32 which are basaltic soil. Most of sample no.14 is the coarse particles. The sizes of them are increasing upon the depths	Medium sand	Poor sorting	Very negative phi values, coarse	Meso - kurtic
13			Medium sand	Poor sorting	Negative phi values	Meso - kurtic
14			Medium sand	Poor sorting	Sym – metrical	Meso - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation

(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 7 Huai Dan Ai floodplain, Ban Lalai (sample nos. 15 – 18) and Location 8 Spillway of Huai Dan Ai Reservoir, Ban Lalai (sample nos. 19 - 21)

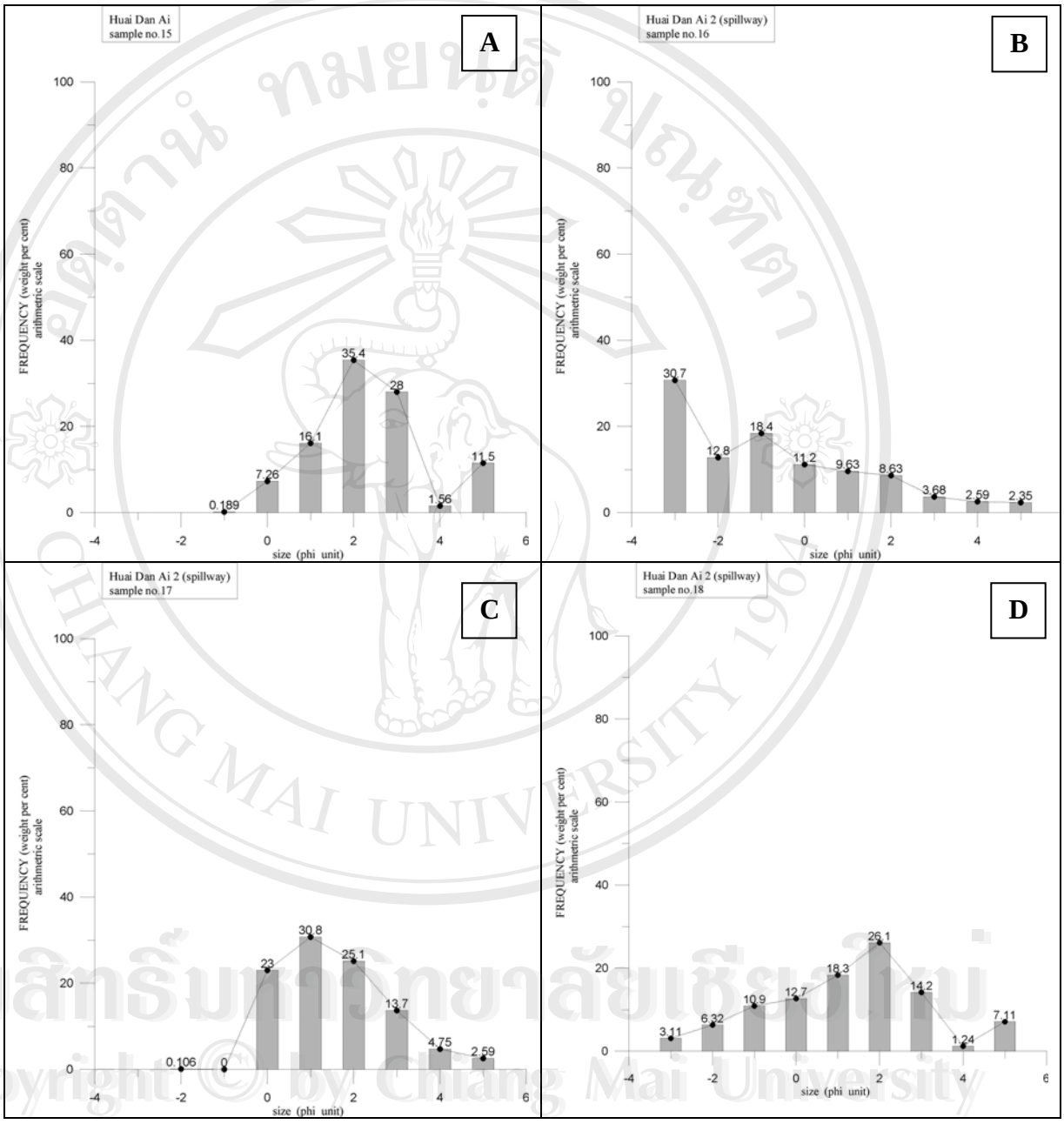


Figure 4A The histograms and the frequency curves of (A) sample no.15, (B) sample no. 16, (C) sample no. 17, and (D) sample no.18.

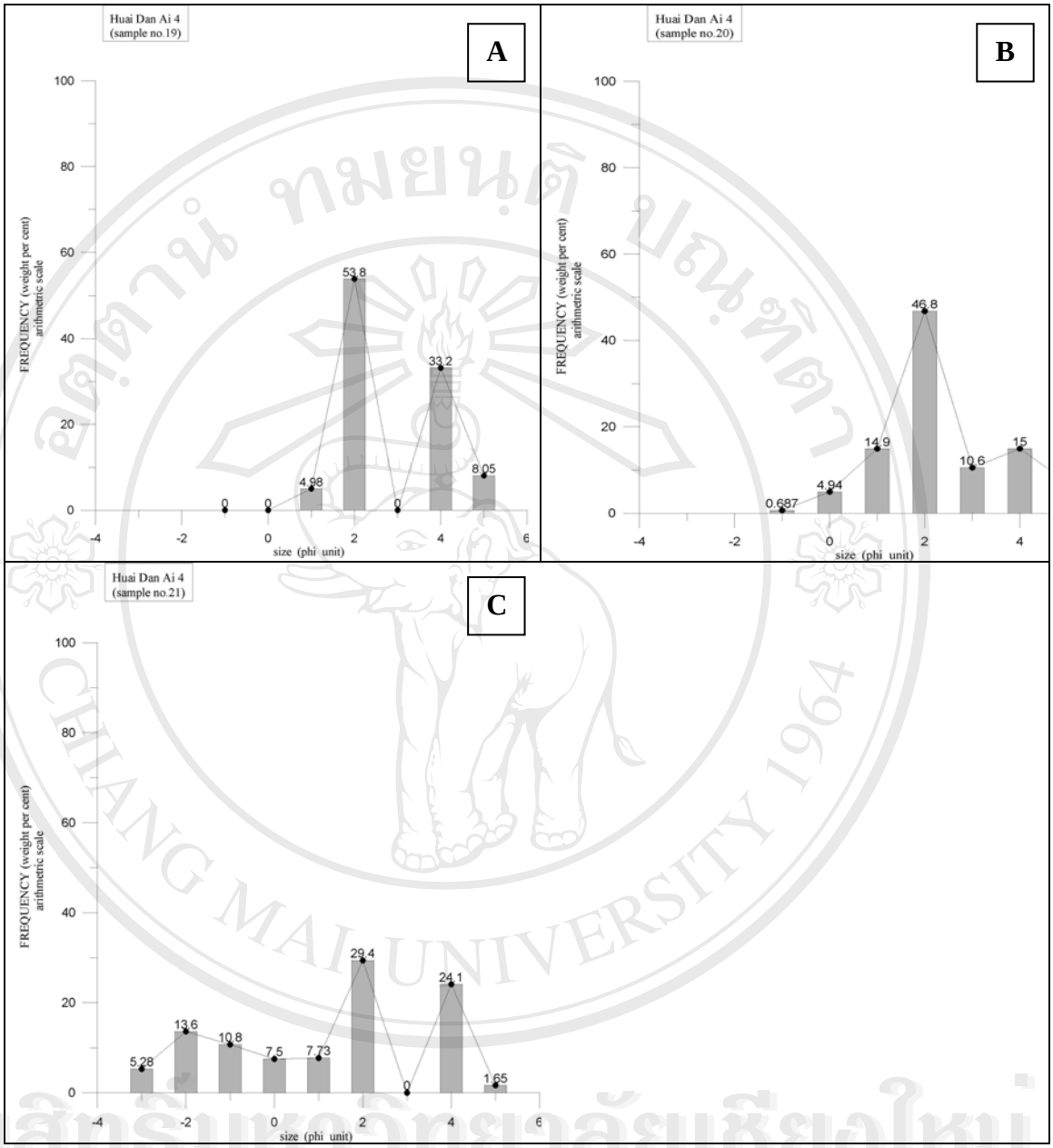


Figure 4B The histograms and the frequency curves of (A) sample no. 19, (B) sample no. 20, and (C) sample no. 21.

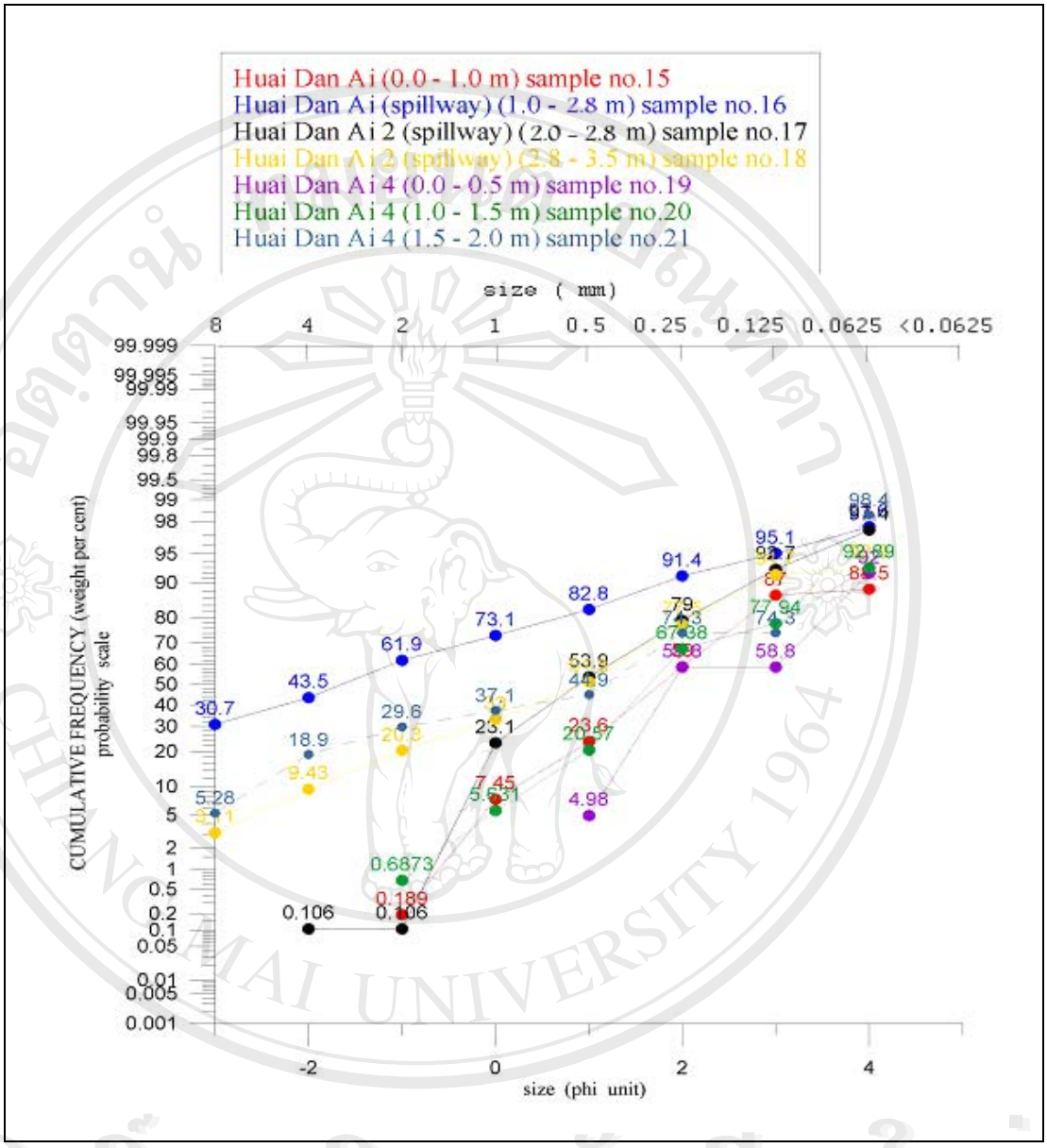


Figure 4C The cumulative frequency curves of sample nos. 15 – 21.

Table 4 The Histograms, Frequency and Cumulative curves of the samples of location 7 (sample nos. 15 – 18) and location 8 (sample nos. 19 – 21) (Figure 4).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
15	The histograms and frequency curves of 2 sets (sample nos.15-18 and sample nos.19-21) show the different tendency of particle sizes, the former is closed to the coarser size than the later generally. The first set, the sample no.15, granule size to silt size being population, seems to be almost 2 modes which peak more distinguishingly at very coarse sand size, and at silt size. The 2 modes reflect 2 sources of particles but it seems one supply more quantity of sediments than the others.	The sample no. 15 has a break, dividing the curve into 2 segments. The first segment reflects slightly poorly sorted whereas the second segment reflects very poory sorted. The sediments forming to be this bed are deposited by saltation and suspension.	Medium sand	Poor sorting	Symme-trical	Lepto - kurtic
16	The histogram and frequency curve of sample no.16 are different. The gravel size beginning at pebble size is the most quantity comparing the very coarse sand to silt. Almost being the single mode, but they shows 2 peaks which both are in the granule size at	The sample no. 16 comprises wide range sediments which most of them is coarse particles. The curve reflects poor sorted of sediments deposited by rolling and sliding.	Gravel	Very poorly sorted	Negative phi values	Platy - kutic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 4 The Histograms, Frequency and Cumulative curves of the samples of location 7 (sample nos.15 – 18) and location 8 (sample nos.19 – 21) (Figure 4)(continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
16 (cont.)	the pebble size and the granule size. It reflects 2 parental sources comparing to the curves patterns of sample no.15 and the following sample no.17. The sediments of sample no.16 should be the gravel bed of channel deposit.	The sample no. 16 is composed of wide range sediments which most of them are coarse particles. The curve reflects poor sorted of sediments deposited by rolling and sliding.	Gravel	Very poorly sorted	Negative phi values	Platy - kutic
17	The sample no.17 reveals the histogram and frequency curve skewing the finer particles, even thought the granule size and very coarse sand size appear slightly. However, the amount of gravel to coarse sand sizes is more than of sample no.15 distinguished. The curve of sample no.17 reveals single mode, reflecting one source.	The sample no.17, even though underlying the sample no. 16, reveals different curve. It is composed of fine sediments mixing a few of coarser sediments. The curve has a break, dividing curve into 2 segments. The first segment reflects poorly sorted and sediments deposited by rolling and sliding. The second segment reflects slightly poorly sorted and sediments deposited by saltation. The second segment overlies the sample no.18 refecting association of this set.	Coarse sand	Poorly sorted	Negative phi values	Meso - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 4 The Histograms, Frequency and Cumulative curves of the samples of location 7 (sample nos. 15 – 18) and location 8 (sample nos. 19 – 21) (Figure 4) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
18	The sample no.18 is composed of pebble to silt size. The curve skews to finer part, showing 2 modes which peak at medium sand size and silt size, reflecting 2 sources. The curve of sample no.18 is different from the adjacent bed (sample no.17). It reflects the different depositional energy.	The curve of sample no.18 has characteristics similar to sample no.16, there is a little difference that the less amount of coarse sediments. The curve reflects poorly sorted. The sediments are deposited by rolling , sliding and suspension. In conclusion, the samples nos. 15 – 18 are a series of fining – upward – gravelly bed. The lower subset has more finer sediments than the upper subset. It implies the sediments deposited by less violent current or smaller channel , are overlain by sediments from larger channel.	Coarse sand	Very poorly sorted	Positive phi values	Lepto - kurtic
19	The curve of sample no.19 skews to finer particles, showing 2 modes which peak at medium sand size and very fine sand size dominantly. It reflects that the sediments of sample no.19 come from 2 sources.	The curve of sample no.19 illustrates the narrower range of grain size comparing to the others. There are no coarse grain in composition. Two breaks on the curve divided it into 3 segments. The first segment is implied	Fine sand	Poorly sorted	Very Negative phi values, coarse	Platy - kutic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 4 The Histograms, Frequency and Cumulative curves of the samples of location 7 (sample nos. 15 – 18) and location 8 (sample nos. 19 – 21) (Figure 4) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
19 (cont.)		that the particles has rather well sorted and deposited by saltation. The second segment has no population. The third segment reflects moderately sorted and sediments are deposited by saltation.				
20	The sample no.20 has coarser particles and granule coarse sand size than of sample no.19 while the last bar occupied the silt size position. The curve of sample no.20 shows 2 modes peaking at the medium sand size and very fine sand size. It reflects 2 sources.	The curve of sample no. 20 is slightly gentle slope comparing to the standard curve (line 45 °). It implies the slightly poorly sorted. And the sediments are deposited by saltation. It is noticed that (Figure 4.6 C) its curve is almost fit to the position of sample no. 15. It implies the according or both of them can be correlated.	Medium sand	Poorly sorted	Negative phi values	Lepto - kurtic
21	Beyond the sample no.21 has wide range of particles, pebble to silt size, it also shows the curve having 3 modes which peak at pebble size, medium sand size, and the very fine sand size respectively. It can hypothesize that the sediments come from 3 sources. The sample no.21 should be related to the sample no.18 in lateritization and being gravel bed.	The curve of sample no. 21 is gentle slope, reflecting poorly sorted. The sediments are deposited by rolling, sliding, and saltation. The curve of sample no. 21 is closed to that of sample no. 18 and they have similar pattern too. Thus they can be correlated together.	Coarse sand	Very poorly sorted	Positive phi values	Platy - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtos

Location 9 Ban Kham Proi (sample nos. 22 - 24)

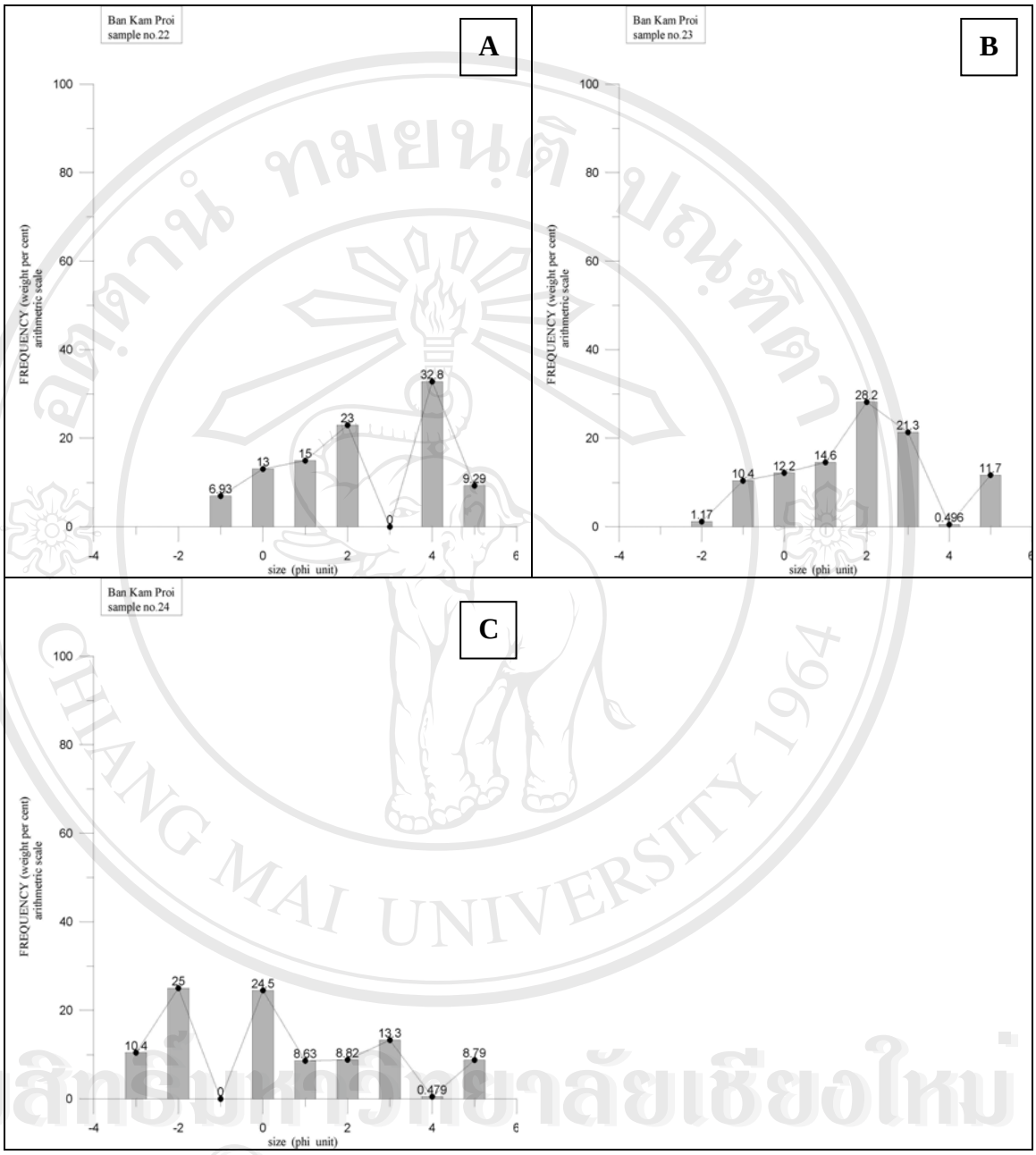


Figure 5A The histograms and the frequency curves of (A)sample no. 22, (B) sample no. 23, and (C) sample no. 24.

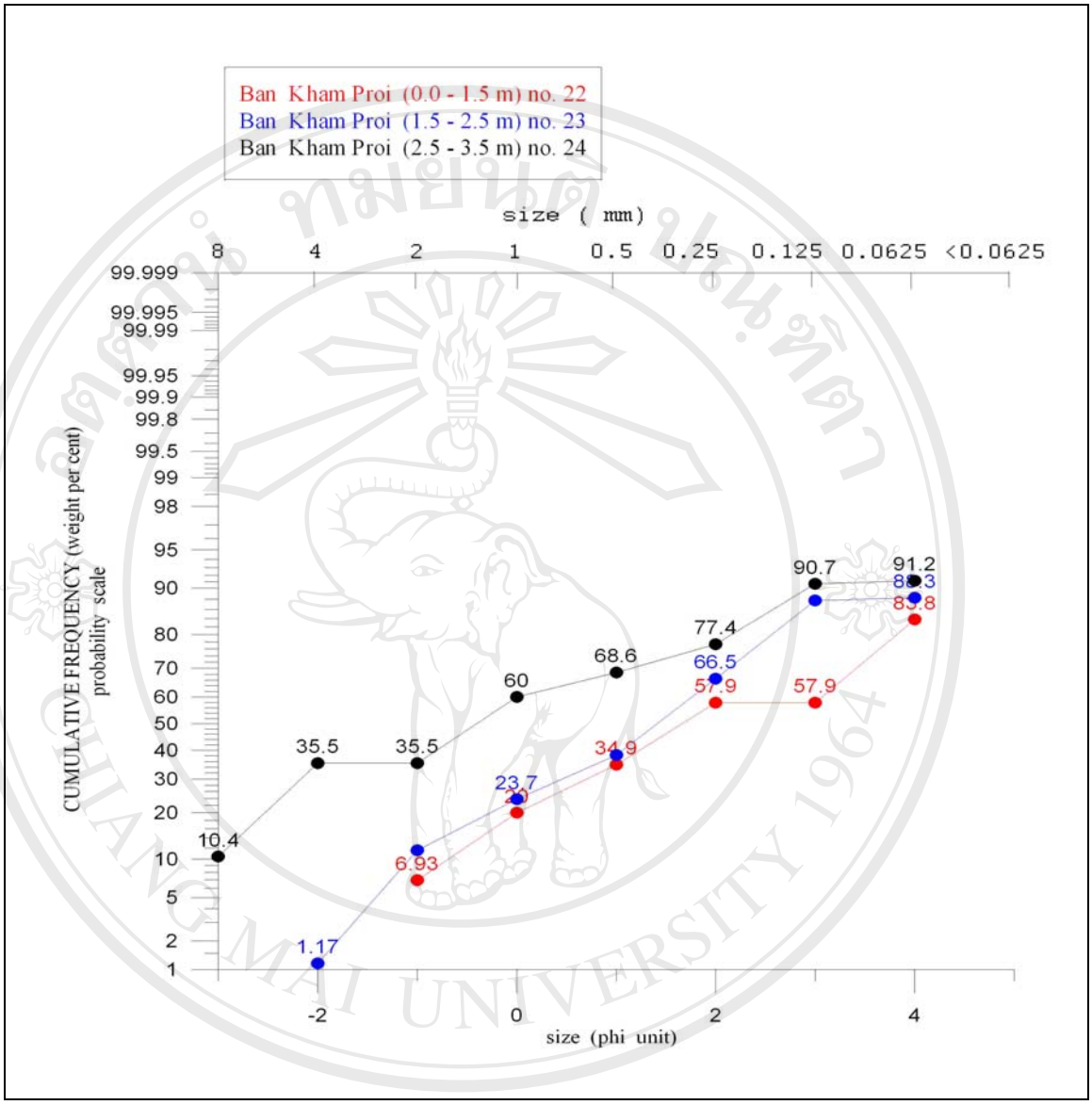


Figure 5B The cumulative frequency curves of sample no. 22 – 24.

Table 5 The Histograms, Frequency and Cumulative curves of the of location 9 (sample nos . 22 – 24) (Figure 5).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
22	The particles are composed of very coarse sand to silt. The curve shows 2 modes which peak at medium sand and silt sizes. It reflects 2 sources of sediments	The curve of samp;e no. 22 reveals the bed of sands which lack of fine sand size. The curve consists of 2 segments. The first segment is slightly gentle slope, reflecting poorly sorted. The sediments are deposited by saltation.	Medium sand	Poorly sorted	Sym-metrical	Platy - kurtic
23	This sample has wider range of sediments than the sample no. 22. The pebble to silt size are seen. The curve shows 2 modes peaking at medium sand and silt. It reflects 2 sources of sediments	The curve of sample no. 23 reveals mixing of very fine pebble size, reflecting more energy. The curve shows a break dividing it into 2 segments. Both of the segments reflect poorly sorted and the sediments are deposited by rolling, sliding and saltation.	Medium sand	Poorly sorted	Sym - metrical	Lepto-kurtic
24	The histogram begins at pebble to silt size. The curve illustrates 4 modes peaking at pebble, very coarse sand,fine sand, and silt sizes respectively. It implies 4 sources which drive the sediments out.	The curve of sample no. 24 reveals the same interpretation as sample no.23 but the particles has more gravels. And there are 2 breaks reflecting the sediments come from 3 sources. In conclusion, the curves of sample no. 22 – 24	Very coarse sand	Very poorly sorted	Negative phi values	Platy - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 5 The Histograms, Frequency and Cumulative curves of location 9 (sample nos. 22 – 24) (Figure 5) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
24 (cont.)		imply that they are a set of fining upward – gravelly bed. Their sediments come from 3 sources during the sample no.24 has been setting. And the sediments come from 2 sources during the sample no. 23 and 22 have been setting. It is hypothesized that the location of this sedimentary set is the junction of 2 – 3 channels				

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 10 Floodplain of Huai Ka Yung, Ban La Lai (sample nos. 25 - 29)

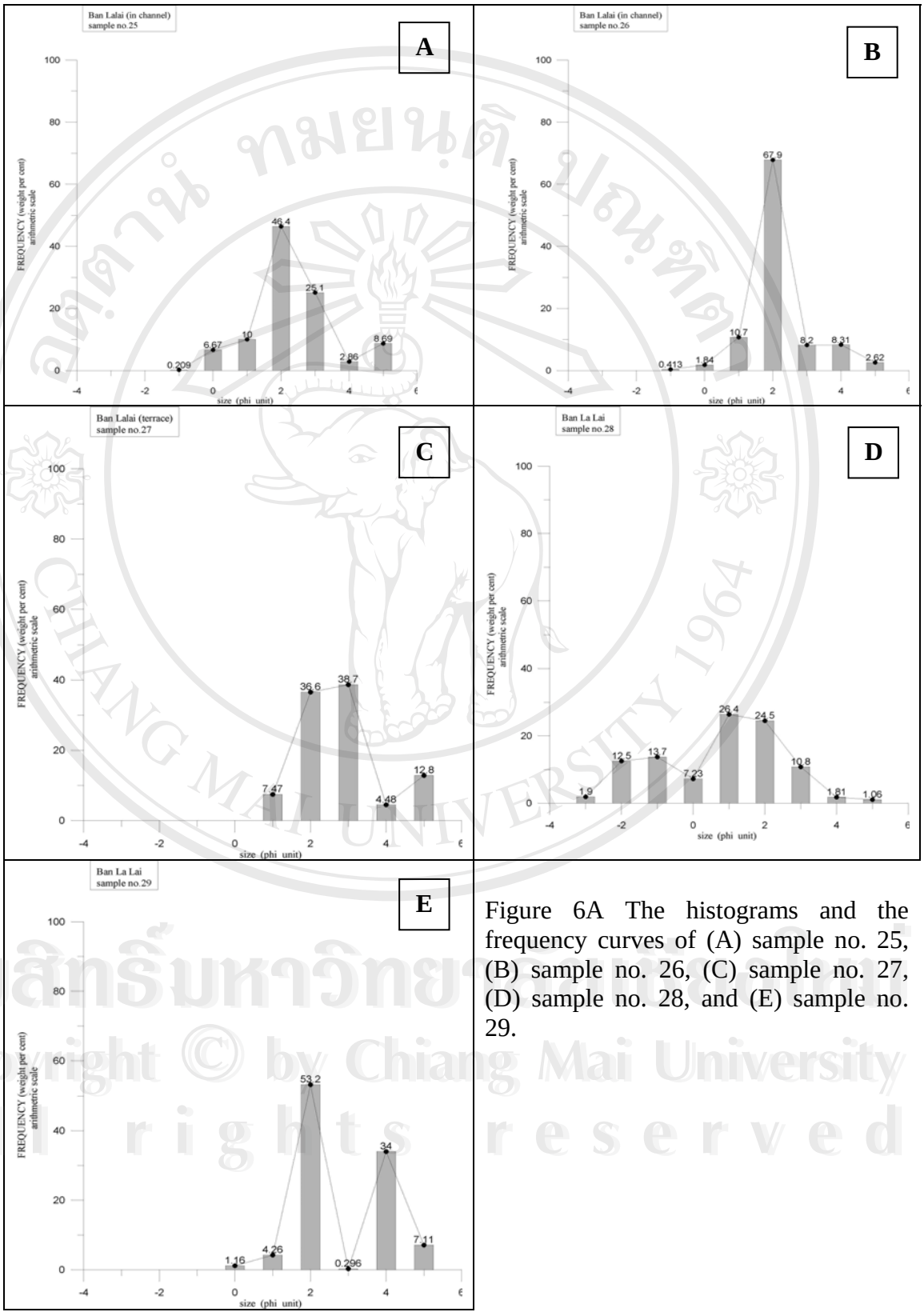


Figure 6A The histograms and the frequency curves of (A) sample no. 25, (B) sample no. 26, (C) sample no. 27, (D) sample no. 28, and (E) sample no. 29.

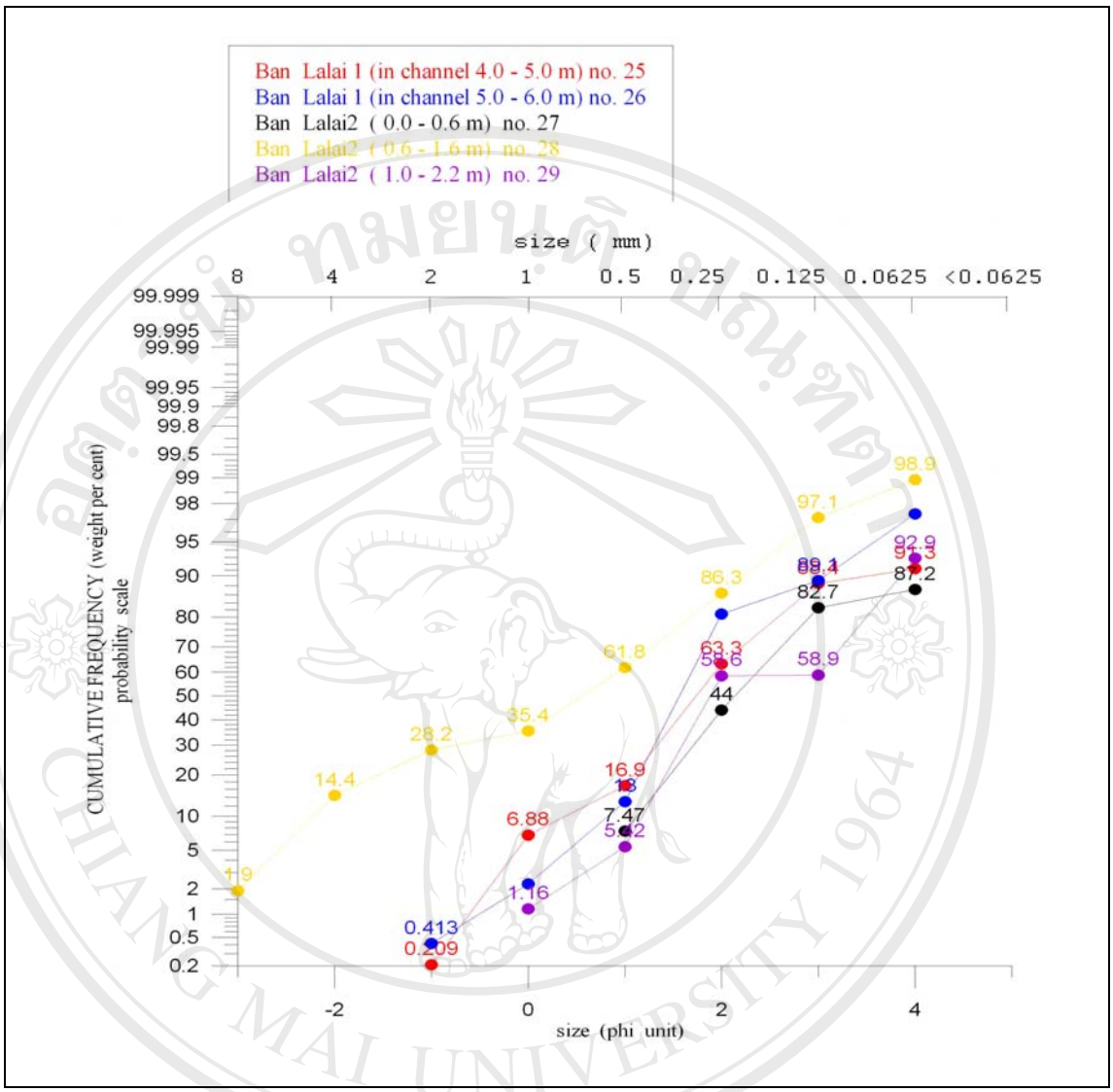


Figure 6B The cumulative frequency curves of sample nos. 25 – 29.

Table 6A The Histograms, Frequency and Cumulative curves of the samples of location 10 (samples nos. 25 - 29) (Figure 6).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
25	The curve seems to be normal distribution, however it skews to finer size slightly. The curve illustrates 2 modes peaking at medium sand and silt sizes. It mentions 2 sources of sediments.	The sample no. 25 – 26 are rather concordant. The curves of them reflect rather poorly sorted. The sediments are deposited by saltation and suspention.	Medium sand	Poorly sorted	Negative phi values	Very Lepto - kurtic
26	The curve shows normal distribution pattern with a single mode which is very dominant at medium sand. It implies 1 source of sediments.		Medium sand	Moder-ately sorted	Negative phi values	Very Lepto - kurtic
27	The histogram and curve show fine particles mostly. The curve illustrates 2 modes at fine sand and silt size, reflecting 2 sources of parents.	The curve of sample no. 27 shows narrow range of sands. It reflects rather poorly sorted. The sediments are deposited by saltation.	Fine sand	Poorly sorted	Negative phi values	Lepto - kurtic
28	The histogram and curve of sample no. 28 are different from the upper and lower beds dominantly. It implies different processing of deposition. The graph shows wide range range from pebble to silt size.	The sample no.28 consists of gravel to sand size. The curve reflects rather poorly sorted. The sediments are deposited by rolling, sliding and saltation.	Coarse sand	Poorly sorted	Positive phi values	Platy - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 6B The Histograms, Frequency and Cumulative curves of the samples of location 10 (sample nos. 25 - 29) (Figure 6) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
28	The histogram and curve of sample no. 28 are different from the upper and lower beds dominantly. It implies different processing of deposition. The graph shows wide range range from pebble to silt size.	The sample no.28 is composed of gravel to sand size. The curve reflects rather poorly sorted. The sediments are deposited by rolling, sliding and saltation.	Coarse sand	Poorly sorted	Positive phi values	Platy - kurtic
29	The particles comprise very coarse sand to silt sizes. The curve shows 2 modes peaking at medium sand and very fine sand sizes. It reflects 2 sources of sediments.	The curve of sample no. 29 is closed to the position of sample no. 25 and no. 26. The curve reflects rather poorly sorted. The sediments are deposited by saltation and suspension.	Fine sand	Poorly sorted	Very Negative phi values, coarse	Platy-kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 11 Basaltic flow at Ban Sam Beng (sample nos. 30 - 32)

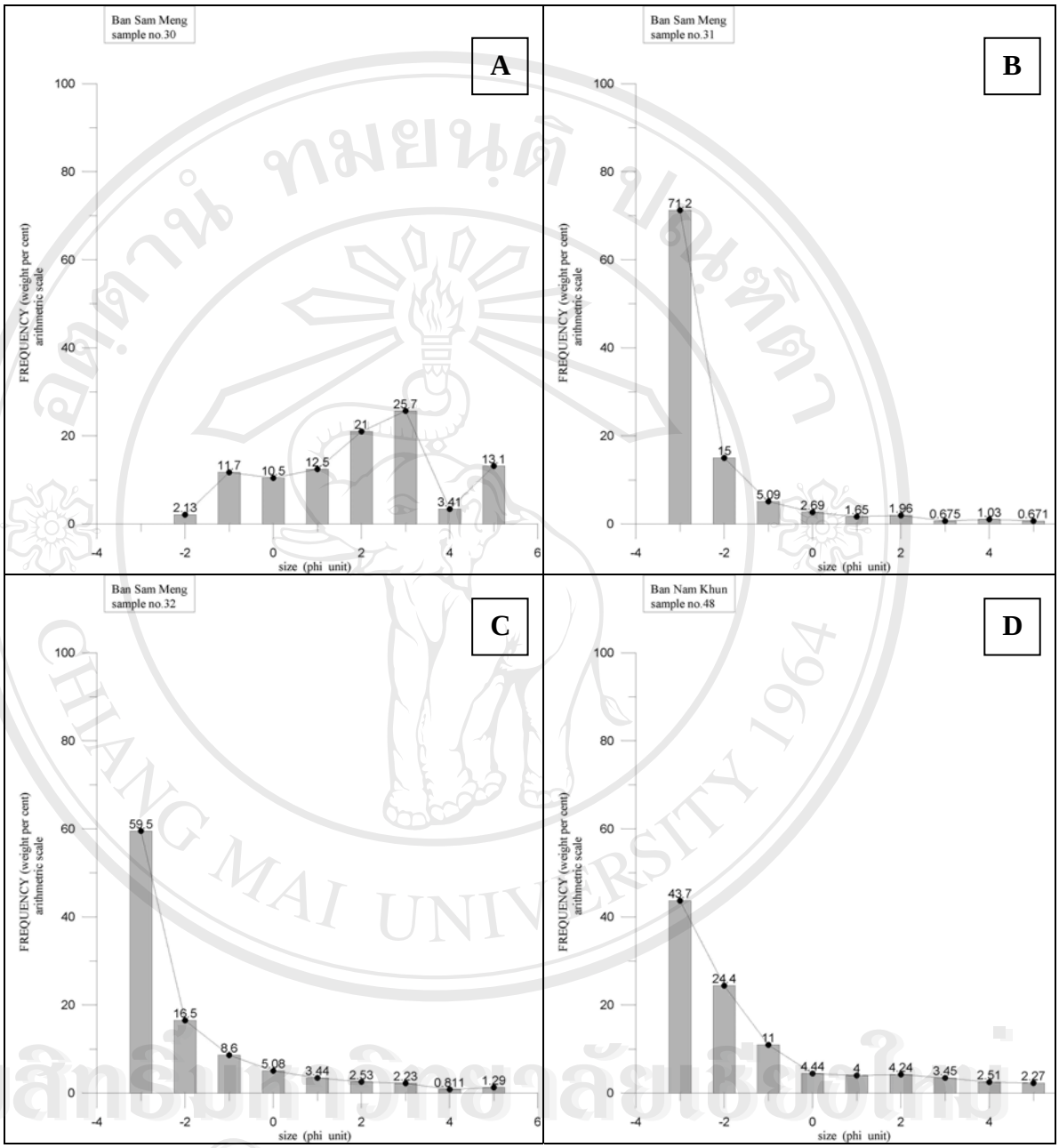


Figure 7A The histograms and the frequency curves of (A) sample no. 30, (B) sample no. 31, (C) sample no. 32 and (D) sample no. 48. They are from the section of weathered basalts. It is noticed that (B) – (D) are similar patterns. (A) is different because there is the mixing of fluvial sediments.

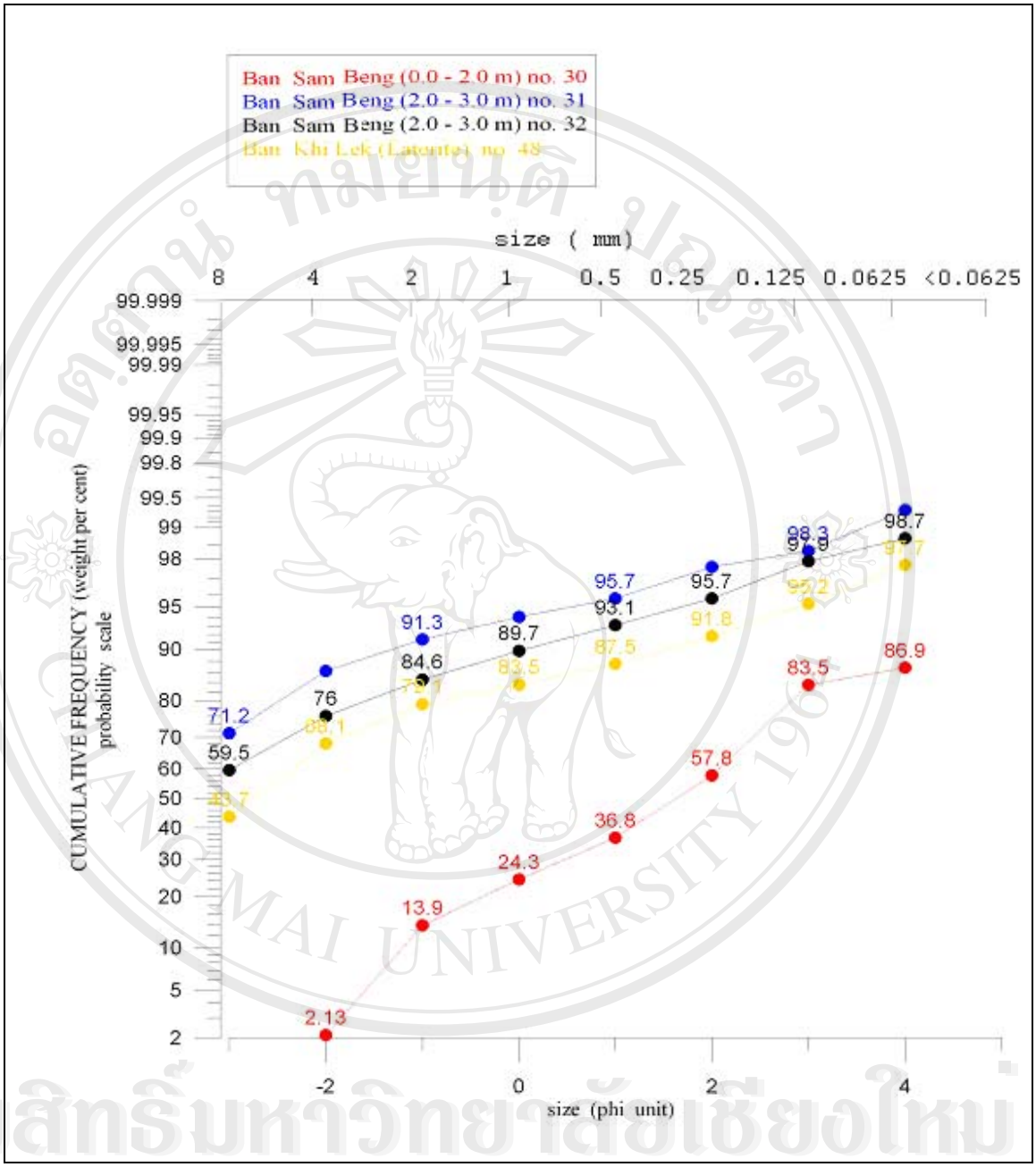


Figure 7B The cumulative frequency curves of sample nos. 30 – 32 and sample no. 48 which are the similar deposits. It is plotted for comparison.

Table 7 The Histograms, Frequency curves and Cumulative curves of the samples of location 11 (sample 30 - 32) (Figure 7).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
30	The histogram reveals wide range of sediments, from very fine pebble to silt size. The curve shows 2 modes, reflecting 2 sources of sediments.	The curve of sample no. 48 is presented together the curves of samples no. 30 – 32 because they are also from the weathered basalts. The curve of sample no. 30 is different from the others in narrower range of particles, which are also fine particles. Whereas the curves of sample no. 31 -32 and no. 48 are similar patterns. They show wider ranges of particle sizes. It implies that the sediments of sample no.30 has mixing of the other sediments out of own – basaltic soil.	Medium sand	Poorly sorted	Positive phi values	Meso - kurtic
31	The histograms show the distinguish amount of pebble size. The curve shows only one mode, meaning the unity of sedimentary source. Thus both of them should change from basaltic rock.		Gravel	Very poorly sorted	Negative phi values	Meso - kurtic
32			Gravel	Very poorly sorted	Negative phi values	Lepto-kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 12 Ban Dan Nue (sample nos. 33 - 37) and Location 13 Ban Dan Tai (sample nos. 38 - 39)

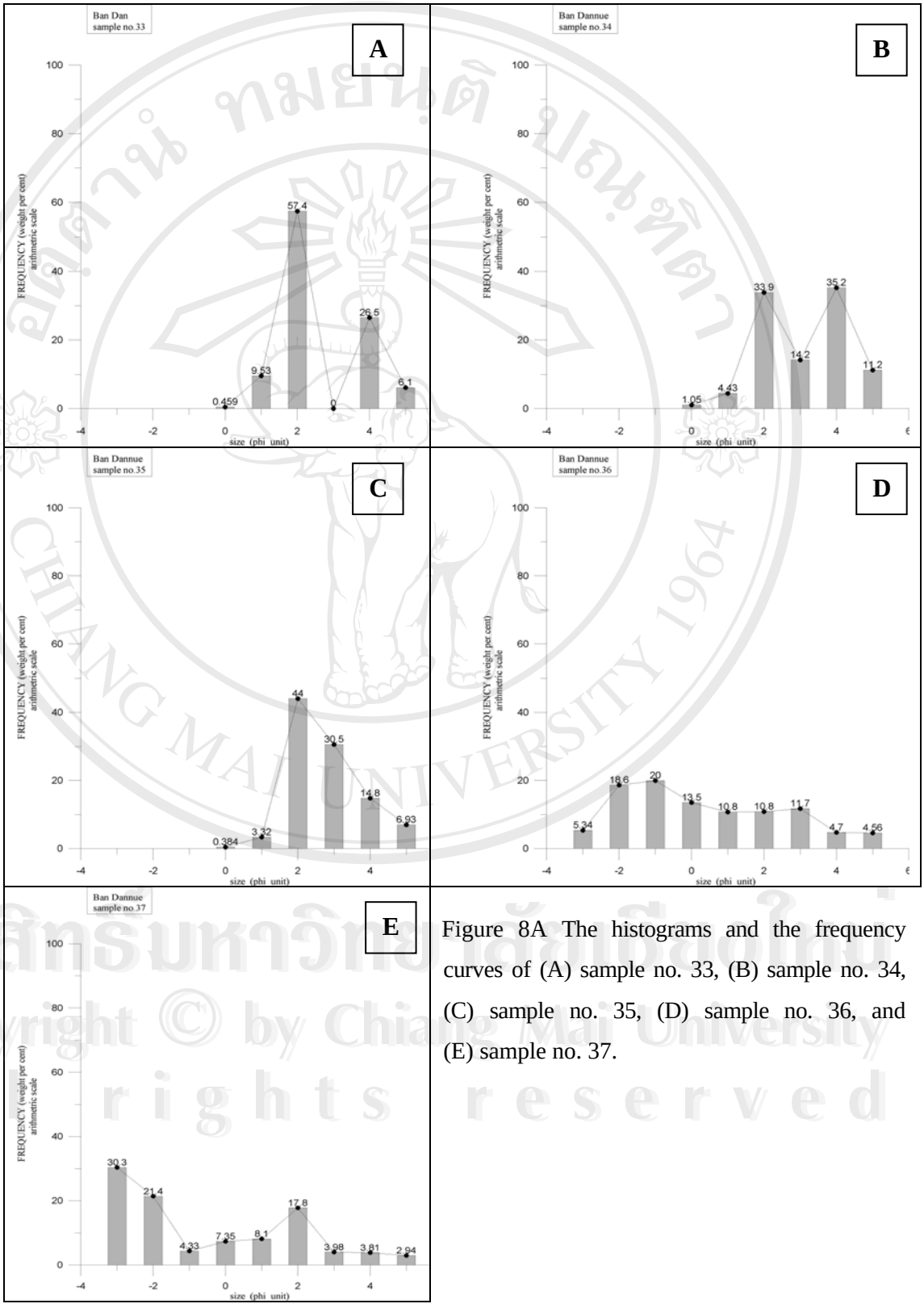


Figure 8A The histograms and the frequency curves of (A) sample no. 33, (B) sample no. 34, (C) sample no. 35, (D) sample no. 36, and (E) sample no. 37.

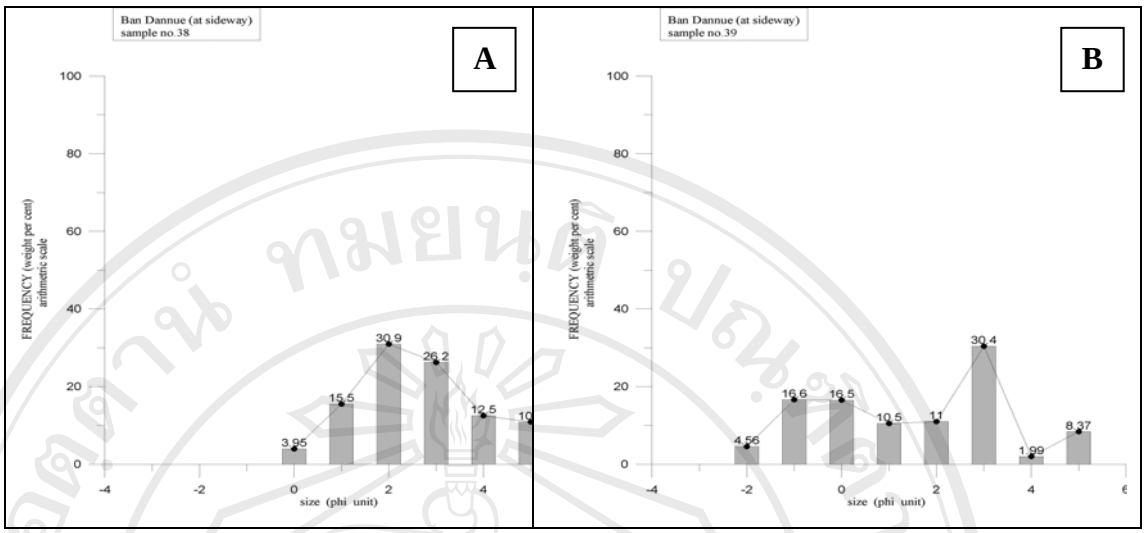


Figure 8B The histograms and the frequency curves of (A) sample no. 38 and (B) sample no. 39.

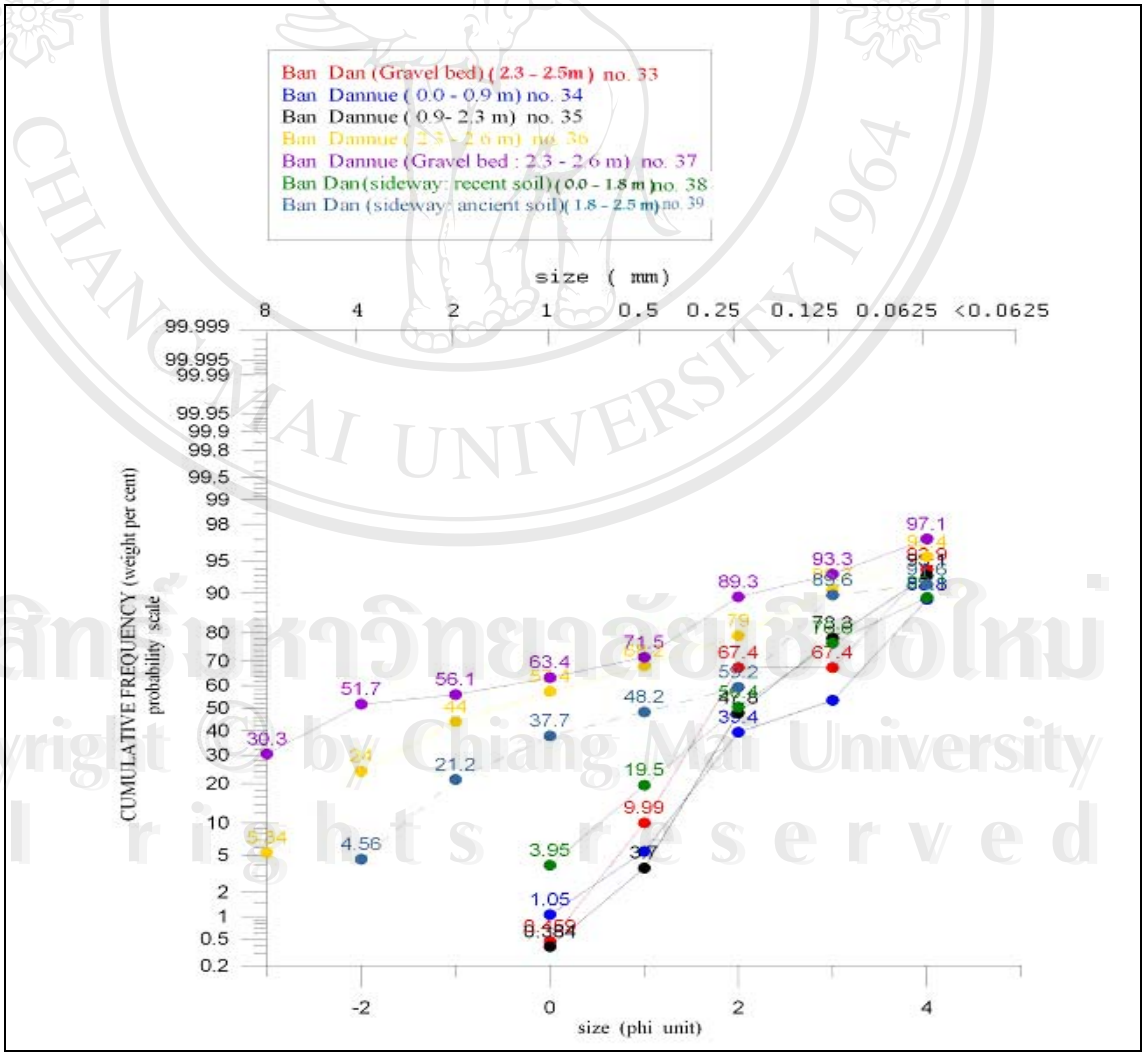


Figure 8C The cumulative frequency curves of sample nos. 33 – 39.

Table 8 The Histograms, Frequency and Cumulative curves of the samples of location 12 -13 (samples no. 33 – 37 and no. 38 - 39) (Figure 8).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
33	The histogram reveals silt to very coarse sand sizes. The curve shows 2 modes of the particles. It implies 2 sources of sediments.	The curve of sample no. 33 reveal whole members are sands. The curve reflects poorly sorted. The sediments are deposited by saltation and suspension. The curve is closed to that of the samples nos. 34, 35, 38.	Fine sand	Poorly sorted	Very Negative phi values, coarse	Platy - kurtic
34	The histogram reveals silt to coarse sand sizes. The curve shows 2 modes of the particles. It implies 2 sources of sediments.	The curve of samples no. 34 – 35 reveal sands are poorly sorted and deposited by saltation and suspension. The curves are closed to those of the samples no. 33, 38.	Fine sand	Poorly sorted	Symme - trical	Platy - kurtic
35	The histogram reveals silt to coarse sand sizes. The curve shows 1 mode of the particles. It implies 1 source of sediments.		Fine sand	Poorly sorted	Very Negative phi values, coarse	Lepto - kurtic
36	The histogram reveals silt to pebble sizes. The curve shows 2 mode but not distinguished. It implies 2 sources of sediments.	The curves of sample no. 36 – 37 reveal wider range of sediments comprising gravels to very fine sand. The curves reflect very poorly sorted. The sediments are deposited by rolling, sliding, saltation, and suspension. The curves are closed to those of sample no.39.	Very coarse sand	Very poorly sorted	Nega- tive phi values	Platy - kurtic
37	The histogram reveals silt to pebble sizes. The curve shows 2 modes clearly. It implies 2 sources of sediments.		Gravel	Very poorly sorted	Very Nega- tive phi values, coarse	Platy - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 8 The Histograms, Frequency and Cumulative curves of the samples of location 12 -13 (samples no. 33 – 37 and no. 38 - 39) (Figure 8) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
38	The histogram reveals silt to coarse sand sizes. The curve shows 1 mode, implying 1 source of sediments.	The curve of sample no. 38 is closed to that of samples no. 33, 34, 35. The members being sands are deposited by saltation. They are poorly sorted.	Fine sand	Poorly sorted	Nega - tive phi values	Meso - kurtic
39	The histogram reveals silt to very fine pebble sizes, which wider range than of sample no. 38. The curve shows 2 modes, implying 2 sources of sediments.	The curve of sample no. 39 is closed to that of samples no.36,37. The members are gravels to very fine sand, reflecting very poorly sorted. They are deposited by rolling, sliding, saltation and suspension.	Coarse sand	Very poorly sorted	Symme - trical	Platy - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Location 14 Ban Non Saeng Phet (sample nos. 40 - 47) and Location 15 Basalt flow, Ban Nam Khun (sample no. 48)

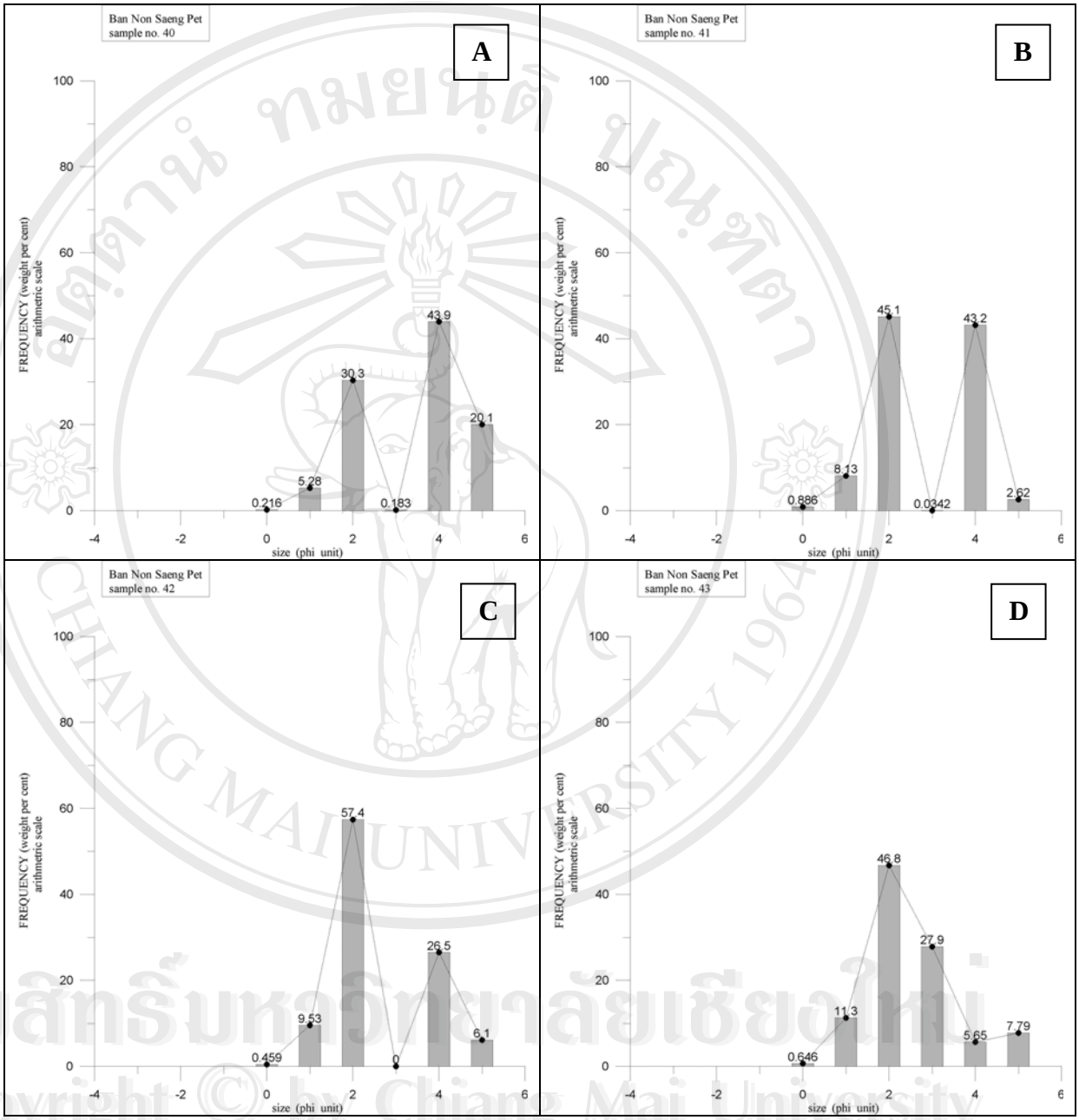


Figure 9A The histograms and the frequency curves of (A) sample no. 40, (B) sample no. 41, (C) sample no. 42, and (D) sample no. 43.

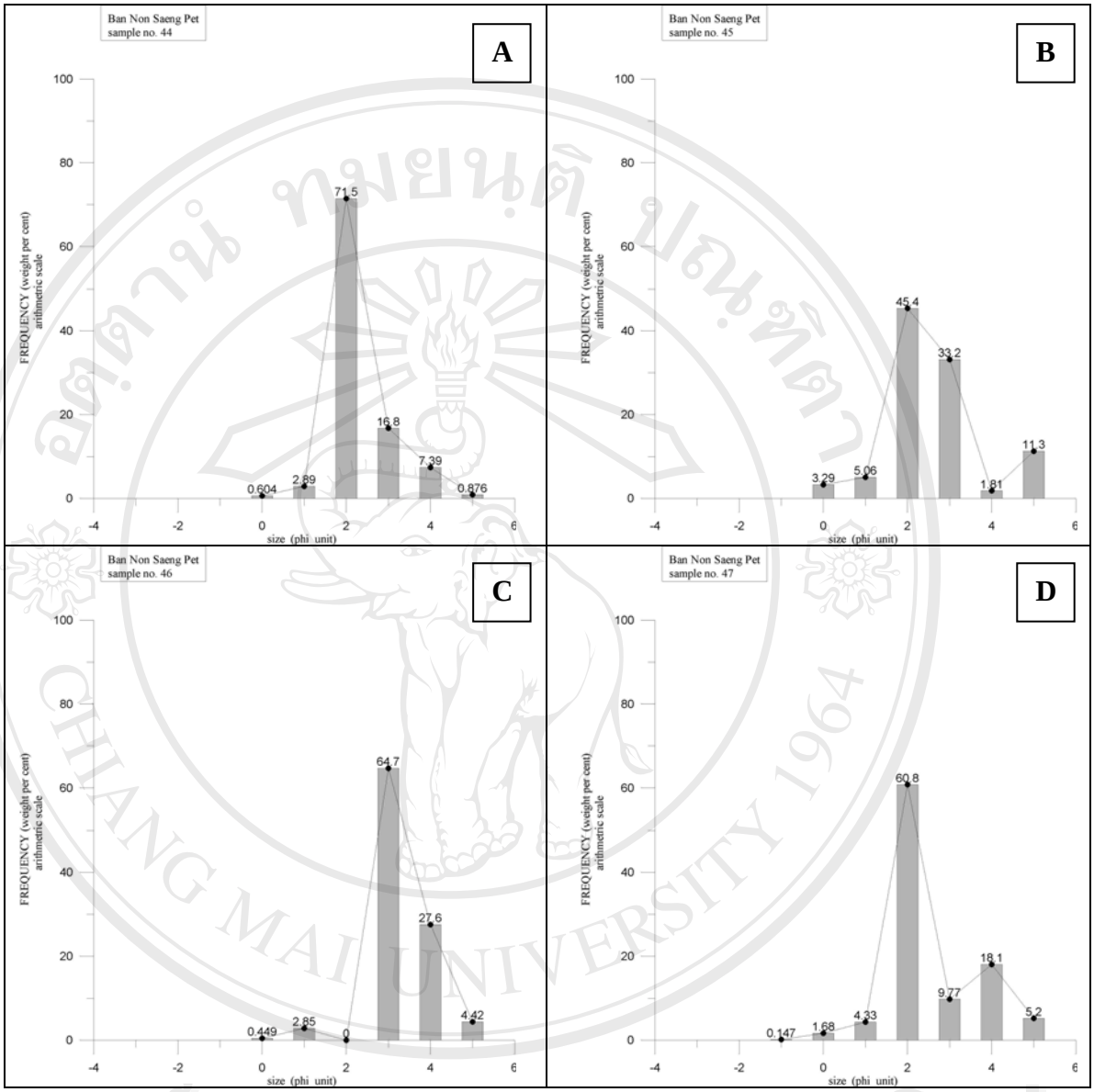


Figure 9B The histograms and the frequency curves of (A) sample no. 44, (B) sample no. 45, (C) sample no. 46, and (D) sample no. 47. The histograms and the frequency curves of sample no. 48 is shown in Figure 7A.

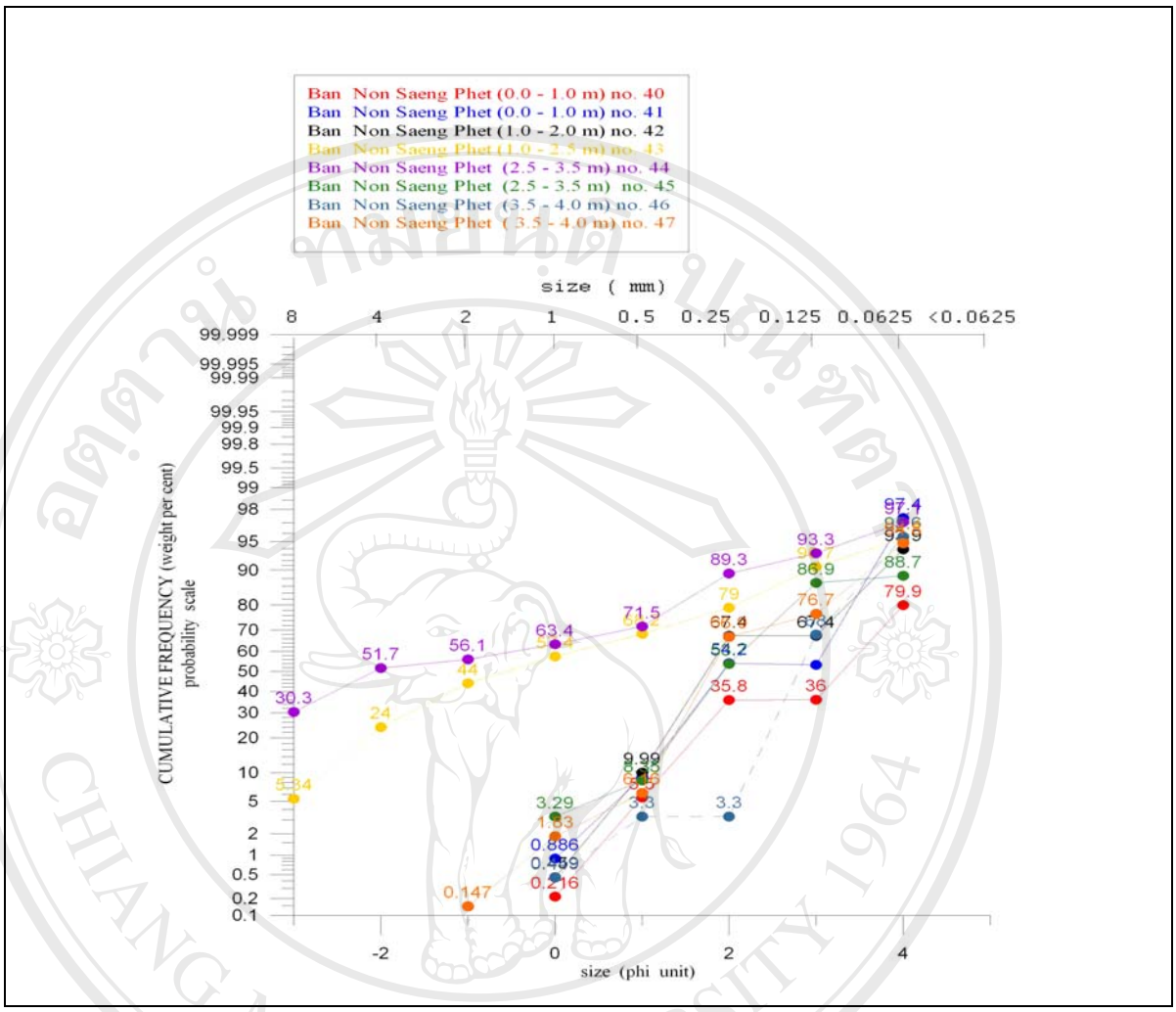


Figure 9C The cumulative frequency curves of sample nos. 40 – 47, the curve of sample no. 48 can be seen from Figure 7B.

Figure 9 D The relicted gravel bed of paleo Lam Som stream in the area of Location 14. The gravels and sands have been cemented by Fe – oxide and changing to lateritic boulder. The gemstones sometimes have been discovered embedding in.

Table 9 The Histograms, Frequency and Cumulative curves of the samples of location 14 (sample nos. 40 - 47) (Figure 9).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
40	The histogram reveals very fine sand to coarse sand sizes. The curve is rather negative skew, showing 2 modes of medium sand and very fine sand sizes. It implies 2 sources of sediments.	The curves of them reflect poorly sorted. The sediments are deposited by saltation.	Fine sand	Poorly sorted	Positive phi values	Platy - kurtic
41	The histogram reveals very fine sand to coarse sand sizes. The curve is slightly positive skew, showing 2 modes of medium sand and very fine sand sizes. It implies 2 sources of sediments.		Fine sand	Poorly sorted	Very Negative phi values, coarse	Platy - kurtic
42	The histogram reveals coarse sand to silt sizes. The curve is rather positive skew, showing 2 modes peaking at medium sand and silt sizes. It implies 2 sources of sediments.	Both of their curves have slightly different depths but the curves are in different position. The curve of sample no. 42 is in the cluster of sand curves (samples no. 40- 42, 45 - 47). It reflects poorly sorted. The sediments are deposited by saltation. The curve of sample no. 43 has the gravels to very fine sand being the members. It reflects very poor sorted. The sediments are deposited by rolling, sliding, saltation and suspension	Fine sand	Poorly sorted	Very Negative phi values, coarse	Platy - kurtic
43	The histogram reveals coarse sand to silt sizes. The curve is rather positive skew, showing 2 modes peaking at medium sand and silt sizes. It implies 2 sources of sediments.		Medium sand	Poorly sorted	Negative phi values	Lepto - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 9 The Histograms, Frequency and Cumulative curves of the samples of location 14 (sample nos. 40 - 47) (Figure 9) (continued).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
44	The histogram reveals coarse sand to silt sizes. The curve shows almost normal distribution. It exhibits one mode peaking at fine sand, implying one source of sediments.	The curves of sample no. 44 reveals the composition of gravels and sands. It reflects very poorly sorted. The sediments are deposited by rolling, sliding, saltation and suspension.	Medium sand	Moder -ately sorted	Very Negative phi values, coarse	Very Lepto-kurtic
45	The histogram reveals coarse sand to silt sizes. The curve shows rather negative skew. It exhibits 2 modes peaking at fine sand and silt sizes, implying 2 sources of sediments.	The curves of sample no. 45 reveals the composition of sands. It reflects poorly sorted. The sediments are deposited by rolling, sliding, saltation and suspension.	Medium sand	Poorly sorted	Negative phi values	Very Lepto - kurtic
46	The histogram reveals coarse sand to silt sizes. The curve shows 2 modes peaking at medium sand and fine sand sizes, implying 2 sources of sediments.	Both of them are in the cluster of sand curves, showing similar bed. The curves reflect well sorted (sample no. 46) and slightly poor sorted (sample no. 47). The sediments are deposited by saltation.	Fine sand	Moder-ately well sorted	Negative phi values	Lepto - kurtic
47	The histogram reveals very fine gravel to silt sizes. The curve shows 2 modes peaking at fine sand and silt sizes, implying 2 sources of sediments.		Fine sand	Poorly sorted	Very Negative phi values, coarse	Meso - kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

Table 9 The Histograms, Frequency and Cumulative curves of the samples of location 15 (sample no. 48) (Figure 9).

Sample number	Histogram and Frequency curve	Cumulative frequency curve	Graphic measure of frequency distribution			
			M_Z	(σI)	SK1	(KG)
48	The histogram reveals pebble to silt sizes. The curve shows positive skew with 1 mode. It implies 1 source of sediments.		Gravel	Very poorly sorted	Very negative phi value, coarse	Lepto -kurtic

M_Z = Graphic mean (σI) = Inclusive graphic standard deviation
(SK1) = Inclusive graphic skewness (KG) = Graphic kurtosis

APPENDIX B

BOREHOLE – DRILLING AND PIT LOGGING

For the according to the correct meaning in logging pages, the words using in logging pages are provided the meaning as follows:

Ban : Village

Tambon : Subdistrict

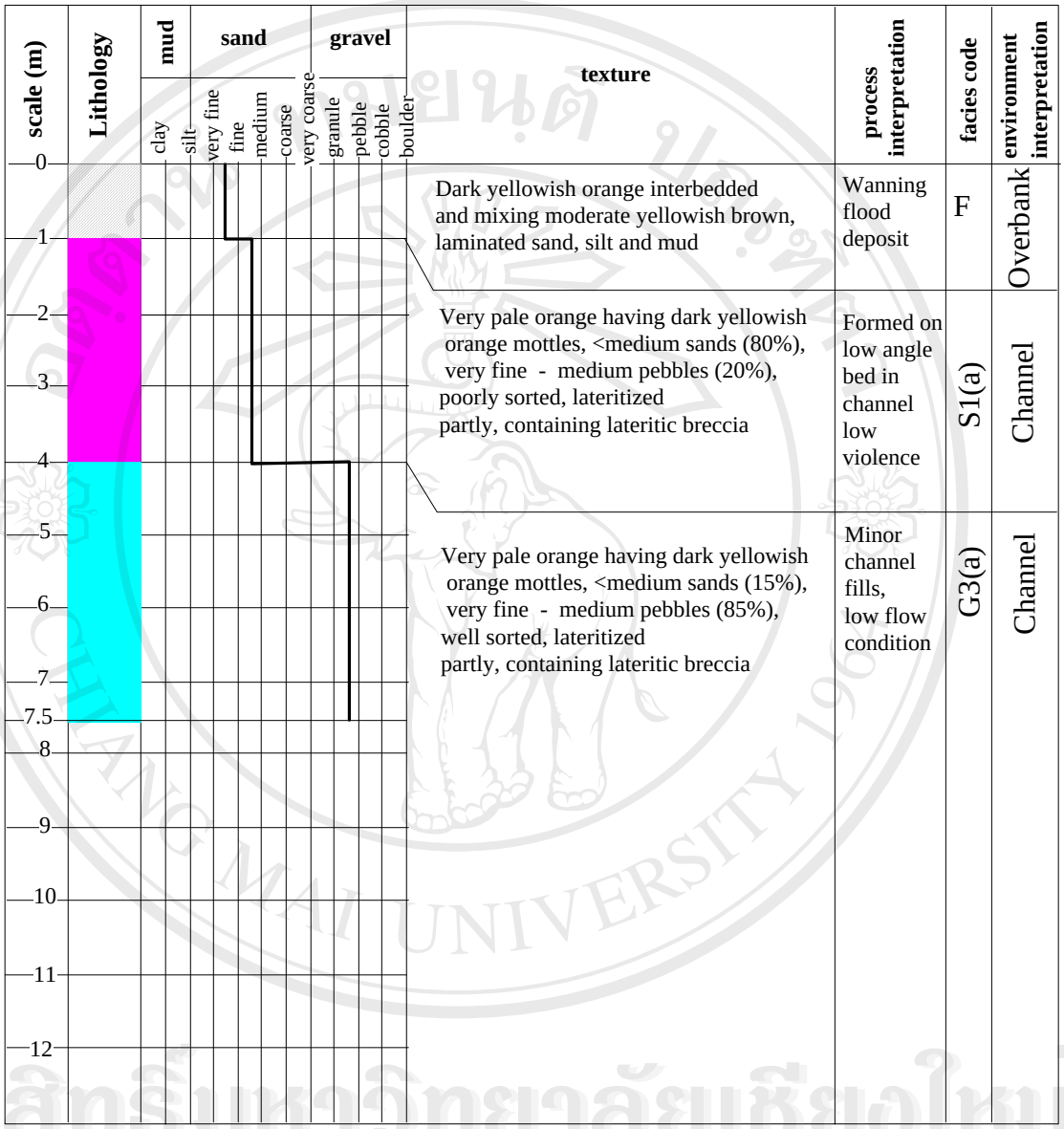
Amphoe : District

Changwat : Province

The names of each page are established concording on their names from the root data. For example, the log DMR A1 is meaning it is from the bore – drilling data of DMR. Some names are absent because they are not selected to use in this thesis, i. e., the DMR D7, F6. Sources of the data, as stating in the Chapter 5. The description of symbols and abbreviations are also in the Chapter 5. The following is the brief.

