APPENDICES

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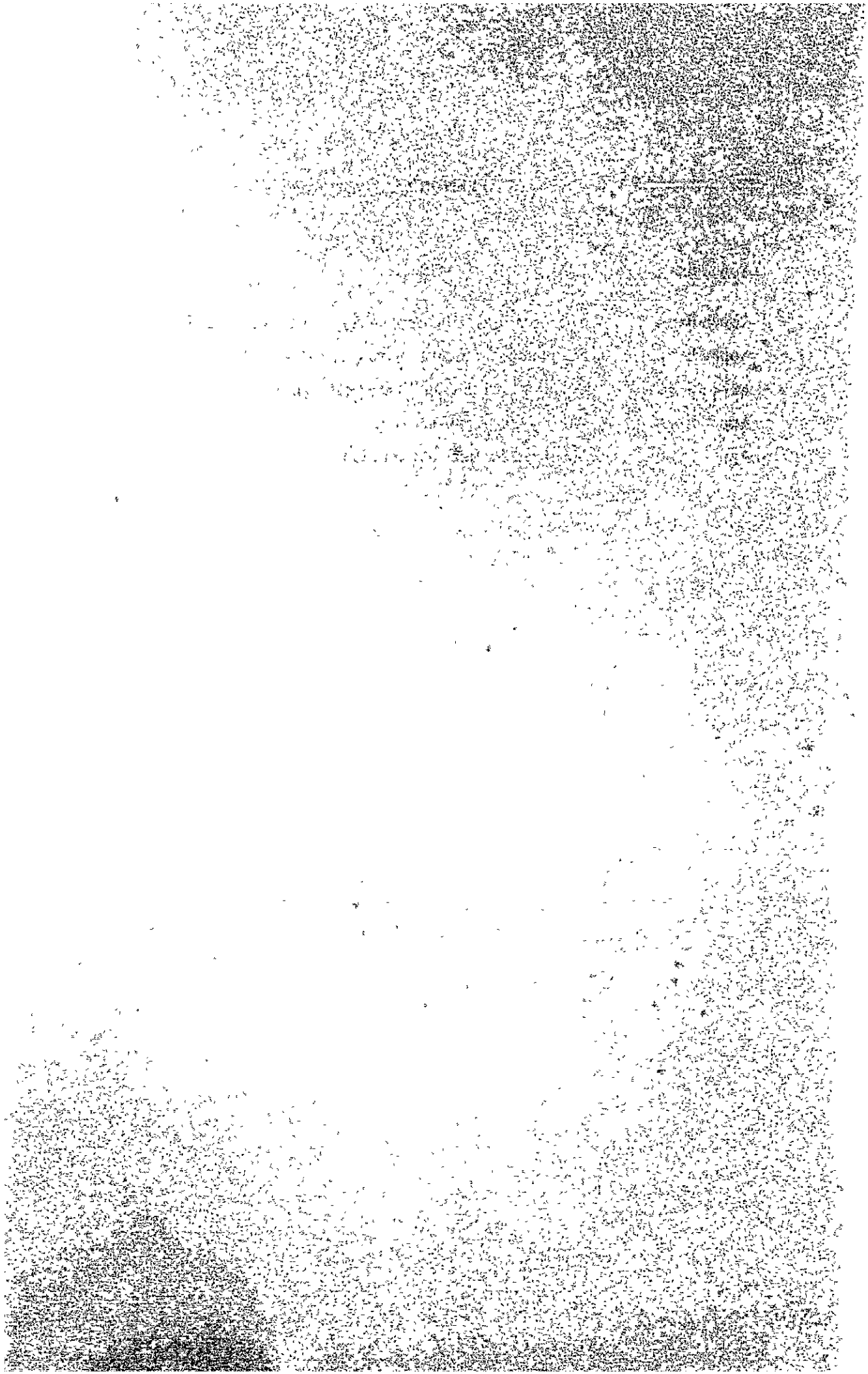


APPENDIX A

SPECIFICATIONS TO BE APPLIED FOR ACTUAL GEOLOGICAL SURVEY

The actual geological field survey will consist of the following objects:

a) Stratigraphy of coal bearing member

b) Continuity of each coal seam and Correlation of every coal seam

c) Geological structure

d) Property of each coal

The description, arrangement, or both of the results should follow the above-mentioned items effectively and adaptively.

[1] DESCRIPTION OF LITHOFACIES

a) The sedimentary rocks in the field have been classified by grain size. The grain size, and rock followed the classification proposed by F.T. Pettijohon (1948), which has been used most generally throughout the world. The classification is shown in Table A-I.

b) he characteristics of rocks should be described with respect to the following properties;

Color,
Hardness,
Weathering Condition,
Minerals,
Fossils,
Sedimentary Structure,
and other properties.

c) Thickness of bed should be measured with "metre" in the order of tenth or hundredth in decimals.

d) The strike and dip of a bed or a fault should be measured at the most representative section to show general structure.

e) Coal Seams and pyroclastic rock beds should be observed carefully because they might become key beds for interpreting geological sequences and structure.

[2] DESCRIPTION OF COAL SEAM

The following points should be given special attention:

a) Prior to observation, weathered portions should be removed sufficiently, for more accurate analysis because coal quality at the weathered bed can be estimated worse than the original quality.

b) The thickness of coal seam should be measured at right angles to the bed as much as possible in order to decrease possible errors in measurement.

c) The measured coal section will be drawn to a scale of 1 : 20 or 1 : 50 under measuring unit of hundredth.

d) Coal seam should be described as coal part is separated from such partings as coaly shale, black shale, and shale. The thickness of coal seam should be arranged into the following:

thickness of coal seam

thickness of coal

thickness of workable coal seam

thickness of workable coal

A example of measured coal section is shown in Figure A-I.

[3] ROUTE MAP

In general, results of geological survey will be described on the topographic map drawn to a scale of 1 : 10,000. When more detailed analysis is required, the route map will be drawn to a scale of 1 . 500 or 1 : 1,000 according to the accuracy of survey.

[4] TRENCHING

When natural outcrops are insufficiently exposed for establishing stratigraphy and confirming continuity of objective beds coal seams and faults, trench will be required for a observations. The necessary attentions and the manners on operation for "Trenching" are as follows:

(Attentions to be taken)

a) To determine the location of trenching route by considering following conditions as much as possible:

i) To make trenching by keeping a right angle to the strike of bed.

ii) To place a trench where the surface soil cover is in a small amount.

iii) To place a trench where the waste by trenching is treated most easily.

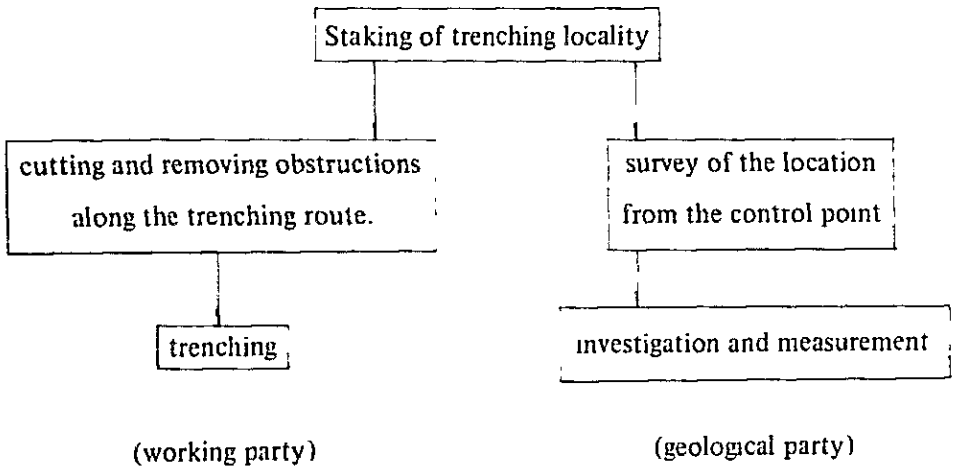
b) The width of trench shall be 60 cm. at the bottom as a standard. In the worst case, at least 30 cm, will be required to enter into the inside of trench for observation.

c) It is necessary to investigated weathered rock masses to be removed for exposure of rocks.

d) In the case of coal seam, it is important to expose itself good enough to observe from the foot wall to the hanging wall because more detailed measurement is required for the coal seam than for the other sedimentary rocks.

e) The best way of trenching is to continue trenching as long as possible successively. However, it is physically difficult, additional trenching will be made near the main one. In that case, the most important caution is to confirm the mutual correlation between the two trenches by some key beds or particular stratigraphic sequences

(Operation)



[5] CLEANING OURCROP FOR OBSERVATION

Generally natural outcrops will be covered by such obstructive matters as plants, soil, debris, etc., or the altered unfavorably with the quality and feature. It is, therefore, necessary to clean the surface to be able to observe proper feature of outcrop precisely.

Figure A-II and III show the legend of measured coal section and the geological symbol used for the survey, respectively.

Table A-I. Table of Size Limits of Common Grade and Book Terms in Sediments

(By F. J. Pettijohn, 1948)

Clastic							Pyroclastic		
Size* (mm)	Rounded, Subrounded, Subangular				Angular		Size* (mm)	Fragment	Aggregate
	Fragment	Aggregate: Unconsolidated	Aggregate: Consolidated		Fragment	Aggregate			
256	Boulder	Boulder gravel	Boulder conglomerate	Conglomerate	Block	Rubble (unconsolidated) Breccia (consolidated)		Block Bomb	Volcanic block, Volcanic breccia, Tuff breccia
64	Cobble	Cobble gravel	Cobble conglomerate	Conglomerate					
4	Pebble	Pebble gravel	Pebble conglomerate	Conglomerate			32	Lapilli	Lapilli tuff
2	Granule	Granule gravel	Granule conglomerate	Conglomerate			4		
1	Sand	Very coarse sand	Very coarse sandstone	Sandstone				Coarse ash	Coarse tuff
1/2		Coarse sand	Coarse sandstone	Sandstone					
1/4		Medium sand	Medium sandstone	Sandstone			1/4		
1/8		Fine sand	Fine sandstone	Sandstone				Fine ash	Fine tuff
1/16		Very fine sand	Very fine sandstone	Sandstone					
	Silt	Silt	Siltstone	Mudstone			1/64		
1/256	Clay	Clay	Claystone, Shale	Mudstone				Volcanic dust	

(* Wentworth Size Class)

Figure A-I Example of Measured Coal Section

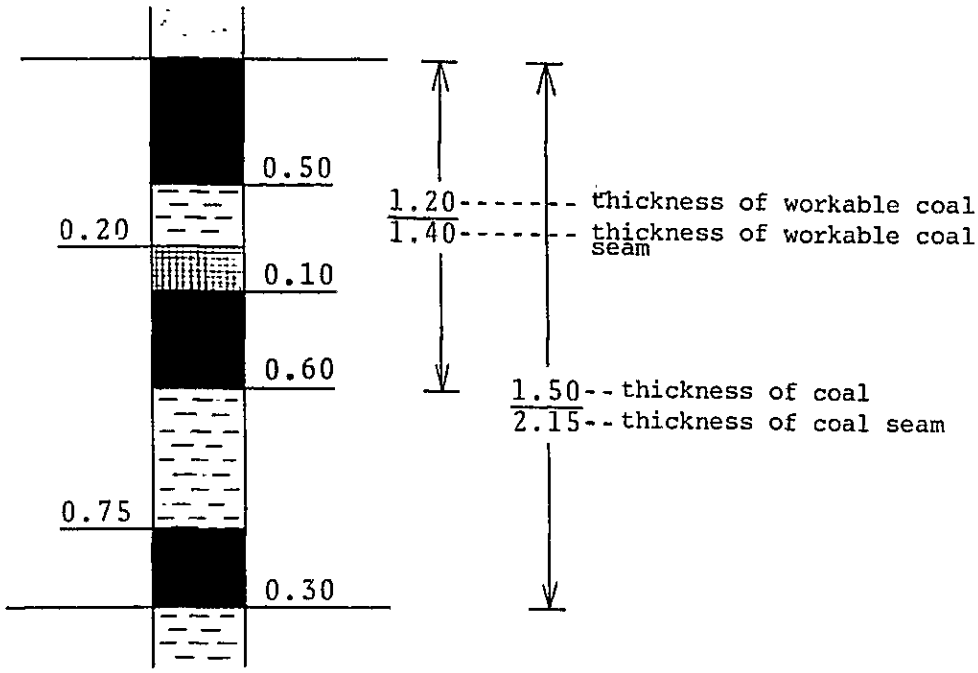
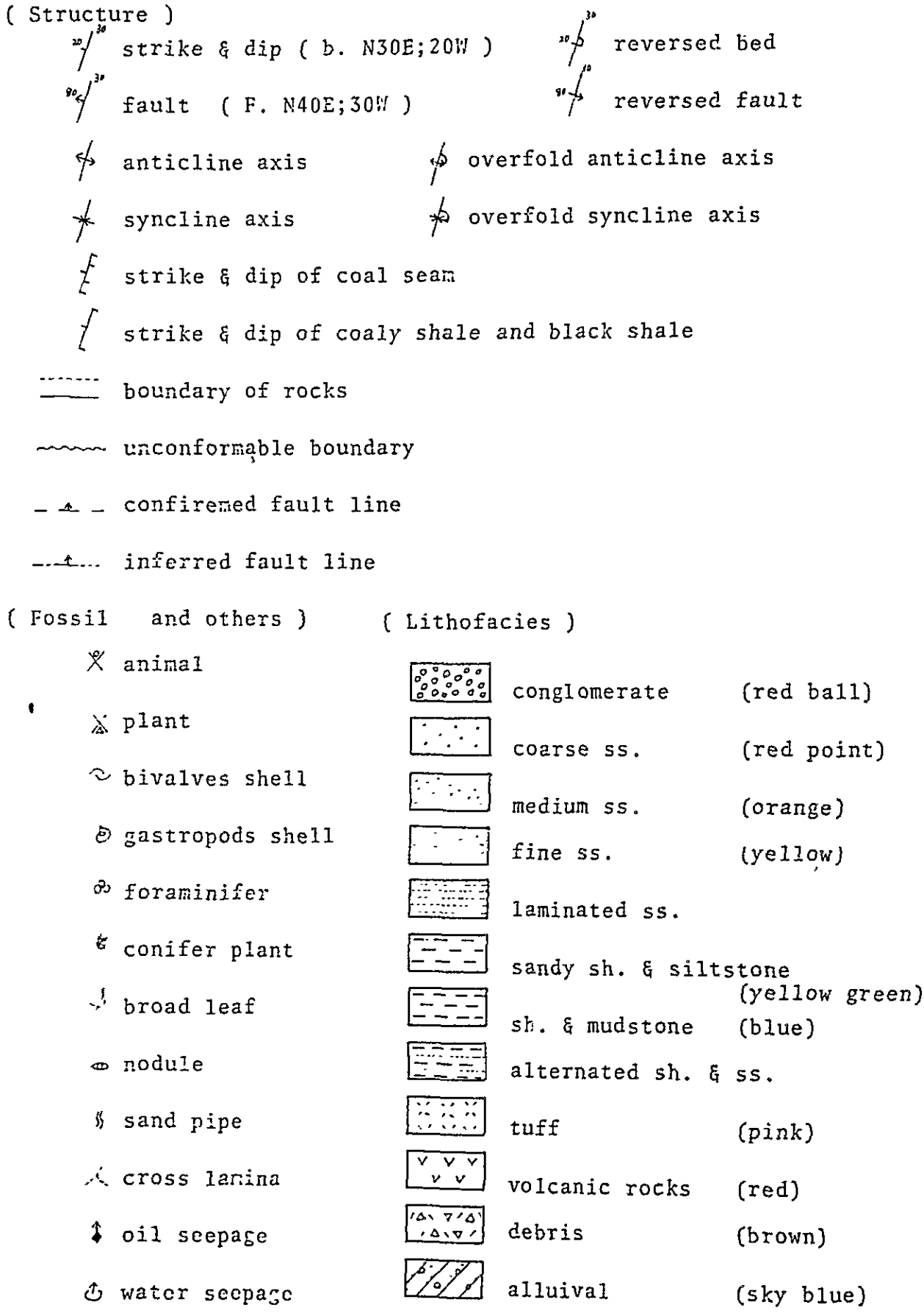


Figure A-II Legend of Measured Coal Section

bright coal	bt.c.	(C_1)
dull coal	d.c.	(C_2)
second coal	2nd c.	(C_3)
striated coal	stria.c.	
coaly shale	c.sh.	
ganbai (crushed c.sh.)	ganb.	
black shale	bk.sh.	
shale bearing coal striation		
coal patch and carbon matter		

Figure A-III Geological Symbol



APPENDIX B

SUPPLEMENT TO COAL RESERVE CALCULATION UNDER JIS

In general, (what is called) the recoverable coal reserves is calculated by multiplying only the proved coal reserves I-A and I-B[*1] out of the abovementioned theoretically minable reserves by the safety ratio[*2] and the recovery ratio[*3], and the probable and the possible reserves are not considered. The recoverable coal reserves thus calculated will directly lead to practical evaluation of the mining at this stage. However, calculation of the recoverable coal reserves was omitted this time, because the projected area was considered to be a virgin coal field which was systematicaly investigated for the first time and the coal seams occur unstably in the sedimentary environment.

*1) The proven coal reserves I and II are classified by depth. Reserve I is within the limit of the currently minable depth.

*2) Safety ratio

a) Disadvantages in the course of mining such as unexpected faults, folding, expansion, and contraction of coal seams are practically impossible to foresee in (a limited accuracy of) the survey. Accordingly, actual recoverable coal reserves will be less than the proved reserves I of the theoretically minable coal reserves.

Namely, possible geological risks derived from the characteristics of the geology and coal seams as well as from the calculated theoretical proved reserves I. In short, the safety ratio is that which the factors of the natural conditions should be deducted.

b) The proved reserves I of the theoretically minable coal reserves multiplied by the safety ratio is called the safety reserves, which is actually minable.

c) The safety ratio will increase as the degree of accuracy of the survey becomes higher and/or as the geology and the coal seams are in stabler and better condition.

In general, the safety ratio of the proved reserves I-A is assumed to be 100 – 80 % and that of the proved reserves I-B is assume to be 90 – 60 %. It is lower in an area with many faults or folds or in an area where igneous rocks are observed.

d) It is extremely difficult to numerically define the safety ratio and the recovery ratio (Refer to *3). The following table shows the factors affecting the safety ratio.

Safety Ratio Factors

Accuracy of the survey	(A) Investigators	(1) Survey skill (2) Differences investigators on the basis of subjective difference
	(B) Kinds & density of the survey	(1) Underground geological survey (2) Surface geological survey (3) Test drilling survey (4) Geophysical survey
Geological condition	(1) Fault (2) Change in the dip of coal seams (3) Change in the coal thickness (4) Change in the coal property (5) Contemporaneous erosion (6) Unconformity (7) Influence of volcanic rocks (8) Unexpected mined tracks (9) Others	

*3) Recovery ratio

The recoverable coal reserve is the actual amount recovered from safety reserves. The recovery ratio is the percentage of the recoverable coal reserve to the safety reserves. (= clean coal reserve)

Explanation

a) In mining coal seams, the actual clean coal yield from the coal reserves is much smaller than the safety reserves depending of such as coal quality, the floor and roof beds, the mining methods, and techniques of coal preparation. Namely, the recovery ratio indicates that the preceding factors which affects the safety ratio of mainly aftificial conditions should be deducted from the safety reserves. The safety reserves multiplied by the recovery ratio makes the recoverable reserves, which is the clean coal reserve obtained at the mine.

b) The safety ratio and the recoverable reserves are calculated only in terms of the proven reserves I. The theoretically minable coal reserves would be calculated in terms of the proven reserve II, and the reserve with more uncertainty (probable and possible reserves).

Classification by Coal Thickness except Partings (JIS)

(Class)	(Coal Thickness)
1st	more than 100 cm
2nd	60 - under 100 cm
3rd	30 - under 60 cm

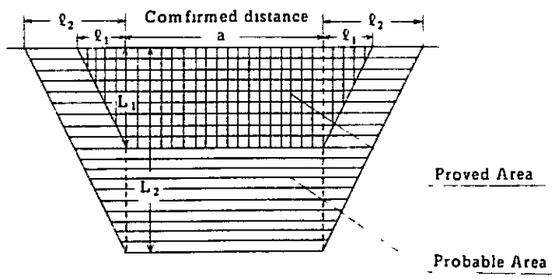
Coal which have coal thickness less than 30 cm and the ratio less than 50 % coal-thickness/seam thickness, are not calculated in principle.

Table B Calculation Area by Comfirmed Distance

Dip of seam	Classification (Quality)	Thickness of coal	Comfirmed distance / Area Classification / Limit of distance	less than 1 km.				1 km. to 3 km.				longer over than 3 km.			
				Proved area		Probable area		Proved area		Probable area		Proved area		Probable area	
				Along Slope Dip (L_1) (m)	Along Strike (ℓ_1) (m)	For Dip (L_2) (m)	For Strike (ℓ_2) (m)	For Dip (L_1) (m)	For Strike (ℓ_1) (m)	For Dip (L_2) (m)	For Strike (ℓ_2) (m)	For Dip (L_1) (m)	For Strike (ℓ_1) (m)	For Dip (L_2) (m)	For Strike (ℓ_2) (m)
less than 30°	A, B, C, D, E	more than 1.0 m.		1/2 a	250	a	500	1/4(a+1,000)	250	1/2(a+1,000)	500	1,000	250	2,000	500
		0.6 m. to 1.0 m.		3/8 a	190	3/4 a	380	3/16(a+1,000)	190	3/8(a+1,000)	380	750	190	1,500	380
		0.3 m. to 0.6 m.		1/4 a	125	1/2 a	250	1/8(a+1,000)	125	1/4(a+1,000)	250	500	125	1,000	250
	F	more than 1.0 m.		1/4 a	125	1/2 a	250	1/8(a+1,000)	125	1/4(a+1,000)	250	500	125	1,000	250
		0.6 m. to 1.0 m.		3/16 a	95	3/8 a	190	3/32(a+1,000)	95	3/16(a+1,000)	190	375	95	750	190
over than 30°	A, B C, D, E	more than 1.0 m.		1/4 a x cosec d	250	1/2 a x cosec d	500	1/8(a+1,000) x cosec d	250	1/4(a+1,000) x cosec d	500	500 x cosec d	250	1,000 x cosec d	500
		0.6 m. to 1.0 m.		3/16 a x cosec d	190	3/8 a x cosec d	380	3/32(a+1,000) x cosec d	190	3/16(a+1,000) x cosec d	380	375 x cosec d	190	750 x cosec d	380
		0.3 m. to 0.6 m.		1/8 a x cosec d	125	1/4 a x cosec d	250	1/16(a+1,000) x cosec d	125	1/8(a+1,000) x cosec d	250	250 x cosec d	125	500 x cosec d	250
	F	more than 1.0 m.		1/8 a x cosec d	125	1/4 a x cosec d	250	1/16(a+1,000) x cosec d	125	1/8(a+1,000) x cosec d	250	250 x cosec d	125	500 x cosec d	250
		0.6 m. to 1.0 m.		1/32 a x cosec d	95	3/16 a x cosec d	190	3/64(a+1,000) x cosec d	95	1/32(a+1,000) x cosec d	190	190 x cosec d	95	375 x cosec d	190

Remarks a) Symbols used in the table are shown in the following figure,

b) Classification by coal quality is shown in the smaller table to the right



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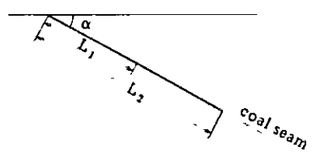


(PROFILE)

Classificati n by Coal Quality(JIS)

		Calorific Values (dry, ash free base cal/kg	Fuel Ratio	Coking Property	Notes
Anthracite (A)	A1		more than 9.0	non coking	
	A2		more than 4.0		Natural coke was occurred by volcanic rock
Bituminous Coal (B, C)	B1	more than 8,400	more than 1.5	heavy coking	
	B2		less than 1.5		
	C	less than 8,400 more than 8,100	-	coking	
Subbituminous Coal (D, E)	D	less than 8,100 more than 7,800	-	soft coking	
	E	less than 7,800 more than 7,300	-	non coking	
Brown Coal(Lignite) (F)	F1	less than 7,300 more than 6,800	-	non coking	
	F2	less than 6,800 more than 5,800	-		

APPENDIX C

CALCULATION TABLE FOR THEORETICAL COAL RESERVES

Seam V-1

(Eastern Block)

	Level (m)	Area (m^2)	Dip (sec.)	Seam Thickness (m)	S.G	Reserves (m.t.)
Proved Area	200-300	15,500	22° (1.08)	1.10	1.5	27,621
	100-200	91,000	21° (1.07)	1.10	1.5	160,661
	0-100	93,750	22° (1.08)	1.10	1.5	167,063
Total		200,250				355,345
Probable Area	200-300	38,750	22° (1.08)	1.10	1.5	69,053
	100-200	38,500	21° (1.07)	1.10	1.5	67,972
	0-100	91,250	22° (1.08)	1.10	1.5	162,608
	-100- 0	54,750	14° (1.03)	1.10	1.5	93,048
Total		223,250				392,681
Possible Area	200-300	42,500	22° (1.08)	1.10	1.5	75,735
	100-200	82,500	21° (1.07)	1.10	1.5	145,654
	0-100	85,000	22° (1.08)	1.10	1.5	151,470
	-100- 0	285,000	14° (1.03)	1.10	1.5	484,358
Total		495,000				857,217

(Western Block)

	Level (m)	Area (m^2)	Dip (sec.)	Seam Thickness (m)	S.G	Reserves (m.t.)
Proved Area	200-300	15,750	29° (1.14)	1.10	1.5	29,626
Probable Area	+300	840	32° (1.18)	1.10	1.5	1,635
	200-300	44,870	29° (1.14)	1.10	1.5	84,400
	100-200	6,540	29° (1.14)	1.10	1.5	12,302
Total		52,250				98,337
Possible Area	+300	6,100	32° (1.18)	1.10	1.5	11,877
	200-300	151,400	29° (1.14)	1.10	1.5	284,783
	100-200	180,500	29° (1.14)	1.10	1.5	339,521
Total		338,000				636,181

Seam V-7

(Eastern Block)

	Level(m)	Area(m^2)	Dip(sec.)	Seam Thickness(m)	S.G	Reserves(m.t.)
Proved Area	+200	4,670	15°(1.04)	1.00	1.5	7,285
	100-200	72,080	15°(1.04)	1.00	1.5	112,445
Total		76,750				119,730
Probable Area	+200	225	15°(1.04)	1.00	1.5	351
	100-200	76,225	15°(1.04)	1.00	1.5	118,911
Total		76,450				119,262

(Western Block)

	Level(m)	Area(m^2)	Dip(sec.)	Seam Thickness(m)	S.G	Reserves(m.t.)
Proved Area	100-200	67,750	4°(1.00)	1.00	1.5	101,625
Probable Area	100-200	115,000	4°(1.00)	1.00	1.5	172,500

Seam V-9

(Eastern Block)

	Level(m)	Area(m^2)	Dip(sec.)	Seam Thickness(m)	S.G	Reserves(m.t.)
Proved Area	100-200	237,500	6°(1.01)	1.70	1.5	611,681

(Western Block)

	Level(m)	Area(m^2)	Dip(sec.)	Seam Thickness(m)	S.G	Reserves(m.t.)
Proved Area	100-200	92,250	37°(1.25)	1.70	1.5	294,047
	0-100	83,250	40°(1.31)	1.70	1.5	278,097
	-0	11,000	40°(1.31)	1.70	1.5	36,746
Total		186,500				608,890

Seam U-3

	Block	Area (m^3)	Dip (sec.)	Seam Thickness (m)	S.G	Reserves (m.t.)
Proved Area	D	62,500	14° (1.03)	0.80	1.5	77,250
	E	8,860	14° (1.03)	0.80	1.5	10,951
	F	12,550	15° (1.04)	0.80	1.5	15,662
	G	11,070	15° (1.04)	0.80	1.5	13,815
	H	12,300	15° (1.04)	0.80	1.5	15,350
Total		107,280				133,028
Probable Area	D	76,280	14° (1.03)	0.80	1.5	94,282
	E	34,450	14° (1.03)	0.80	1.5	42,580
	F	52,530	15° (1.04)	0.80	1.5	65,557
	G	51,060	15° (1.04)	0.80	1.5	63,723
	H	49,290	15° (1.04)	0.80	1.5	61,514
Total		263,610				327,656

	Level (m)	Area (m^3)	Dip (sec.)	Seam Thickness (m)	S.G	Reserves (m.t.)
Possible D.E Area	200-250	40,000	15° (1.04)	0.80	1.5	49,920
	150-200	50,750	15° (1.04)	0.80	1.5	63,336
	100-150	91,250	14° (1.03)	0.80	1.5	112,785
	50-100	245,250	14° (1.03)	0.80	1.5	303,129
Total		427,250				529,170
Possible F.G.H Area	+100	32,500	15° (1.04)	0.80	1.5	40,560
	50-100	152,500	15° (1.04)	0.80	1.5	190,320
	0- 50	290,000	15° (1.04)	0.80	1.5	361,920
Total		475,000				592,800

Seam U-6

	Block	Area (m^3)	Dip (sec.)	Seam Thickness (m)	S.G	Reserves (m.t.)
Proved Area	A	12,060	16° (1.04)	0.75	1.5	14,110
	B	19,930	15° (1.04)	0.75	1.5	23,318
	C	12,970	15° (1.04)	0.75	1.5	15,175
Total		44,960				52,603
Probable Area	AB	107,230	16° (1.04)	0.75	1.5	125,459
	C	38,880	15° (1.04)	0.75	1.5	45,490
Total		146,110				170,949
	Level (m)	Area (m^3)	Dip (sec.)	Seam Thickness (m)	S.G	Reserves (m.t.)
Possible A.B Area	200-250	30,500	15° (1.04)	0.75	1.5	35,685
	150-200	68,500	16° (1.04)	0.75	1.5	80,145
	100-150	84,250	16° (1.04)	0.75	1.5	98,573
Total		183,250				214,403
Possible B.C Area	+100	44,250	15° (1.04)	0.75	1.5	51,773
	50-100	75,000	15° (1.04)	0.75	1.5	87,750
Total		119,250				139,523

APPENDIX D

ANALYSIS OF COAL QUALITY

Table D-I. * Proximate Analysis
* Calorific Value
* Total Sulphur
* Specific Gravity

Table D-II. * Chlorine Content
* Ultimate Analysis
* Composition of Ash
* Non-combustible Sulphur Content
* Ash Fusion Temperature
* Free Swelling Index
* Hard Grove Index

Table D-III. * Maceral Analysis

Table D-IV. * Component Ratio of Vitrinite Type
* Mean Maximam Reflectance

Table D-V. * Float and Sink Test (sample T011604)

Figure D-I. * Washability Curves (sample T011604)

Figure D-II. * Correlation between Ash and Calorific Value

Table D-VI. * Calculation Table of Correlation between Ash and Calorific Value

Figure D-III., D-IV. and D-V.
Measured Sections of Coal Seams

Table D-I.

Seam or Area Name	Sample Name	Proximate Analysis				Cal.V. (kcal/kg)	T.S. (%)	S.G.
		Mt.(%)	Ash(%)	V.M.(%)	F.C.(%)			
B-6	M060502	12.0	36.7	28.8	22.5	2,970	6.93	1.85
V-1	T011915	9.7	11.5	40.5	38.3	5,440	2.70	1.50
	T011910	10.4	15.6	38.7	35.3	4,780	4.29	1.64
	T020447	10.9	26.8	35.5	26.8	4,120	3.50	1.72
V-5	T011705	11.0	30.7	33.7	24.6	3,830	2.10	1.69
V-7	M012708	11.0	24.6	34.8	29.6	4,540	2.90	1.68
V-9	T011604	11.0	8.8	42.9	37.3	5,630	0.90	1.45
	" (Up)	10.2	8.1	42.9	38.8	5,670	1.40	1.47
	" (Md)	10.2	10.3	42.0	37.5	5,400	0.50	1.48
	" (Lw)	10.6	10.0	41.9	37.5	5,460	0.70	1.47
	T011607	12.9	11.3	41.1	34.7	5,170	1.56	1.64
	T011612	15.1	9.9	40.7	34.3	5,200	1.20	1.49
S	M021205	12.9	25.1	37.1	24.9	4,230	3.03	1.72
	M021710	14.2	18.8	37.4	29.6	4,390	1.49	1.64
U-3	T062012	13.8	11.1	39.4	35.7	5,070	0.72	1.53
	T062110	14.0	13.6	38.9	33.5	4,950	1.56	1.49
U-6	T061711	13.6	17.5	39.0	29.9	4,680	4.13	1.61
	T061915	14.0	18.9	41.2	25.9	4,870	2.60	1.55
D	M030201	12.6	37.1	29.2	21.1	2,850	4.48	1.89
D-4	M061903	11.6	41.6	28.5	18.3	2,530	3.56	1.96

(Note) Abbreviation in Table

* Seam or Area Name
  - (B) Rio Bocuares Area
  - (V) Carbón Volio Area
  - (S) Sand Box Area
  - (U) Carbón Uno Area
  - (D) Carbón Dos Area
* Items of Analysis
  - (Mt.) Moisture
  - (V.M.) Volatile Matter
  - (F.C.) Fixed Carbon
  - (Cal.V.) Calorific Value
  - (T.S.) Total Sulphur
  - (S.G.) Specific Gravity

Table D-II.

