

DH-2

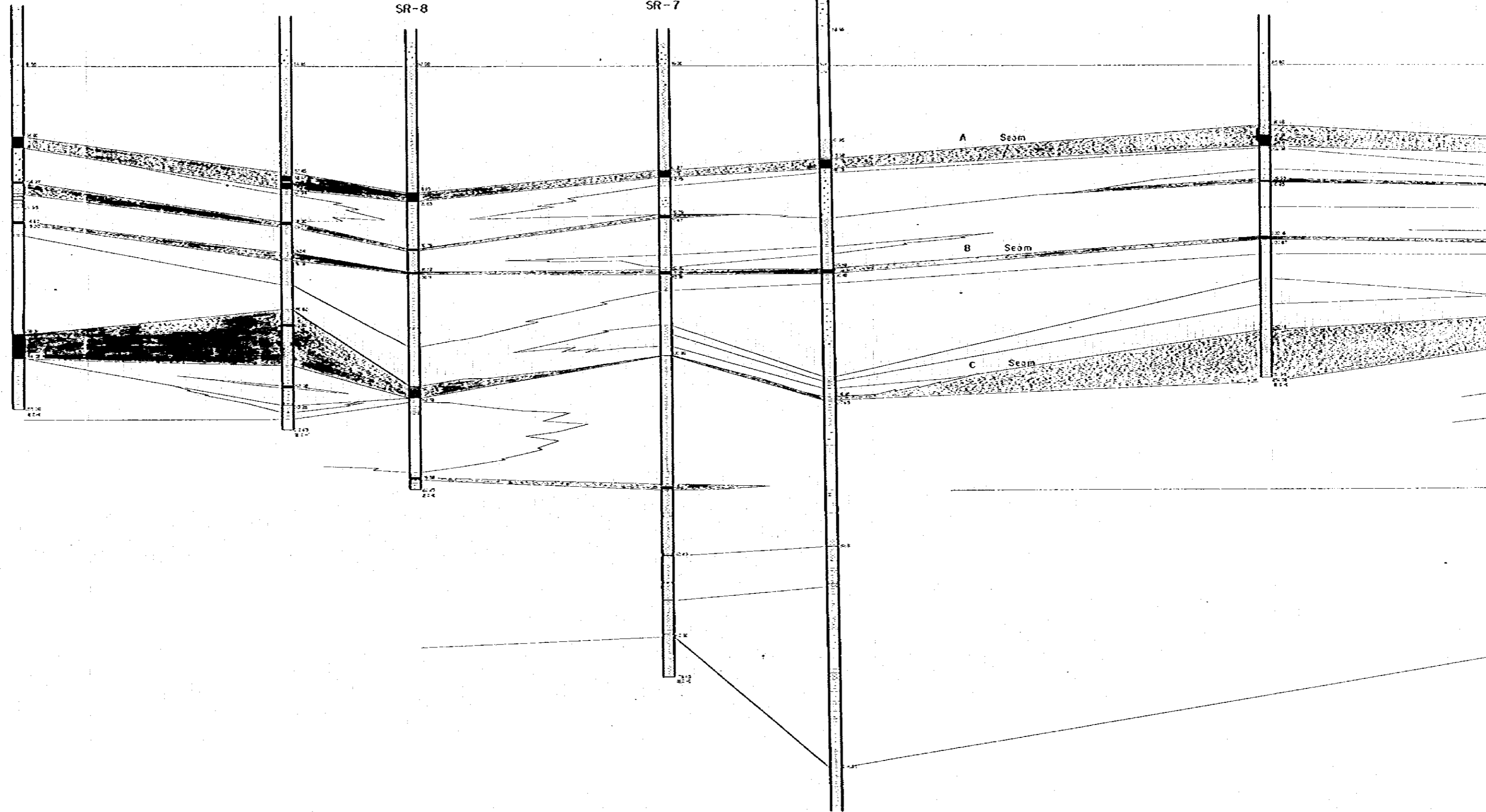
SR-2

SR-8

SR-7

DH-6

SR-4



SR-4

DH-7'