Symbols	Refer to the lithofacies	Symbols	Refer to the lithofacies	Symbols	Refer to the lithofacies
	G1		S1		Bs
	G1(a)		S1(a)		Bs(a)
	G2		S2		
	G2(a)		S2(a)		
	G3		F		
	G3(a)		F(a)		

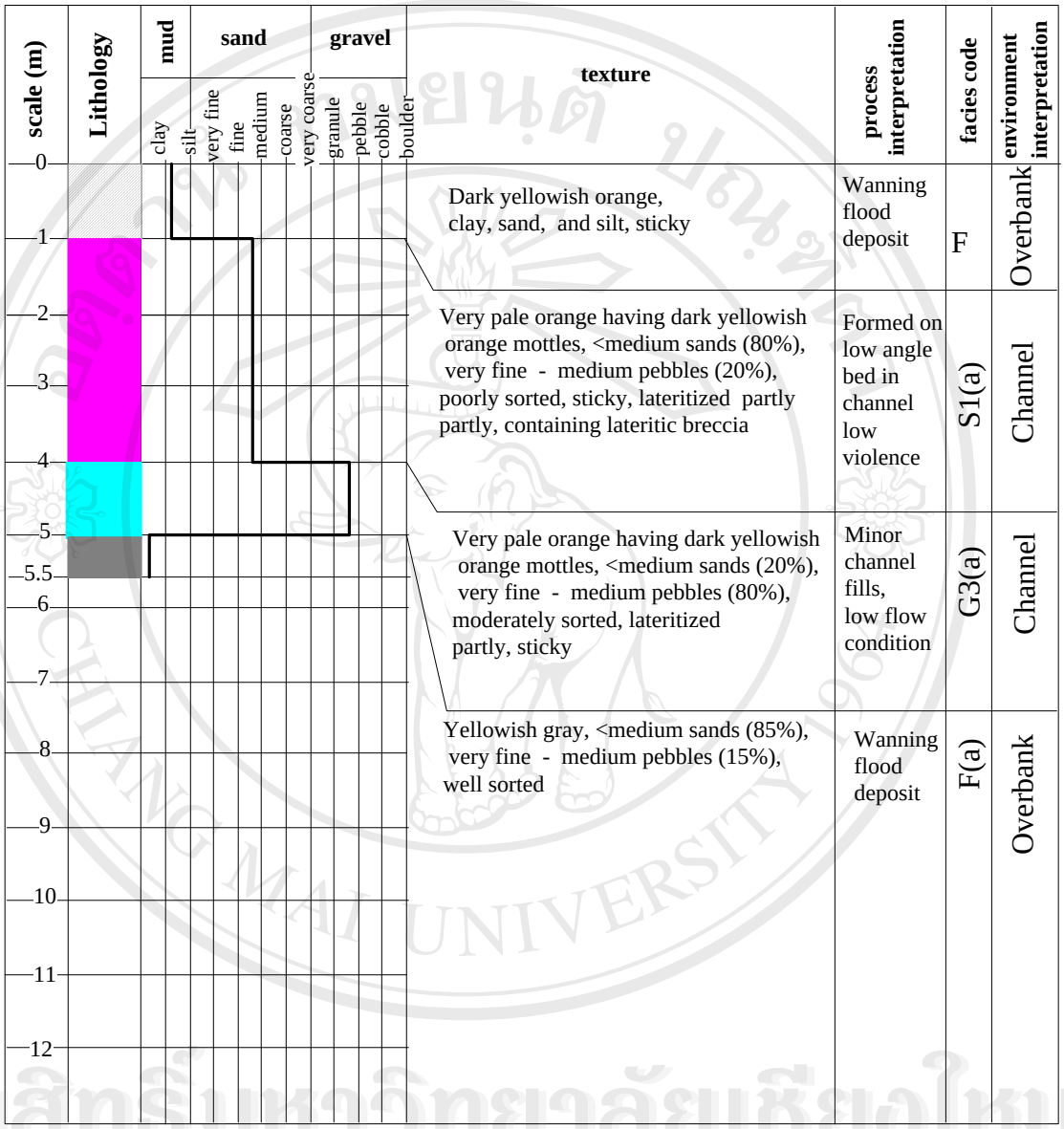
Sedimentary log : DMR A1 Ban: Non Son Boon Tambon: Kanoon
Grid: 480400 m E 16100260 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 7.5 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

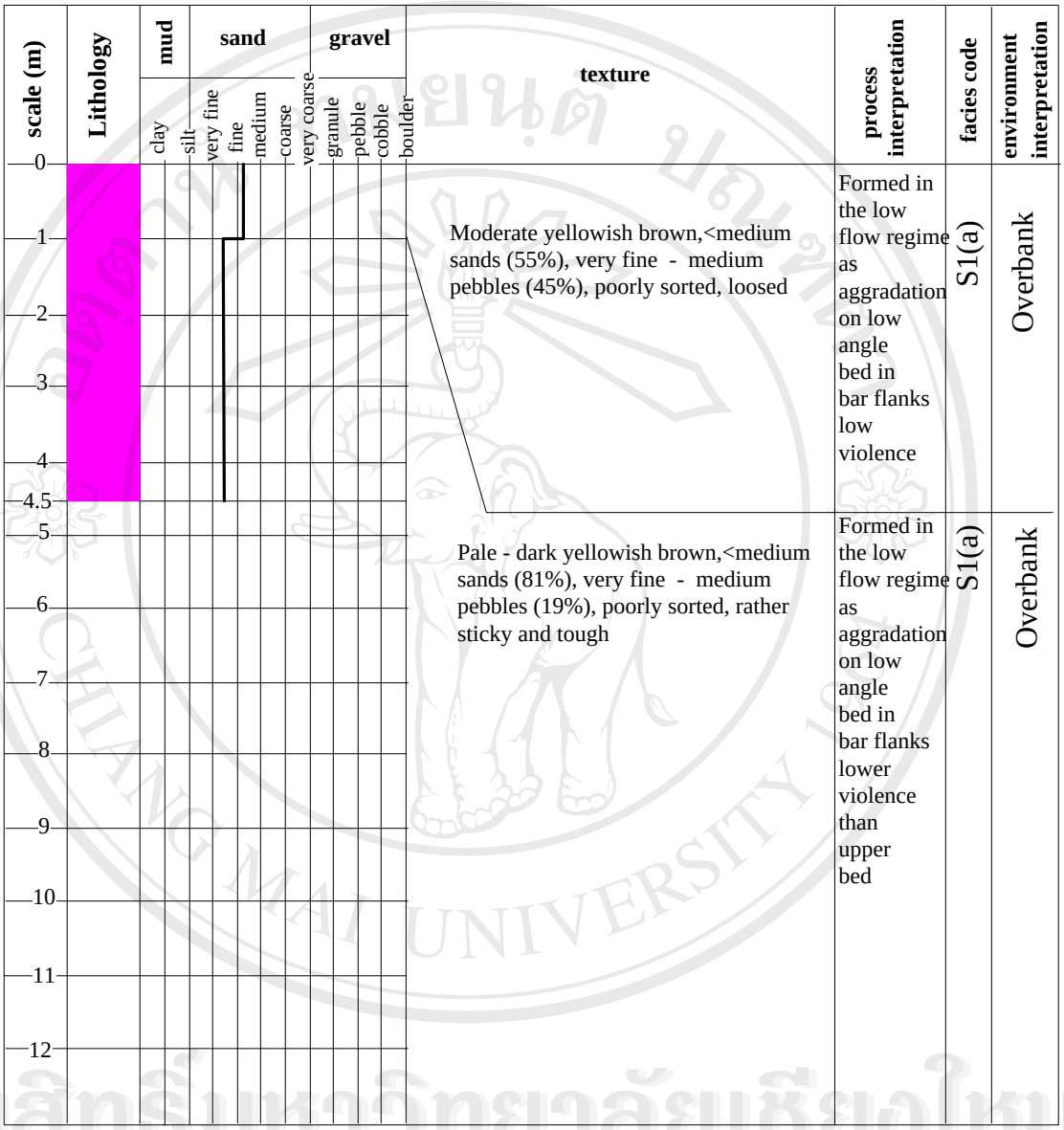
Sedimentary log : DMR A2 Ban: Nong Doom Tambon: Phai Boon
Grid: 481200 m E 1609940 mN Amphoe: Nam Yuen Changwat : Ubon Ratchathani
Map sheet: 5938 II Total thickness: 5.5 meters (From basement - rock



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

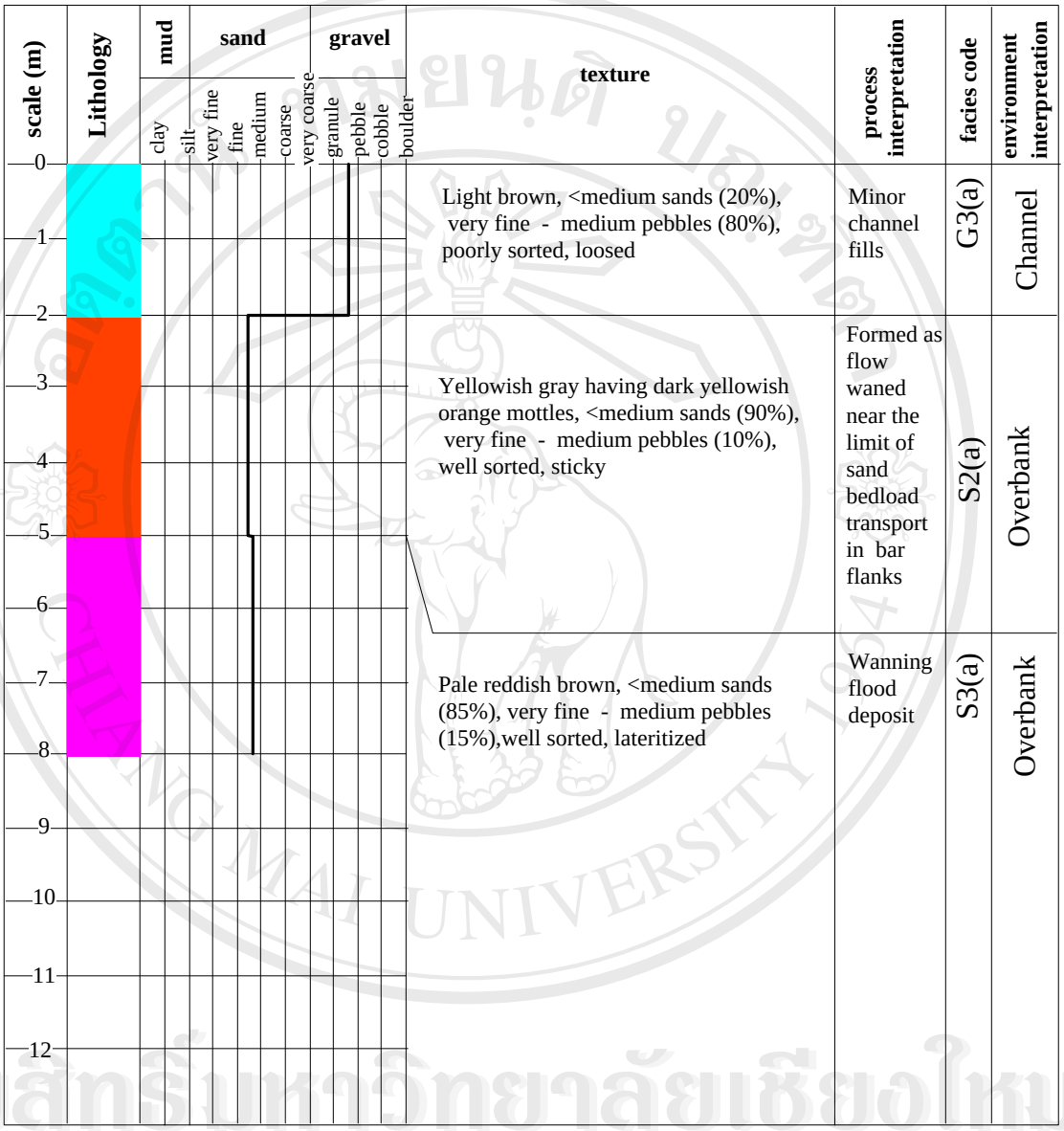
Sedimentary log : DMR A3 Ban: Nong Doom Tambon: Phai Boon
Grid: 481740 m E 1609690 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 3.5 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR A4 Ban: Nong Doom Tambon: Phaiboon
Grid: 482530 m E 1609900 mN Amphoe: Nam Yuen Changwat : Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surfa



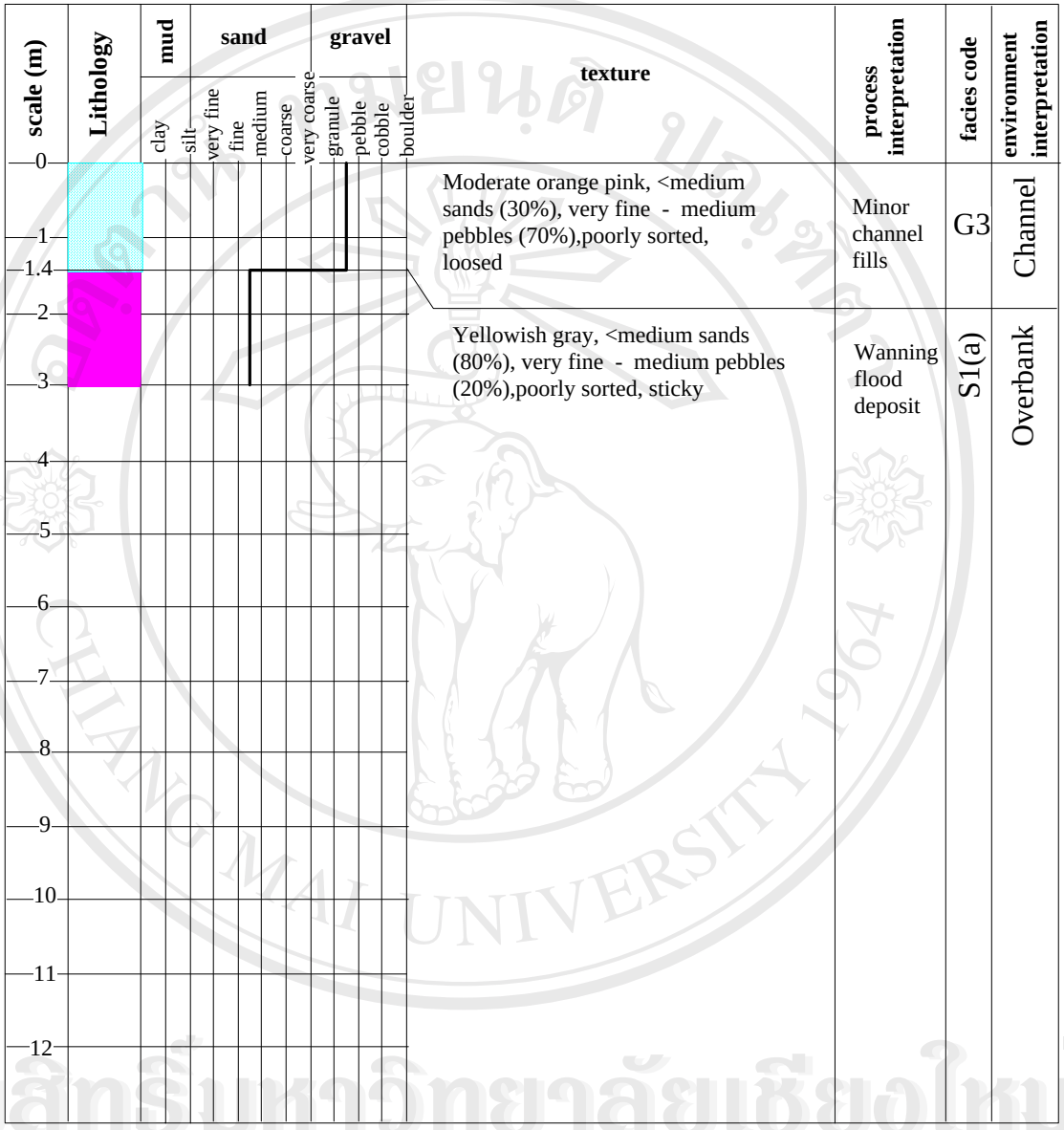
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

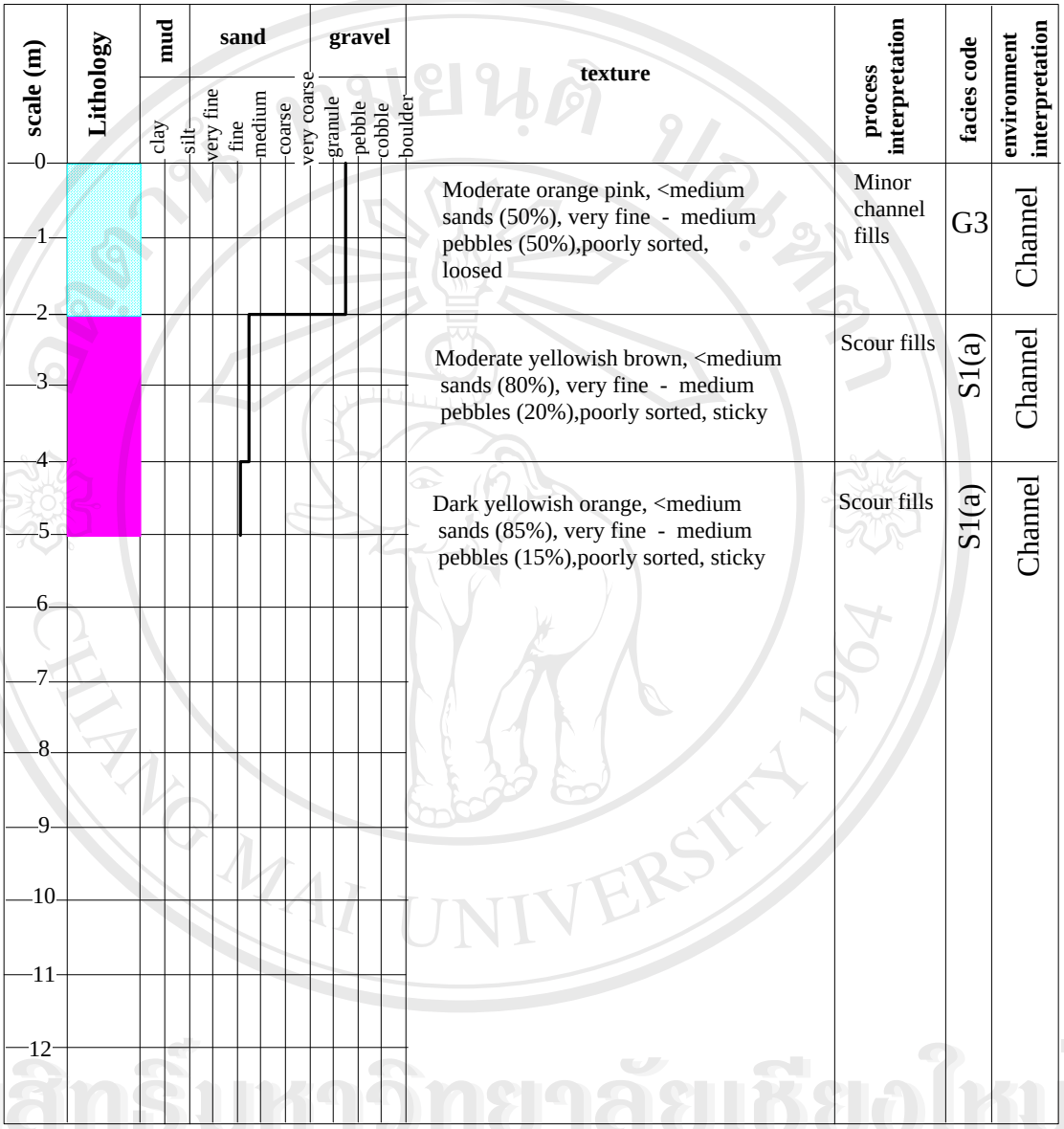
Sedimentary log : DMR A5 Ban: Nong Doom Tambon: Phaiboon
Grid: 483300 m E 1609700 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 3.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

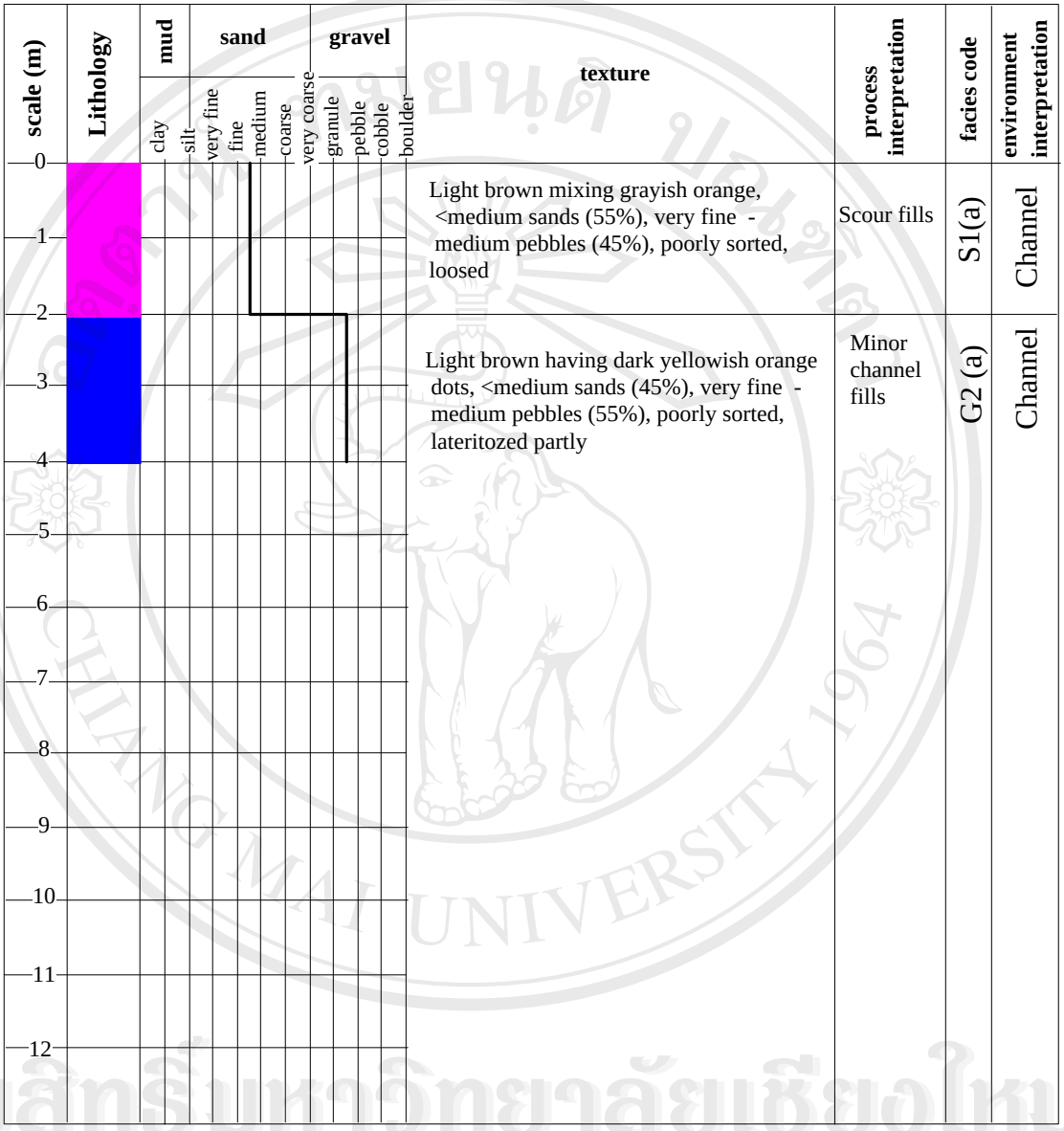
Sedimentary log : DMR A6 Ban: Nong Doom Tambon: Phaiboon
Grid: 484000 m E 1609750 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 5.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

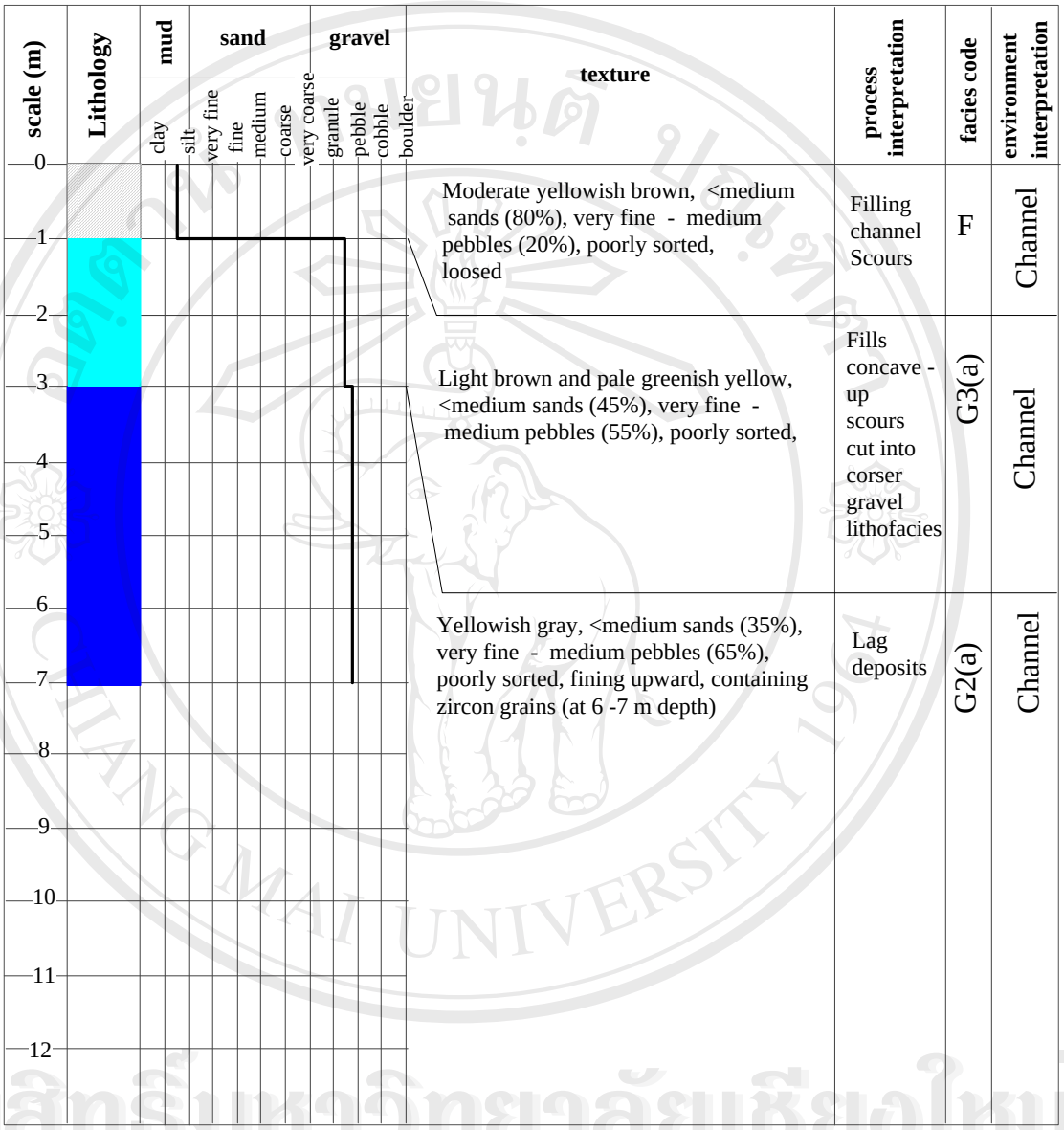
Sedimentary log : DMR A7 Ban: Nong Doom Tambon: Phaiboon
Grid: 484800 m E 1609600 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 4.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

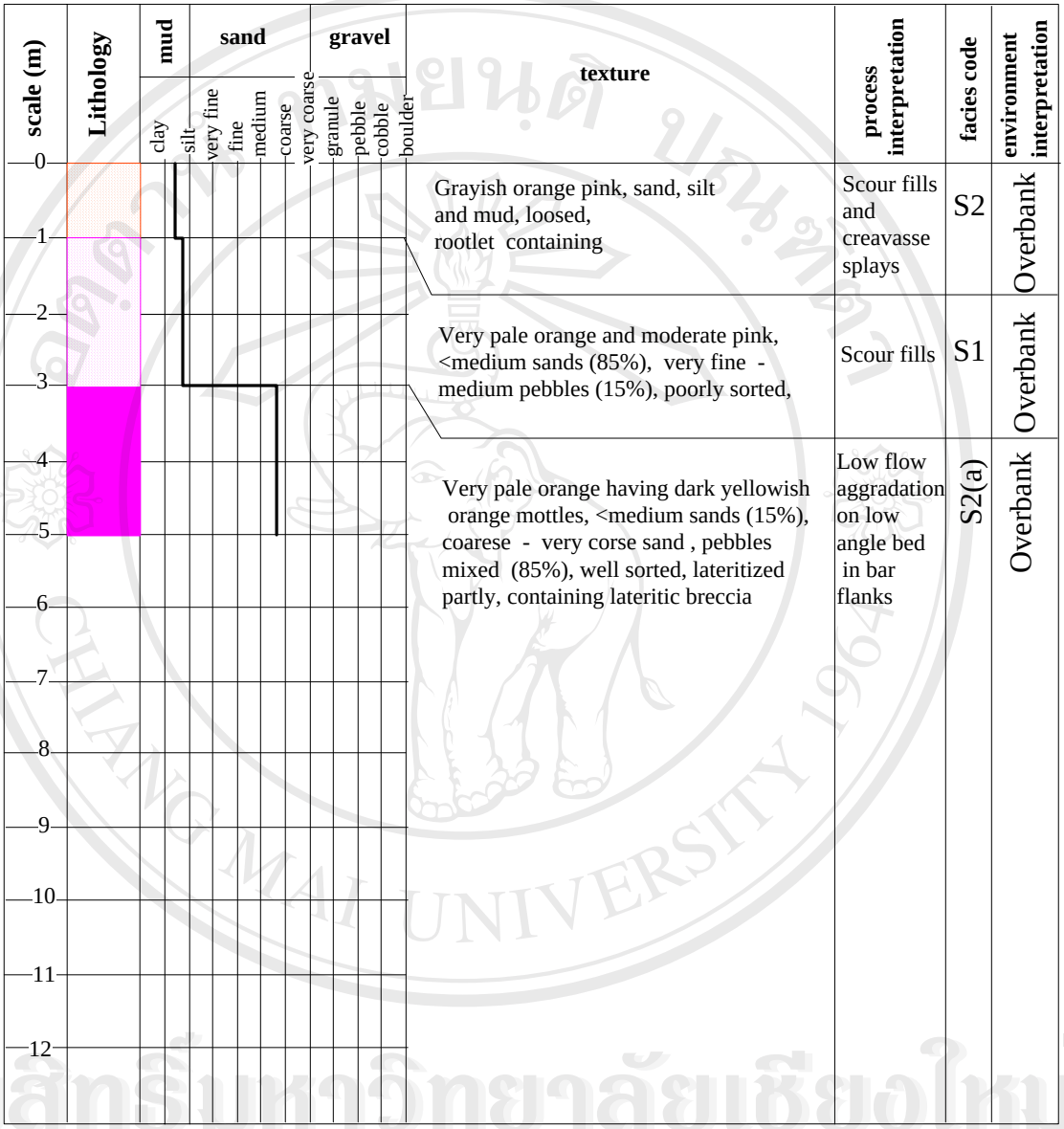
Sedimentary log : DMR A8 Ban: Nong Doom Tambon: Phaiboon
Grid: 485300 m E 1609700 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 7.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

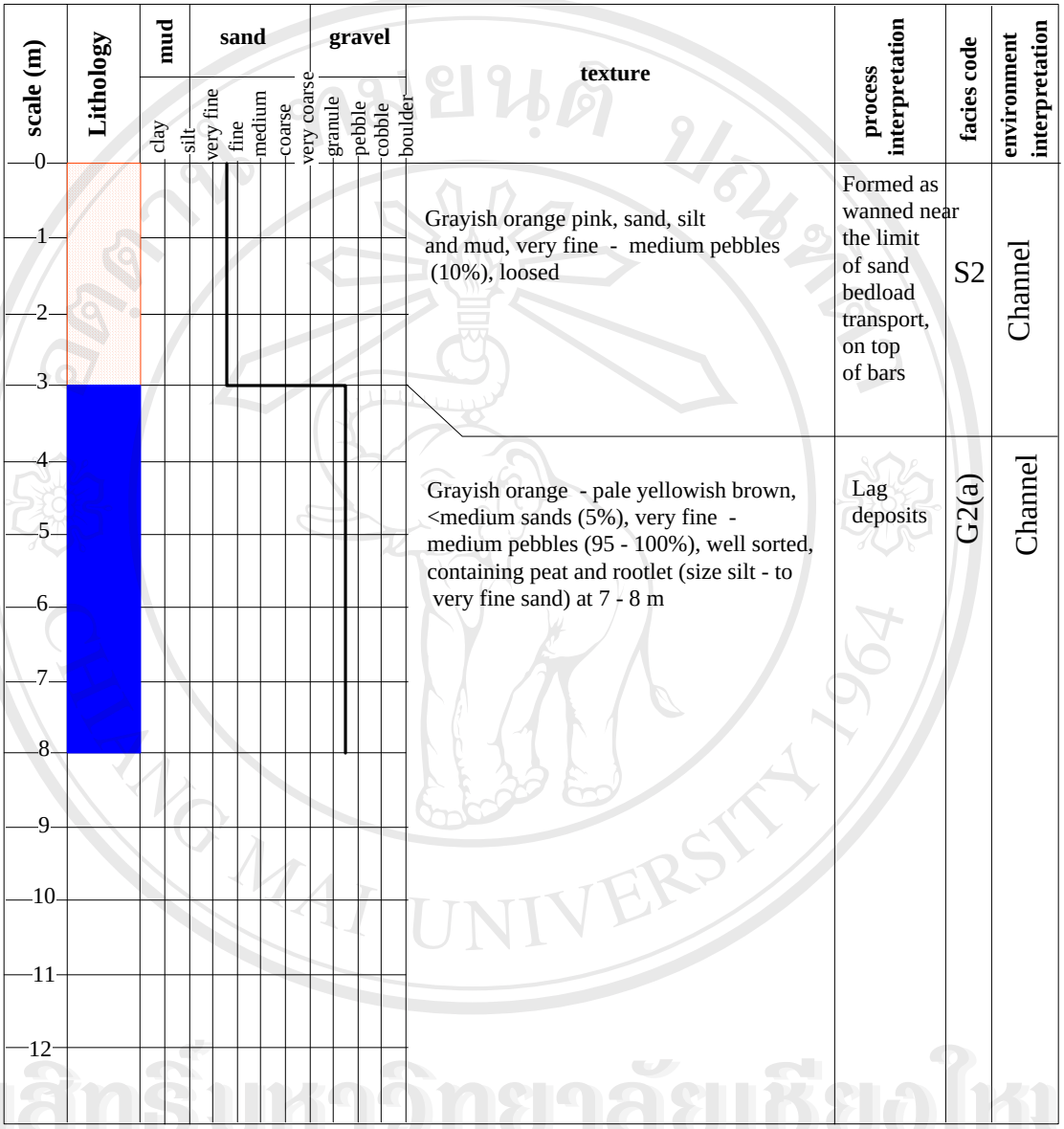
Sedimentary log : DMR B1/1 Ban: Tha Sawang Tambon: Non Samran
Grid: 479990 m E 1608850 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 5.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

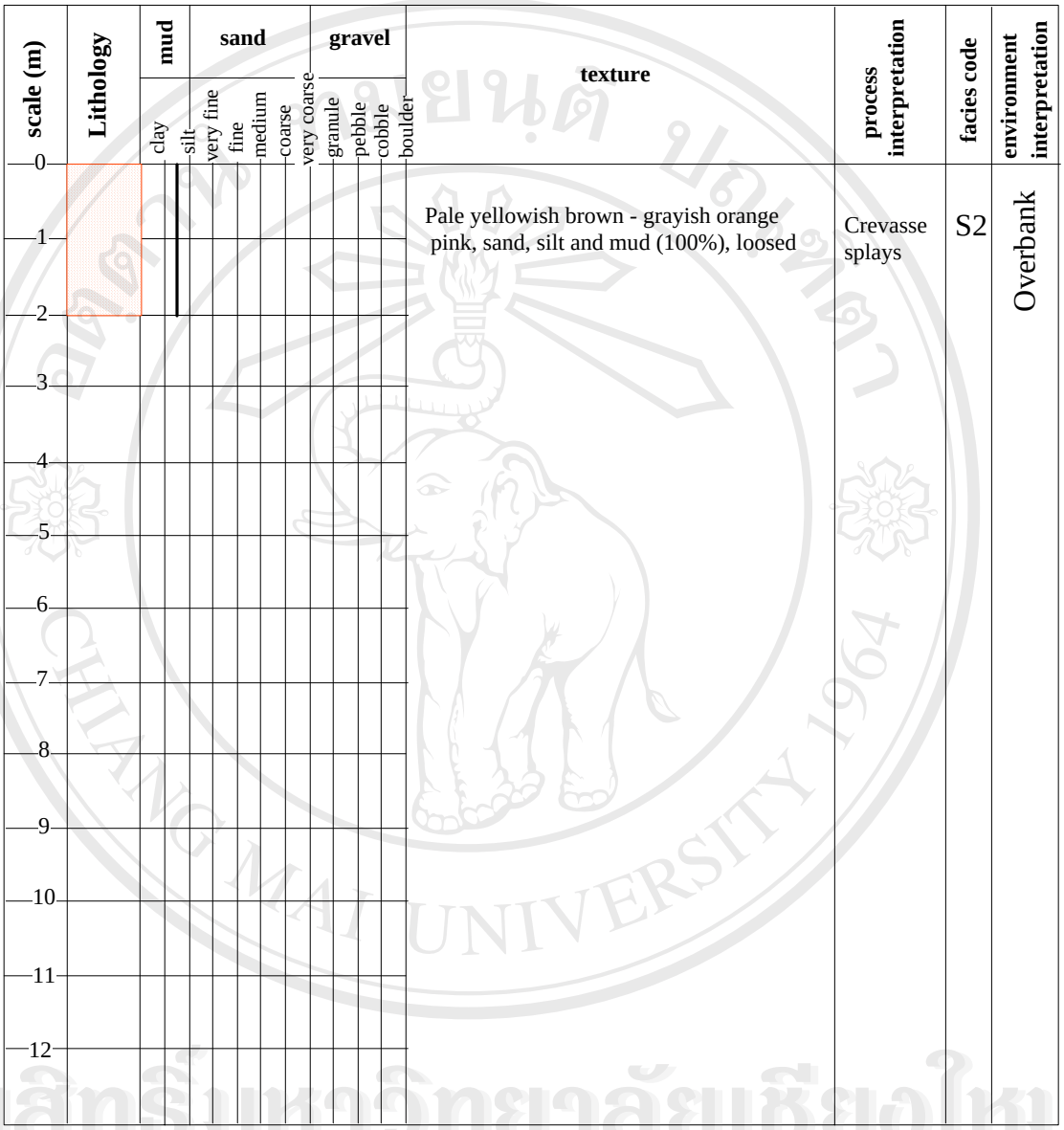
Sedimentary log : DMR B2 Ban: Tha Sawang Tambon: Non Samran
Grid: 480000 m E 1608900 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR B3 Ban: Non Khamkaew Tambon: Phaiboon
Grid: 482000 m E 1609100 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 2.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated
	G1(a)	
	G2	Massive or crudely bedded gravel
	G2(a)	
	G3	Gravel stratified
	G3(a)	

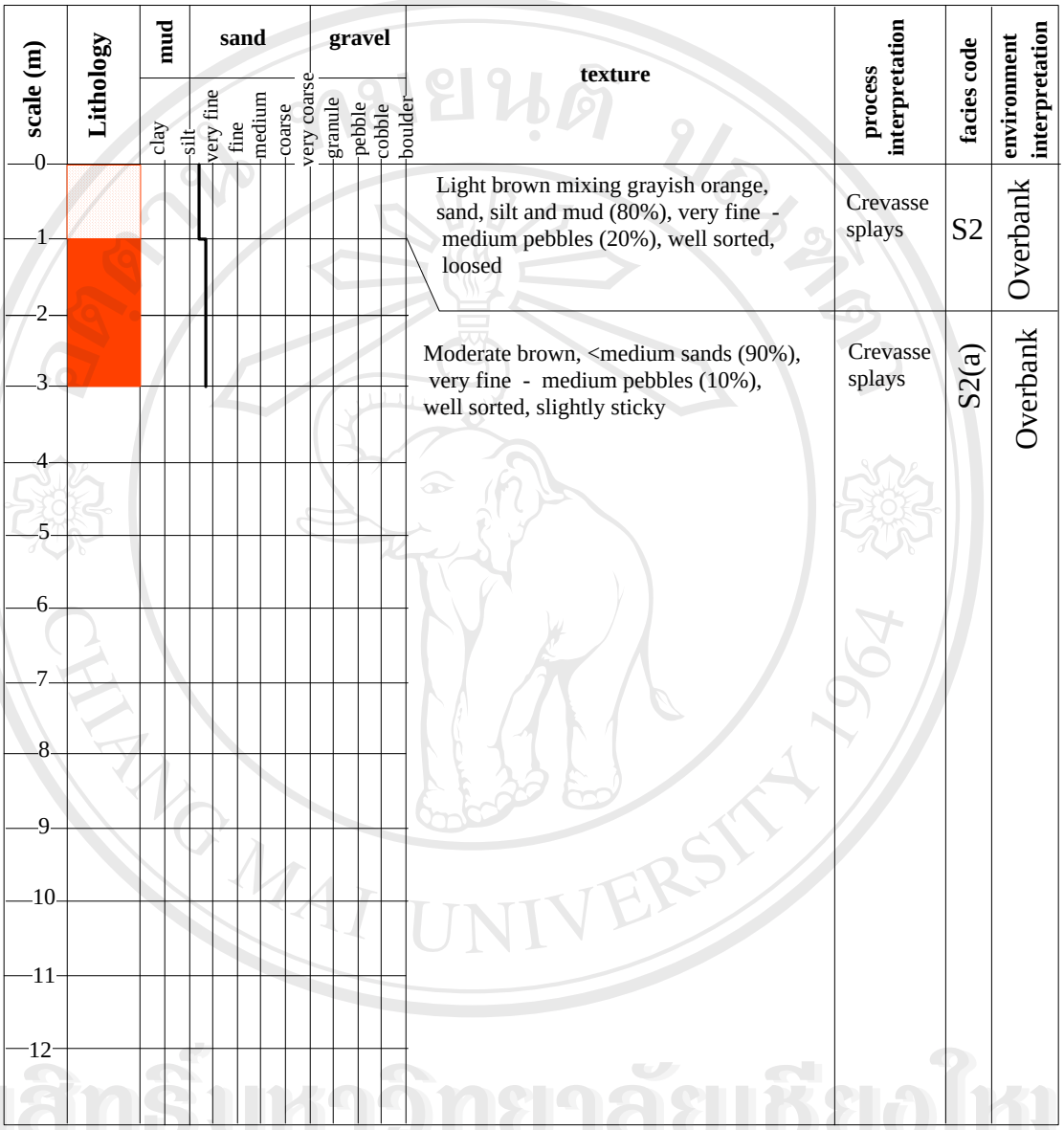
symbol	facies code	lithofacies
	S1	Horizontal to low angle bedded, fine to medium sand
	S1(a)	
	S2	Ripple - laminated, very fine to fine sand
	S2(a)	
	F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud
	F(a)	

symbol	facies code	lithofacies
	Bs	Hard rock, seen on surface
	Bs(a)	Clay, very sticky, most of them generate gemstones

Note:

(a) refer to lithofacies having same characteristics but older age

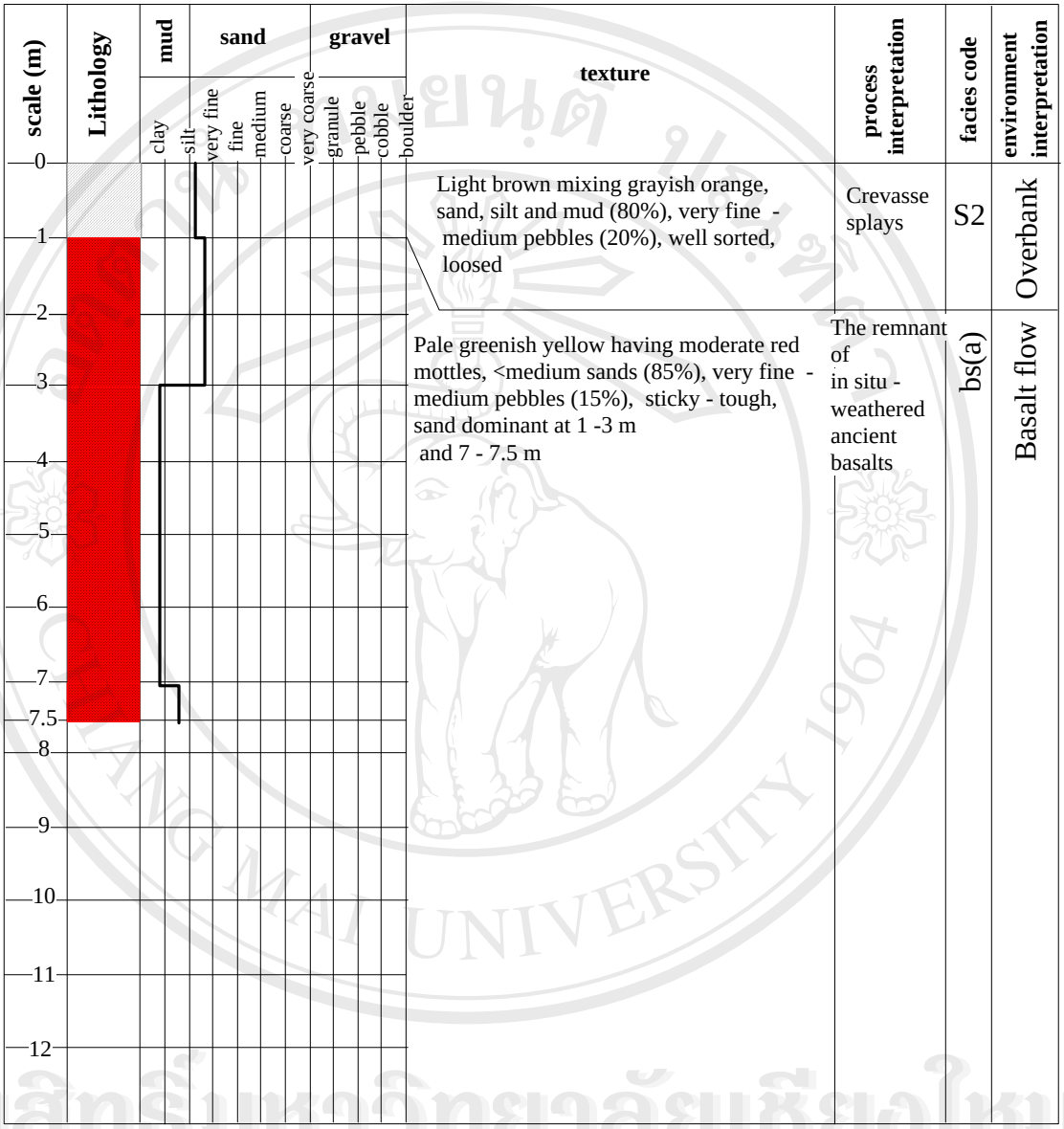
Sedimentary log : DMR B4 Ban: Non Khamkaew Tambon: Phaiboon
Grid: 481900 m E 1607800 mN Amphoe: Nam Yuen Changwat: Ubonratchathani
Map sheet: 5938 II Total thickness: 3.0 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

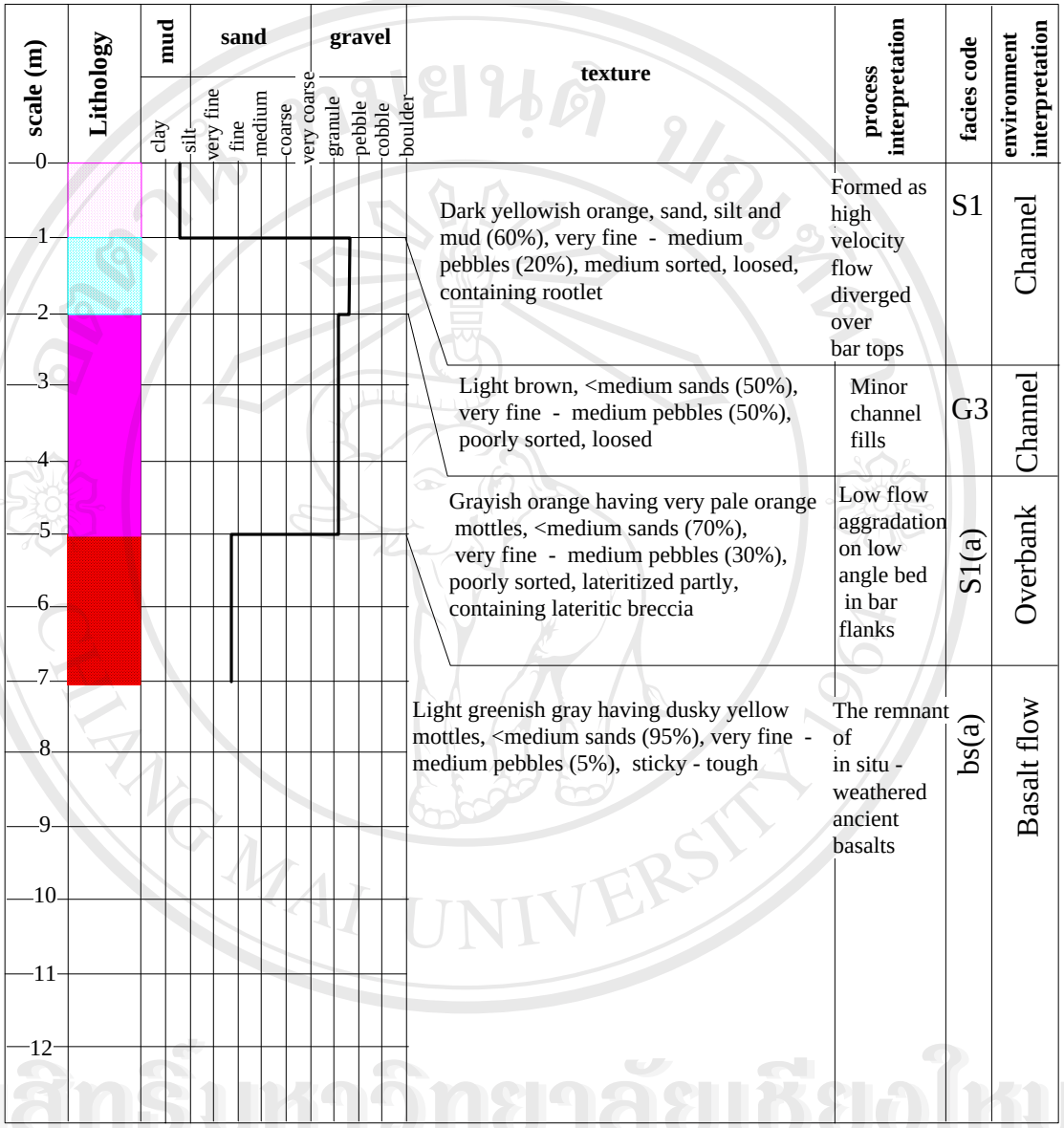
Sedimentary log : DMR B5 Ban: Non Khamkaew Tambon: Phaiboon
Grid: 482600 m E 1607600 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 7.5 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

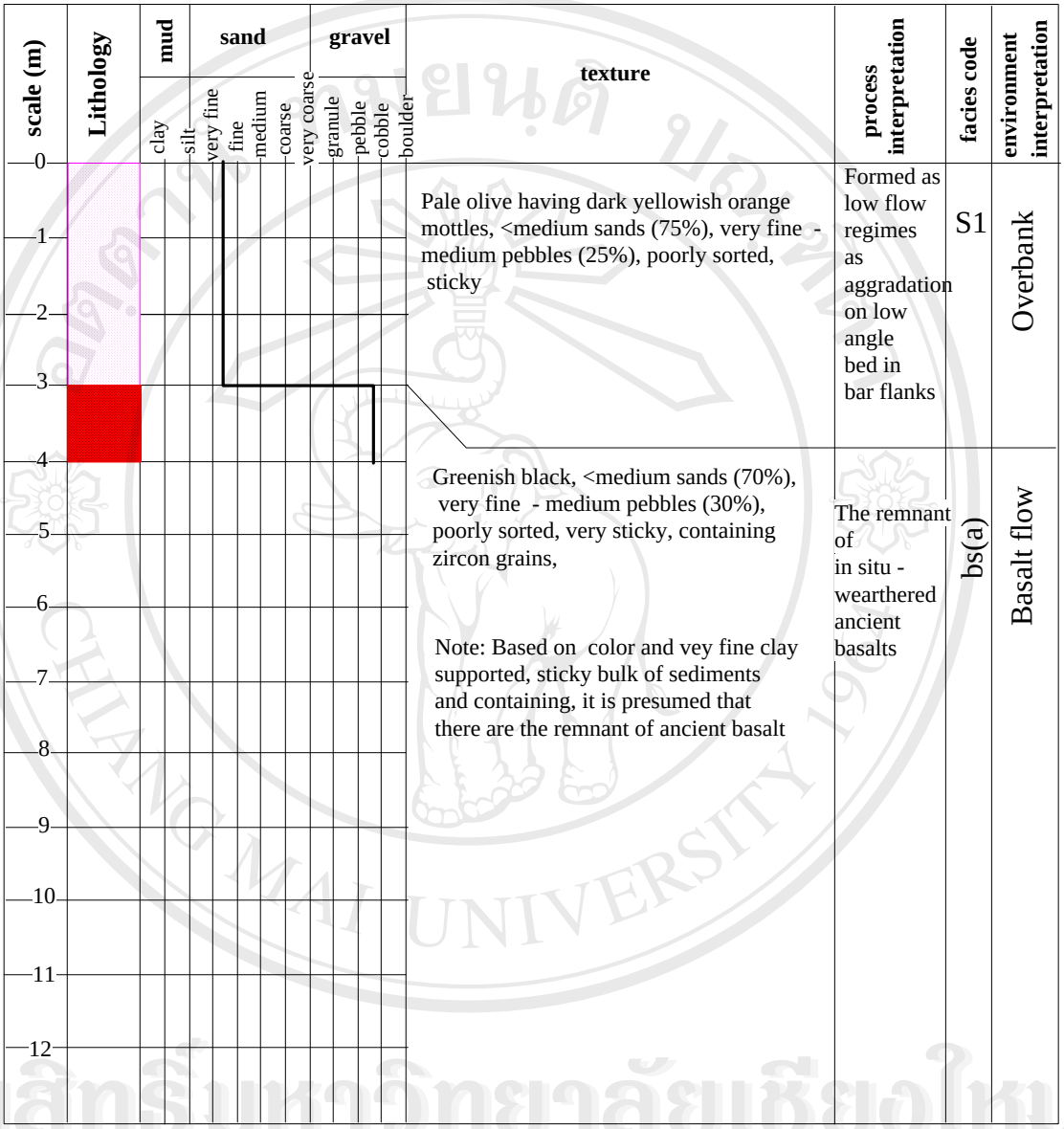
Sedimentary log : DMR B6 Ban: Non Khamkaew Tambon: Phaiboon
Grid: 483500 m E 1607500 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 7.0 meters From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

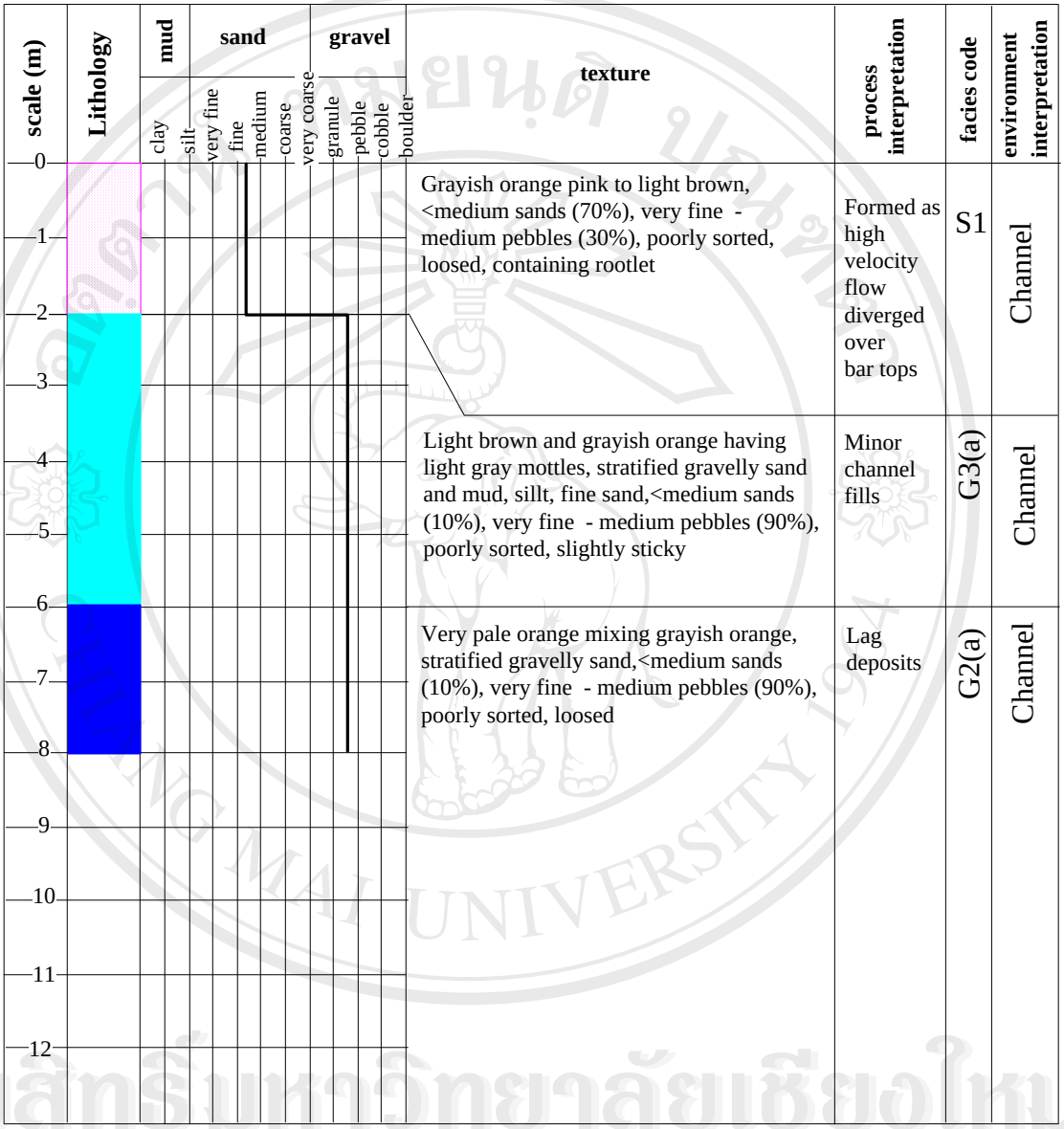
Sedimentary log : DMR B7 Ban: Non Khamkaew Tambon: Phaiboon
Grid: 483500 m E 1607800 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 4.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR B8 Ban: Huai Yang Tambon: Ta Kao
Grid: 484400 m E 1607400 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surfac

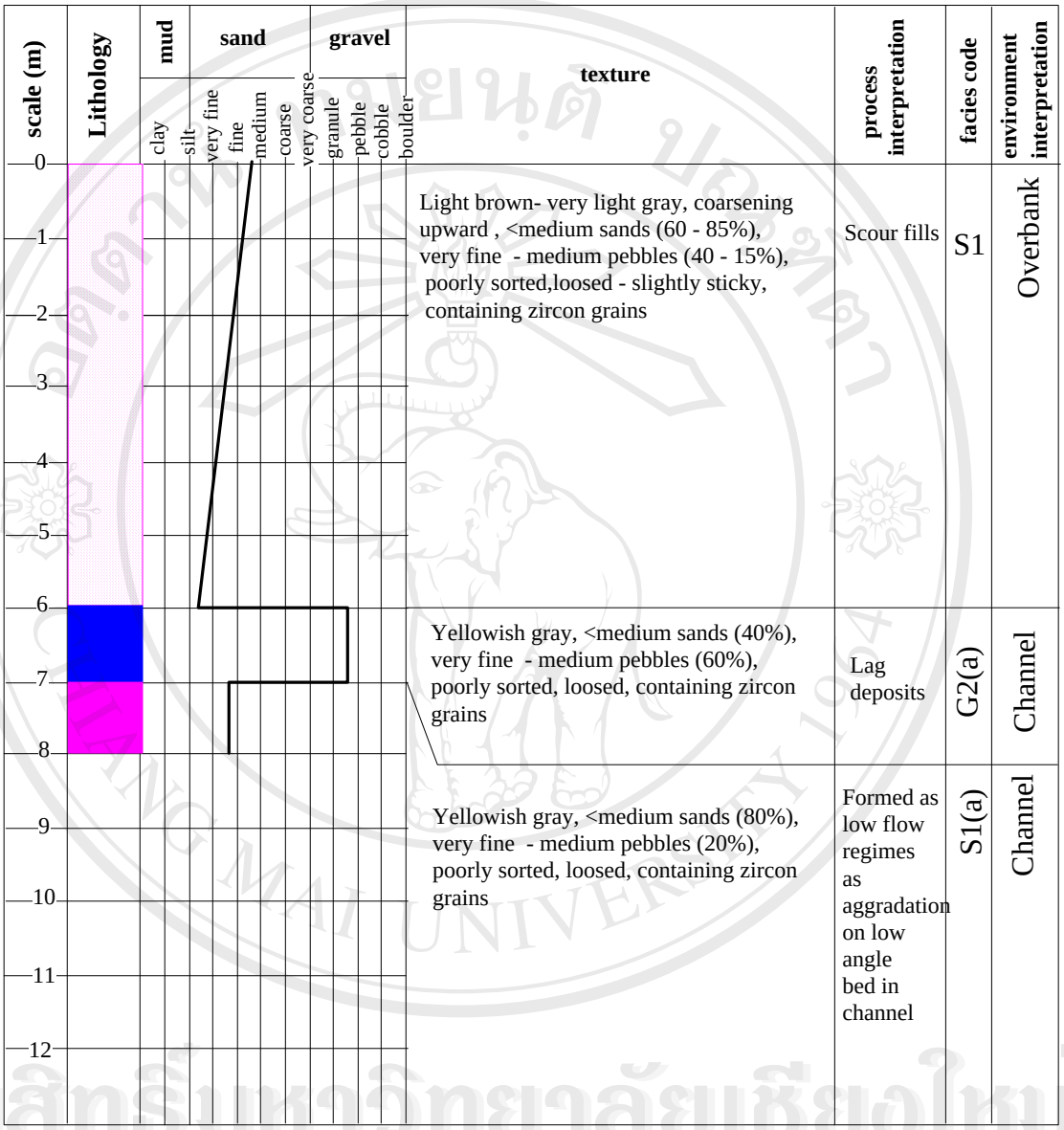


texture	process interpretation	facies code	environment interpretation
Grayish orange pink to light brown, <medium sands (70%), very fine - medium pebbles (30%), poorly sorted, loosed, containing rootlet	Formed as high velocity flow diverged over bar tops	S1	Channel
Light brown and grayish orange having light gray mottles, stratified gravelly sand and mud, sillt, fine sand,<medium sands (10%), very fine - medium pebbles (90%), poorly sorted, slightly sticky	Minor channel fills	G3(a)	Channel
Very pale orange mixing grayish orange, stratified gravelly sand,<medium sands (10%), very fine - medium pebbles (90%), poorly sorted, loosed	Lag deposits	G2(a)	Channel

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

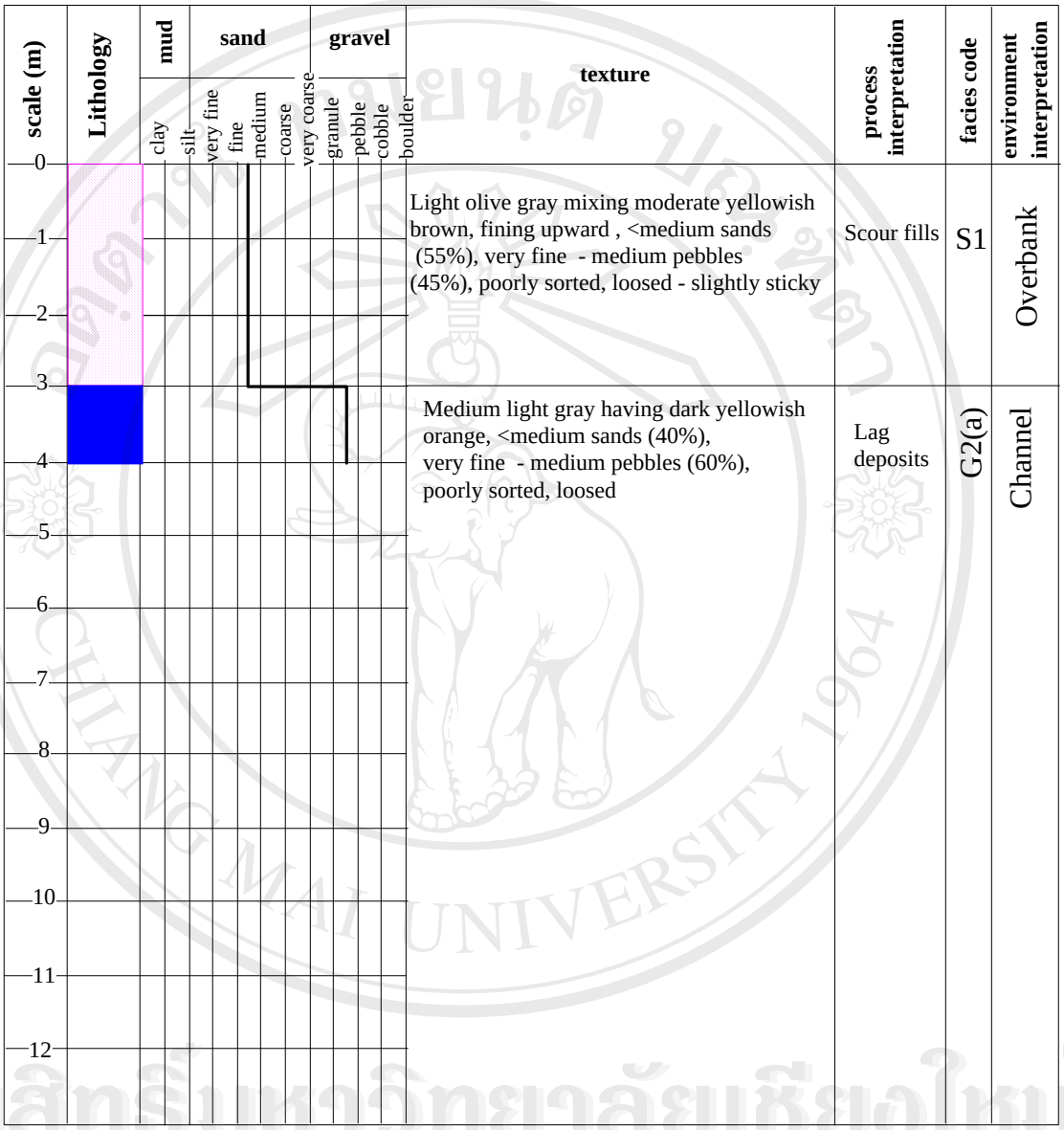
Sedimentary log : DMR B9 Ban: Huai Yang Tambon: Ta Kao
Grid: 484900 m E 1607400 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR B10 Ban: Ta Em Tambon: Phai Boon
Grid: 486000 m E 1607400 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 4.0 meters (From basement - rock surfac



texture	process interpretation	facies code	environment interpretation
Light olive gray mixing moderate yellowish brown, fining upward , <medium sands (55%), very fine - medium pebbles (45%), poorly sorted, loosed - slightly sticky	Scour fills	S1	Overbank
Medium light gray having dark yellowish orange, <medium sands (40%), very fine - medium pebbles (60%), poorly sorted, loosed	Lag deposits	G2(a)	Channel

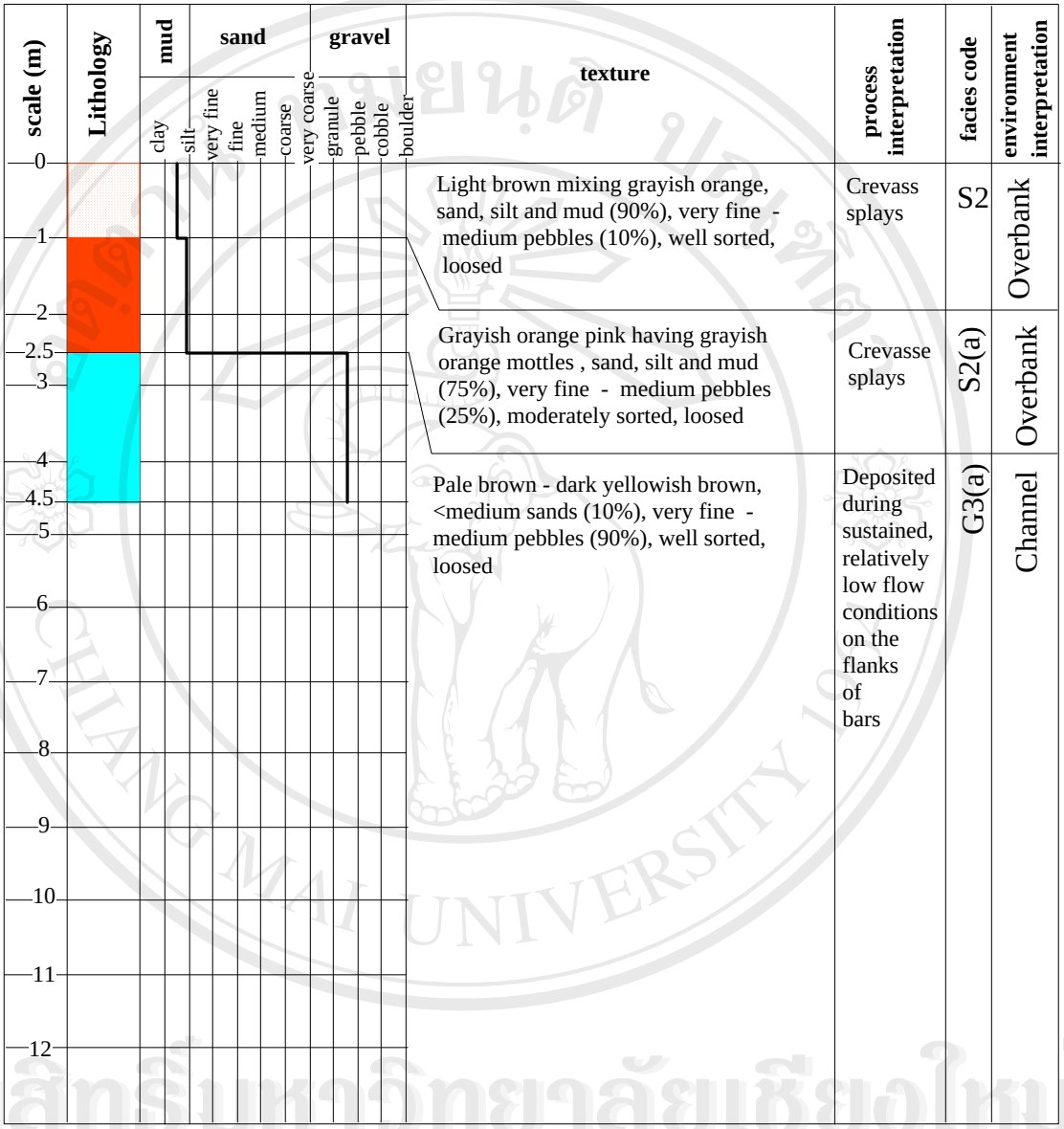
EXPLANATION

symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated
	G1(a)	
	G2	Massive or crudely bedded gravel
	G2(a)	
	G3	Gravel stratified
	G3(a)	
	S1	Horizontal to low angle bedded, fine to medium sand
	S1(a)	
	S2	Ripple - laminated, very fine to fine sand
	S2(a)	
	F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud
	F(a)	
	Bs	Hard rock, seen on surface
	Bs(a)	Clay, very sticky, most of them generate gemstones

Note:

(a) refer to lithofacies having same characteristics but older age

Sedimentary log : DMR C1 Ban: Chan Hom Tambon: Non Samran
Grid: 481900 m E 1605700 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 4.5 meters (From basement - rock surfac

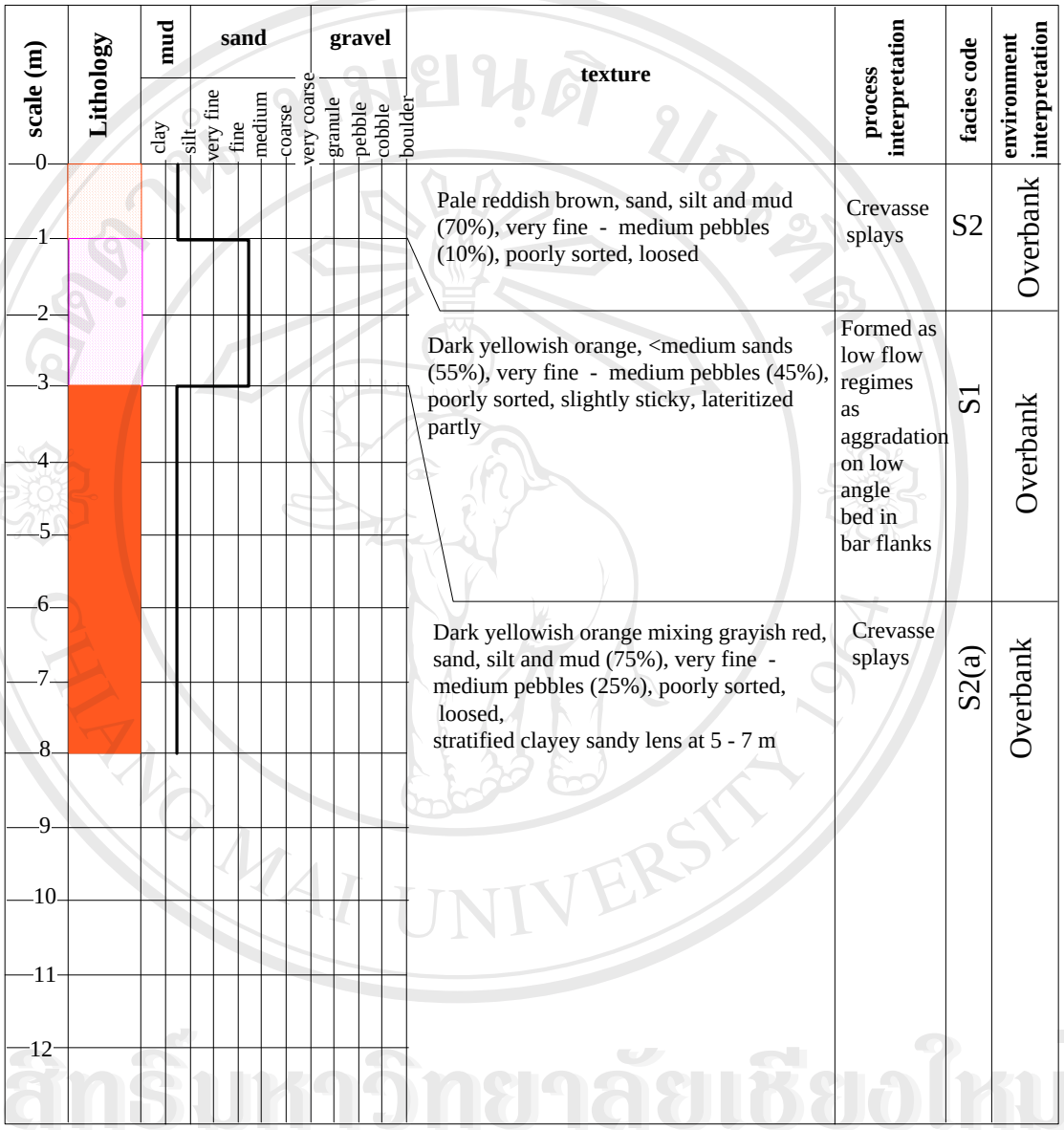


texture	process interpretation	facies code	environment interpretation
Light brown mixing grayish orange, sand, silt and mud (90%), very fine - medium pebbles (10%), well sorted, loosed	Crevass splays	S2	Overbank
Grayish orange pink having grayish orange mottles , sand, silt and mud (75%), very fine - medium pebbles (25%), moderately sorted, loosed	Crevasse splays	S2(a)	Overbank
Pale brown - dark yellowish brown, <medium sands (10%), very fine - medium pebbles (90%), well sorted, loosed	Deposited during sustained, relatively low flow conditions on the flanks of bars	G3(a)	Channel