Seam Name	V-1	V-5	V-7	V-9	U-3	U-6
Sample Name	T011915	T011705	M012708	T011604	T062012	T061915
Chlorine Content (%)	0.002	0.002	0.001	0.004	0.000	0.010
Ultimate Analysis						
Carbon (C) (%)	59.7	43.3	49.6	64.2	61.7	57.0
Hydrogen (H) (%)	5.2	4.4	4.6	5.6	5.3	5.1
Nitrogen (N) (%)	1.0	0.9	0.9	1.3	1.3	1.1
Sulfur (S) (%)	3.0	2.0	2.2	0.2	0.1	0.6
Oxygen (O) (%)	18.3	15.0	15.1	18.8	18.7	14.1
Ash (%)	12.8	34.4	27.6	9.9	12.9	22.1
Composition of Ash						
SiO_2 (%)	35.24	49.94	37.09	25.37	27.99	23.27
Al_2O_3 (%)	30.83	30.61	26.21	22.25	16.83	12.83
Fe_2O_3 (%)	28.94	10.38	15.42	11.17	15.73	9.77
CaO (%)	1.46	2.66	8.10	17.19	17.74	20.38
MgO (%)	0.44	1.43	1.43	2.88	3.40	3.97
Na_2O (%)	0.27	0.35	0.15	0.23	0.66	0.51
K_2O (%)	0.25	0.53	0.13	0.27	0.51	0.35
SO_3 (%)	1.04	2.46	10.01	18.75	14.29	27.66
TiO_2 (%)	1.23	1.50	1.13	1.35	0.78	0.94
P_2O_5 (%)	0.22	0.10	0.19	0.12	0.14	0.10
MnO (%)	0.03	0.06	0.07	0.20	1.87	0.13
Non-combustible Sulfur Content (%)	0.1	0.3	1.1	0.7	0.6	2.1
Ash Fusion Temperature						
Initial Deformation (°C)	1,420	1,470	1,310	1,230	1,180	1,190
Hemispherical (°C)	1,450	1,490	1,340	1,260	1,200	1,210
Fluid (°C)	1,480	1,520	1,370	1,290	1,220	1,230
Free Swelling Index	0	0	0	0		
Hard Grove Index	43	52	47	41	41	43

Table D-III.

Seam Name		V-1	V-5	V-7	V-9
Sample Name		T011915	T011705	M012708	T011604
Maceral Analysis	Vitrinite (%)	79.5	64.2	65.9	76.0
	Exinite				
	Sporinite (%)	2.8	5.5	4.3	5.5
	Resinite (%)	1.7	1.5	2.1	2.5
	Inertinite				
	Micrinite (%)	3.6	1.8	5.3	5.2
	Sclerotinite (%)	2.3	2.9	2.1	2.9
	Fusinite (%)	2.0	0.9	2.0	2.2
	Mineral (%)	8.1	23.2	18.3	5.7

Table D-IV.

Seam Name	V-1	V-5	V-7	V-9
Sample Name	T011915	T011705	M012706	T011604
Component Ratio of Vitrinite Type				
V_3 (%)	38	40	37	74
V_4 (%)	60	60	59	26
V_5 (%)	2	0	4	0
Mean Maximam Reflectance	0.42	0.41	0.42	0.38

Table D-V.

Sample T011604

Size $-10^{mm};-0.5^{mm}$ $7.86^{W/o}$ $17.7^{A/o}$

S.G.	Wt%	Ash%	Floats		Sinks	
			Wt %	Ash%	Wt %	Ash %
— 1.30	27.35	4.1	27.35	4.1	72.65	8.9
1.30/1.35	38.53	5.6	65.88	5.0	34.12	12.6
1.35/1.40	21.40	8.6	87.28	5.9	12.72	19.4
1.40/1.60	11.41	15.8	98.69	7.0	1.31	51.2
+ 1.60	1.31	51.2	100	7.6	—	—
Total	100	7.6				

Figure D-I.

Washability Curves

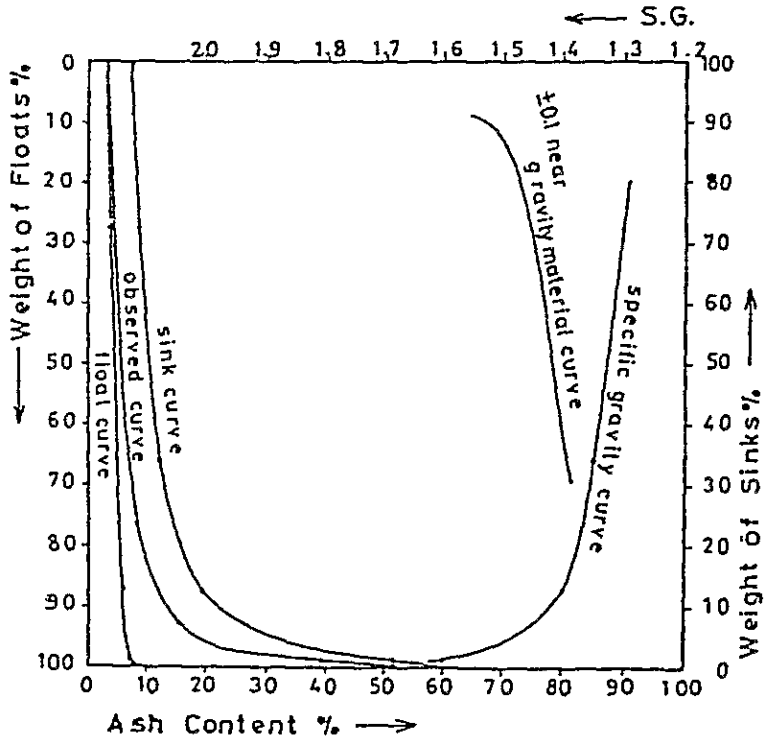
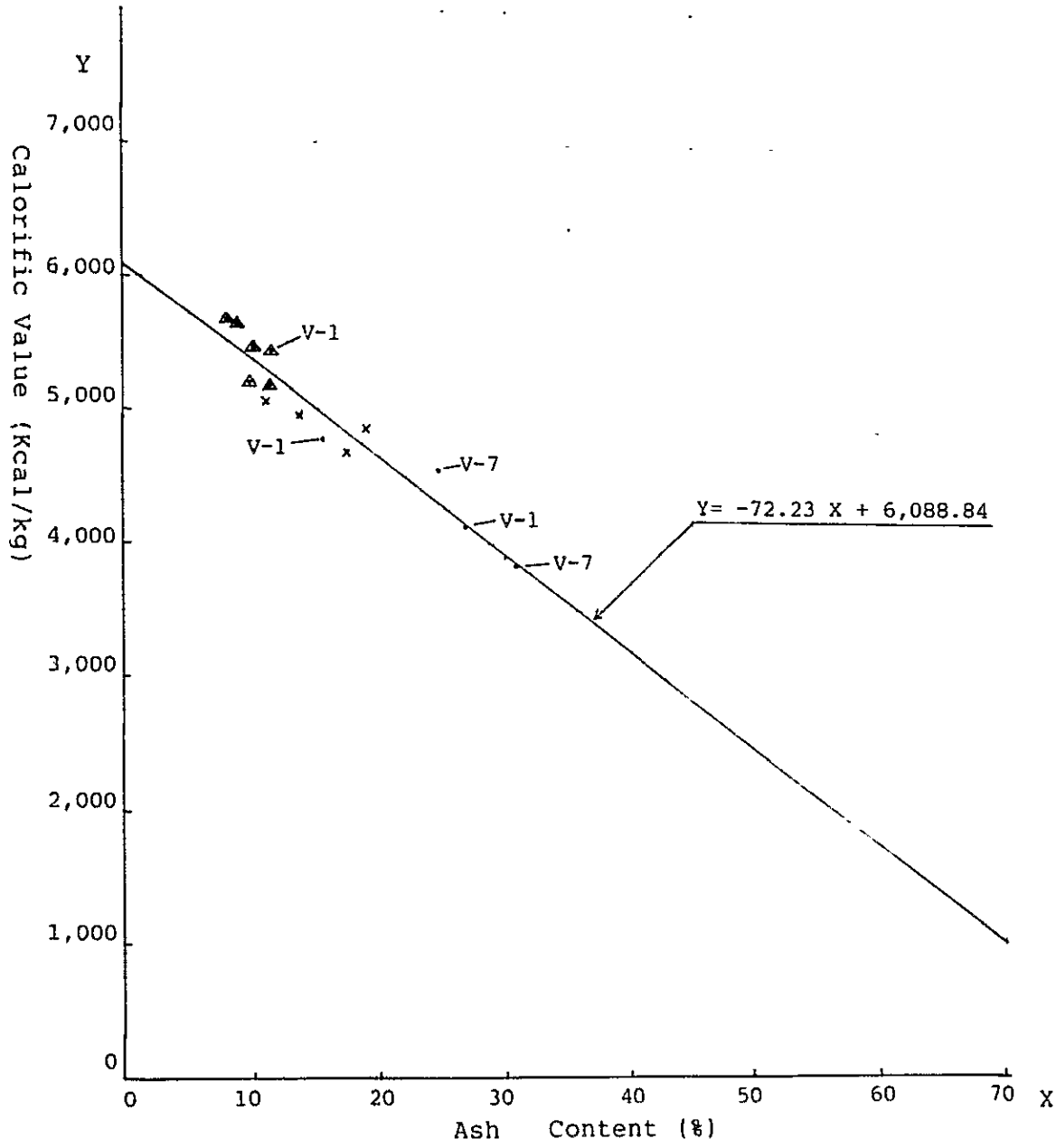


Figure D-II.

Correlation between Ash and Calorific Value



× : Samples from Carbon Uno Area

△ : Samples from Seam V-9

• : Samples from various locations as designated in the figure.

Table D-VI.

Calculation Table of Correlation between Ash and Calorific Value

S. No.	Ash: X	Cal: Y	$(X-\bar{X})$	$(X-\bar{Y})$	$(X-\bar{X})^2$	$(Y-\bar{Y}^2)$	$(X-\bar{X})(Y-\bar{Y})$
To6 2110	13.6	4,950	-1.65	-39.33	2.72	1,394	61.6
2012	11.1	5,070	-4.15	82.67	17.22	6,834	-343.1
1711	17.5	4,680	2.25	-307.33	5.06	94,452	-691.5
1915	18.9	4,870	3.65	-117.33	13.32	13,766	-428.3
To1 1910 (V-1)	15.6	4,780	0.35	-207.33	0.12	42,986	-72.6
1915 (V-1)	11.5	5,440	-3.75	452.6	14.06	204,910	-1,697.5
To2 0447 (V-1)	26.8	4,120	11.55	-867.33	133.40	752,261	-10,017.7
To1 1705 (V-5)	30.7	3,830	15.45	-1157.33	238.70	1339,413	-17,880.7
Mo1 1708 (V-7)	24.6	4,540	9.35	-447.33	87.42	200,104	-4,182.5
To1 1604 (V-9)	8.8	5,630	-6.45	642.67	41.60	413,025	-4,145.2
1607 (")	11.3	5,170	-3.95	182.67	15.60	33,368	-721.5
1612 (")	9.9	5,200	-5.35	212.67	28.62	45,229	-1,137.8
1604-U (")	8.1	5,670	-7.15	682.67	51.12	466.038	-4,881.1
-M (")	10.3	5,400	-4.95	412.67	24.50	170.299	-2,042.7
-L (")	10.0	5,460	-5.25	472.67	27.56	223,417	-2,481.5
Total	228.7	74,810	-	-	701.02	4,007,496	-50,662.1
Average	15.25	4,987.33					

$Sx = \sqrt{701.02/15} = 6.84$ $\qquad$ $Sy = \sqrt{4007,496/15} = 516.88$

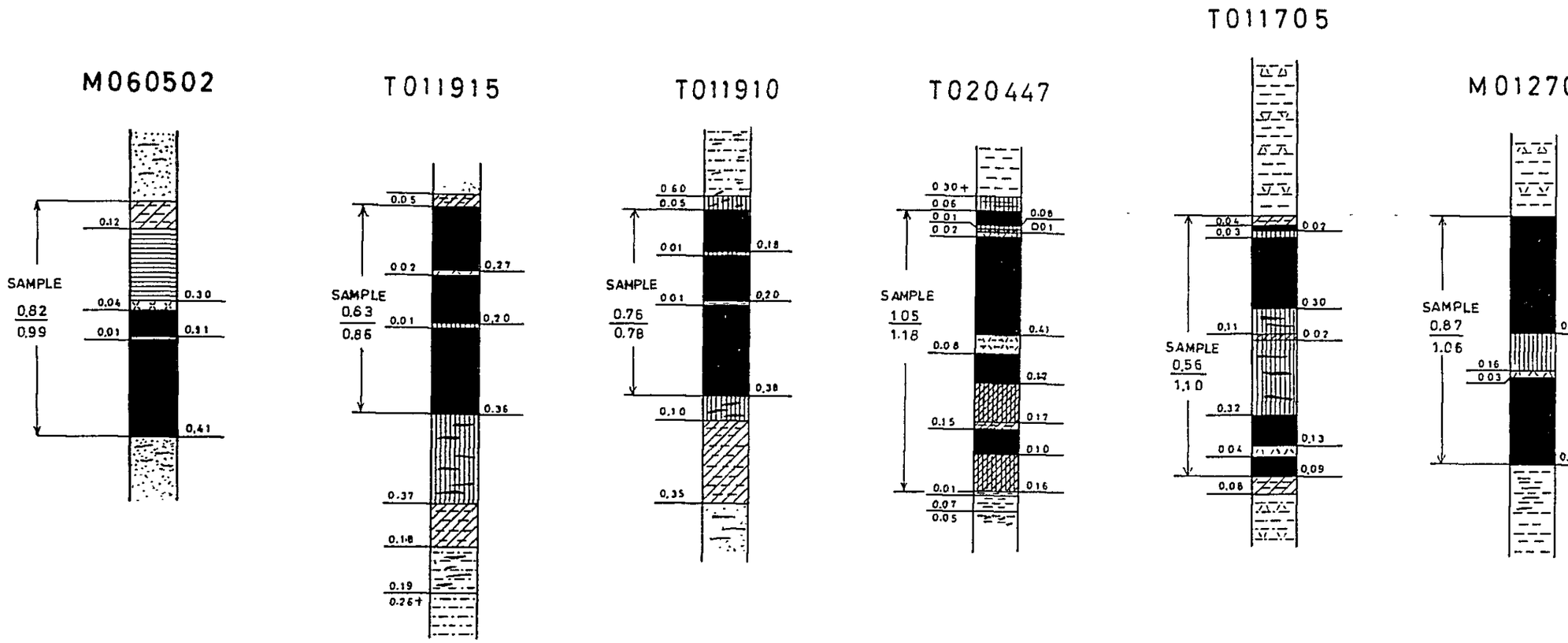
$$\gamma = \frac{-50,662}{\sqrt{701.02 \times 4,007,496}} = \frac{-50,662}{53,003} \approx -0.95583$$

$$Y - 4987.33 = (-0.9558) \times \frac{516.88}{6.84} \times (X - 15.25)$$

$$Y = -72.23X + 4,987.33 + 1,101.51$$

$$Y = -72.23X + 6,088.84$$

Figure D-III Measured Sections of Coal Seams



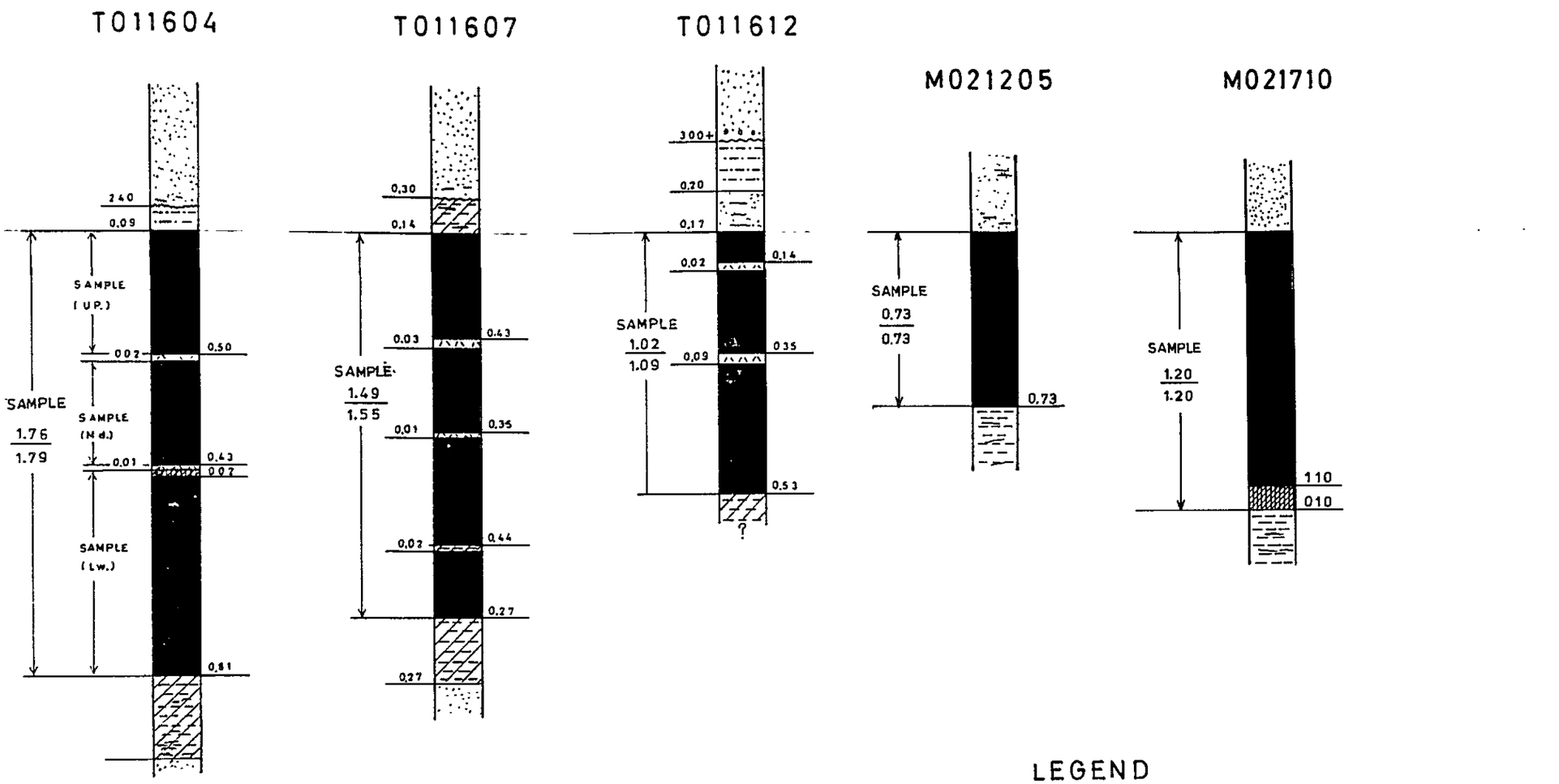
LEGEND

M060502 : Location number of coal outcrop

- Coal
- 2nd Coal
- Striated Coal
- Coaly Shale
- Black Shale
- Shale
- Sandy Shale
- Sandstone
- Tuff
- Coal Striation & Coal Patch

SAMPLE
0.82 ------Thickness of coal
0.99 ------Thickness with parting
-------Sampled portion for analysis

Figure D-IV Measured Sections of Coal Seams

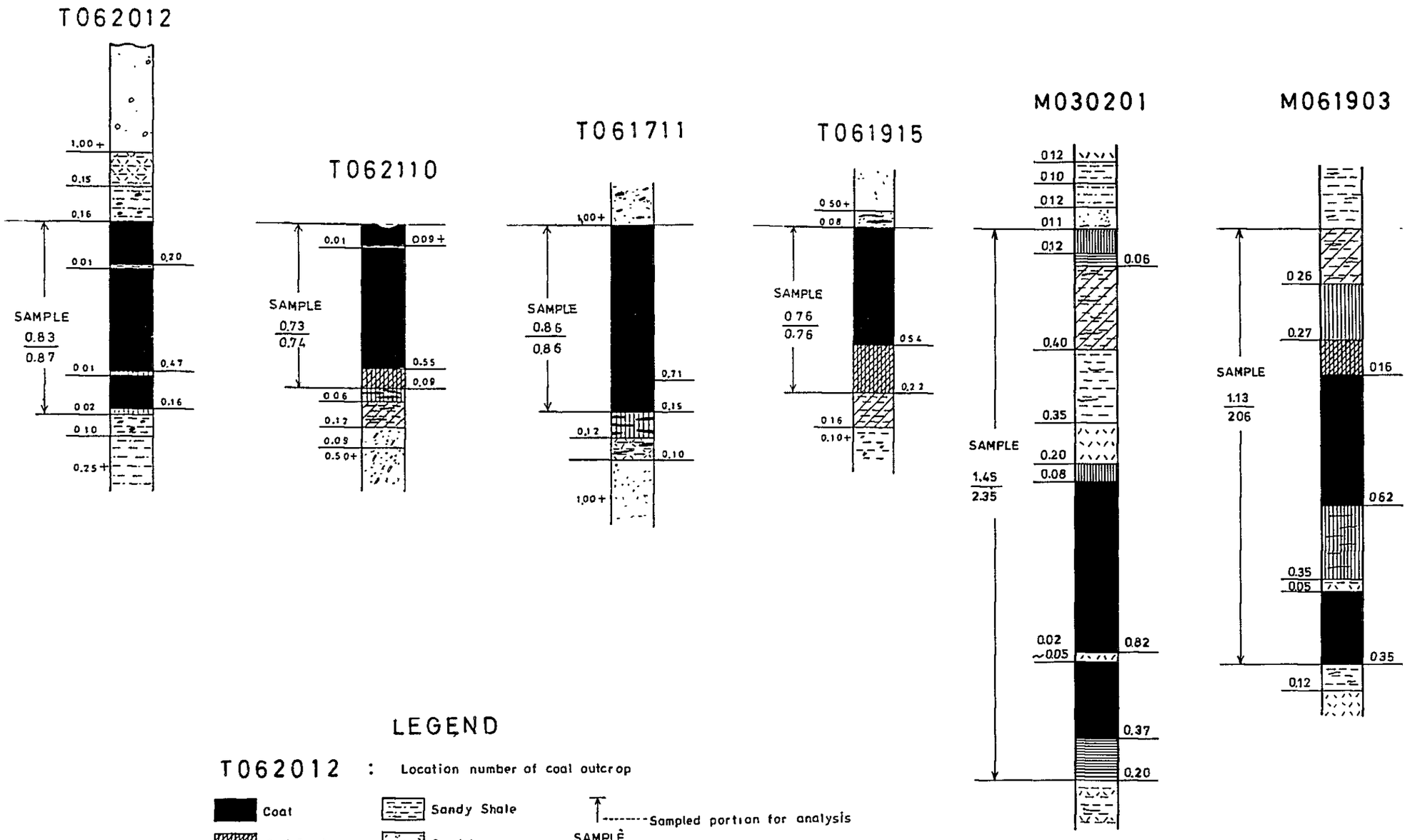


LEGEND

T011604 : Location number of coal outcrop

- Coal
- 2nd Coal
- Black Shale
- Shale
- Sandy Shale
- Sandstone
- Tuff
- Coal striation & Coal patch
- Sampled portion for analysis
- SAMPLE 1.76 ------ Thickness of coal
- 1.79 ------ Thickness with parting

Figure D-V Measured Sections of Coal Seams



LEGEND

T062012 : Location number of coal outcrop

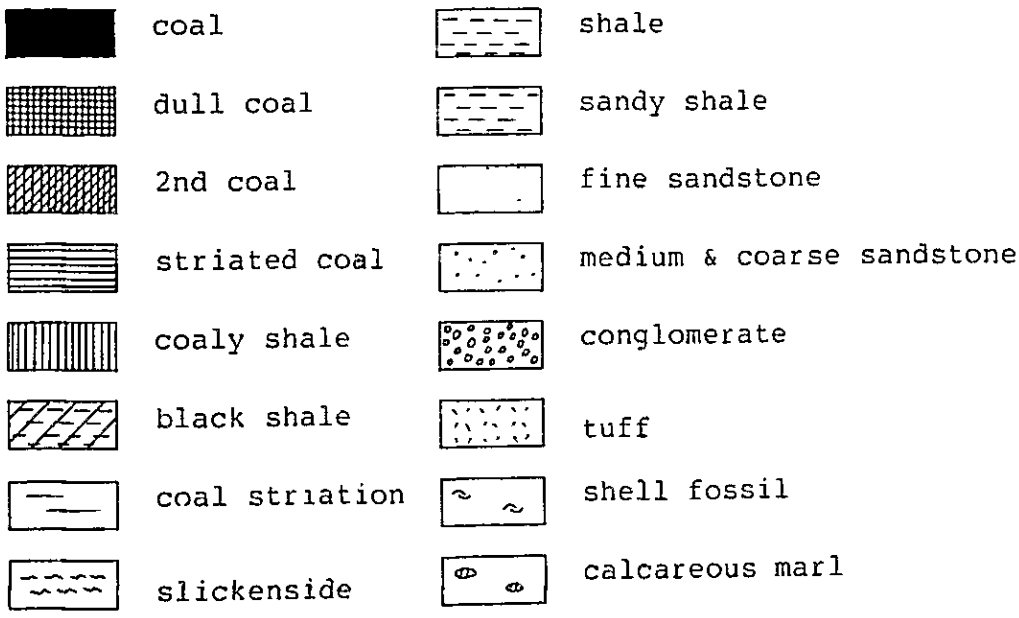
- Coal
- 2nd Coal
- Striated Coal
- Coaly Shale
- Black Shale
- Shale
- Sandy Shale
- Sandstone
- Tuff
- Coal Striation & Coal Patch

SAMPLE
0.83 ------Thickness of coal
0.87 -------Thickness with parting
--------Sampled portion for analysis

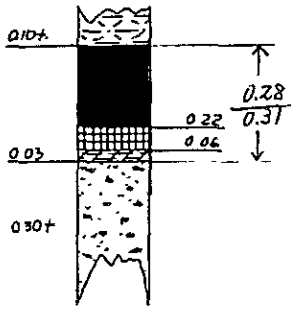
APPENDIX E.

MEASURED SECTIONS OF COAL SEAMS

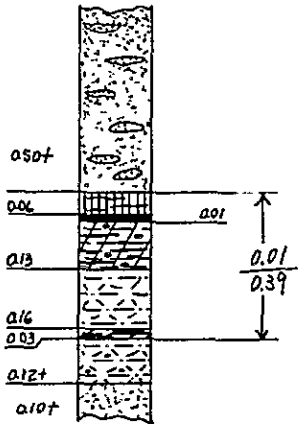
LEGEND



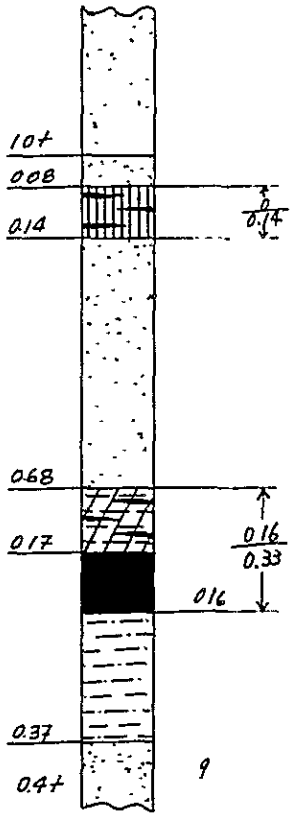
T060712 (N50W, 57S)



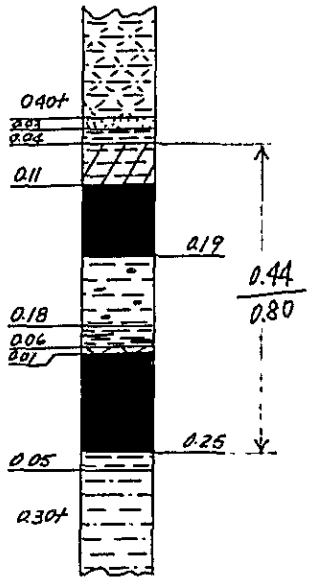
T060714 (N48W, 19S)



T060715 (N69W, 49N)

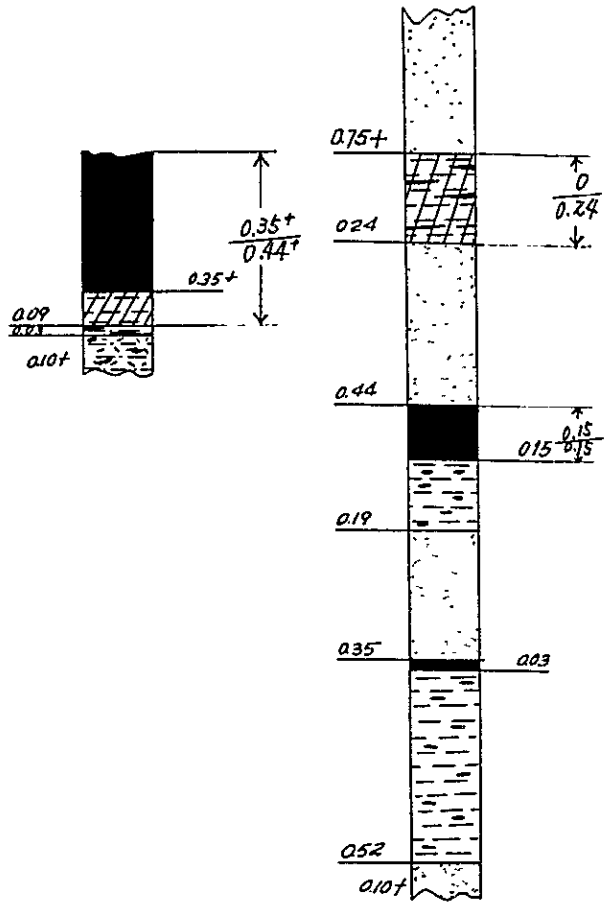


T060718 (N69W, 29S)

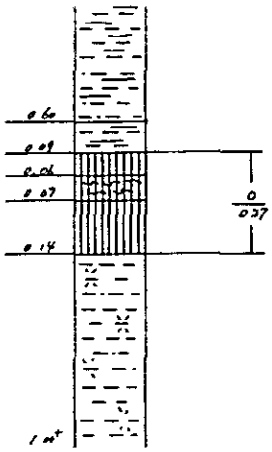


T060801 T060830

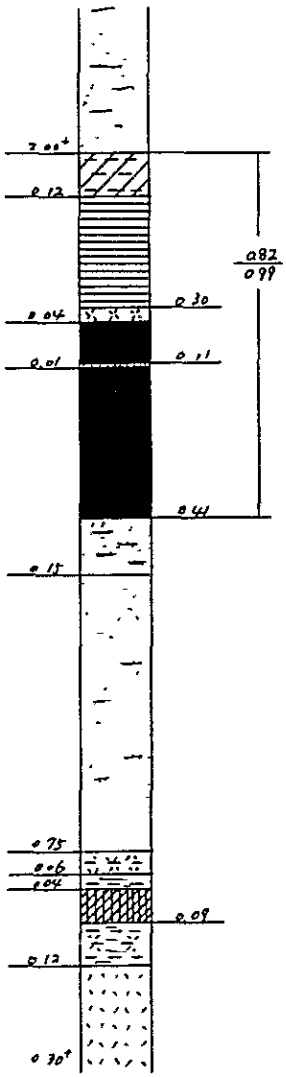
(N43W, 12S)



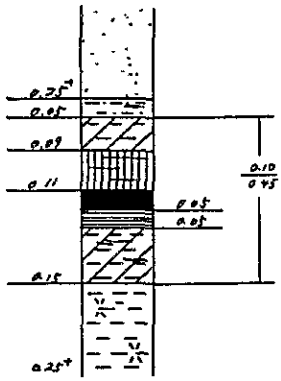
M060501 (N25E; 82W)



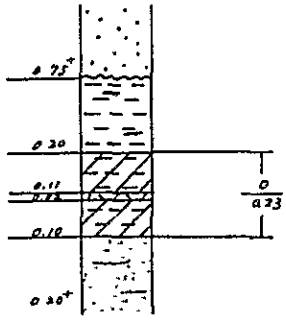
M060502 (N78W; 44N)



M060503 (N60W; 34N)

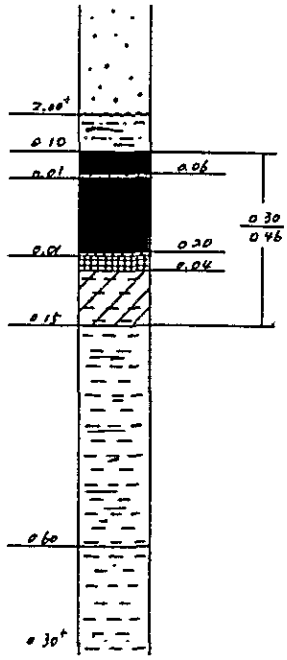


M060504 (N70W; 35N)



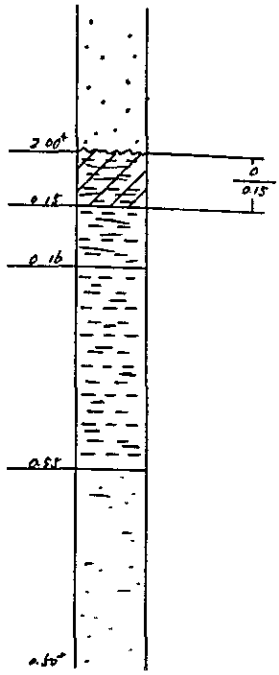
M060505

(N30W; 90)