DH-7











W-1

Lower Sash Tambong Formation

Sowah Lunto Formation

SergKerawang Formation

Legend

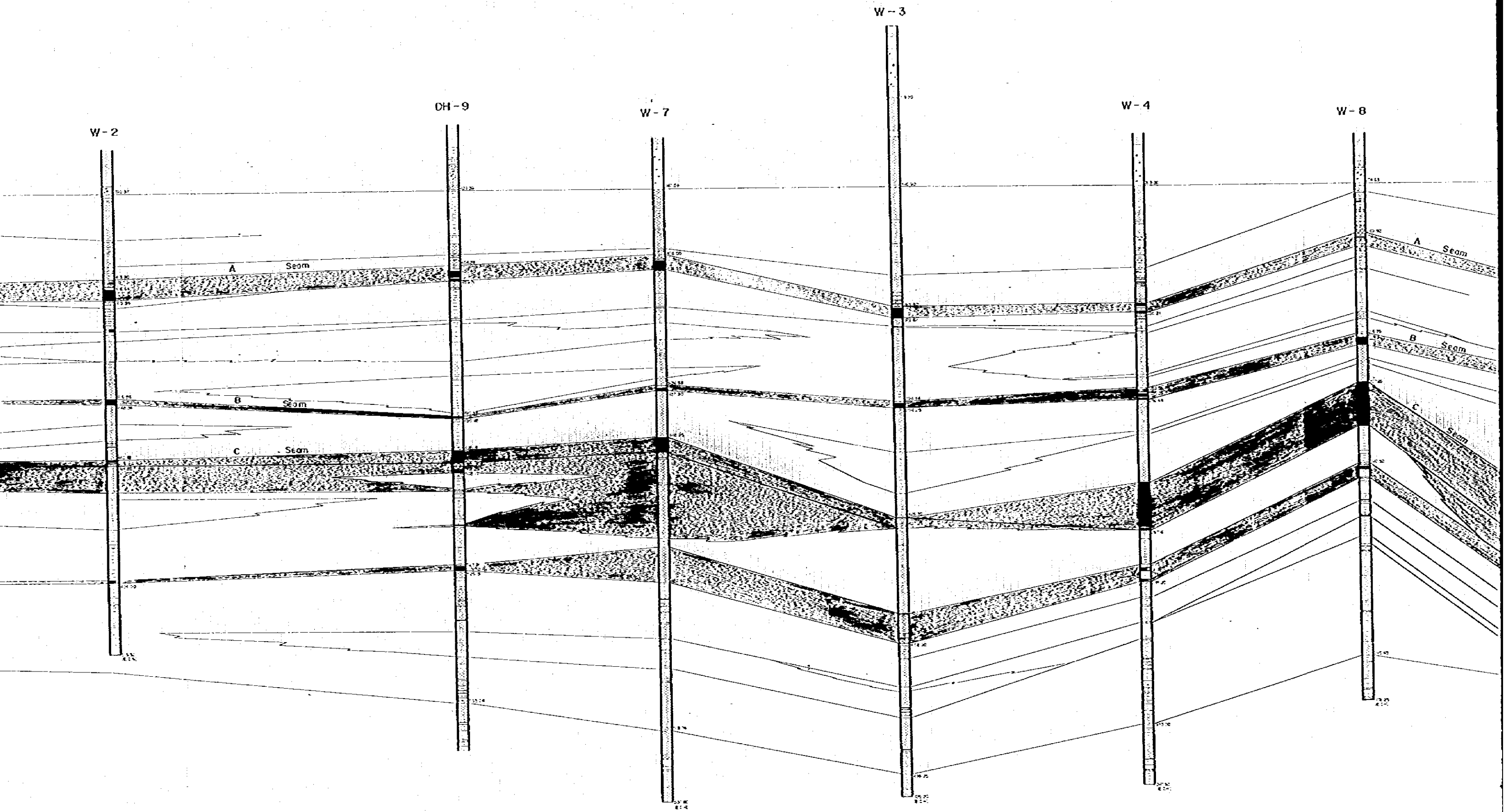
-  Coal, bright
-  Coal, inferior
-  Coaly shale
-  Carbonaceous mudstone
-  Mudstone
-  Siltstone
-  Conglomeratic sandstone
-  Coarse grained sandstone
-  Medium-fine grained sandstone
-  Clay (shaded zone)