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR C2 Ban: Ta Sek Tambon: Non Samran
Grid: 482800 m E 1605200 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface

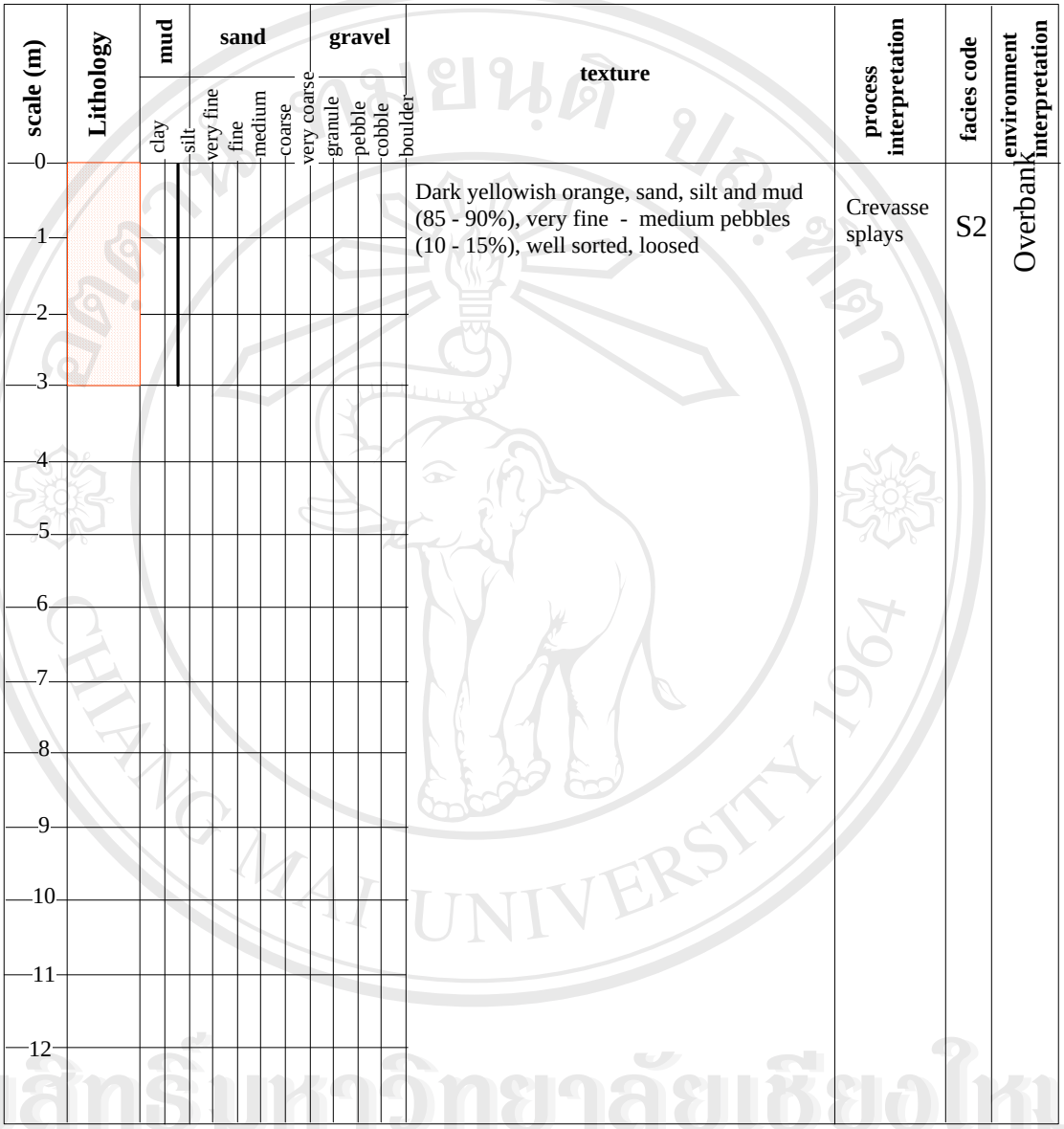


texture	process interpretation	facies code	environment interpretation
Pale reddish brown, sand, silt and mud (70%), very fine - medium pebbles (10%), poorly sorted, loosed	Crevasse splays	S2	Overbank
Dark yellowish orange, <medium sands (55%), very fine - medium pebbles (45%), poorly sorted, slightly sticky, lateritized partly	Formed as low flow regimes as aggradation on low angle bed in bar flanks	S1	Overbank
Dark yellowish orange mixing grayish red, sand, silt and mud (75%), very fine - medium pebbles (25%), poorly sorted, loosed, stratified clayey sandy lens at 5 - 7 m	Crevasse splays	S2(a)	Overbank

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note: (a) refer to lithofacies having same characteristics but older age		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

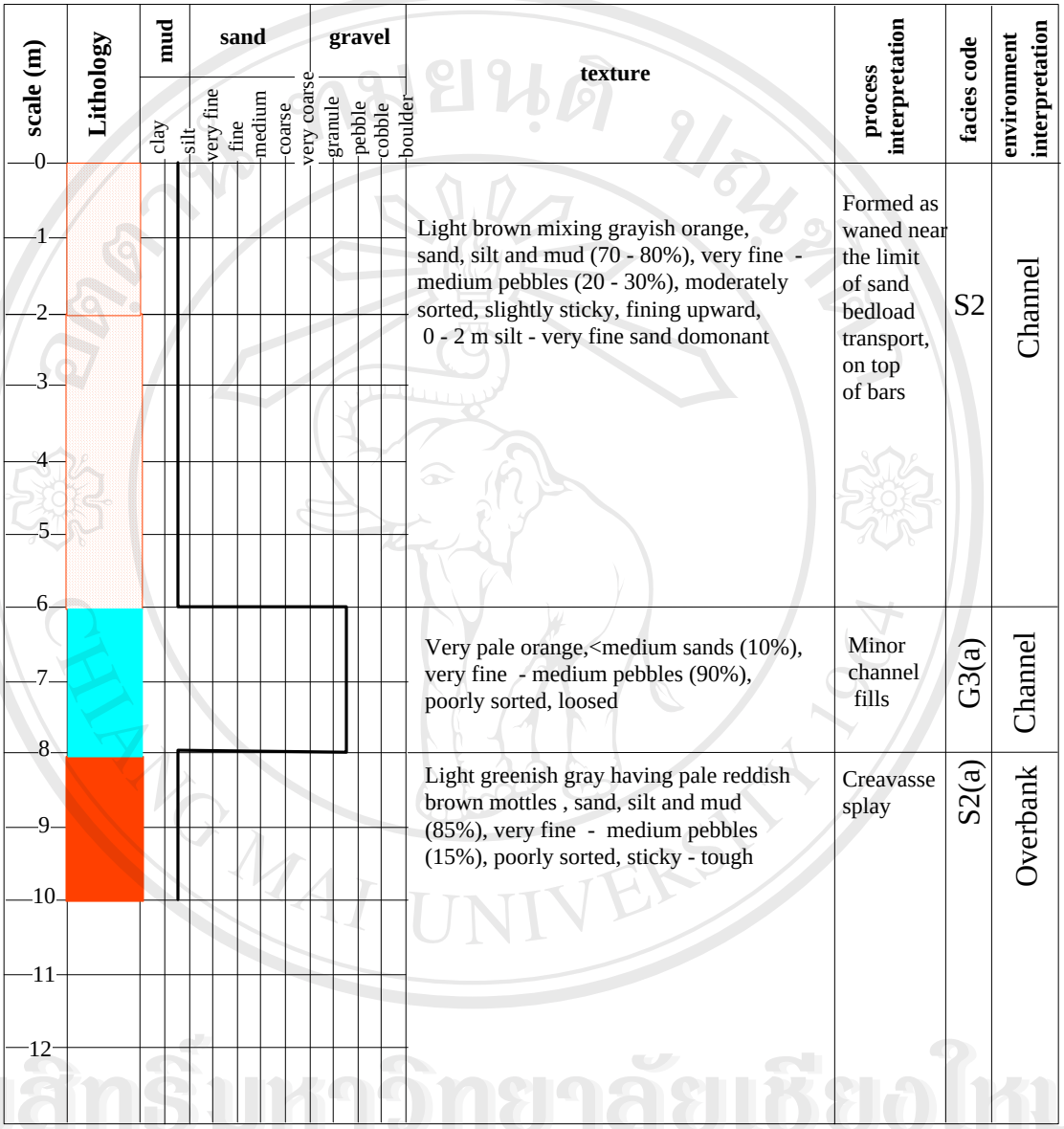
Sedimentary log : DMR C3 Ban: Ta Sek Tambon: Non Samran
Grid: 483400 m E 1605350 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 3.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note:		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	(a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

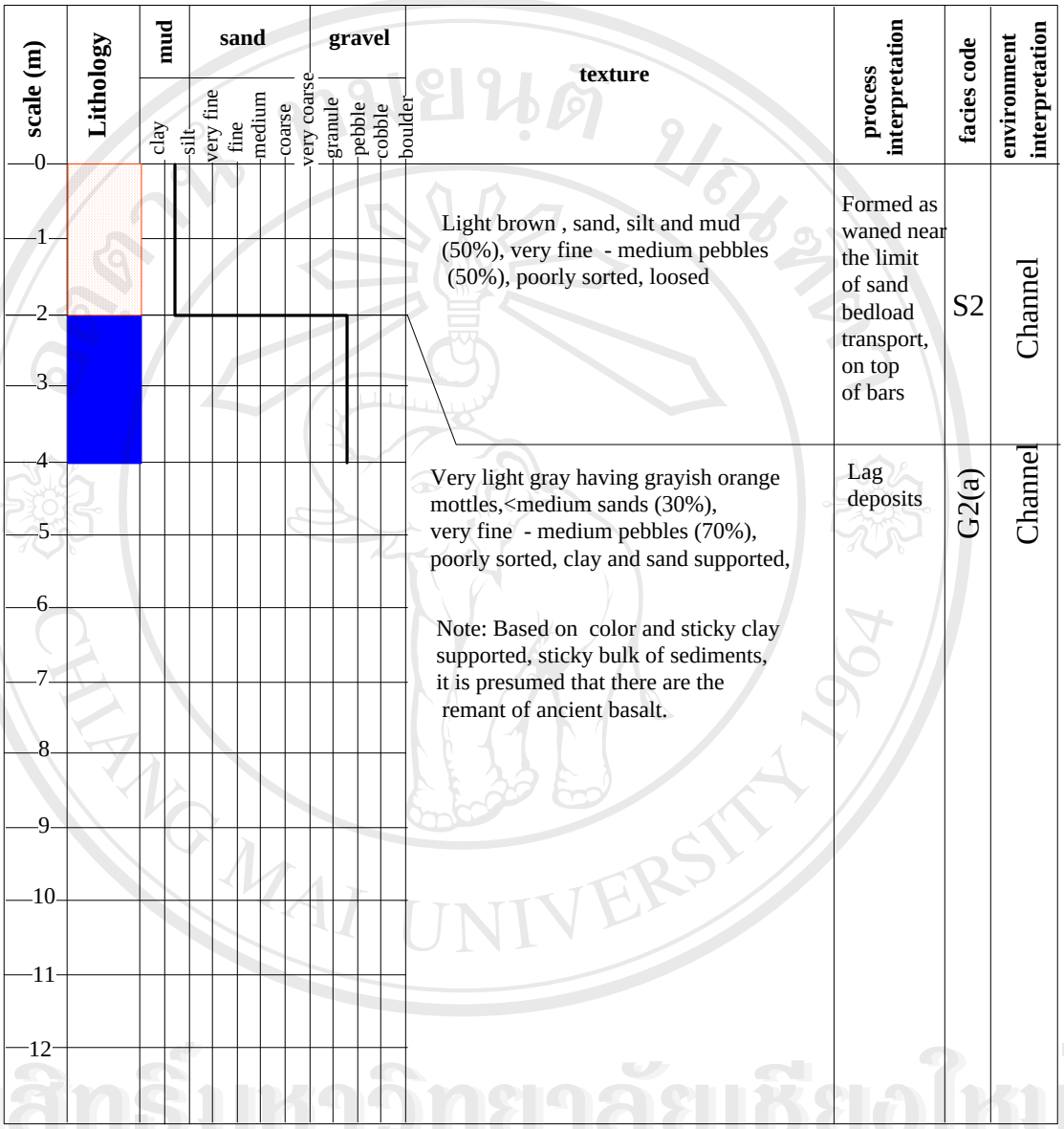
Sedimentary log : DMR C4 Ban: Na Charoen Tambon: Khok Sa-ard
Grid: 483900 m E 1604900 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

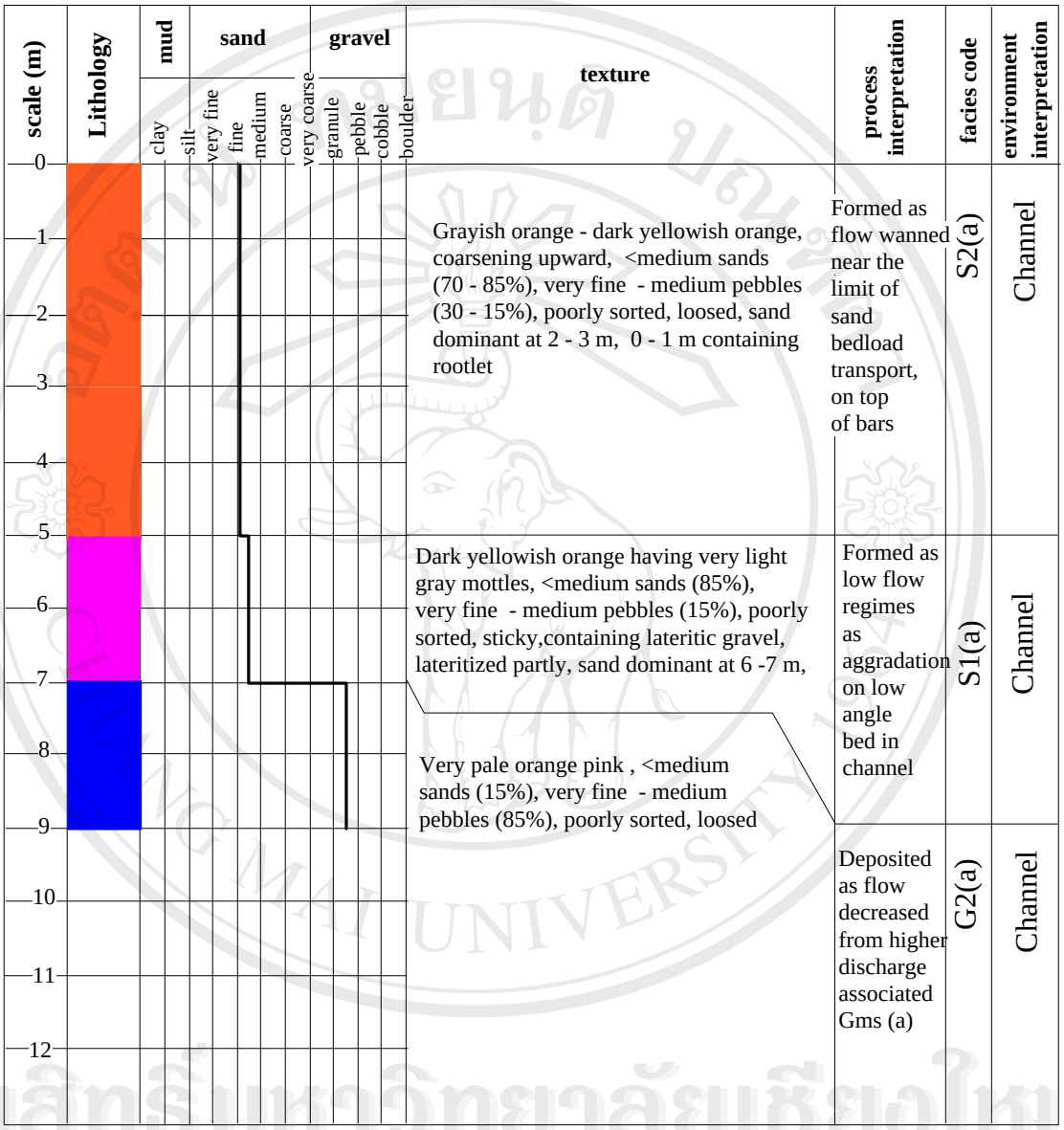
Sedimentary log : DMR C5 Ban:Khok Sa-ard Tambon: Khok Sa-ard
Grid: 484800 m E 1605300 mN Amphoe: Nam Yuen Changwat: Ubonr Rtchathani
Map sheet: 5938 II Total thickness: 4.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

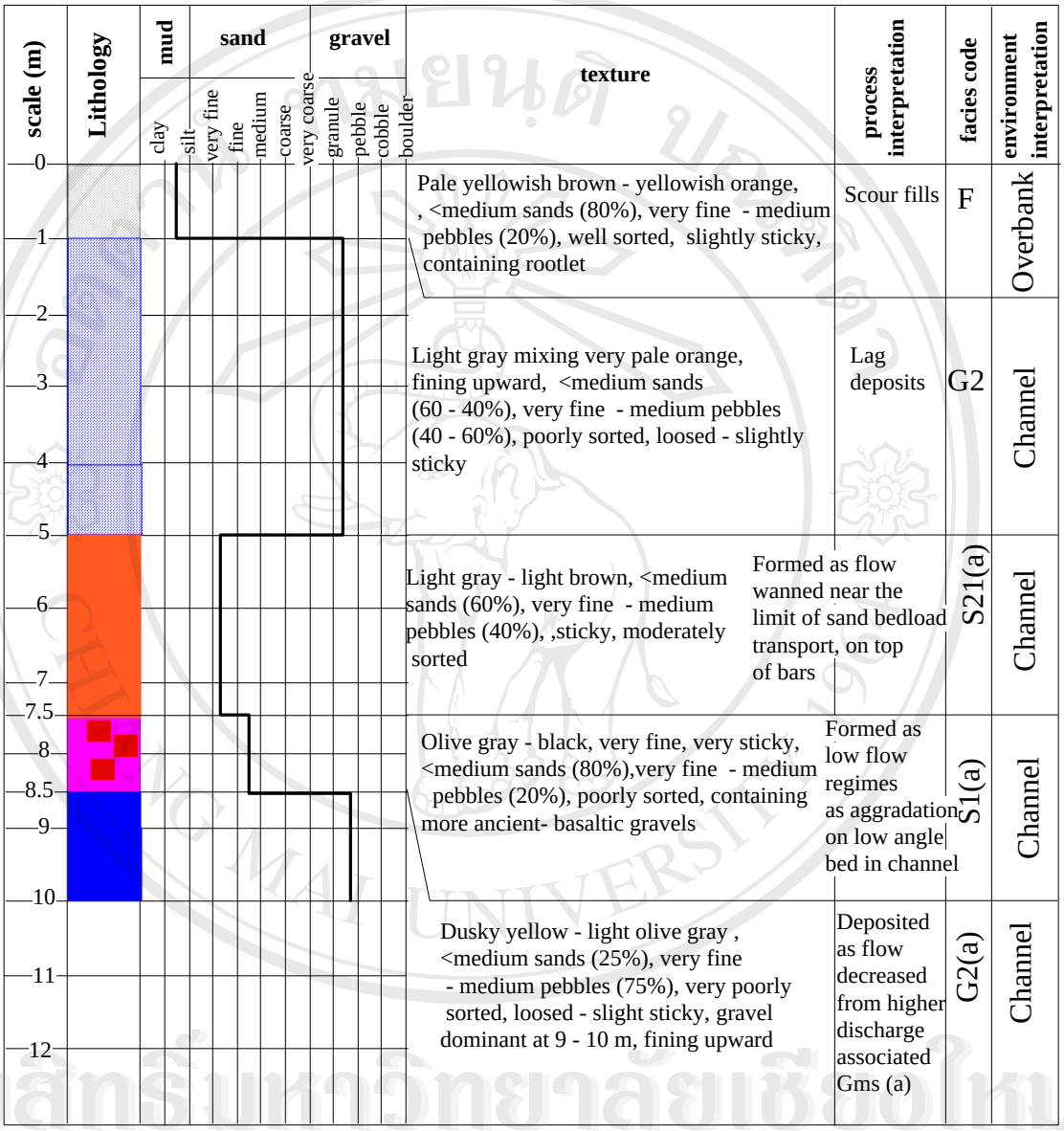
Sedimentary log : DMR D1 Ban: Dan Tambon: Phu Pha Mok
Grid: 484500 m E 1602700 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 9.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

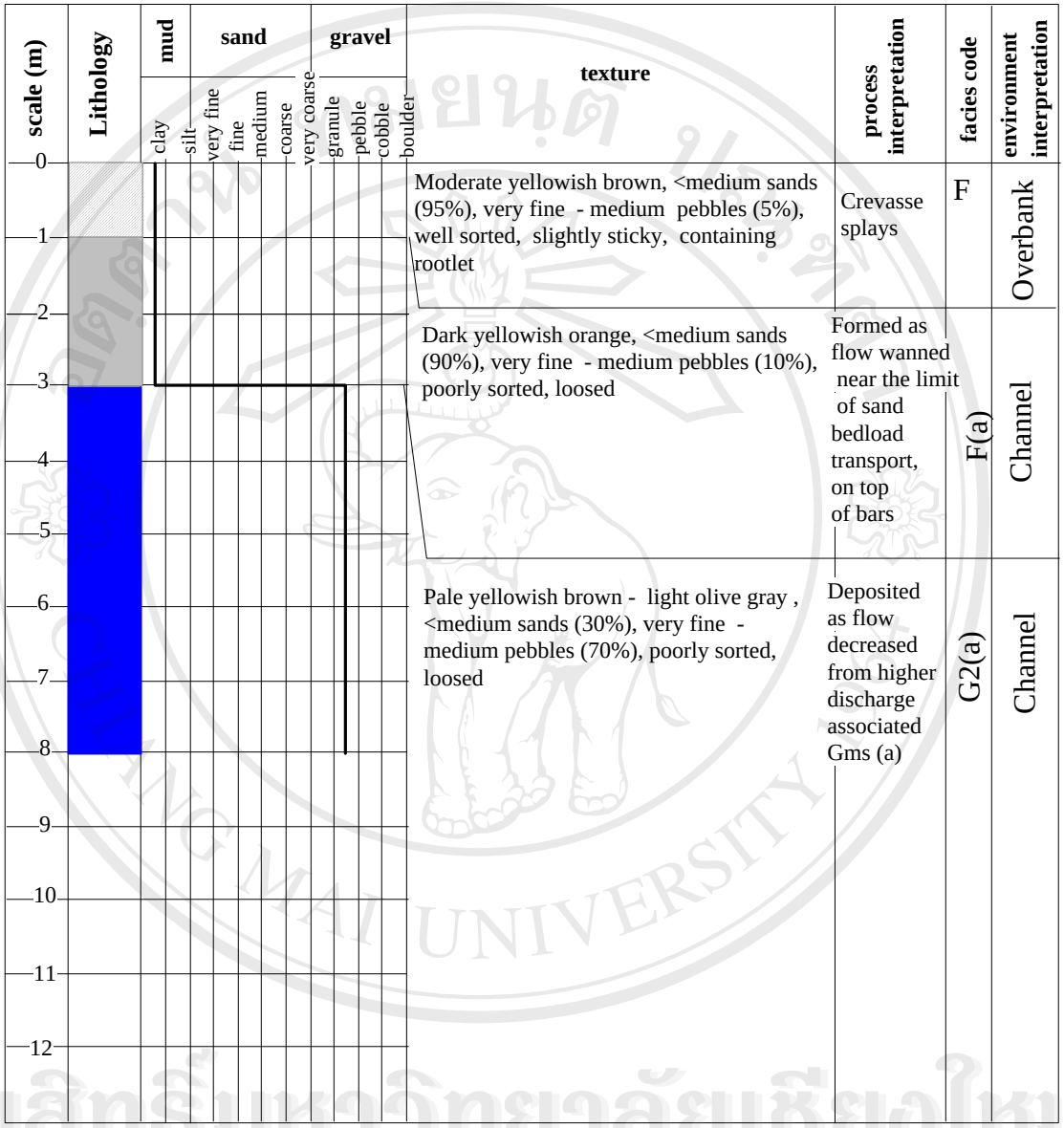
Sedimentary log : DMR D2 Ban: Ta Sek Tambon: Non Samran
Grid: 484500 m E 1602700 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 10.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

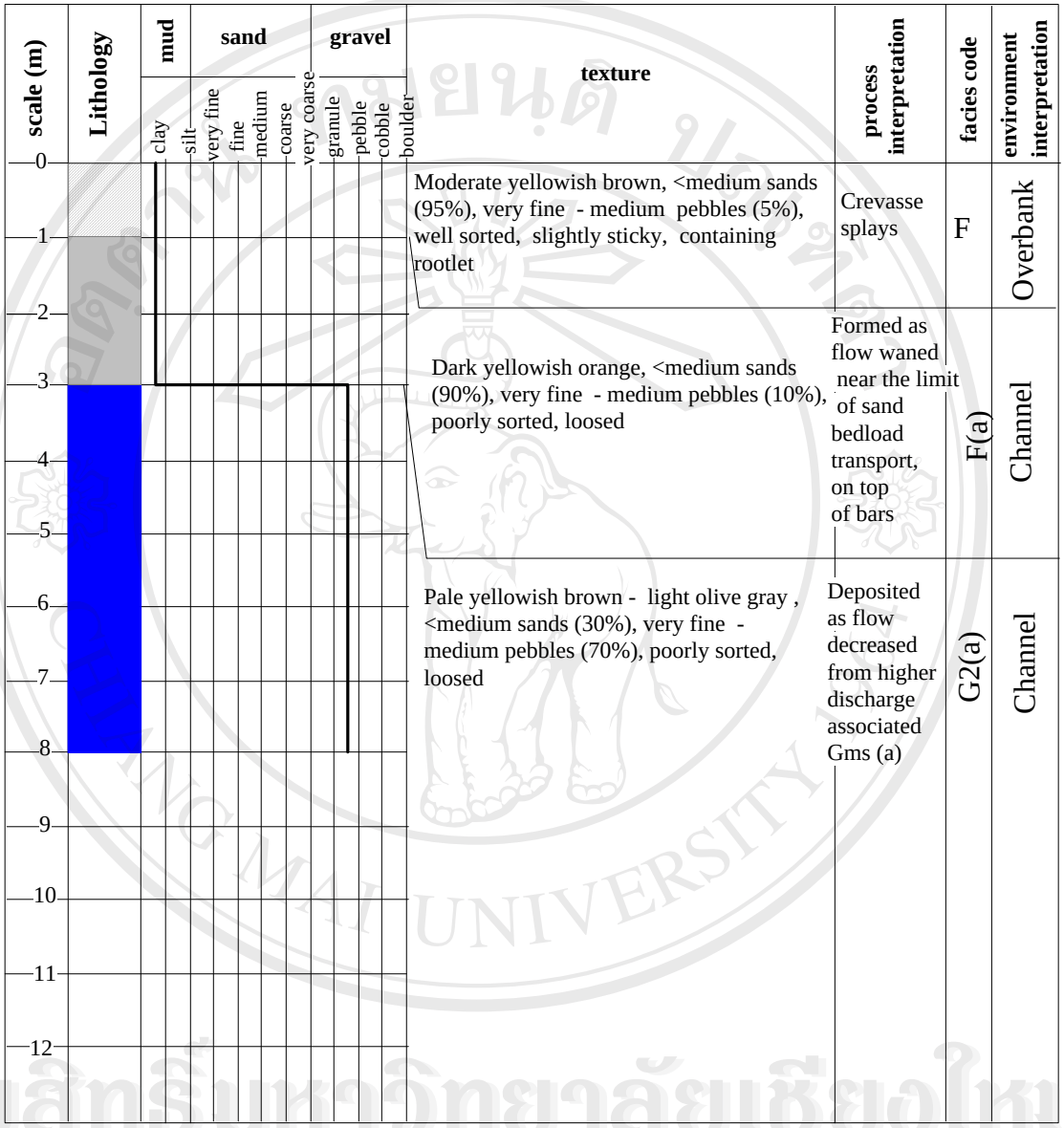
Sedimentary log : DMR D3 Ban: Khok Sa - ard Tambon: Khok Sa - ard
Grid: 484800 m E 1603600 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

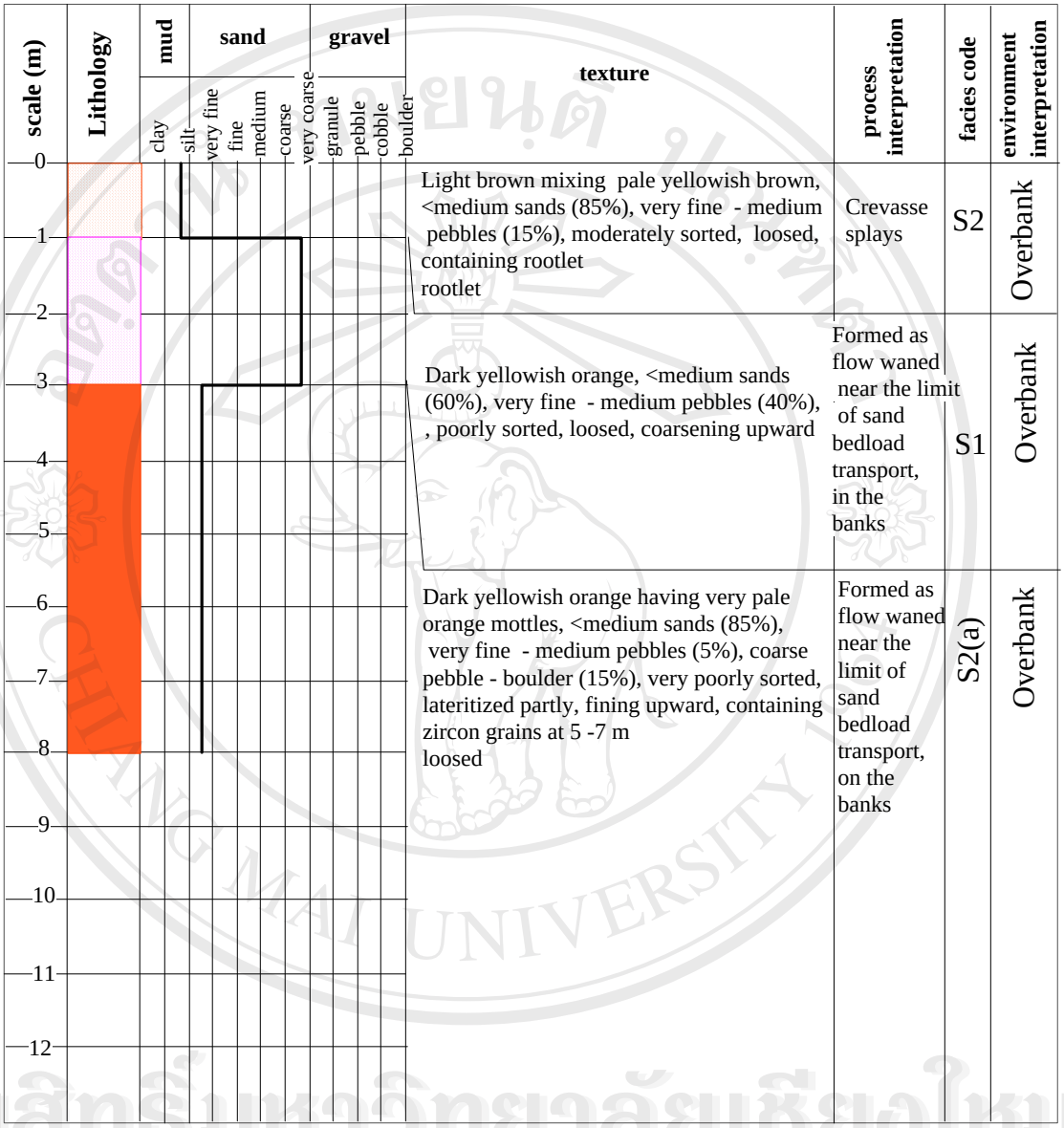
Sedimentary log : DMR D4 Ban: Khok Sa - ard Tambon: Khok Sa - ard
Grid: 485700 m E 1604200 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

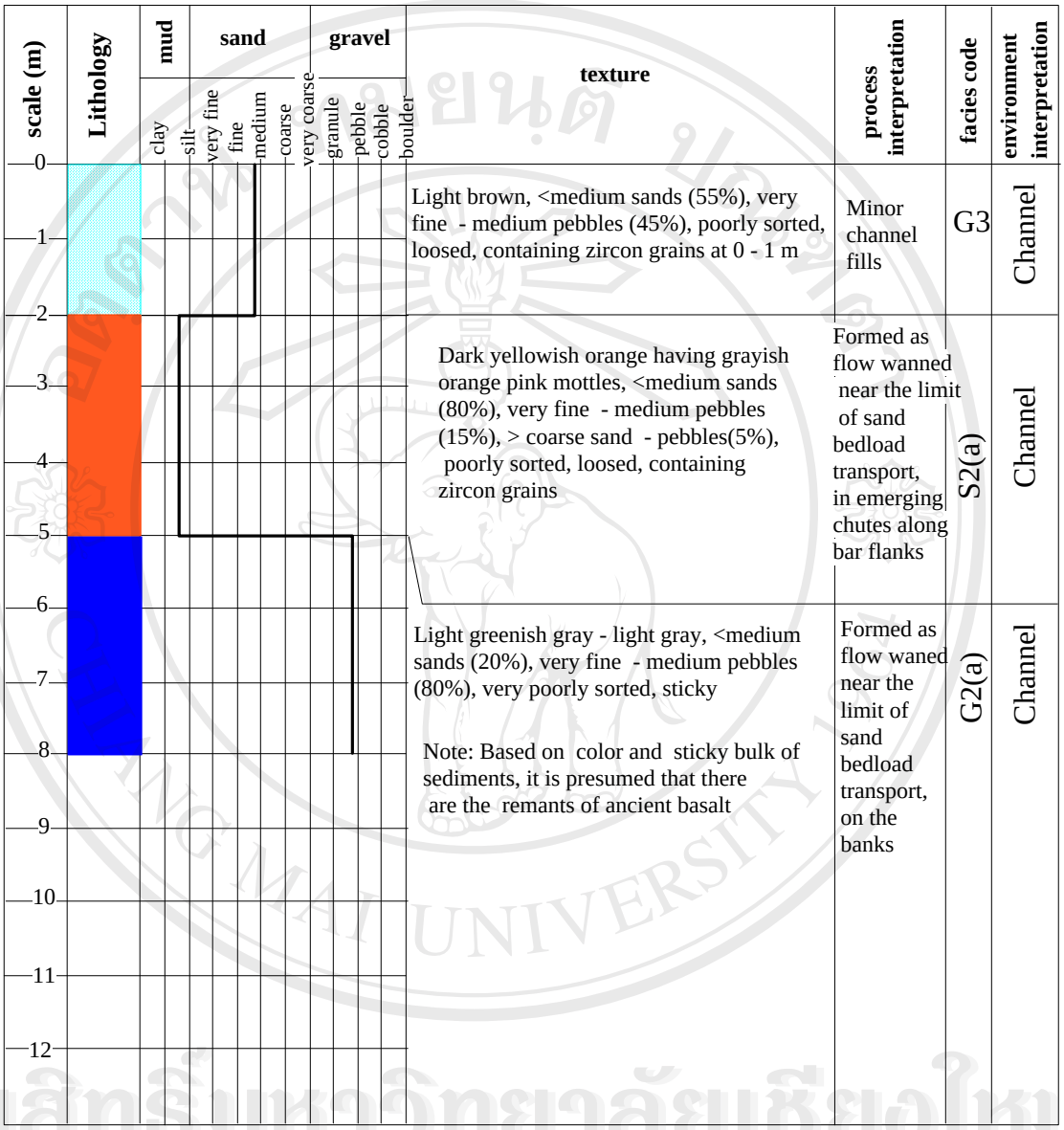
Sedimentary log : DMR D5 Ban: Khok Sa - ard Tambon: Khok Sa - ard
Grid: 485700 m E 1604200 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR D6 Ban: Non Sa - nga Tambon: Khok Sa - ard
Grid: 486700 m E 1604100 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surface

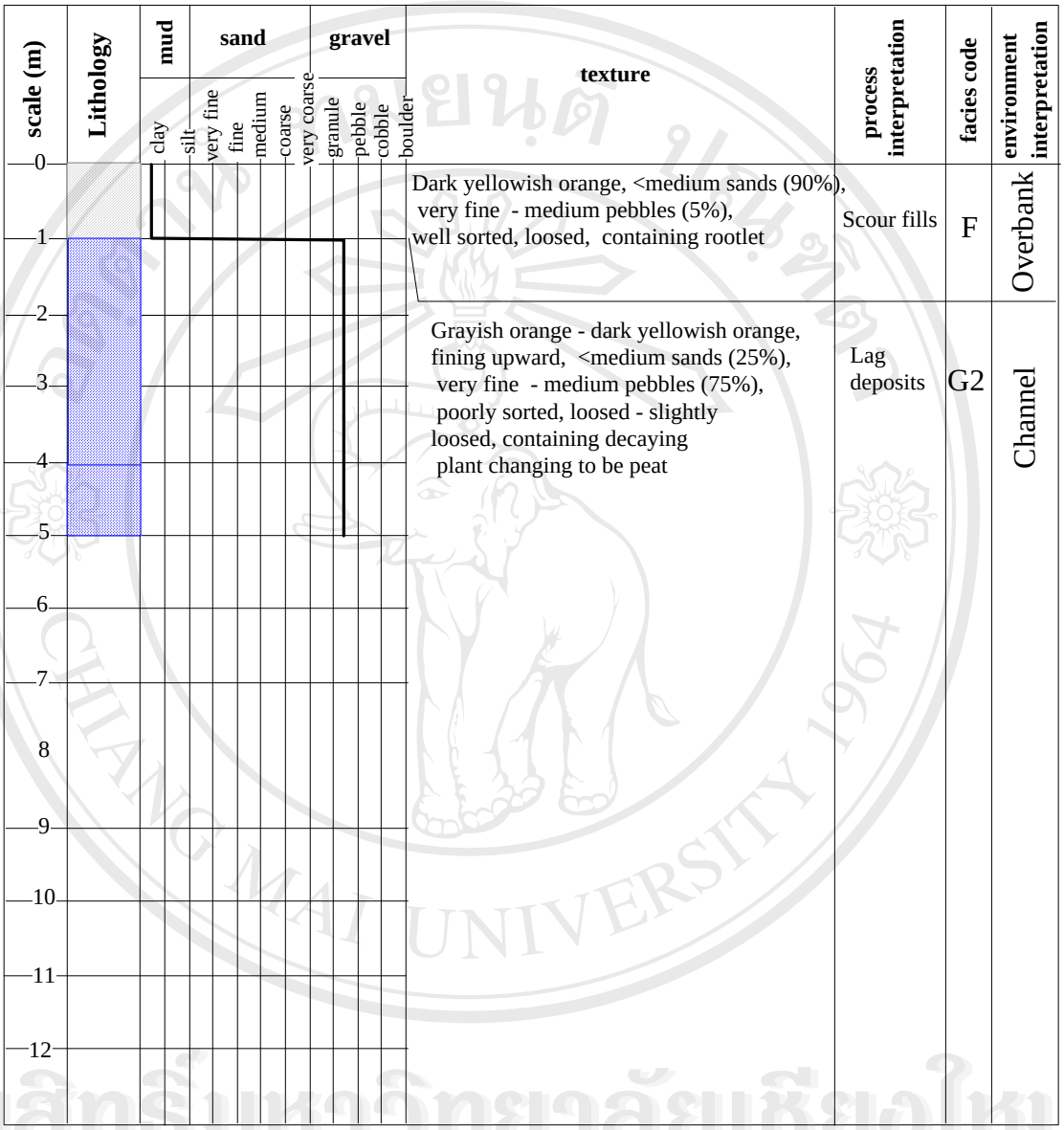


texture	process interpretation	facies code	environment interpretation
Light brown, <medium sands (55%), very fine - medium pebbles (45%), poorly sorted, loosed, containing zircon grains at 0 - 1 m	Minor channel fills	G3	Channel
Dark yellowish orange having grayish orange pink mottles, <medium sands (80%), very fine - medium pebbles (15%), > coarse sand - pebbles(5%), poorly sorted, loosed, containing zircon grains	Formed as flow wanned near the limit of sand bedload transport, in emerging chutes along bar flanks	S2(a)	Channel
Light greenish gray - light gray, <medium sands (20%), very fine - medium pebbles (80%), very poorly sorted, sticky Note: Based on color and sticky bulk of sediments, it is presumed that there are the remants of ancient basalt	Formed as flow waned near the limit of sand bedload transport, on the banks	G2(a)	Channel

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

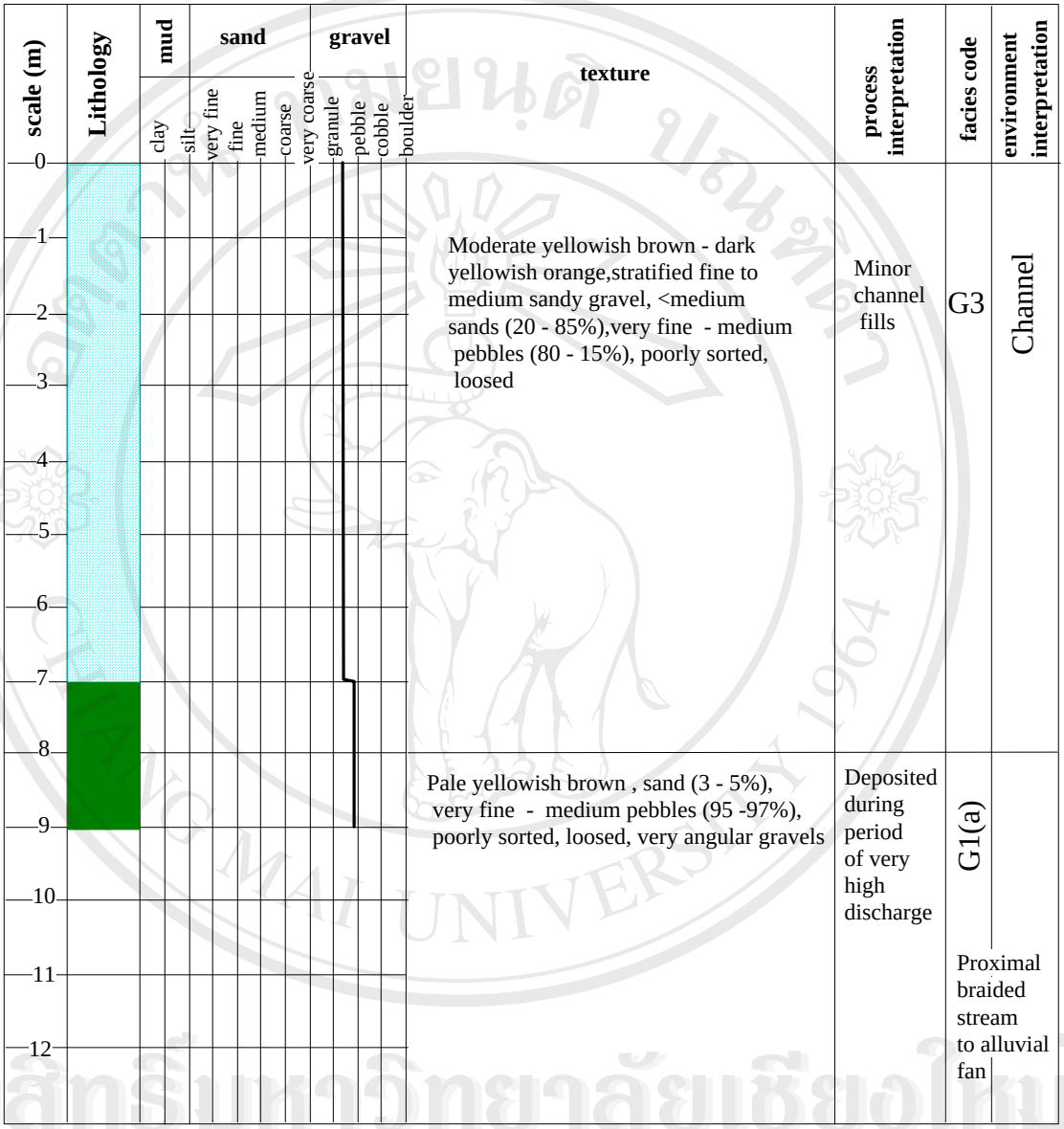
Sedimentary log : DMR D8 Ban: Khok Sa - ard Tambon: Khok Sa - ard
Grid: 485100 m E 1602950 mN Amphoe: Nam Yuen Changwat Ubon Ratchathani
Map sheet: 5938 II Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

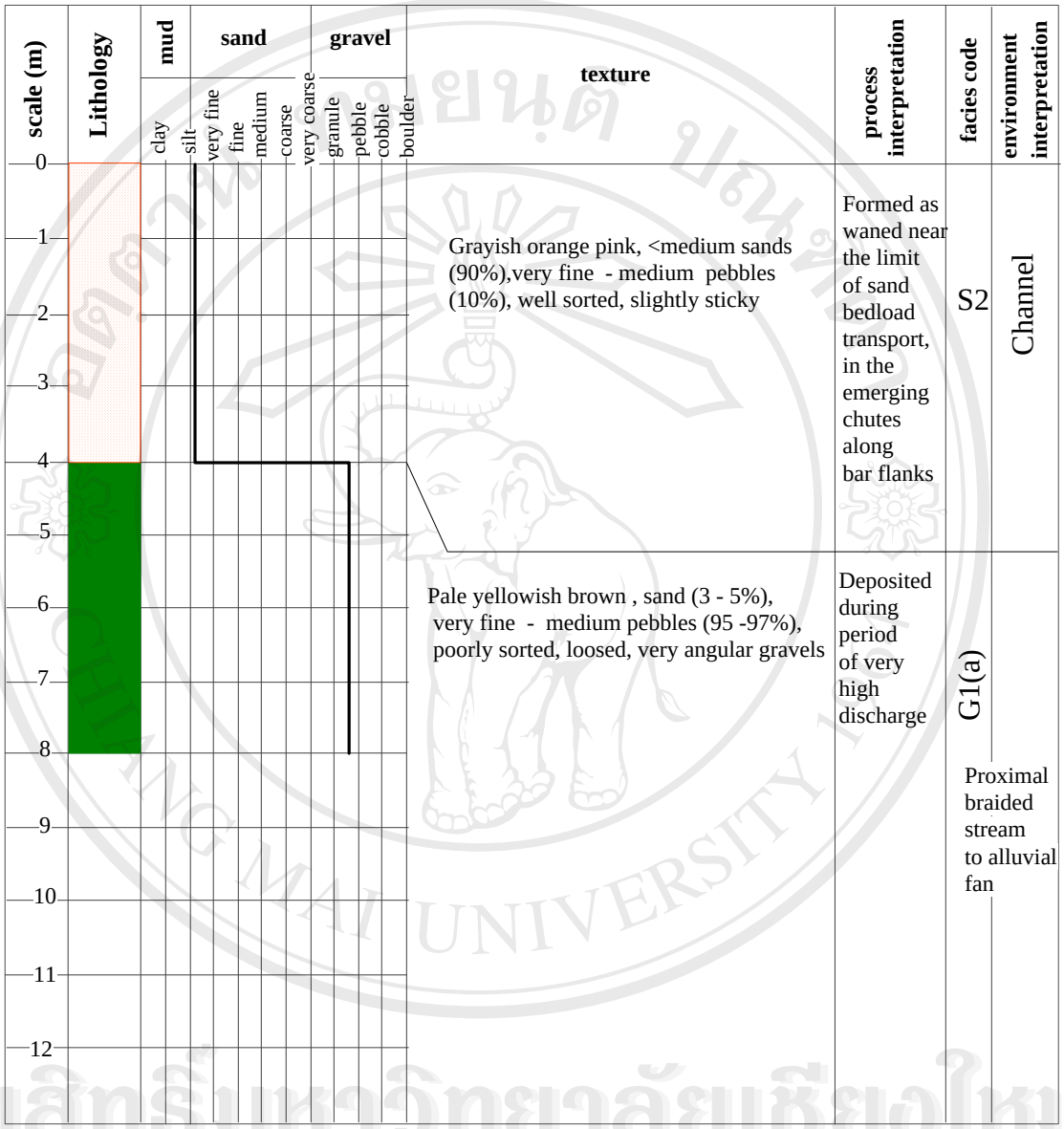
Sedimentary log : DMR D9 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 483950 m E 1604300 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathan
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

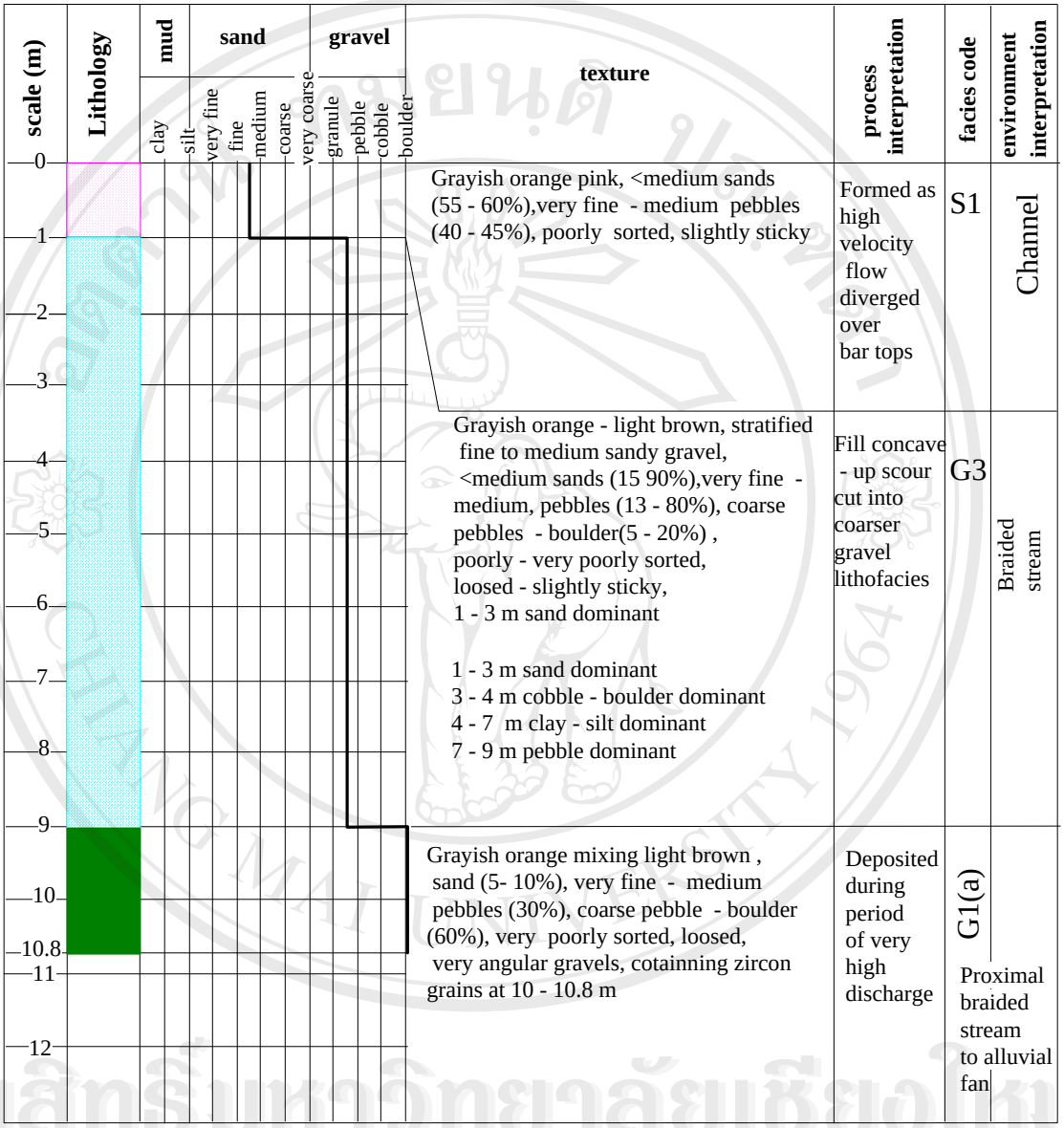
Sedimentary log : DMR D10 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 484150 m E 1604310 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 8.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note: (a) refer to lithofacies having same characteristics but older age		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt			
	G3(a)			F(a)	- Sand, silt, mud			

Sedimentary log : DMR D11 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 484500 m E 1604300 mN Amphoe: Nam Yuen Changwat: Ubonratchathani
Map sheet: 5938 II Total thickness: 10.8 meters (From basement - rock surfac



texture	process interpretation	facies code	environment interpretation
Grayish orange pink, <medium sands (55 - 60%),very fine - medium pebbles (40 - 45%), poorly sorted, slightly sticky	Formed as high velocity flow diverged over bar tops	S1	Channel
Grayish orange - light brown, stratified fine to medium sandy gravel, <medium sands (15 90%),very fine - medium, pebbles (13 - 80%), coarse pebbles - boulder(5 - 20%) , poorly - very poorly sorted, loosed - slightly sticky, 1 - 3 m sand dominant 1 - 3 m sand dominant 3 - 4 m cobble - boulder dominant 4 - 7 m clay - silt dominant 7 - 9 m pebble dominant	Fill concave - up scour cut into coarser gravel lithofacies	G3	Braided stream
Grayish orange mixing light brown , sand (5- 10%), very fine - medium pebbles (30%), coarse pebble - boulder (60%), very poorly sorted, loosed, very angular gravels, cotainning zircon grains at 10 - 10.8 m	Deposited during period of very high discharge	G1(a)	Proximal braided stream to alluvial fan

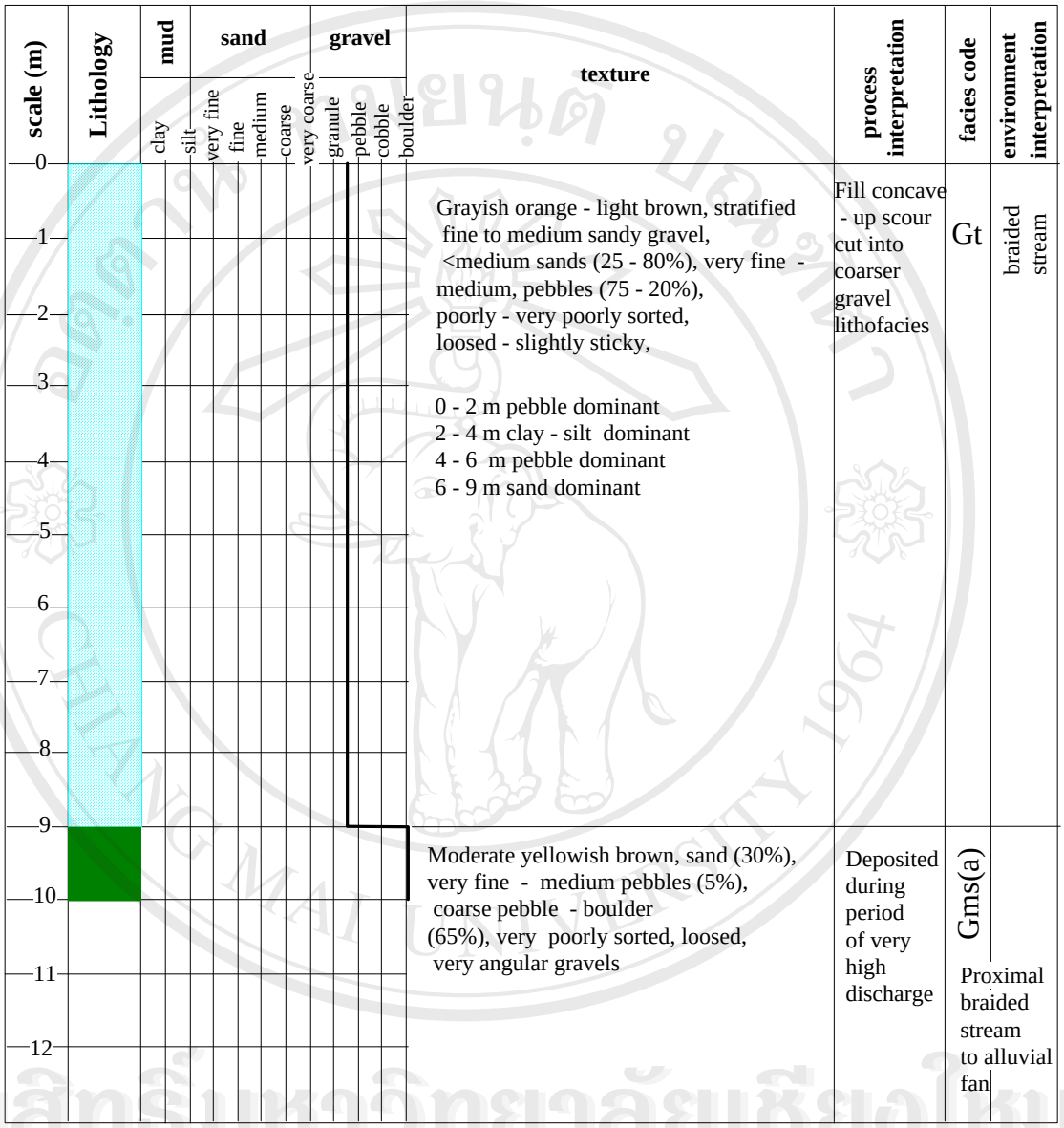
EXPLANATION

symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated
	G1(a)	
	G2	Massive or crudely bedded gravel
	G2(a)	
	G3	Gravel stratified
	G3(a)	
	S1	Horizontal to low angle bedded, fine to medium sand
	S1(a)	
	S2	Ripple - laminated, very fine to fine sand
	S2(a)	
	F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud
	F(a)	
	Bs	Hard rock, seen on surface
	Bs(a)	Clay, very sticky, most of them generate gemstones

Note:

(a) refer to lithofacies having same characteristics but older age

Sedimentary log : DMR D12 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 484500 m E 1604300 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 10.8 meters (From basement - rock surf



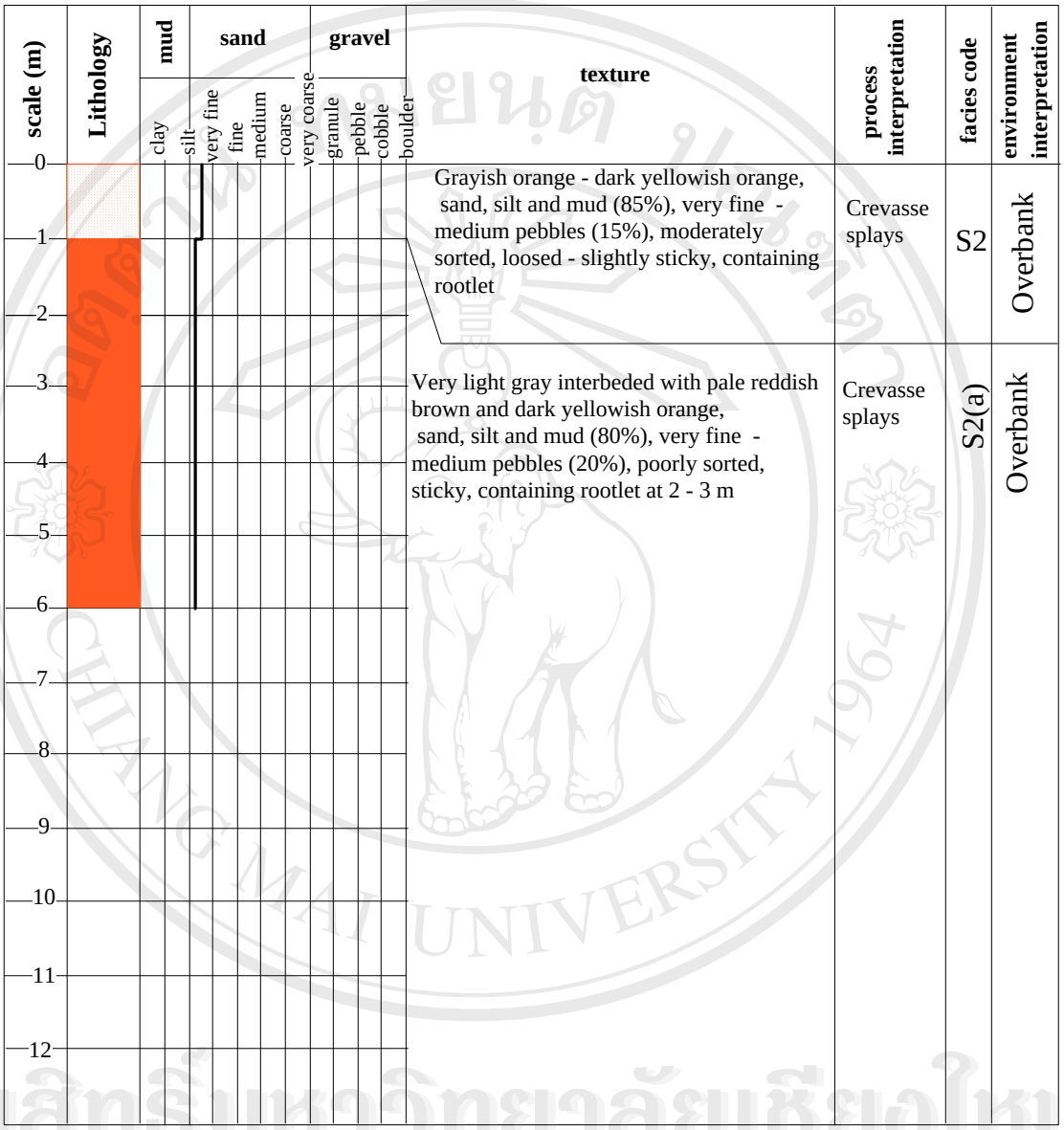
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

Sedimentary log : DMR D13 Ban: Ta Sek Tambon: Non Samran
Grid: 482900 m E 1604400 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 6.0 meters (From basement - rock surfac

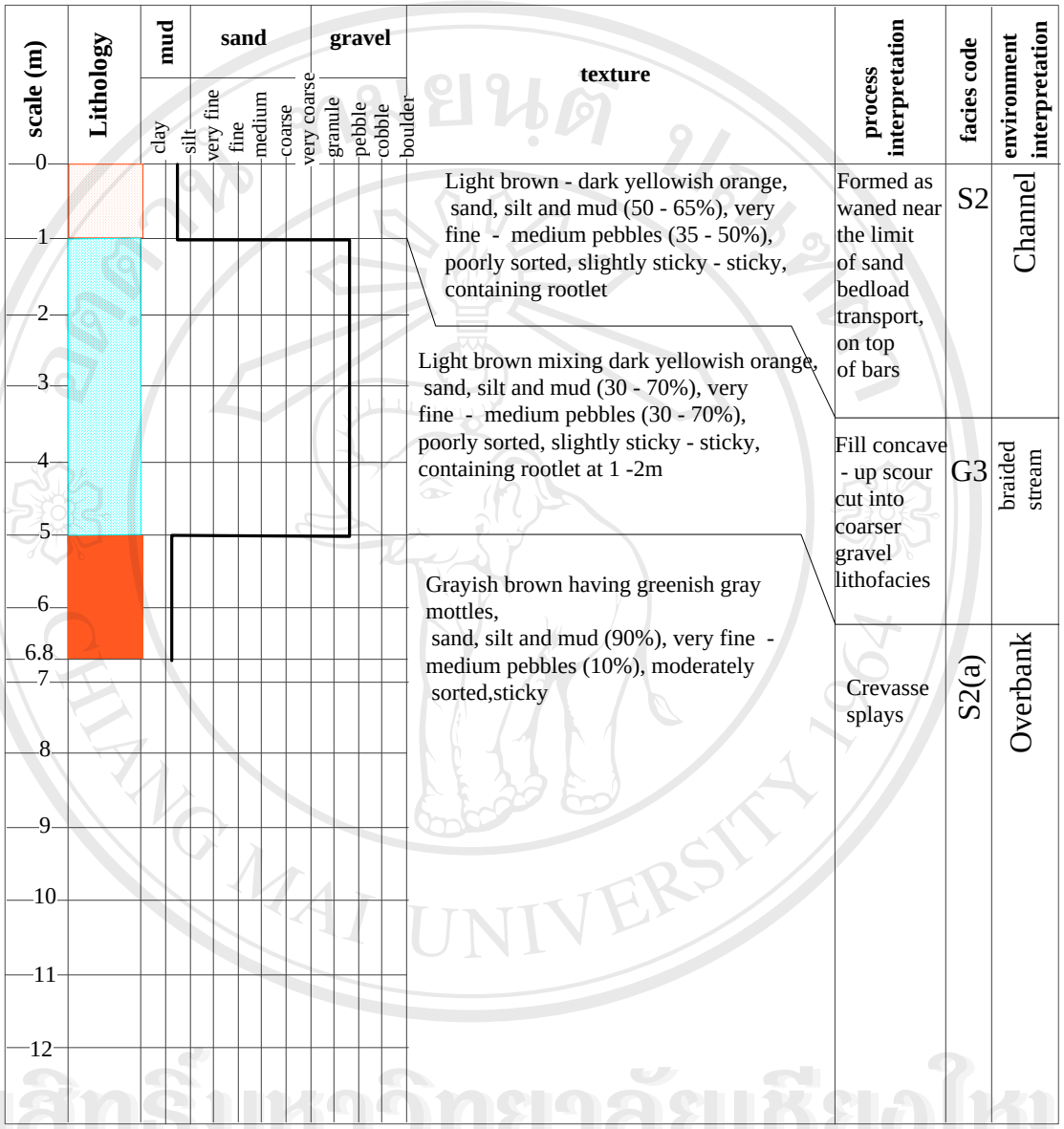


texture	process interpretation	facies code	environment interpretation
Grayish orange - dark yellowish orange, sand, silt and mud (85%), very fine - medium pebbles (15%), moderately sorted, loosed - slightly sticky, containing rootlet	Crevasse splays	S2	Overbank
Very light gray interbeded with pale reddish brown and dark yellowish orange, sand, silt and mud (80%), very fine - medium pebbles (20%), poorly sorted, sticky, containing rootlet at 2 - 3 m	Crevasse splays	S2(a)	Overbank

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

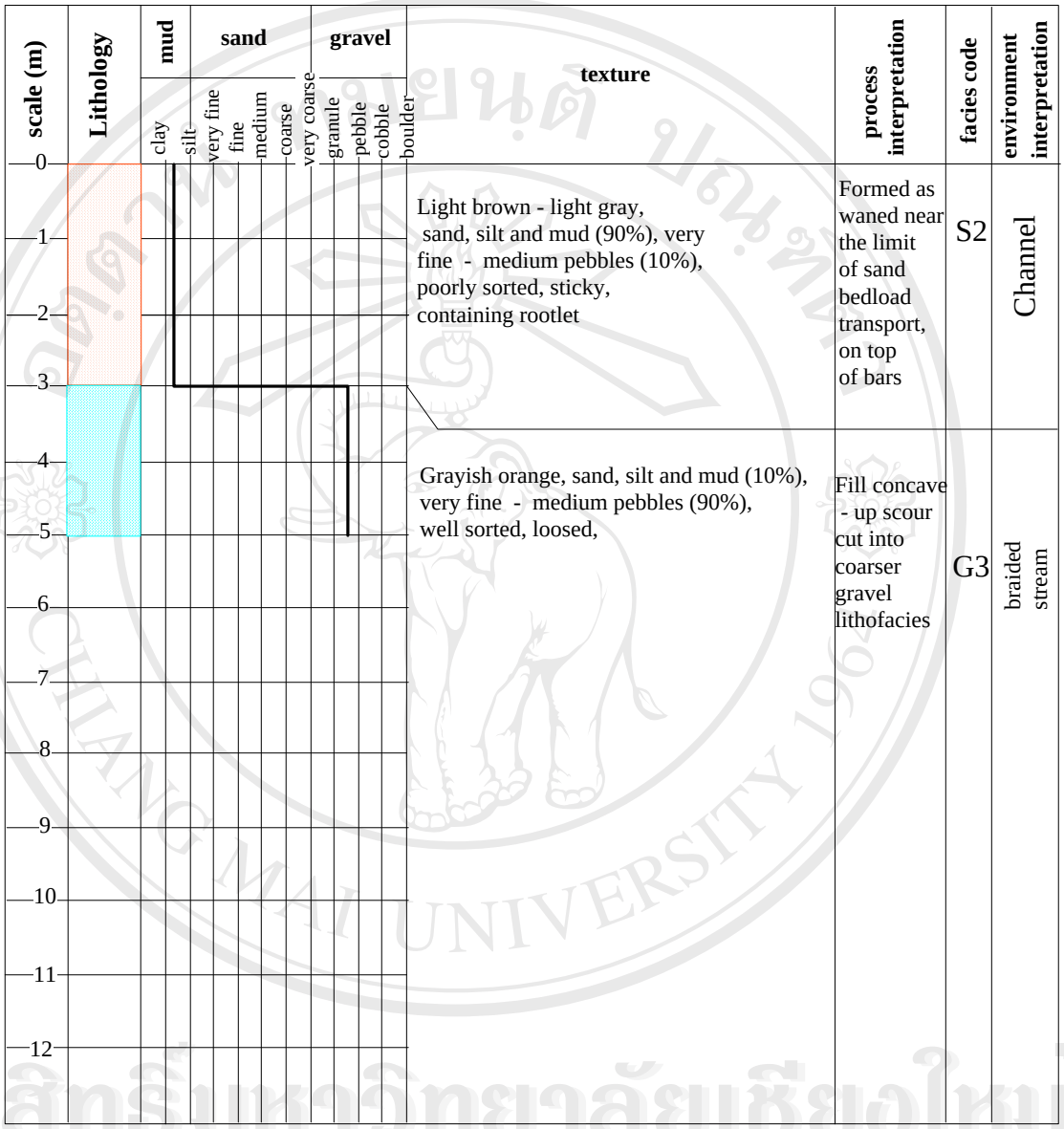
Sedimentary log : DMR D14 Ban: Ta Sek Tambon: Non Samran
Grid: 483390 m E 1604300 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 6.8 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note: (a) refer to lithofacies having same characteristics but older age		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Sedimentary log : DMR D15 Ban: Ta Sek Tambon: Non Samran
Grid: 483550 m E 1604300 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 5.0 meters (From basement - rock surfa

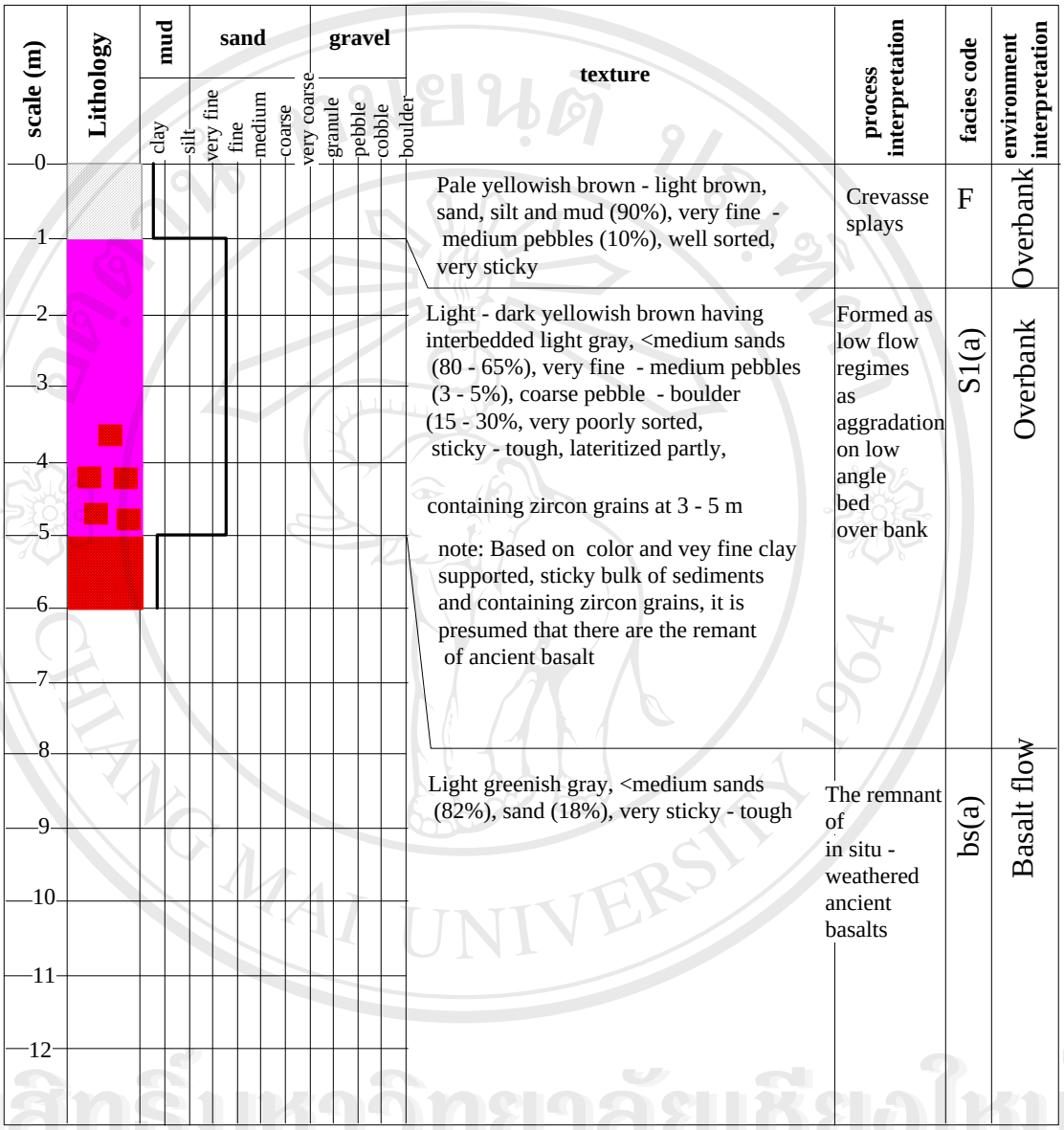


texture	process interpretation	facies code	environment interpretation
Light brown - light gray, sand, silt and mud (90%), very fine - medium pebbles (10%), poorly sorted, sticky, containing rootlet	Formed as waned near the limit of sand bedload transport, on top of bars	S2	Channel
Grayish orange, sand, silt and mud (10%), very fine - medium pebbles (90%), well sorted, loosed,	Fill concave - up scour cut into coarser gravel lithofacies	G3	braided stream