M060601

(N5E; 18W)



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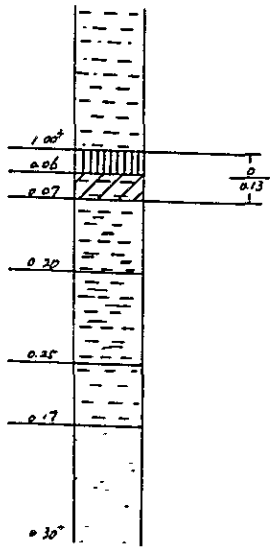
(N25E; 18W)



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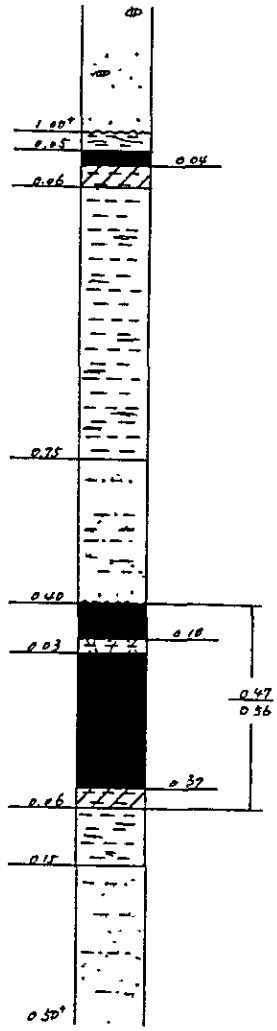
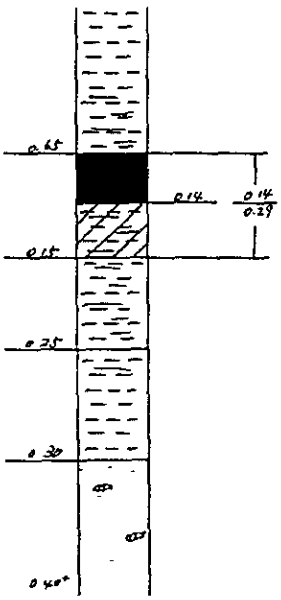
(N15E; 23W)



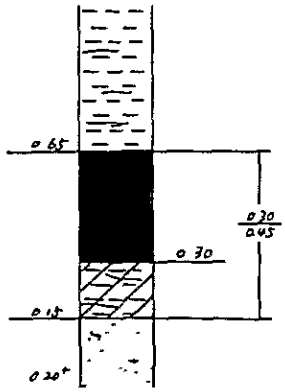
M060604

(N40E; 30W)



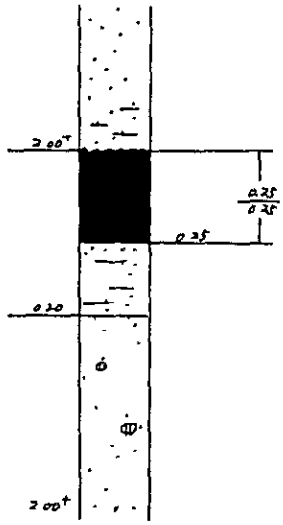
M060505

(N35E; 28W)



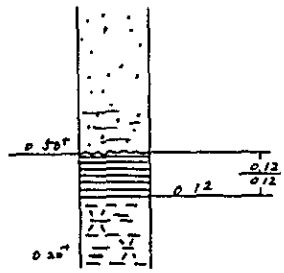
M060701

(N65W; 15S)



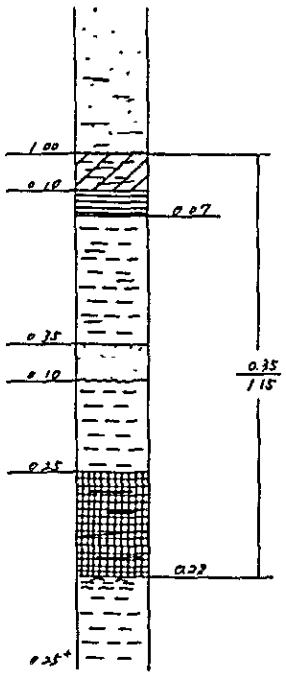
M060702

(N55W: 14S)



M060703

(N69W; 20S)



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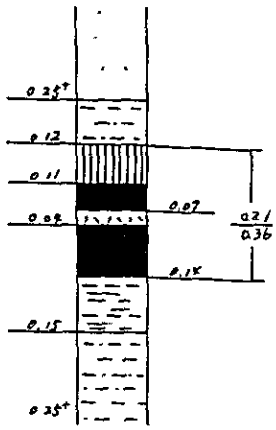
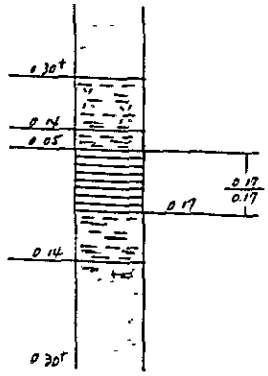
(N85W; 25S)



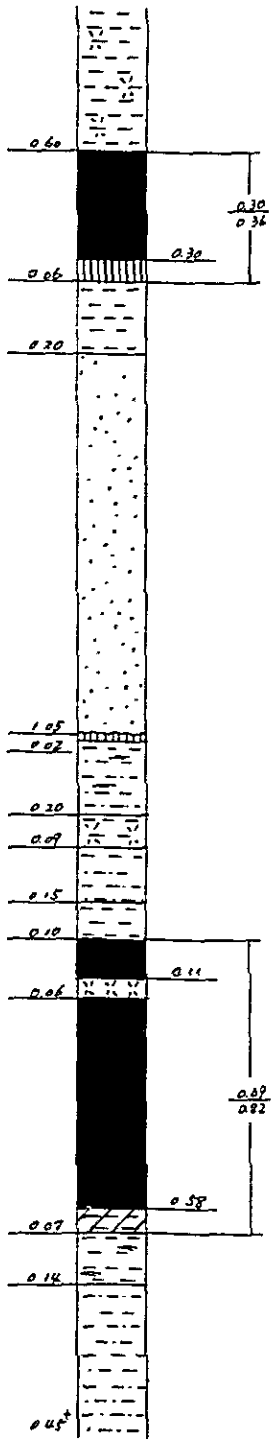
M060705

(EW; 20S)



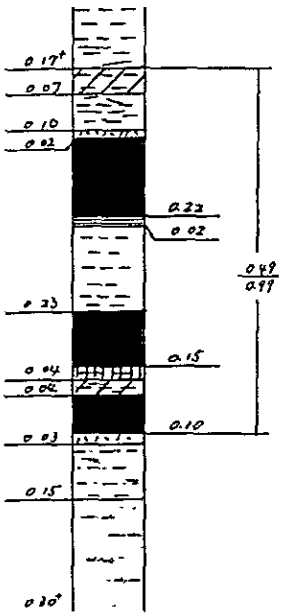
M060706

(EW; 23S)



M060801

(N87W; 20S)



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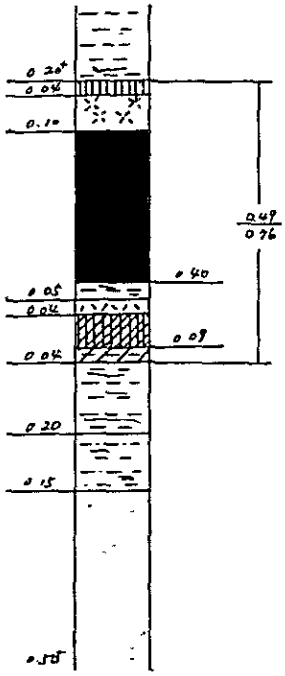
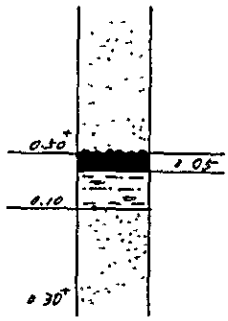
(N74W; 26S)



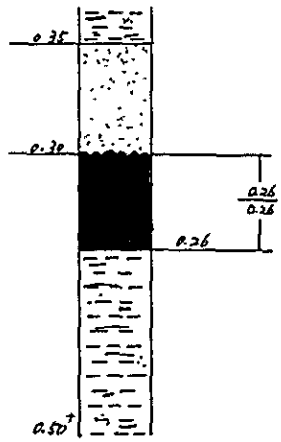
M060901

(EW; 32N)



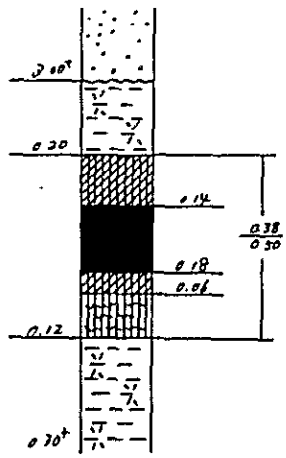
M060902

(N50E; 24N)

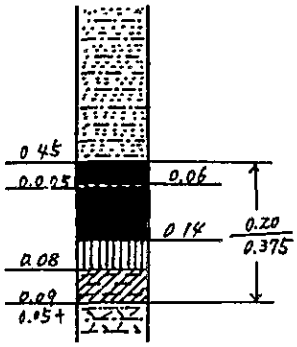


M060903

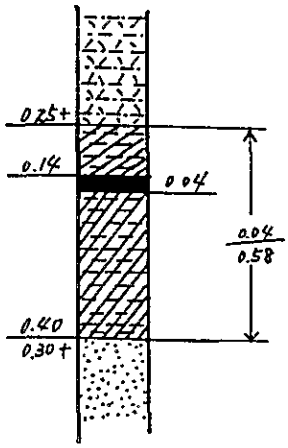
(N42E; 29W)



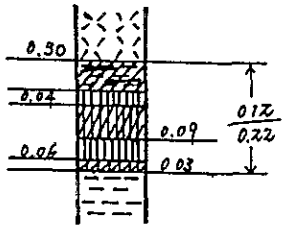
T0Z1053 (N75W, 27E)



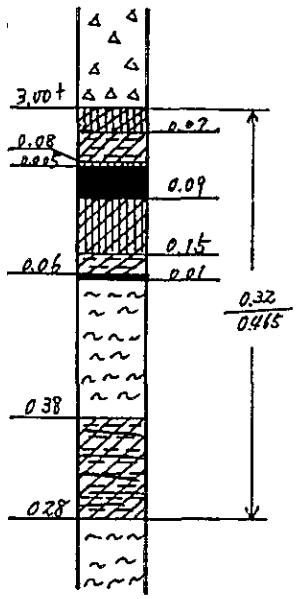
T0Z1175 (N76E, 35S)



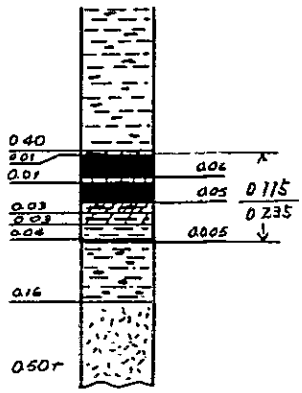
T0Z1184 (N30E, 25E)



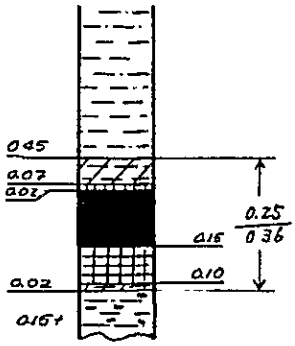
T0Z1179 (N80E, 10S)



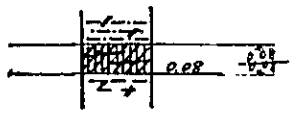
T0Z1305 (N72W, 27N)



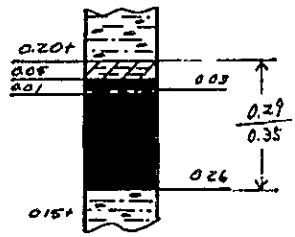
T0Z1312 (N80E, 3N)



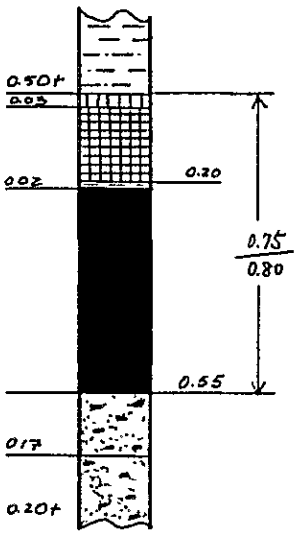
T0Z1317



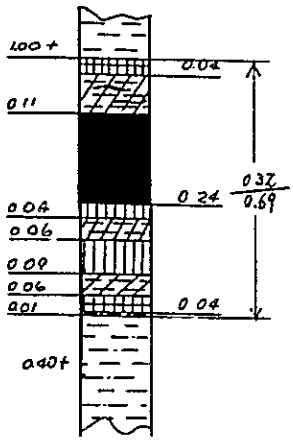
T0Z1318 (N78W, 16N)



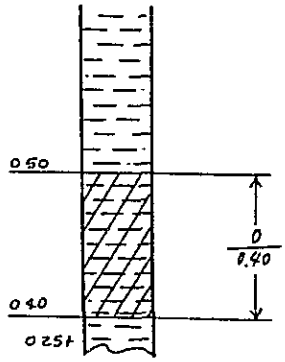
T0Z1319
(EW, 10N)



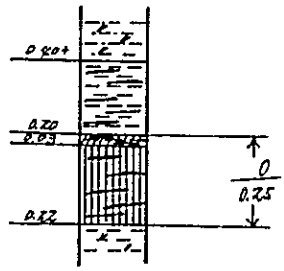
T0Z1610A
(N48E, 9W)



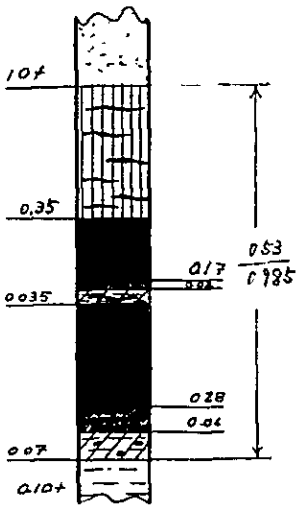
T0Z1610B
(N48E 9W)



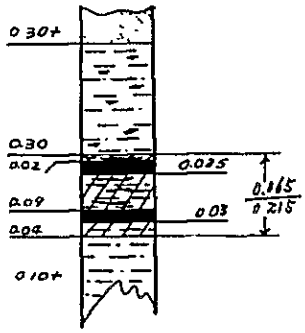
T0Z1709UA
(N85W, 25N)



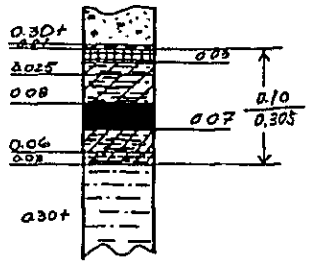
T0Z1709UB (N85W, 25N)



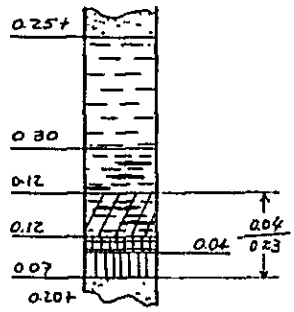
T0Z1707U (N80E, 15N)



T0Z1706U (N72E, 23N)

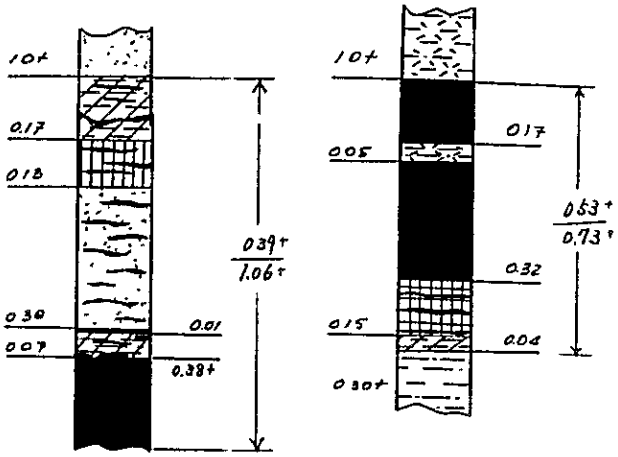


T0Z1705U (EW, 13N)

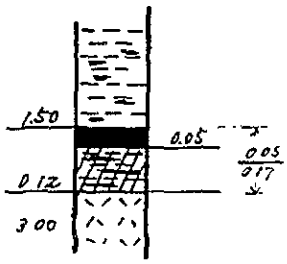


T021705D (N70E, 16N)

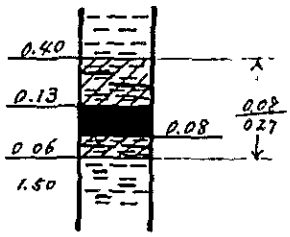
T021706D (N65E, 21N)



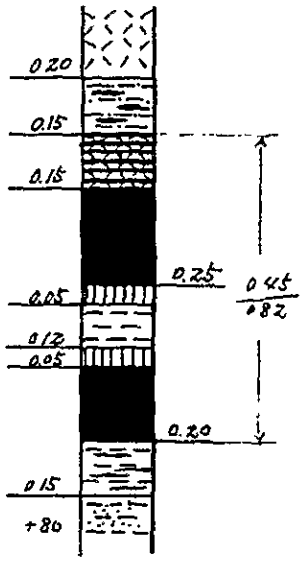
T0114 08A (N75E, 32N)



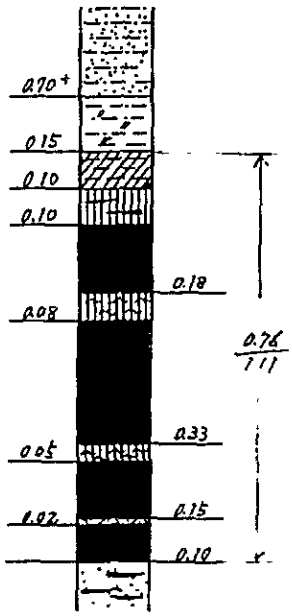
T0114 08B (N75E, 32N)



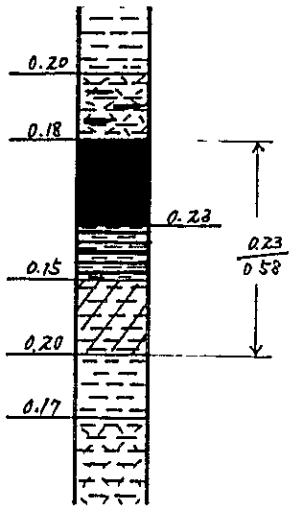
T0114 13 (N45E, 35W)



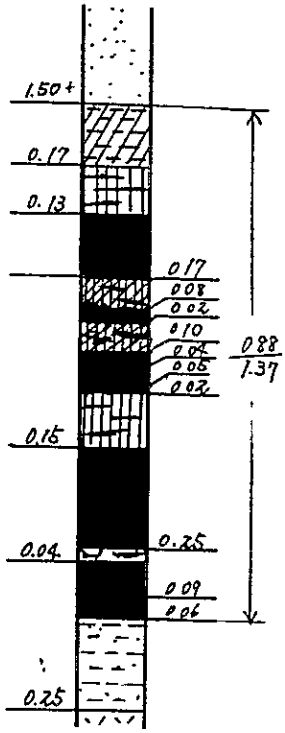
T0114 22 (N70W, 42N)



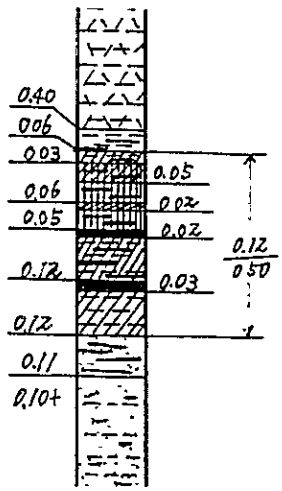
T011502 (N65E, 30N)



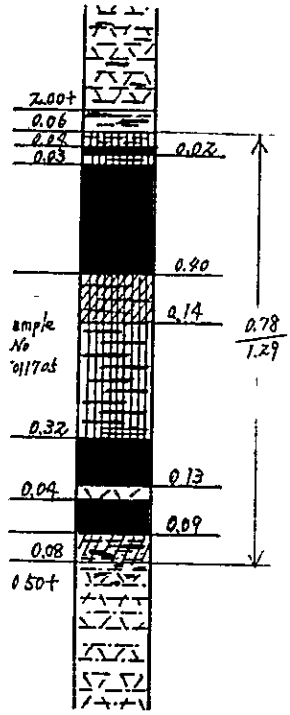
T011504 (N68W, 10N)



T011703 (N84W, 32N)

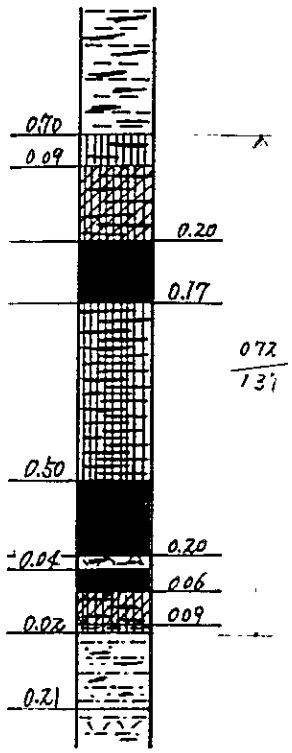


T011705 (N80W, 14N)



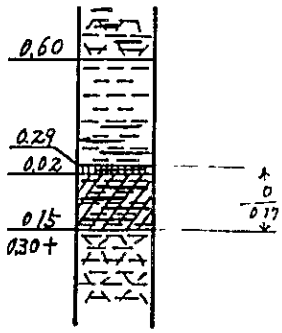
T011709

(N60W, 14E)



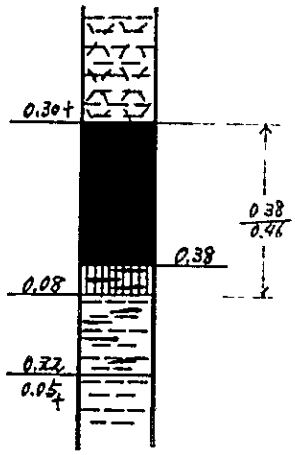
T011710

(N60W, 14E)



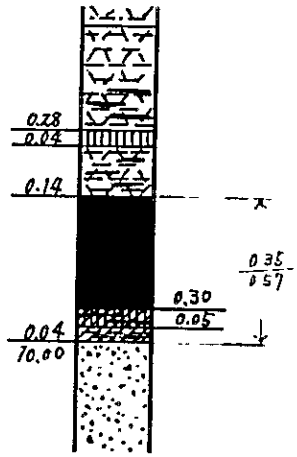
T011716

(N80W, 21N)

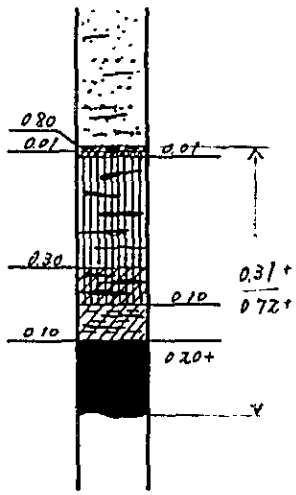


T011717

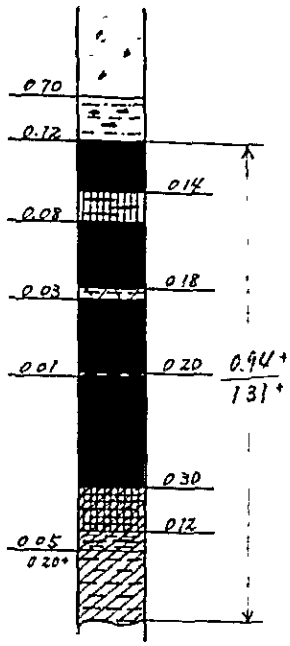
(N65W, 12E)



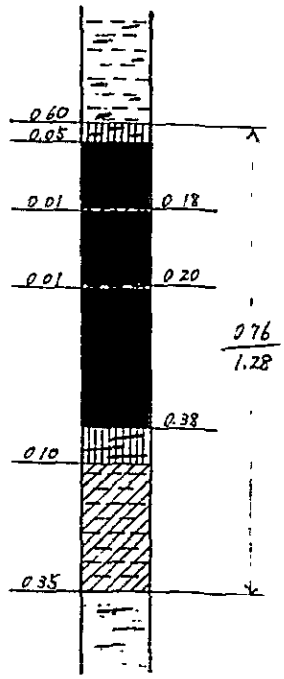
T011722 (N36W, 20E)



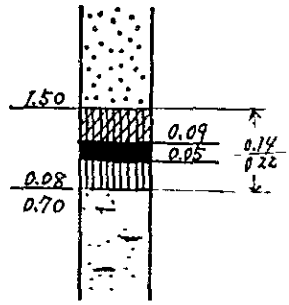
T011901 (N78E, 25N)



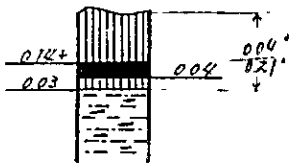
T011910 (N86W, 26N)



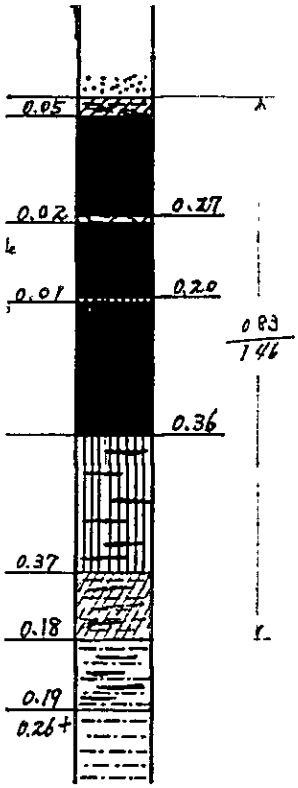
T011911 (N82E, 30N)



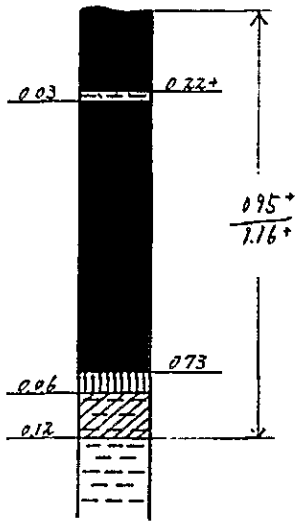
T011913 (N74E, 18N)



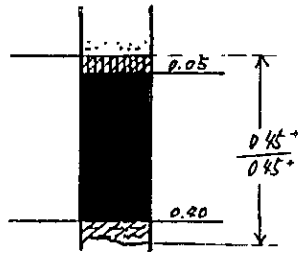
T011915 (N86E, 20N)



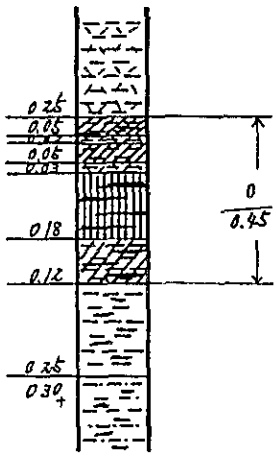
T011918 (N82E, 16N)



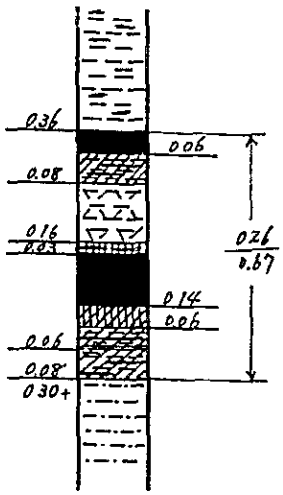
T012001 (N75E, 26N)



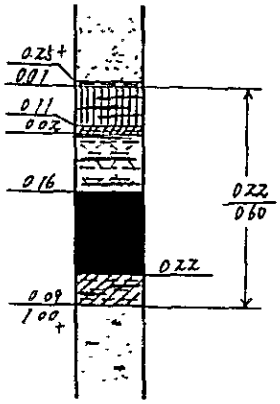
T0I2002



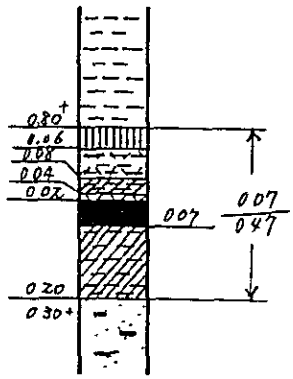
T0I2004 (N82E, 25N)



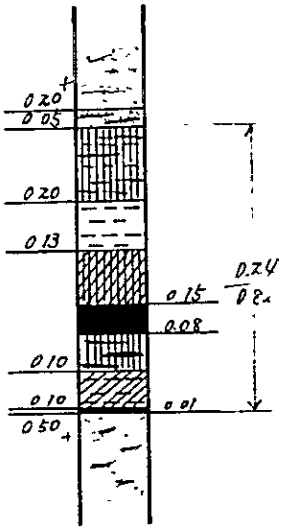
T0I2005 (N82E, 24N)



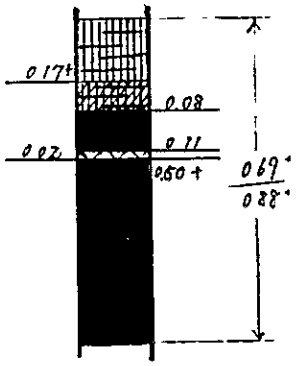
T0I2017



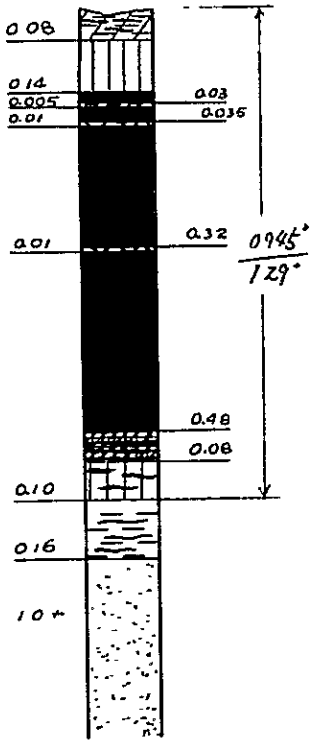
T012022 (N84E, 20N)

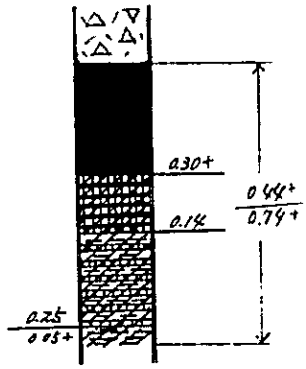


T012610 (N75E, 22N)

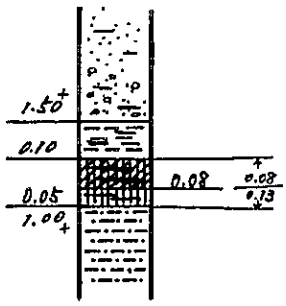


T012612 (N60E, 22N)

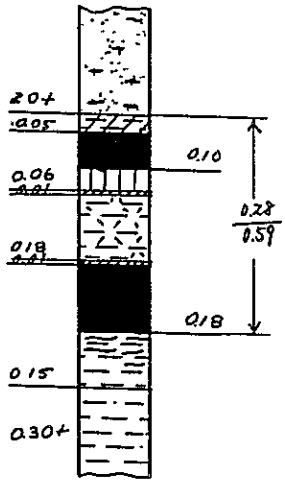




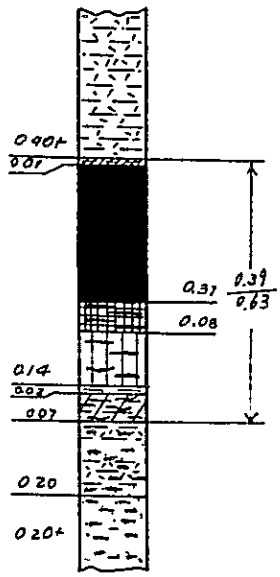
T0126 22
(EW, 12N)



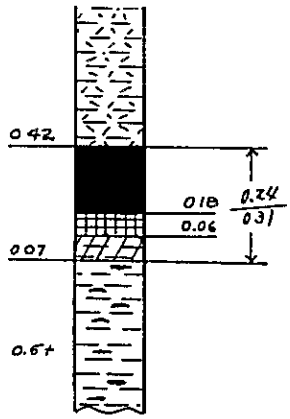
T0126 23
(EW, 12N)