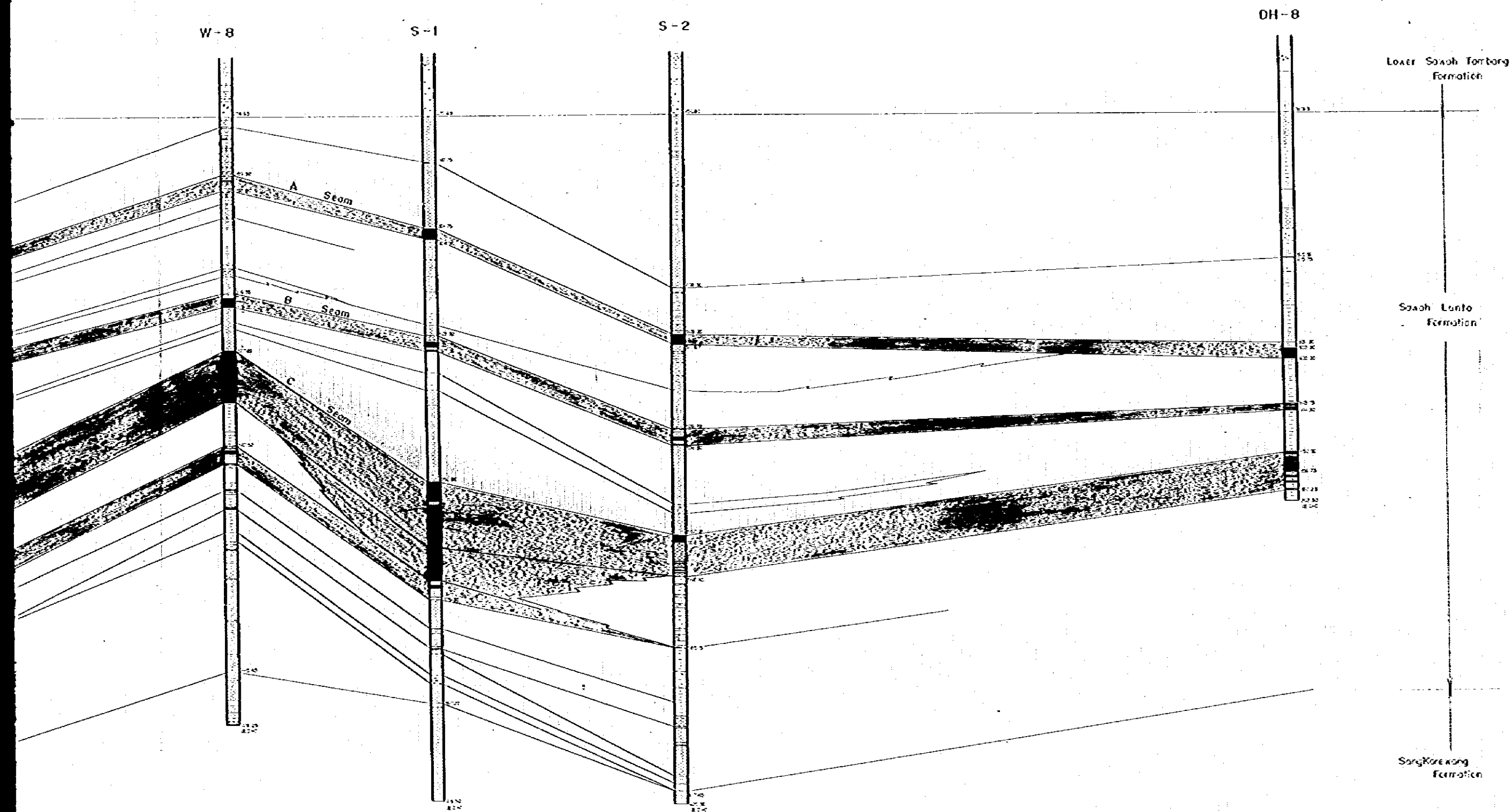
JAPAN INTERNATIONAL COOPERATION AGENCY

THE SURVEY FOR THE REHABILITATION OF CASILIN COAL MINE

**Development of Coal Seam
in Sowah Lunto Formation**

Draw No	6a	Scale	Vert 1:400 Hor 1:400
Date	July, 1970	Prepared by	S.Yog, K.Ho, I.Pegih