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

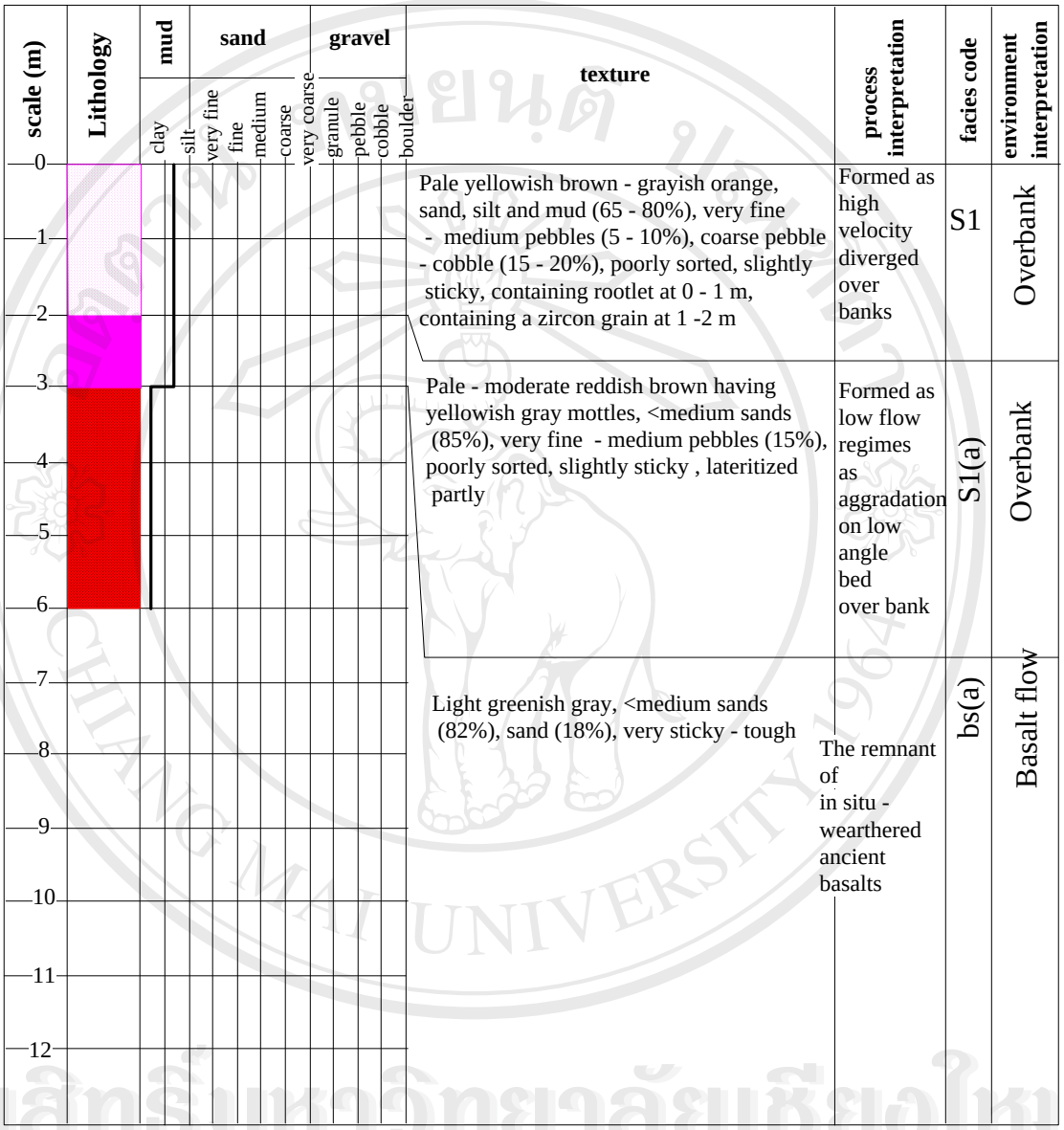
Sedimentary log : DMR E1 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 486000 m E 1603100 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 7.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR E2 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 486000 m E 1603000 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 6.0 meters (From basement - rock surface)



texture	process interpretation	facies code	environment interpretation
Pale yellowish brown - grayish orange, sand, silt and mud (65 - 80%), very fine - medium pebbles (5 - 10%), coarse pebble - cobble (15 - 20%), poorly sorted, slightly sticky, containing rootlet at 0 - 1 m, containing a zircon grain at 1 -2 m	Formed as high velocity diverged over banks	S1	Overbank
Pale - moderate reddish brown having yellowish gray mottles, <medium sands (85%), very fine - medium pebbles (15%), poorly sorted, slightly sticky , lateritized partly	Formed as low flow regimes as aggradation on low angle bed over bank	S1(a)	Overbank
Light greenish gray, <medium sands (82%), sand (18%), very sticky - tough	The remnant of in situ - wearthered ancient basalts	bs(a)	Basalt flow

EXPLANATION

symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated
	G1(a)	
	G2	Massive or crudely bedded gravel
	G2(a)	
	G3	Gravel stratified
	G3(a)	

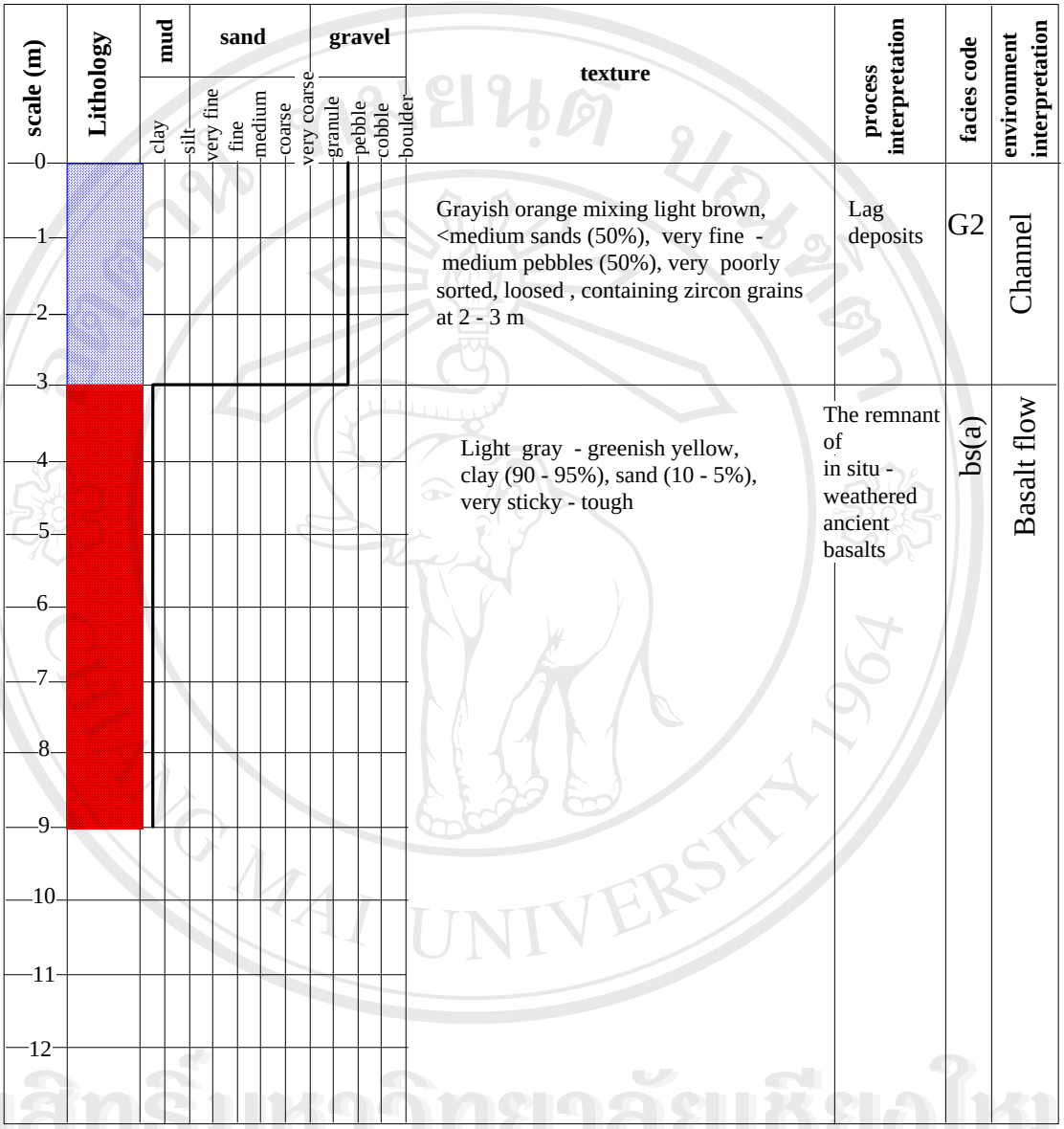
symbol	facies code	lithofacies
	S1	Horizontal to low angle bedded, fine to medium sand
	S1(a)	
	S2	Ripple - laminated, very fine to fine sand
	S2(a)	
	F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud
	F(a)	

symbol	facies code	lithofacies
	Bs	Hard rock, seen on surface
	Bs(a)	Clay, very sticky, most of them generate gemstones

Note:

(a) refer to lithofacies having same characteristics but older age

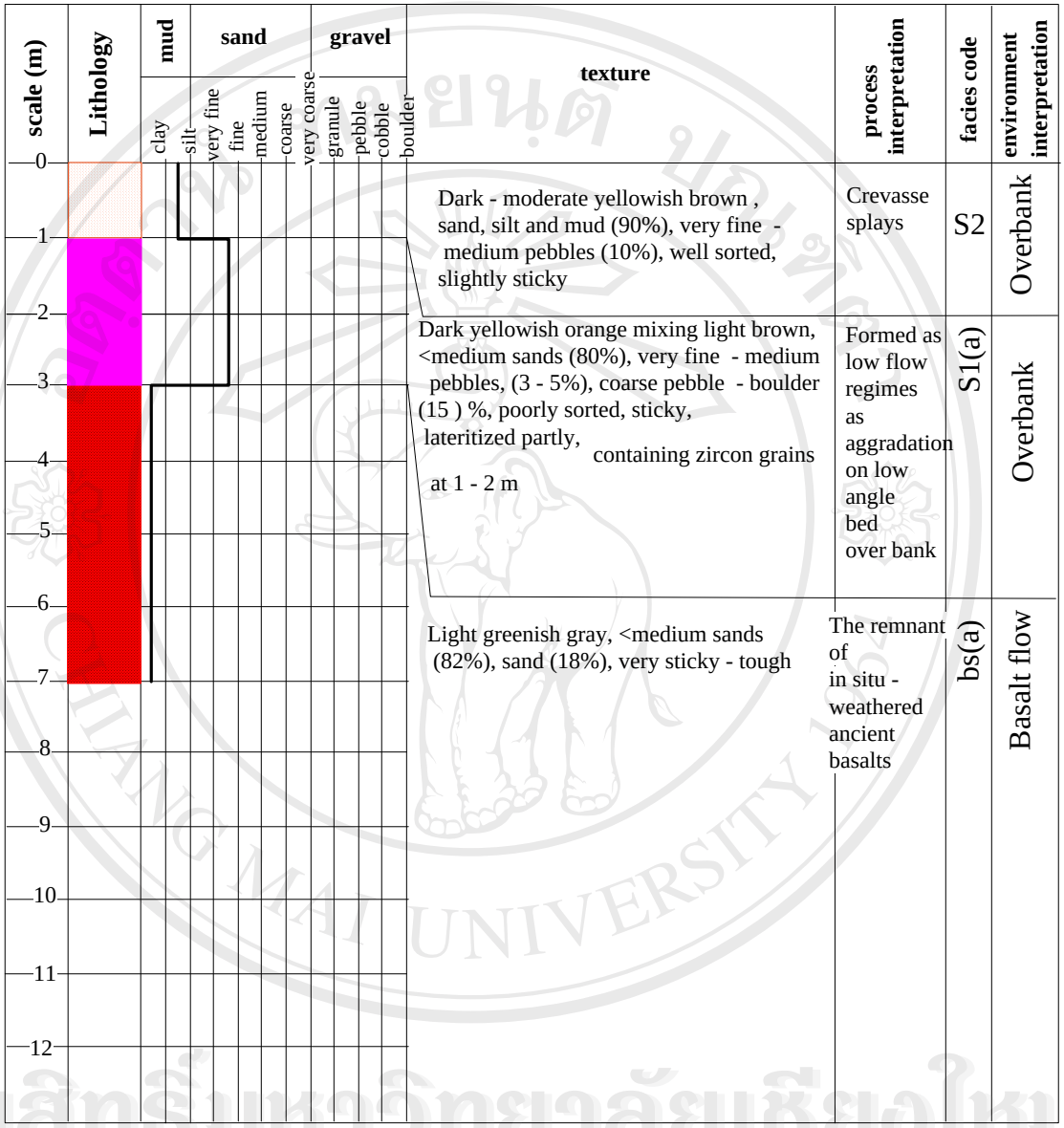
Sedimentary log : DMR E3 Ban: Khok Sa-ard Tambon: Khok Sa-ard
Grid: 486000 m E 1602700 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 9.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

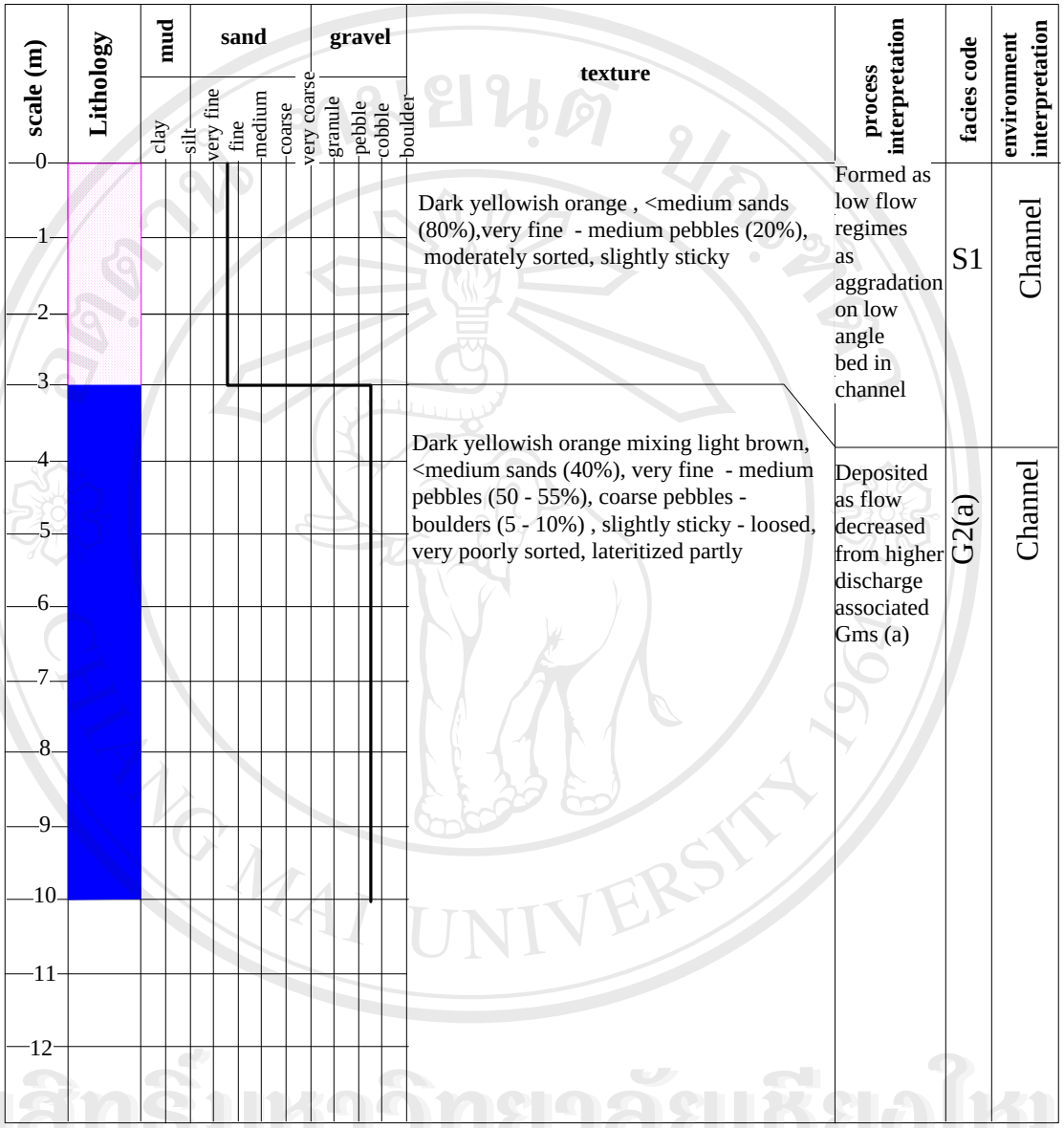
Sedimentary log : DMR E4 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485900 m E 1602300 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 7.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

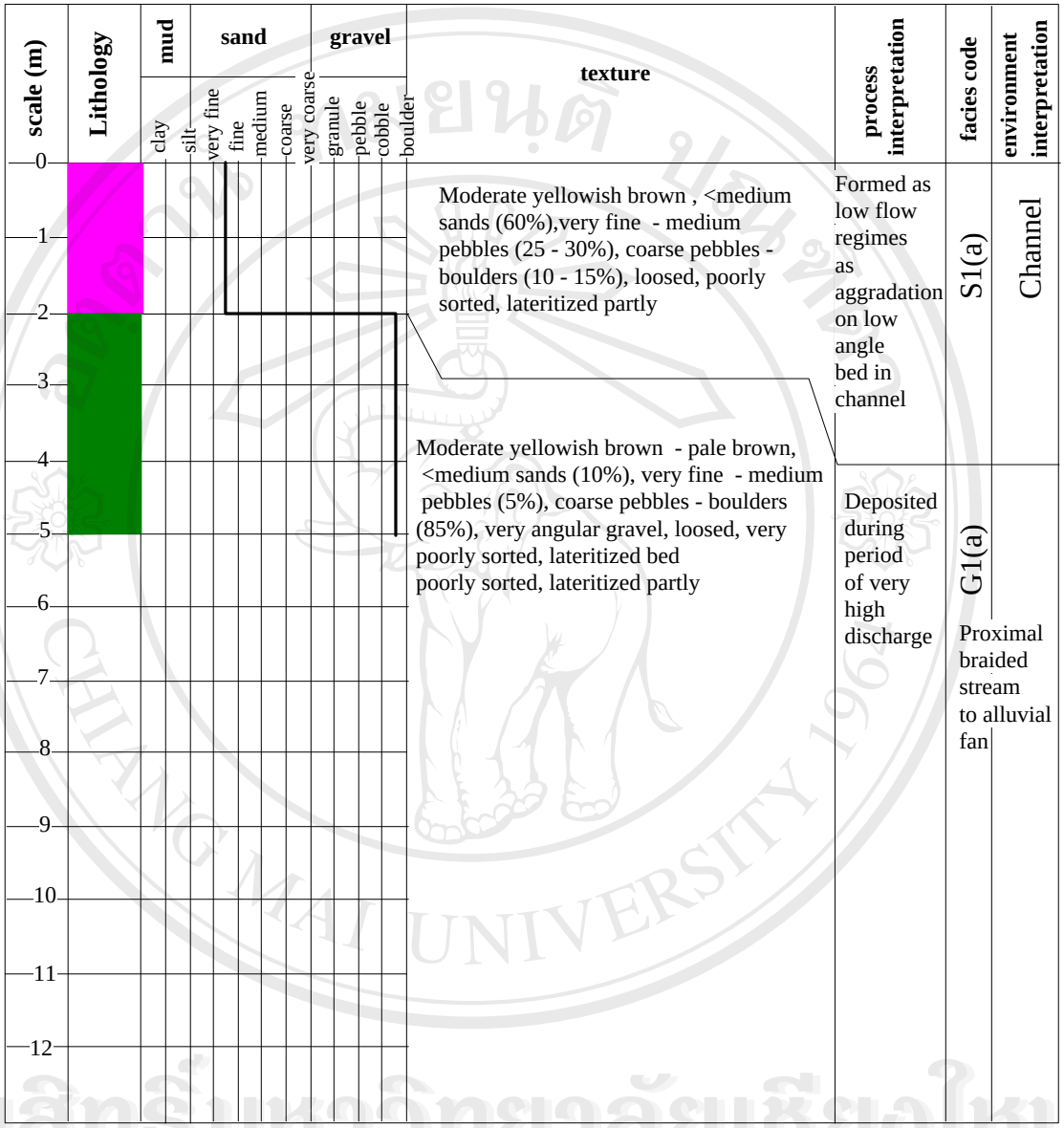
Sedimentary log : DMR F1 Ban: Dan Tambon: Phu Pha Mok
Grid: 485300 m E 1601900 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 10.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

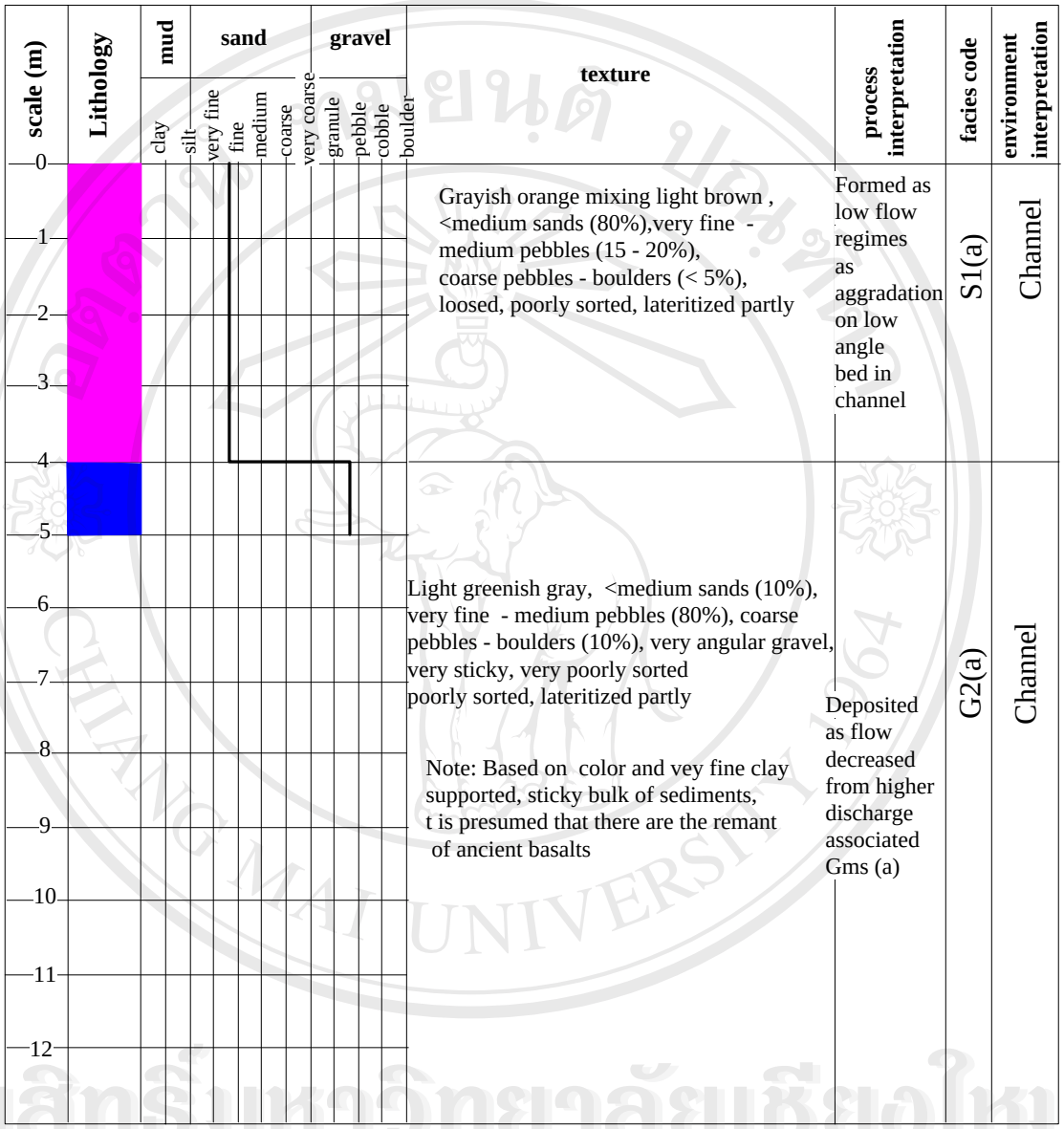
Sedimentary log : DMR F2 Ban: Dan Tambon: Phu Pha Mok
Grid: 485450 m E 1601900 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

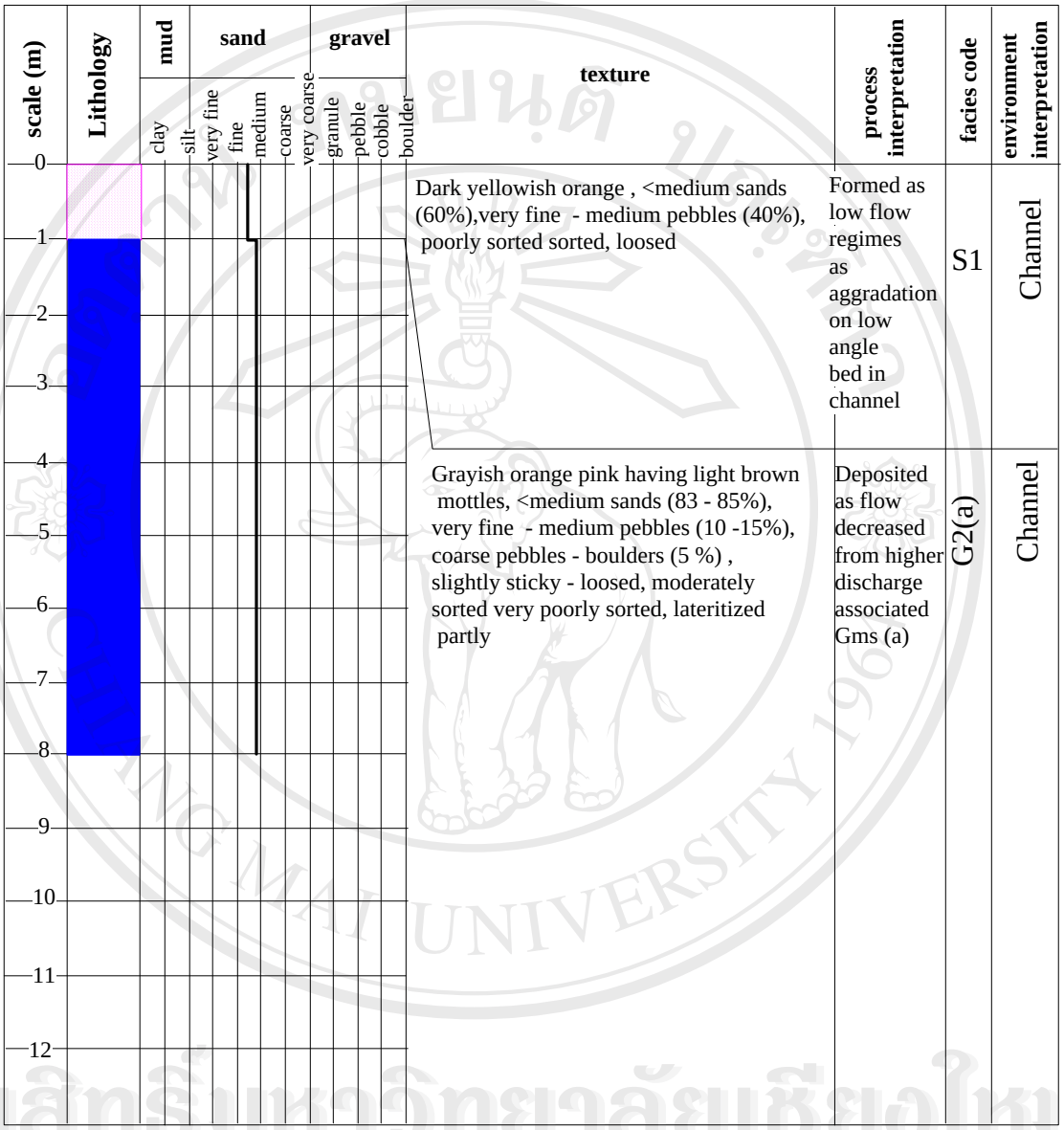
Sedimentary log : DMR F3 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485500 m E 1601900 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

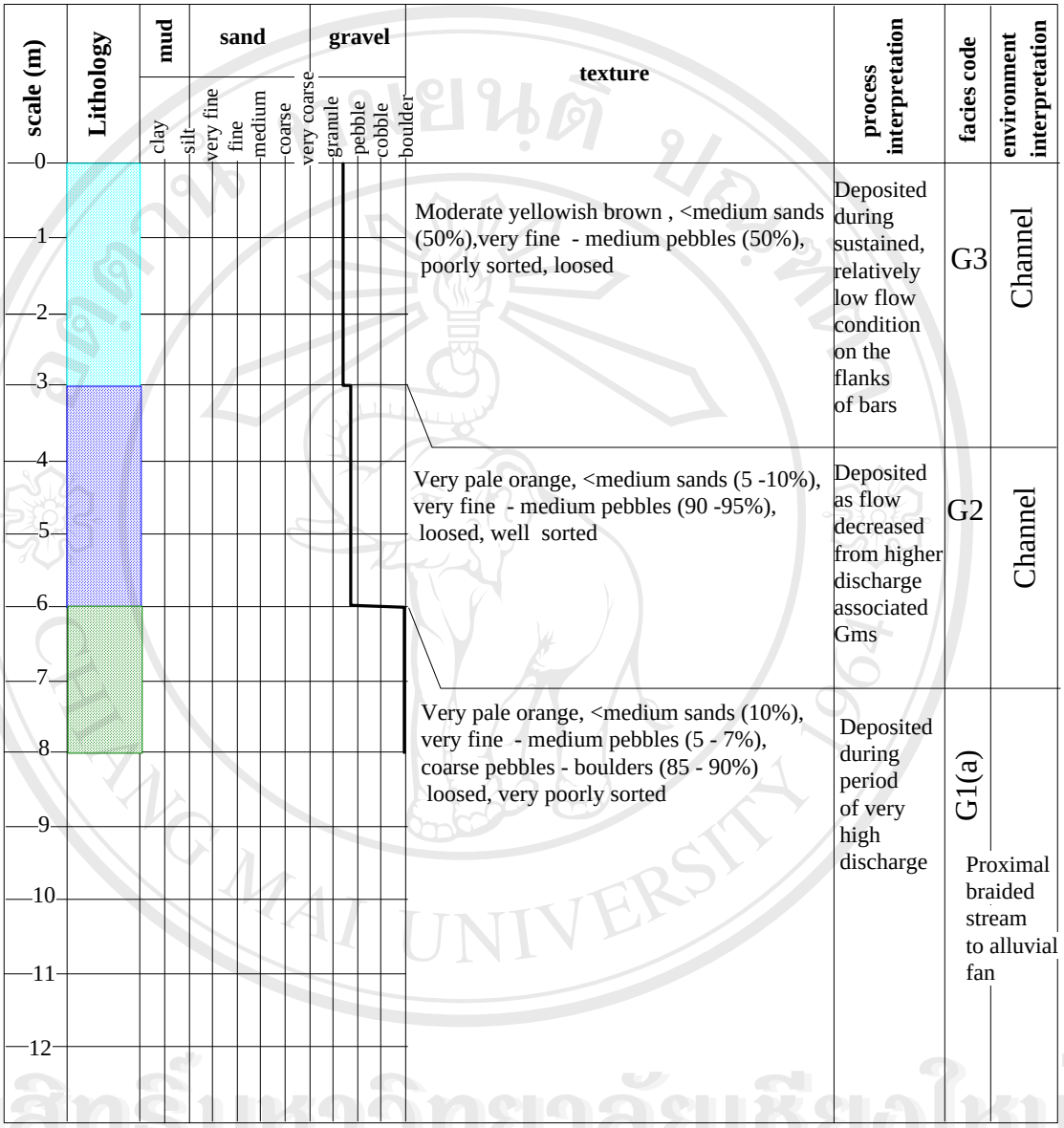
Sedimentary log : DMR F4 Ban: Dan Nue Tambon: Phu Pha Mok
Grid: 484800 m E 1601000 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 8.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

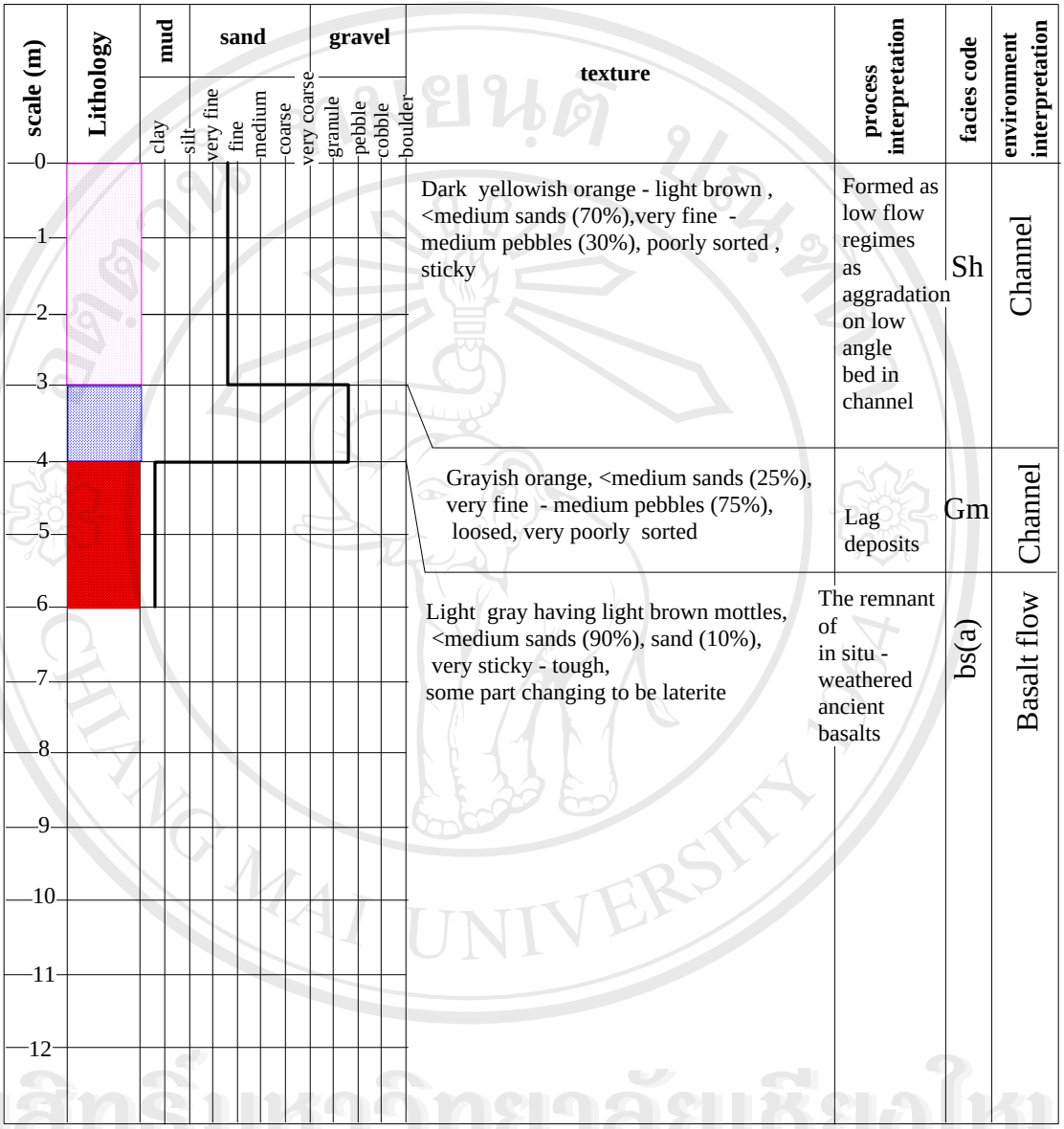
Sedimentary log : DMR F5 Ban: Dan Nue Tambon: Phu Pha Mok
Grid: 484200 m E 1600430 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 8.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

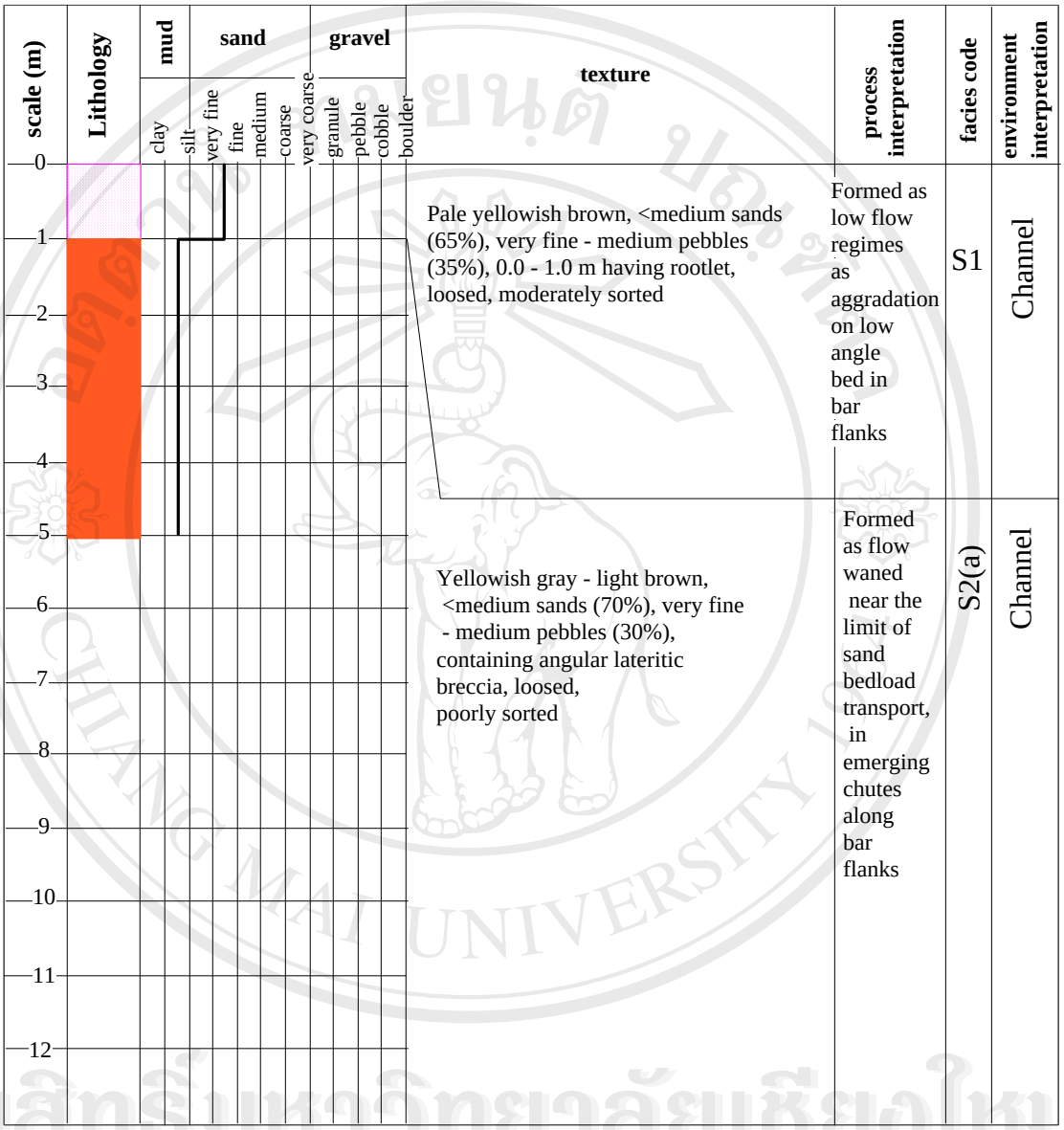
Sedimentary log : DMR F7 Ban: Dan Nue Tambon: Phu Pha Mok
Grid: 484090 m E 1601420 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 6.0 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

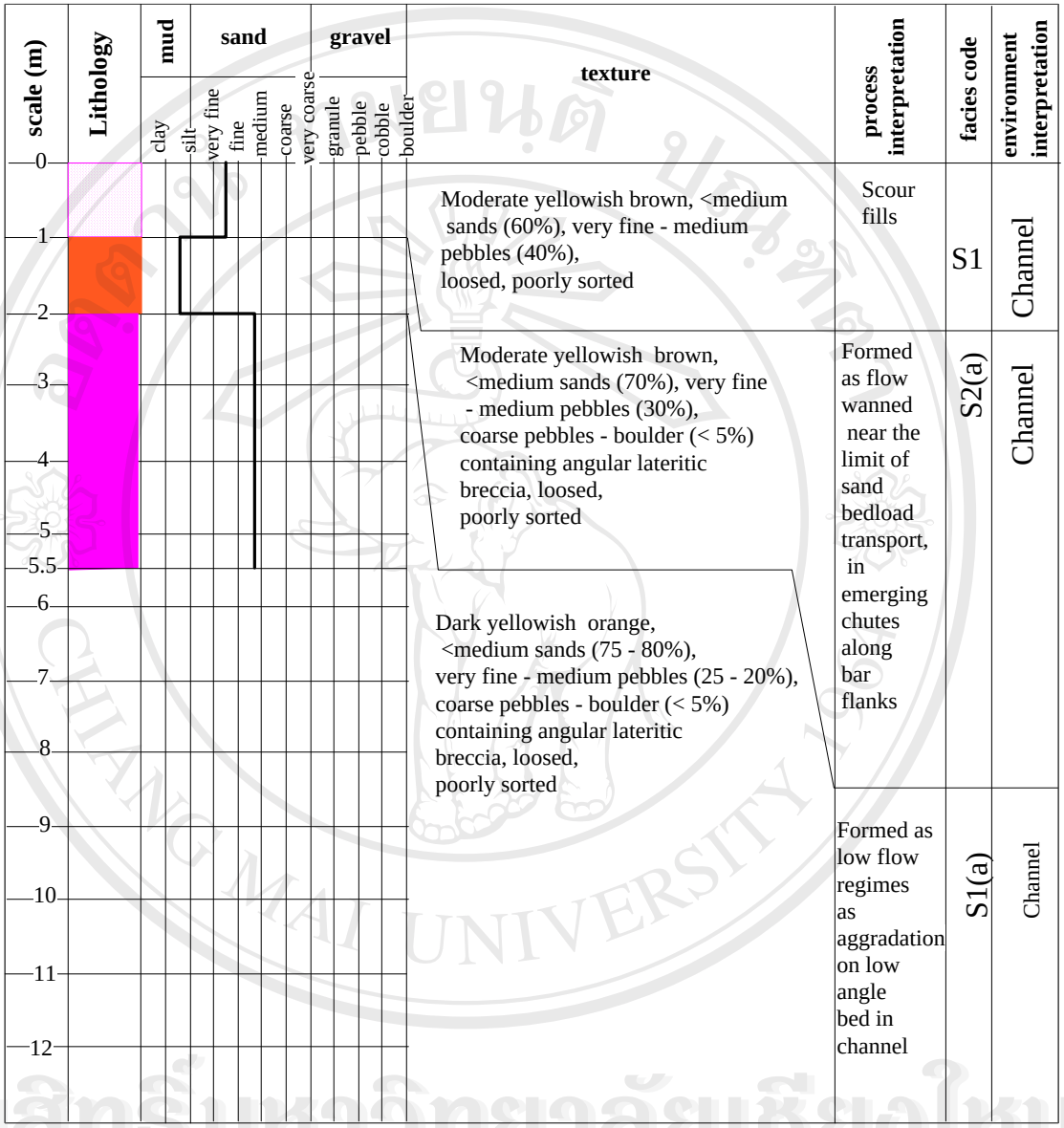
Sedimentary log : DMR G1 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485650 m E 1600800 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

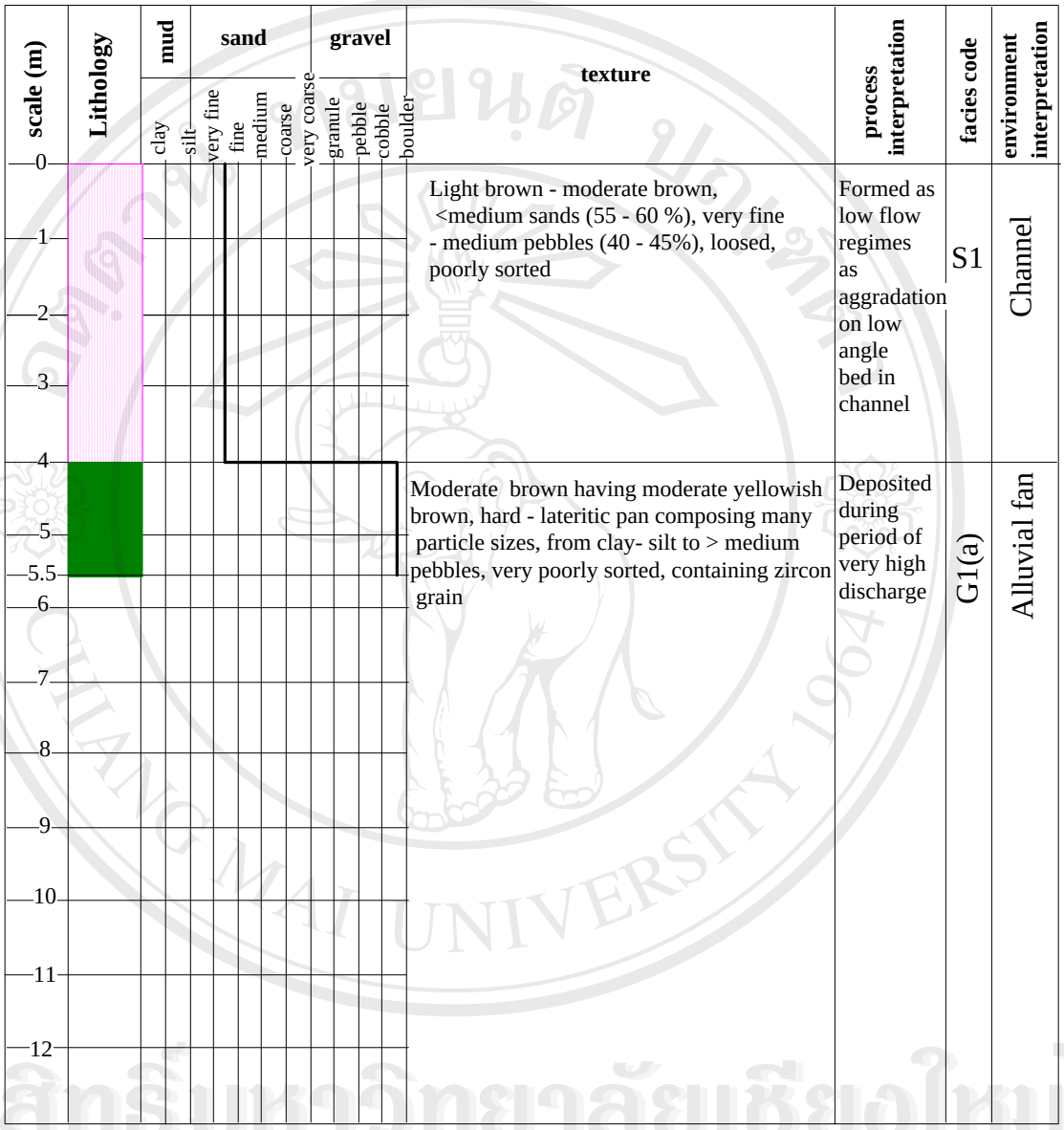
Sedimentary log : DMR G2 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 486300 m E 1600300 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 5.5 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR G3 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 486200 m E 1599900 mN Amphoe: Nam Khun Changwat: Ubon Ratchathar
Map sheet: 5937 I Total thickness: 5.5 meters (From basement - rock surface



texture	process interpretation	facies code	environment interpretation
Light brown - moderate brown, <medium sands (55 - 60 %), very fine - medium pebbles (40 - 45%), loosed, poorly sorted	Formed as low flow regimes as aggradation on low angle bed in channel	S1	Channel
Moderate brown having moderate yellowish brown, hard - lateritic pan composing many particle sizes, from clay- silt to > medium pebbles, very poorly sorted, containing zircon grain	Deposited during period of very high discharge	G1(a)	Alluvial fan

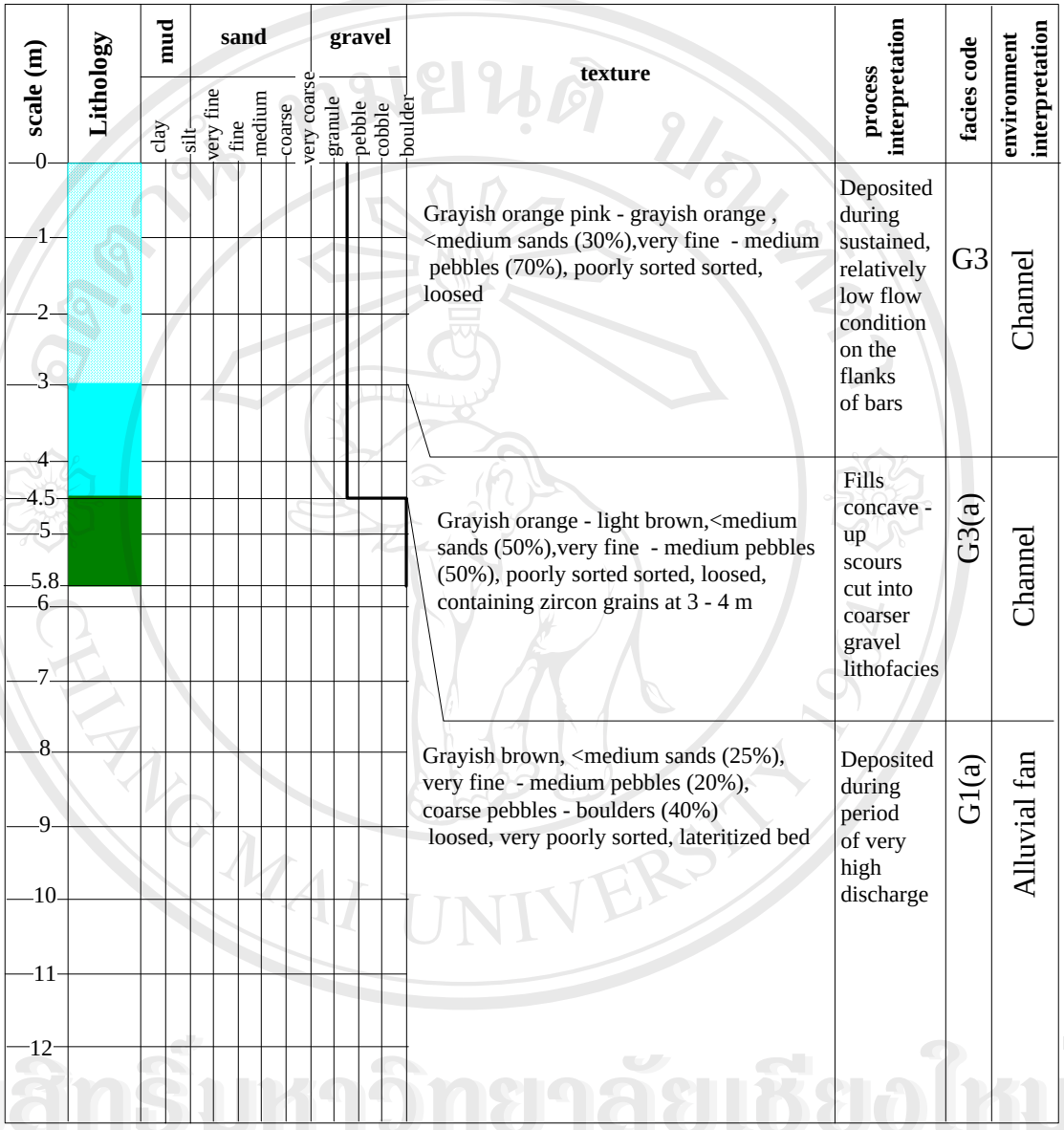
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

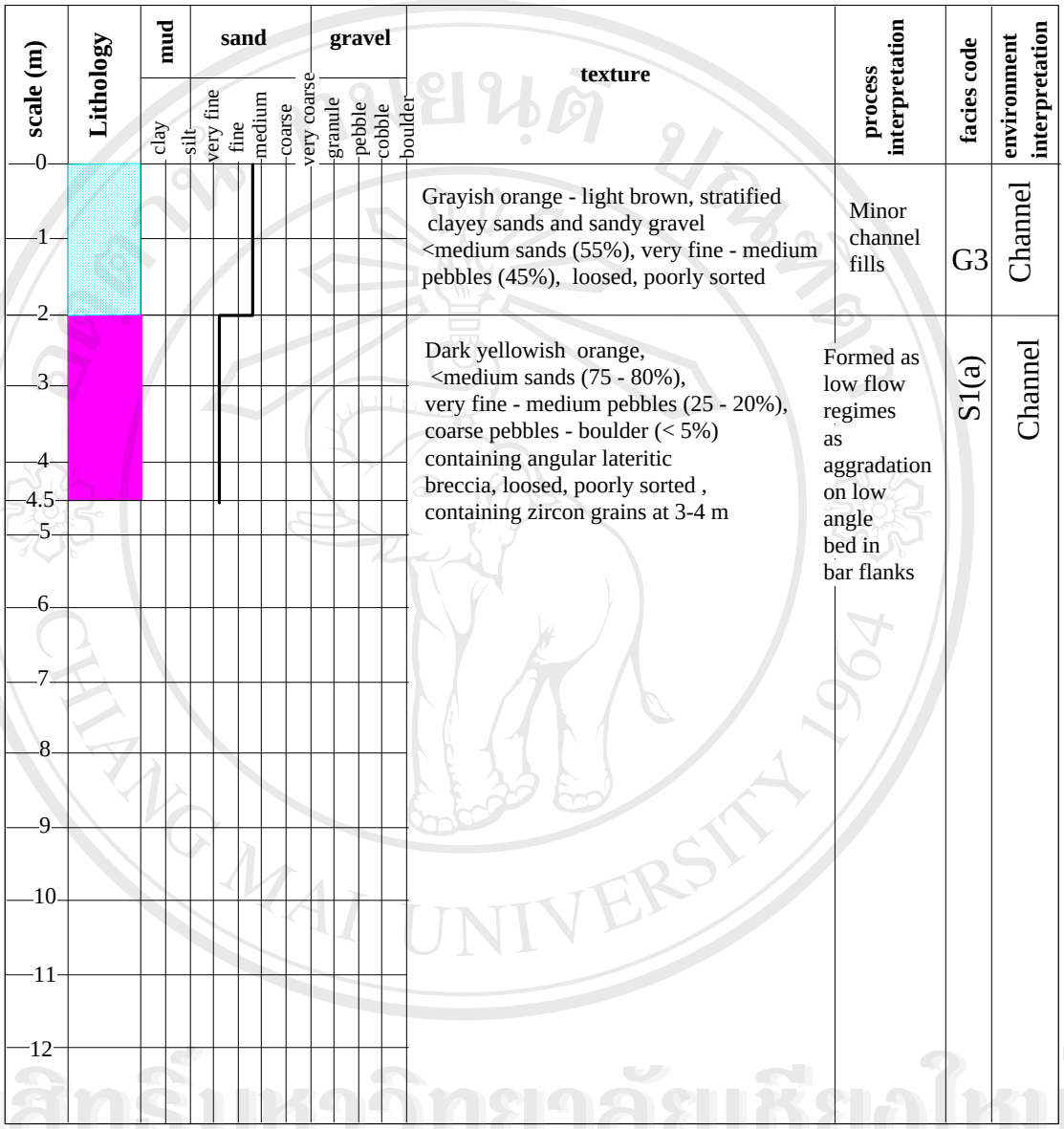
Sedimentary log : DMR G4re Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 483600 m E 1600000 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 5.8 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

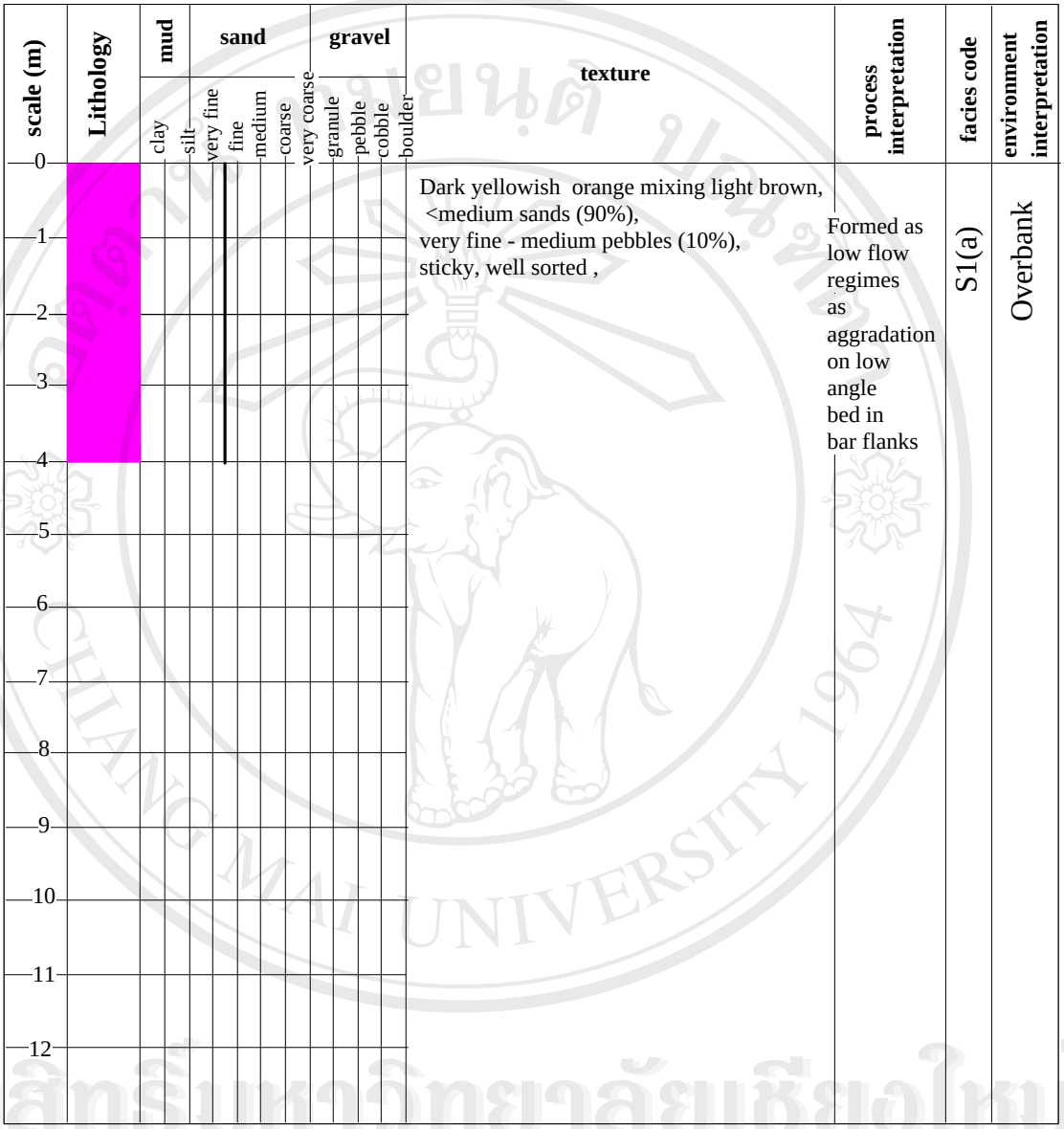
Sedimentary log : DMR G5 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 486600 m E 1599900 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 4.5 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

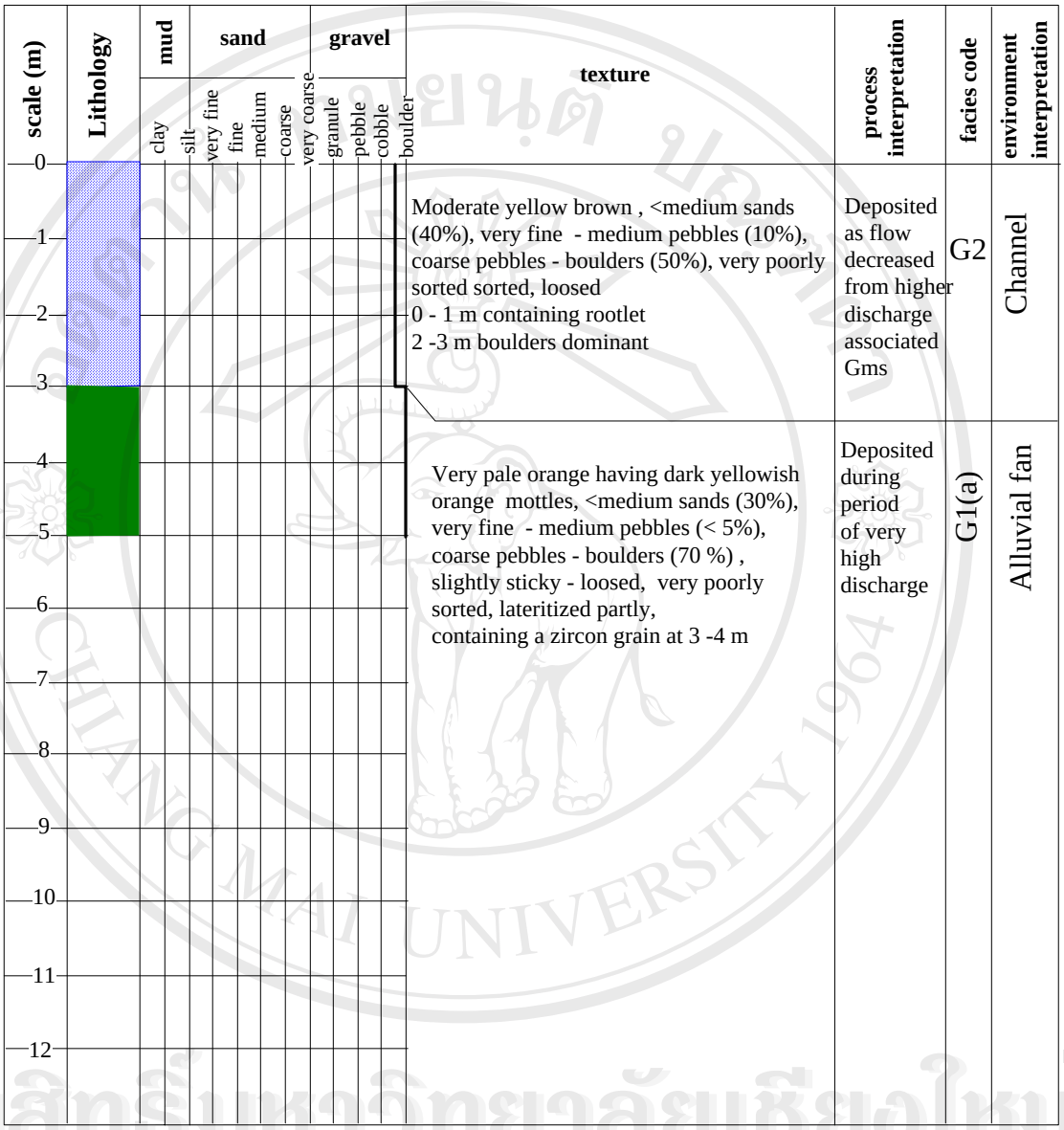
Sedimentary log : DMR G7 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485400 m E 1599800 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 4.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

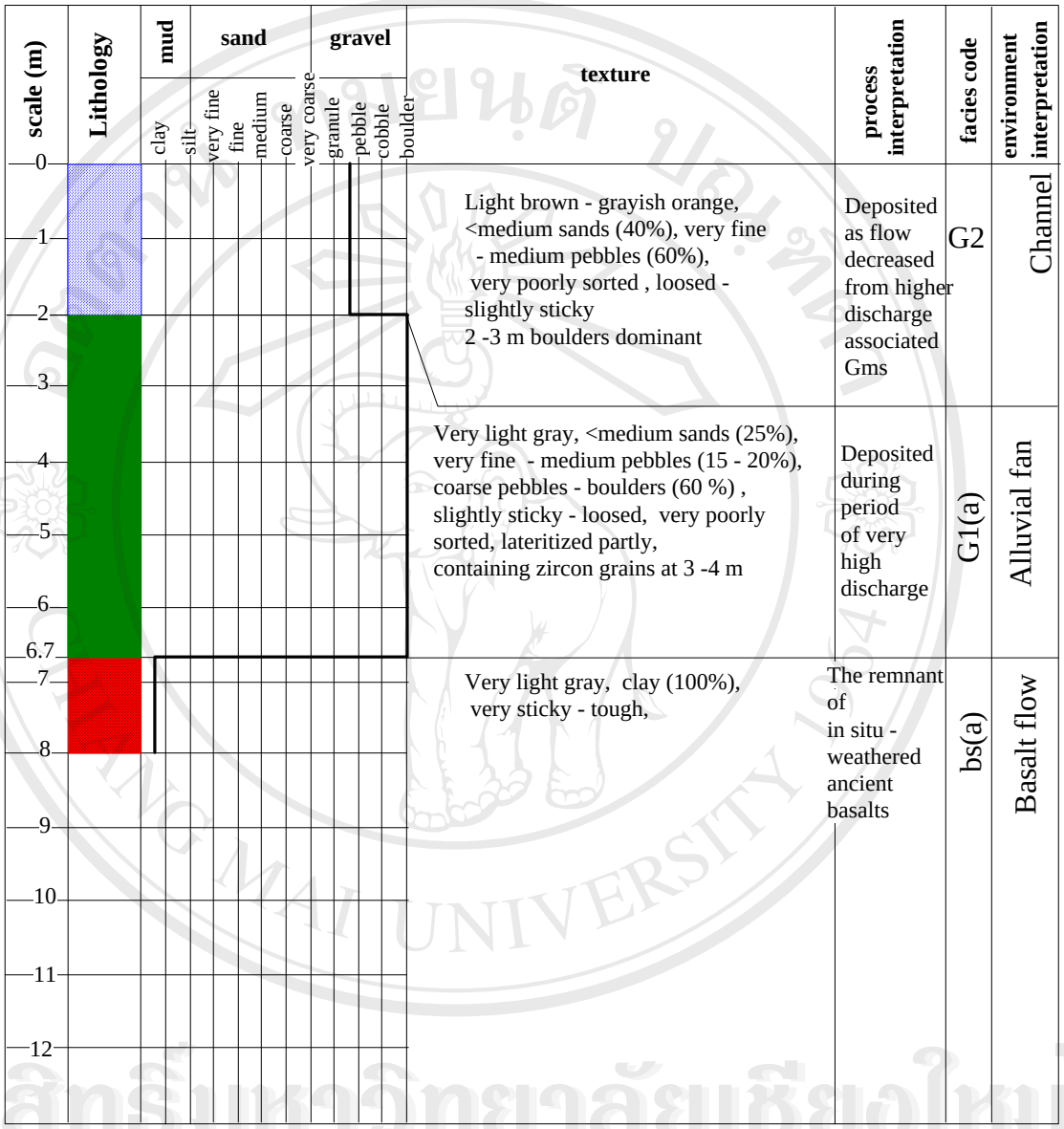
Sedimentary log : DMR G11 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485400 m E 1600600 mN Amphoe: Nam Khun Changwat: Ubon Ratchathan
Map sheet: 5937 I Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR G13 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485700 m E 1600300 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 7.0 meters (From basement - rock surface)

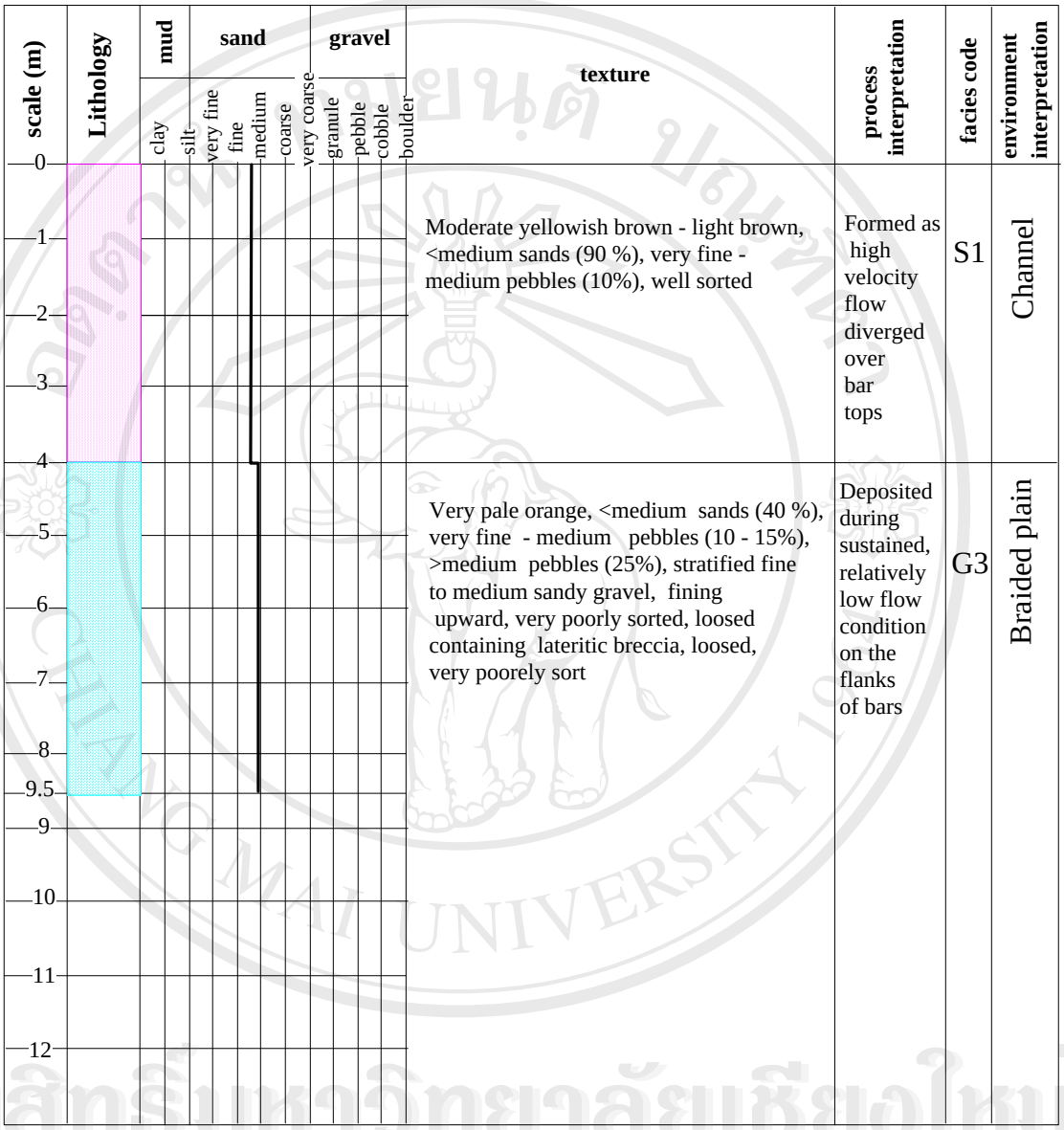


texture	process interpretation	facies code	environment interpretation
Light brown - grayish orange, <medium sands (40%), very fine - medium pebbles (60%), very poorly sorted , loosed - slightly sticky 2 -3 m boulders dominant	Deposited as flow decreased from higher discharge associated Gms	G2	Channel
Very light gray, <medium sands (25%), very fine - medium pebbles (15 - 20%), coarse pebbles - boulders (60 %) , slightly sticky - loosed, very poorly sorted, lateritized partly, containing zircon grains at 3 -4 m	Deposited during period of very high discharge	G1(a)	Alluvial fan
Very light gray, clay (100%), very sticky - tough,	The remnant of in situ - weathered ancient basalts	bs(a)	Basalt flow

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note:		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	(a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

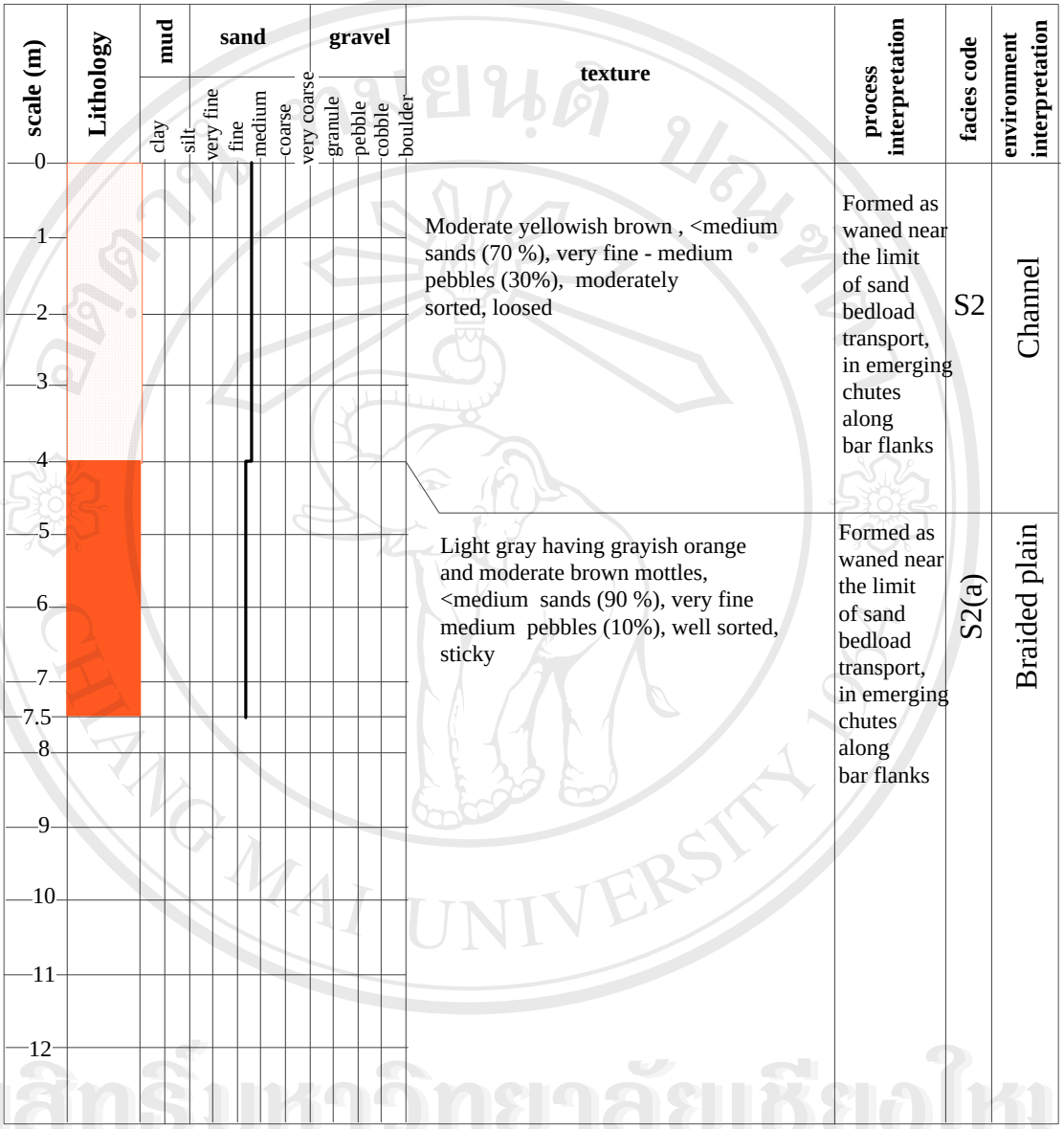
Sedimentary log : DMR H1 Ban: Dan Tambon: Phu Pha Mok
Grid: 484100 m E 1599460 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 9.5 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