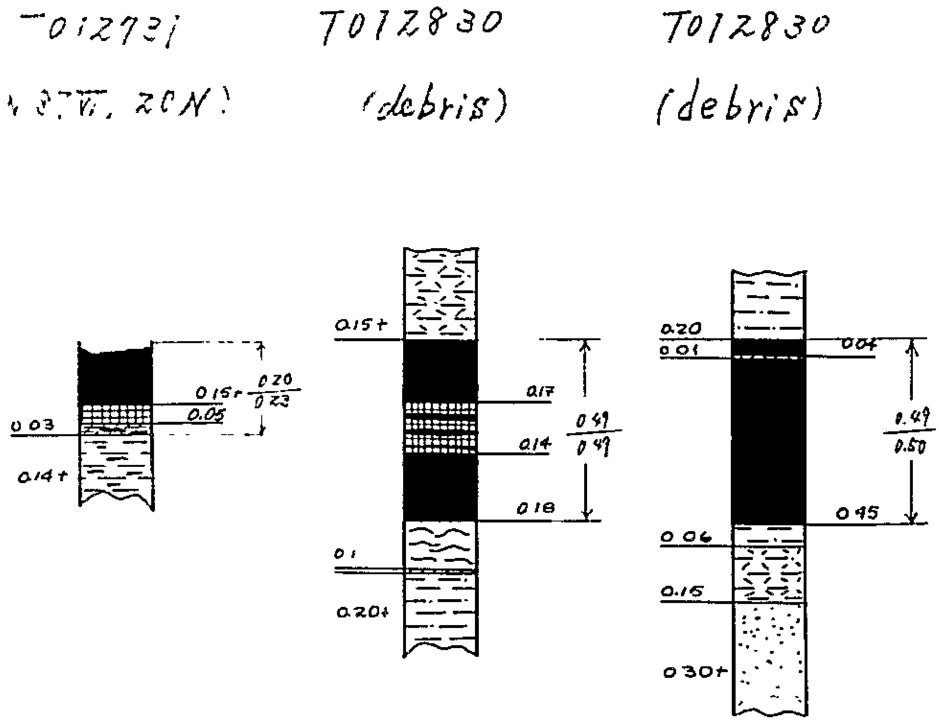


T0126 24
(EW, 22N)

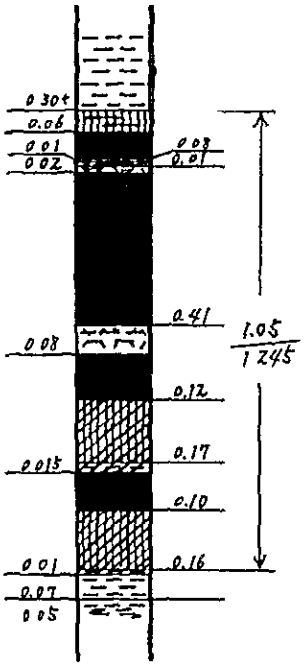


T0127 22
(N80E, 30N)

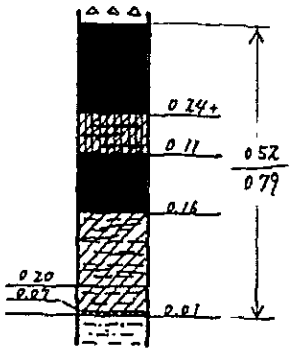



T012830
(debris)
T012830
(debris)
0.15+
0.20
0.23
0.05
0.03
0.14+
0.15+
0.17
0.49
0.49
0.14
0.18
0.1
0.20+
0.20
0.01
0.04
0.49
0.50
0.45
0.06
0.15
0.30+

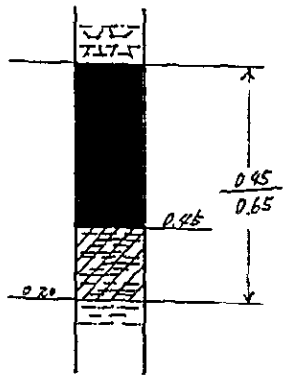
TCZ0447 (N80E, 32N)



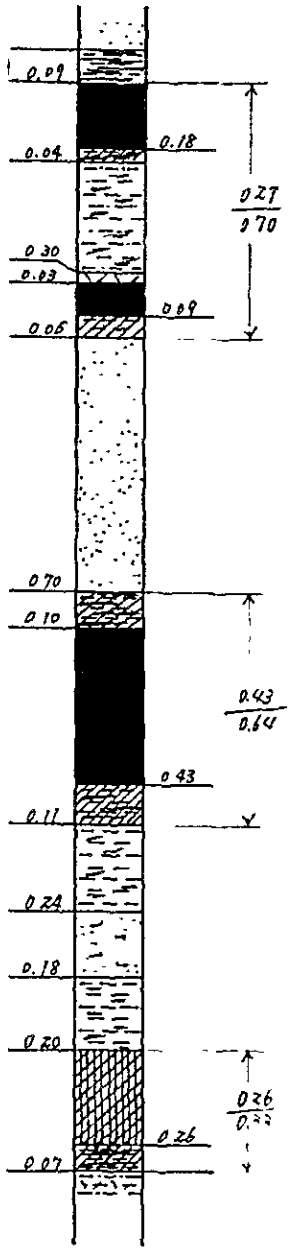
TOZ0458 (N82W, 27N)



TCZ1818 (N88W, 28N)

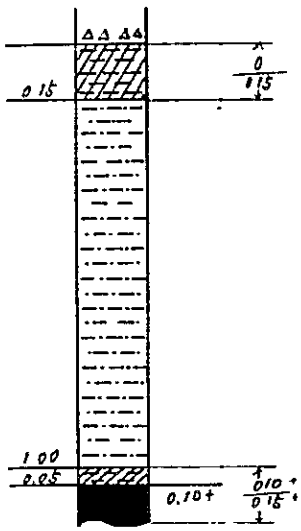


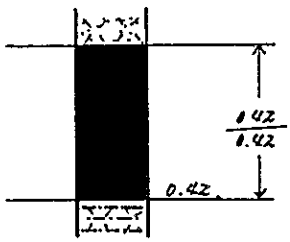
TOZ1824 (N63E, 10W)



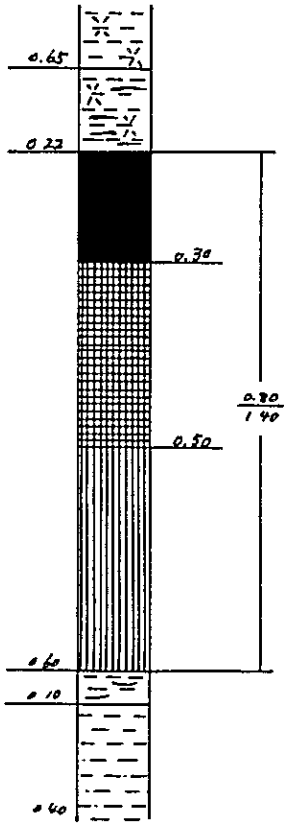
T0Z1825 T0Z1830

N80W, Z7N) (N45E, 15W)

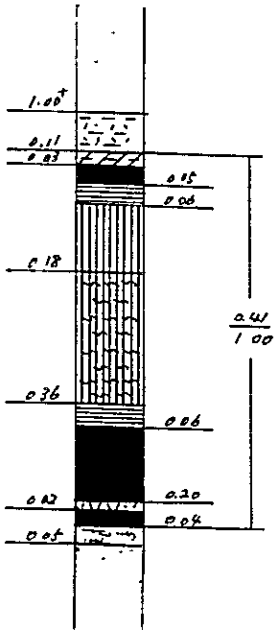




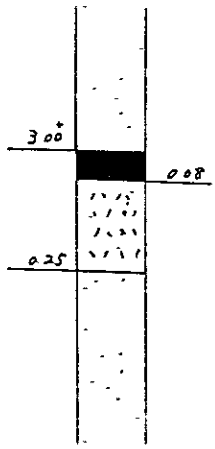
M011701



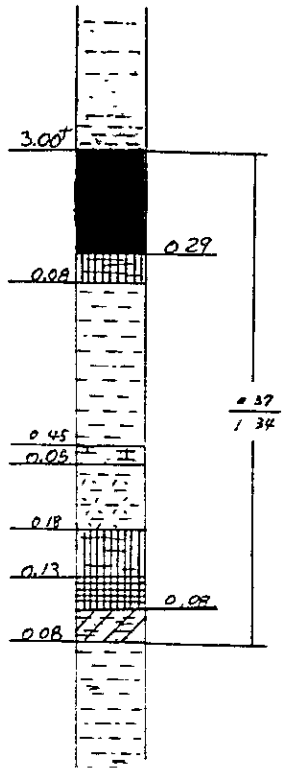
M011801 (N15E; 20W)



M011802 (N62E; 8N)

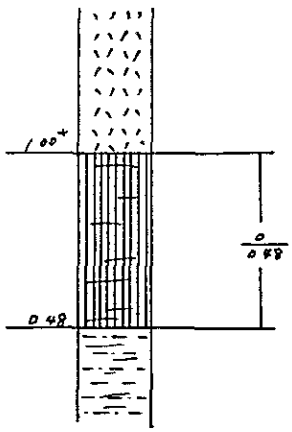


M011803 (N15E; 15W)



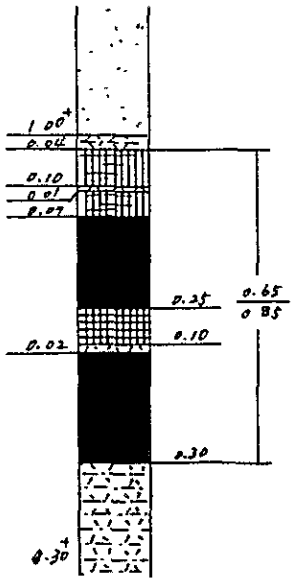
M011205

(N10E ; 15W)



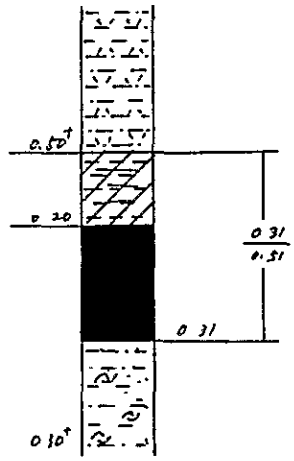
M011206

(NS ; 48W)

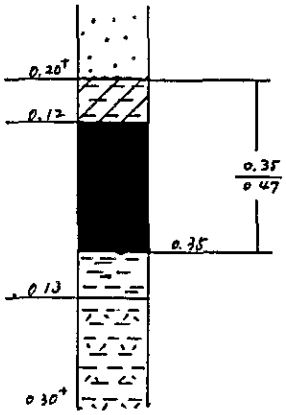


M011207

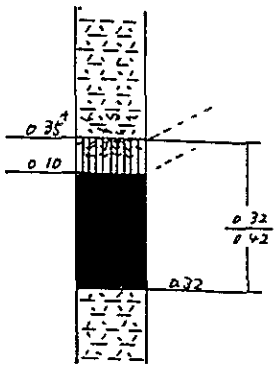
(N26W ; 38N)



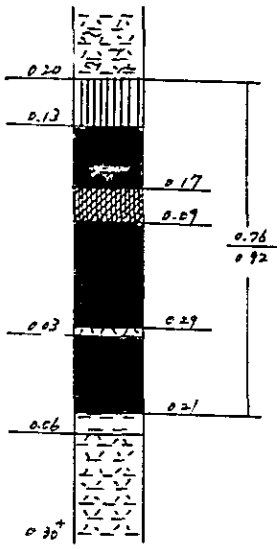
M011808 (N75E; 8?)



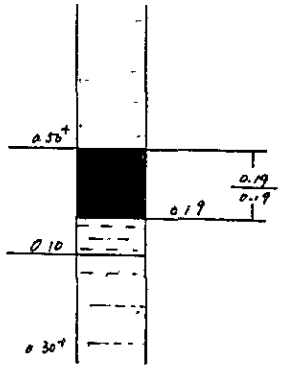
M011901 (N65W; 12N)



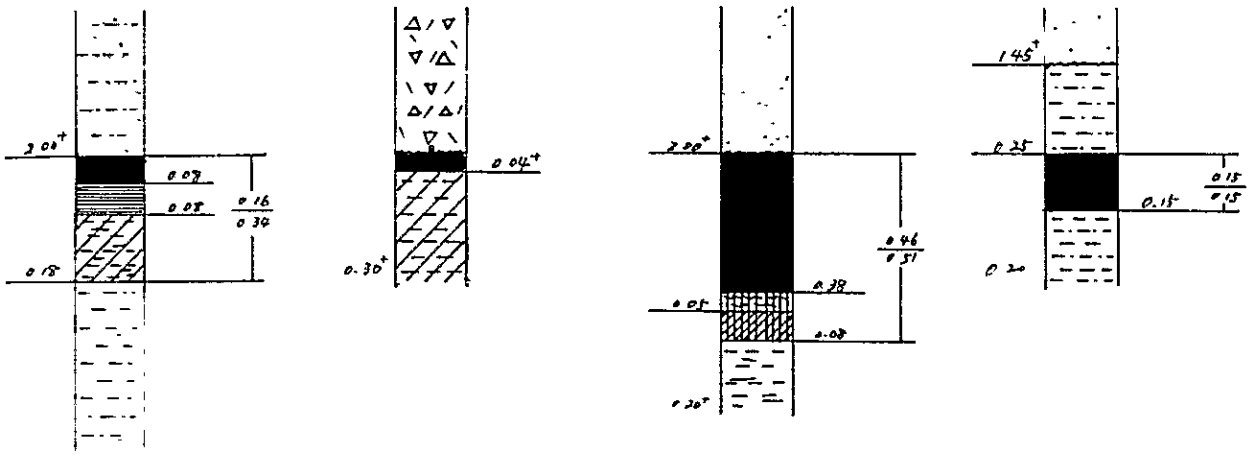
M011901-B (N56W; 20N)



M011902 (N64W 6N)

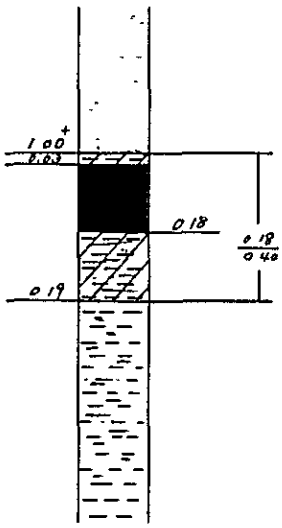


M011903 M011904 M011905 M011906



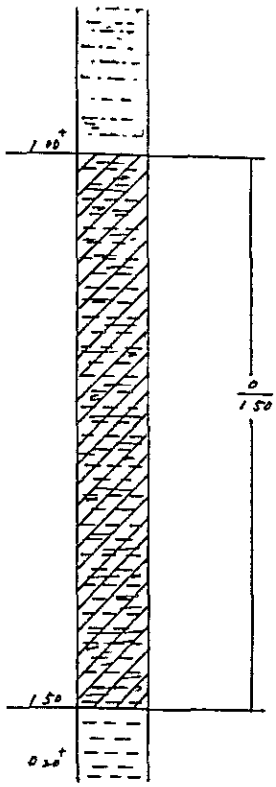
M0..?07

(N73W:17N)



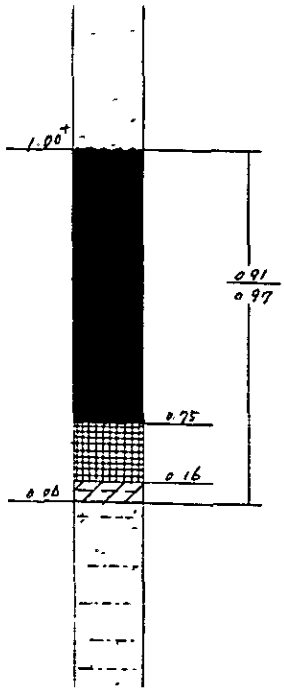
M011908

(N55W;18N)



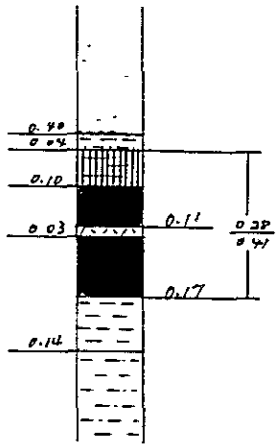
M012001

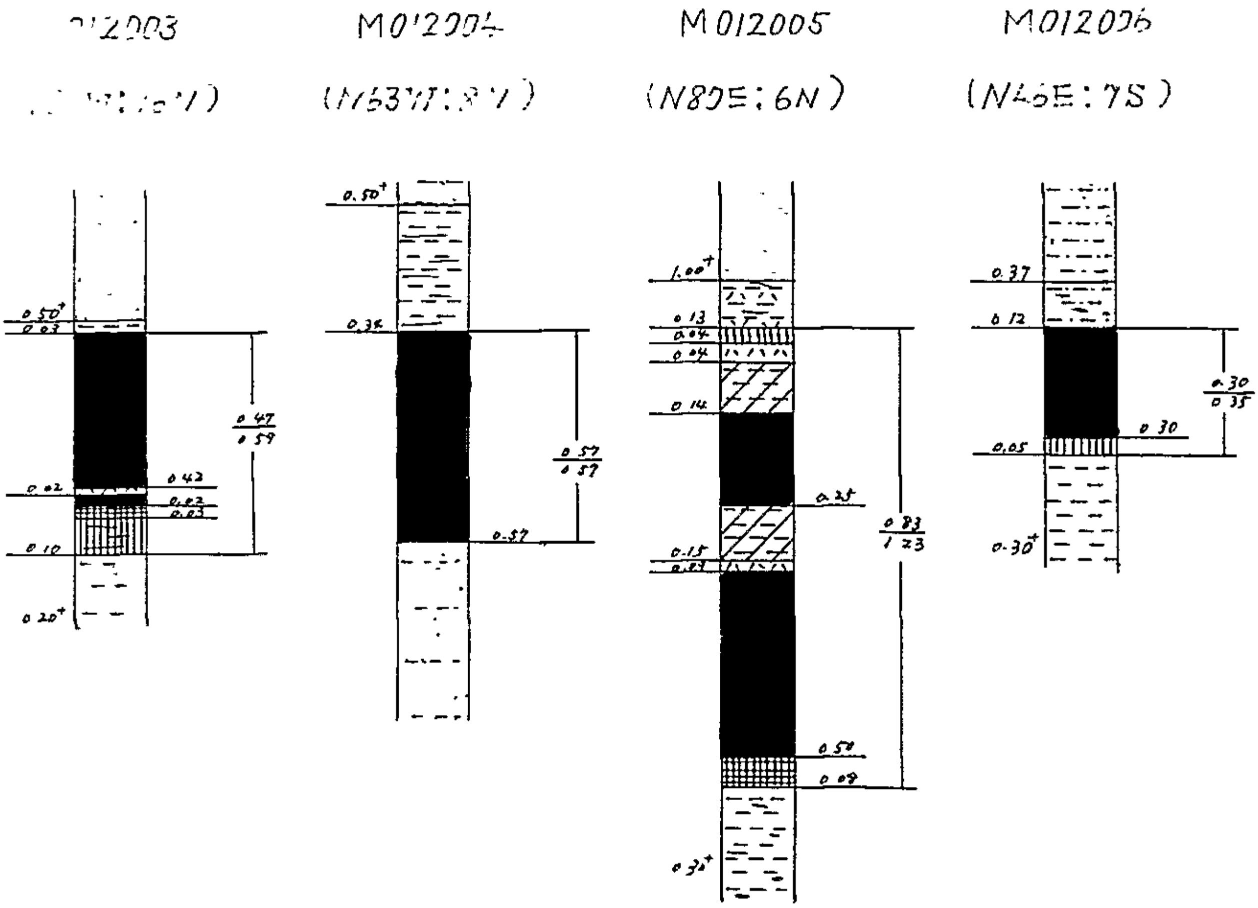
(N65W;7N)



M012002

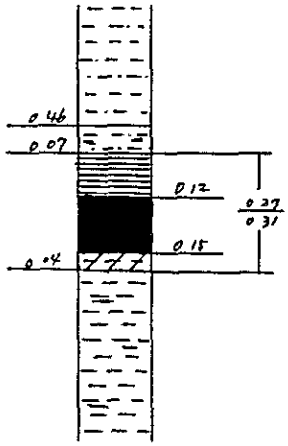
(N62W;11N)




M012005
(N80E:6N)
0.50+
0.03
0.47
0.59
0.42
0.02
0.10
0.20+
0.57
0.57
1.00+
0.13
0.14
0.25
0.83
1.23
0.50
0.09
0.37
0.12
0.30
0.35
0.05
0.30+

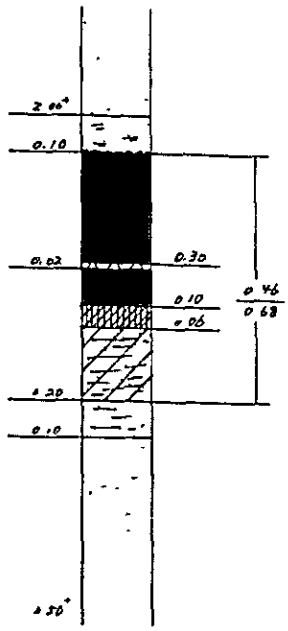
M012599

(N75E; 11N)



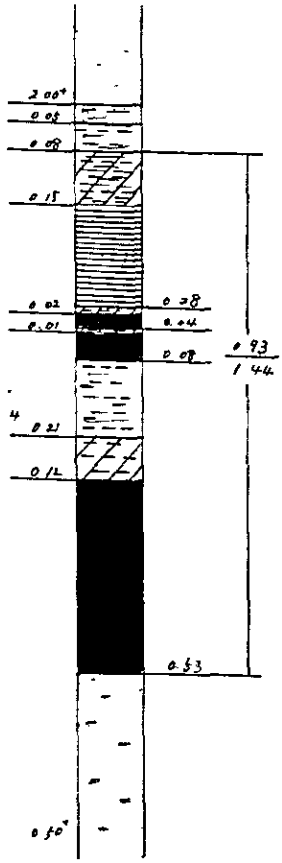
M012601

(N70E; 10N)



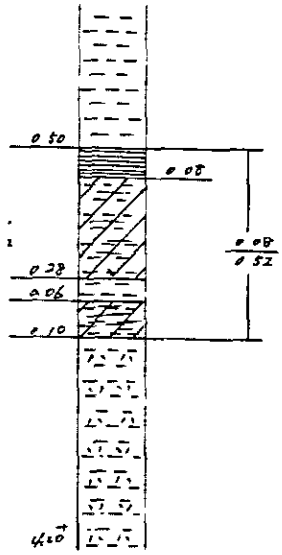
M012602

(N52E; 12N)



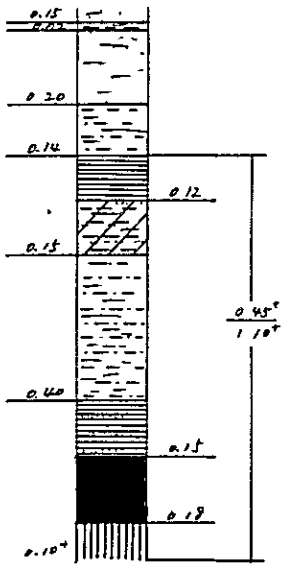
M012603

(N65E; 14N)

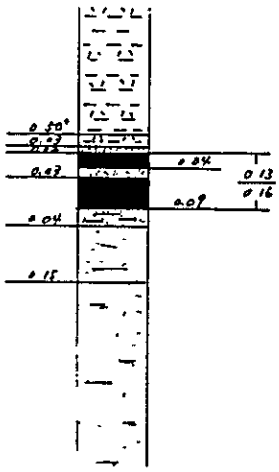


M012604

(N55E; 18N)

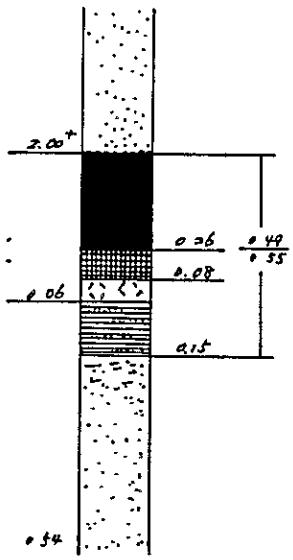


M012605



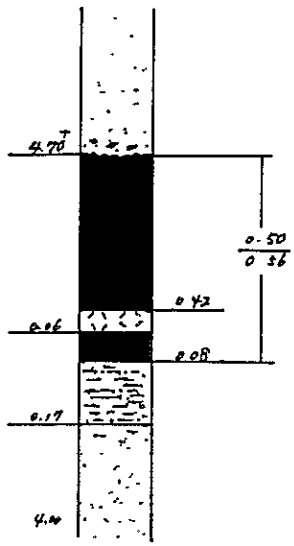
M012701U

(N60E; 20N)

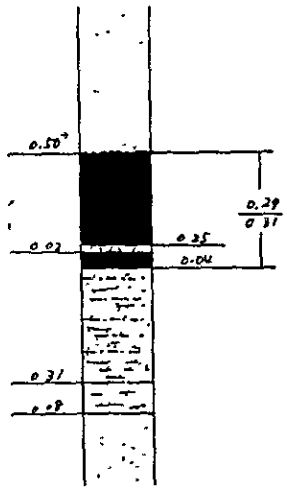


M012701L

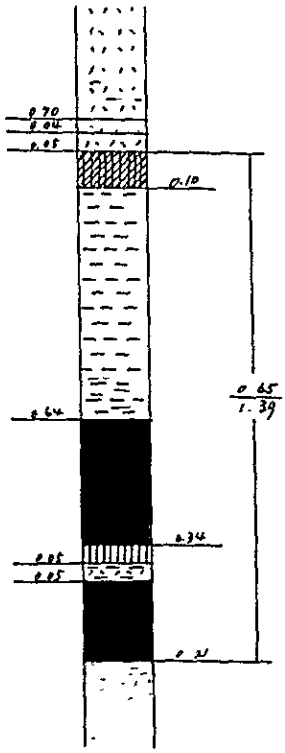
(N65E; 10N)



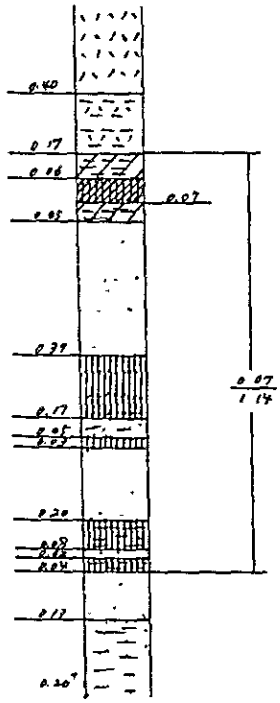
M012702 (N70W; 11N)



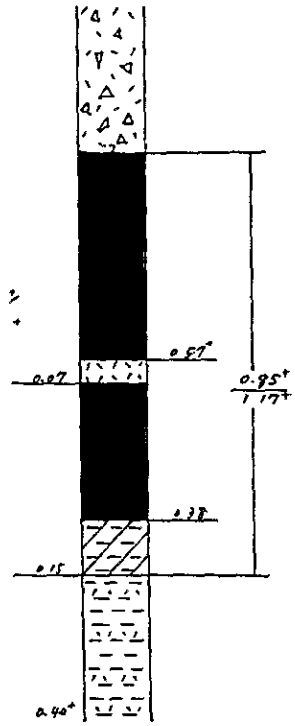
M012703



M012704 (N48E; 9N)



M012705 (N70E: 6N)



M012706

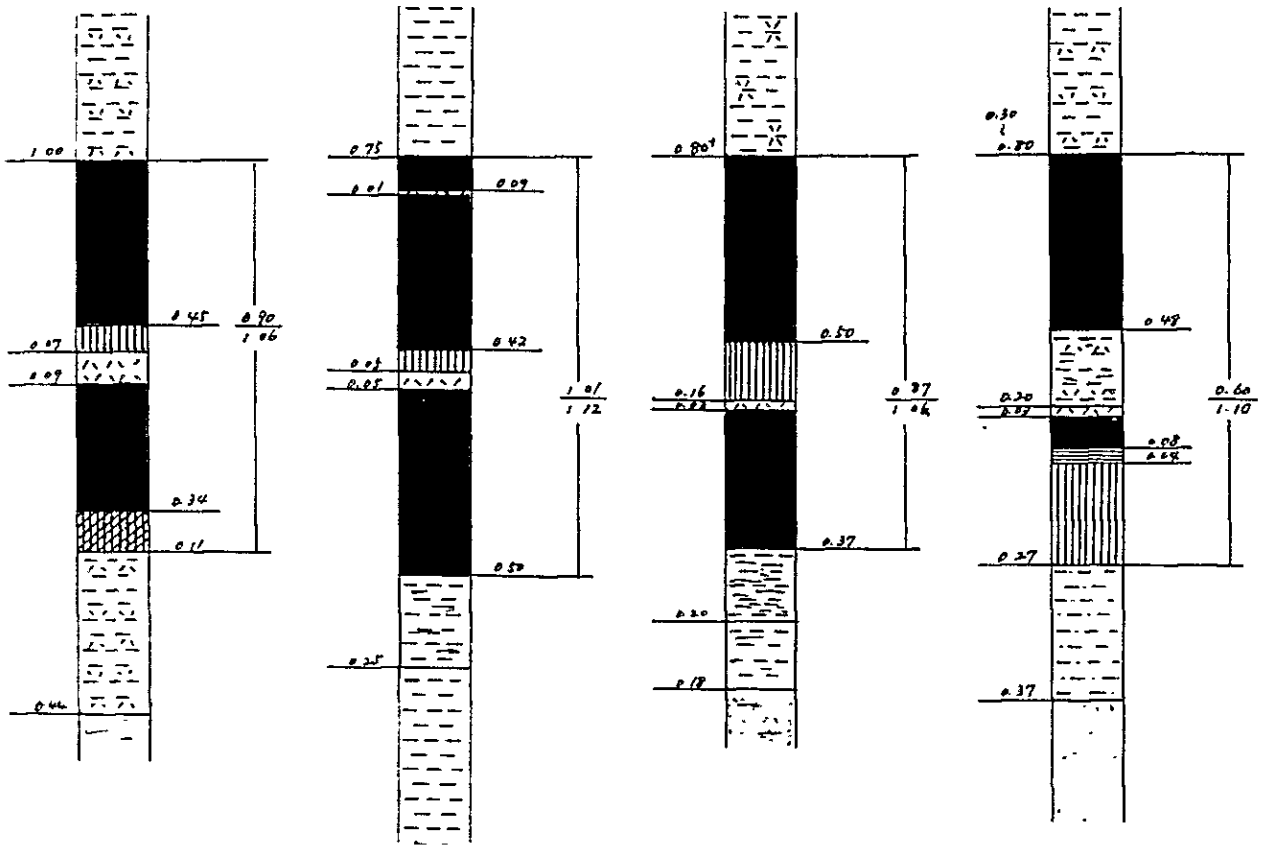
M012707

(N68E; 10N)

M012708

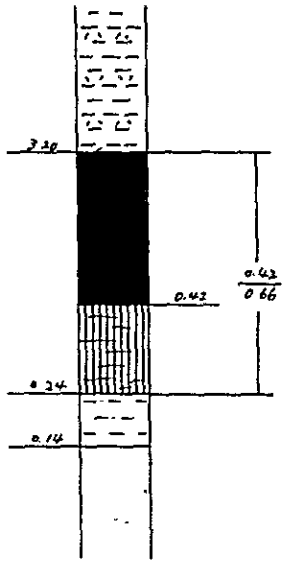
M012801

(N72W; 15N)



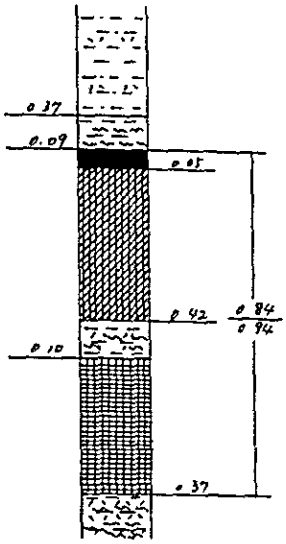
M012802

(N23E; 32E)



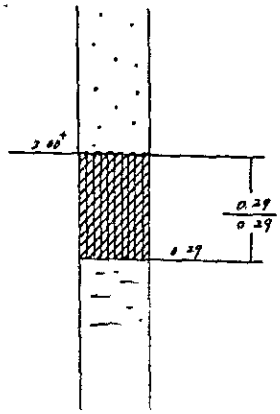
M012803

(N20E; 27E)



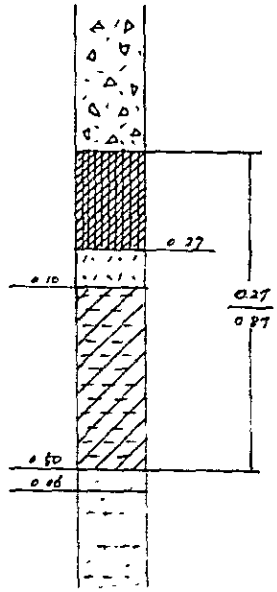
M012804

(N44E; 19N)

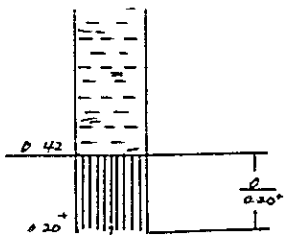


M012805

(N27E; 14W)

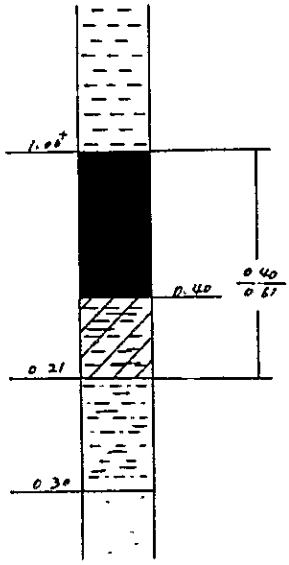


M0'2806



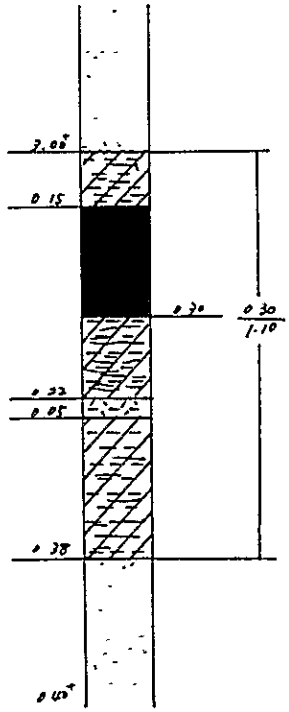
M0'2807

(N80W; 13N.