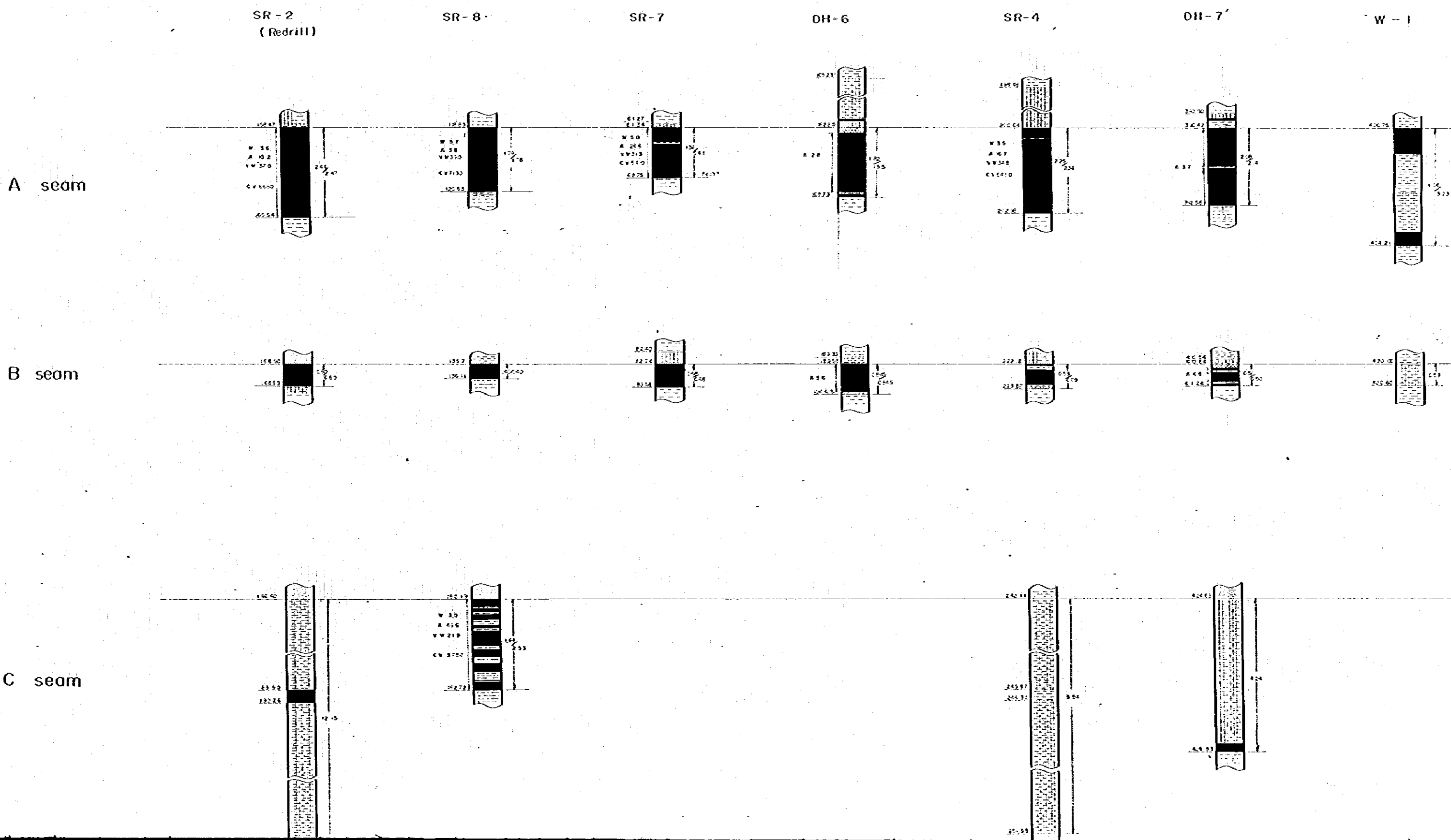


- Legend**
- Coal, bright
 - Coal, inferior
 - Coaly shale
 - Carbonaceous mudstone
 - Mudstone
 - Siltstone
 - Conglomeratic sandstone
 - Coarse grained sandstone
 - Medium-fine grained sandstone
 - Clay (shaded area)

JAPAN INTERNATIONAL COOPERATION AGENCY
 FIELD SURVEY FOR THE REHABILITATION OF CUSUM COAL MINE

**Development of Coal Seam
 in Sowah Lunto Formation**

Map No.	6b	Scale	Vert 1" = 300' Horz 1" = 400'
Date	July, 1979	Prepared by	S. Kato, T. Higashi