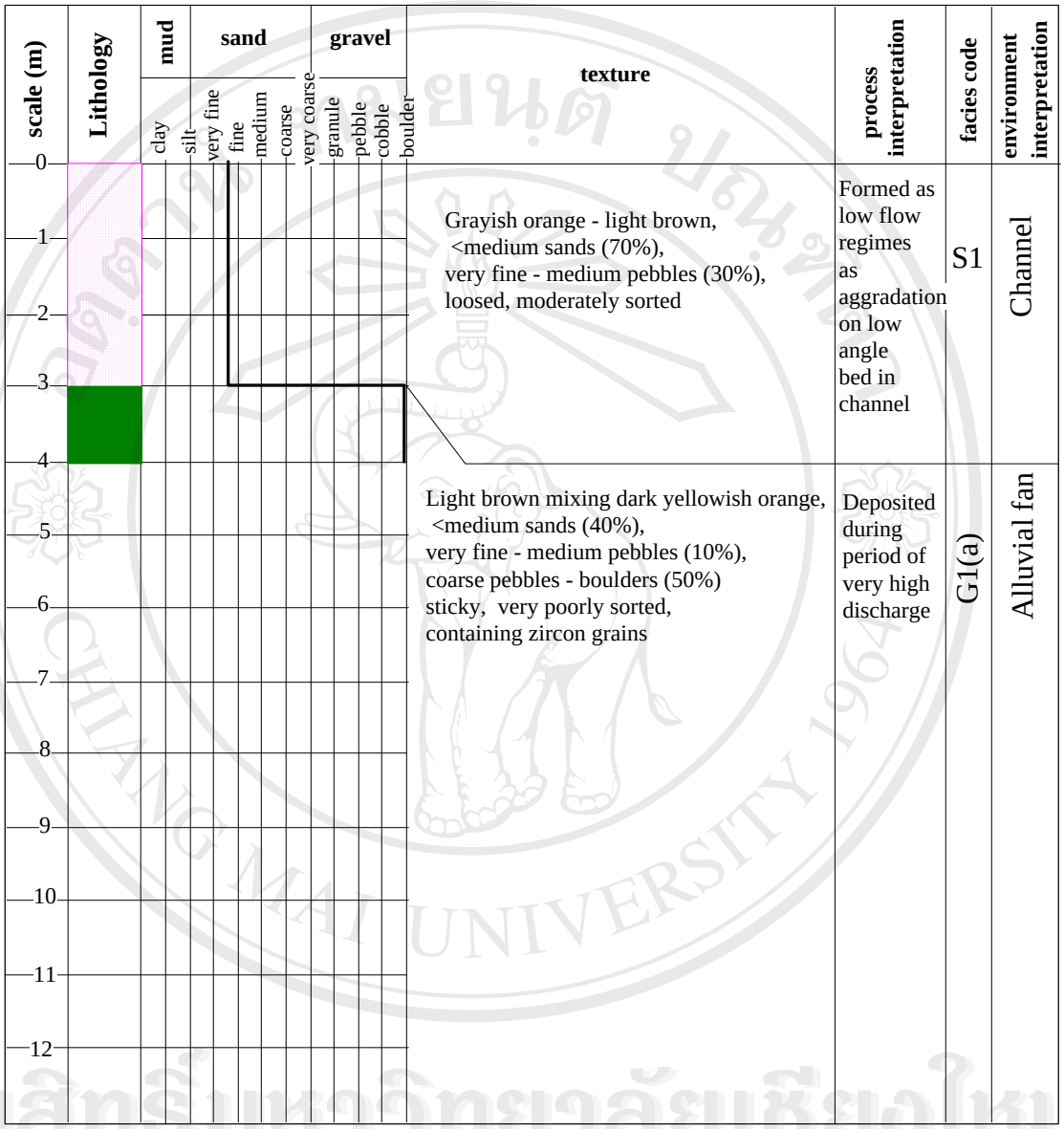
Sedimentary log : DMR H2 Ban: Dan Tambon: Phu Pha Mok
Grid: 484730 m E 1599300 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 7.5 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

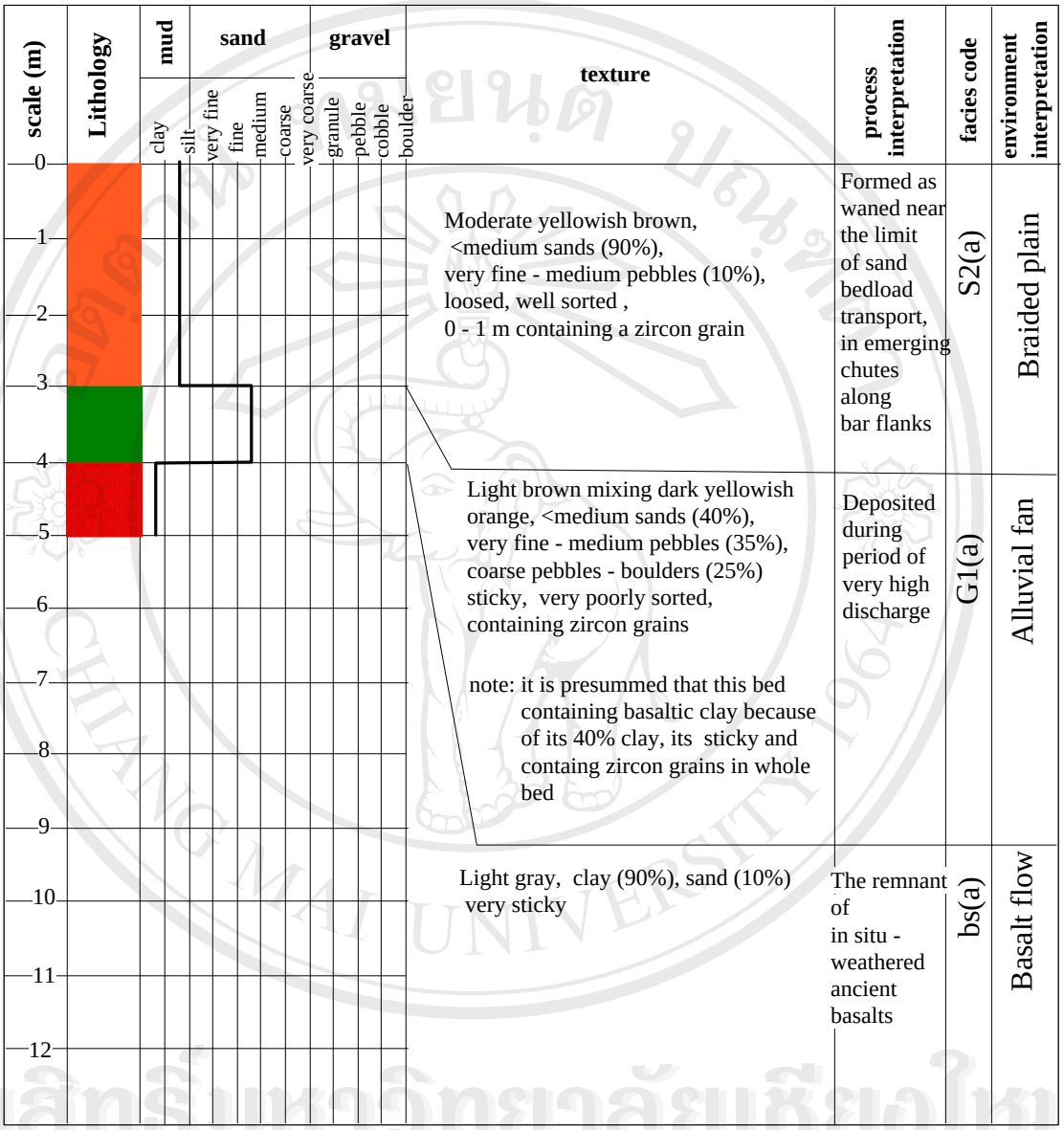
Sedimentary log : DMR H3 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485200 m E 1599250 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

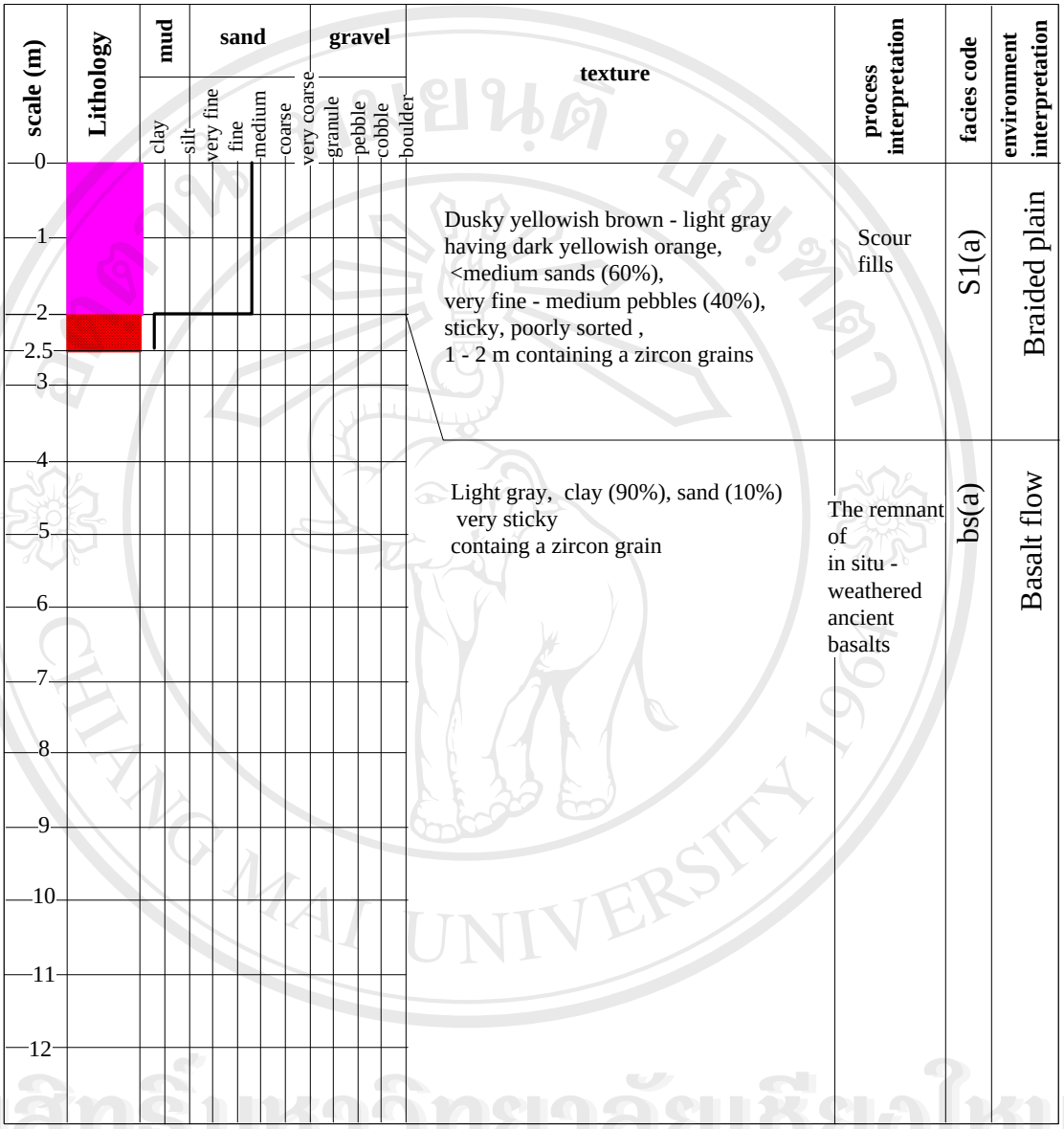
Sedimentary log : DMR H4 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485450 m E 1599250 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 5.0 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

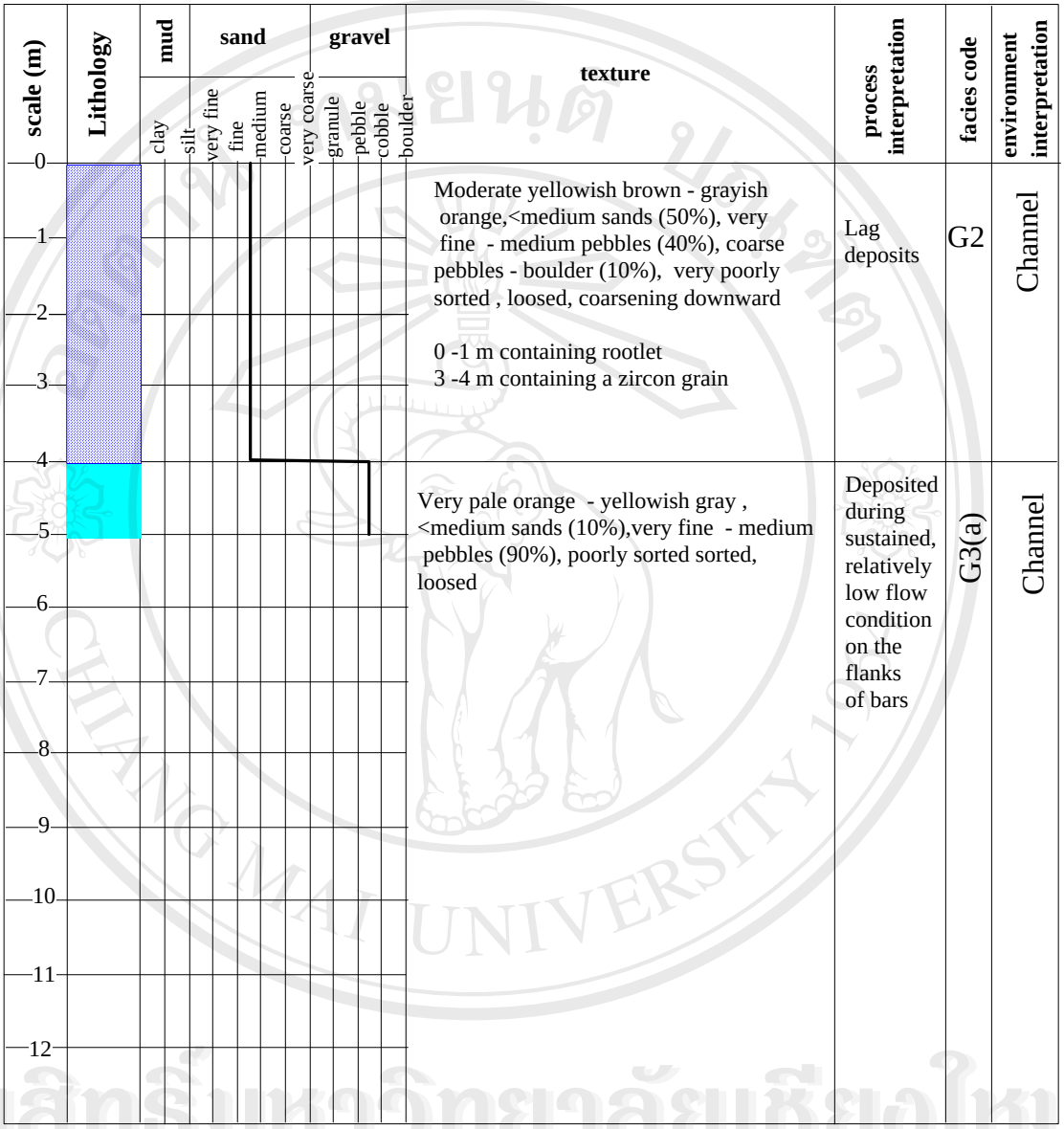
Sedimentary log : DMR H5re Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485600 m E 1599100 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 2.5 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

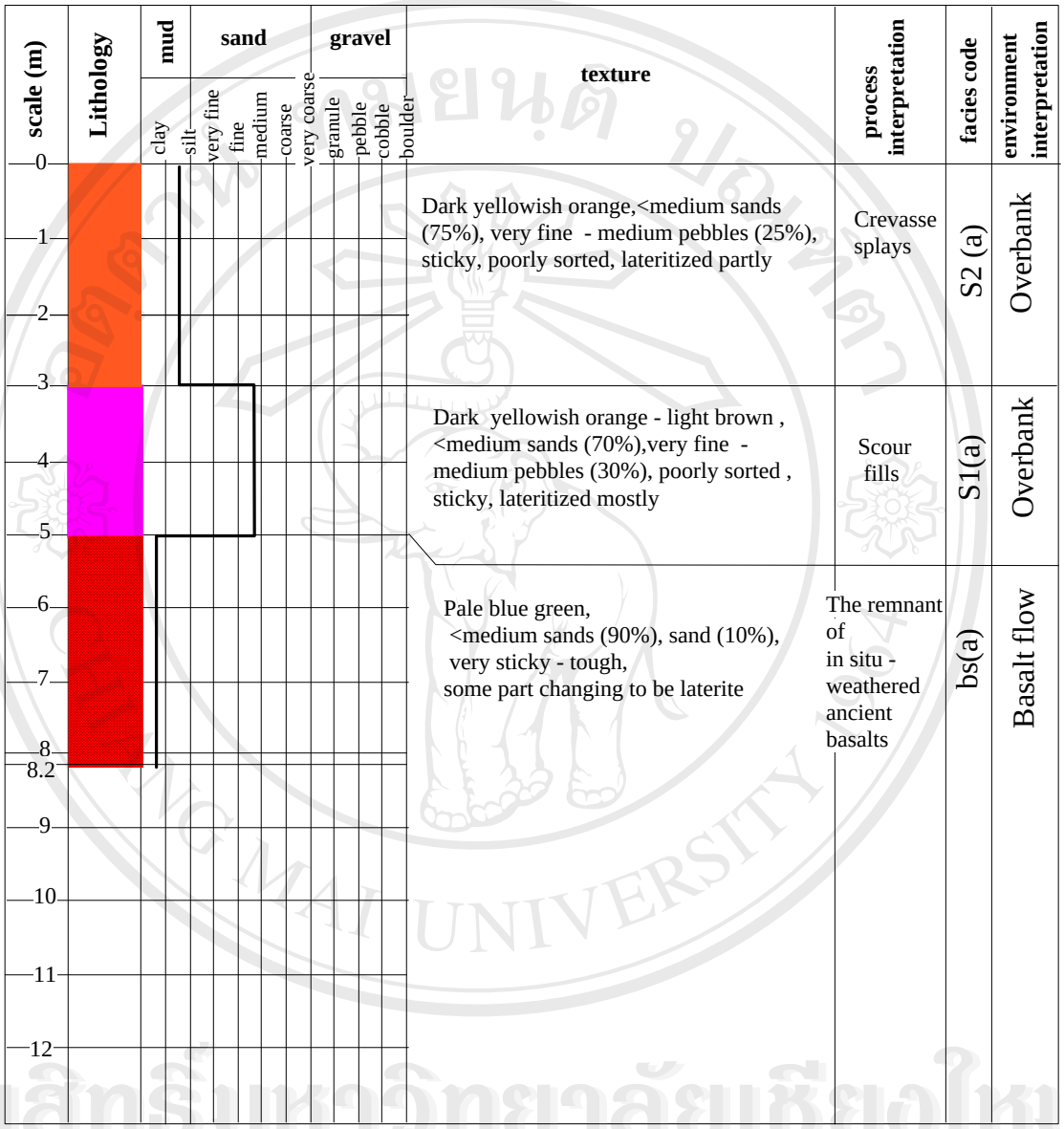
Sedimentary log : DMR H7re Ban: Non Yang Tambon: Song
Grid: 487000 m E 1599400 mN Amphoe: Nam Yuen Province: Ubon Ratchathani
Map sheet: 5937 I Totall thickness: 5.0 meters (to basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

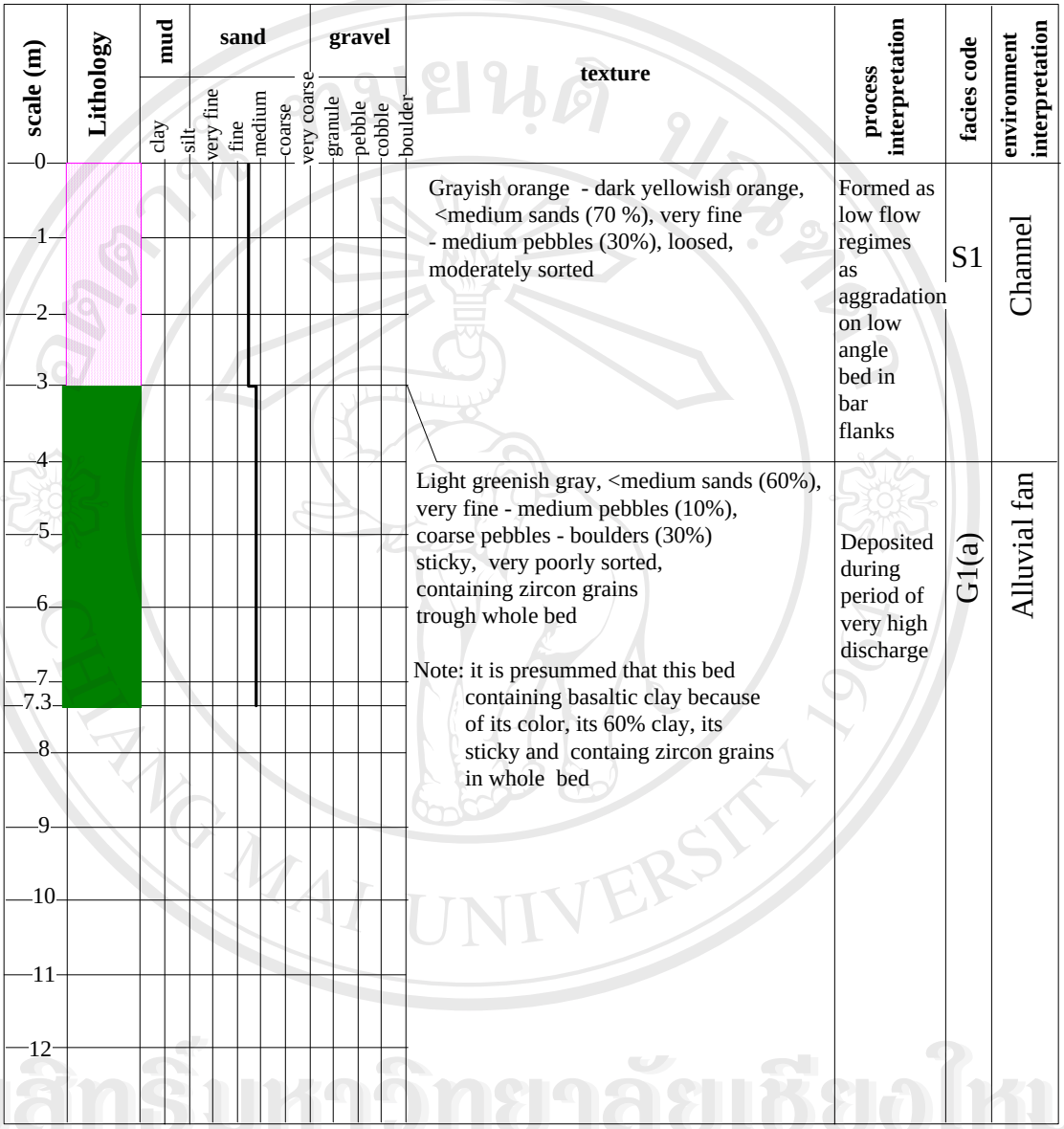
Sedimentary log : DMR H8 Ban: Non Yang Tambon: Song
Grid: 487160 m E 1599730 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 8.2 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : DMR H9 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 486750 m E 1599950 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 7.3 meters (From basement - rock surface)

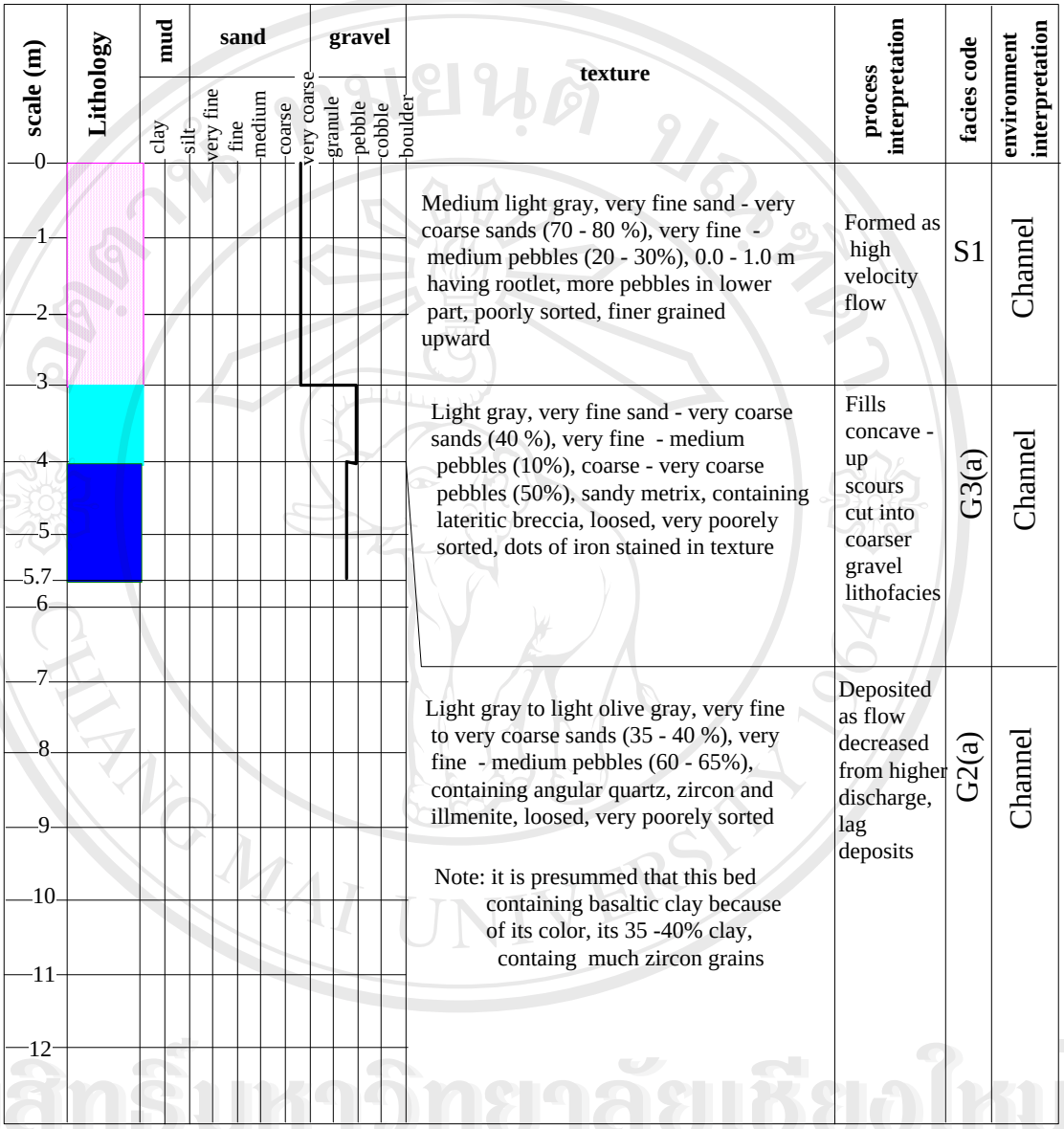


texture	process interpretation	facies code	environment interpretation
Grayish orange - dark yellowish orange, <medium sands (70 %), very fine - medium pebbles (30%), loosed, moderately sorted	Formed as low flow regimes as aggradation on low angle bed in bar flanks	S1	Channel
Light greenish gray, <medium sands (60%), very fine - medium pebbles (10%), coarse pebbles - boulders (30%) sticky, very poorly sorted, containing zircon grains trough whole bed Note: it is presummed that this bed containing basaltic clay because of its color, its 60% clay, its sticky and containg zircon grains in whole bed	Deposited during period of very high discharge	G1(a)	Alluvial fan

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

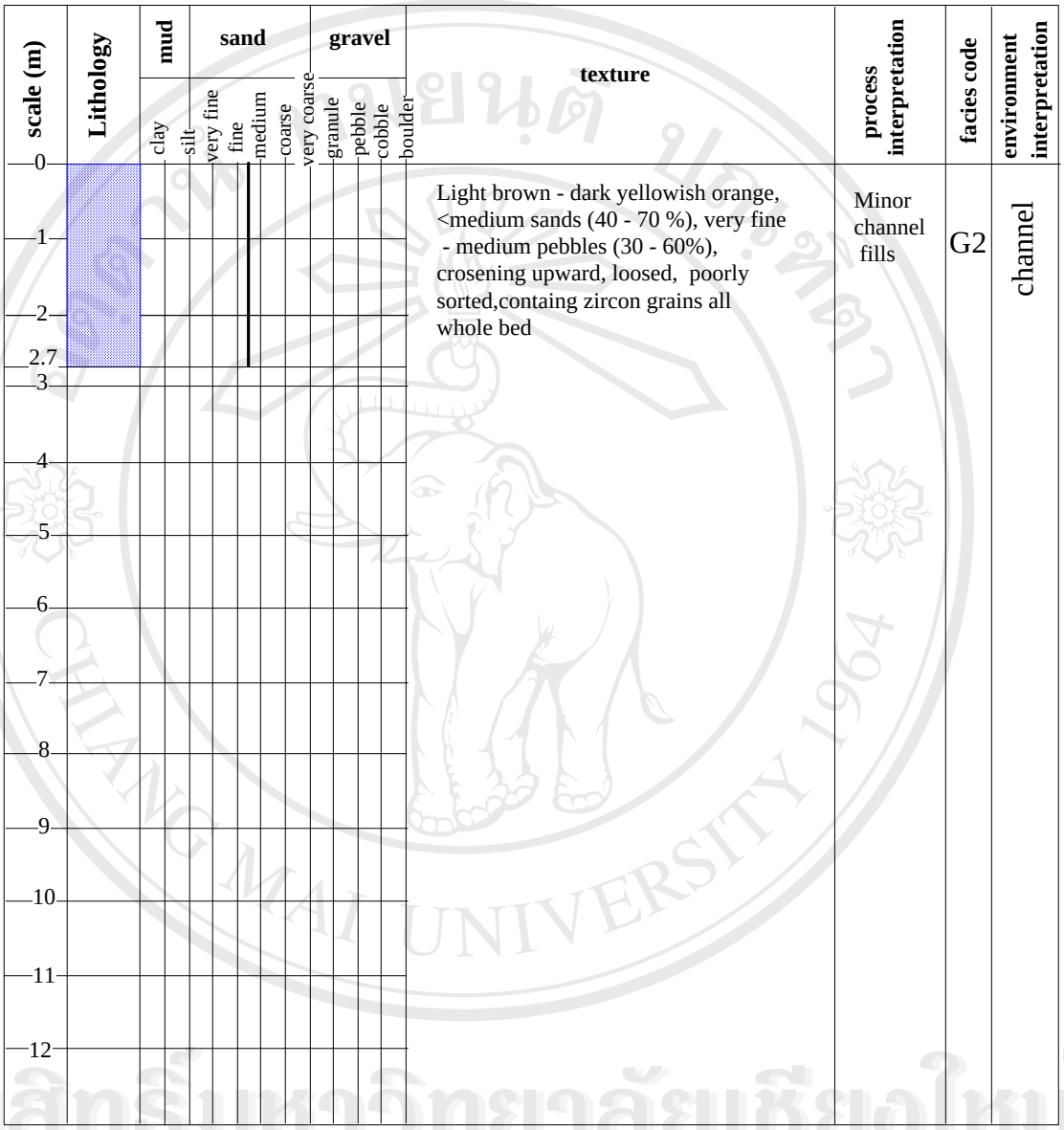
Sedimentary log : DMR H10 Ban: Non Yang Tambon: Song
Grid: 487100 m E 1599300 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathan
Map sheet: 5937 I Total thickness: 5.7 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

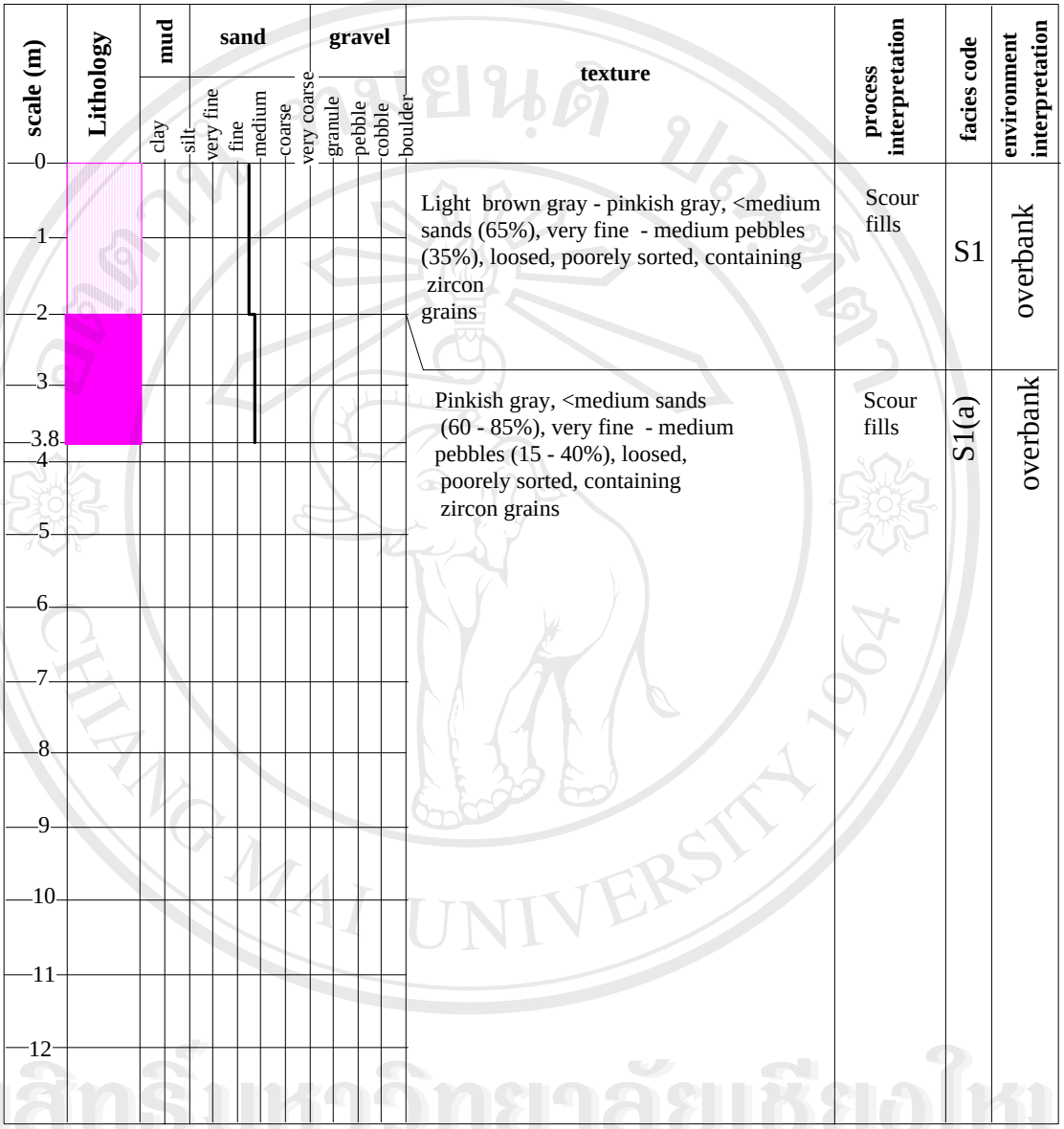
Sedimentary log : DMR H12 Ban: Non Yang Tambon: Song
Grid: 487100 m E 1599800 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 2.7 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note: (a) refer to lithofacies having same characteristics but older age		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

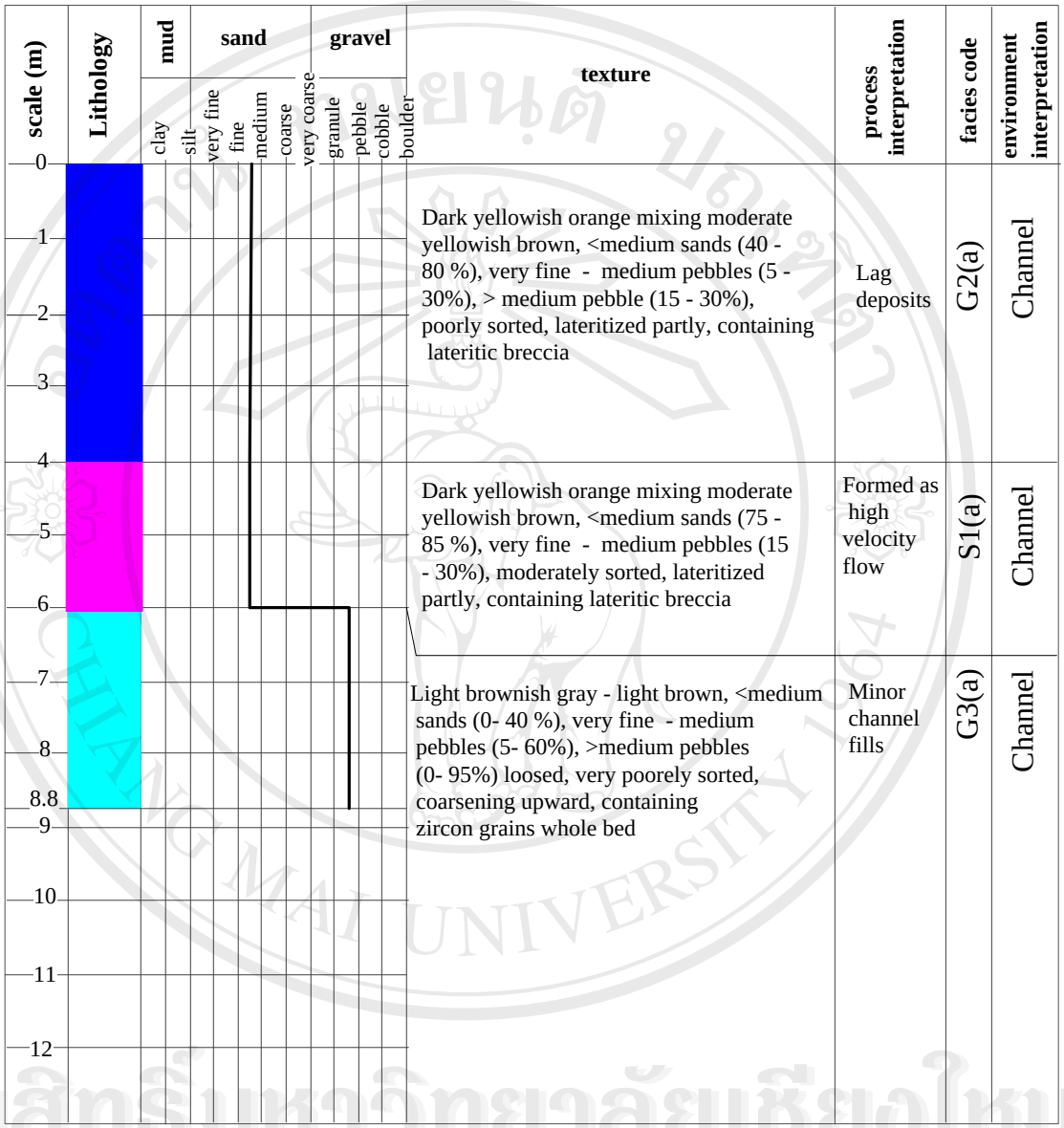
Sedimentary log : DMR H13 Ban: Non Yang Tambon: Song
Grid: 487630 m E 1599450 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 3.8 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

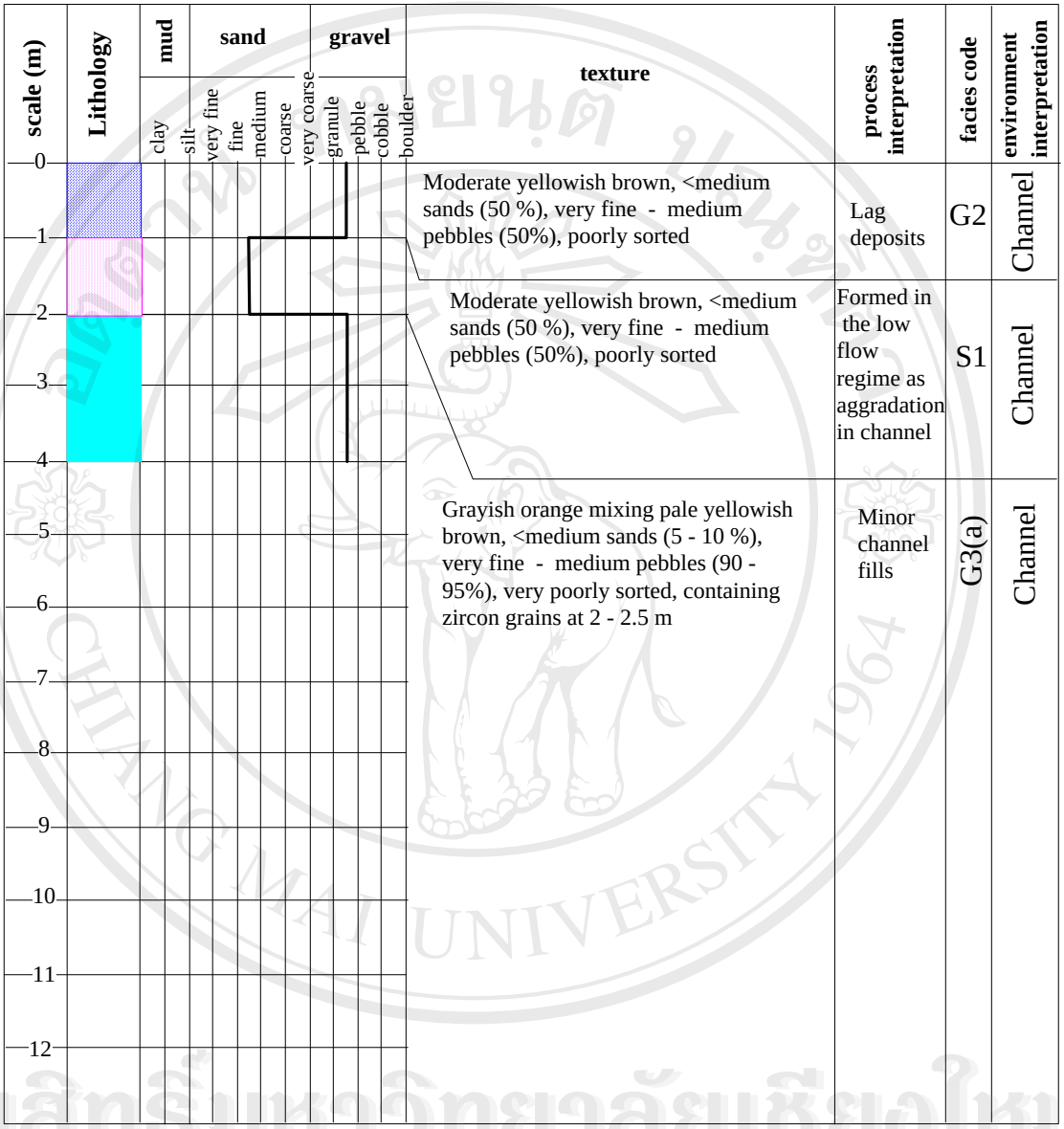
Sedimentary log : DMR H14 Ban: Non Yang Tambon: Song
Grid: 489250 m E 1599500 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 8.8 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

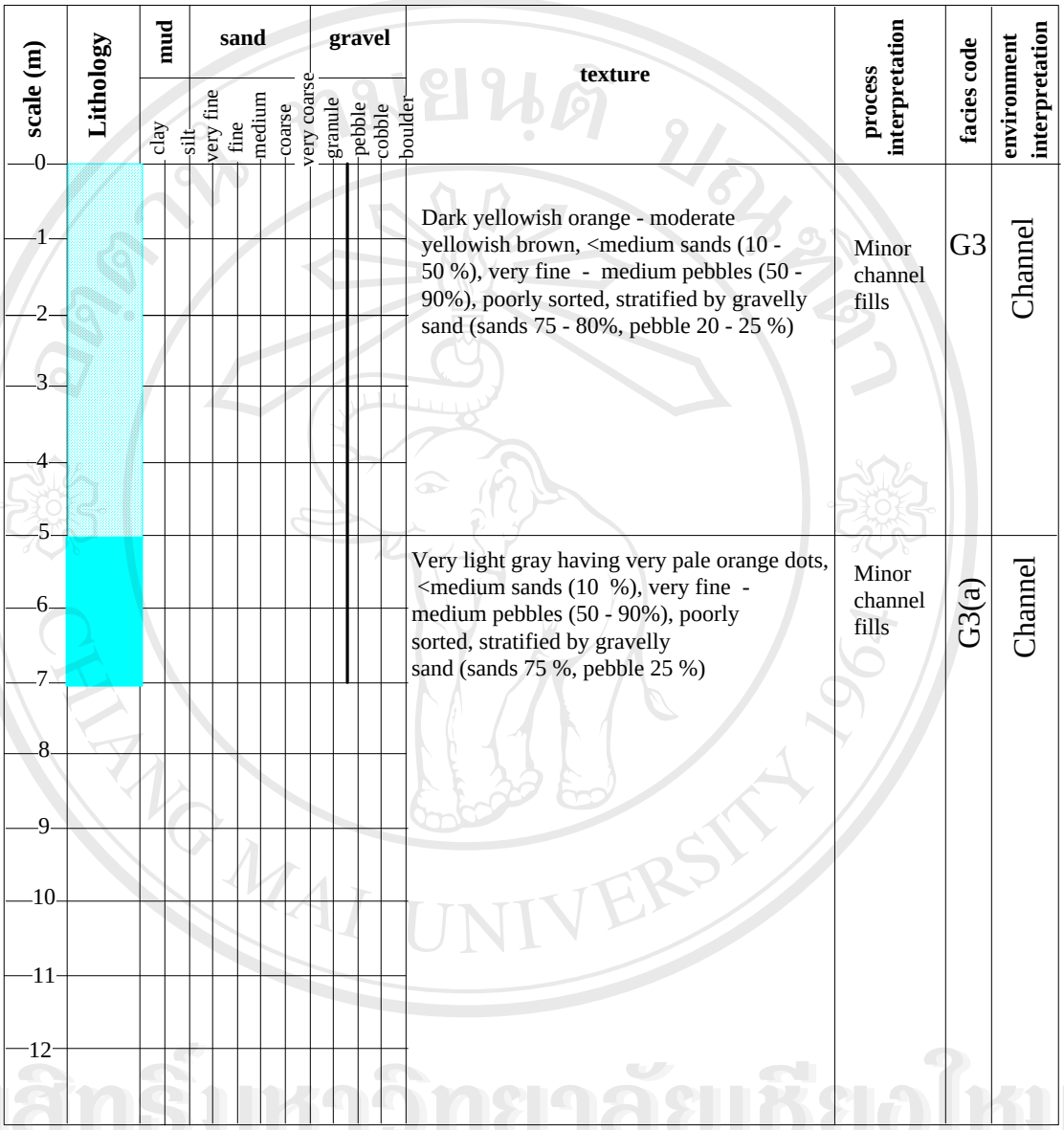
Sedimentary log : DMR H15 Ban: Non Yang Tambon: Song
Grid: 490400 m E 1599300 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 4.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

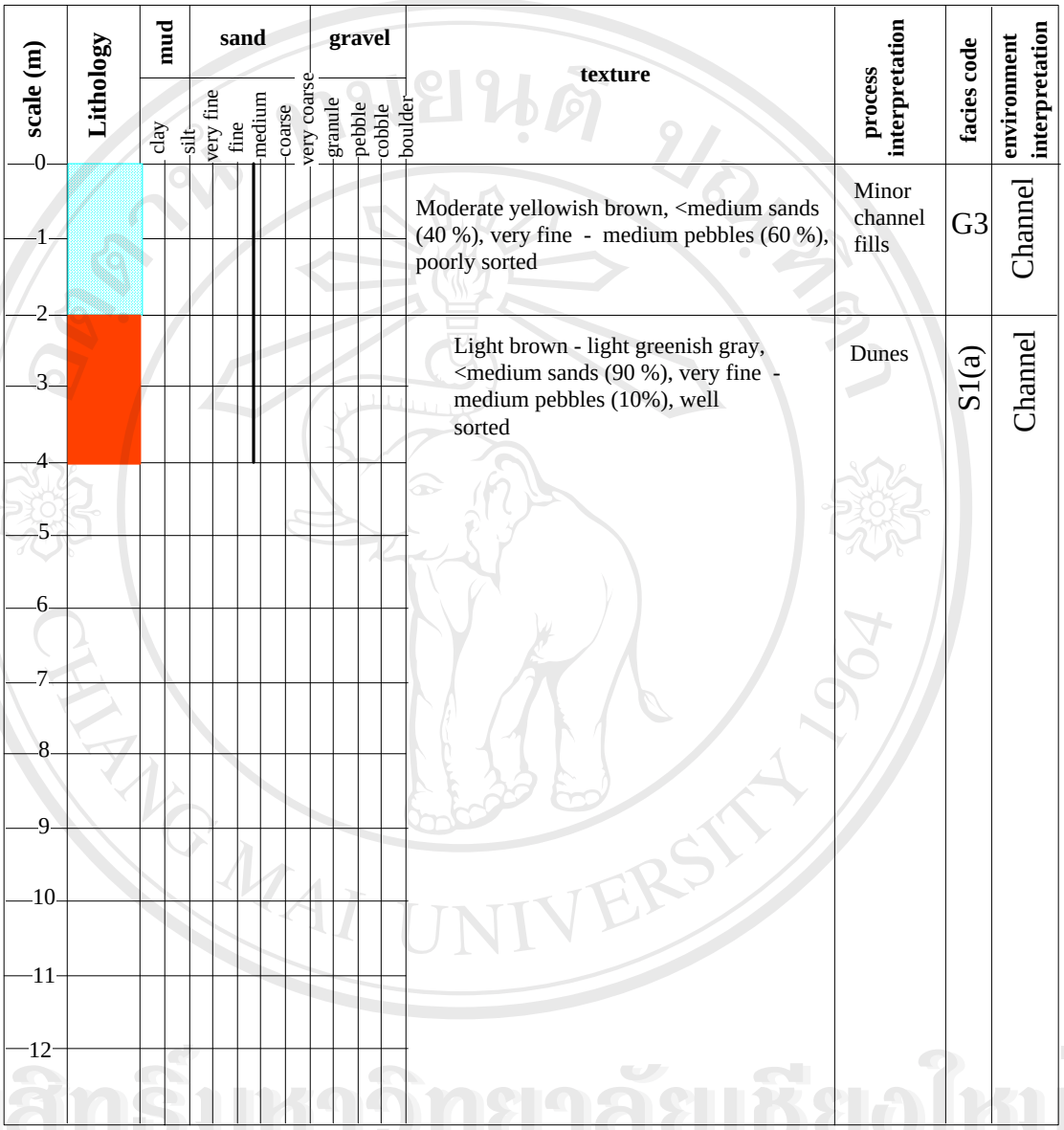
Sedimentary log : DMR I1 Ban: Dan Tai Tambon: Sao Thong Chai
Grid: 483450 m E 1598570 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 7.0 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

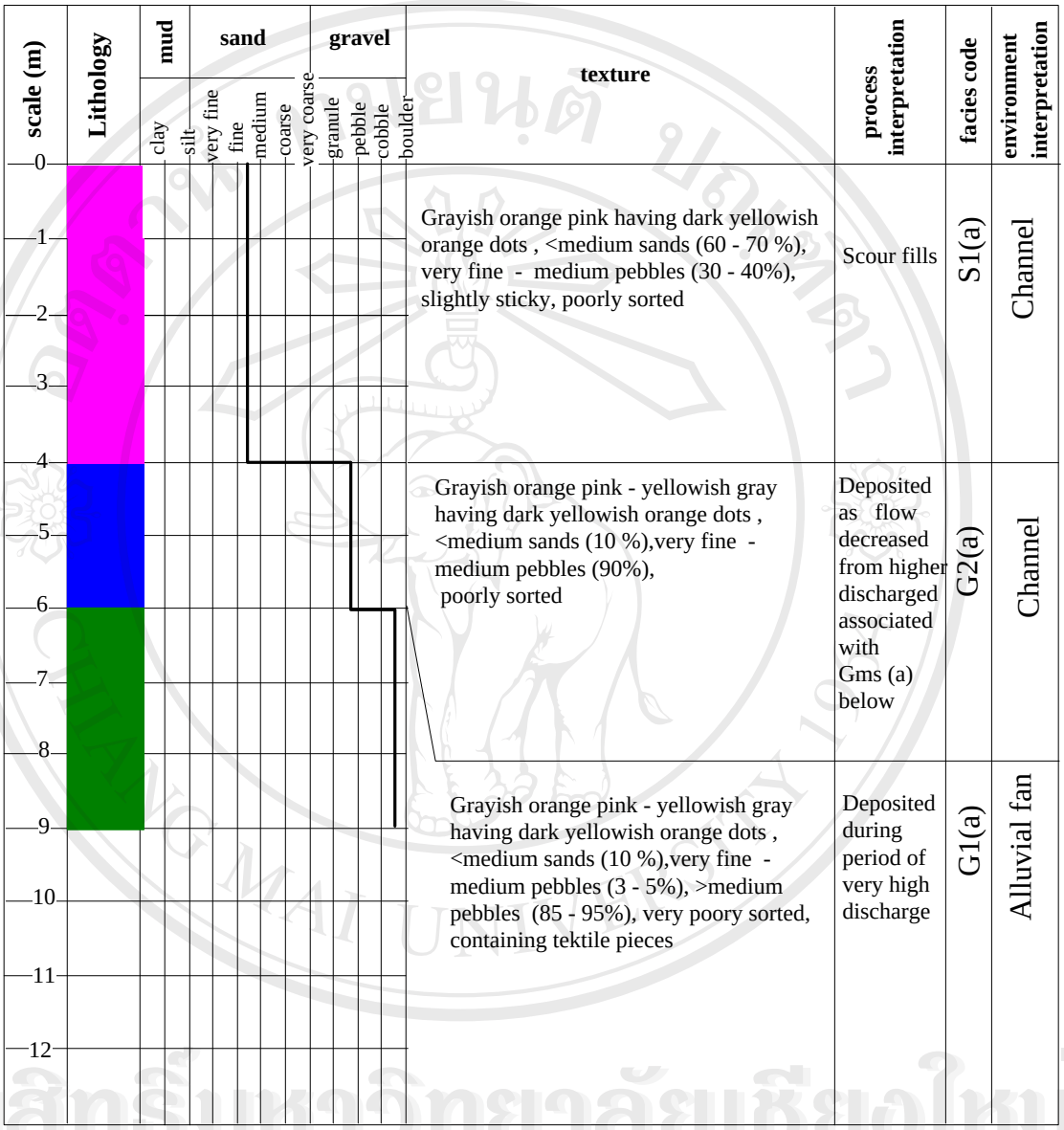
Sedimentary log : DMR I2 Ban: Dan Tai Tambon: Sao Thong Chai
Grid: 483430 m E 1598130 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 4.0 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

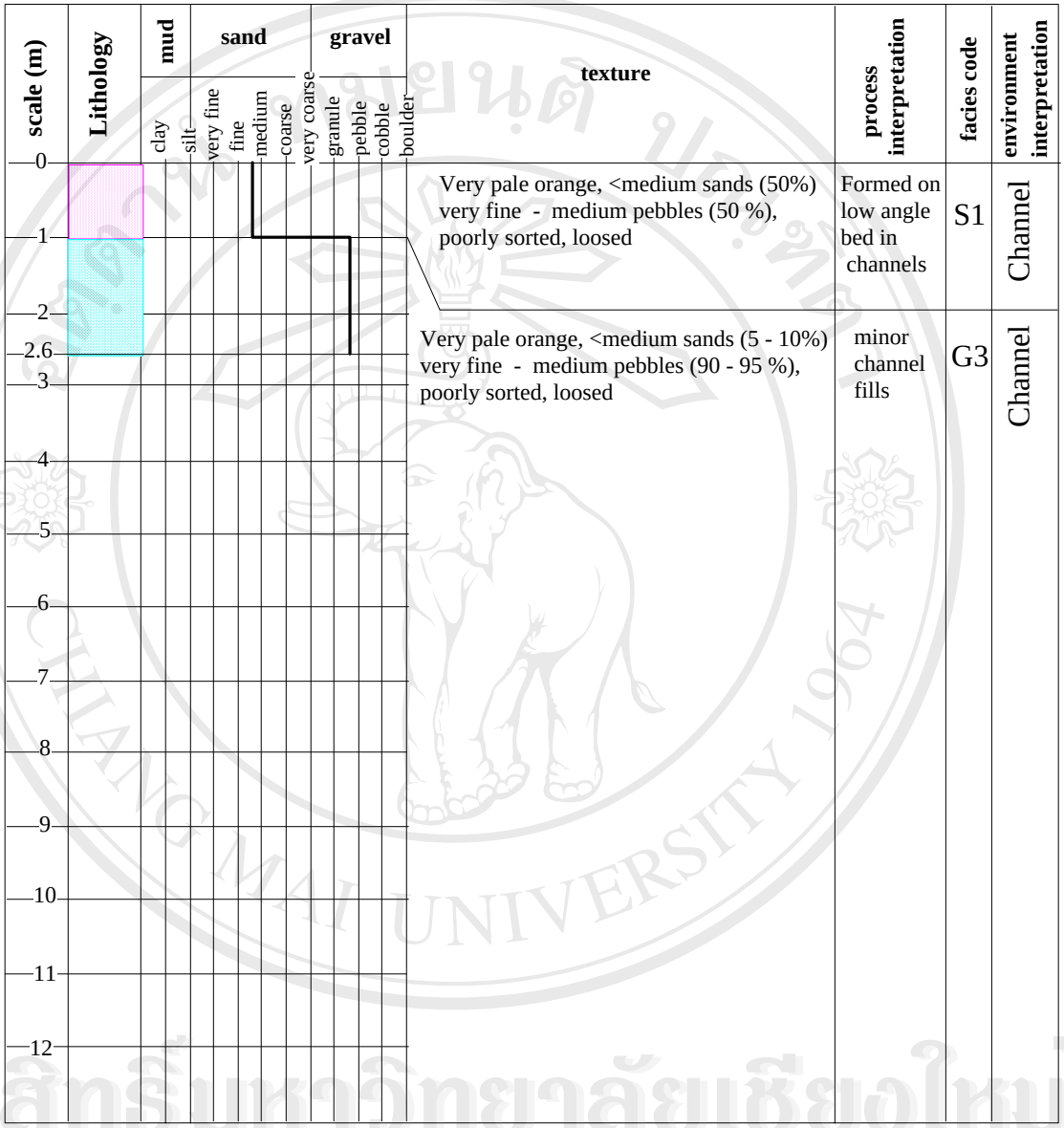
Sedimentary log : DMR I3 Ban: Dan Tai Tambon: Sao Thong Chai
Grid: 483430 m E 1597650 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 9.0 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

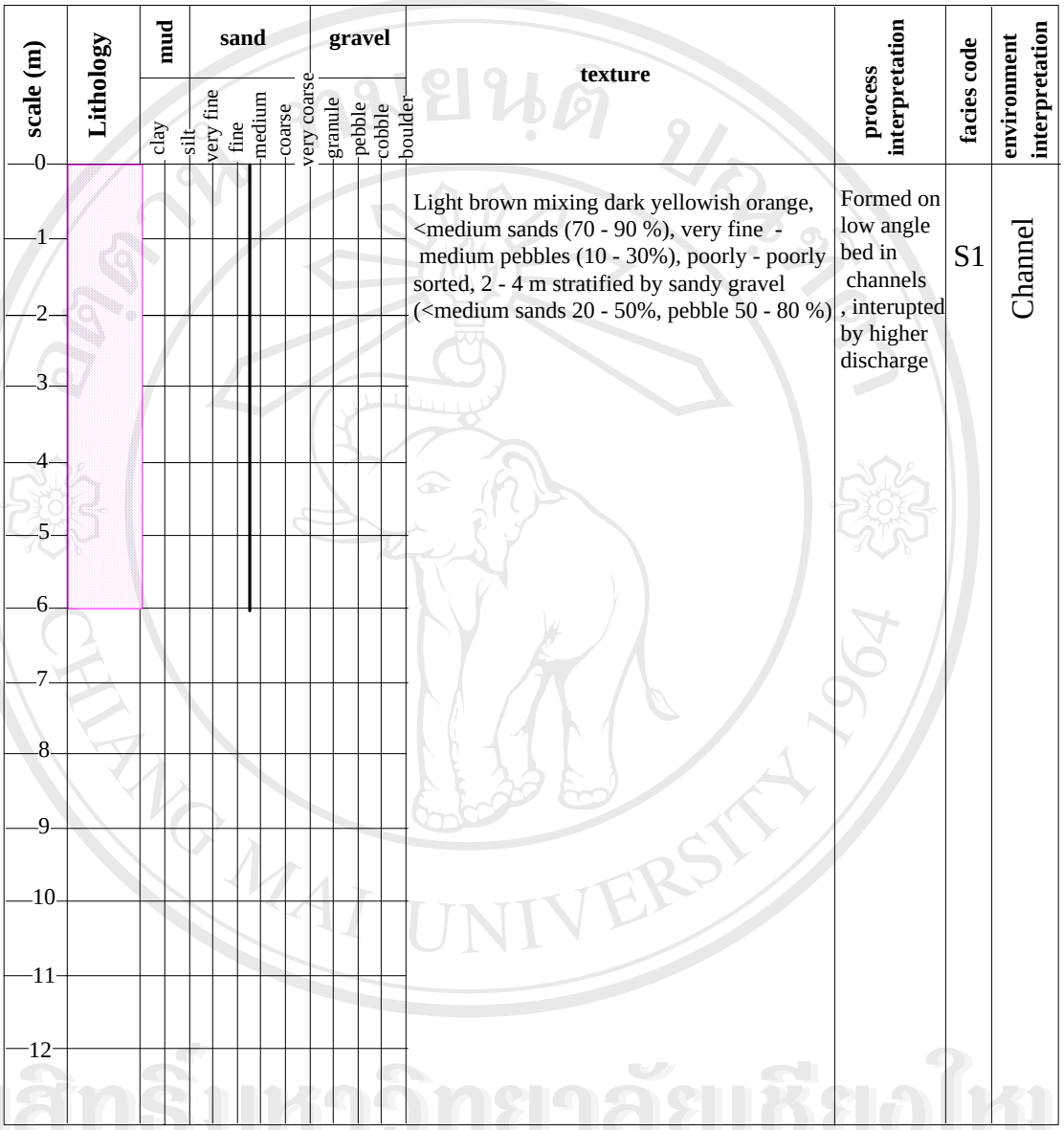
Sedimentary log : DMR I4 Ban: Dan Tai Tambon: Sao Thong Chai
Grid: 483500 m E 1597300 mN Amphoe: Kantaralak ChangwatT: Si Sa Ket
Map sheet: 5937 I Total thickness: 2.6 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

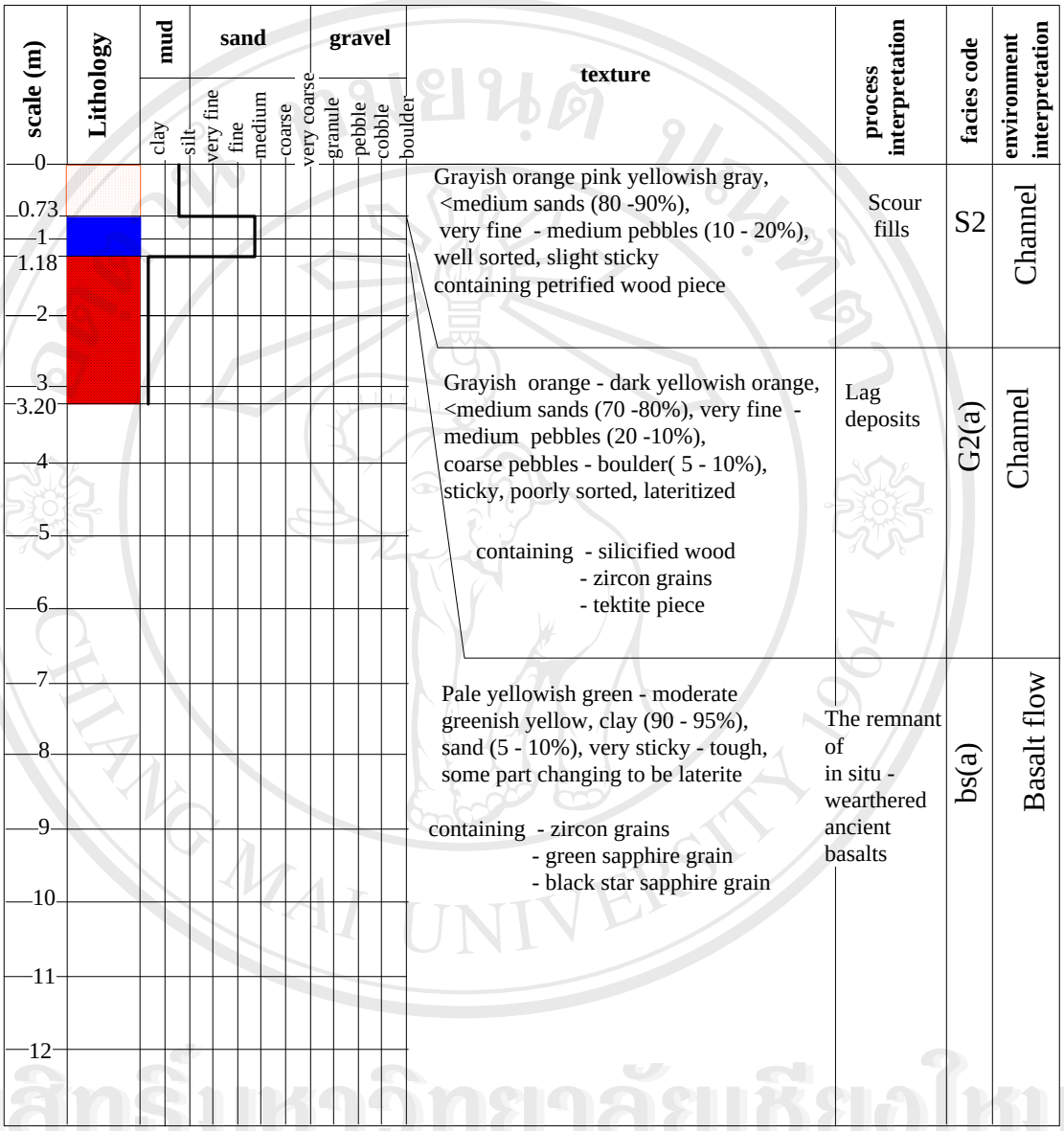
Sedimentary log : DMR I5 Ban: Dan Tai Tambon: Sao Thong Chai
Grid: 484300 m E 1598600 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 6.0 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : P14 Ban: Hua Nam Tambon: Song
Grid: 489450 m E 1603050 mN Amphoe: Nam Yuen Changwat : Ubon Ratchathai
Map sheet: 5938 II Total thickness: 1.91 meters (From basement - rock surfac

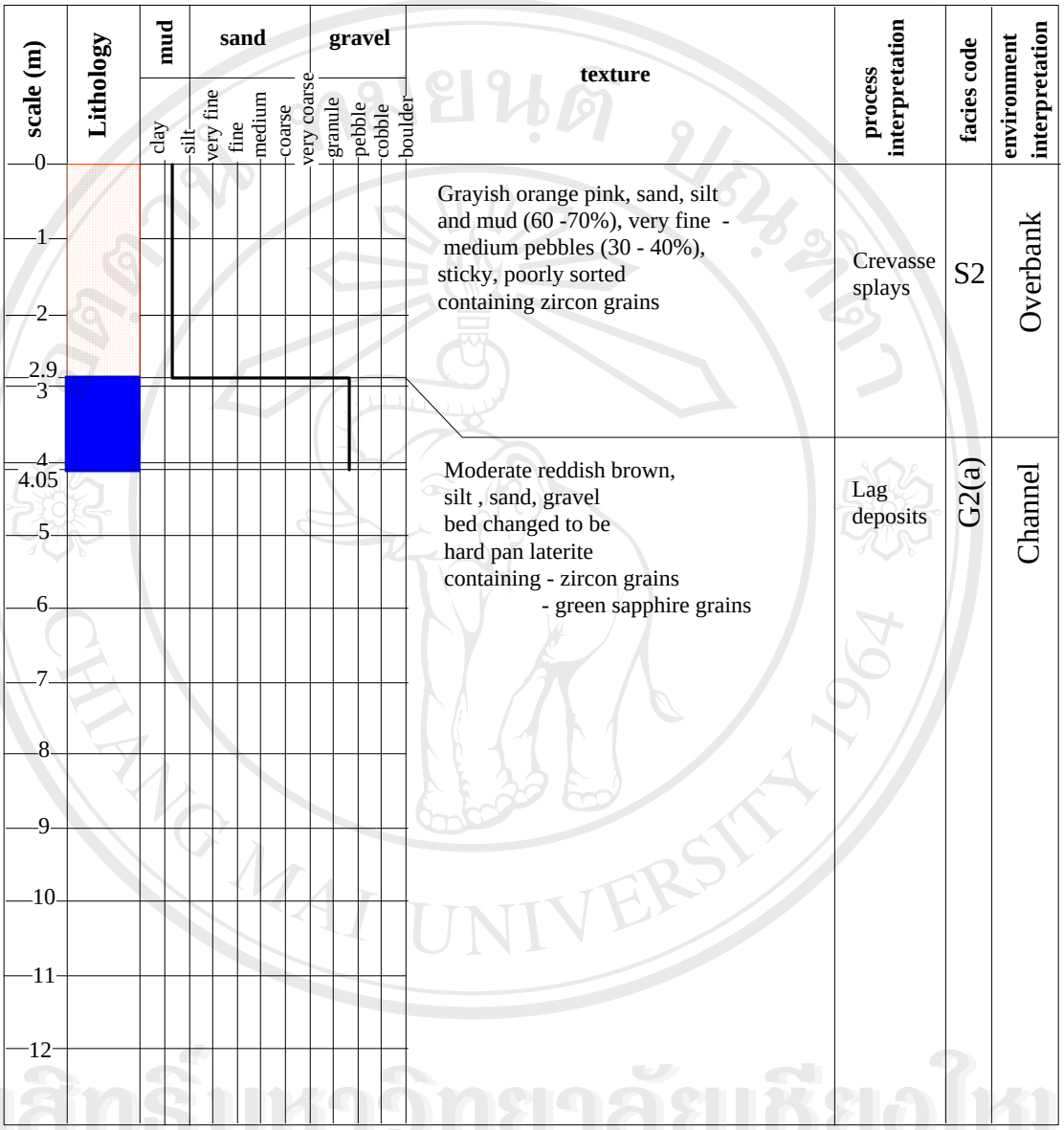


texture	process interpretation	facies code	environment interpretation
Grayish orange pink yellowish gray, <medium sands (80 -90%), very fine - medium pebbles (10 - 20%), well sorted, slight sticky containing petrified wood piece	Scour fills	S2	Channel
Grayish orange - dark yellowish orange, <medium sands (70 -80%), very fine - medium pebbles (20 -10%), coarse pebbles - boulder(5 - 10%), sticky, poorly sorted, lateritized containing - silicified wood - zircon grains - tektite piece	Lag deposits	G2(a)	Channel
Pale yellowish green - moderate greenish yellow, clay (90 - 95%), sand (5 - 10%), very sticky - tough, some part changing to be laterite containing - zircon grains - green sapphire grain - black star sapphire grain	The remnant of in situ - wearthered ancient basalts	bs(a)	Basalt flow

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

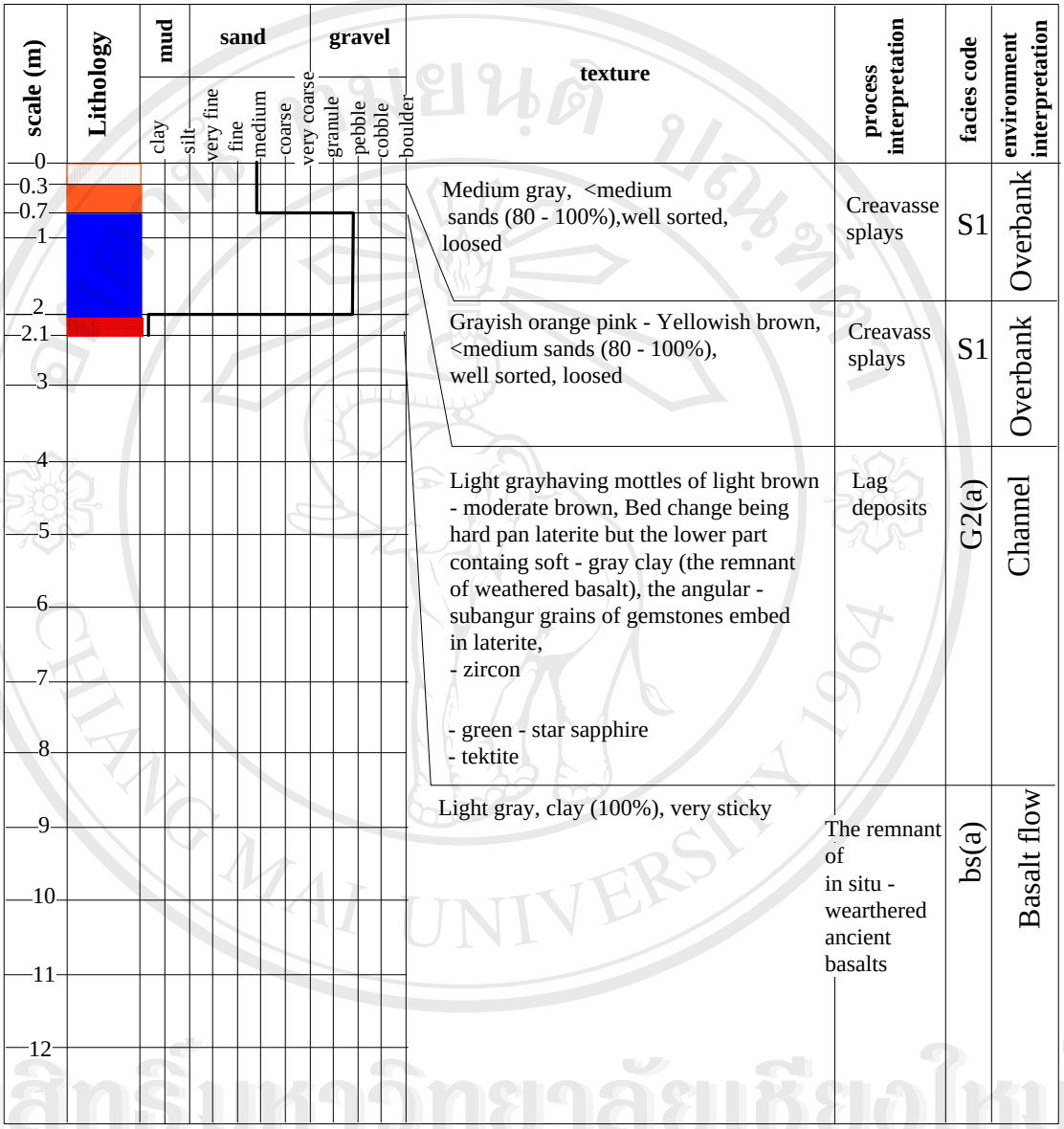
Sedimentary log : P19 Ban: Ta Kao Tambon: Ta Kao
Grid: 489150 m E 1606850 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 4.05 meters (From basement - rock surf



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

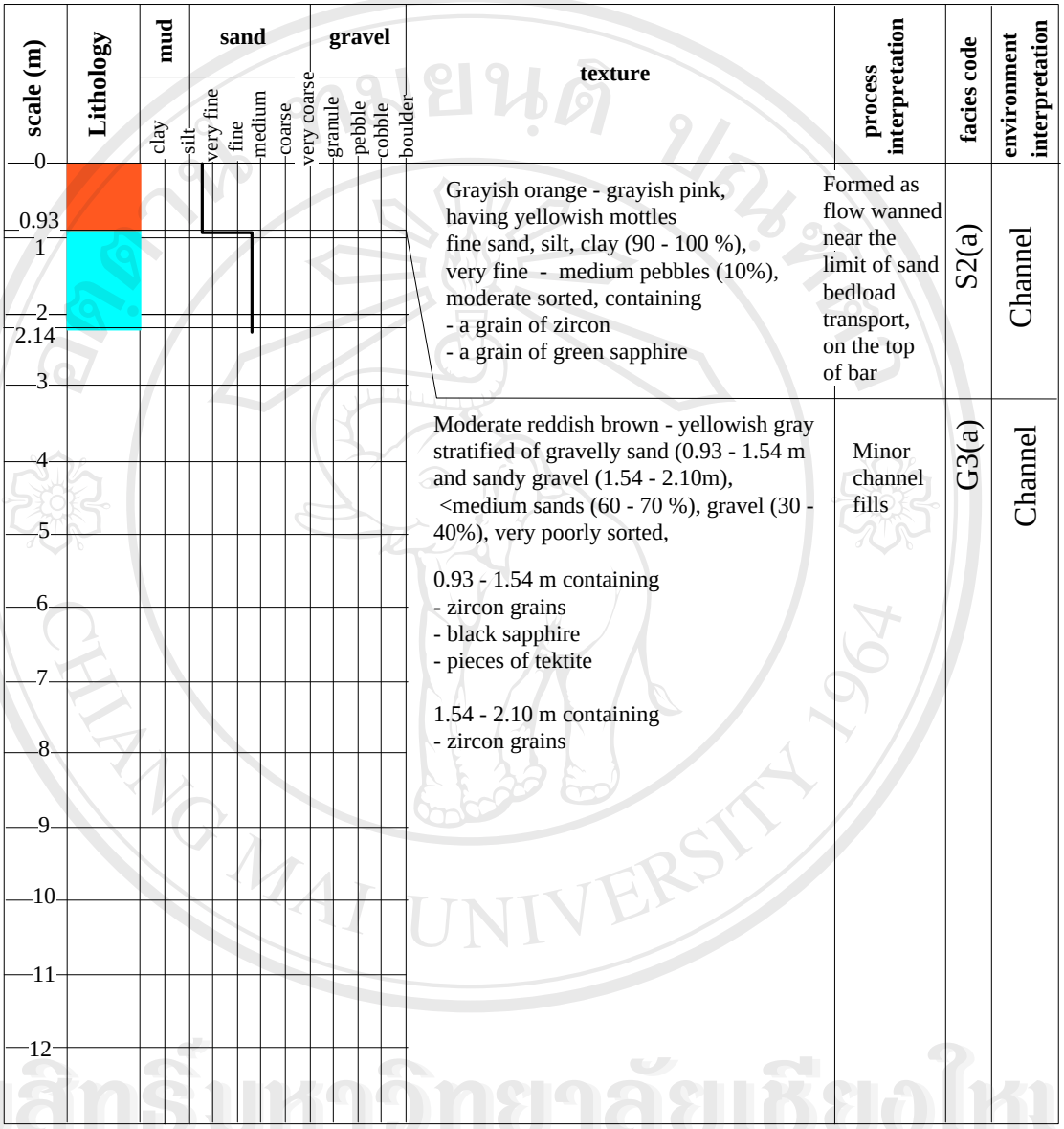
Sedimentary log : P21 Ban: San Taworn Tambon: Phaiboon
Grid: 486300 m E 1610000 mN Amphoe: Nam Yuen Province: Ubonratchathani
Map sheet: 5938 II Total thickness: 2.1 meters (Not from to basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