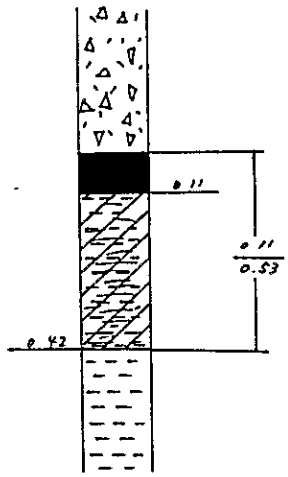
M0'2802

(N52E; 141'



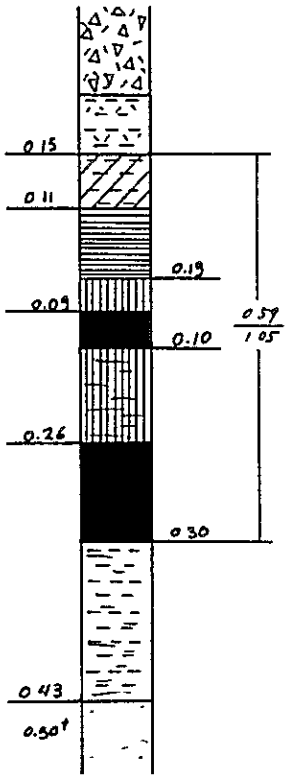
M0122??

.N62E; 18.1')

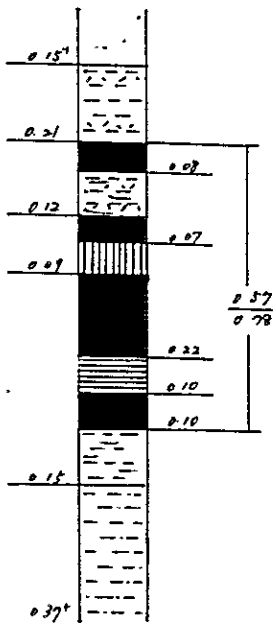


M012870

(N32E; 4W)

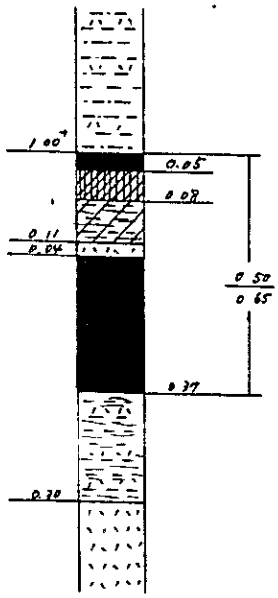


M012811



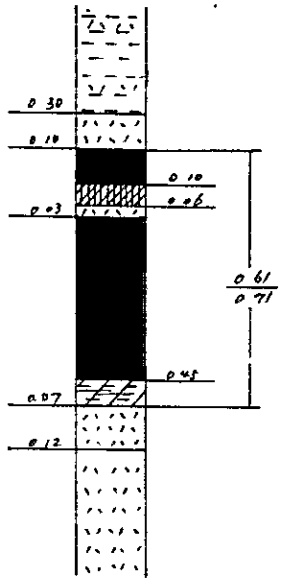
M012901

(N63W; 14N)

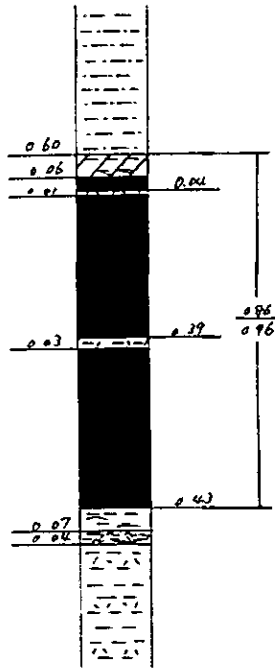


M012902

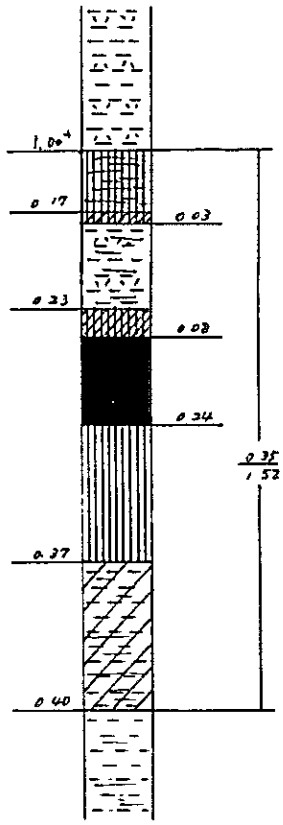
(block debris)



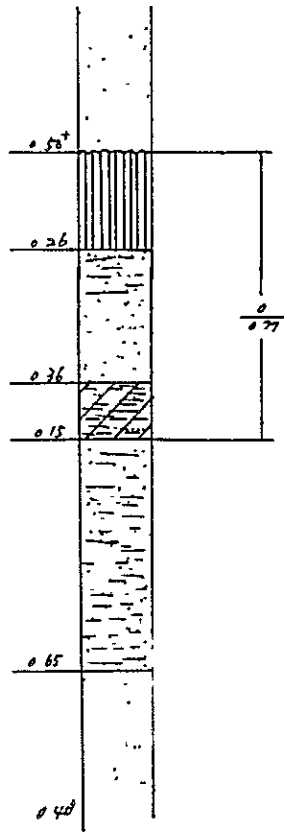
M012903 (N84E; 35S)



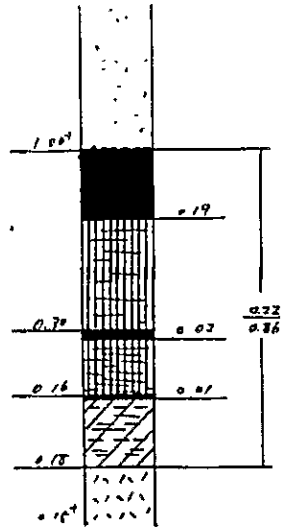
M012904 (N33W; 22E)



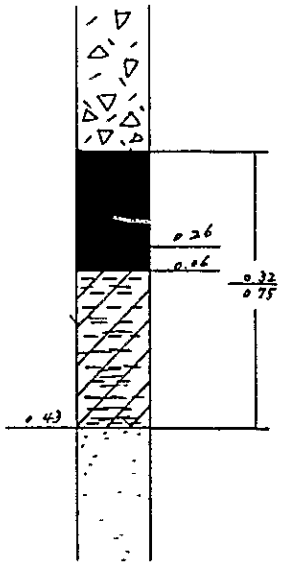
M012905 (N35W; 27E)



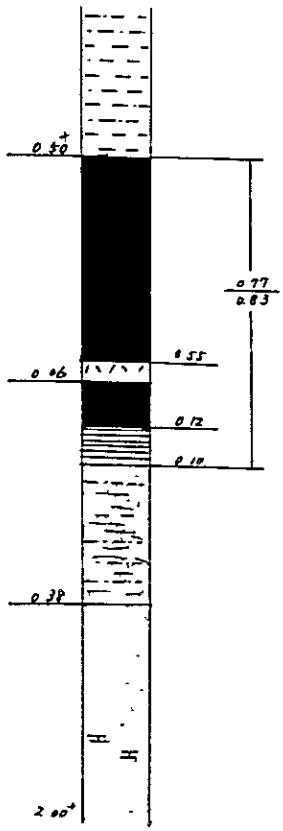
M012906 (block depth)



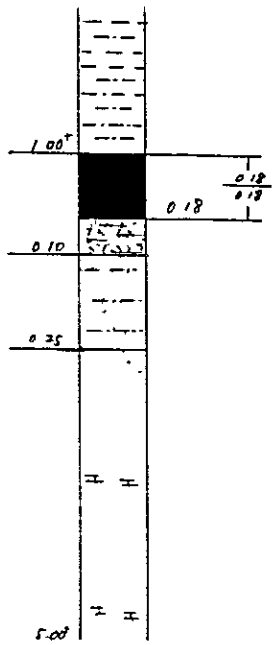
M013007 (N10E; 15W)



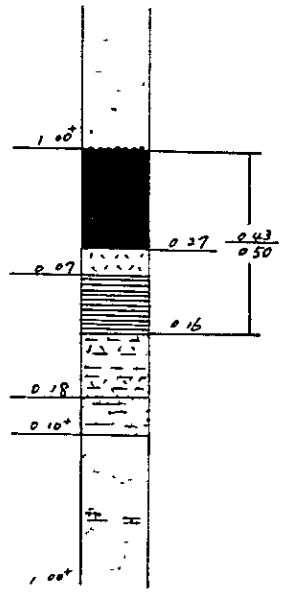
M013001 (N83W; 11N)



M013002

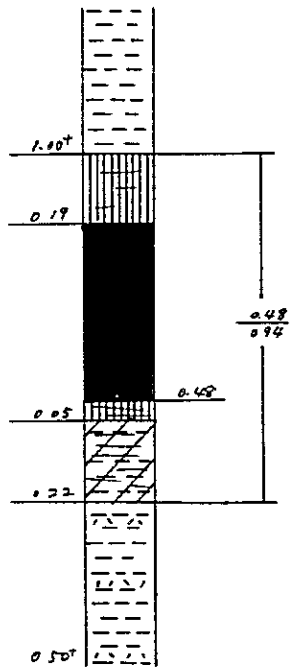


M013003



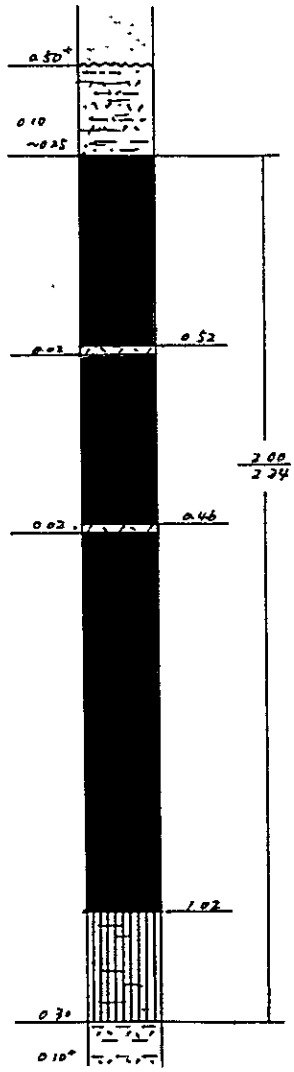
M013005

(N15°W ; 8°E)



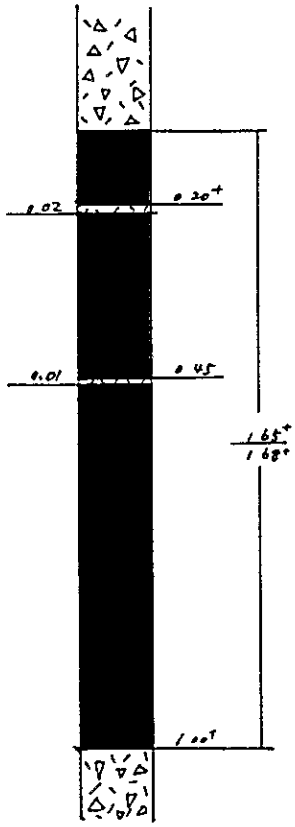
M020101

(N2° ; 55°W)

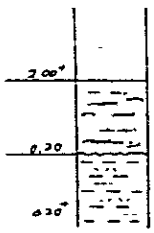


M020102

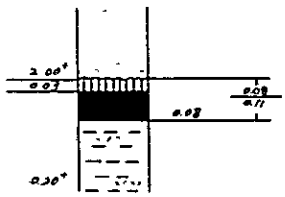
(N10°E ; 34°W)



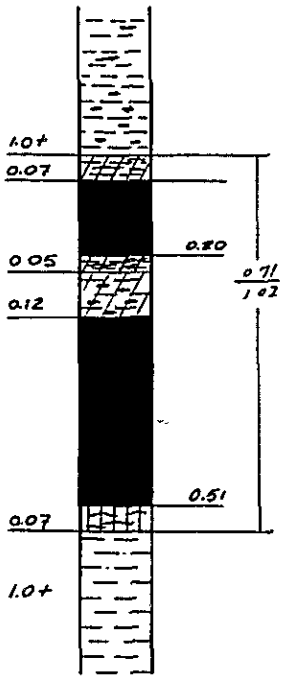
M013006



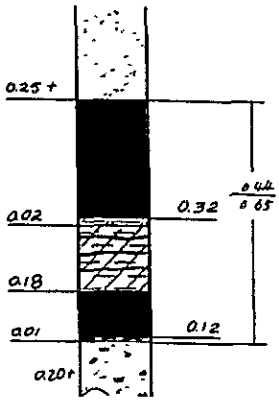
M013007



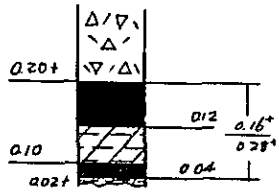
T020203



T020208

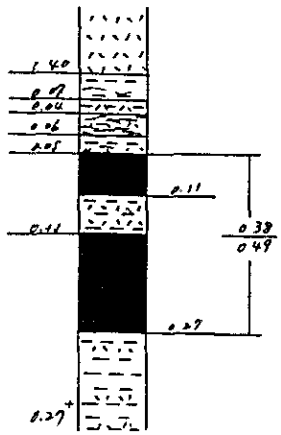


T020210

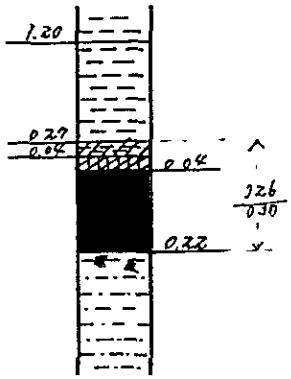


M020401

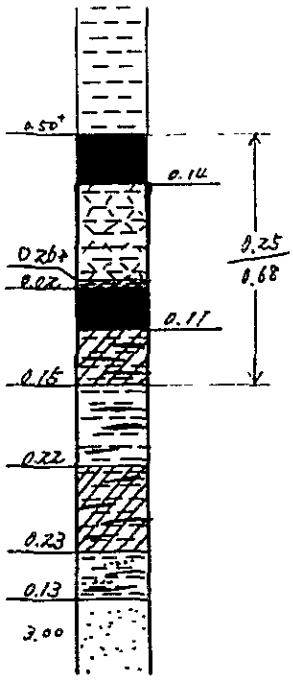
(N10W; 59W)



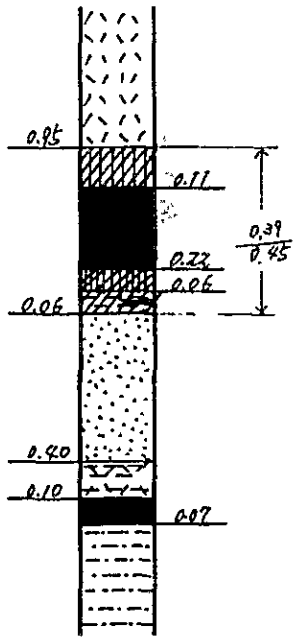
T011508 (N4W, 60W)



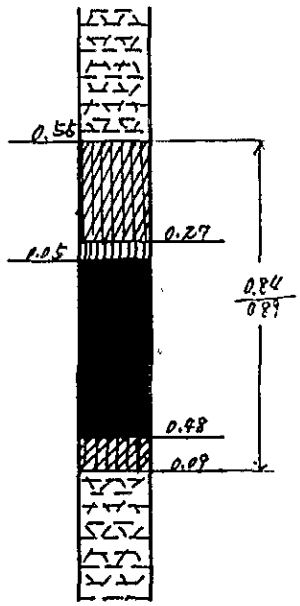
T011511 (N8W, 48W)



T011512 (N2W, 70W)

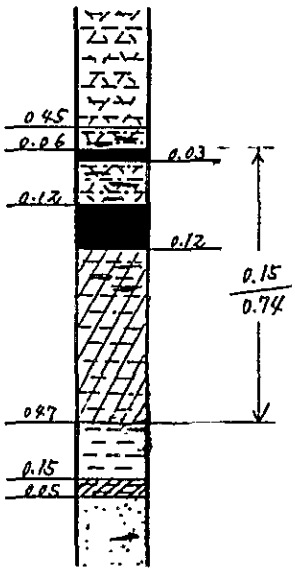


T011513 (N5W, 78W)



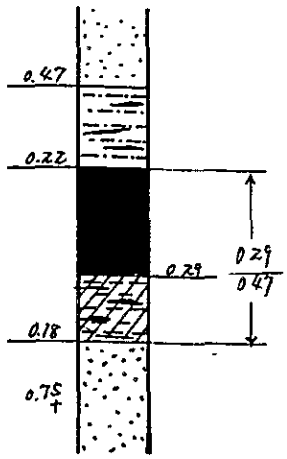
T011517A

(N18W, 23W)



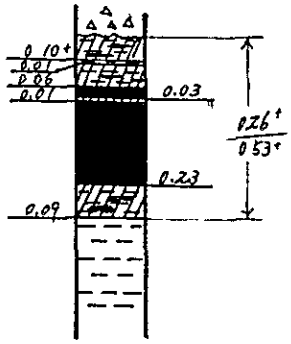
T011517B

(N18W, 23W)



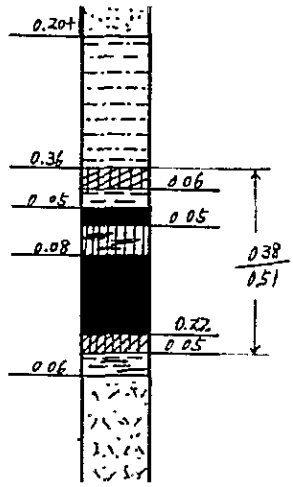
T011518

(N15W, 27W)

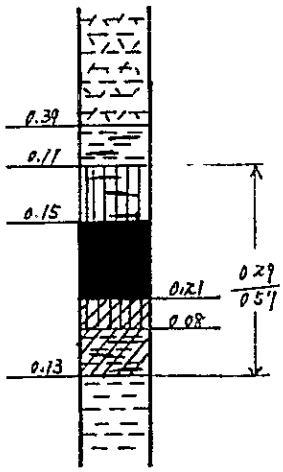


T011519A

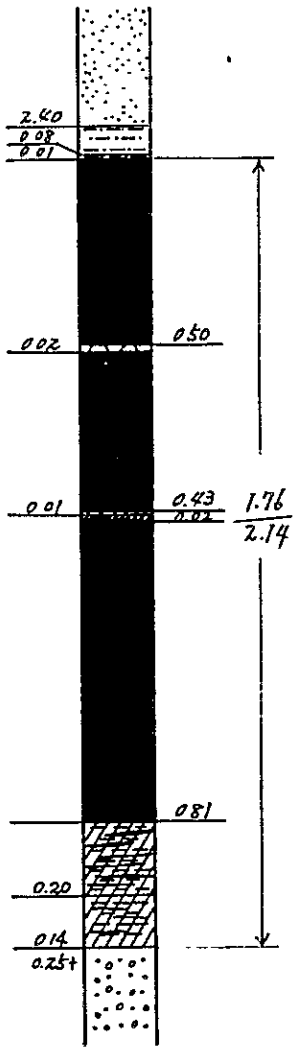
(N20W, 28W)



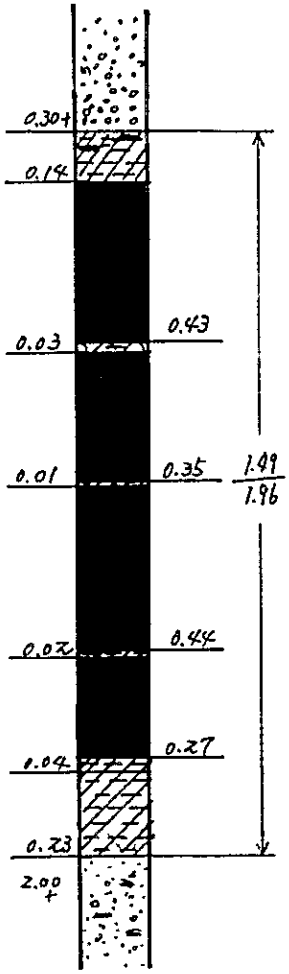
T011519B (N20W, 28W)



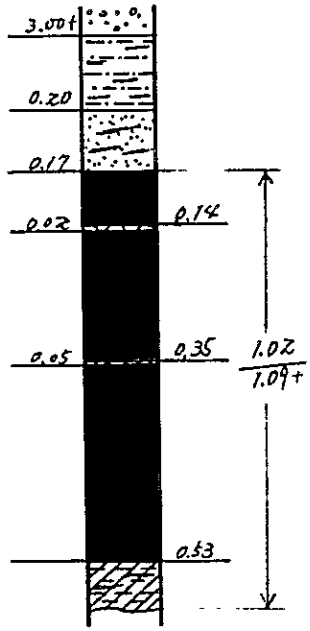
T011604 (N30W, 30W)



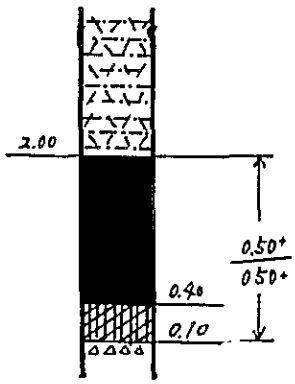
T011607 (N32W, 36W)



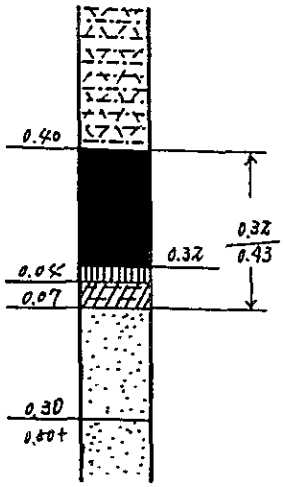
T011612 (EW, 5N)



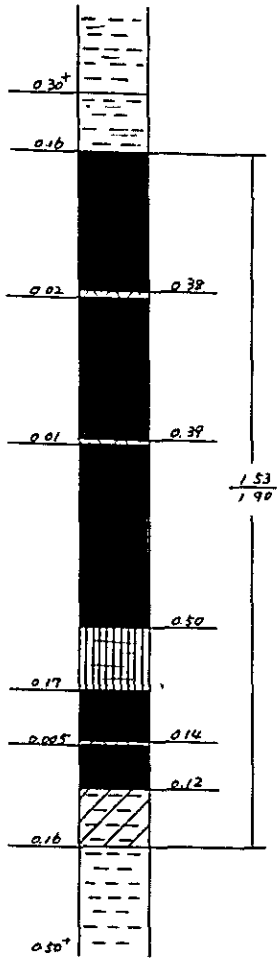
T012916 (N13W, 18E)



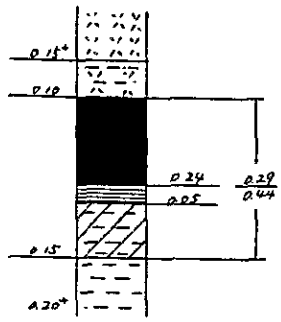
T012917 (N10W, 8E)



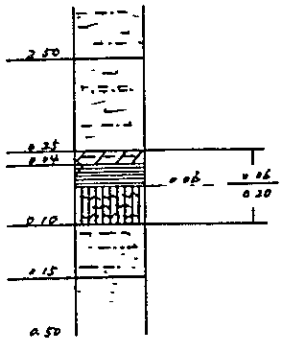
M011601 (N85W; 8N)



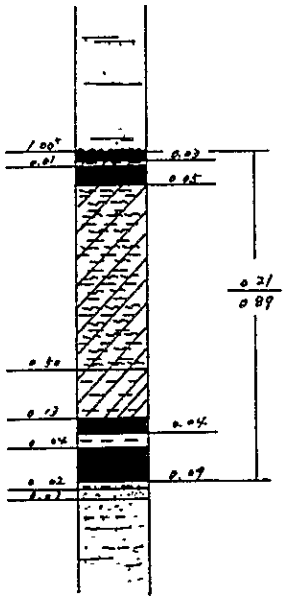
M011602 (block debris)



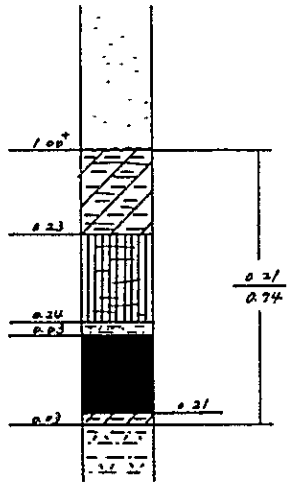
M021001 (N85W; 25N)



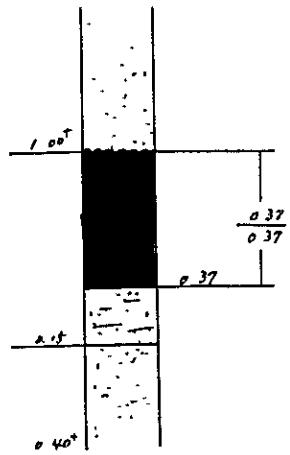
M021002 (N85W; 28N)



M021003 (N79E; 21N)

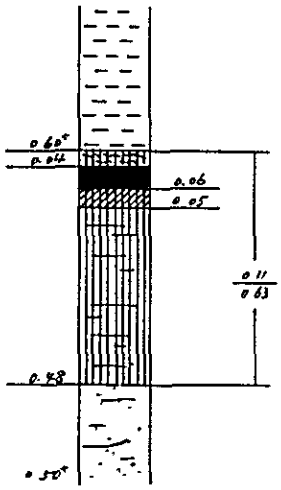


M021004 (N10E; 20N)



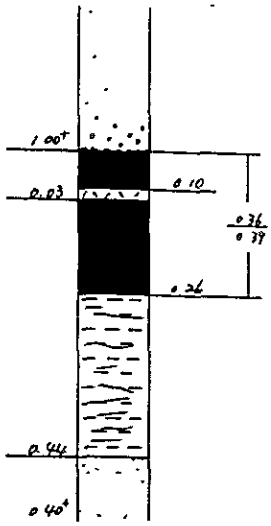
M021005

(N73W; 14N)



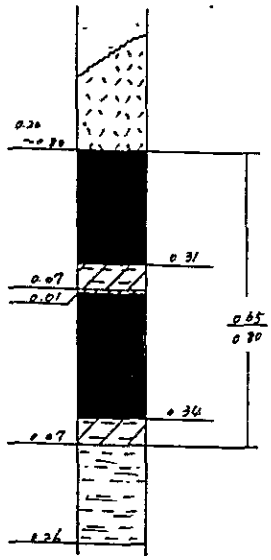
M021101

(N62E; 16N)



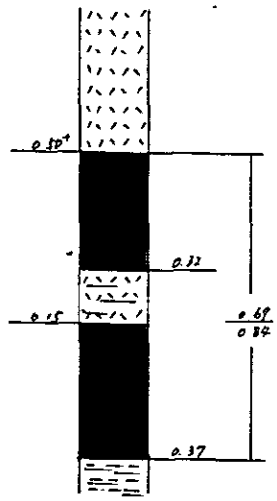
M021102

(N68E; 19N)

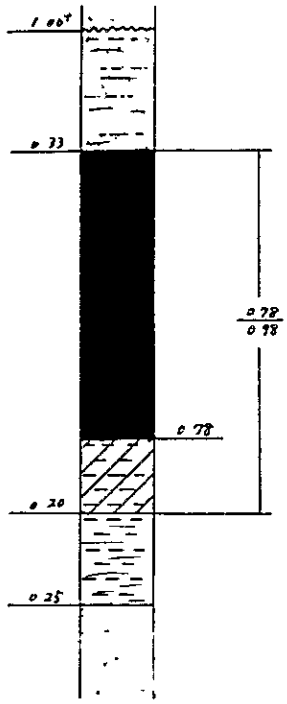


M021103

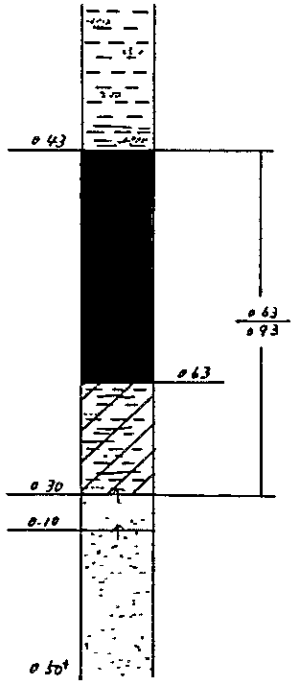
(N70E: 8N)



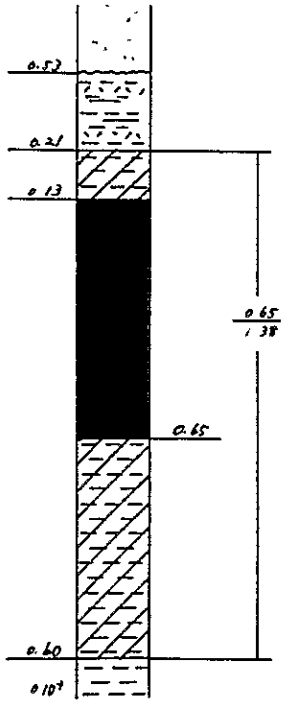
M021201 (N42E; 8W)



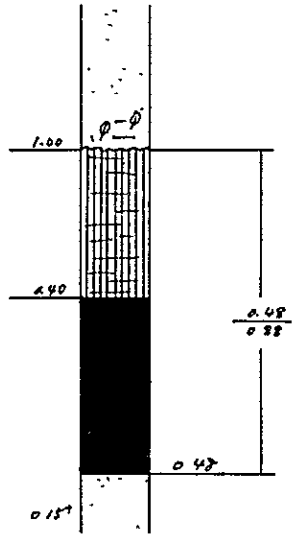
M021202 (N25E; 13W)



M021203 (N13E; 17W)

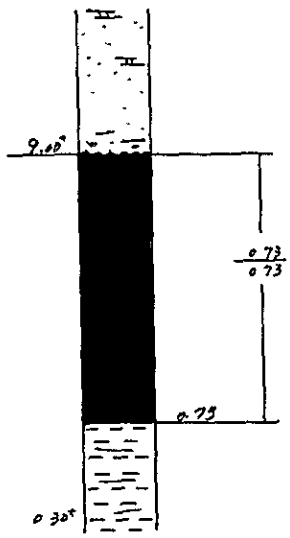


M021204 (N20W; 25W)



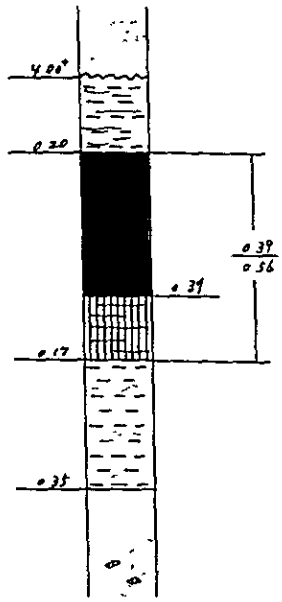
M021205

(N18E; 11W)



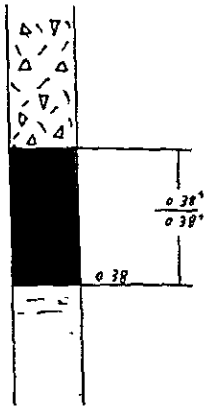
M021301

(N5E; 11W)



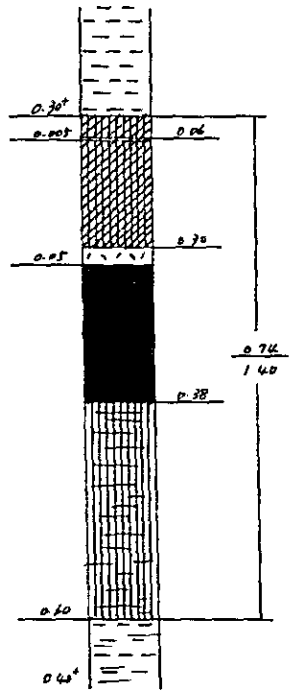
M021501

(N50E; 15N)

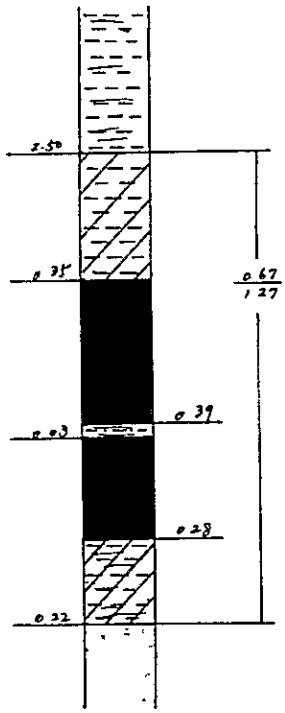


M021502

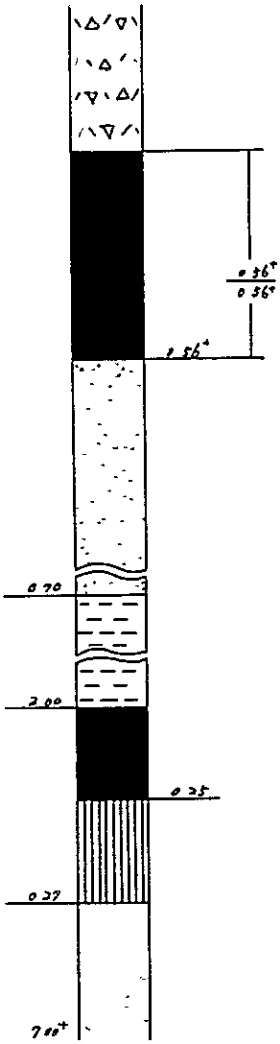
(N48E; 5N)