SR-4

DH-7

W-1

W-2

DH-9

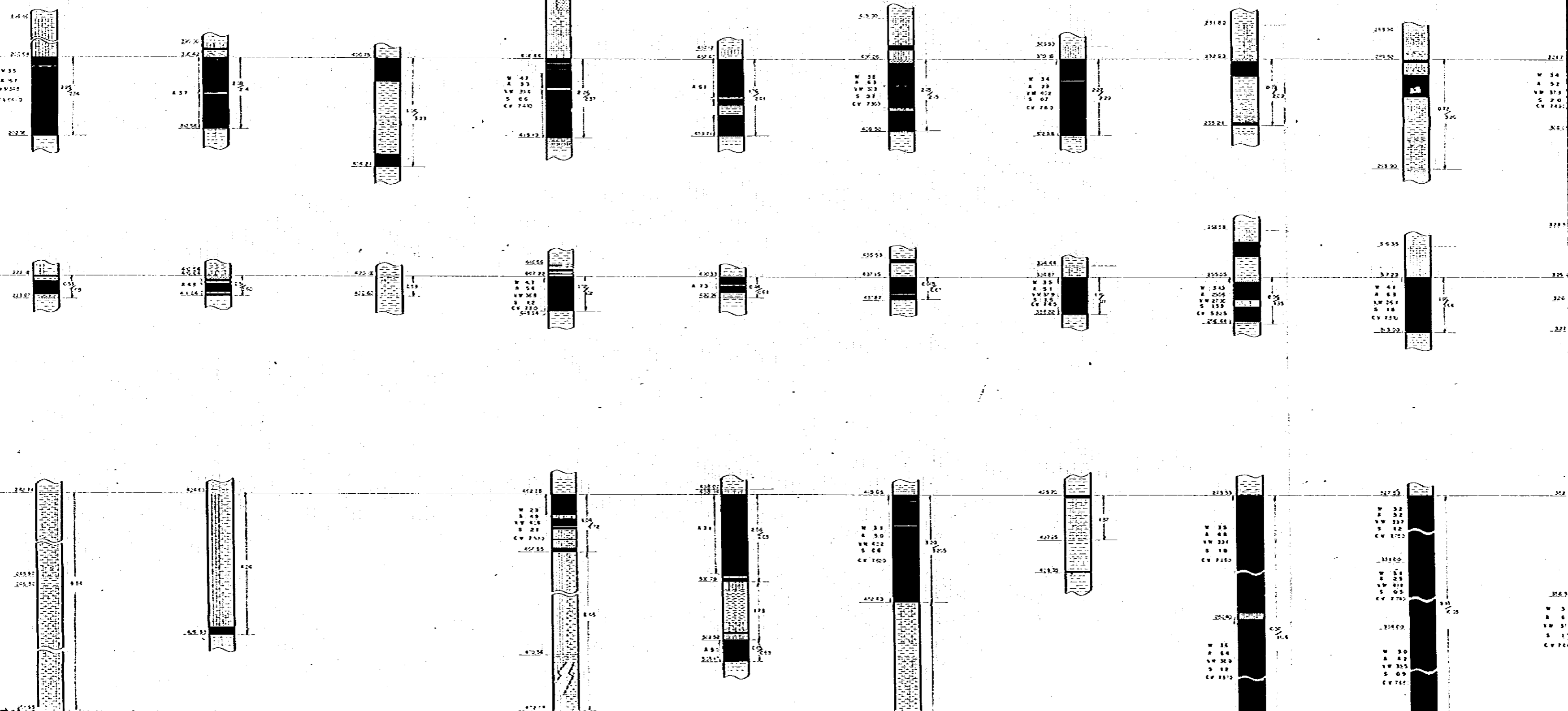
W-7

W-3

W-4

W-8

S



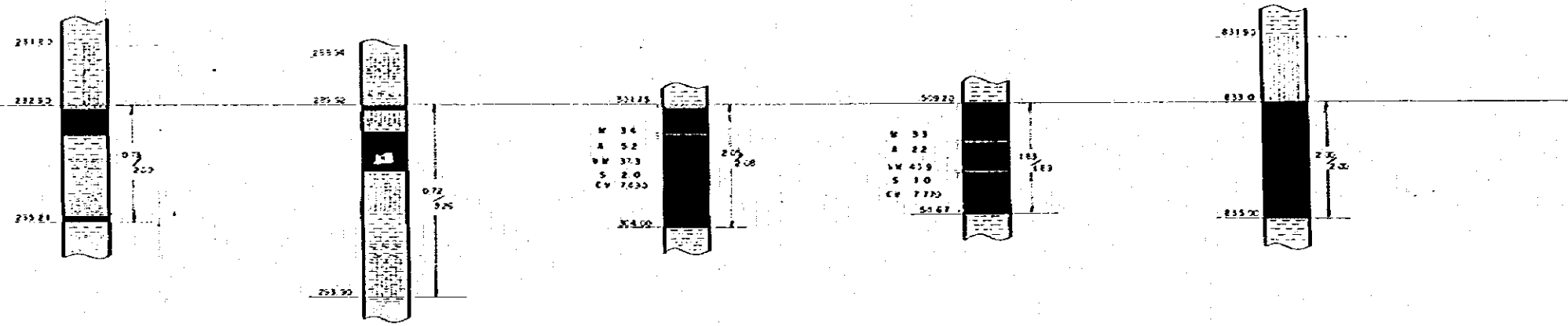
W-4

W-8