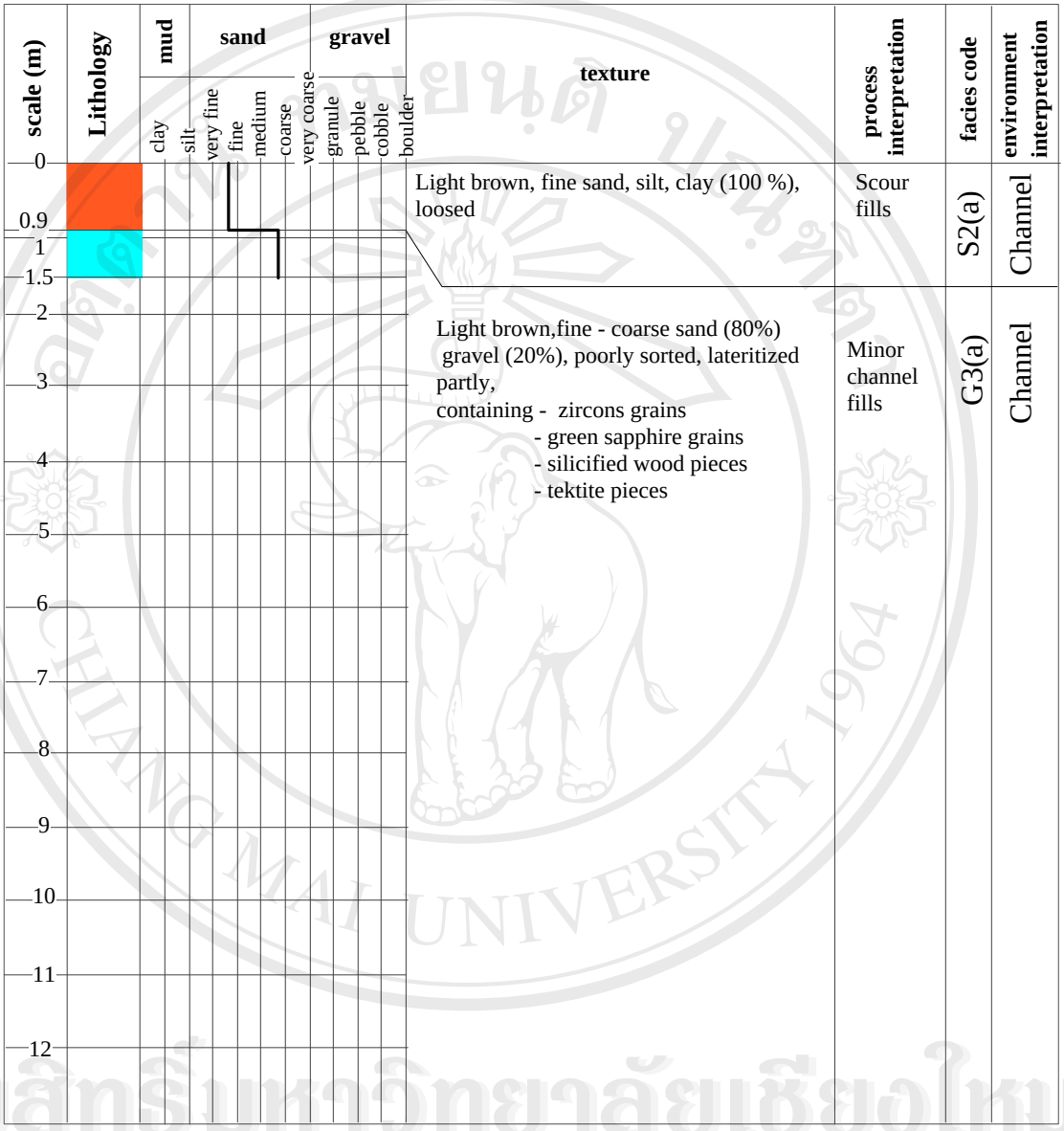
Sedimentary log : DMR P32 Ban: Non Yang Tambon: Song
Grid: 490900 m E 1599600 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 2.1 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

Sedimentary log : DMR P33 Ban: Hua Nam - Ban Ta Kao Tambon: Song
Grid: 489800 m E 1604500 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 1.5 meters (From basement - rock surface

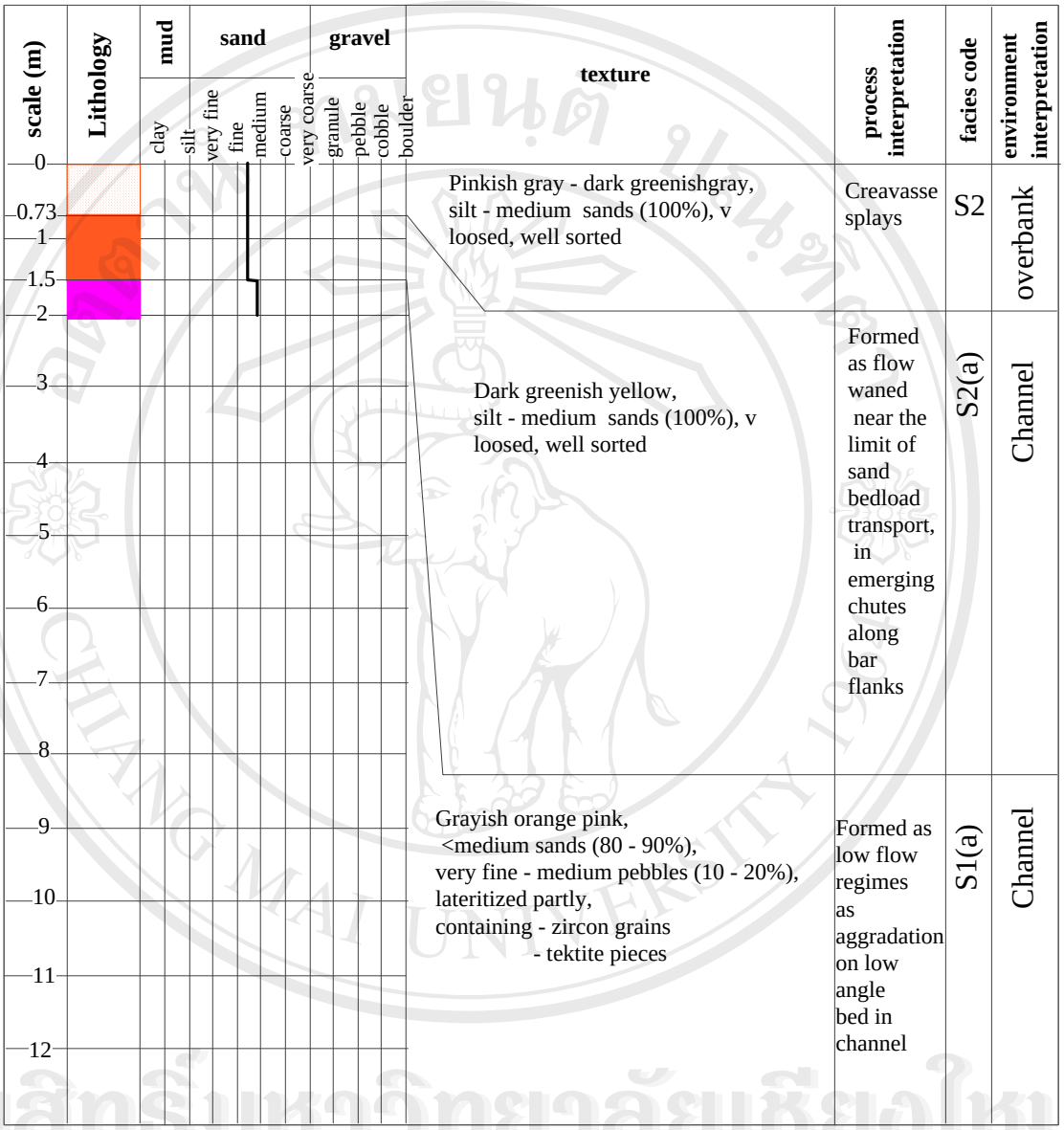


texture	process interpretation	facies code	environment interpretation
Light brown, fine sand, silt, clay (100 %), loosed	Scour fills	S2(a)	Channel
Light brown,fine - coarse sand (80%) gravel (20%), poorly sorted, lateritized partly, containing - zircons grains - green sapphire grains - silicified wood pieces - tektite pieces	Minor channel fills	G3(a)	Channel

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

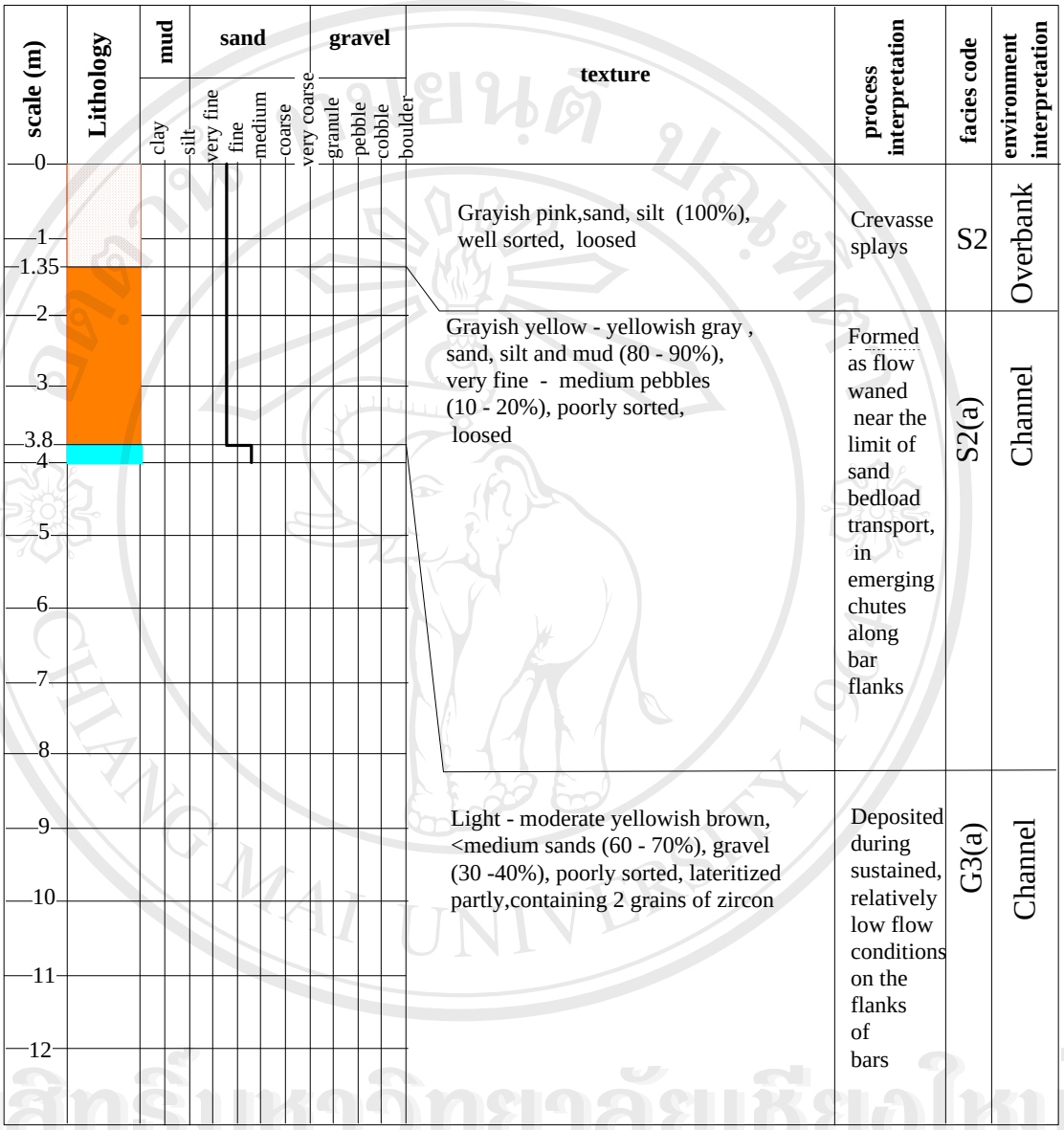
Sedimentary log : P35 Ban: Ta koi Tambon: Ta Kao
Grid: 487950 m E 1604400 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 2.0 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

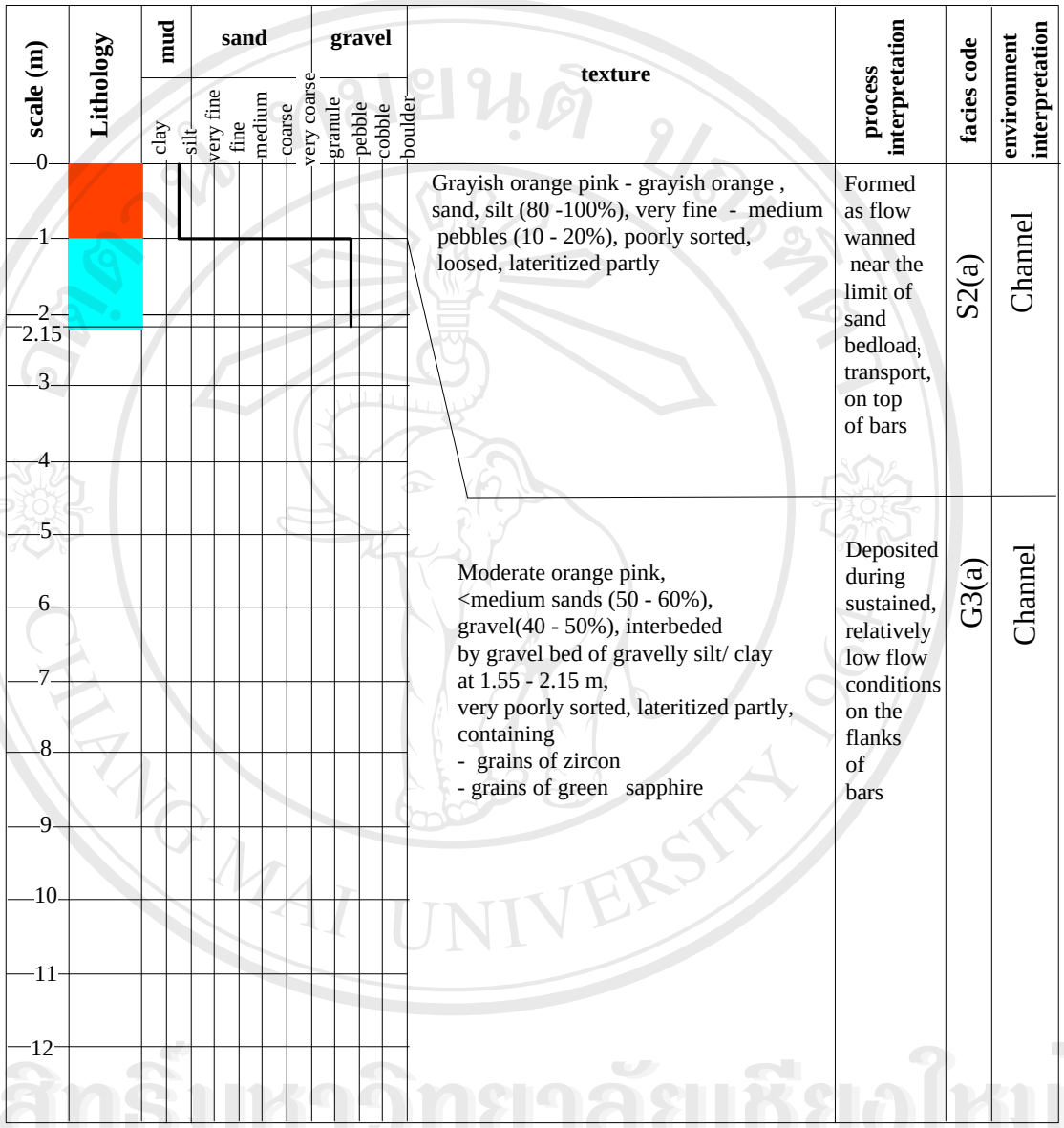
Sedimentary log : P36 Ban: Huai Yang Tambon: Ta Kao
Grid: 485550 m E 1606600 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 4.0 meters (Not from to basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

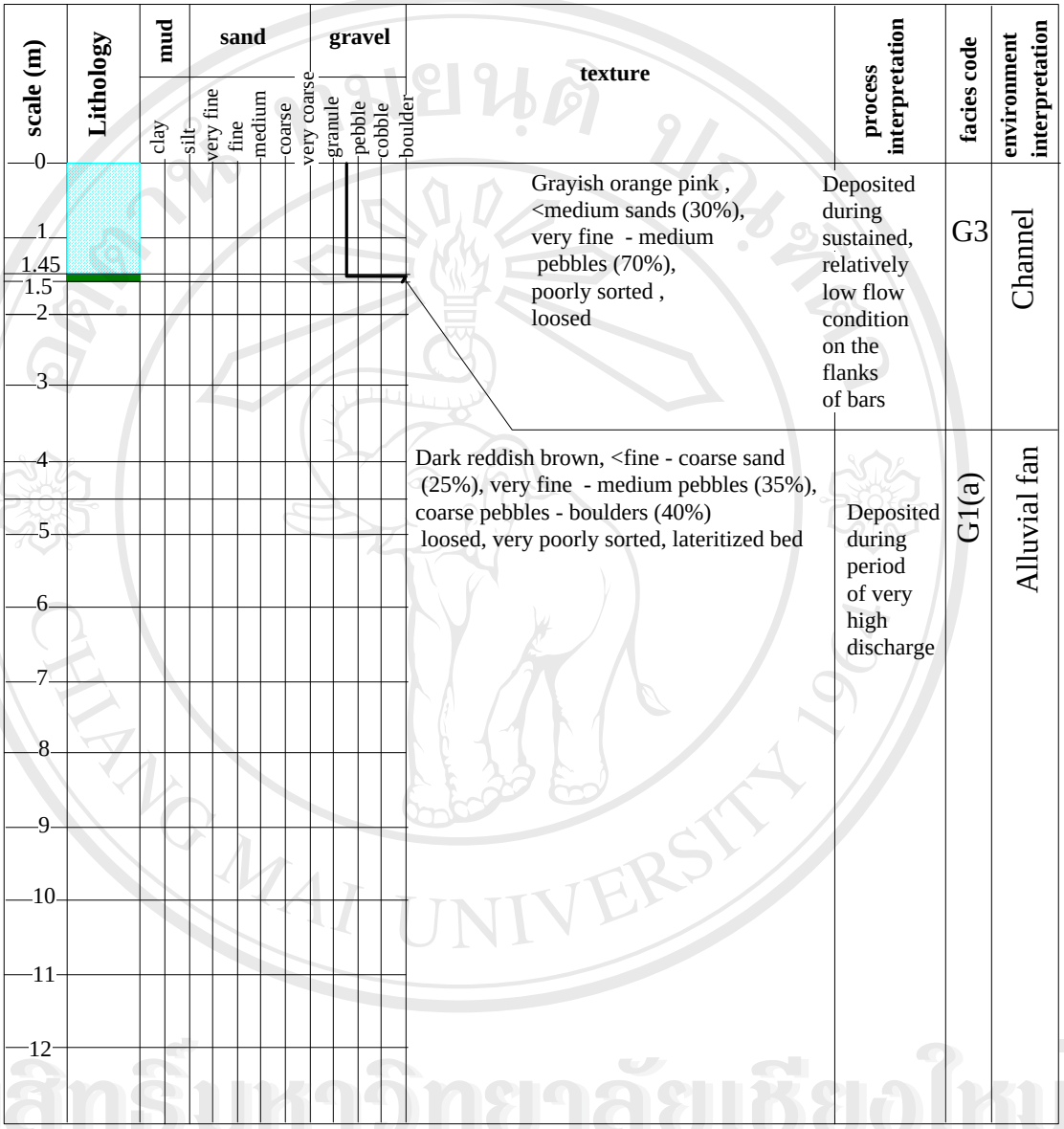
Sedimentary log : P37 Ban: Ta Em Tambon: Ta Kao
Grid: 487350 m E 1608600 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 2.15 meters (Not from basement - rock surf



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

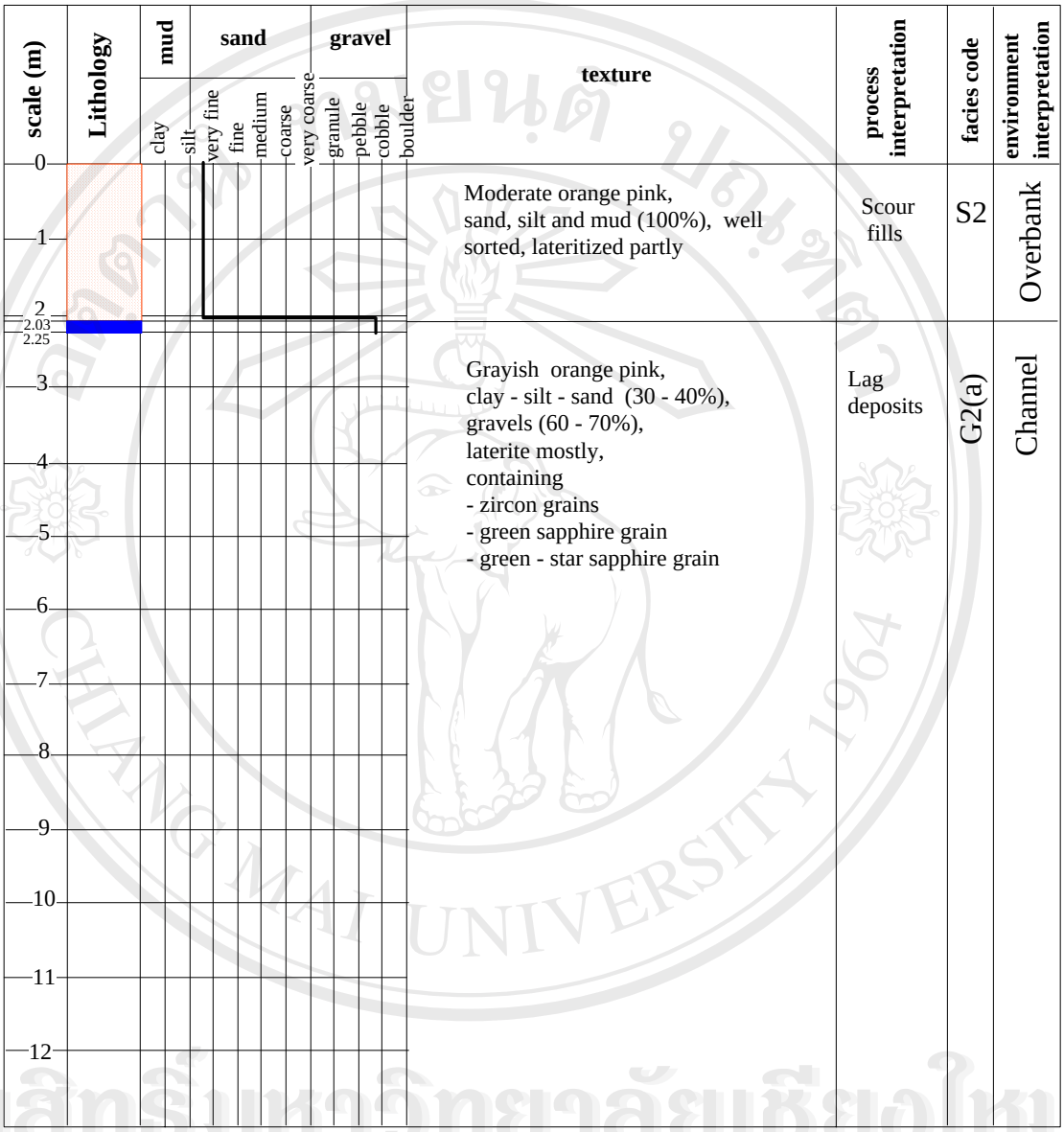
Sedimentary log : P39 Ban: Nong Tim Tambon: Sao Thong Chai
Grid: 482250 m E 1601750 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 1.5 meters (Not from basement rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

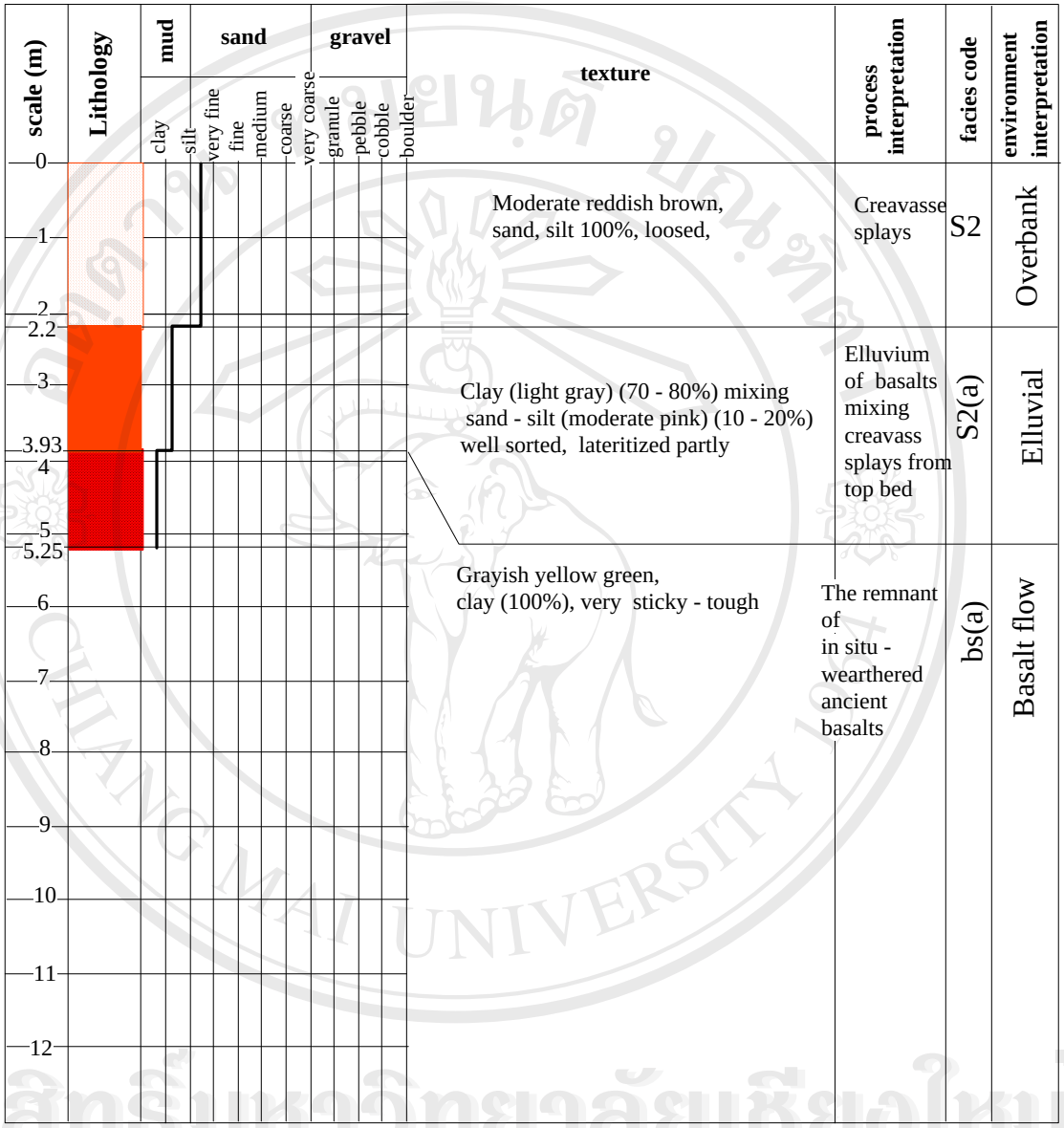
Sedimentary log : P40 Ban: Ta Sek Tambon:Non Samran
Grid: 482450 m E 1604700 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 2.25 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

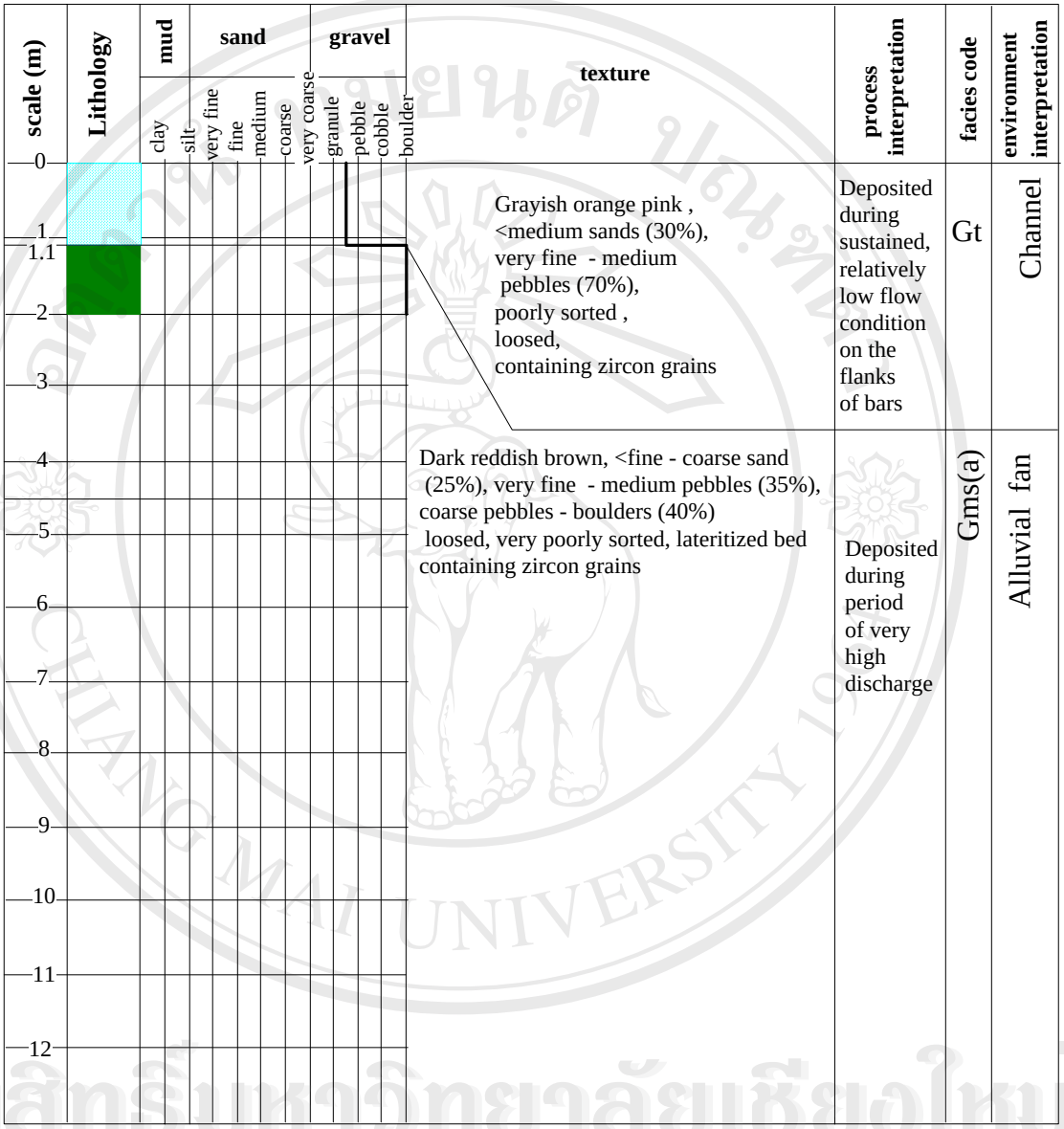
Sedimentary log : P41 Ban: Chan Hom Tambon: Non Samran
Grid: 480450 m E 1606250 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 5.25 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

Sedimentary log : P45 Ban: Dan Tai Tambon: Sao Thong Chai
Grid: 483450 m E 1598750 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 2.5 meters (From basement rock surface)



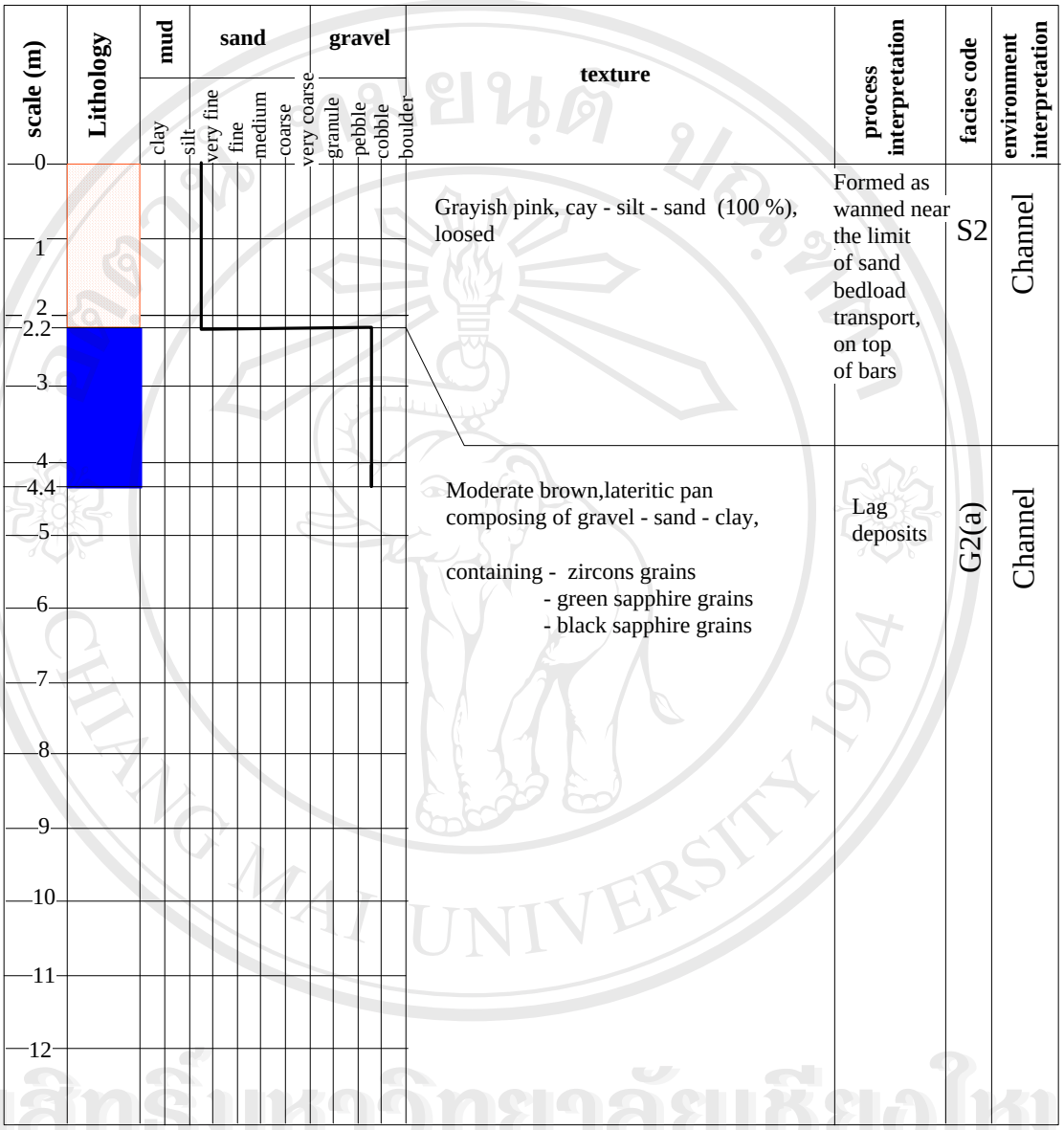
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

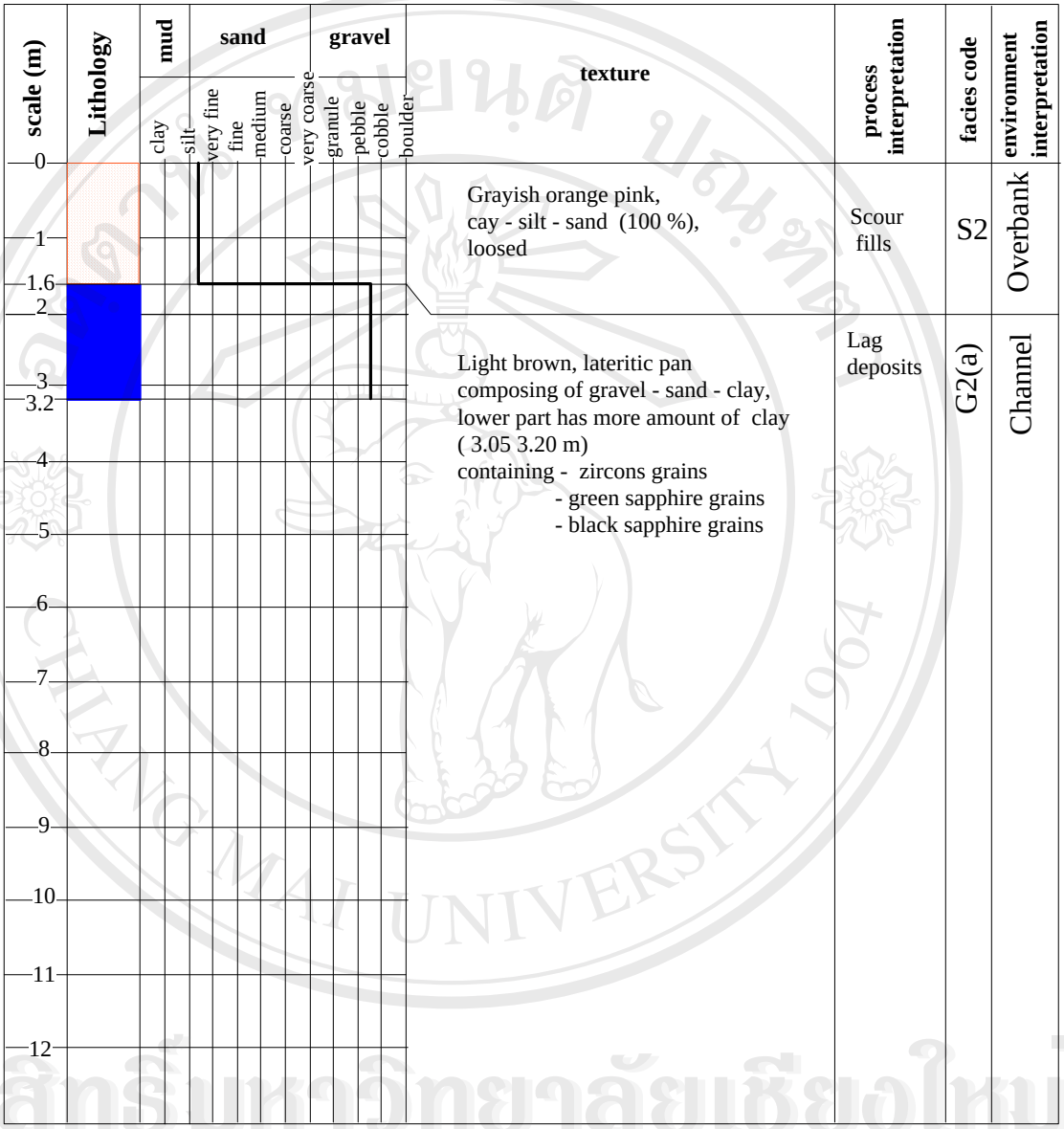
Sedimentary log : DMR P51 Ban: Hua Nam Tambon: Song
Grid: 490700 m E 1603100 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 4.4 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

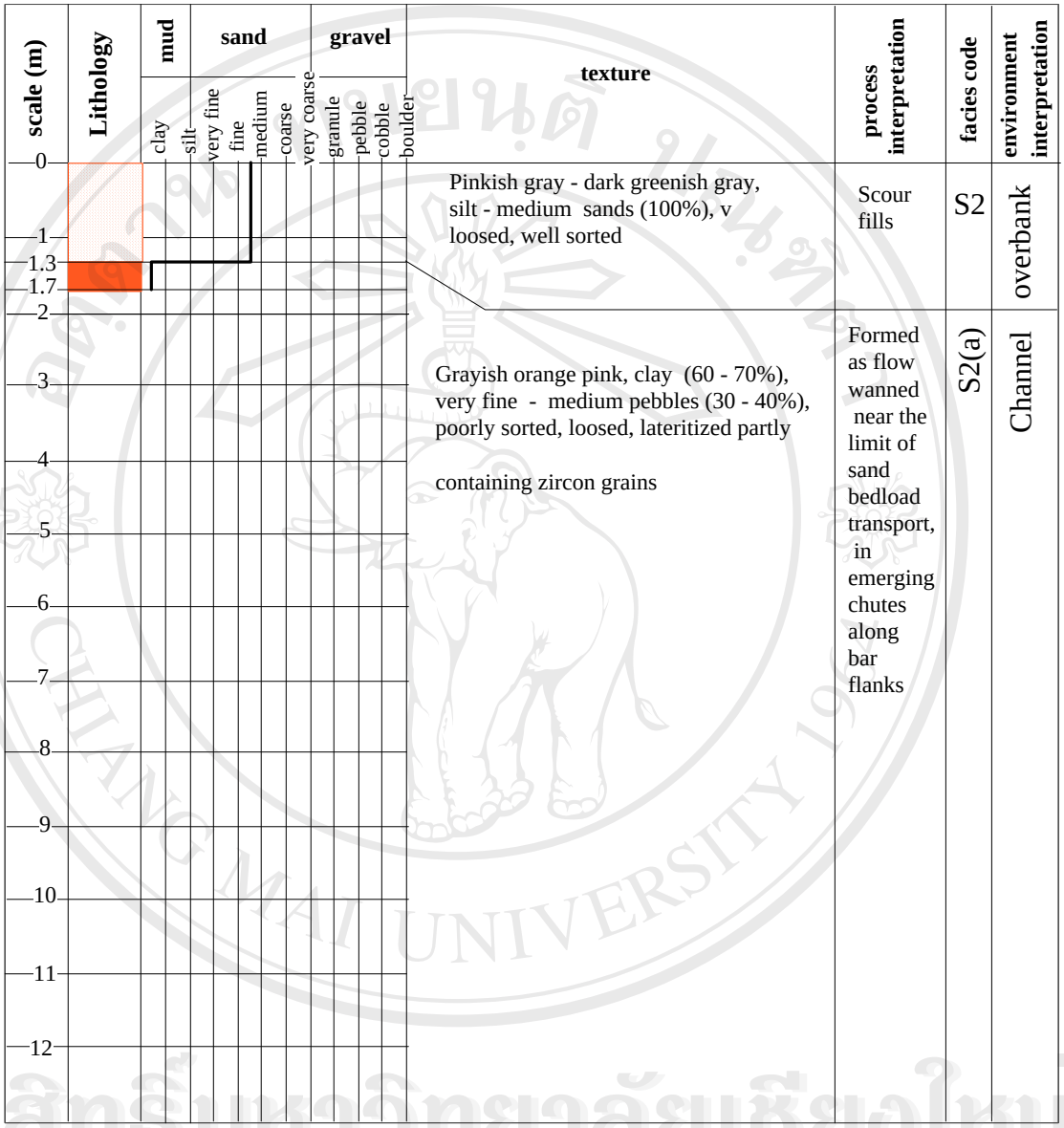
Sedimentary log : DMR P52 Ban: Hua Nam Tambon: Song
Grid: 489250 m E 1603700 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathan
Map sheet: 5938 II Total thickness: 3.2 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

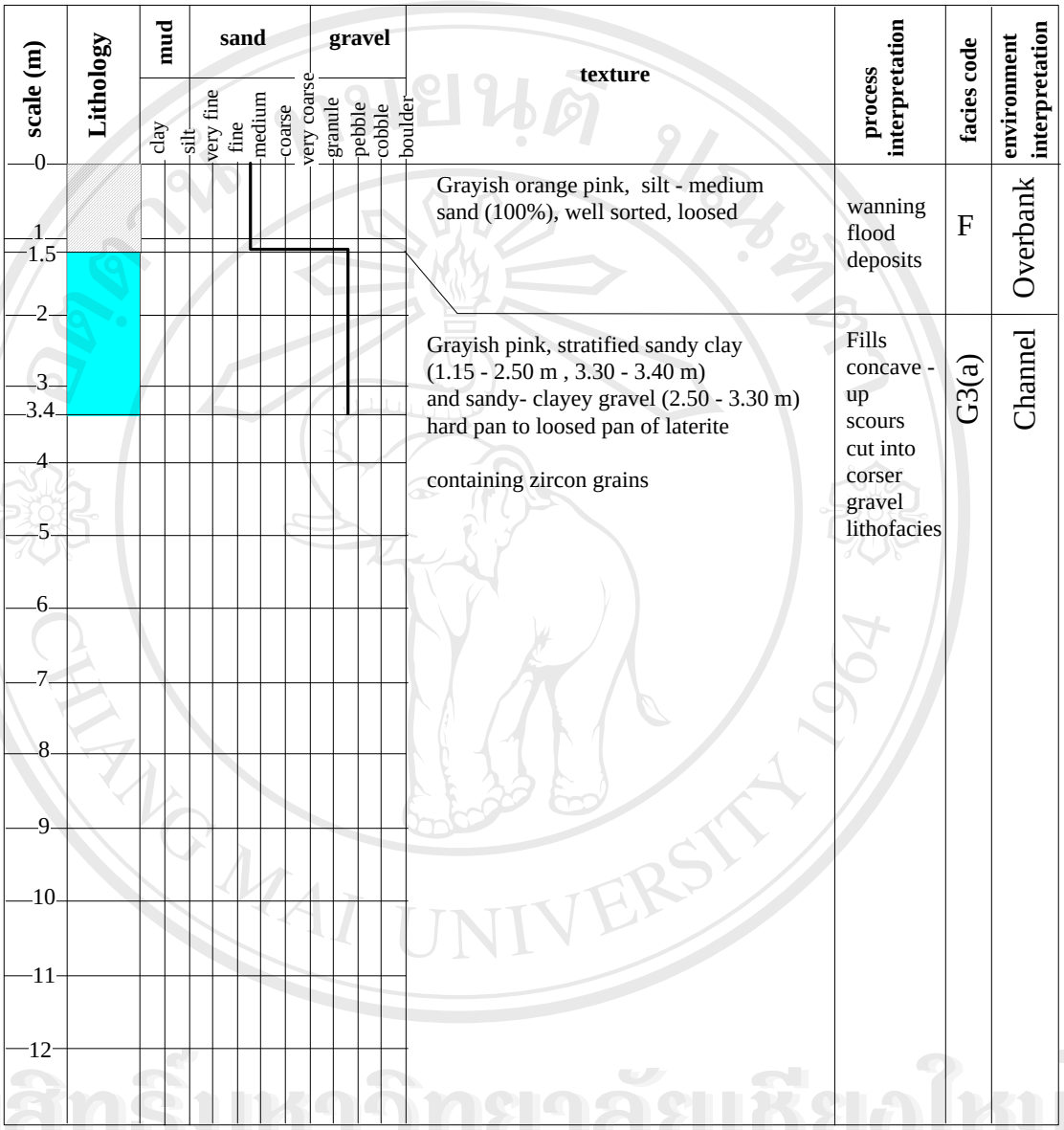
Sedimentary log : P54 Ban: Ta koi Tambon: Ta Kao
Grid: 488150 m E 1604400 mN Amphoe: Nam Khun Changwat: Ubon Ratchathan
Map sheet: 5938 II Total thickness: 1.7 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

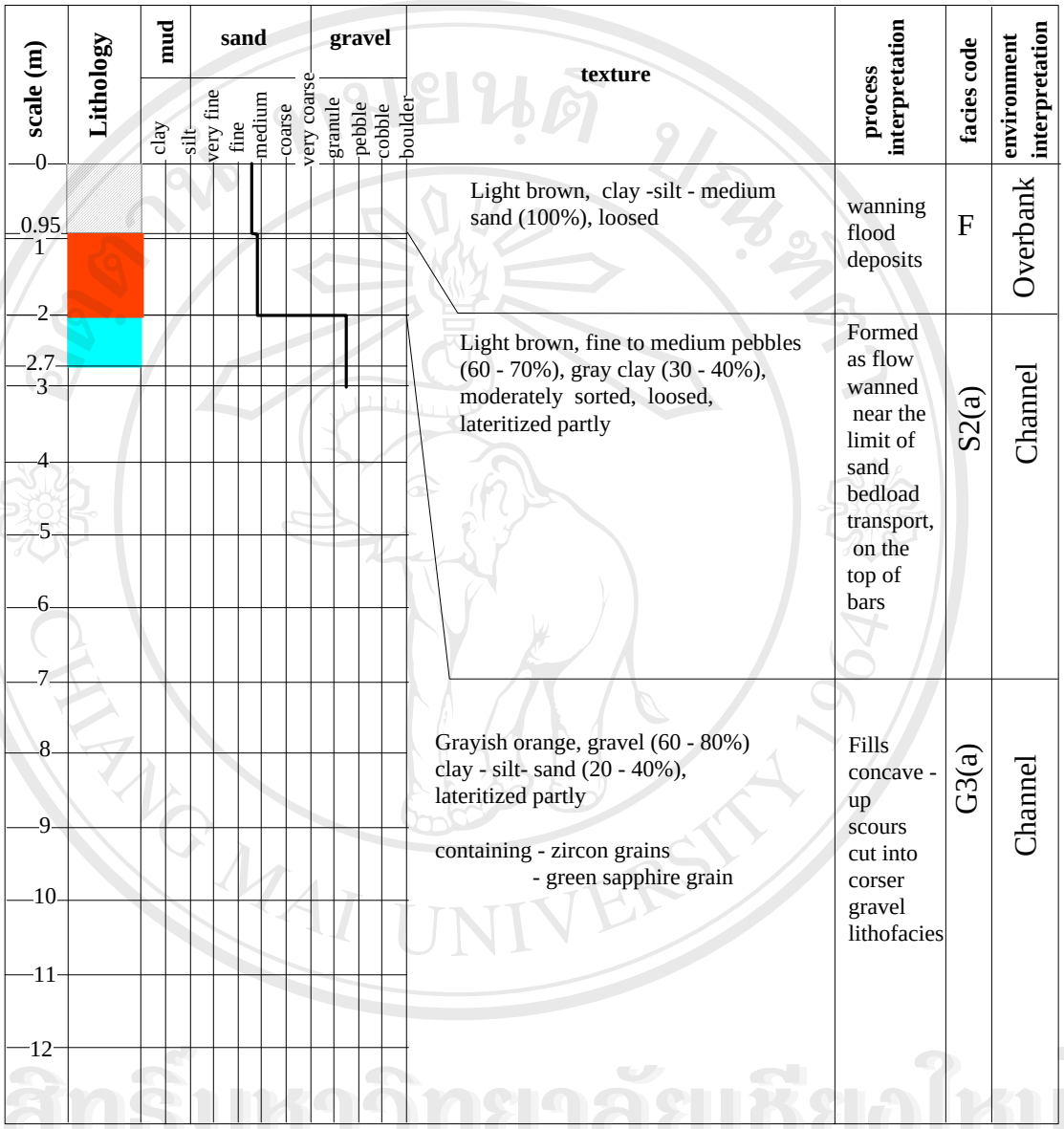
Sedimentary log : P 55 Ban: Ta Em Tambon: Ta Kao
Grid: 486850 m E 160680 0mN Amphoe: Nam Yuen Changwat: Ubon Ratchathan
Map sheet: 5938 II Total thickness: 3.40 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

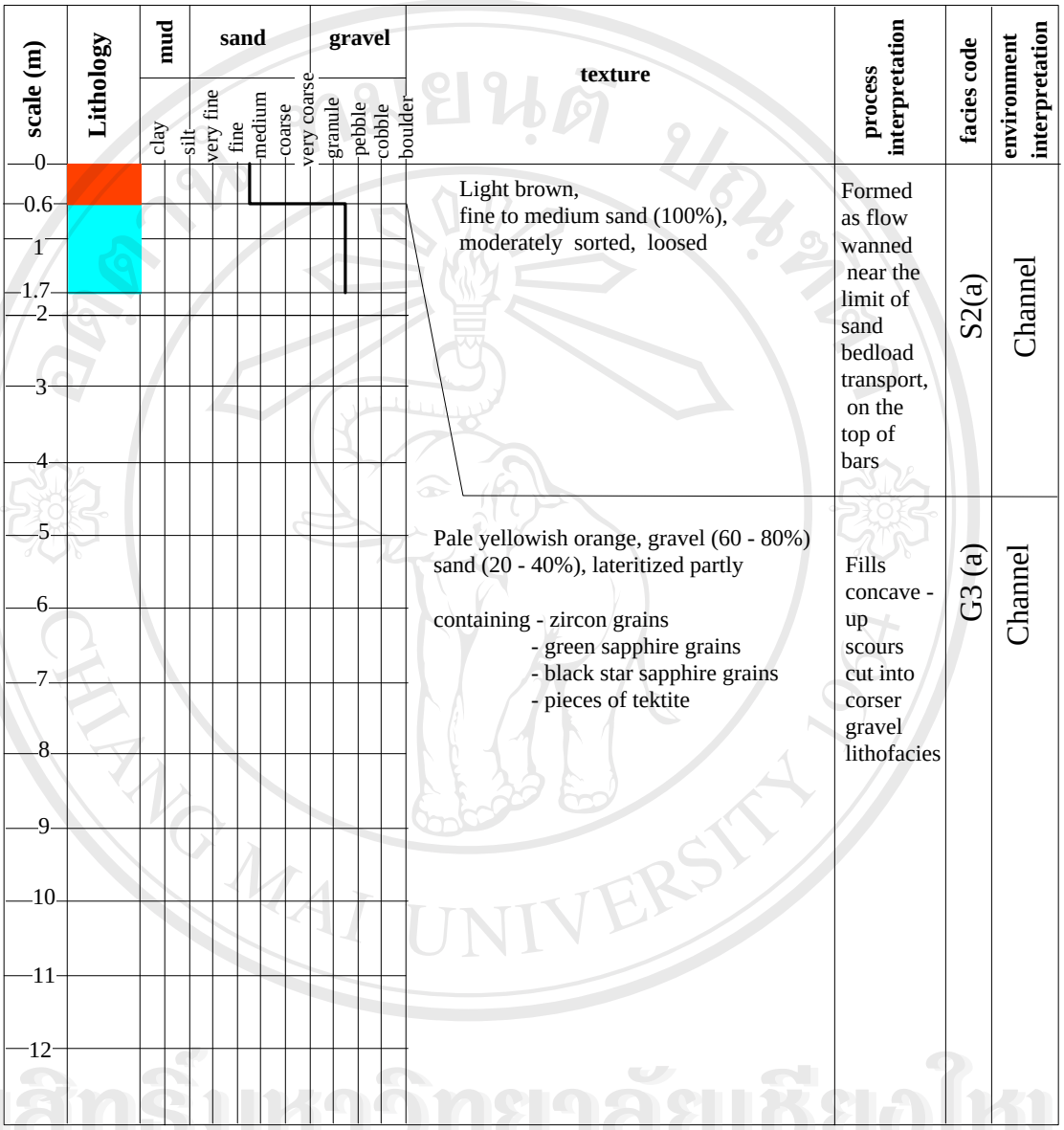
Sedimentary log : P 56 Ban: Huai Yang Tambon: Ta Kao
Grid: 486600 m E 1606300mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 2.70 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

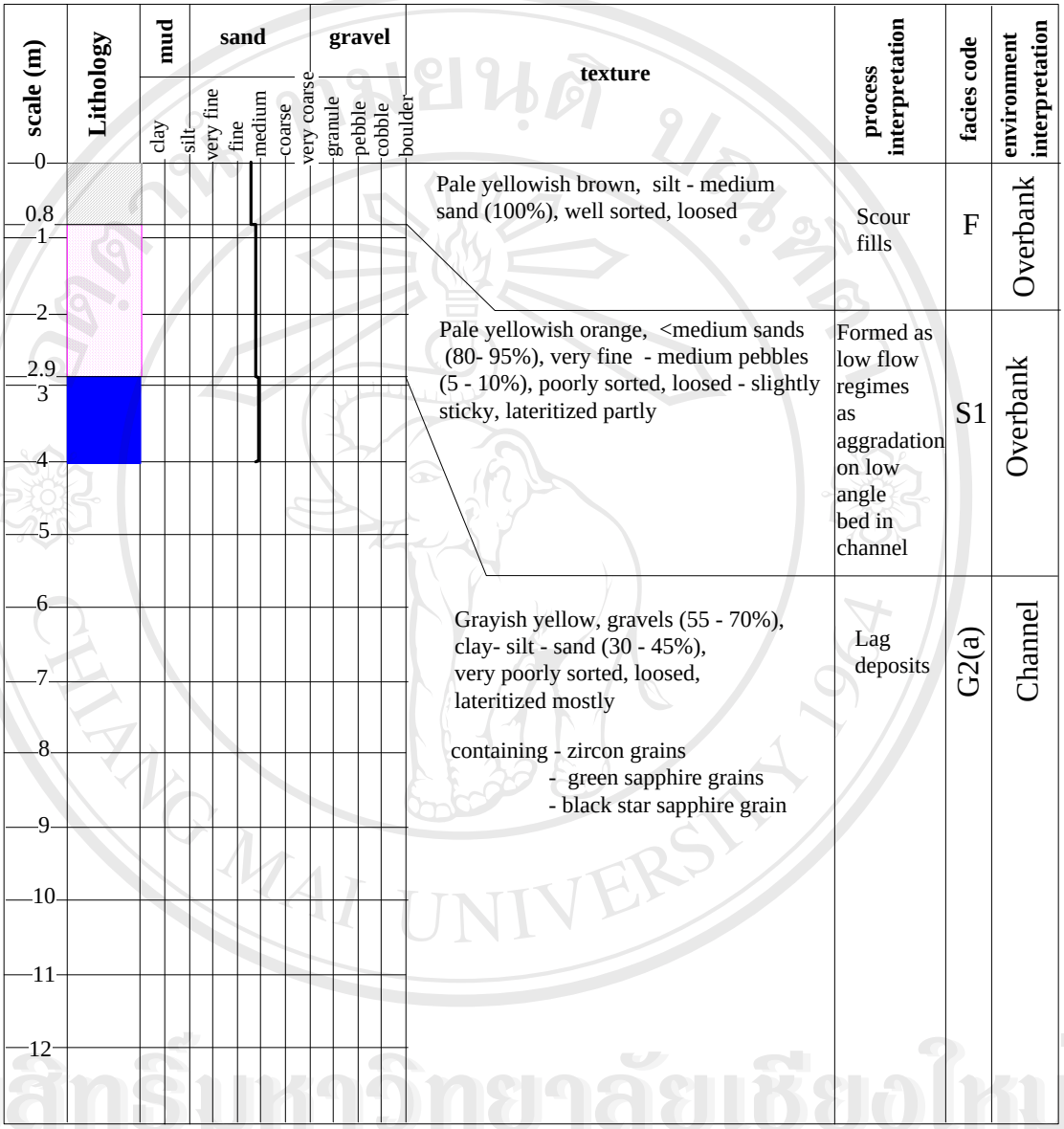
Sedimentary log : P 57 Ban: Huai Yang Tambon: Ta Kao
Grid: 486250 m E 1605150mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 1.70 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

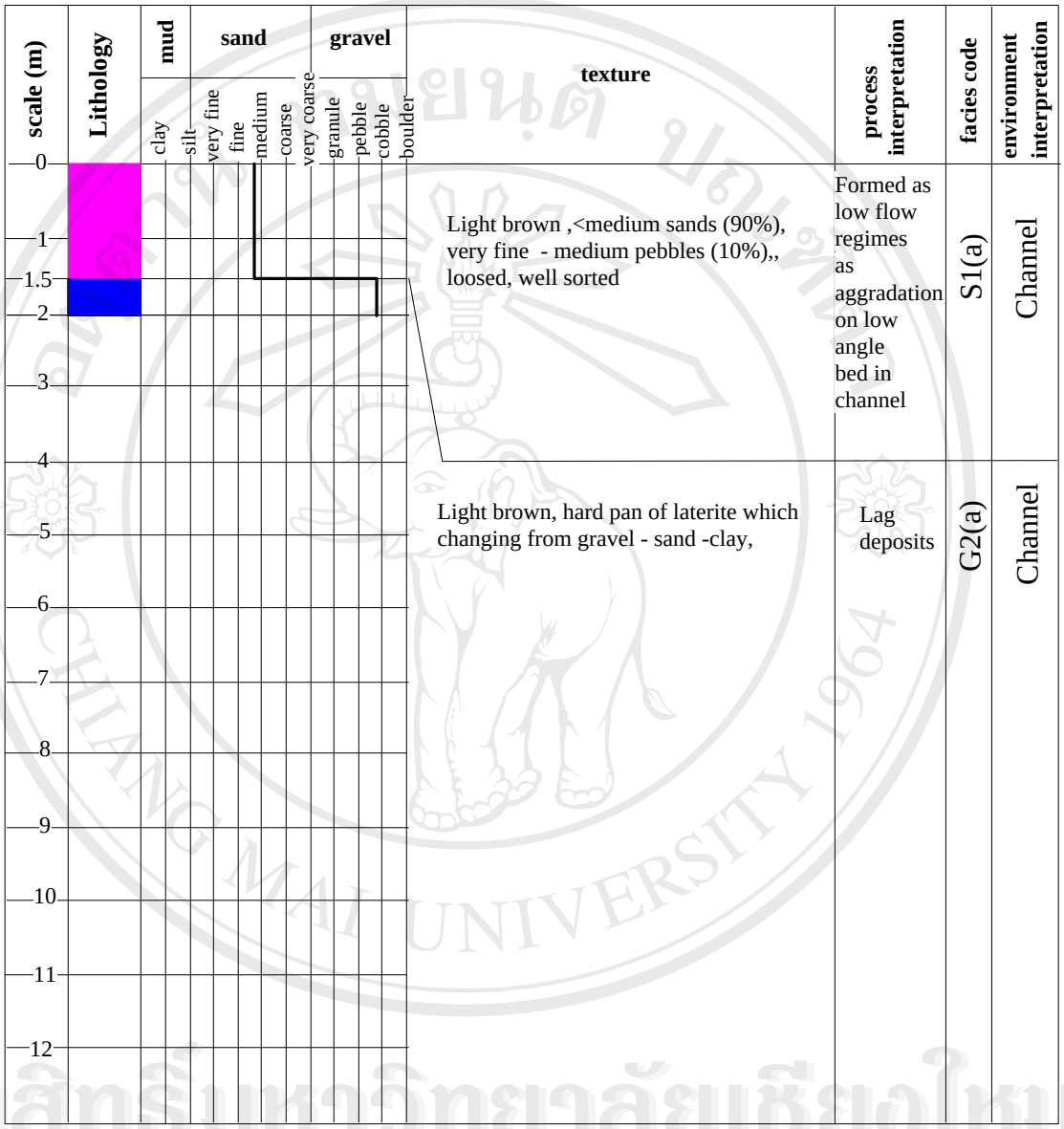
Sedimentary log : P58 Ban: Huai Yang Tambon: Ta Kao
Grid: 485500 m E 1607200 mN Amphoe: Nam Yuen Province: Ubonratchathani
Map sheet: 5938 II Totall thickness: 4.0 meters (to basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

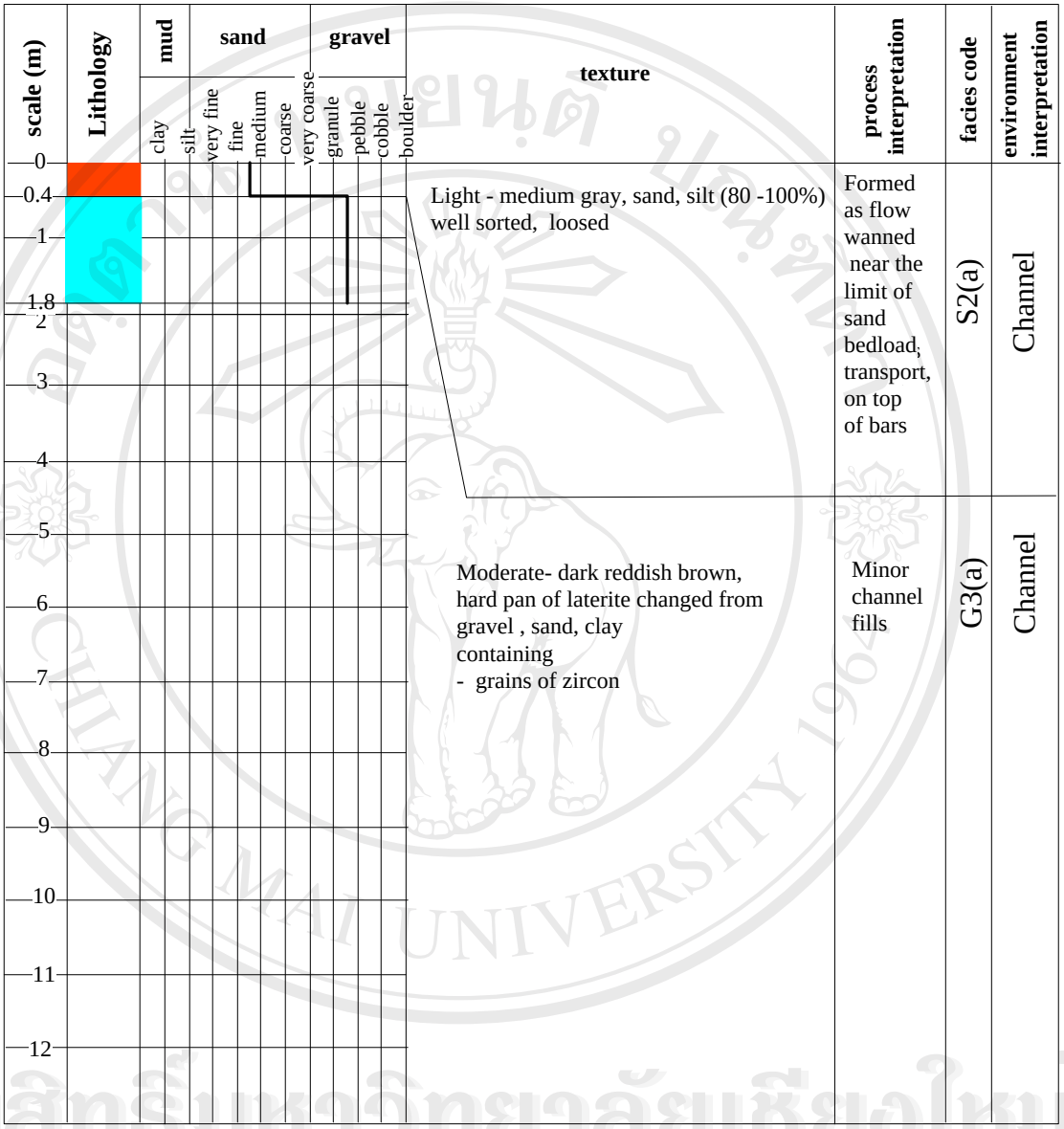
Sedimentary log : P76 Ban: Non Yang Tambon: Song
Grid: 491800 m E 1599100 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 2.0 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

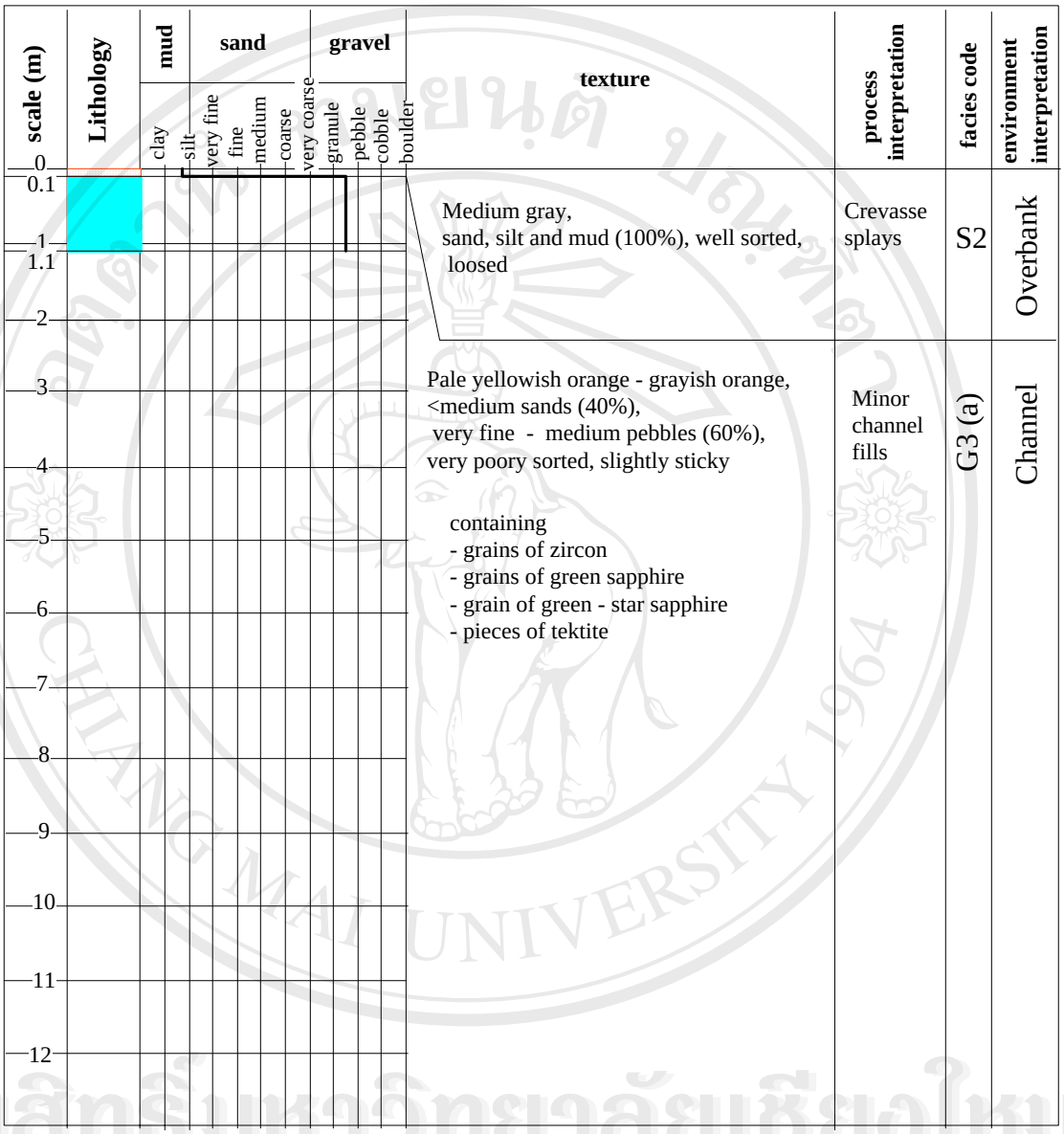
Sedimentary log : P85 Ban: Nam Khun Tambon: Ta Kao
Grid: 489100 m E 1610900 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 1.80 meters (Frombasement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

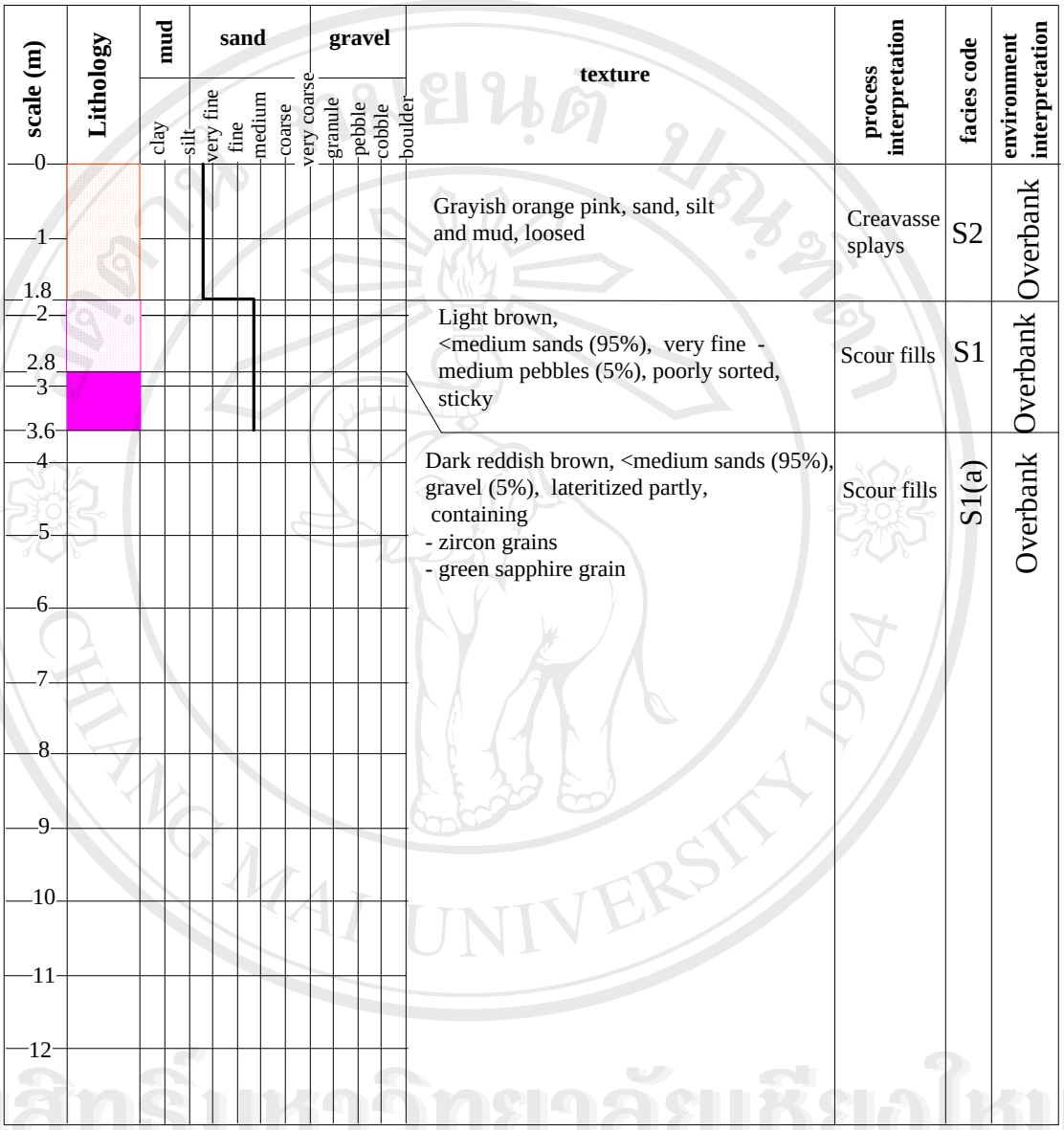
Sedimentary log : P90 Ban: Nong Doom Tambon: Phaiboon
Grid: 480800 m E 1608400 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 1.1 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