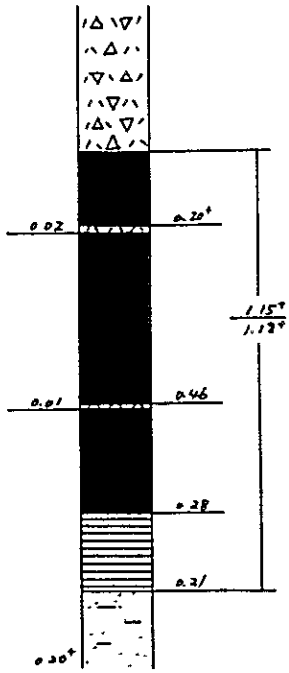
M021503 (N52E ; 19N)



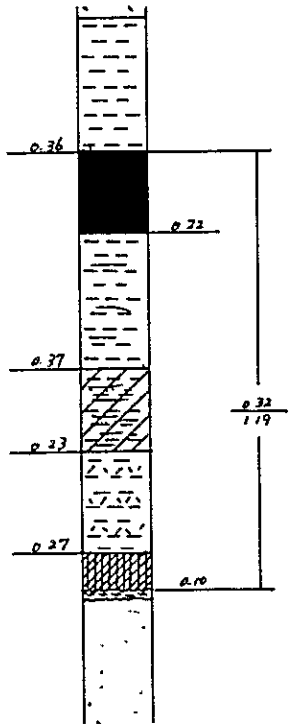
M021504 (block debris)



M021505 (block debris)

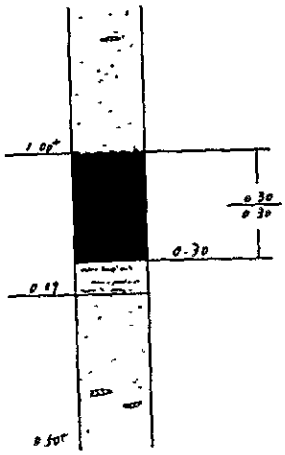


M021601 (block debris)



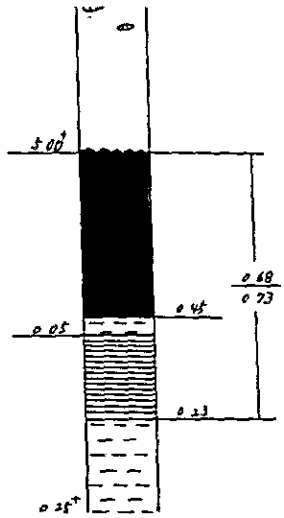
M021602

(N42E; 10W)



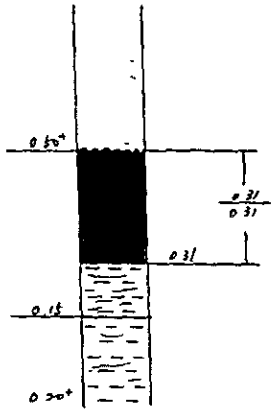
M021603

(N60E; 10N)



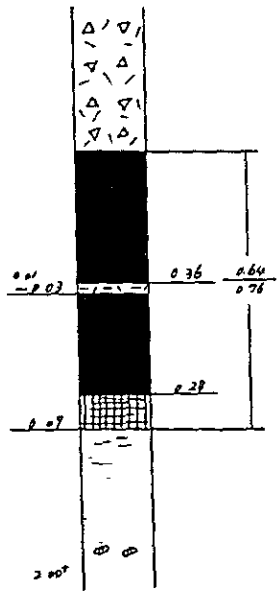
M021604

(EW; 20N)



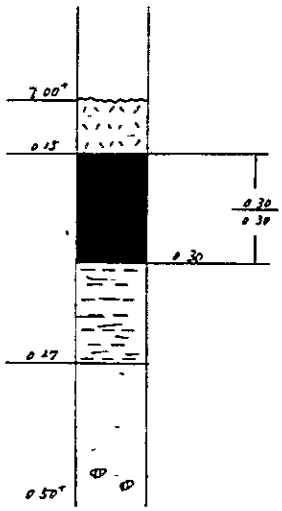
M021605

(N80E; 19N)



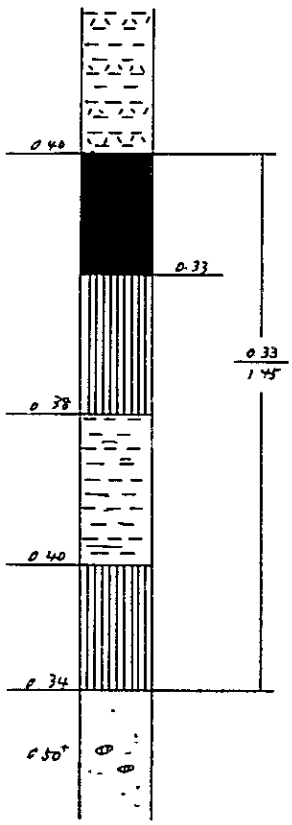
M021606

(EW ; 20N)



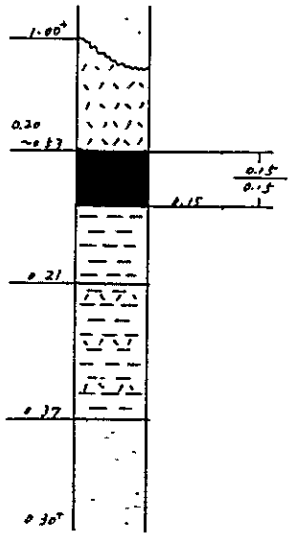
M021607

(N85E ; 38N)



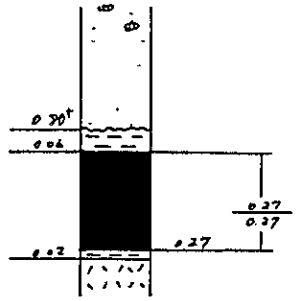
M021608

(N85E ; 20N)



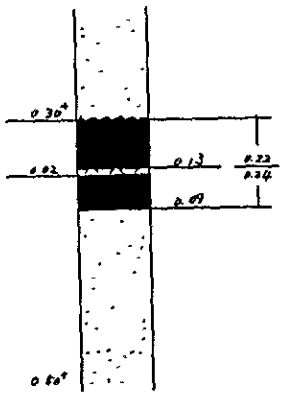
M021609

(EW ; 20N)



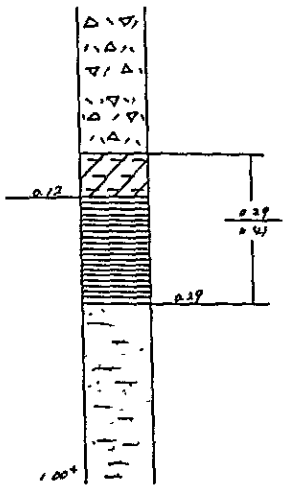
M021701

(N88W; 25N)



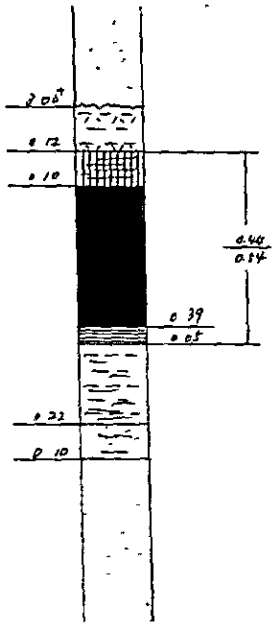
M021702

(N85W; 12N)



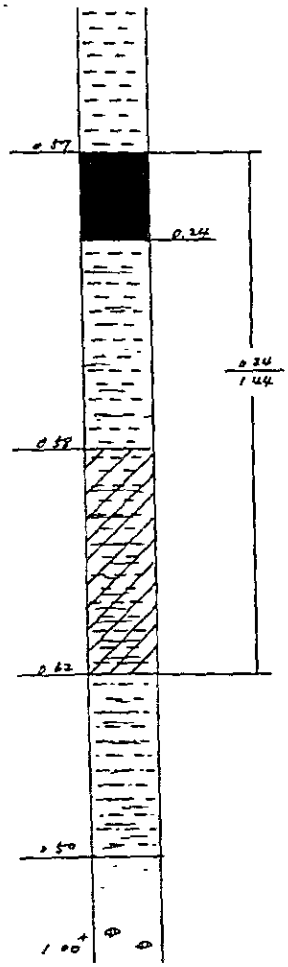
M021703

(N55W; 13N)



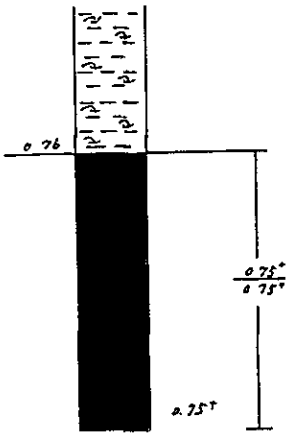
M021704

(N33W; 28E)



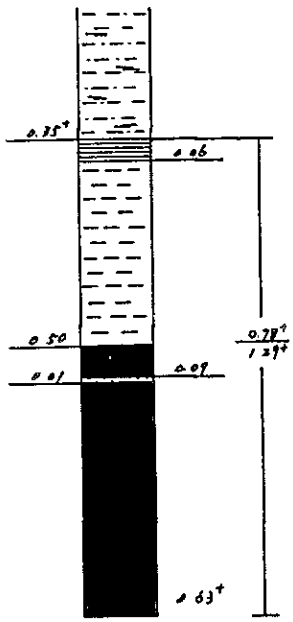
M021705

(N62E ; 27N)



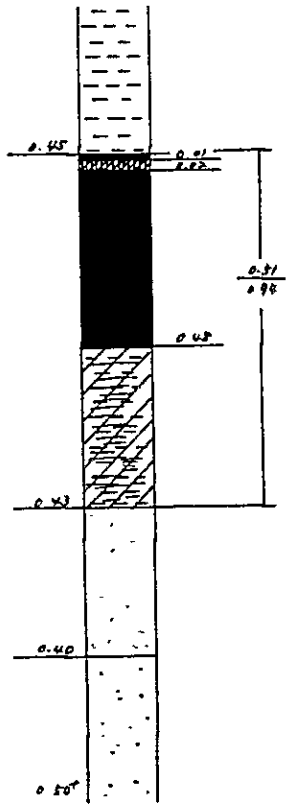
M021706

(N71W ; 16N)



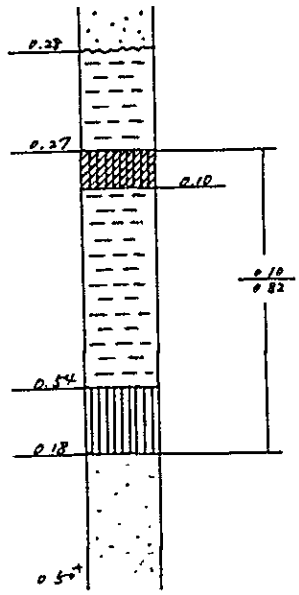
M021707

(N78W ; 22N)

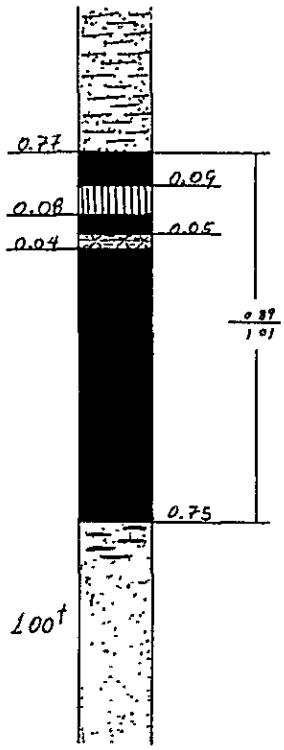


M021708

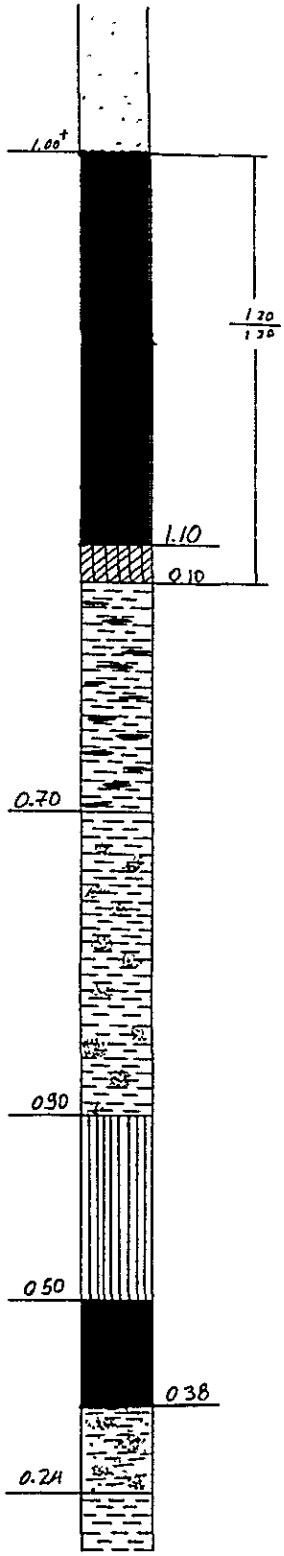
(N70W ; 24N)



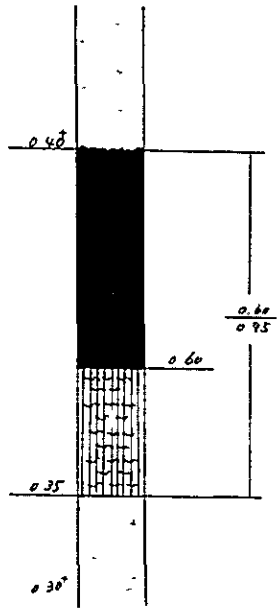
M021709



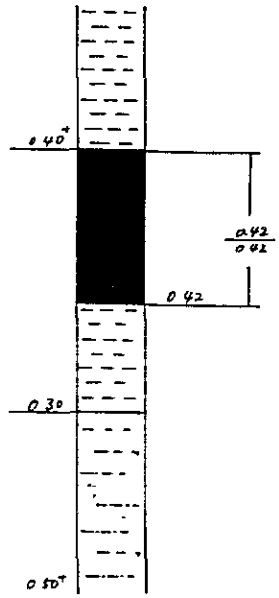
M021710 (N84W; 24N)



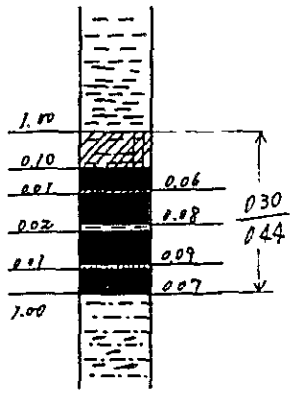
M021711 (N41W; 18E)



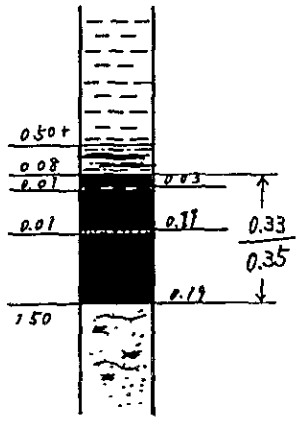
M021712 (N65E; 22N)



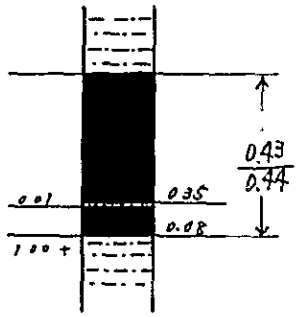
T061612 (N42W, 8S)



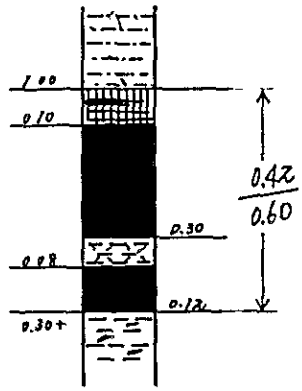
T061615 (N80W, 7S)



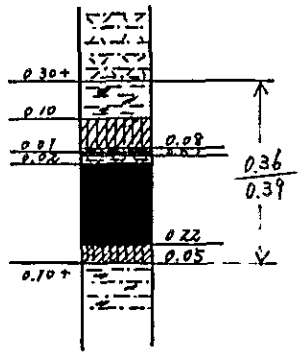
T061616 (N40W, 10S)



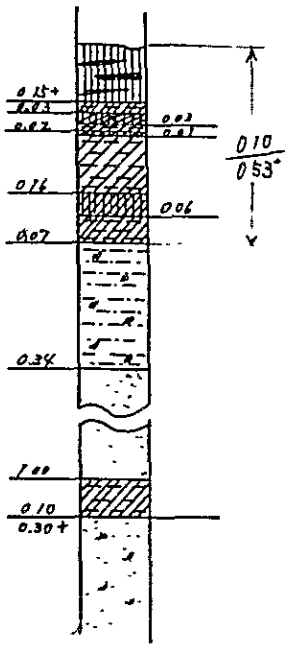
T061620 (N56W, 18S)



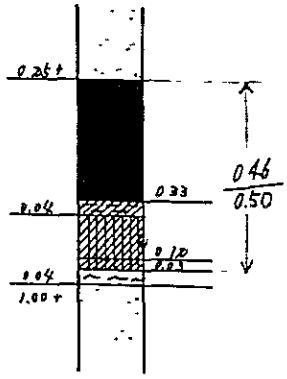
T061621



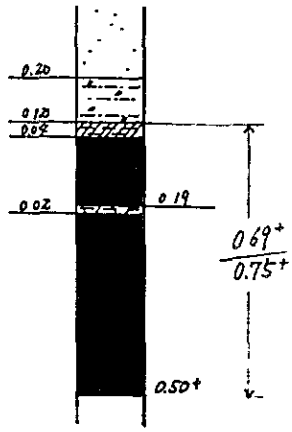
T061622 (N74W, 18S)



T061630 (N20E, 20E)

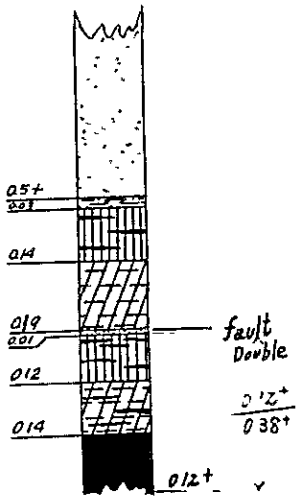


T061640 (N40W, 16S)



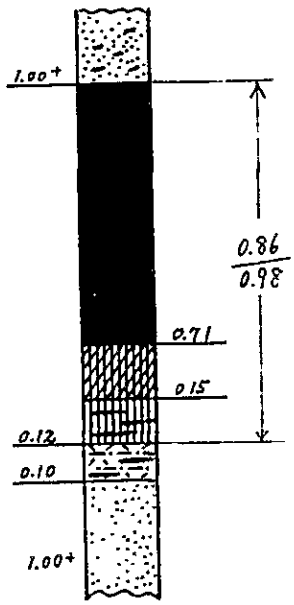
T061704

(N 80W, 26S)



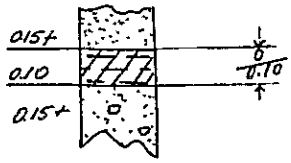
T061711

(N50W, 15S)



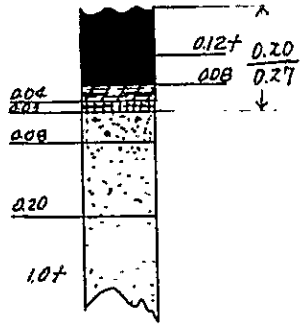
T061709

(N75W, 25S)

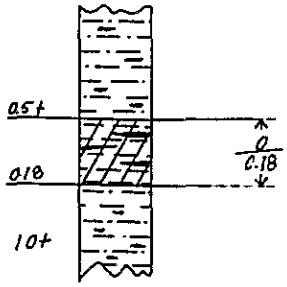


T061716

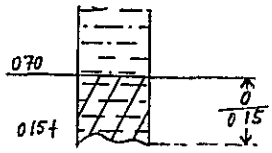
(N50W, 33W)



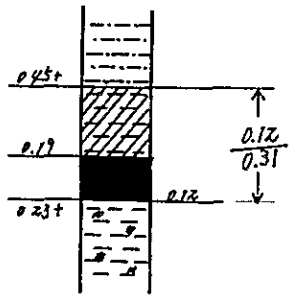
T061717 (N42W, 30W)



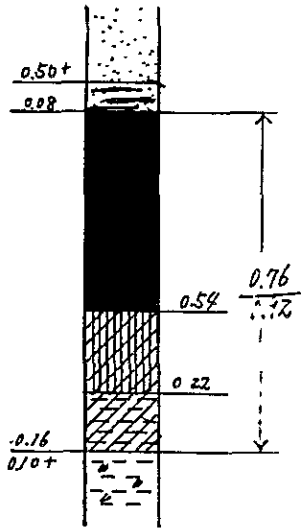
T061718 (N40W, 25W)



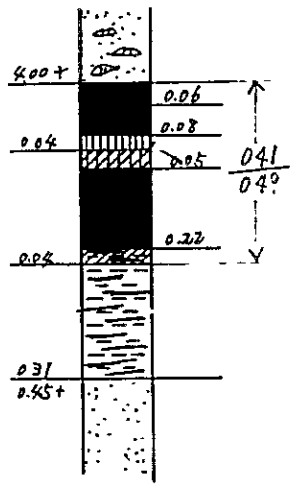
T061802 (N35W, 10E)



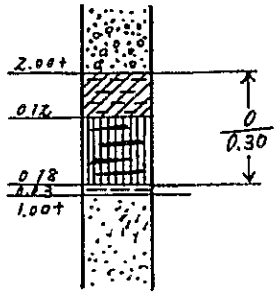
T061915 (N65W, 14W)



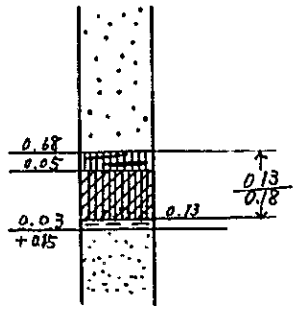
T061916 (N30W, 10W)



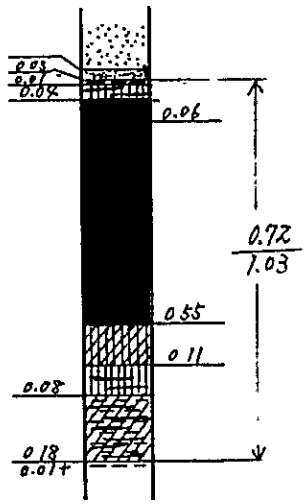
T061917 (N58W, 7W)



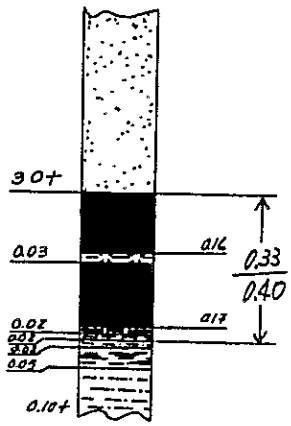
T061924 (N30W, 6S)



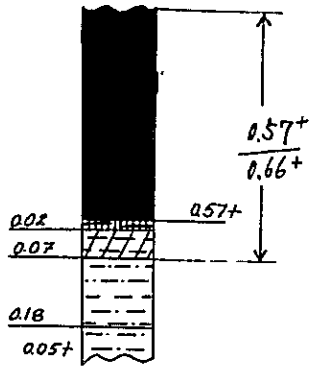
T061926 (N75W, 14S)



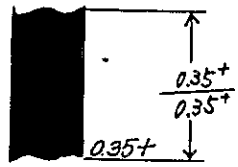
T062001 (N40W, 15W)



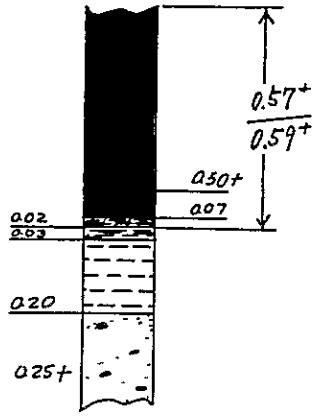
T062003 (N43W, 13W)



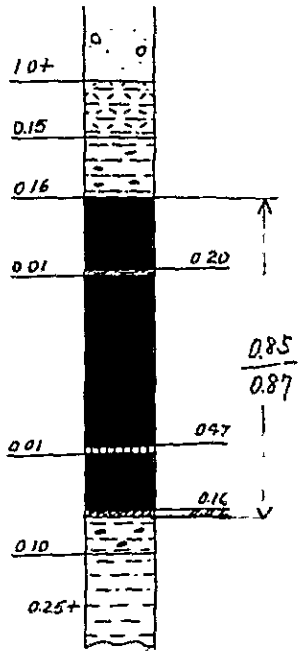
T062006 (N40W, 13W)



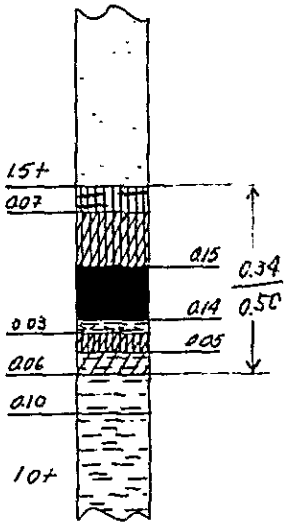
T062009 (N52W, 14S)



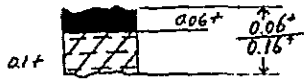
T062012 (N30W, 20W)



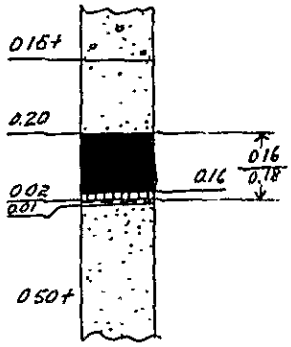
T062013 (N50W, 20W)



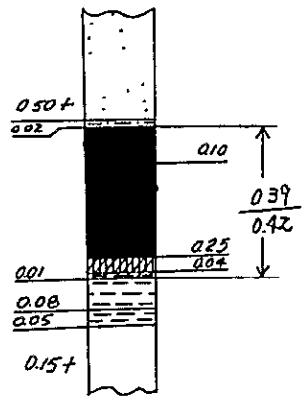
T062014



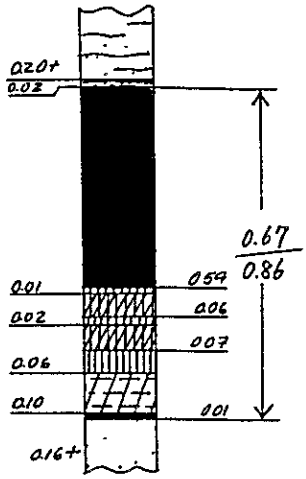
T062030 (N40W, 12W)



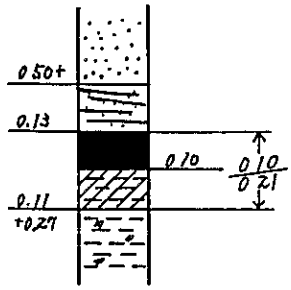
T062031 (N40W, 10S)



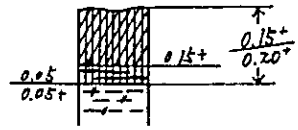
T062032 (N14W, 16W)



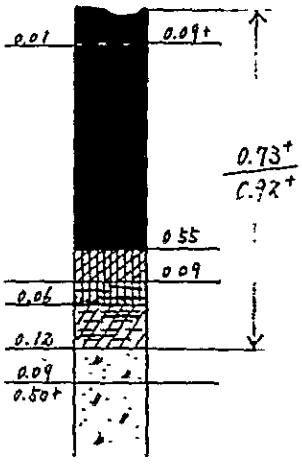
T062104 (N83E, 6S)



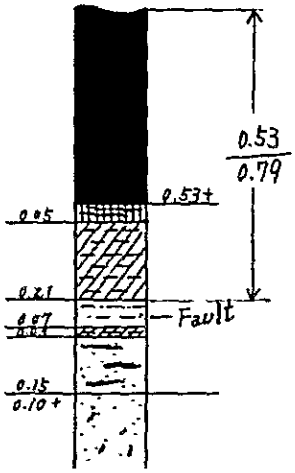
T062105 (N65W, 17S)



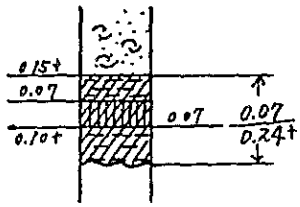
T062110 (N80W, 15S)



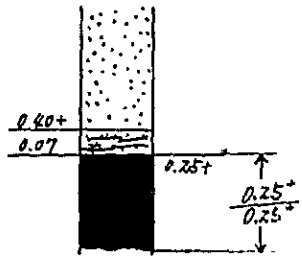
T062144 (N56W, 17W)



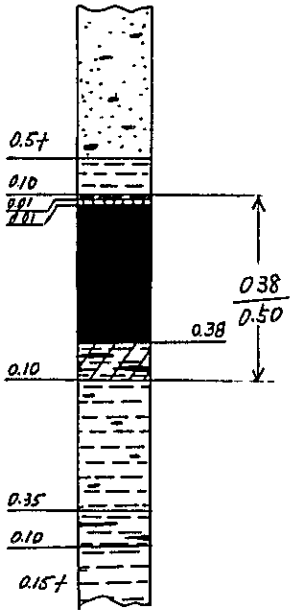
T062146 (EW, 10S)



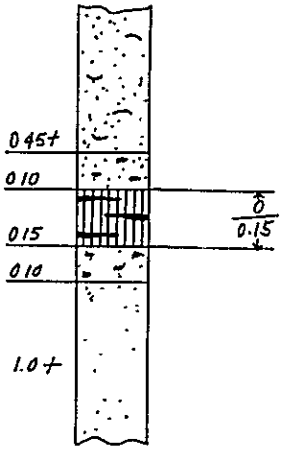
T062150 (N45E, 15S)



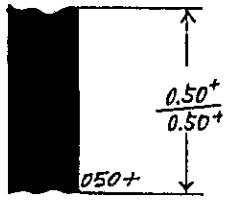
T062214 (N80W, 28S)



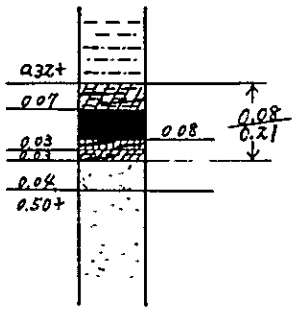
T062210 (N30W, 18W)



T062204 (N62W, 12S)

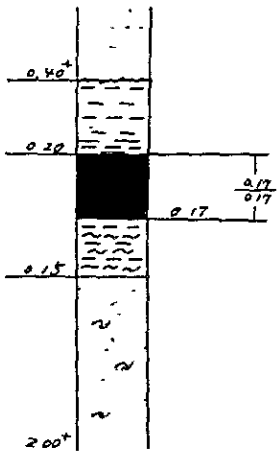


T062307 (N68W, 20S)



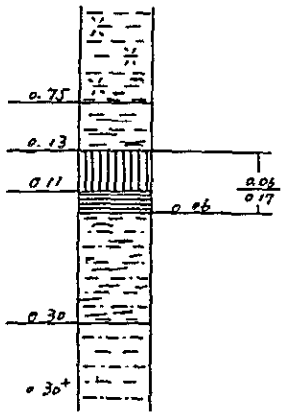
M061701

(N75E; 78S)



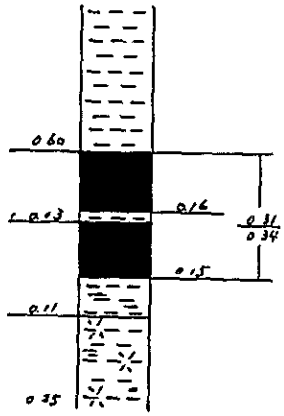
M061702

(N80W; 90)



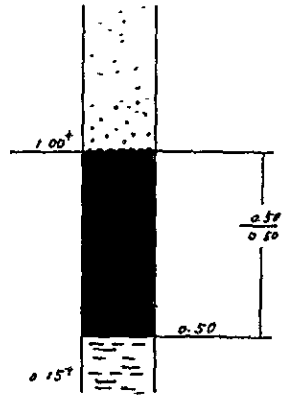
M061703

(N65W; 24N)



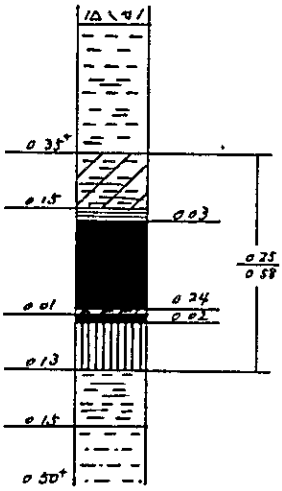
M061704

(block debris)