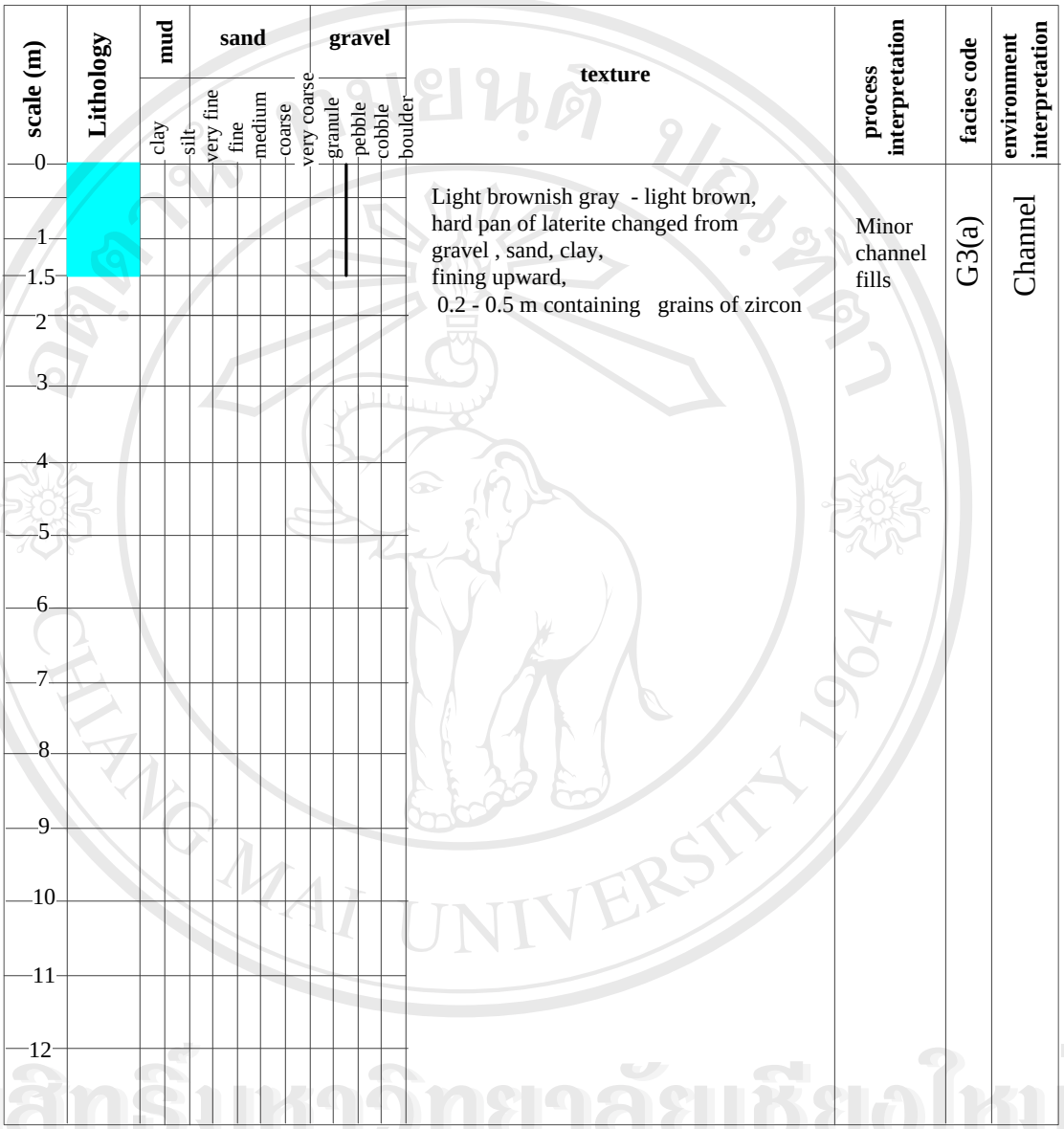
Sedimentary log : P103 Ban: Non Khamkaew Tambon: Phaiboon
Grid: 483100 m E 1607200 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 3.6 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

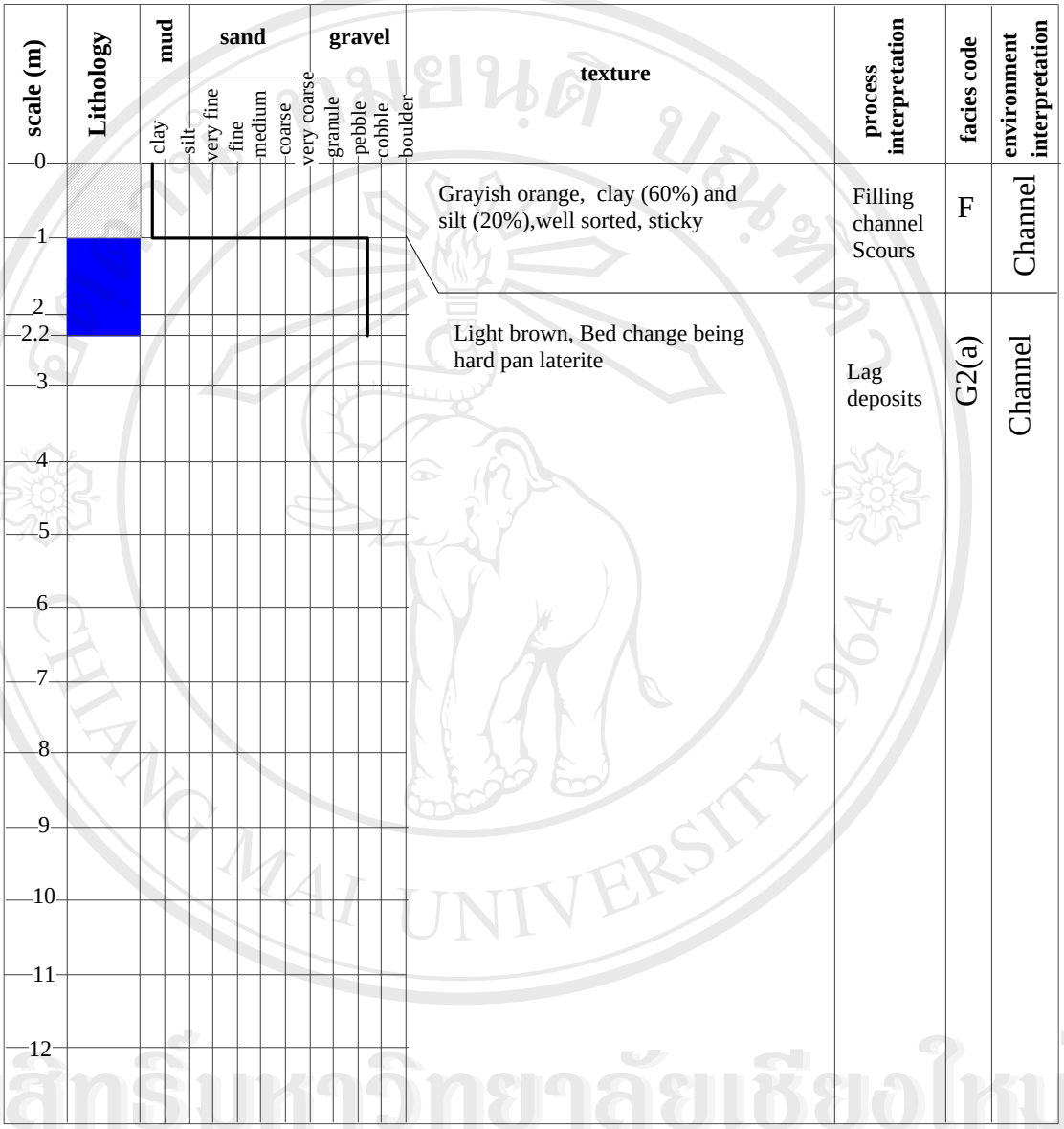
Sedimentary log : P108 Ban: Saen Thaworn Tambon: Ta Kao
Grid: 486350 m E 1611200 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 1.50 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

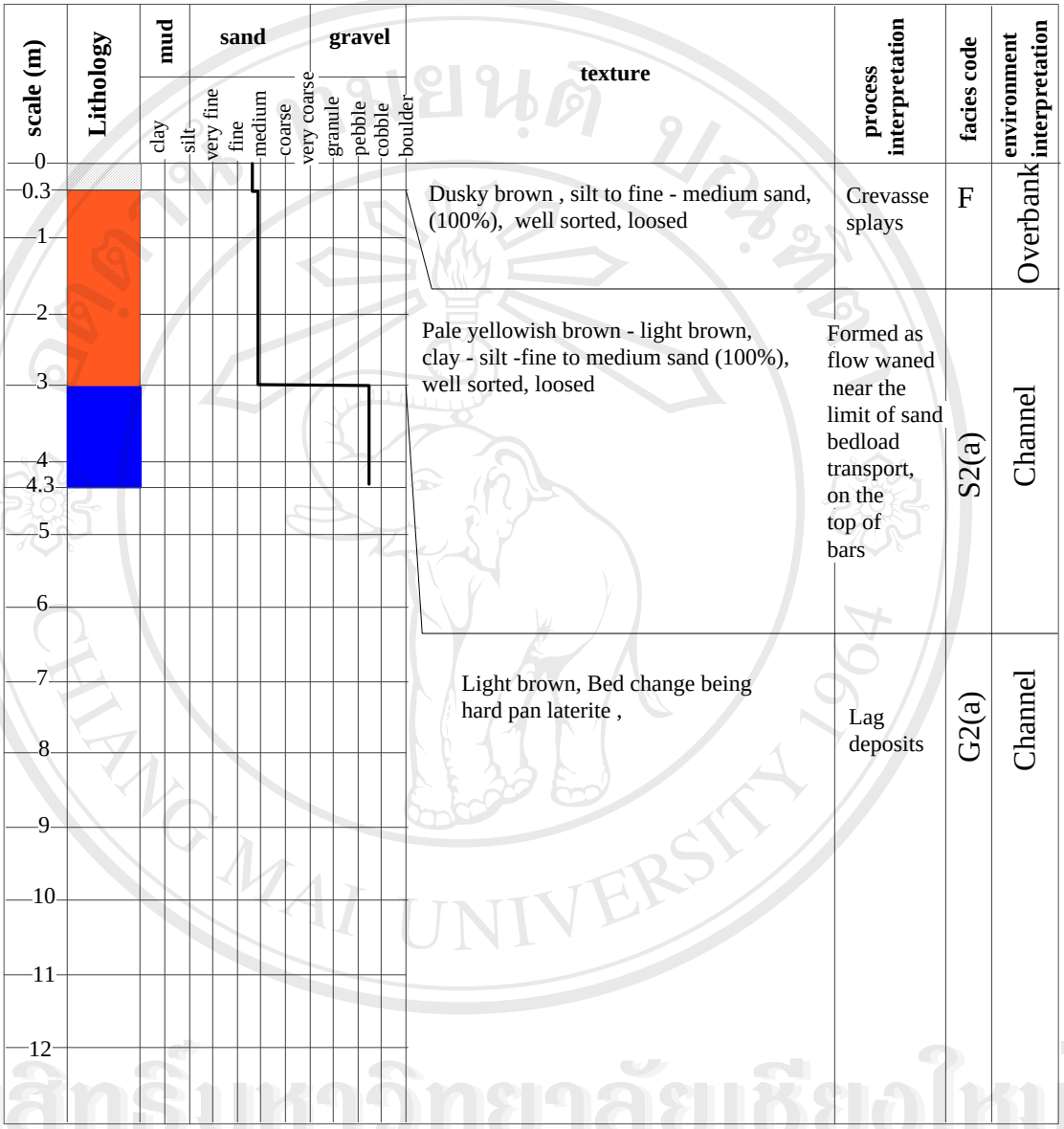
Sedimentary log : P109 Ban: San Taworn Tambon: Phaiboon
Grid: 487450 m E 1609300 mN Amphoe: Nam Yuen Changwat: Ubon Ratchathani
Map sheet: 5938 II Total thickness: 2.2 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

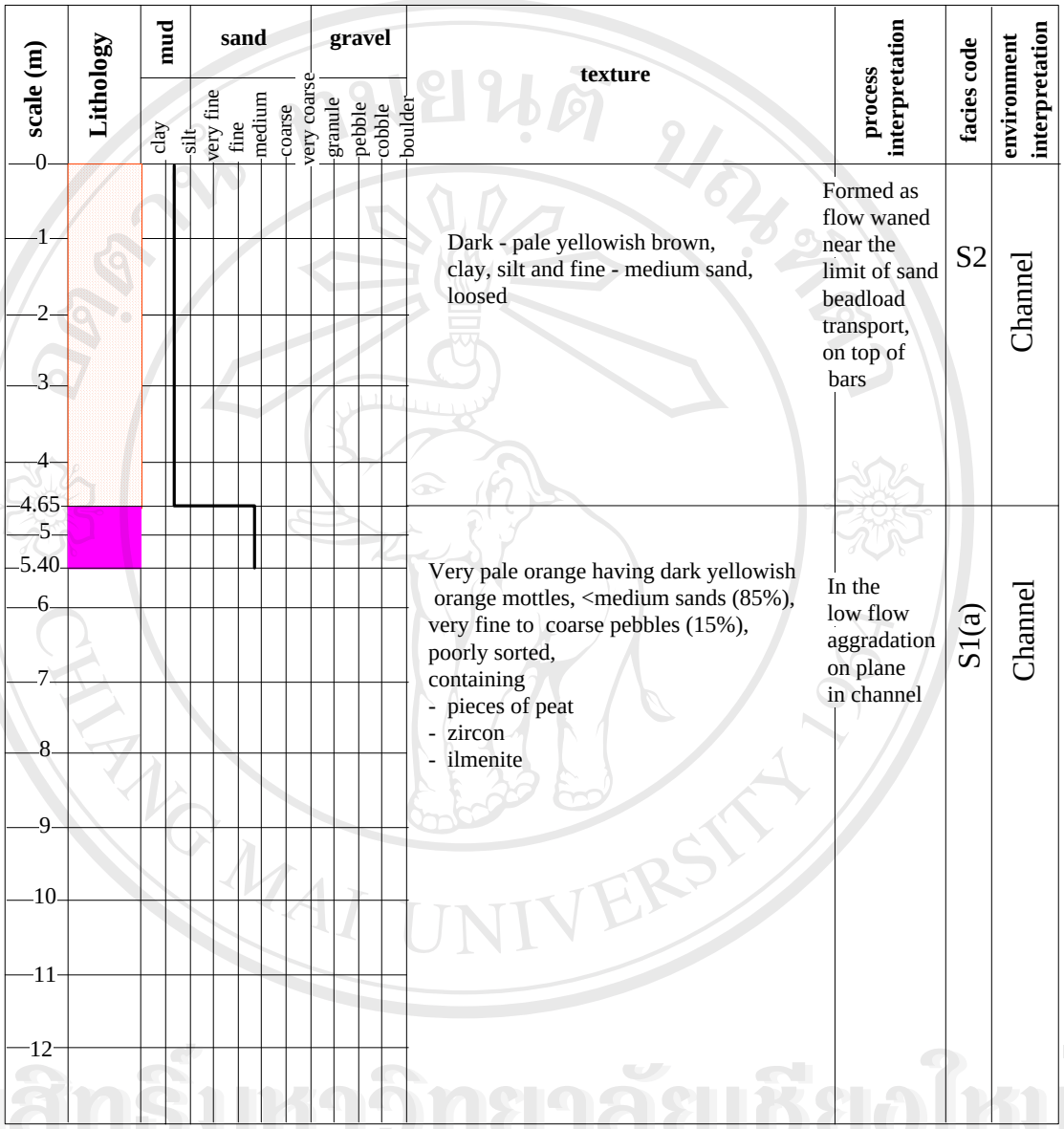
Sedimentary log : P111 Ban: Hua Nam Tambon: Ta Kao
Grid: 489850 m E 1601600 mN Amphoe: Nam Yuen Province: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 4.3 meters (Not from to basement - rocks)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

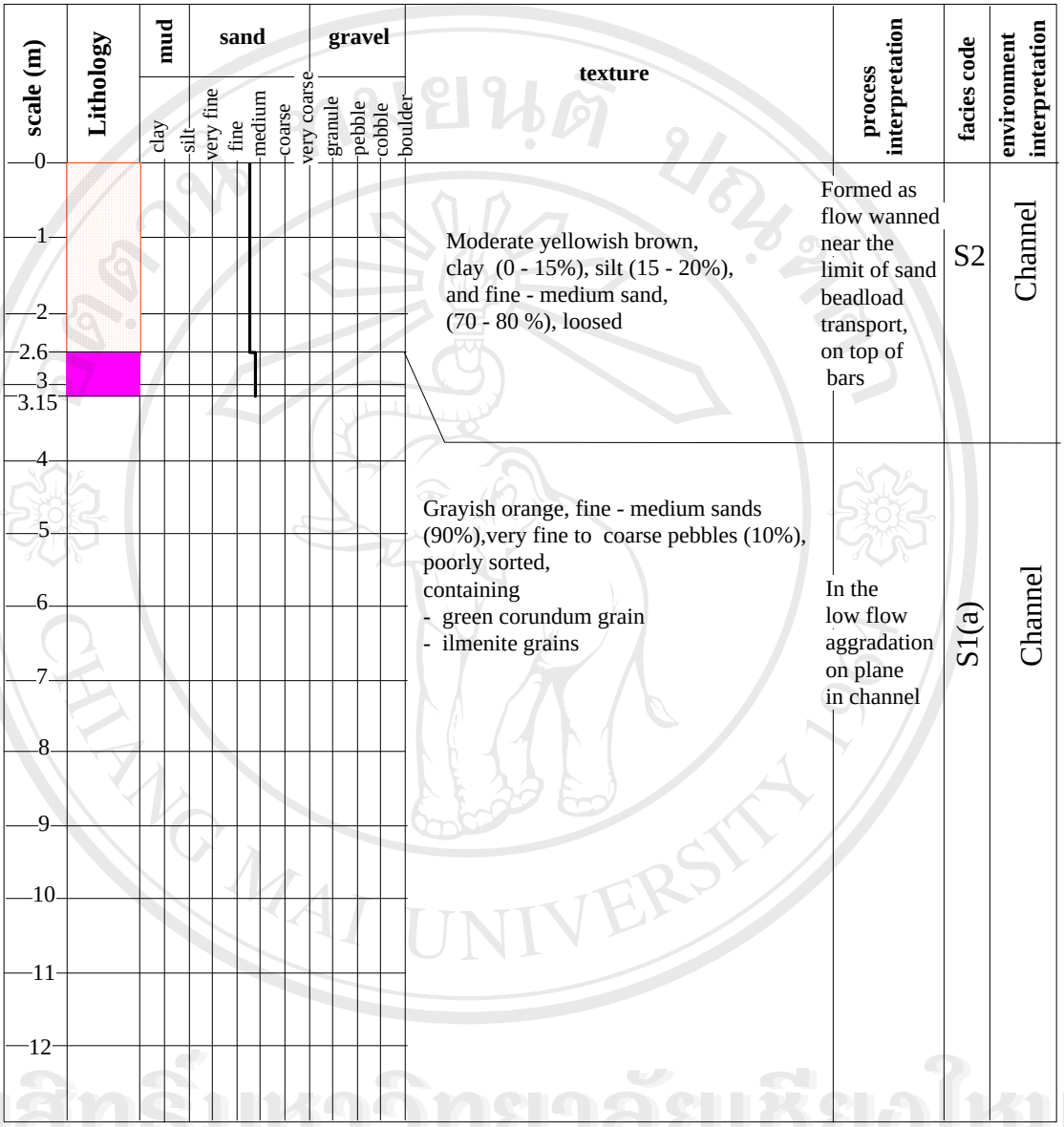
Sedimentary log : K1 Ban: La Lai Tambon: La Lai
Grid: 450550 m E 1602350 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 IV Total thickness: 6.85 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

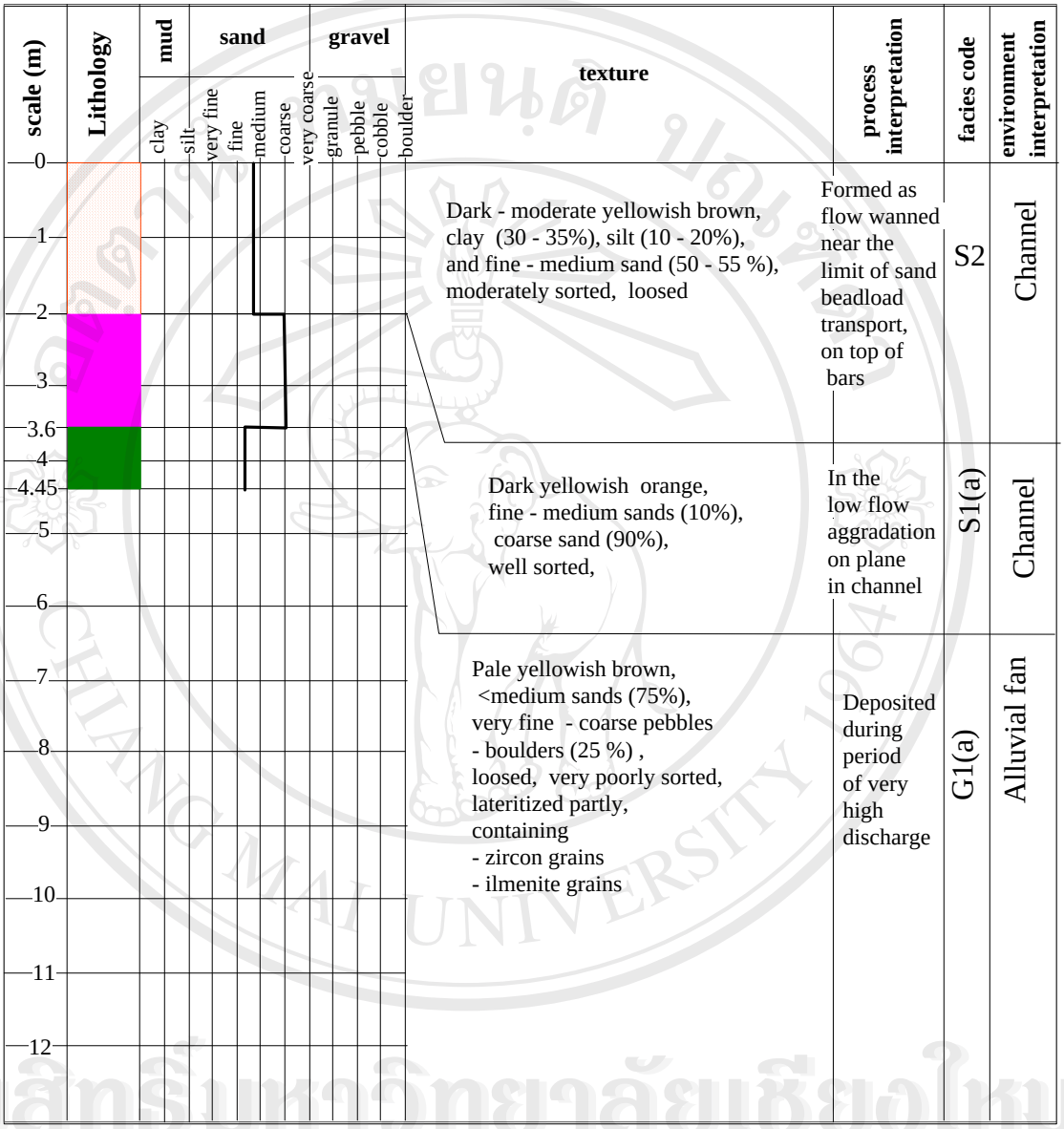
Sedimentary log : K2 Ban: Non Mee Chai Tambon: La Lai
Grid: 451560 m E 1602940 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 III Total thickness: 3.15 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

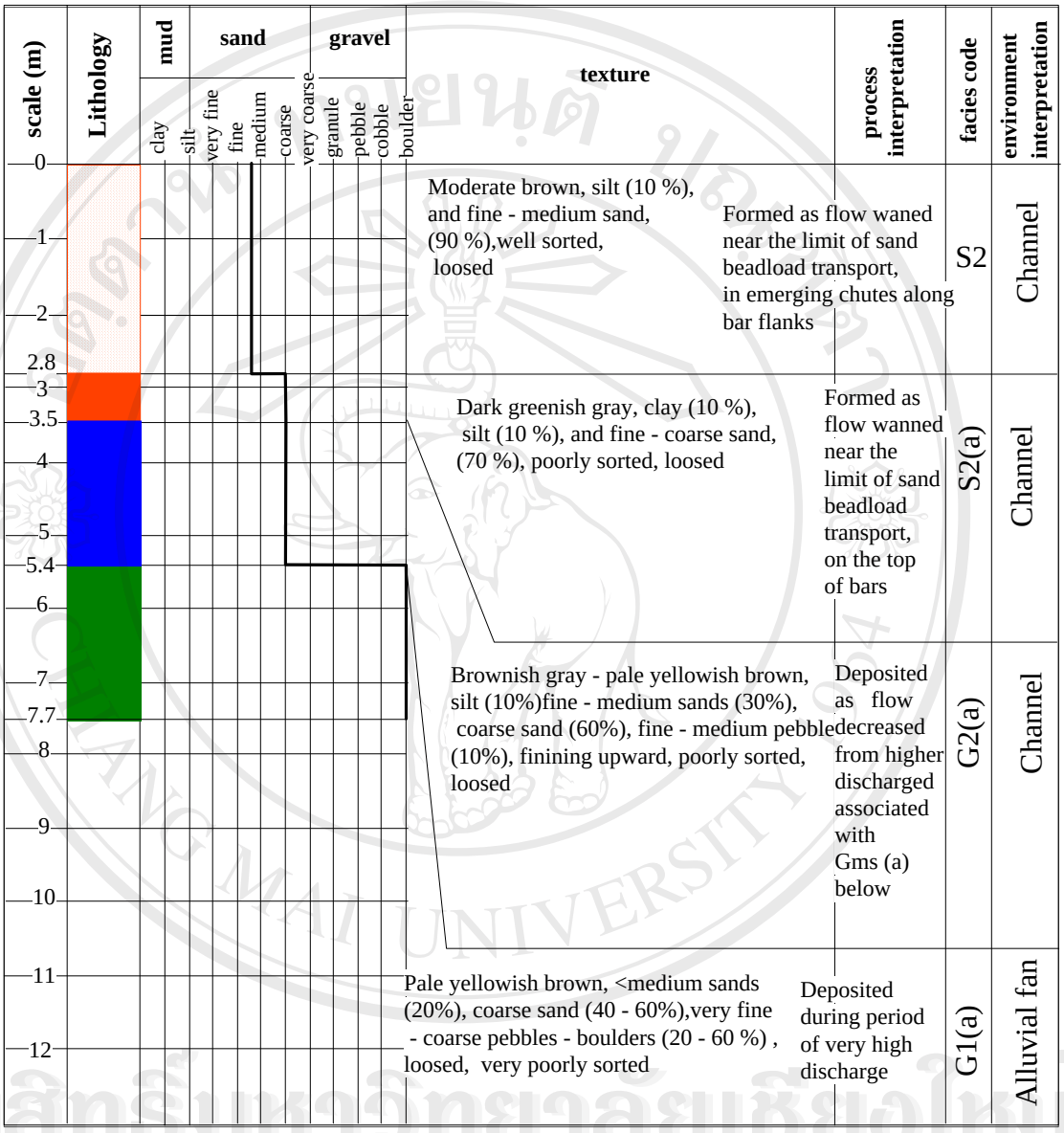
Sedimentary log : K3 Ban:Khok Charoen Tambon: La Lai
Grid: 452540 m E 1603650 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 III Total thickness: 4.45 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

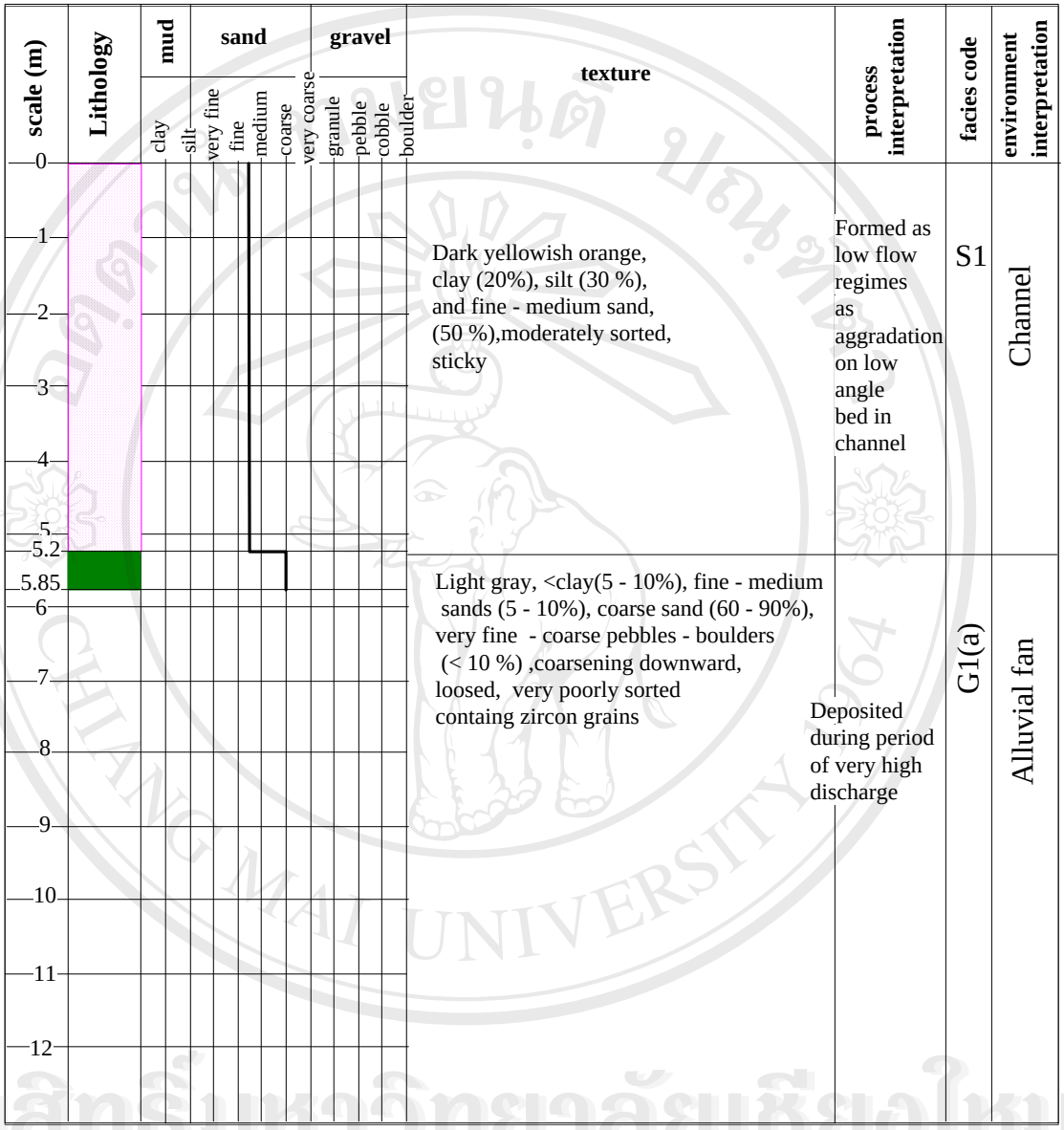
Sedimentary log : K5 Ban:Kham Moon Tambon: Sam
Grid: 456890 m E 1602930 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 III Total thickness: 7.70 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

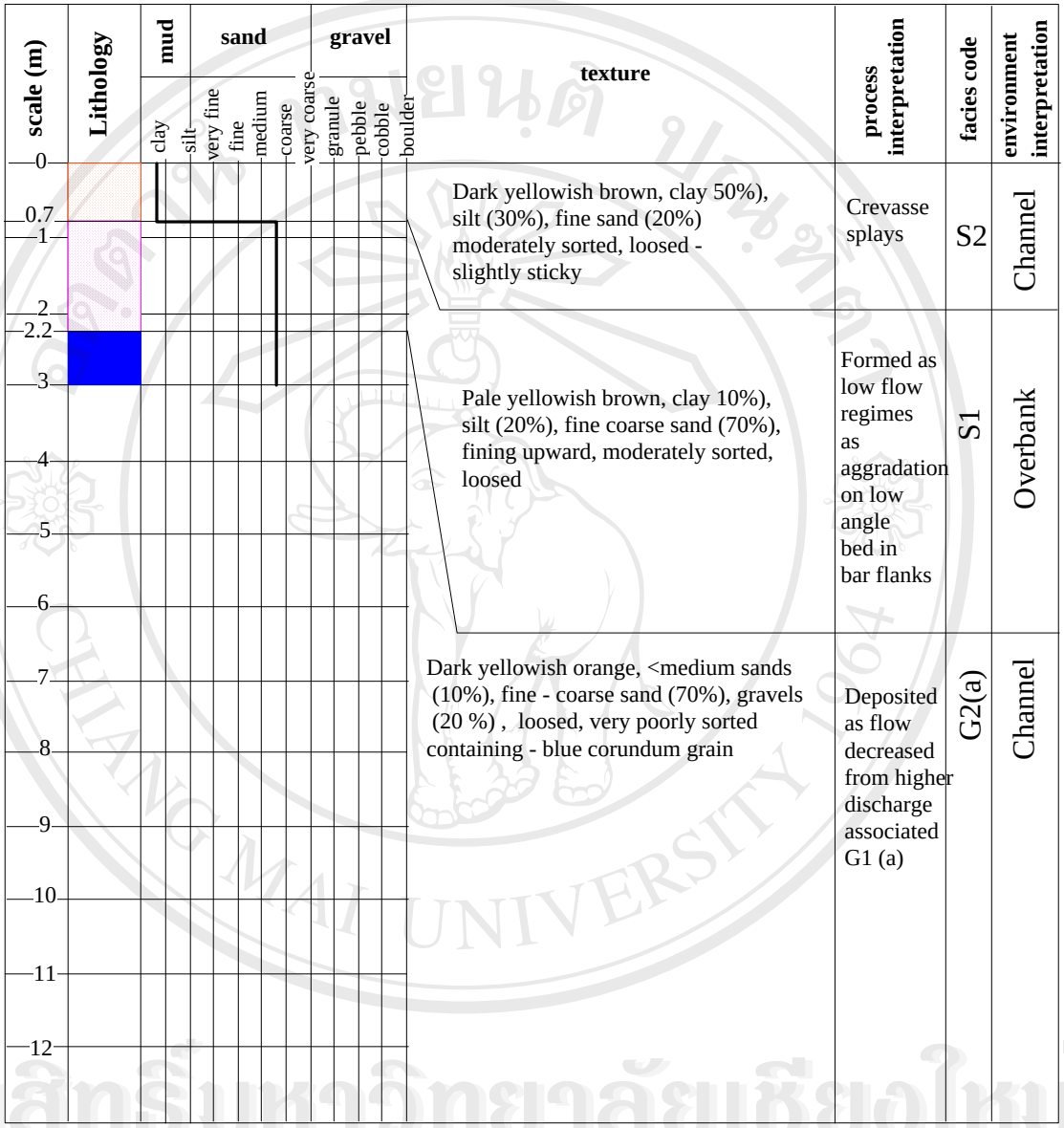
Sedimentary log : K6 Ban:Don Ao Tambon: La Lai
Grid: 458020 m E 1602920 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5938 III Total thickness: 5.85 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

Sedimentary log : K7 Ban: Bug Dong Tambon:Bug Dong
Grid: 440510 m E 1607500 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 3.0 meters (From basement - rock surface

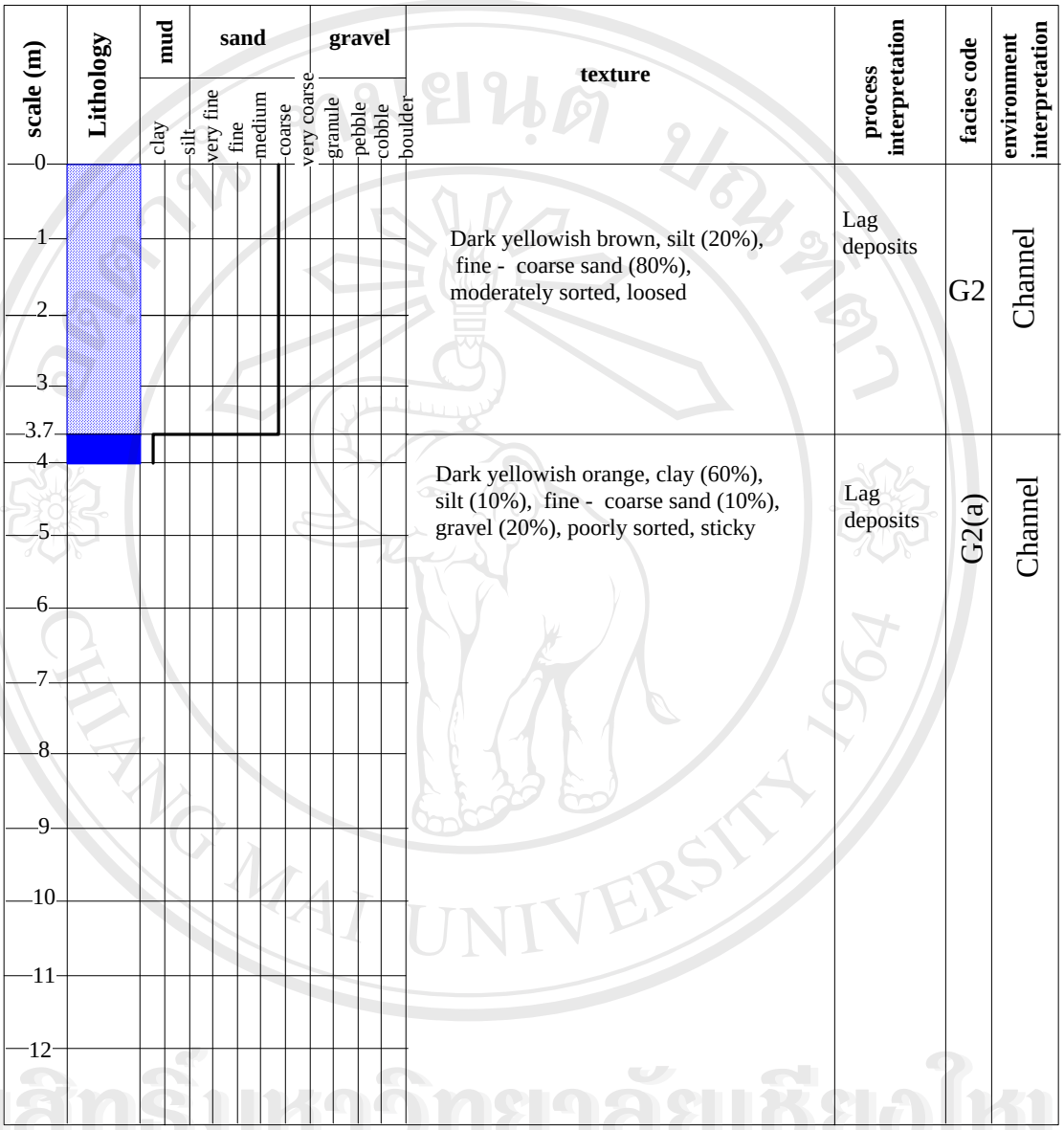


texture	process interpretation	facies code	environment interpretation
Dark yellowish brown, clay 50%), silt (30%), fine sand (20%) moderately sorted, loosed - slightly sticky	Crevasse splays	S2	Channel
Pale yellowish brown, clay 10%), silt (20%), fine coarse sand (70%), fining upward, moderately sorted, loosed	Formed as low flow regimes as aggradation on low angle bed in bar flanks	S1	Overbank
Dark yellowish orange, <medium sands (10%), fine - coarse sand (70%), gravels (20 %) , loosed, very poorly sorted containing - blue corundum grain	Deposited as flow decreased from higher discharge associated G1 (a)	G2(a)	Channel

EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

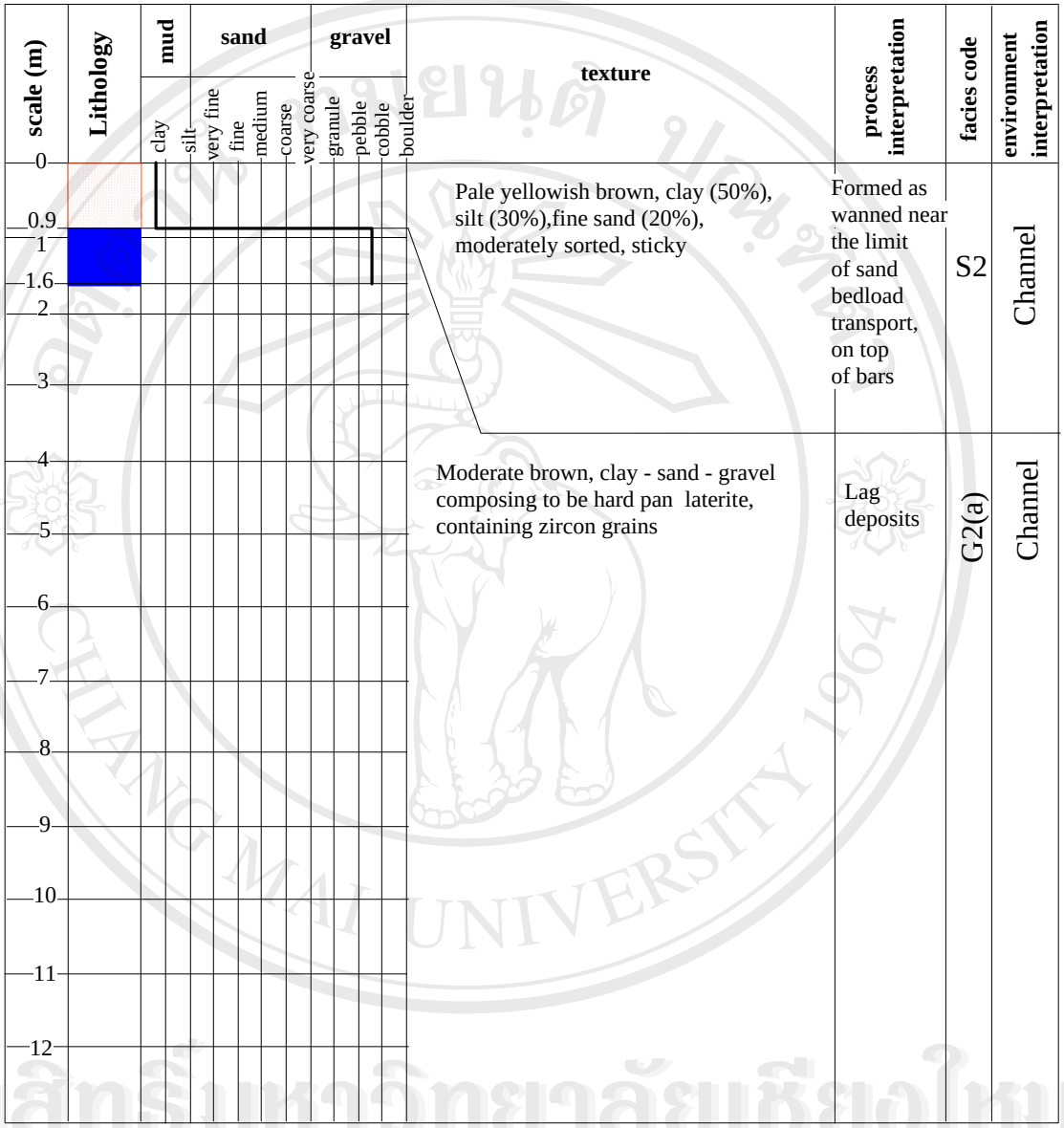
Sedimentary log : K8 Ban: Ta Sed Tambon:Bug Dong
Grid: 442040 m E 1608050 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 4.0 meters (From basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

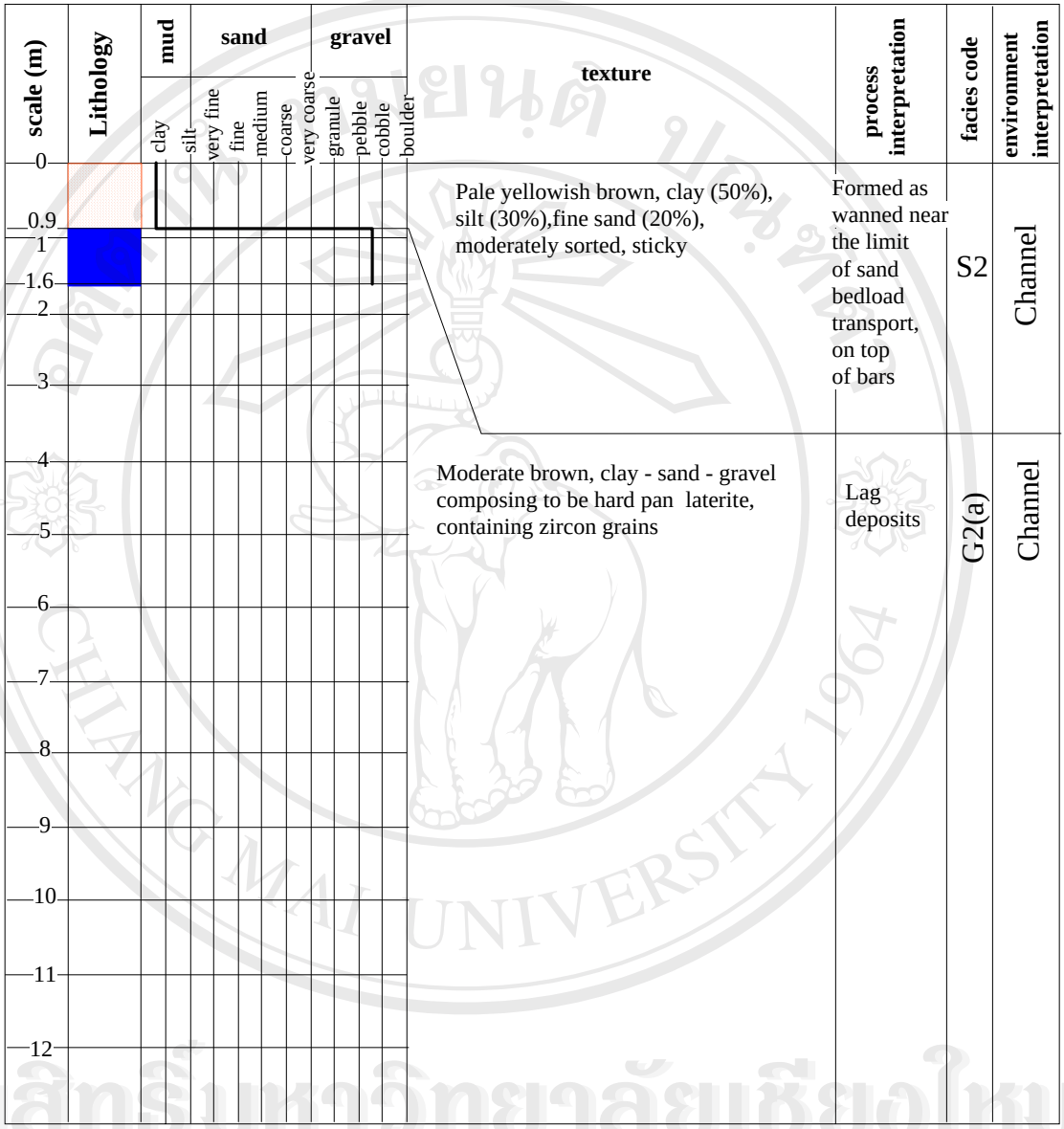
Sedimentary log : K10 Ban: Ta Sed Tambon:Bug Dong
Grid: 441600 m E 1606890 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 1.60 meters (From basement - rock surf



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

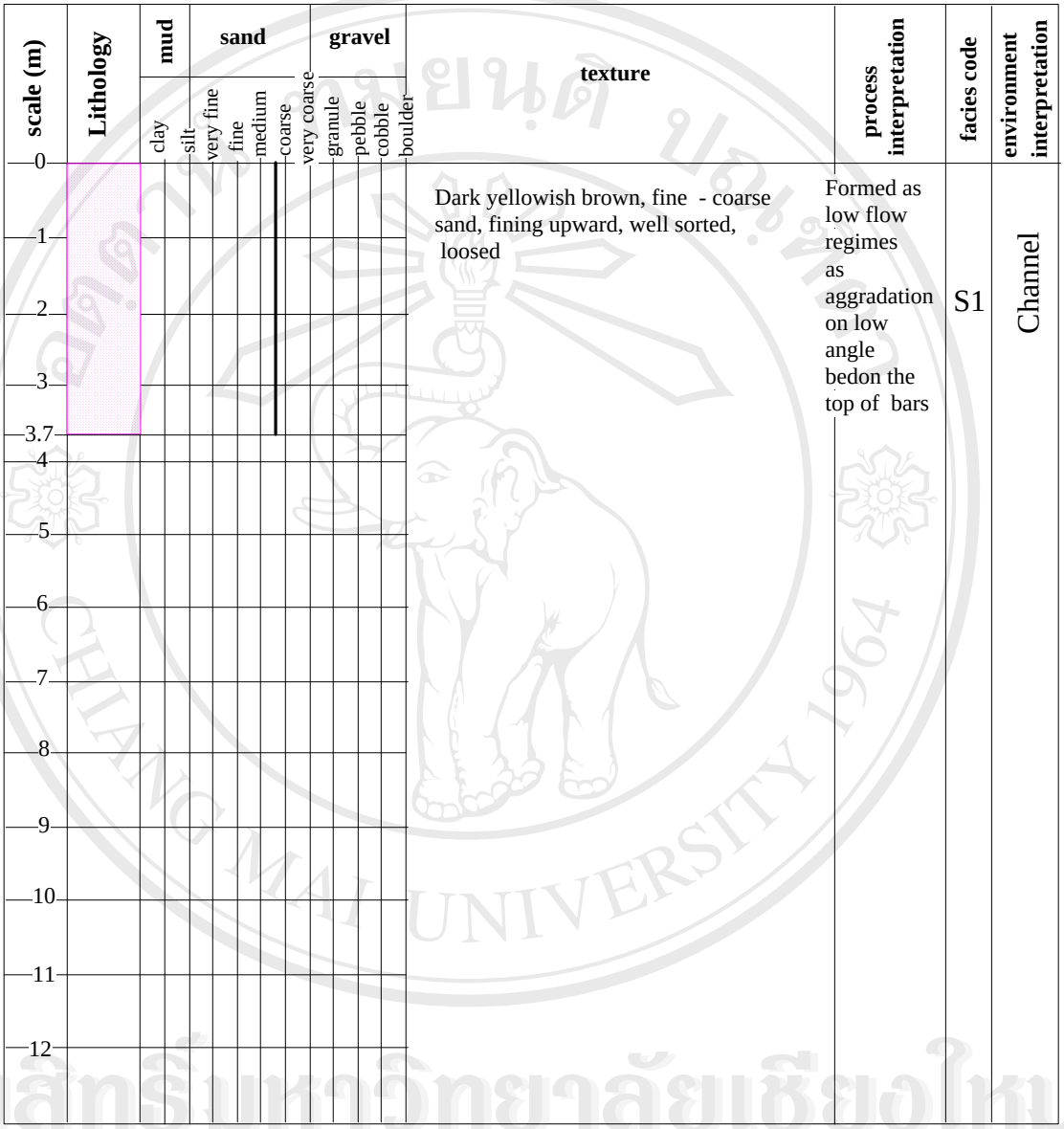
Sedimentary log : K10 Ban: Ta Sed Tambon:Bug Dong
Grid: 441600 m E 1606890 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 1.60 meters (From basement - rock surf



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

Sedimentary log : K11 Ban: Samrong Kiat Tambon:Bug Dong
Grid: 443880 m E 1605060 mN Amphoe: Khun Han Province: Si Sa Ket
Map sheet: 5938 II Total thickness: 3.7 meters (From basement - rock surface



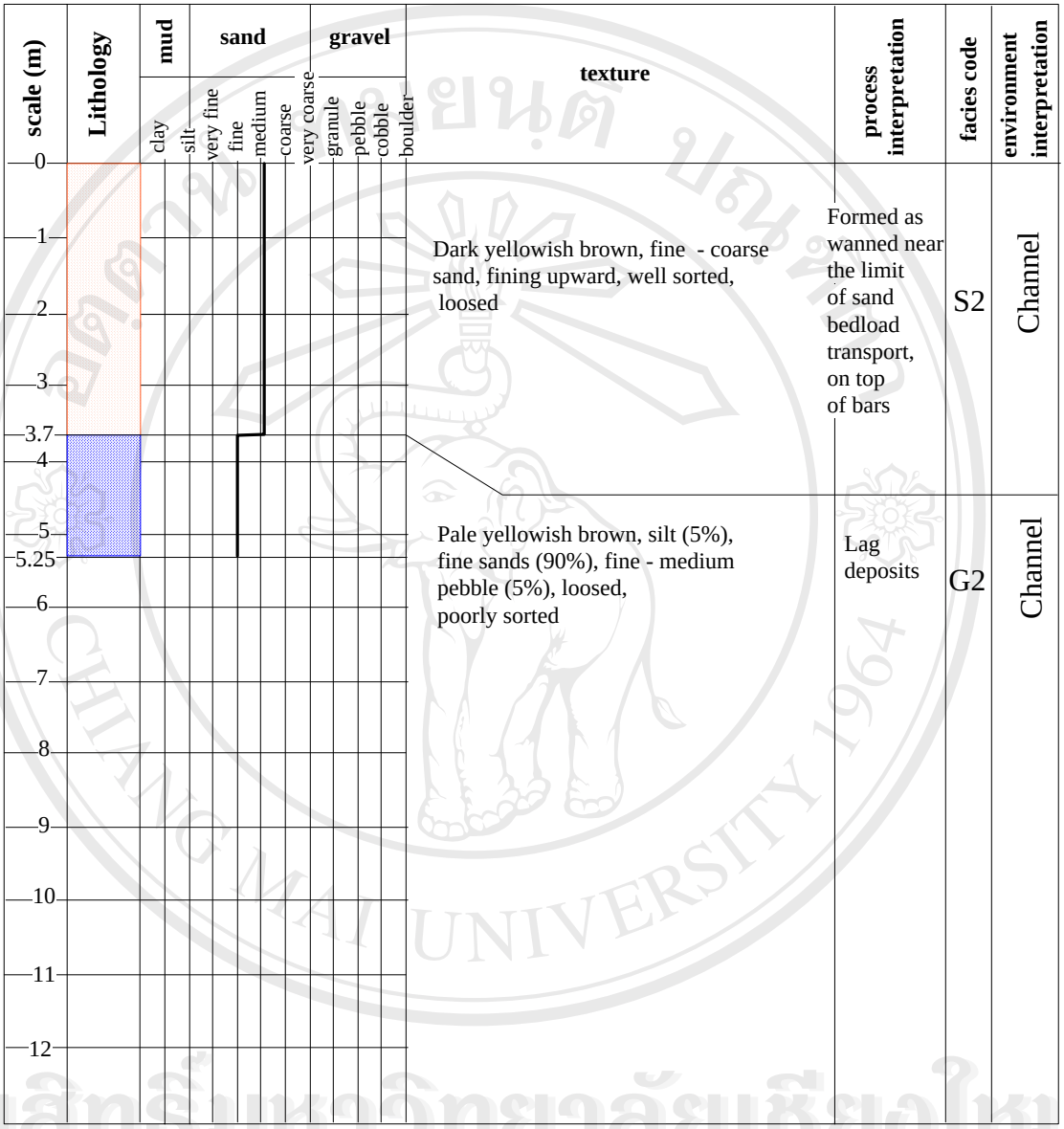
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

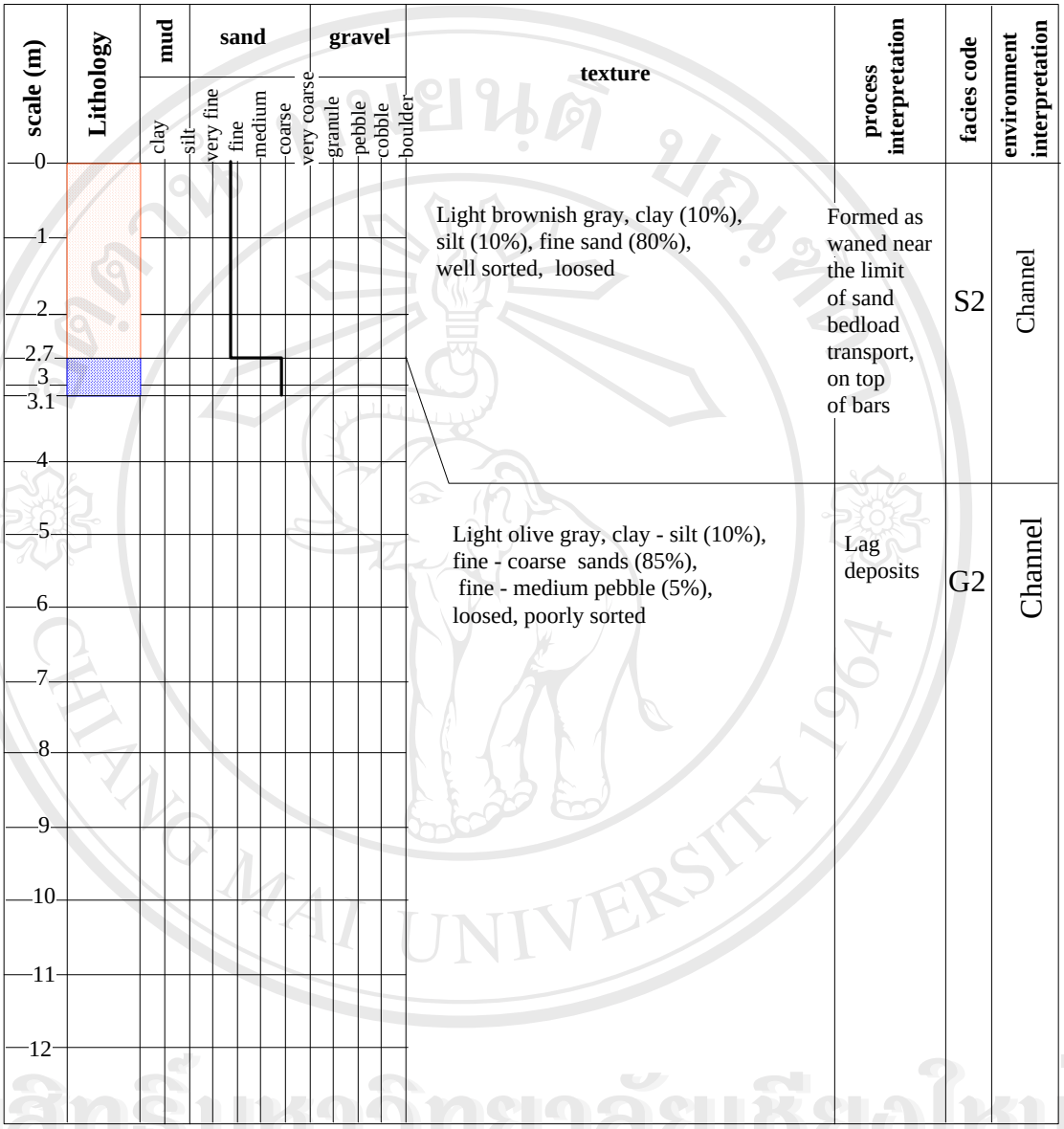
Sedimentary log : K12 Ban: Samrong Kiat Tambon:Bug Dong
Grid: 444900 m E 1606780 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 5.25 meters (to basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

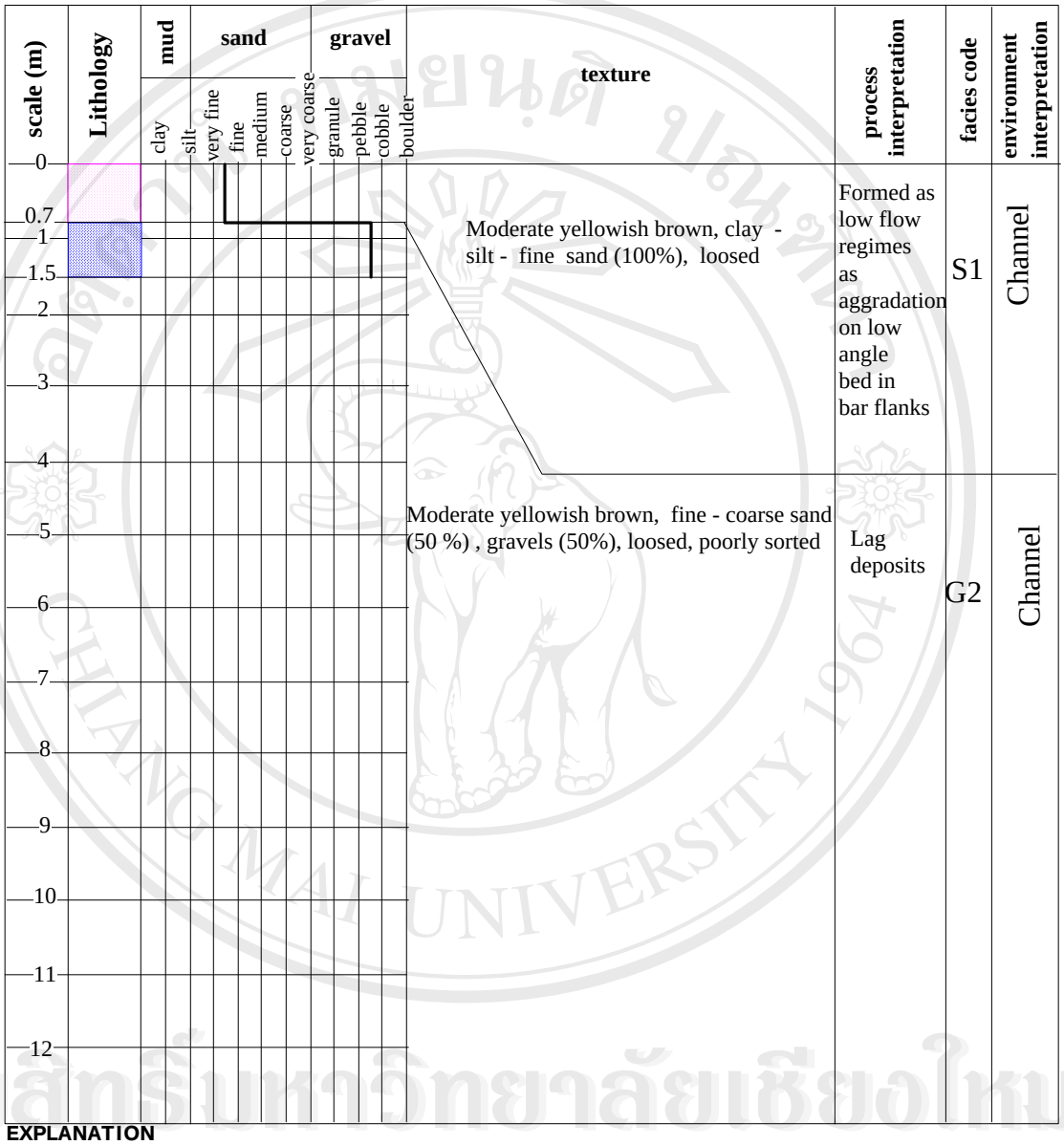
Sedimentary log : K13 Ban: Tam Nak Sai Tambon:Bug Dong
Grid: 444920 m E 1607610 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 3.10 meters (From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

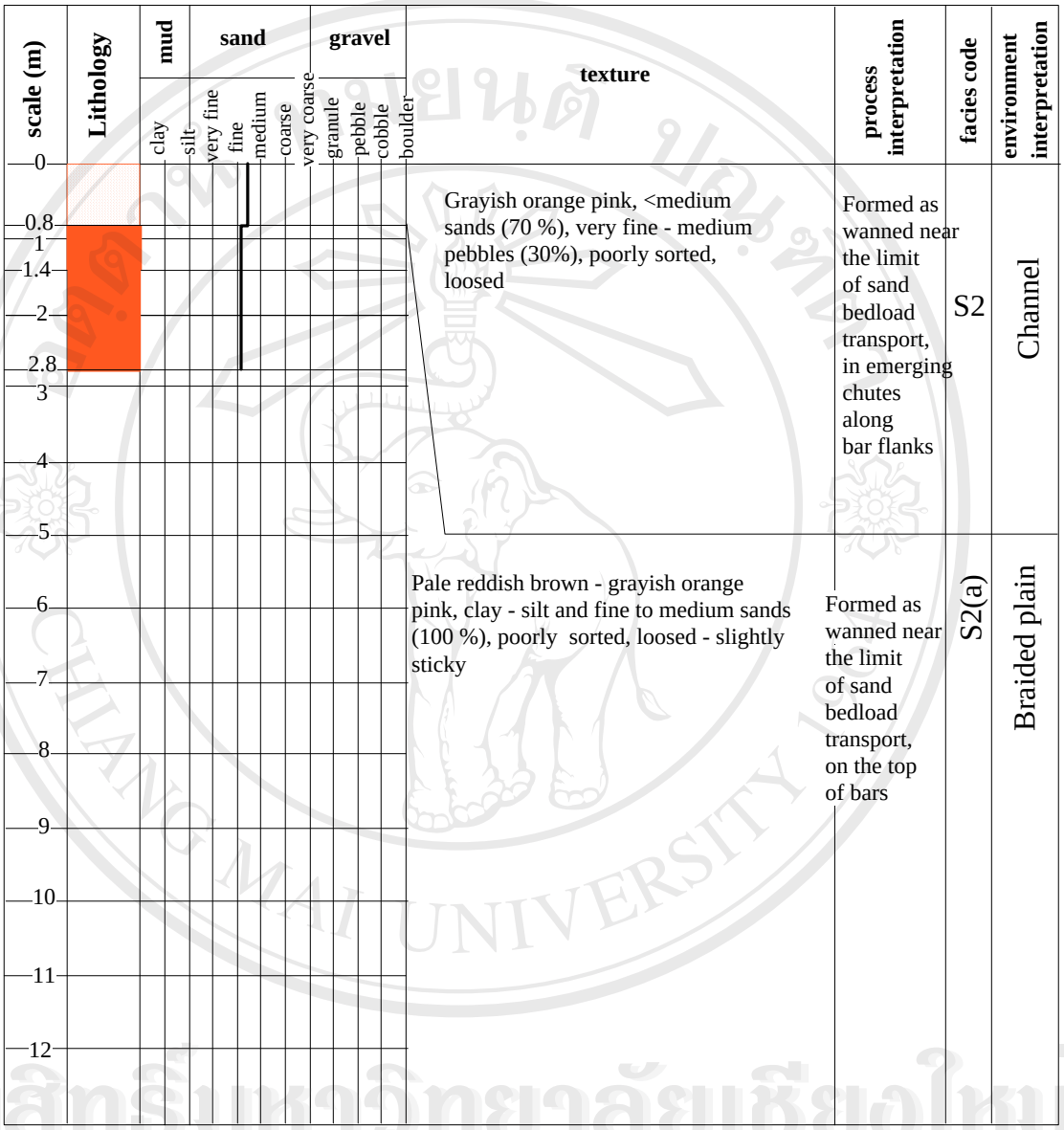
Sedimentary log : S6 Ban: Nam Mood Tambon: Huai Chan
Grid: 438100 m E 1604300 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 1.5 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note: (a) refer to lithofacies having same characteristics but older age		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Sedimentary log : S11 Ban: Nam Mood Tambon: Bak Dong
Grid: 437450 m E 1604150 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 2.8 meters (From basement - rock surface



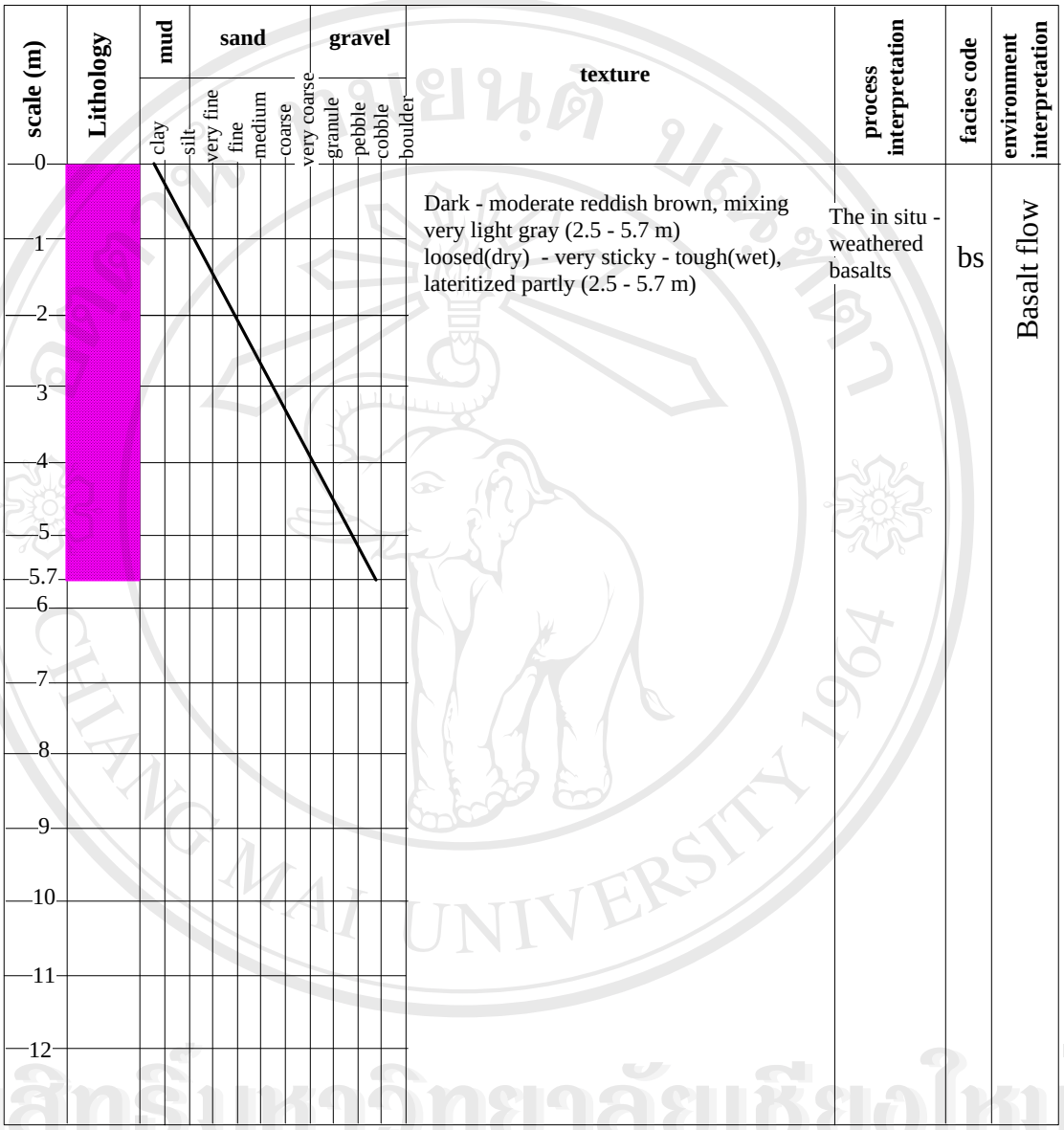
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

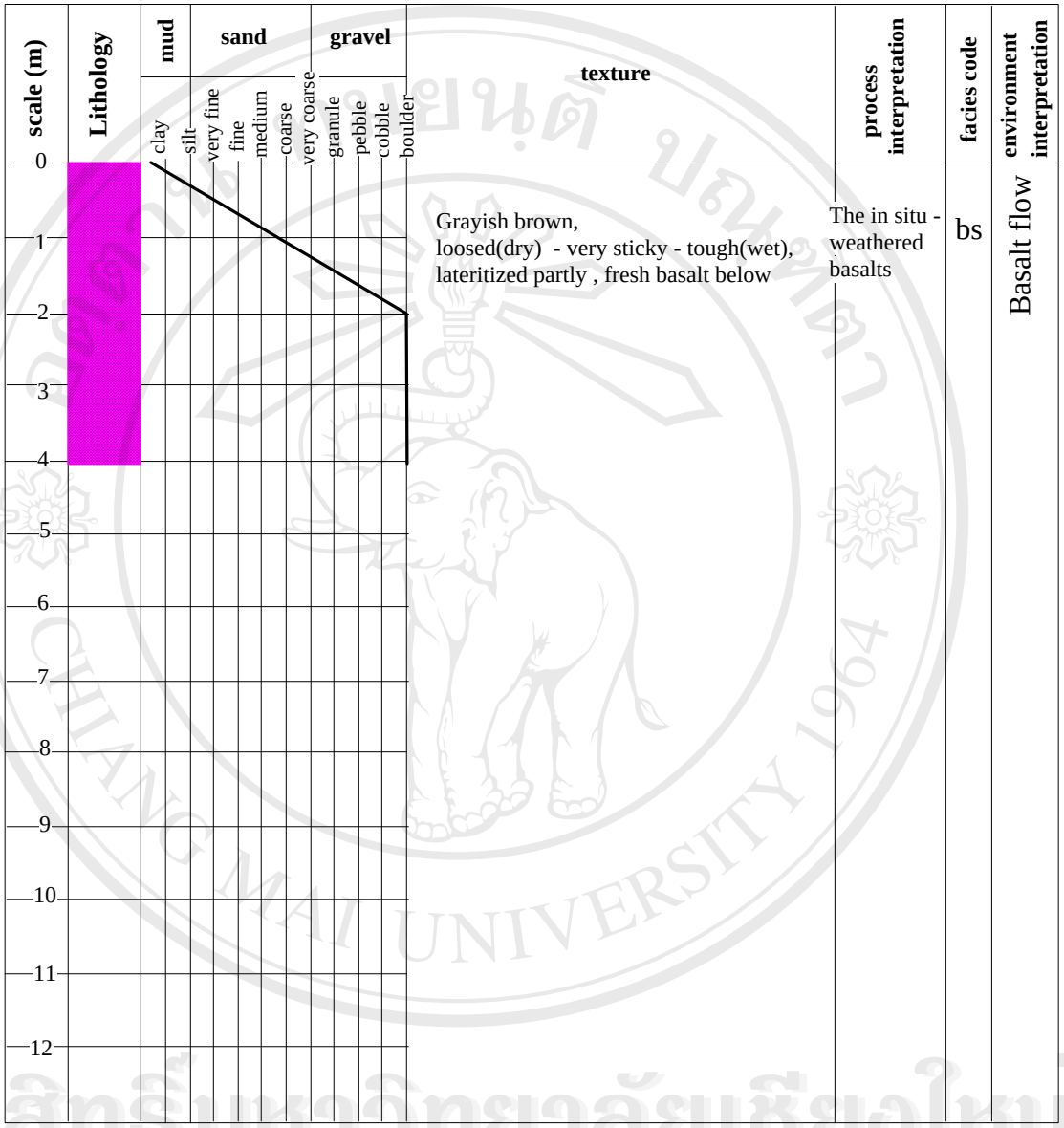
Sedimentary log : S13 Ban: Nontoom Taworn Tambon: Bak Dong
Grid: 439950 m E 1604300 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 II Total thickness: 5.7 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

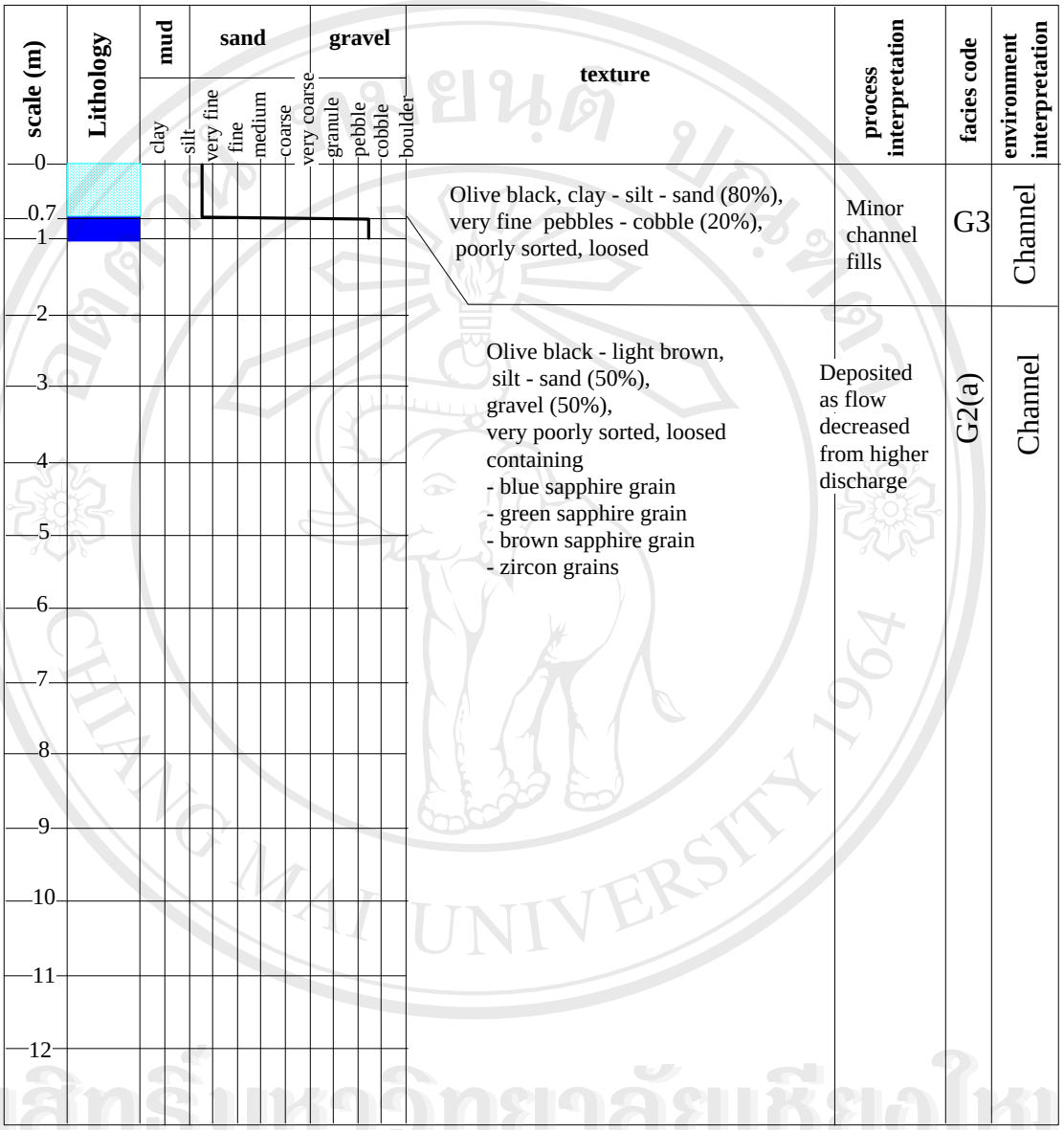
Sedimentary log : S14 Ban: Phudin Pattana Tambon: Bak Dong
Grid: 439350 m E 1602800 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 4.0 meters (Not from basement - rocks