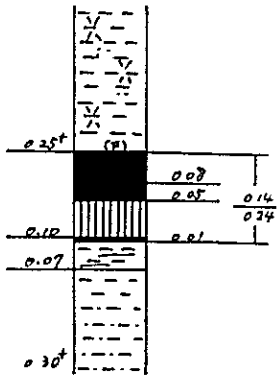
M061705

(N85W; 58N)



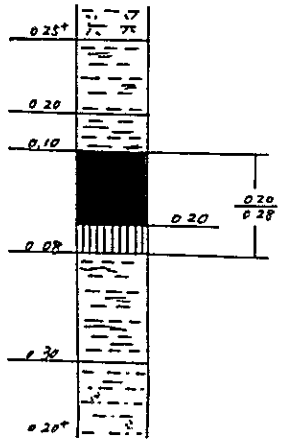
M061706

(N65E; 80N)



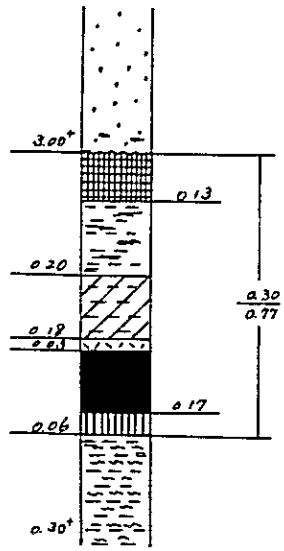
M061801

(N50W; 32S)



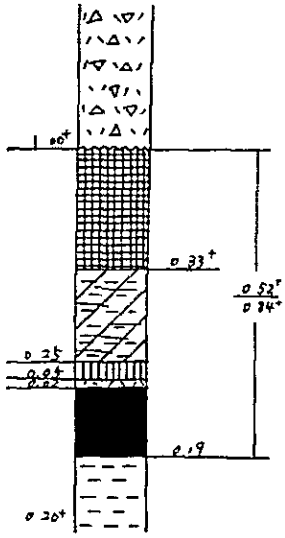
M061802

(N75W; 30S)



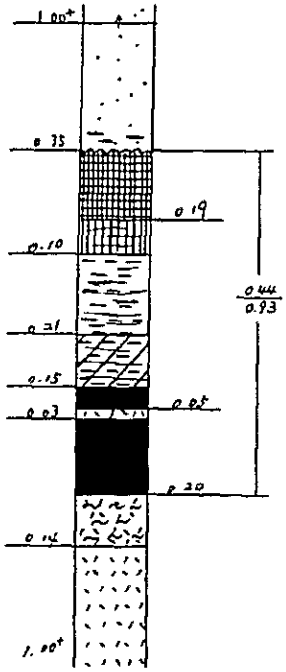
M061803

(N45W;29SW)



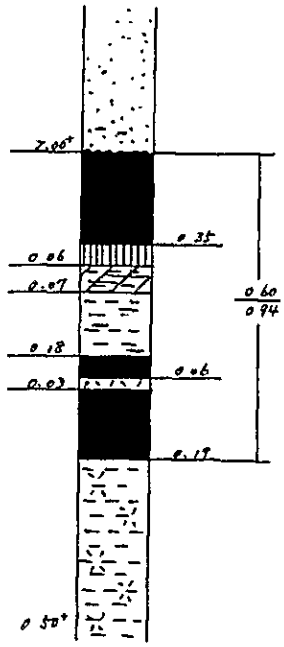
M061804A

(block debris)



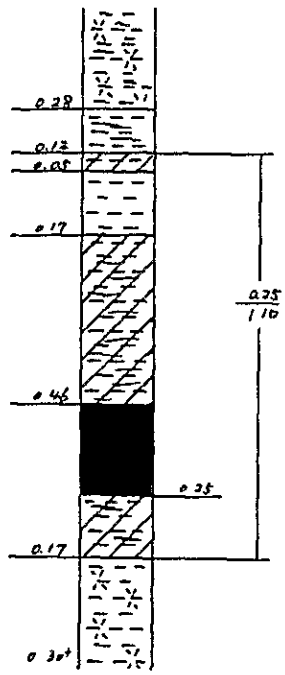
M061804B

(block debris)



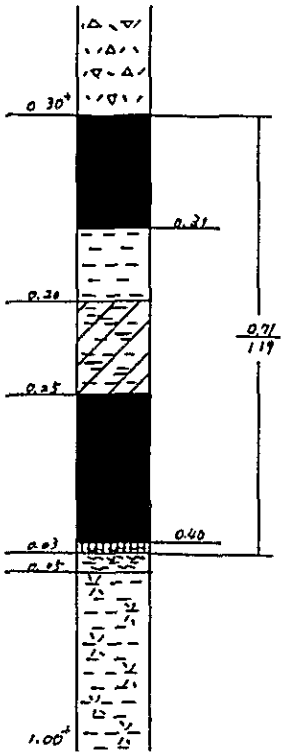
M061805

(N40E; 7E)



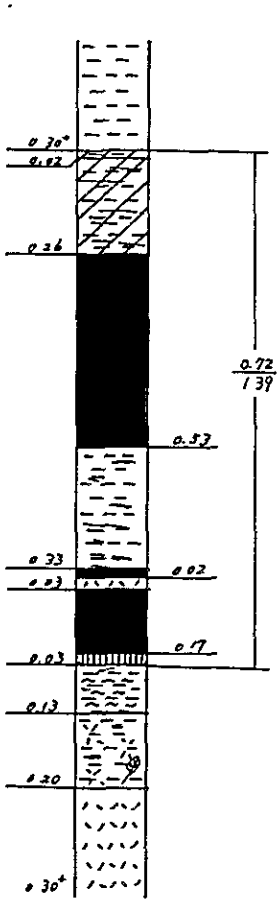
M061806

(N25W; 55W)



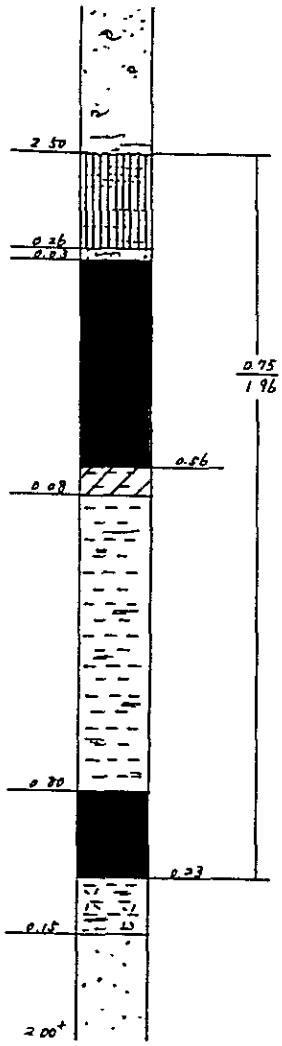
M061807

(N20W; 25W?)



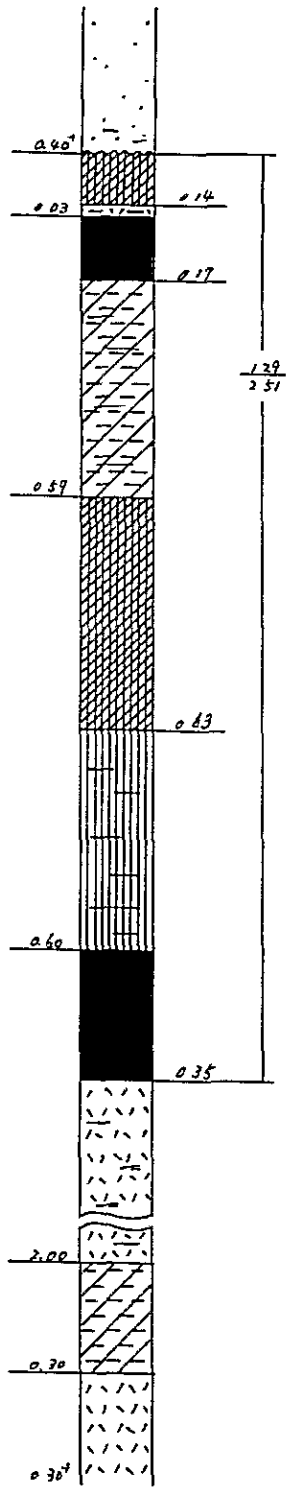
M061901

(N76E; 16S)



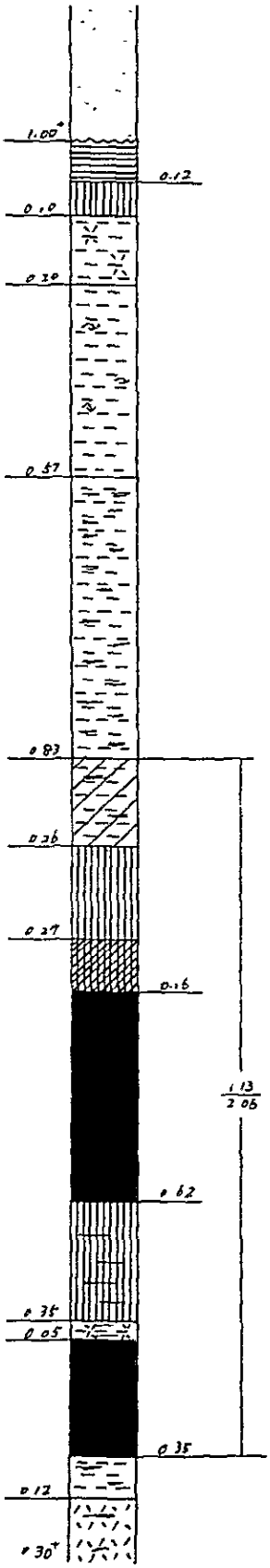
M061902

(N65E; 28S)



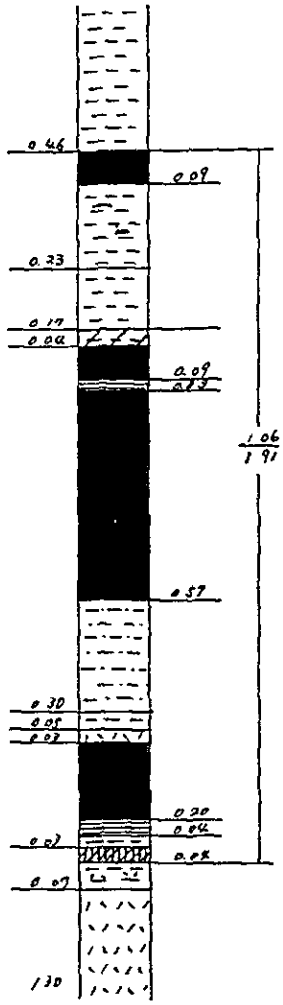
M061903

(block debr.s)



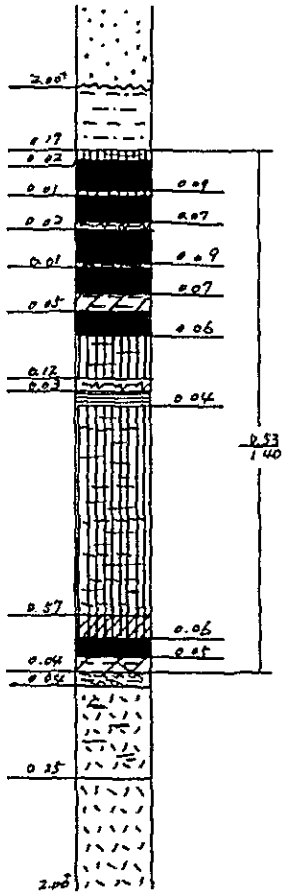
M061904

(N15E; 8W)



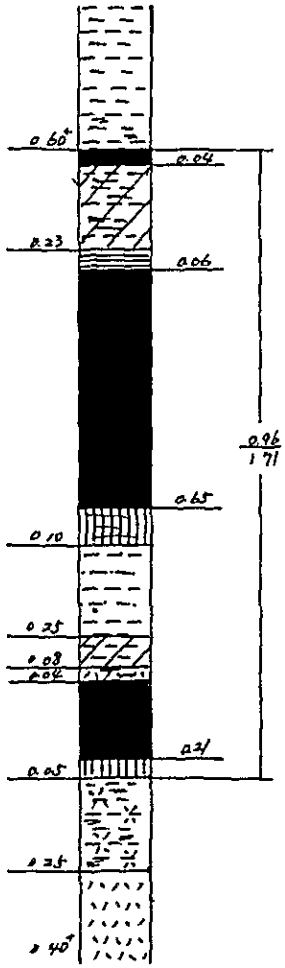
M062001

(N20E; 53E)



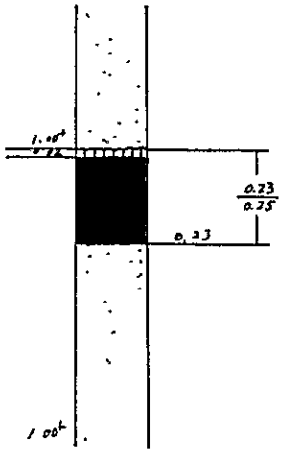
M062002

(N38E; 20E)



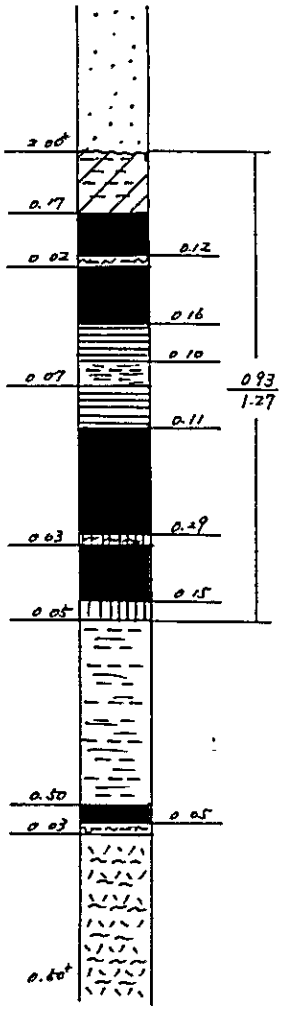
M062003

(N46E; 48S)



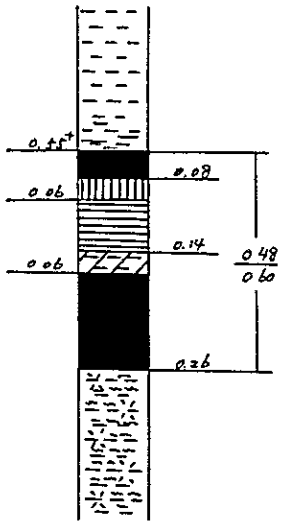
M062004

(block debris)



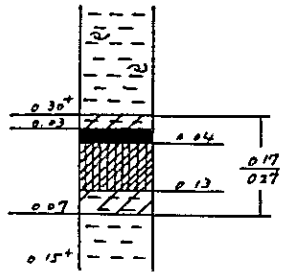
M062005

(N13W; 67W)



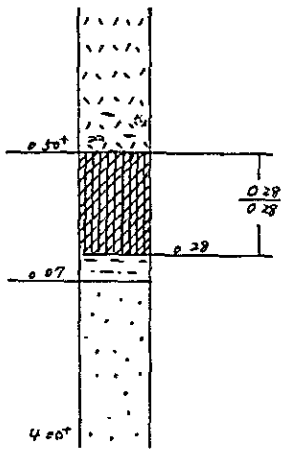
M062006

(block debris)



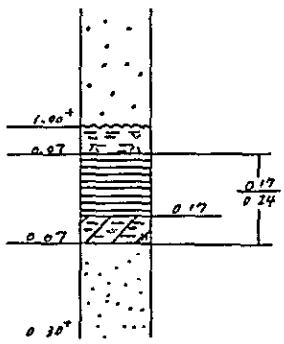
M062007

(N40W; 42W?)



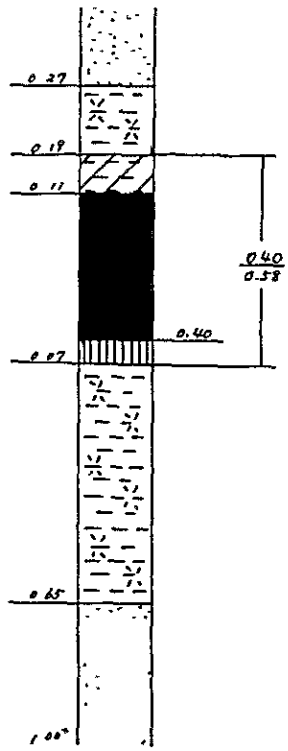
M062008

(N83W; 40N)



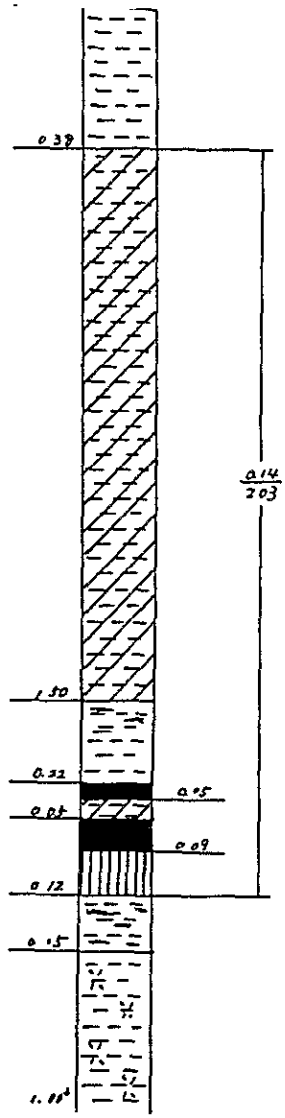
M062101

(N5W; 11W)

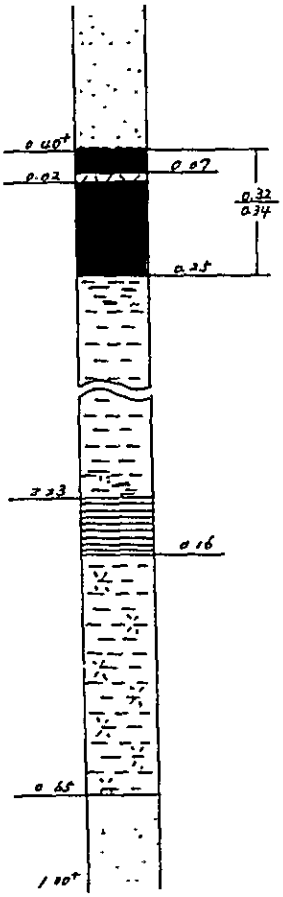


M062102

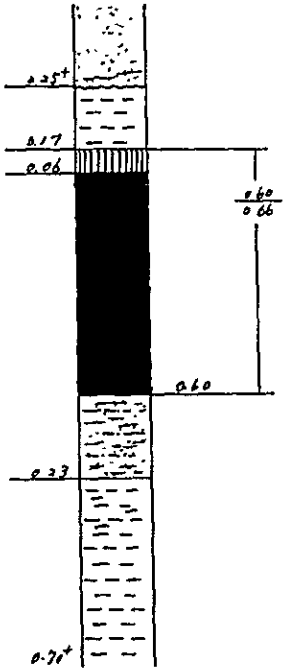
(N5; 10E)



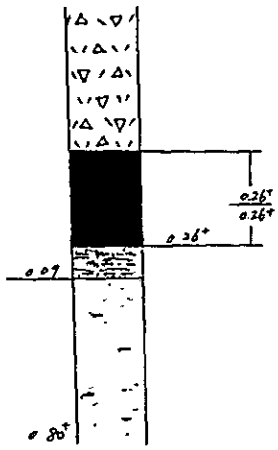
M062/03 (N20E; 9E)



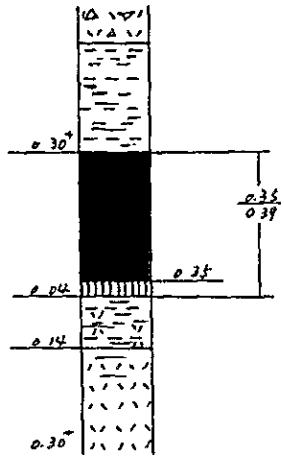
M062201 (block debris)



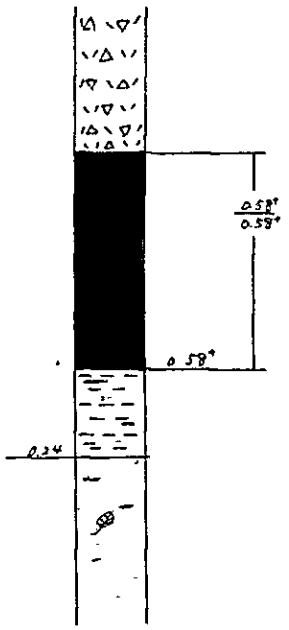
M062202 (block debris)



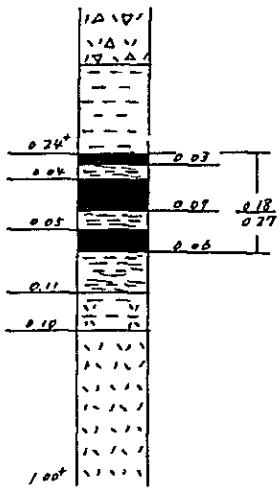
M062301 (block debris)



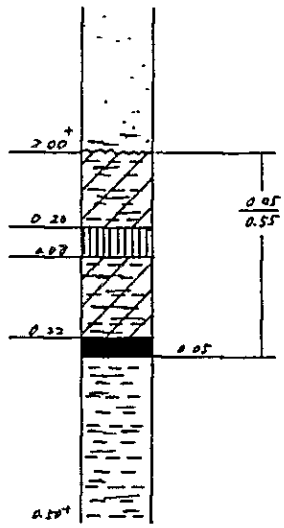
M062302 (N45W; 11SW)



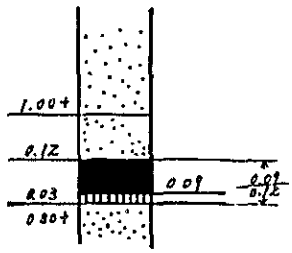
M062401 (N66E; 40S)



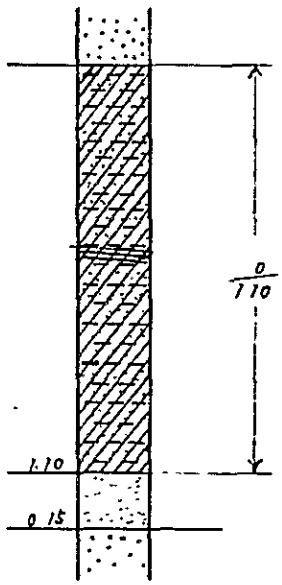
M062402 (block debris)



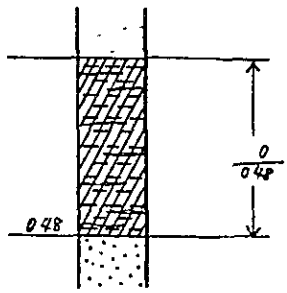
T0224O3 (N22W, 12E)



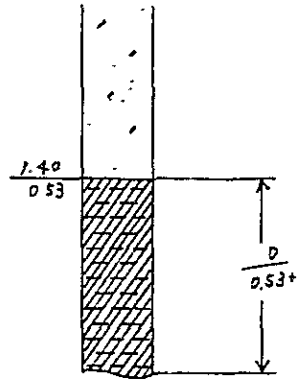
T0224O4 (N45W, 15E)



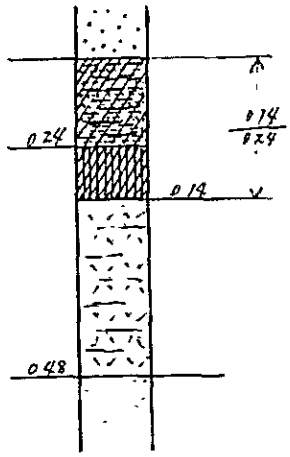
T0224O5 (N20W, 14E)



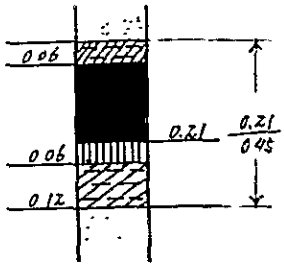
T0224/0A (N25W, 14E)



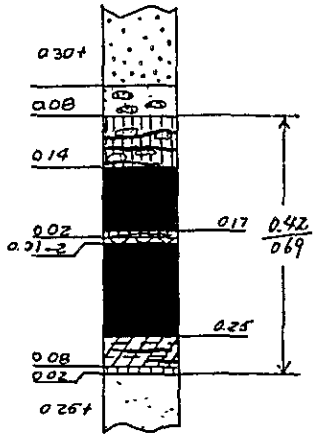
T0224 10B (N80E, 14N)



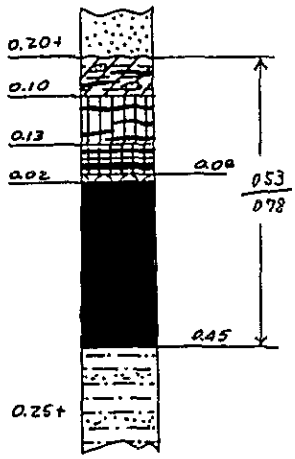
T0224 13 (N15W, 13E)



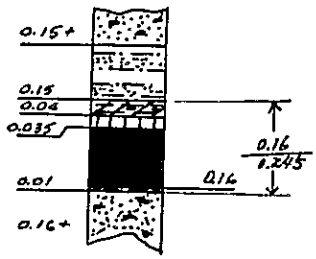
T0225 16 (N55W, 16E)



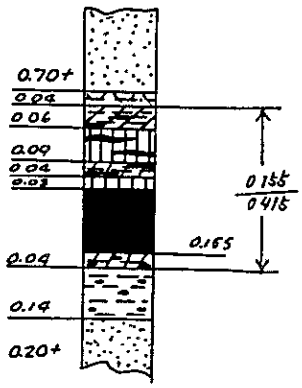
T0225 19 (N30W, 15E)



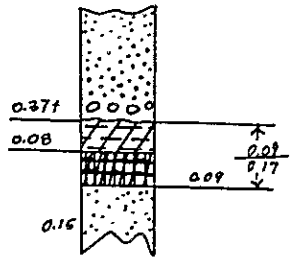
T022529 (N23W 14E)



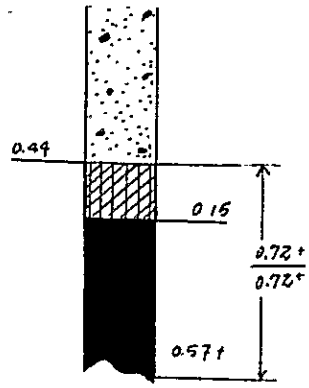
T022530 (N20W, 18E)



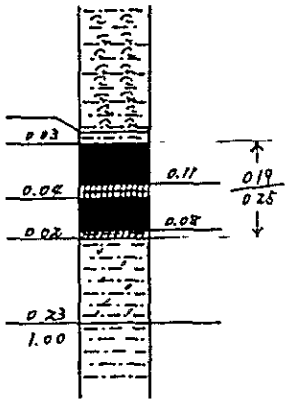
T022537 (NS 5E)



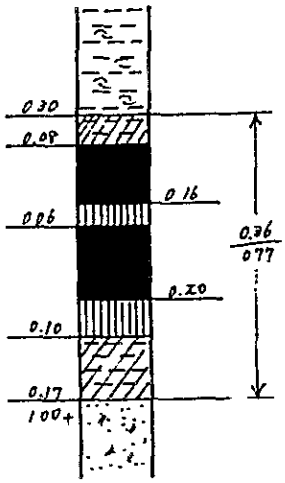
T022541 (N44W, 34E)



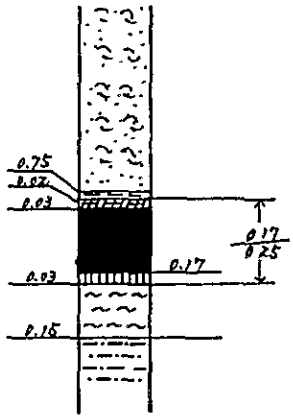
T022620 (N70W, 20N)



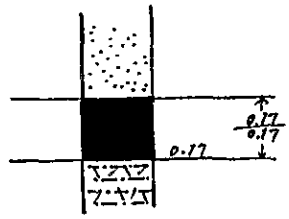
T022621 (N22W, 20E)



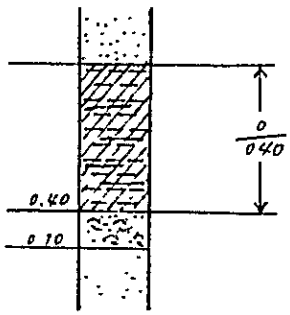
T022623 (N6W, 16E)



T022628 (N18W, 22E)

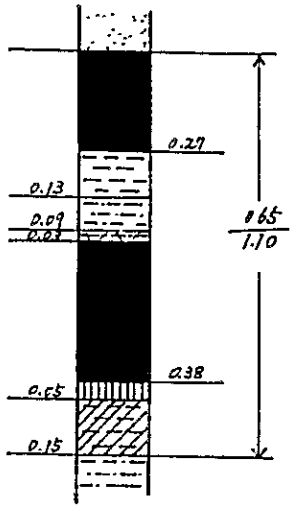


T022634 (N20W, 20E)

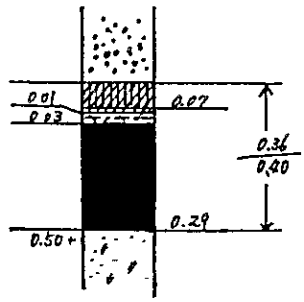


T022638 (N30W, 10E)

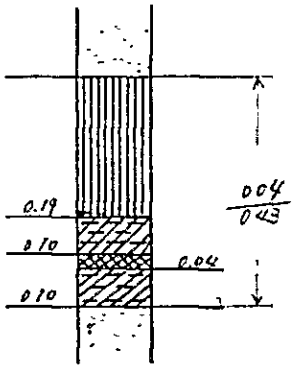
T022641 (N35W, 19E)



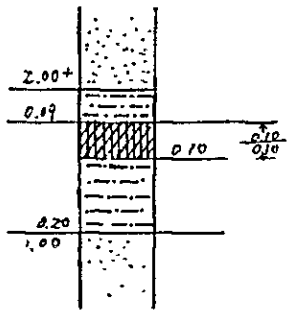
T022645 (N40W, 23E)



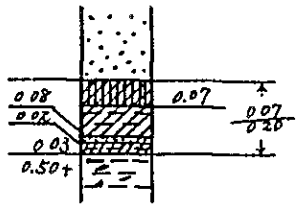
T0Z2700 (NS, 15E)



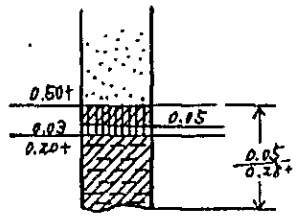
T0Z2702 (NS, 12E)



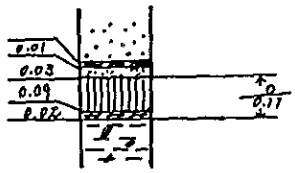
T0Z2703 (NS, 8E)



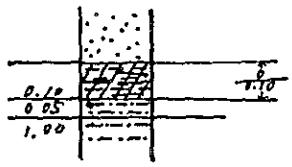
T0Z2706



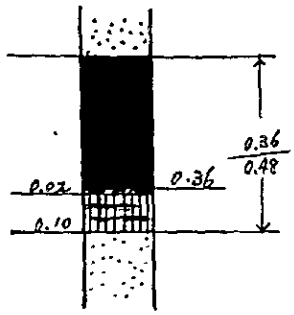
T0Z2709



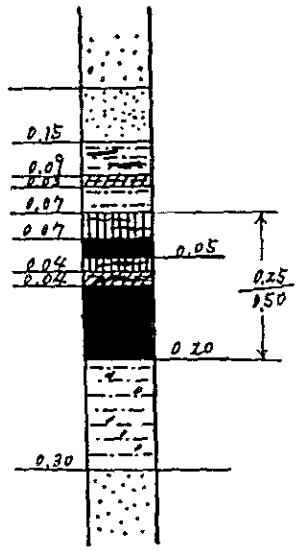
T0Z2804A (N58W, 18E)



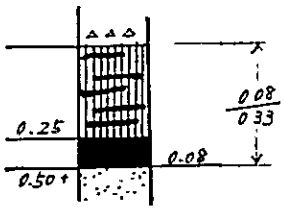
T0Z2804B (N5E, 20E)



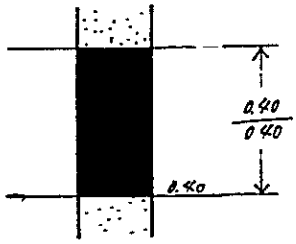
T0Z2807 (N64E, 24E)



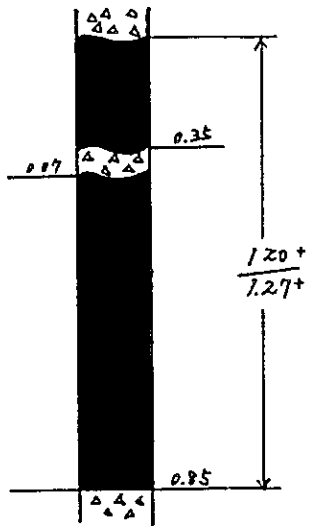
T022818 (N30W, 29E)



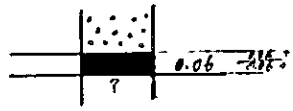
T030128 (N35E, 70E)