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

Sedimentary log : S15 Huai Hu Su Ban: Dong Matoom Tambon: Bak Dong
Grid: 439200 m E 1603750 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5838 II Total thickness: 1.0 meters (From basement - rock surface)



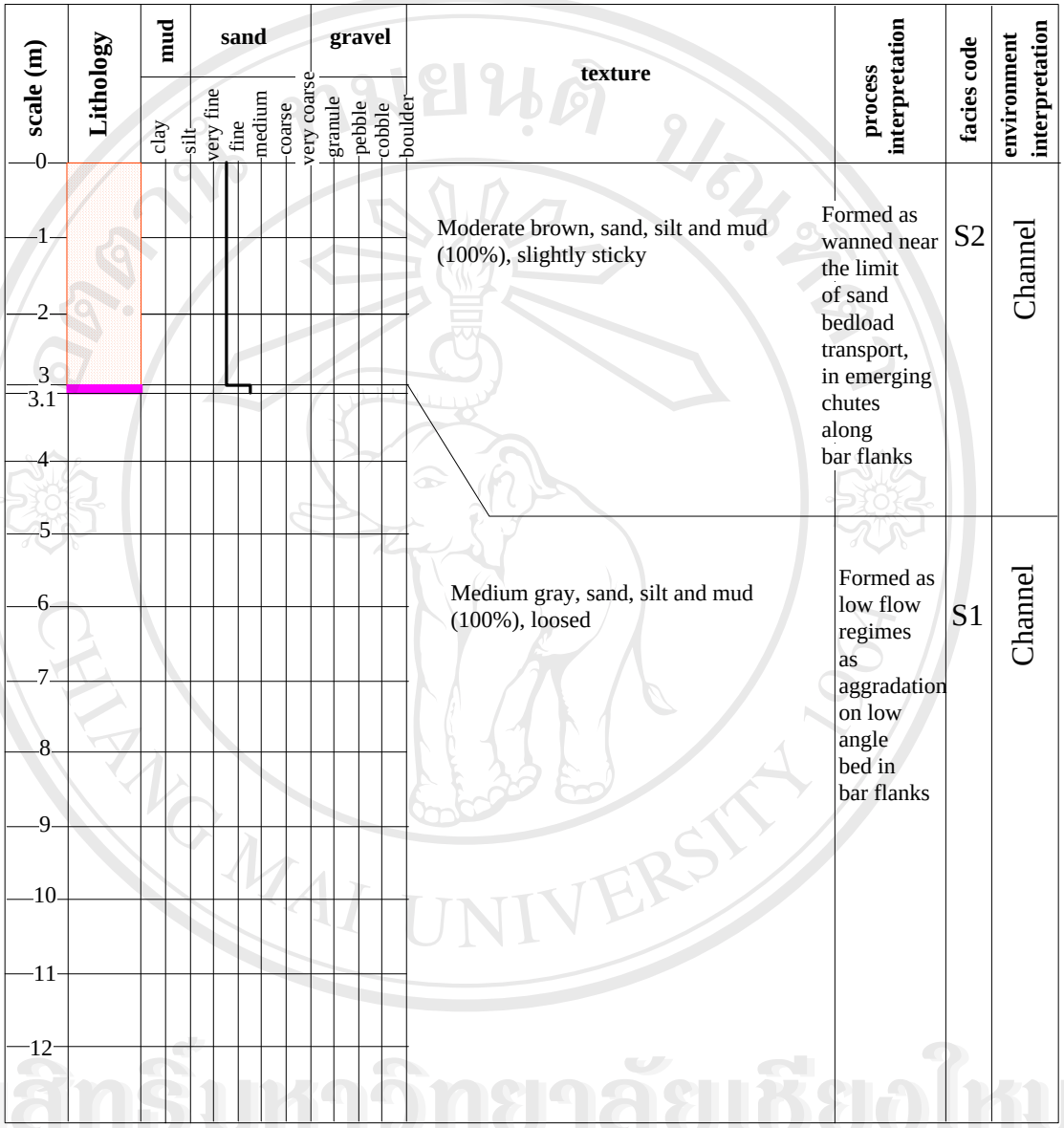
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

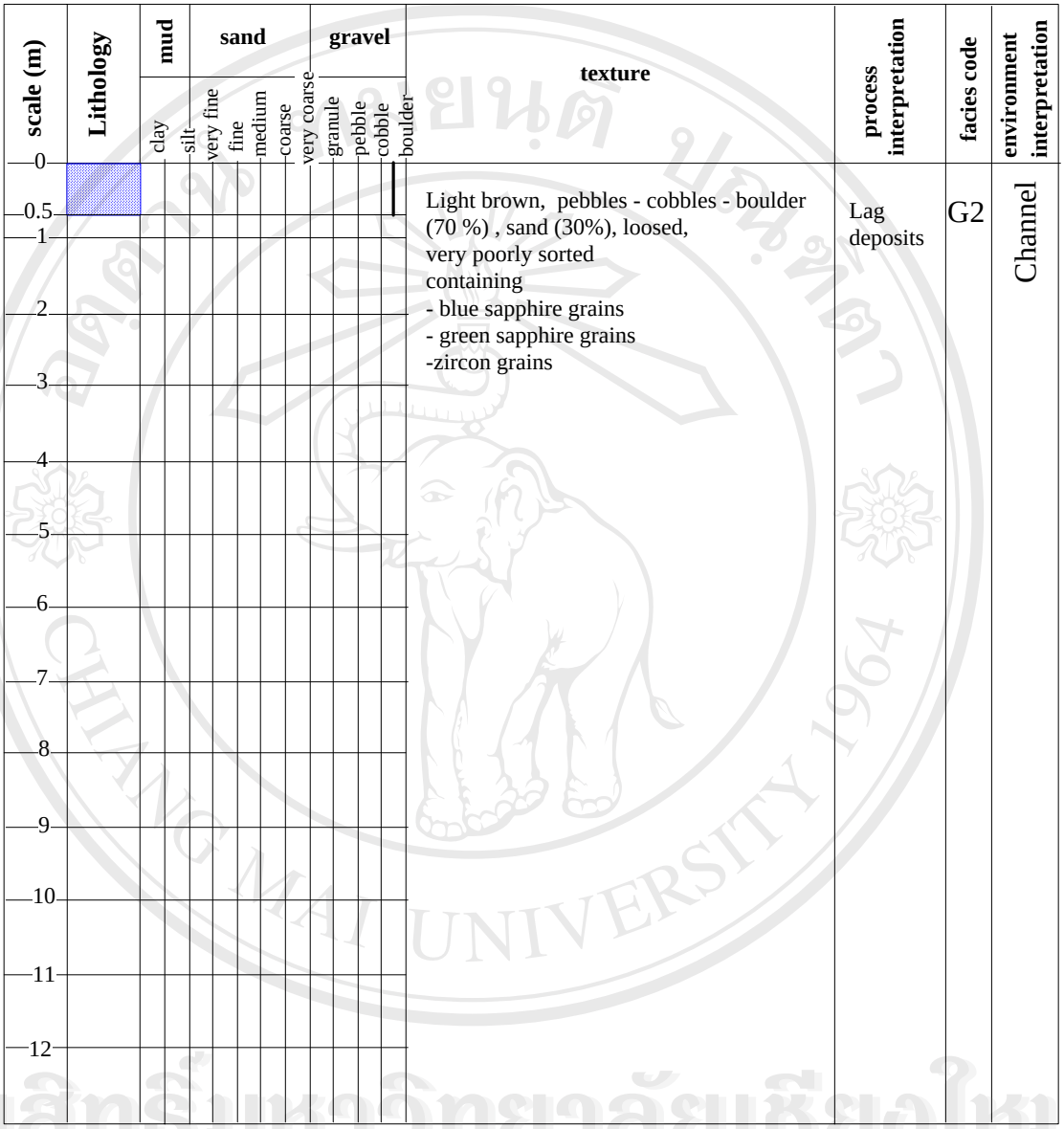
Sedimentary log : S16 Huai Tha Ban: Phu Din Tambon:Bak Dong
Grid: 440420 m E 1602600 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5837 I Total thickness: 3.10 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

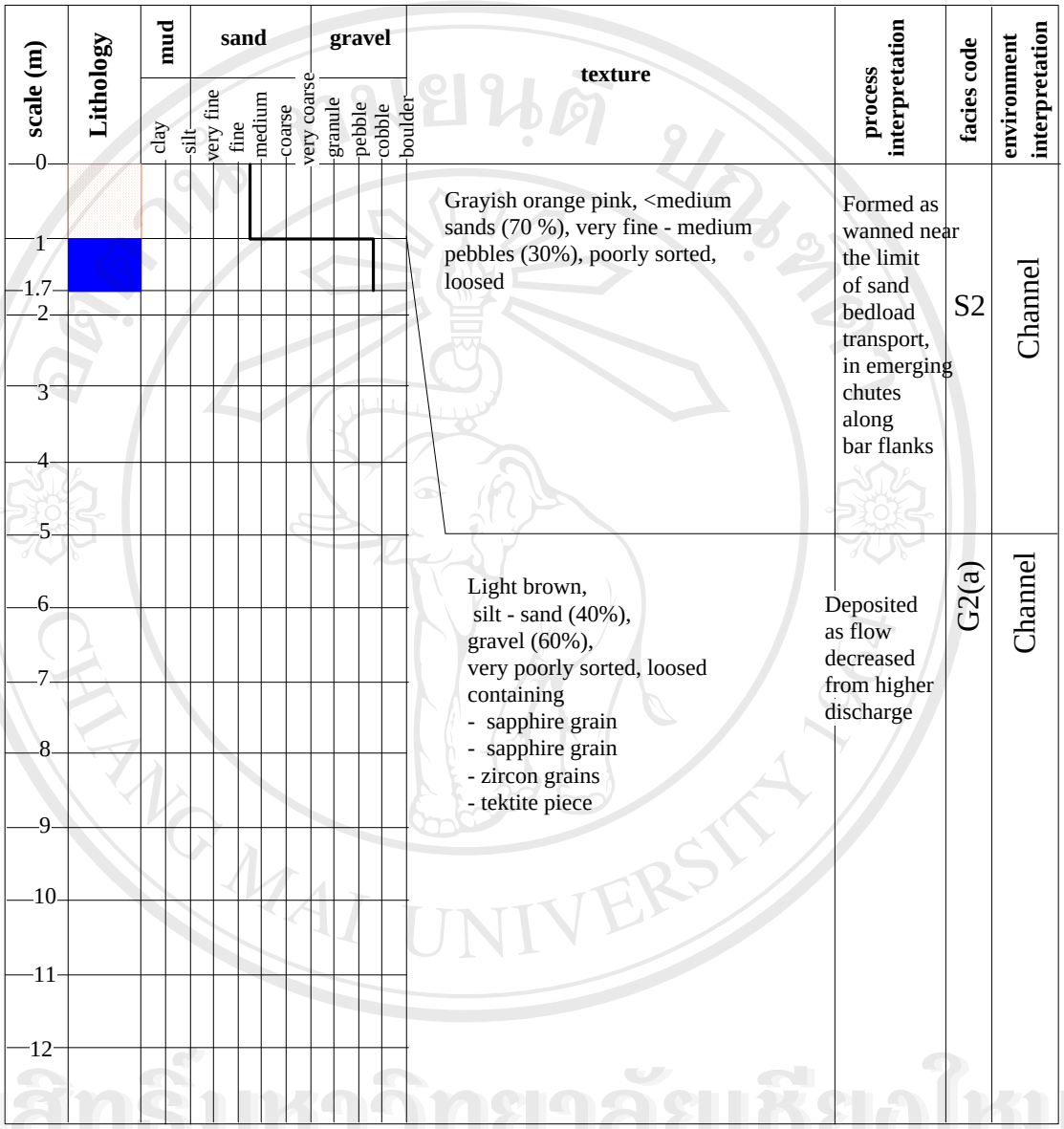
Sedimentary log : S17 Huai Tha Ban: Phu Din Tambon:Bak Dong
Grid: 440420 m E 1602600 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5938 I Total thickness: 0.5 meters (POTHOLE, From basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

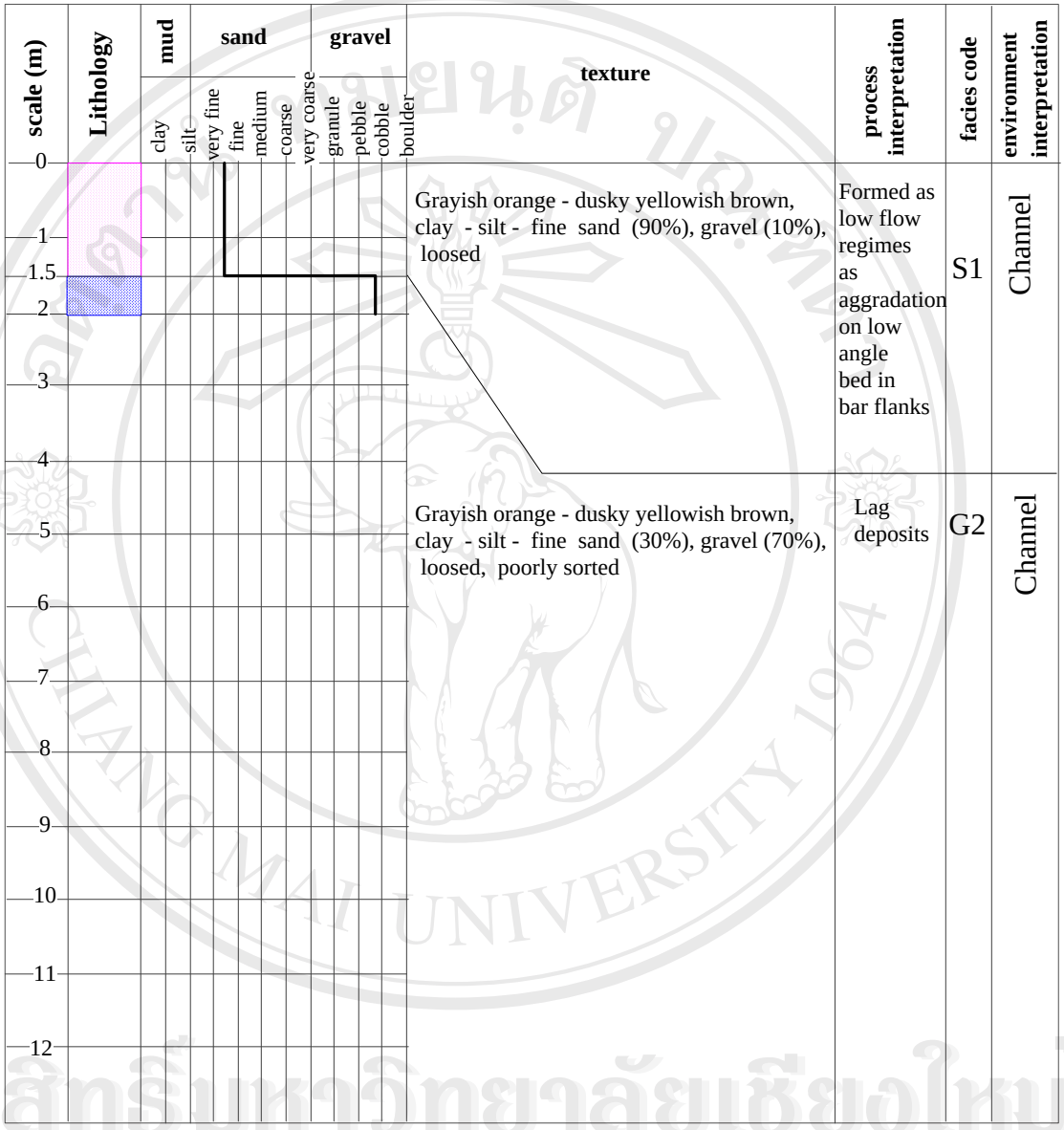
Sedimentary log : S18 Ban: Phu Din Tambon: Bak Dong
Grid: 435750 m E 1602680 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 1.70 meters (Not from basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

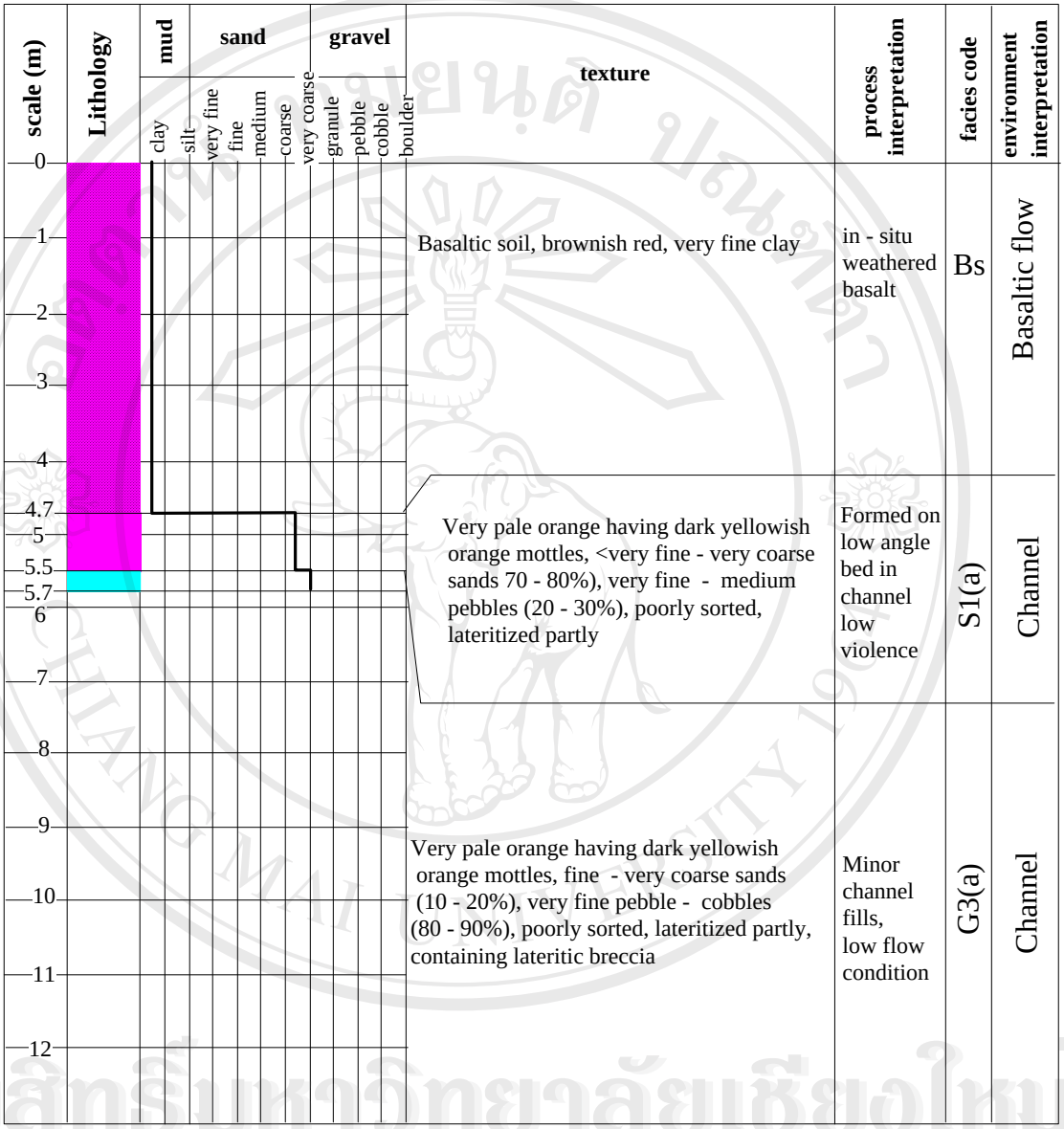
Sedimentary log : S19 Huai Ta Sed Tambon: Bak Dong
Grid: 434740 m E 1599620 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5837 I Total thickness: 2.0 meters (Not to basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

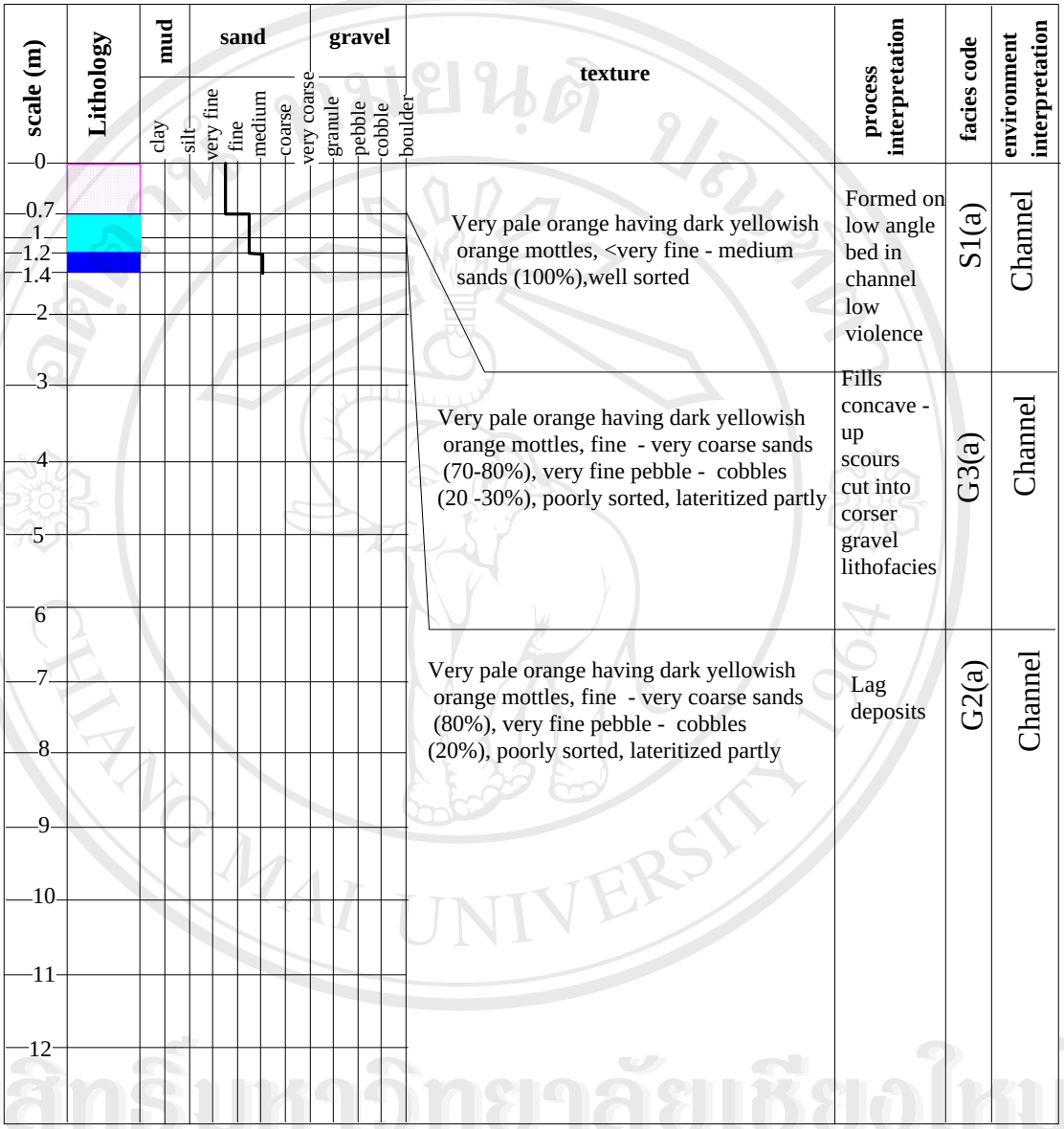
Sedimentary log : Location 1 Ban: Phu Din Pattana Tambon: Bak Dong
Grid: 439135 m E 1598880 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5838 II Total thickness: 5.7 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

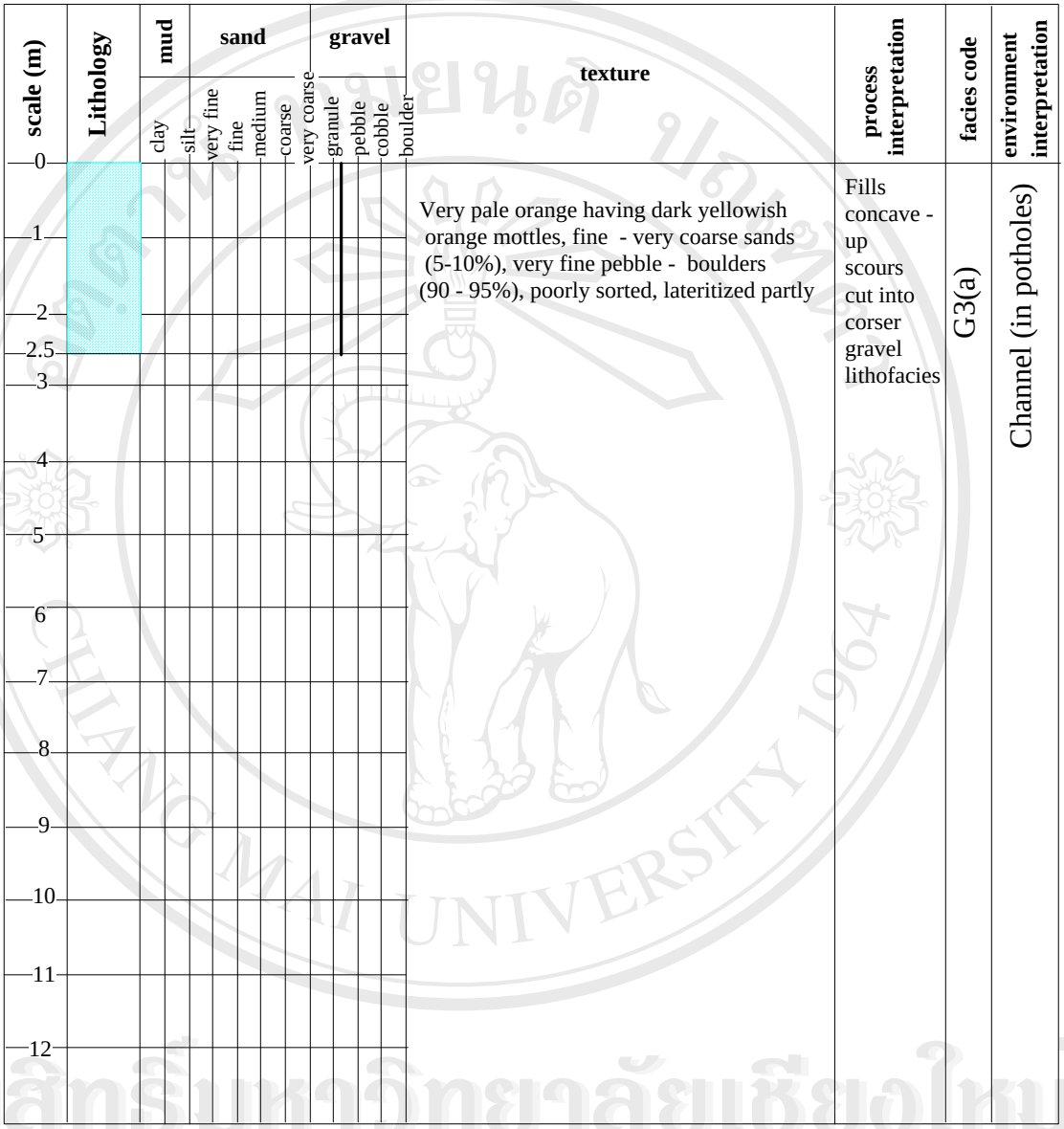
Sedimentary log : Location 2 Ban: Non Toom Taworn Tambon: Bak Dong
Grid: 439968 m E 1599784 mN Amphoe: Khun Han Changwat: Si Sa Ket
Map sheet: 5838 II Total thickness: 1.4 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

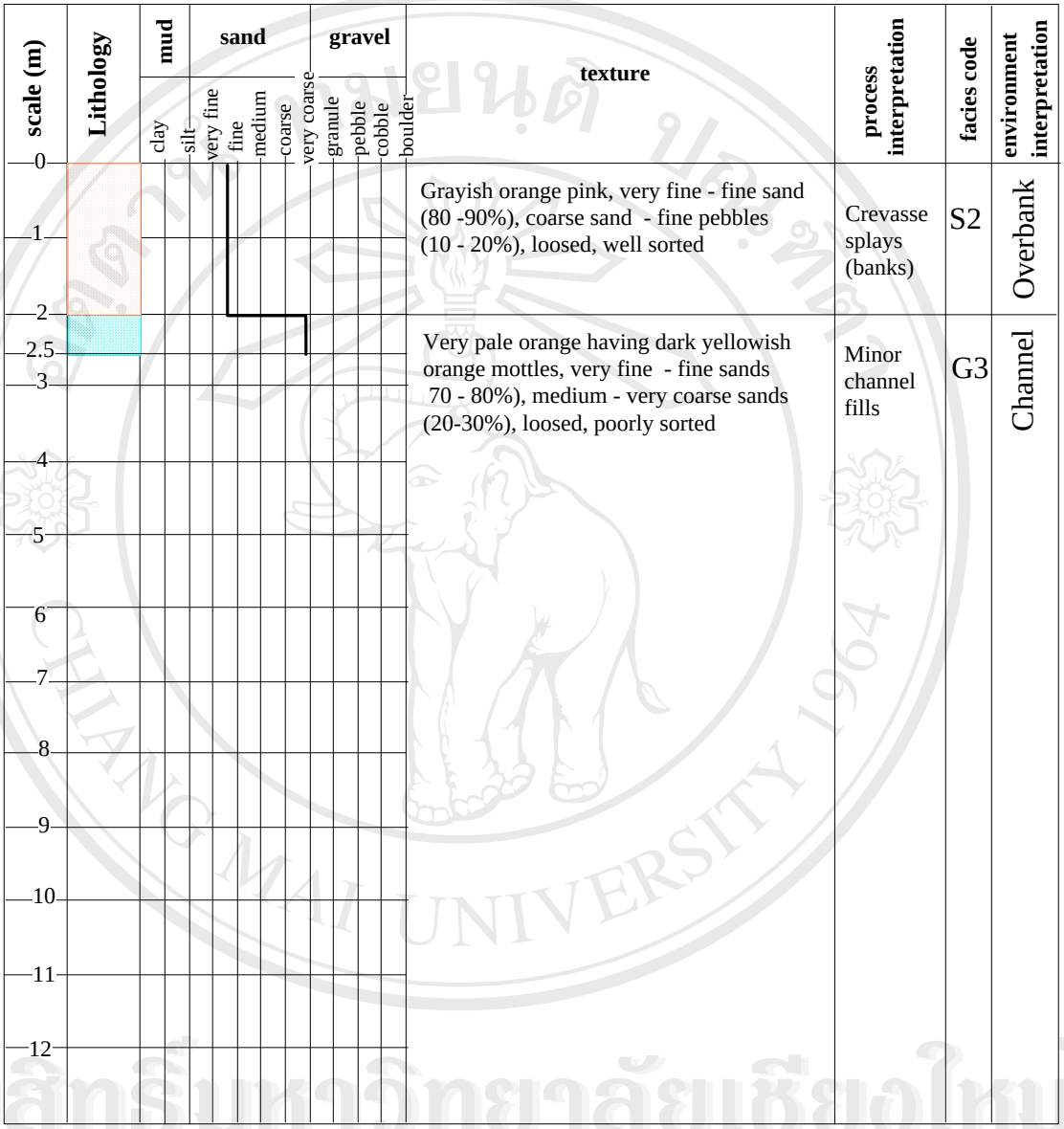
Sedimentary log : Location 3 Ban: La Lai Noi (Wang Yai Waterfall) Tambon: La Lai
Grid: 447638m E 1596014 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 2.5 meters (From basement - rock surface



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

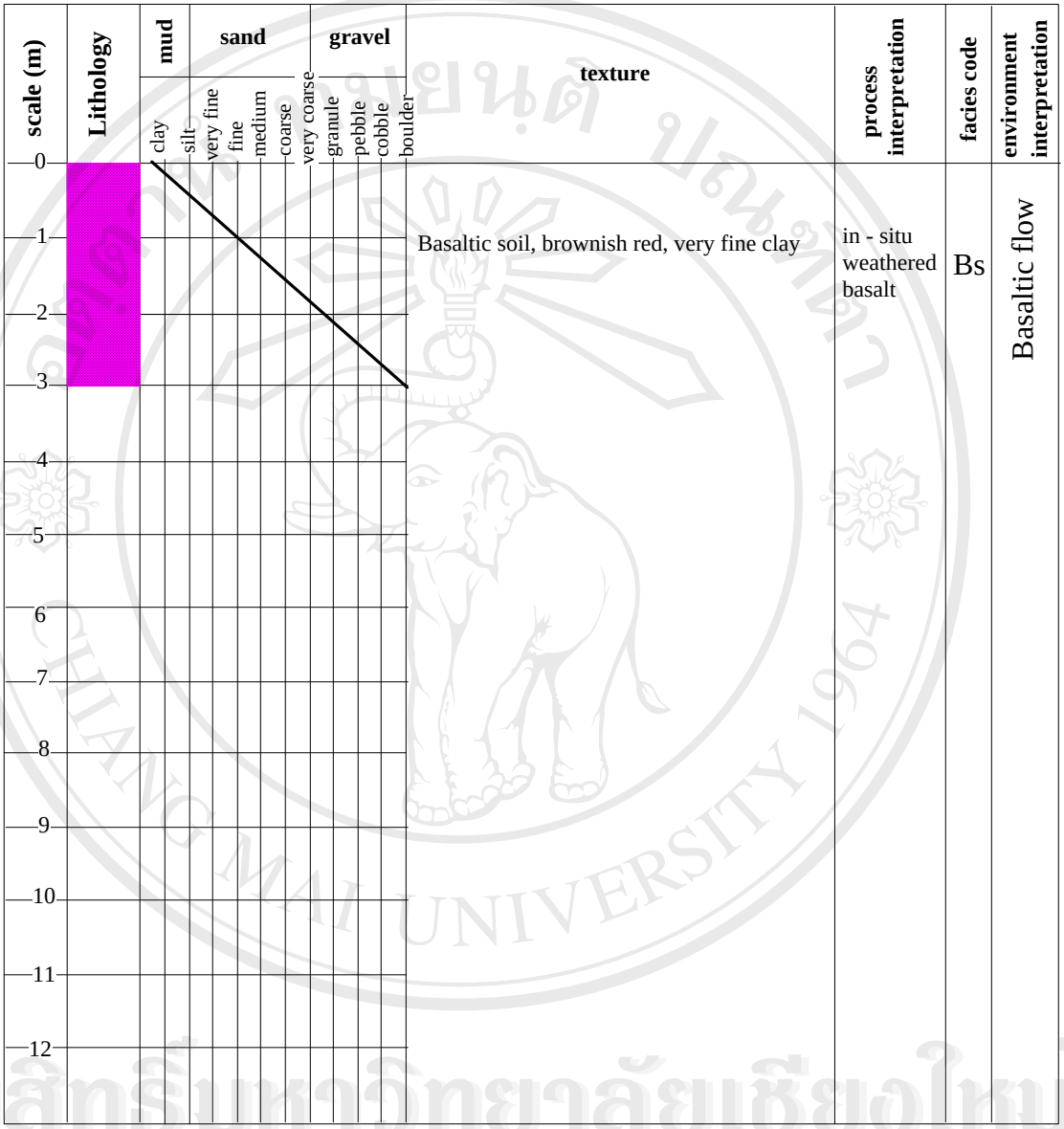
Sedimentary log : Location 4 - 5 Ban: La Lai Noi (Wang Yai Waterfall) Tambon: La Lai
Grid: 448473m E 1596516 mN, 450356 m E 1597068 mN Amphoe: Kantaralak
Map sheet: 5937 III Total thickness: 2.5 meters (From basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

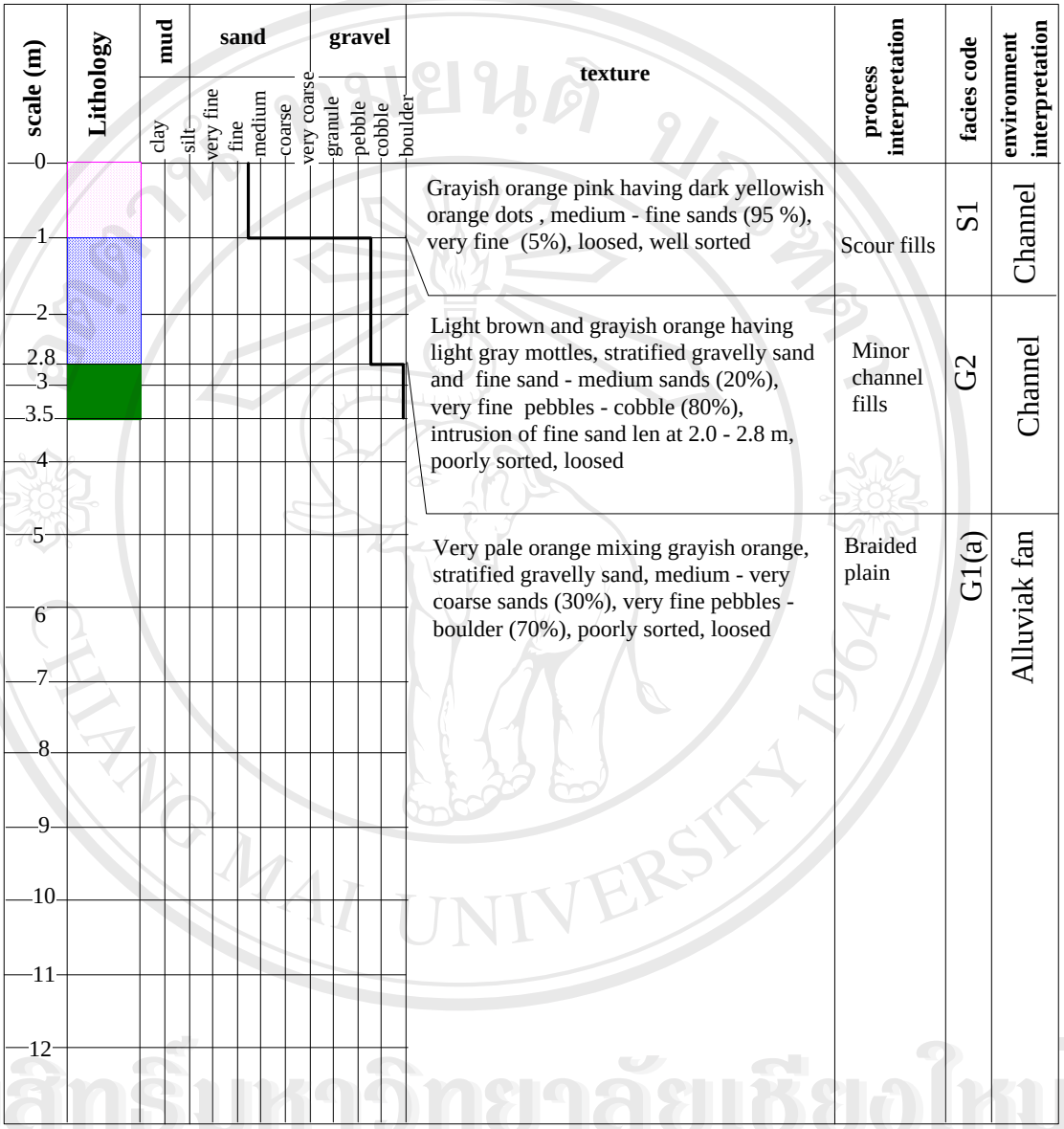
Sedimentary log : Location 6 Ban: Khok Charoen Tambon: La Lai
Grid: 453693 m E 1600008 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 3.0 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)		Note: (a) refer to lithofacies having same characteristics but older age		
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

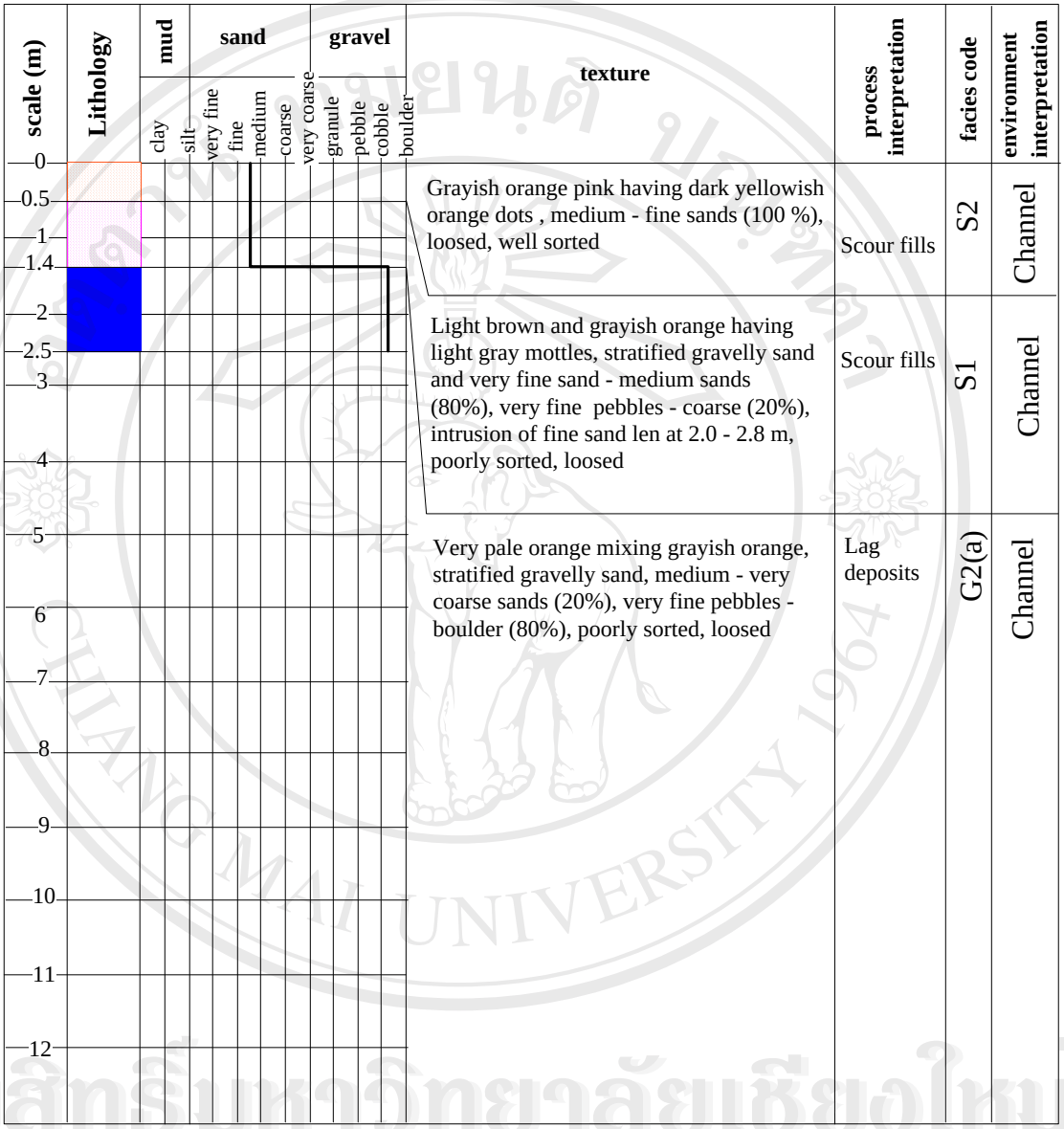
Sedimentary log : Location 7 Ban: La Lai Tambon: La Lai
Grid: 454119 m E 1598876 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 3.5 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

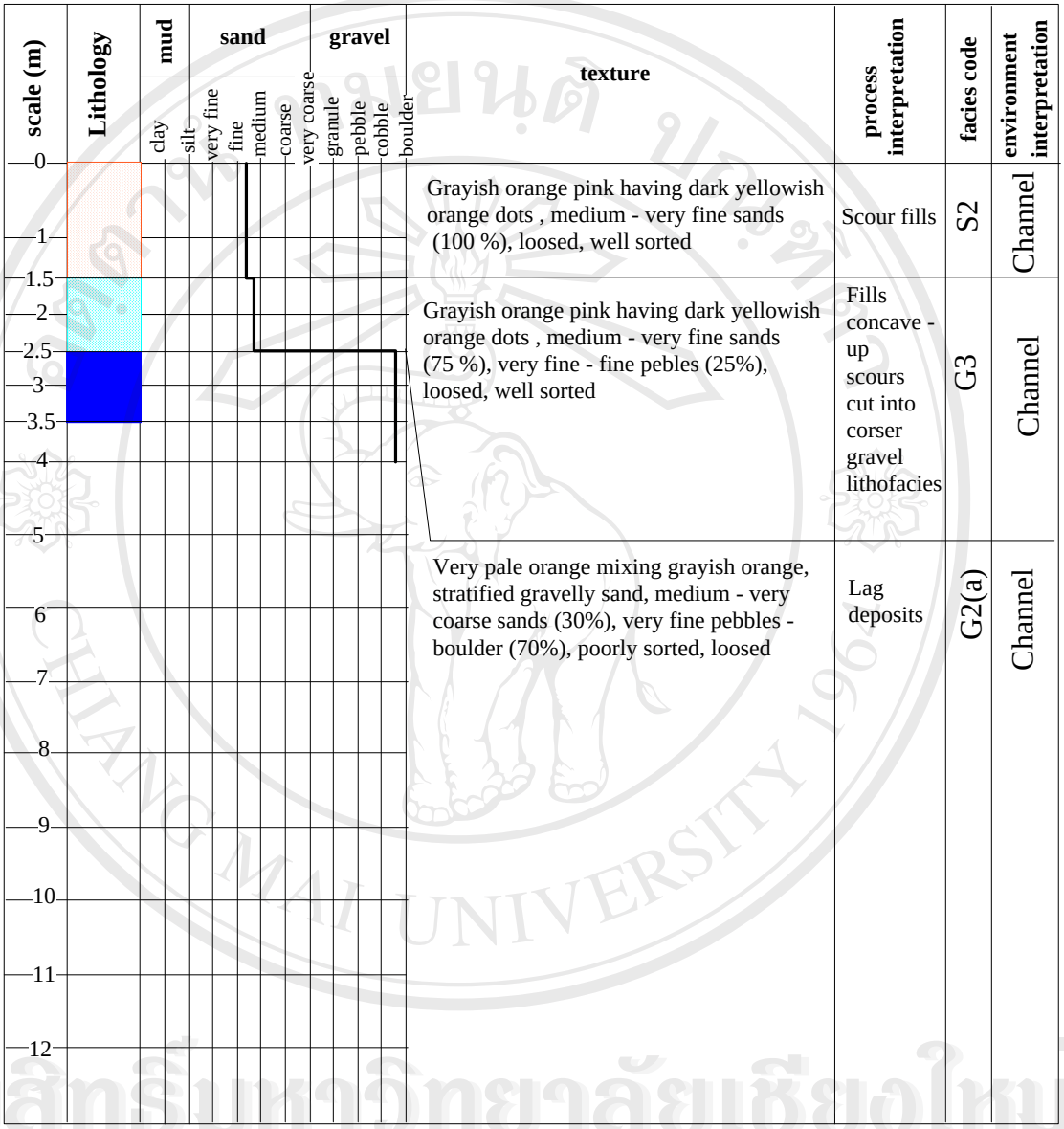
Sedimentary log : Location 8 Ban: La Lai Tambon: La Lai
Grid: 455380 m E 1598173 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 2.5 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

Sedimentary log : Location 9 Ban: Kham Proi Tambon: La Lai
Grid: 456107 m E 1599327 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 3.5 meters (Not from basement - rock surface)



texture	process interpretation	facies code	environment interpretation
Grayish orange pink having dark yellowish orange dots , medium - very fine sands (100 %), loosed, well sorted	Scour fills	S2	Channel
Grayish orange pink having dark yellowish orange dots , medium - very fine sands (75 %), very fine - fine pebles (25%), loosed, well sorted	Fills concave - up scours cut into corser gravel lithofacies	G3	Channel
Very pale orange mixing grayish orange, stratified gravelly sand, medium - very coarse sands (30%), very fine pebbles - boulder (70%), poorly sorted, loosed	Lag deposits	G2(a)	Channel

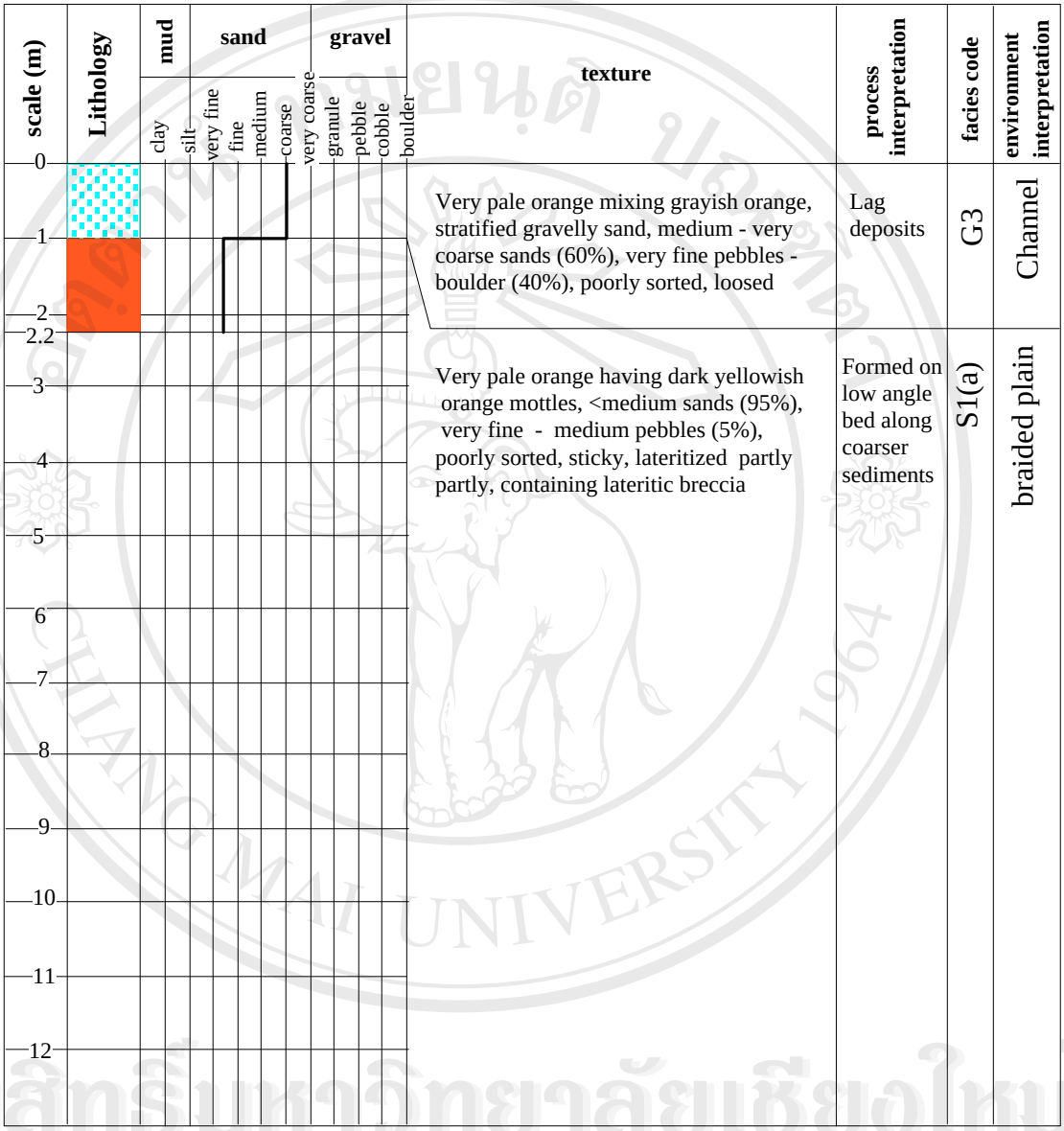
EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud			
	G3(a)			F(a)				

Note:

(a) refer to lithofacies having same characteristics but older age

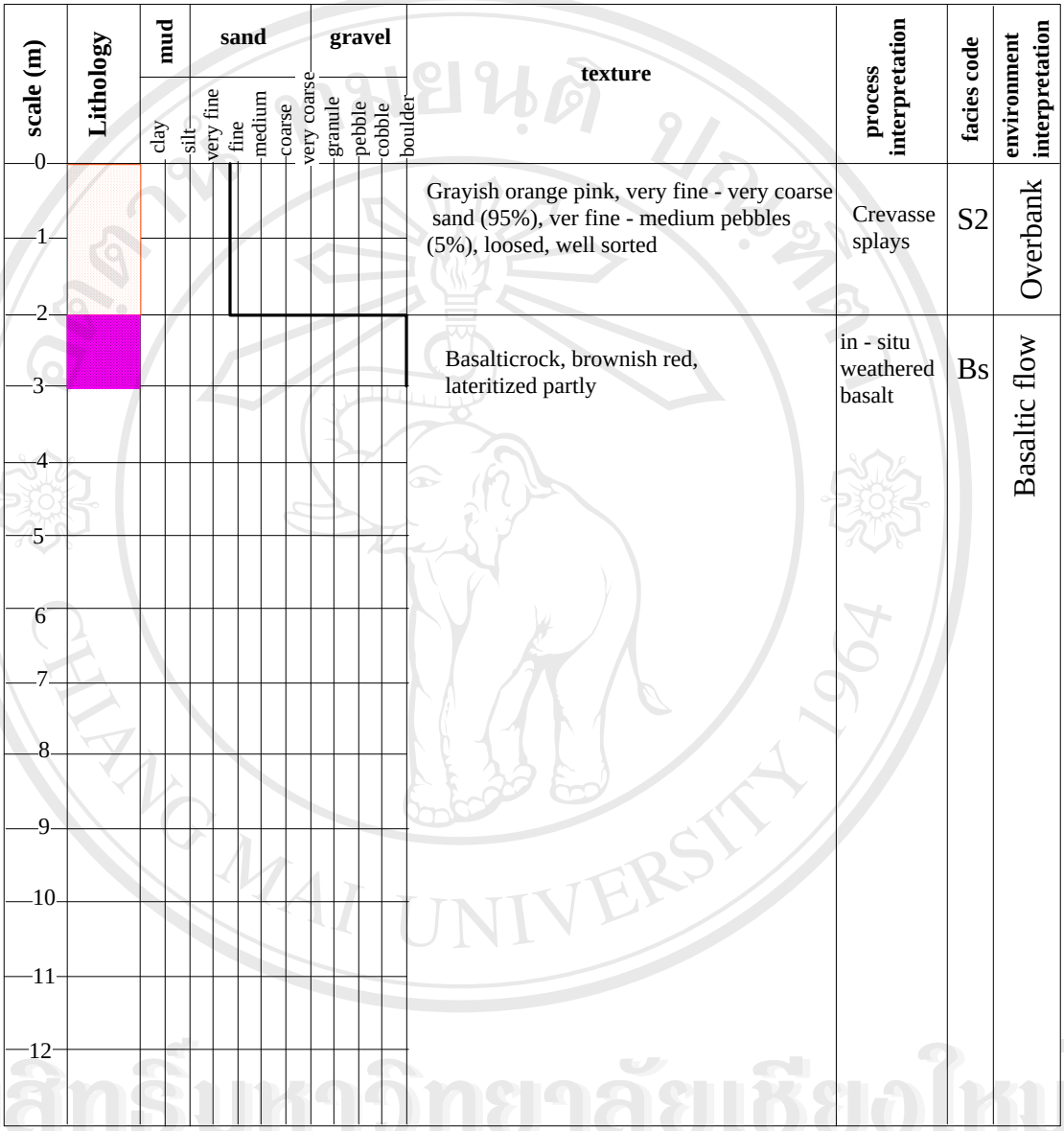
Sedimentary log : Location 10/2 Ban: La Lai Tambon: La Lai
Grid: 457893 m E 1598473 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 2.2 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

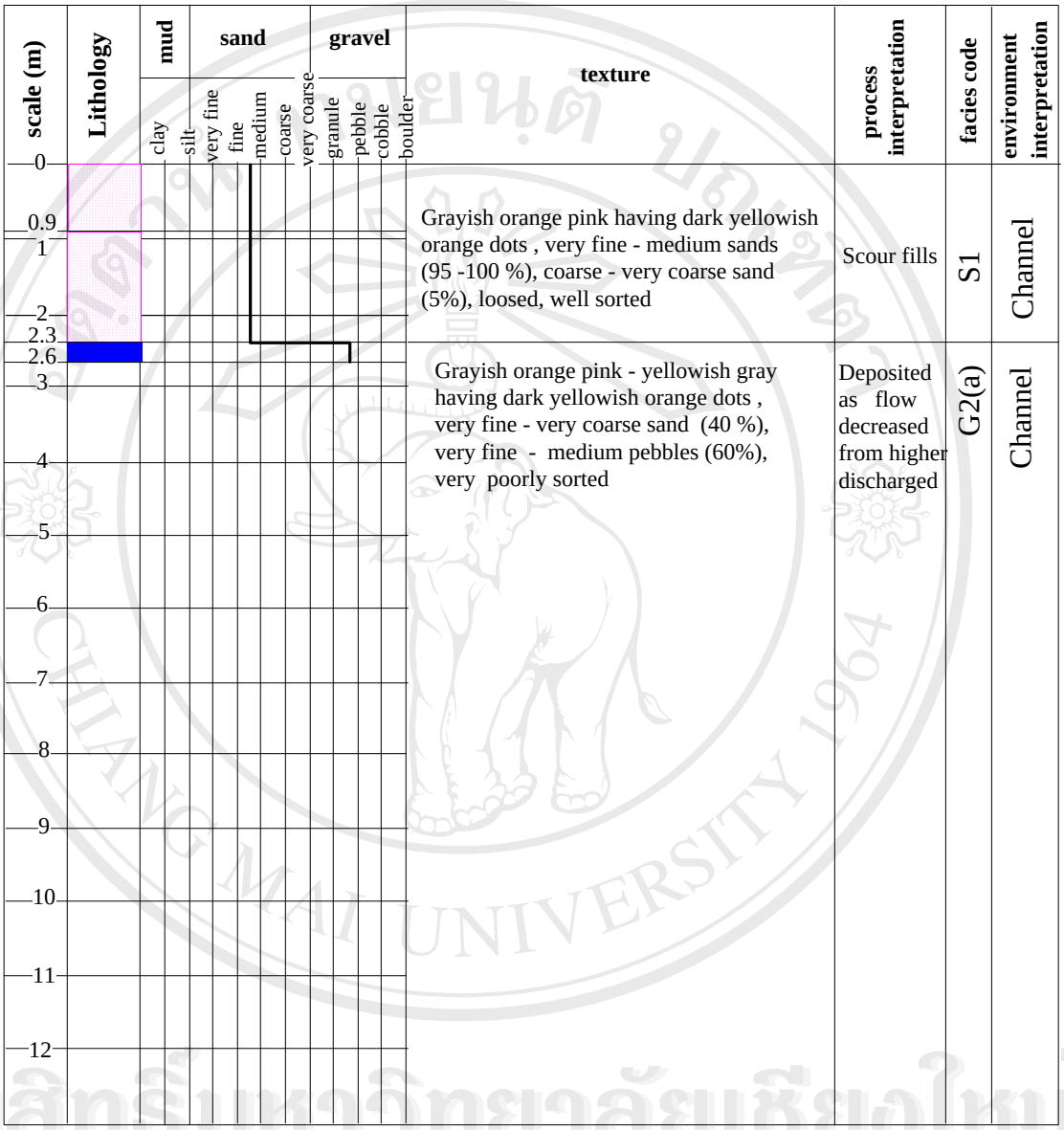
Sedimentary log : Location 11 Ban: Sam Beng Tambon: Kra Sang
Grid: 465023 m E 1597617 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 III Total thickness: 3.0 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

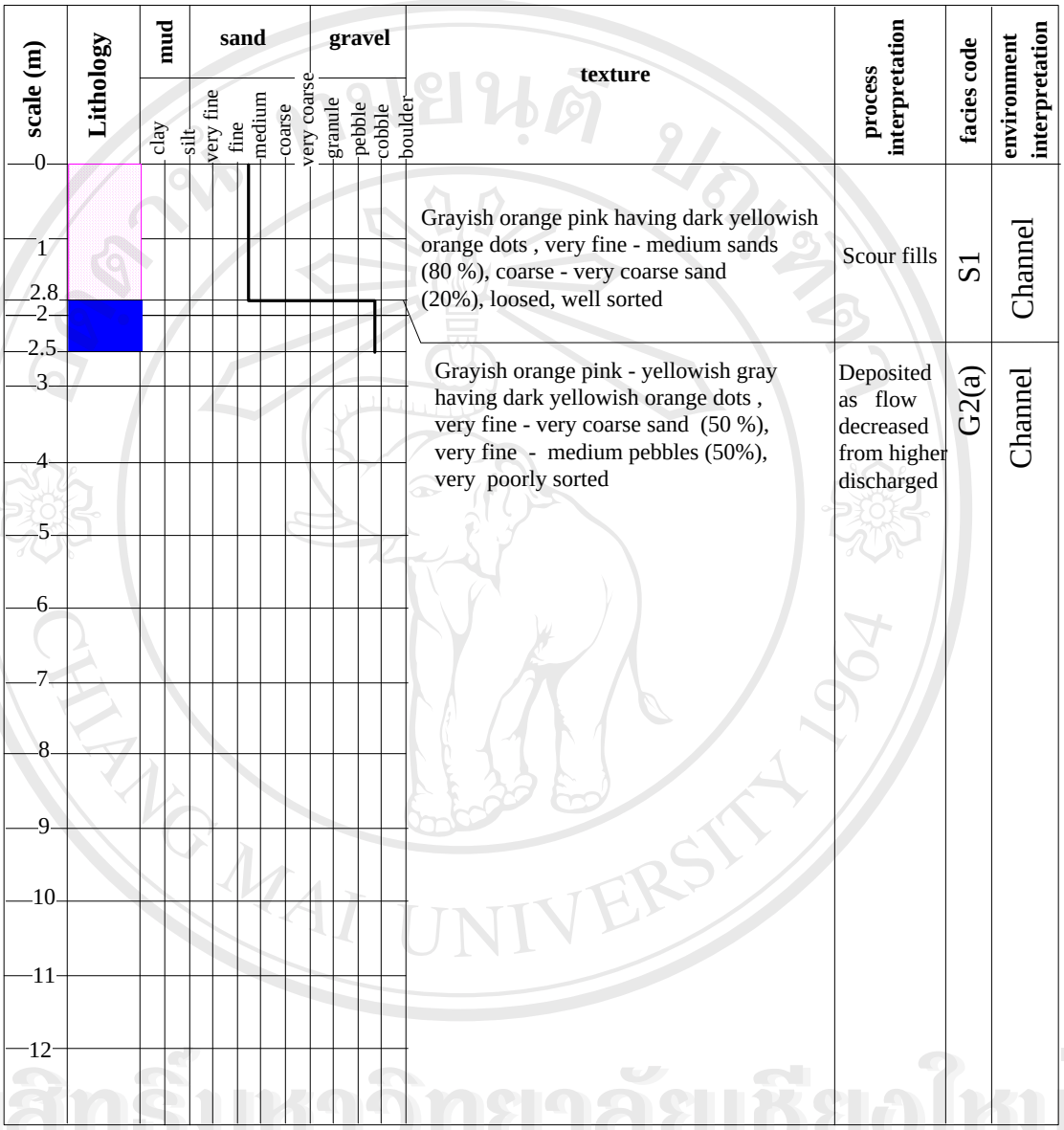
Sedimentary log : Location 12 Ban: Dan Nue Tambon: Phu Pha Mok
Grid: 483791 m E 1598473 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 2.6 meters (Not from basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

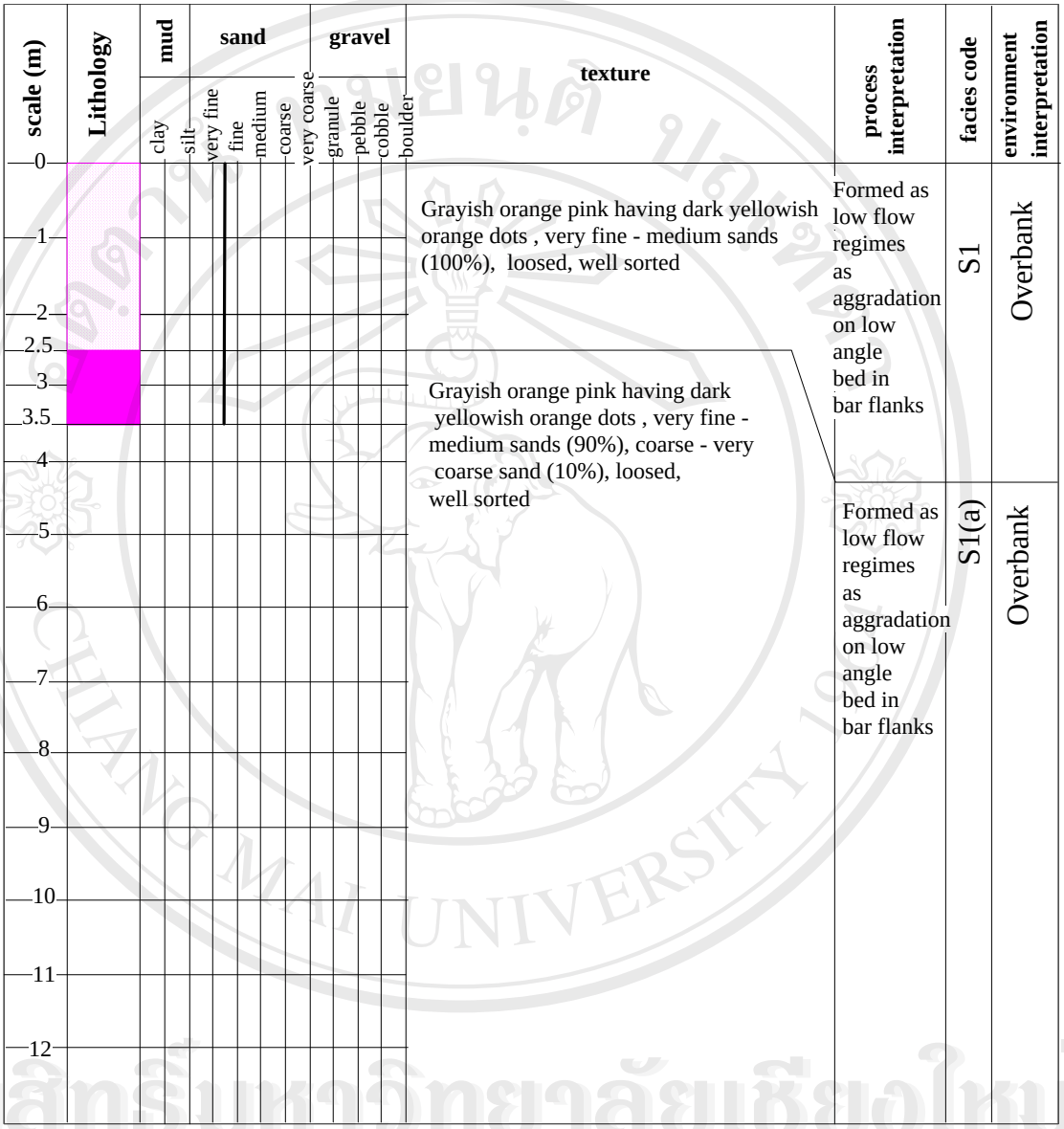
Sedimentary log : Location 13 Ban: Dan Tai Tambon: Phu Pha Mok
Grid: 483777 m E 1598215 mN Amphoe: Kantaralak Changwat: Si Sa Ket
Map sheet: 5937 I Total thickness: 2.5 meters (Not from basement - rock surfac



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

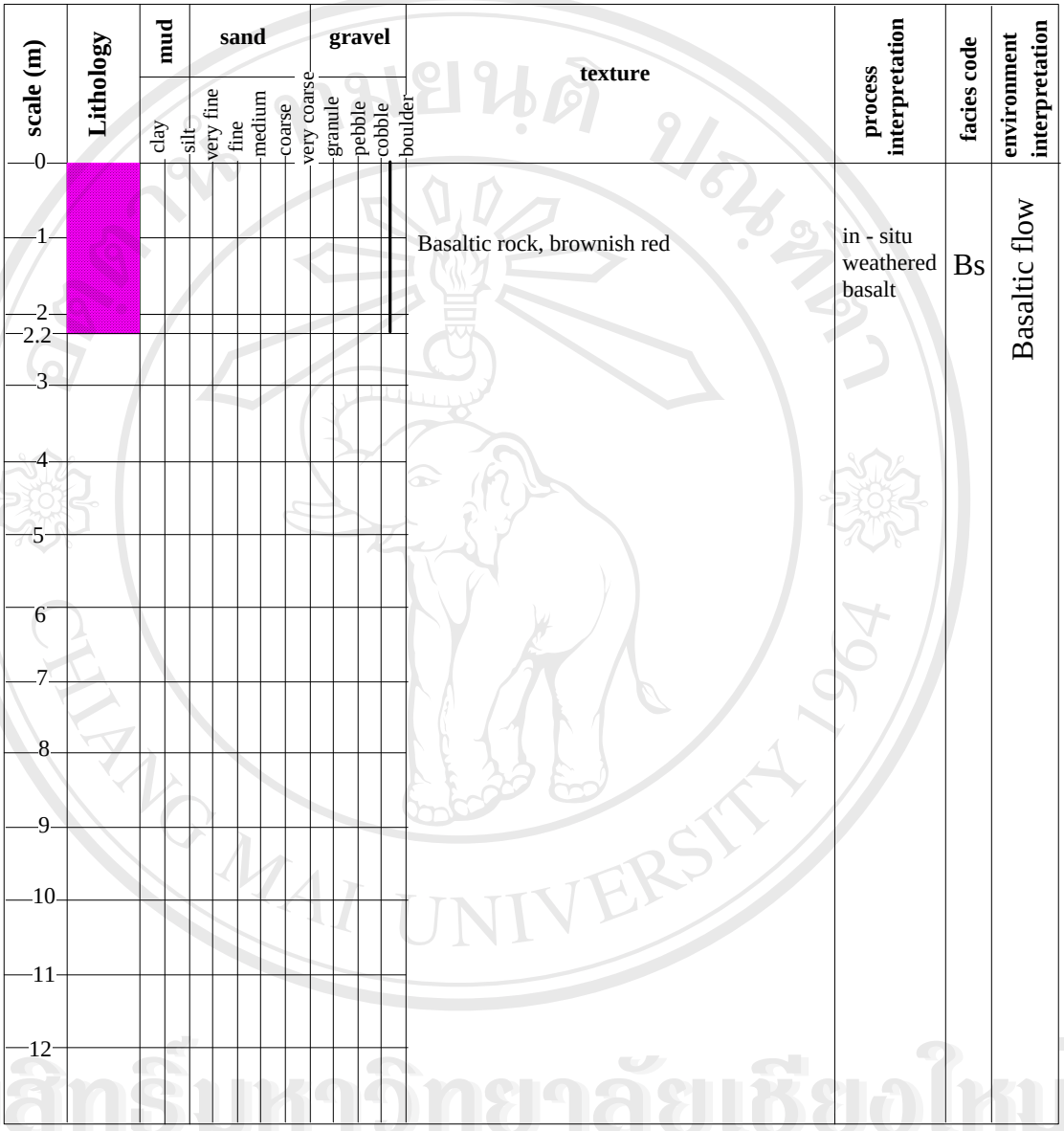
Sedimentary log : Location 14 Ban: Non Saeng Phet Tambon: Khok Sa-ard
Grid: 485982 m E 1597260 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 4.0 meters (Not from basement - rock surfa



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note:		
	G3(a)			F(a)		(a) refer to lithofacies having same characteristics but older age		

Sedimentary log : Location 15 Ban: Khi lek Tambon:Khi lek
Grid: 488991 m E 1602835 mN Amphoe: Nam Khun Changwat: Ubon Ratchathani
Map sheet: 5937 I Total thickness: 2.2 meters (Not from basement - rock surface)



EXPLANATION

symbol	facies code	lithofacies	symbol	facies code	lithofacies	symbol	facies code	lithofacies
	G1	Massive, matrix supported gravel ; weaky imbricated		S1	Horizontal to low angle bedded, fine to medium sand		Bs	Hard rock, seen on surface
	G1(a)			S1(a)			Bs(a)	Clay, very sticky, most of them generate gemstones
	G2	Massive or crudely bedded gravel		S2	Ripple - laminated, very fine to fine sand			
	G2(a)			S2(a)				
	G3	Gravel stratified		F	- Laminated very fine to fine grained sand and silt - Sand, silt, mud	Note: (a) refer to lithofacies having same characteristics but older age		
	G3(a)			F(a)				

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Experience

1995: Joined DMR gemstone exploration team, Gemstone Exploration Section. Work involved geological mapping and bore – drilling of gem field at Bo Phloi District, Kanchanaburi Province, Western Thailand.

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1998: Team leader of gemstone exploration team, Gemstone Exploration Section. Work involved geological mapping and bore – drilling of gem field at Mueang and Tha Mai Districts, Chanthaburi Province, Eastern Thailand.

2005: Field assistance for the project Ruby-Bearing Xenoliths in Cenozoic Basalt Exposed in the Vicinity of Bo Rai Gem Deposits, Eastern Thailand.

2006: Geological field mapping using Satellite imageries for the sand deposit along the Mae Klong Basin.

Publications:

Hansawek, R., Inthasopha, S., Pattamalai, K., Saraphanchotwitthaya, P., Vitiaranee, R., Sangsahachat, C., Kortwong, S., Chamruswai, U., 1999, The Ruby – Sapphire deposits

in Thailand: Economic Geological Division, Department of Mineral Resources, Thailand, 17 pp. (in Thai)

Saraphanchotwitthaya, P., and Vitiaranee, R., 2000, Map of Mineral Resouces mapsheet ND 48 – 13 scale 1: 250000: Economic Geological Division, Department of Mineral Resources, Thailand.

Pattamalai, K., Saraphanchotwitthaya, P. and Tangphong, P., 2001, Geology of gemstone deposit in Amphoe Bo Ploi, Changwat Kanchanaburi: Economic Geological Division, Department of Mineral Resources, Thailand, 238 pp. (in Thai)

Saraphanchotwitthaya, P. and Tangphong, P., 2001, Geology of gemstone deposit in Lamsom floodplain: Economic Geological Division, Department of Mineral Resources, Thailand, 196 pp. (in Thai)

Saraphanchotwitthaya, P. and Tangphong, P., 2001, Geology of gemstone deposit at Amphoe Bo Rai, Changwat Trat and Amphoe Khlung, Changwat Chanthaburi : Economic Geological Division, Department of Mineral Resources, Thailand, 173 pp. (in Thai)

Saraphanchotwitthaya, P., 2001, Introduction Madagascar, *In* Proceedings of Madagascar: new opportunity for Thai industry, Department of Mineral Resources, Bangkok, Thailand, 15 February 2001, p.1 - 5.

Saraphanchotwitthaya, P., Vitiaranee, R. and Tangphong, P., 2001, Geology of gemstone deposit in Amphoe Tha Mai, Amphoe Mueang and Amphoe Laem Sing, Changwat Chanthaburi : Economic Geological Division, Department of Mineral Resources, Thailand, 285 pp. (in Thai)

Saraphanchotwitthaya, P.,2003, Ruby – sapphire deposits in Ubon Ratchathani and Si Sa Ket Provinces, Northeastern Thailand,. *In* Proceedings of a graduate School, Chiang Mai university, Chiang Mai, Thailand,.26 - 27 September, 2003, p.5 -9.

Saraphanchotwitthaya, P. and Tangphong, P., 2006, The cryptocrystalline silica in Lob Buri, Petchabun and Nakhon Sawan Provinces : Economic Geological Division, Department of Mineral Resources, Thailand, 68 pp. (in Thai).