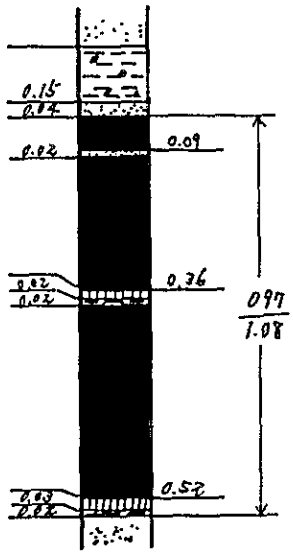
T030156 (N38W 65W)



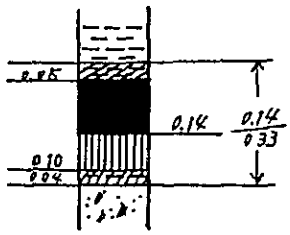
T030158A (N50W, 52W)



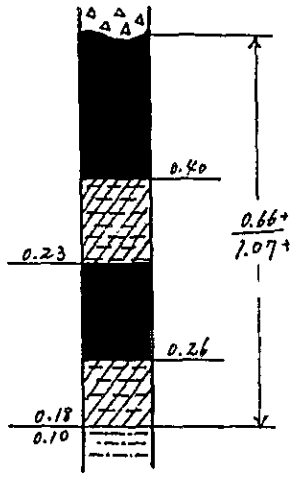
T030158B (N45W, 65W)



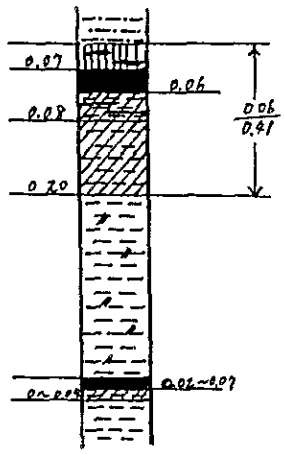
T030203 (N50W, 12E)



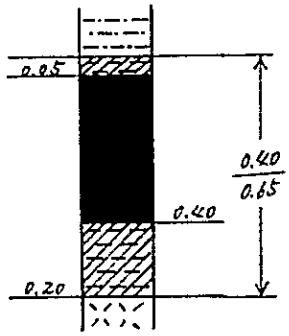
T030210 (N85E, 15S)



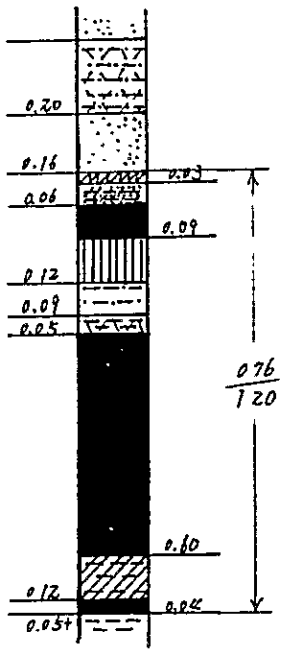
T030221 (EW, 10N)



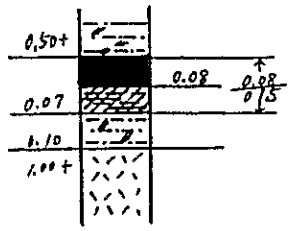
T030Z23



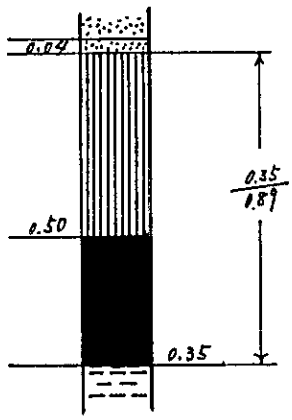
T030Z28 (N15W, 25E)



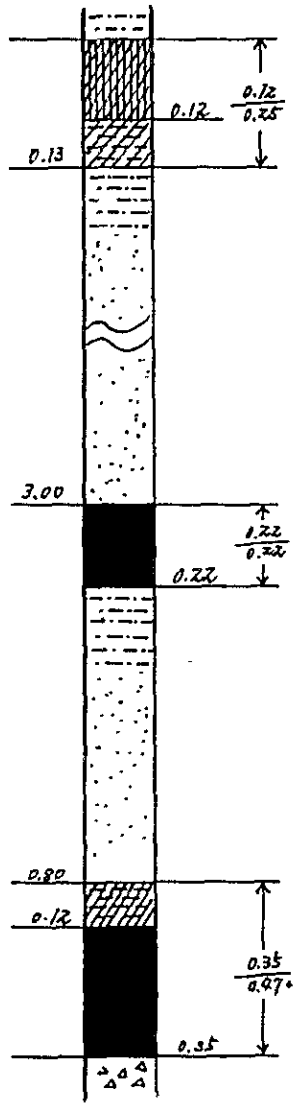
T030Z29 (NS, 55E)



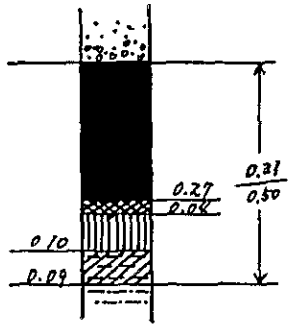
T030Z30 (N12E, 22E)



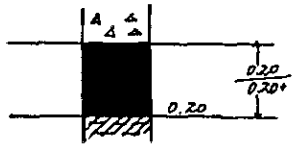
T03023Z (N70E, 20S)



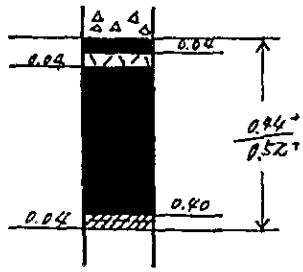
T03030ZA (N40W, 30E)



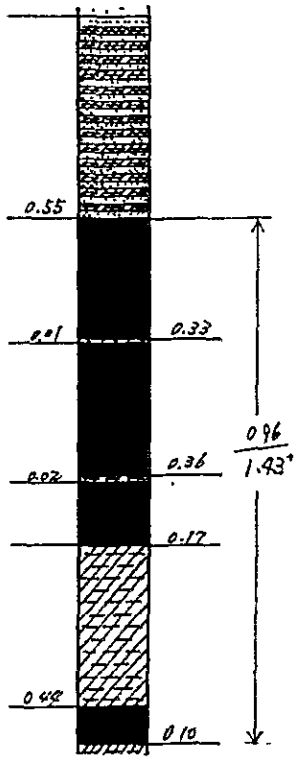
T03030ZB (N50W, 22E)



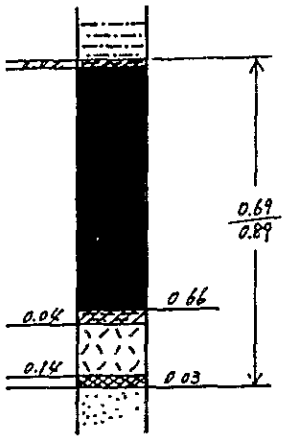
T030303 (N75W 35N)



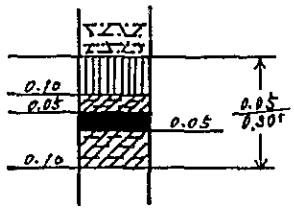
T030305 (N72W 45S)



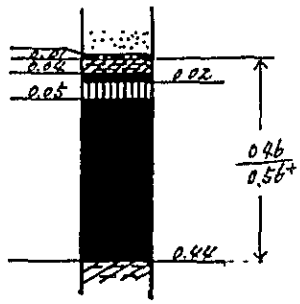
T030309 (N75W, 30S)



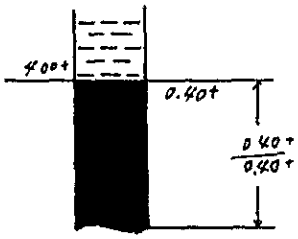
T030312A (horizon)



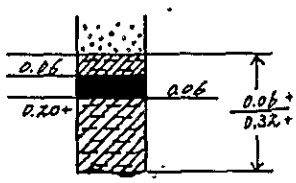
T030312B (horizon)



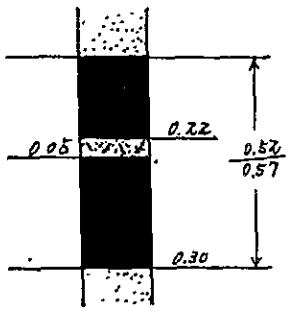
T030315 (horizon)



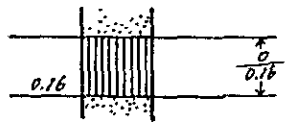
T030316



T030317 (N20W, 20E)

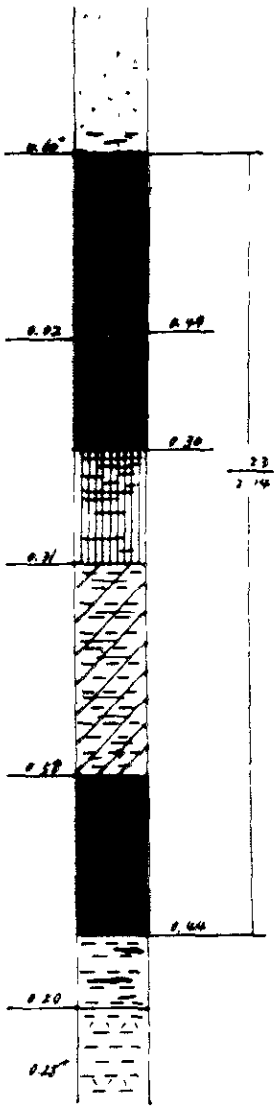


T030321 (N5W, 25E)



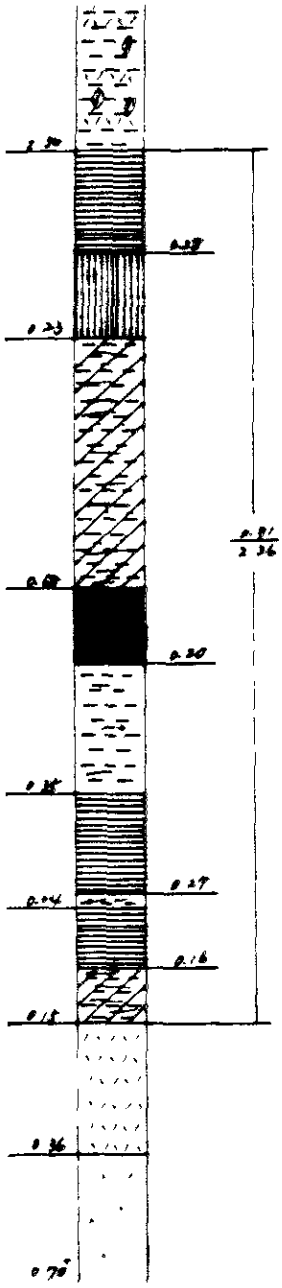
M022401

(N75W:38W)



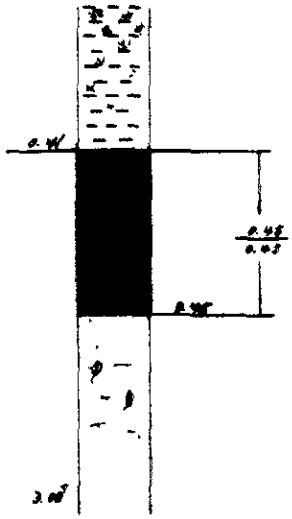
M022402

(N40W:54E)



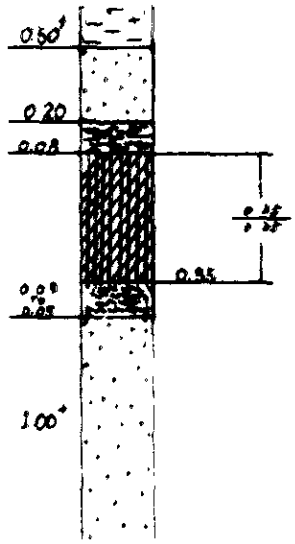
M022403

(N75W;18N)



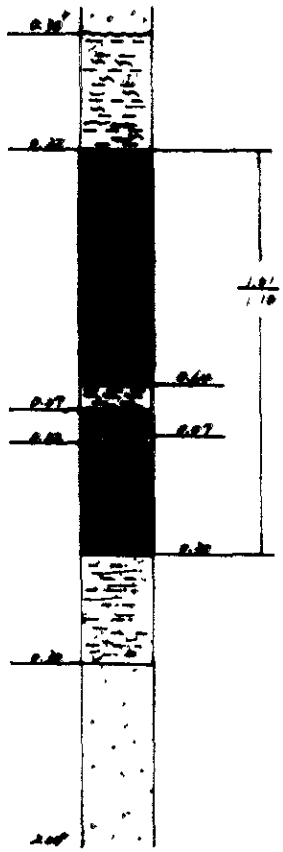
M022404

(N85E;86S)



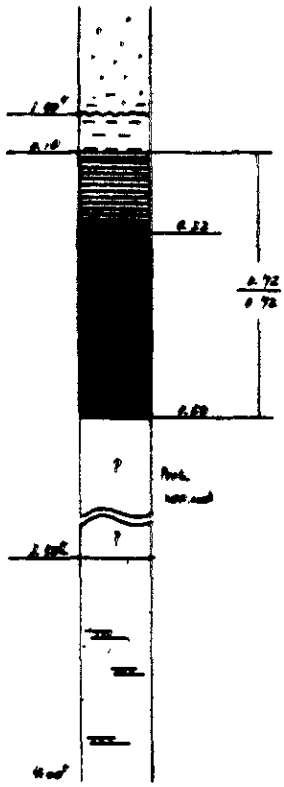
M022501

(N38W; 82E)



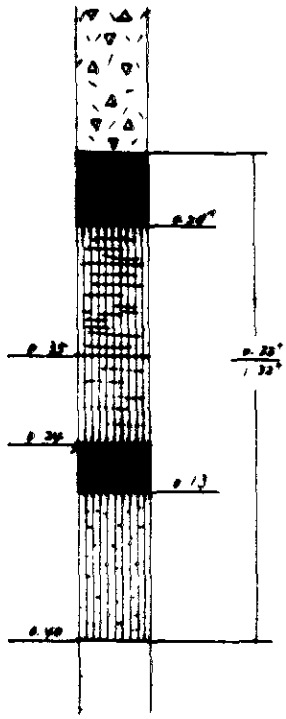
M022502

(N85W; 14S)



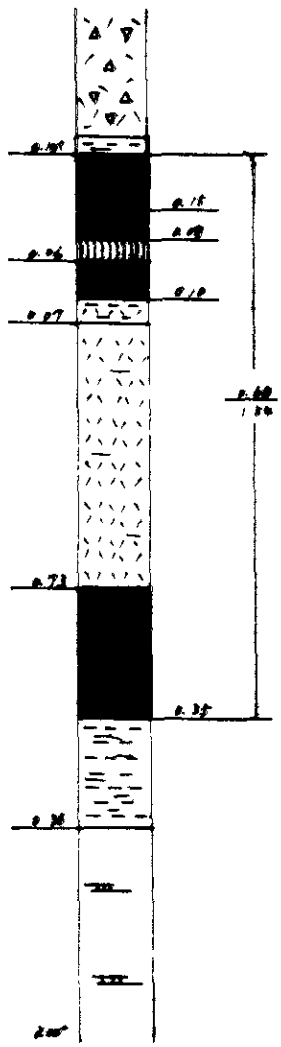
M022503

(block debris)

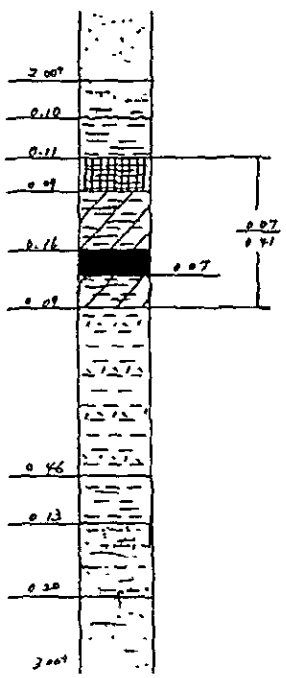


M022504

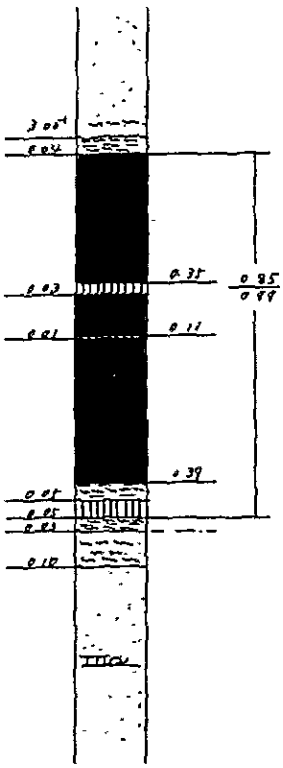
(N15W; 10W)



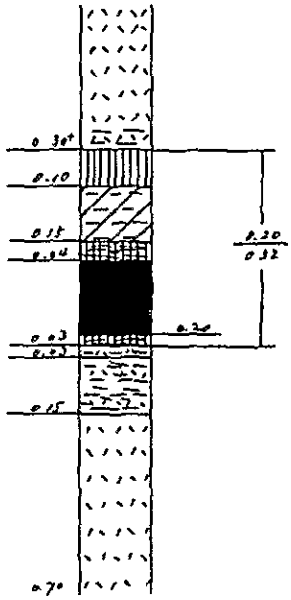
M022701 (N44W; 12E)



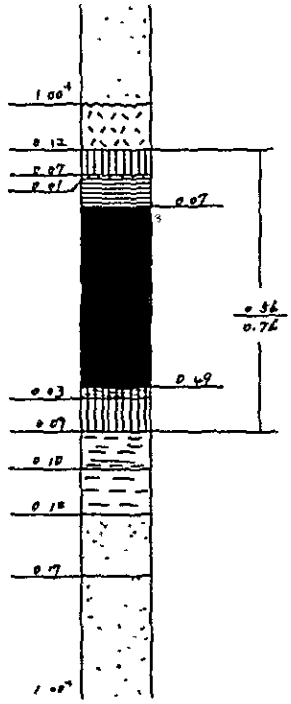
M022702 (N33E; 59E)



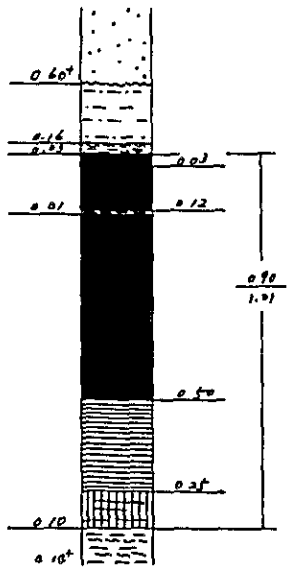
M022703 (N45W; 23SE)



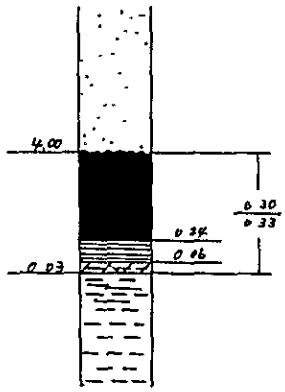
M022704 (N43E; 30W)



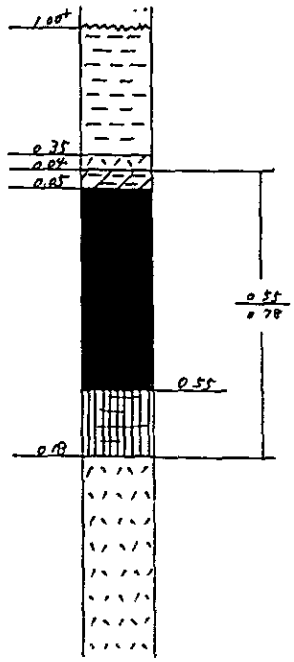
M022705 (N10E; 30W)



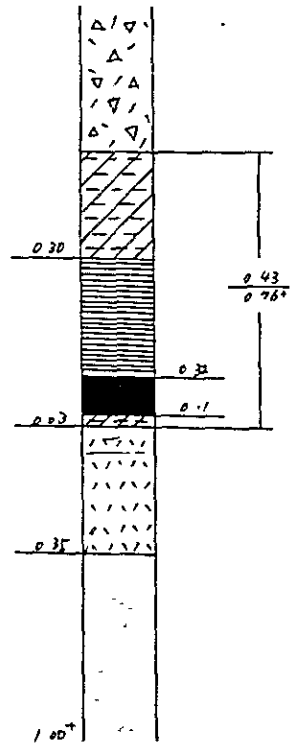
M022801 (N35W; 12E)



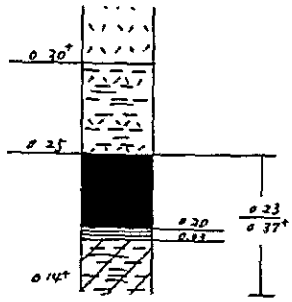
M022802 (N65W; 17N)



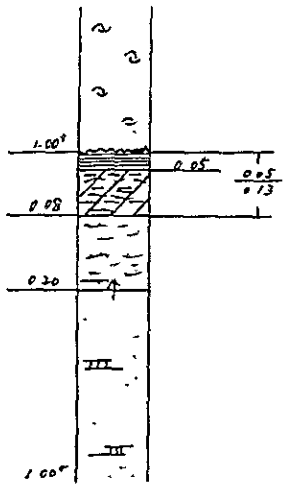
M022803 (N35W; 8E)



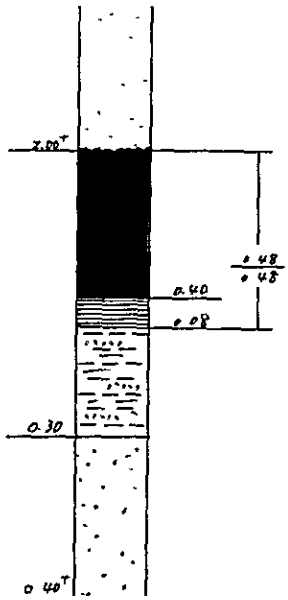
M022804 (N25E; 16E)



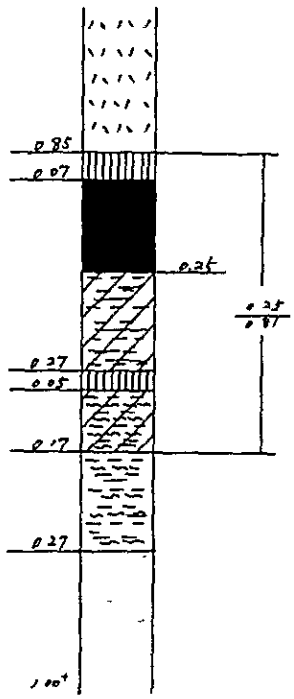
M030101 (N60W; 10N)



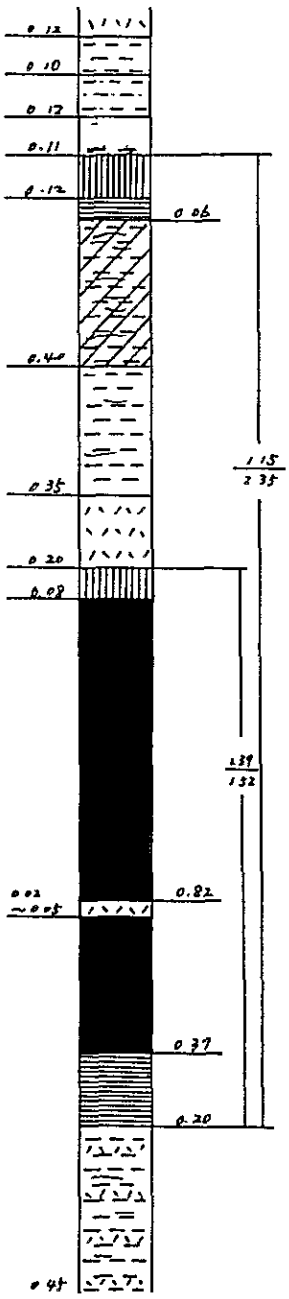
M030102 (N48W; 9S)



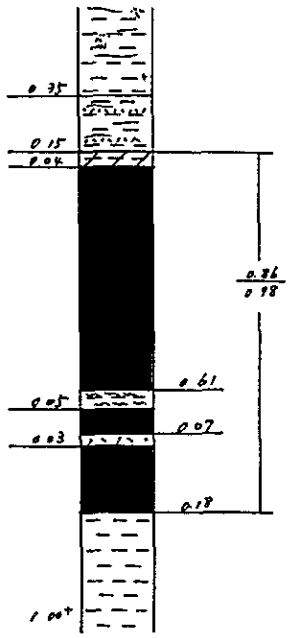
M030103 (N85W; 80S)



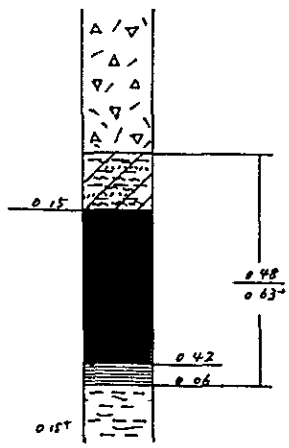
M030201 (N9E; 21W)



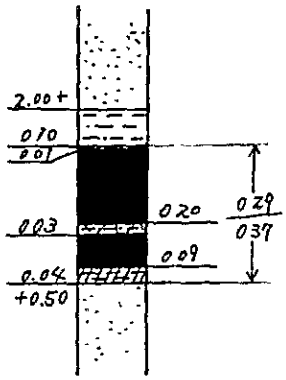
M030202 (N5E; 32W)



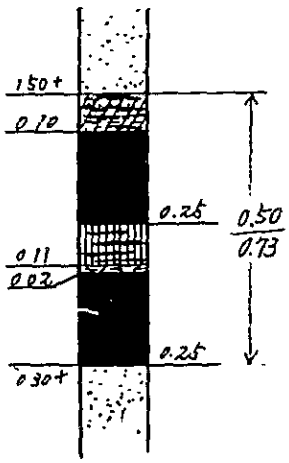
M030203 (black debris)



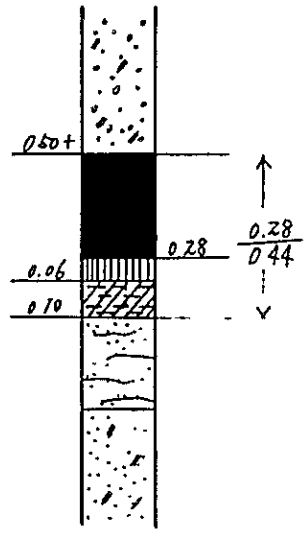
T072024 (N80W, 42E)



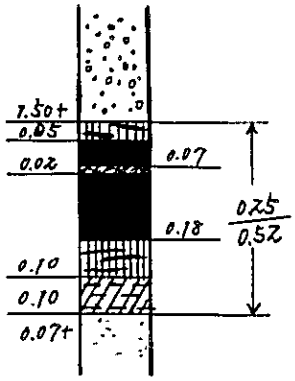
T072026 (N54W, 45E)



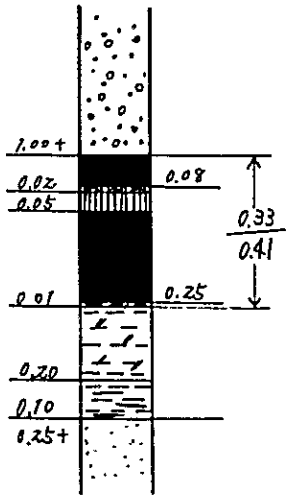
T072918 (N40W, 30E)



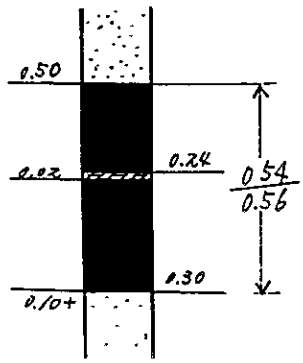
T072920 (N40W, 33E)



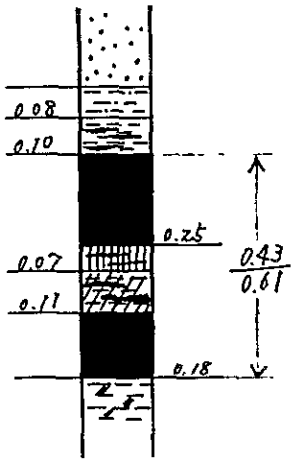
T072938 (N30W, 22E)



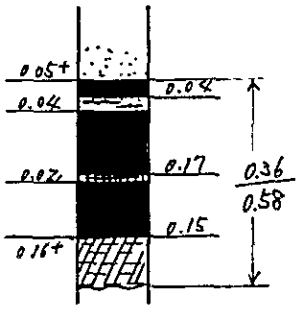
T072942 (N84E, 20S)



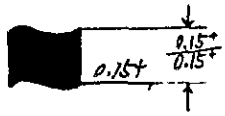
T072950 (N20W, 22E)



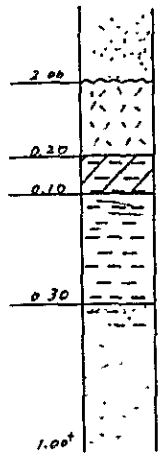
T072956 (N22W, 30E)



T072955 (N34W, 20E)

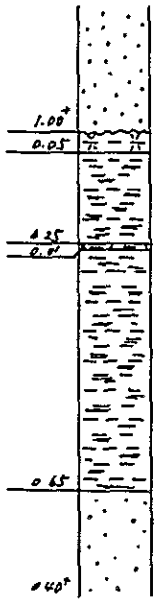


M070701 (N42W; 73N)



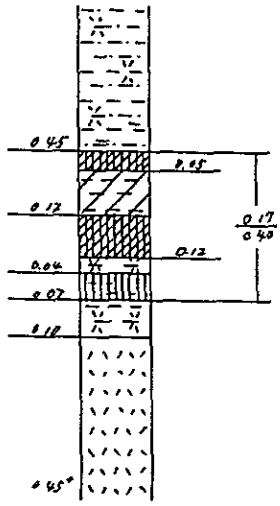
M071601

(block debris)



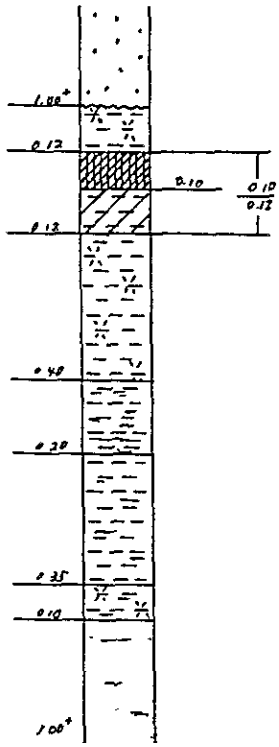
M070401

(block debris)



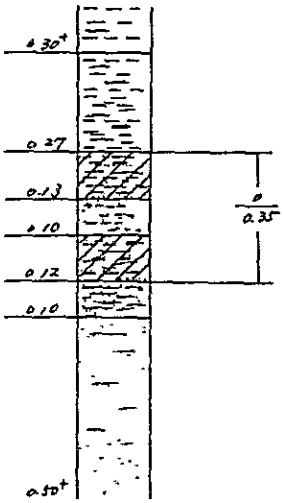
M070402

(N56E; 60S)



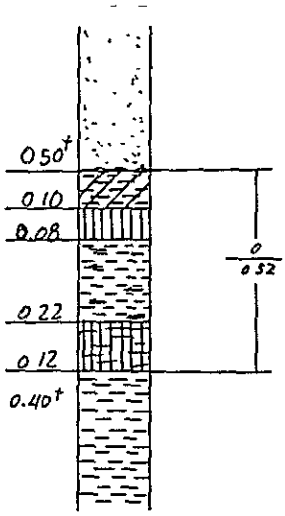
M031101

(N57W; 42E)

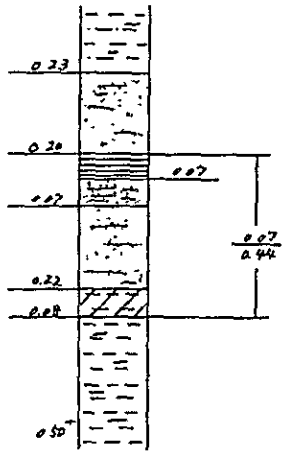


M031002

(N50W; 45E)

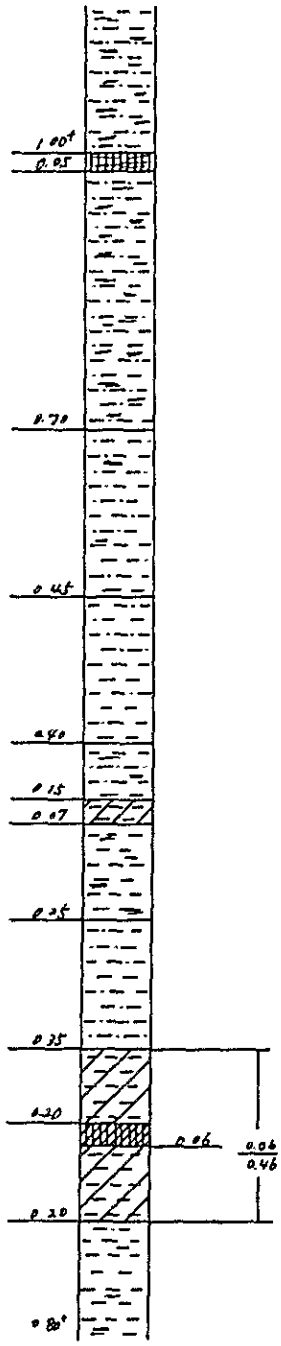


M031101



M072901

(N8W; 22W)



JICA