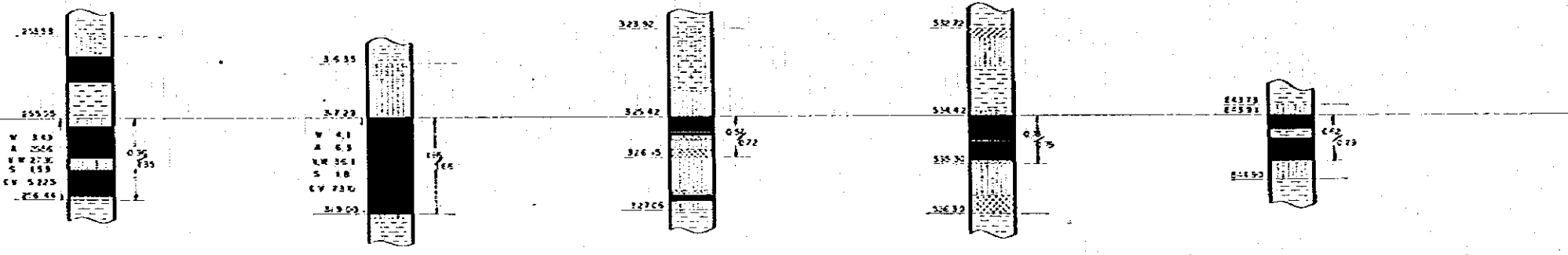
S-1

S-2

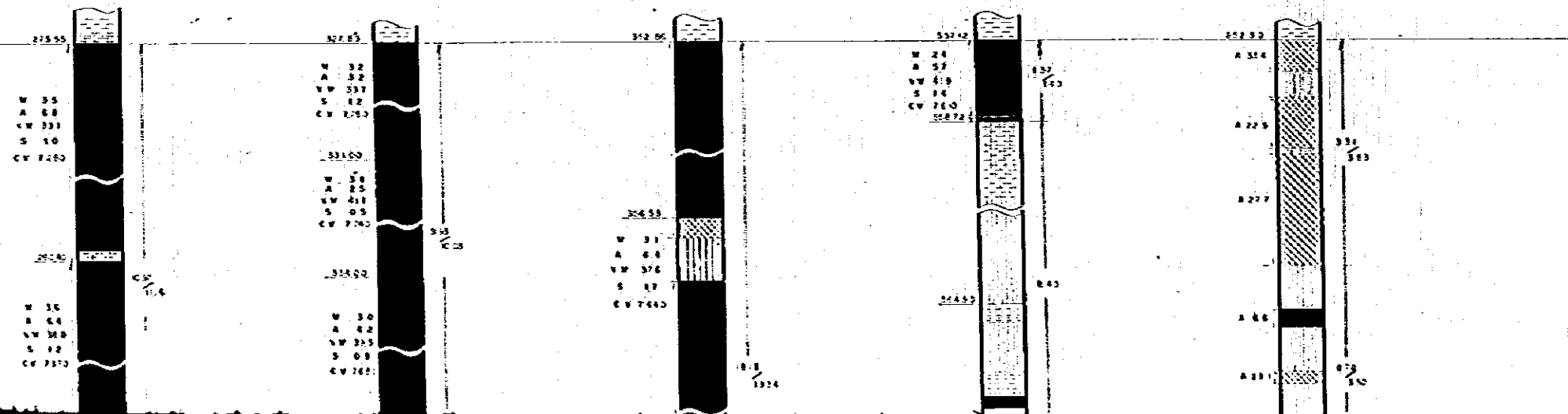
DH-8



A seam

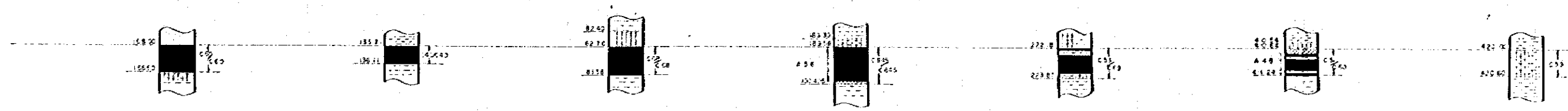


B seam

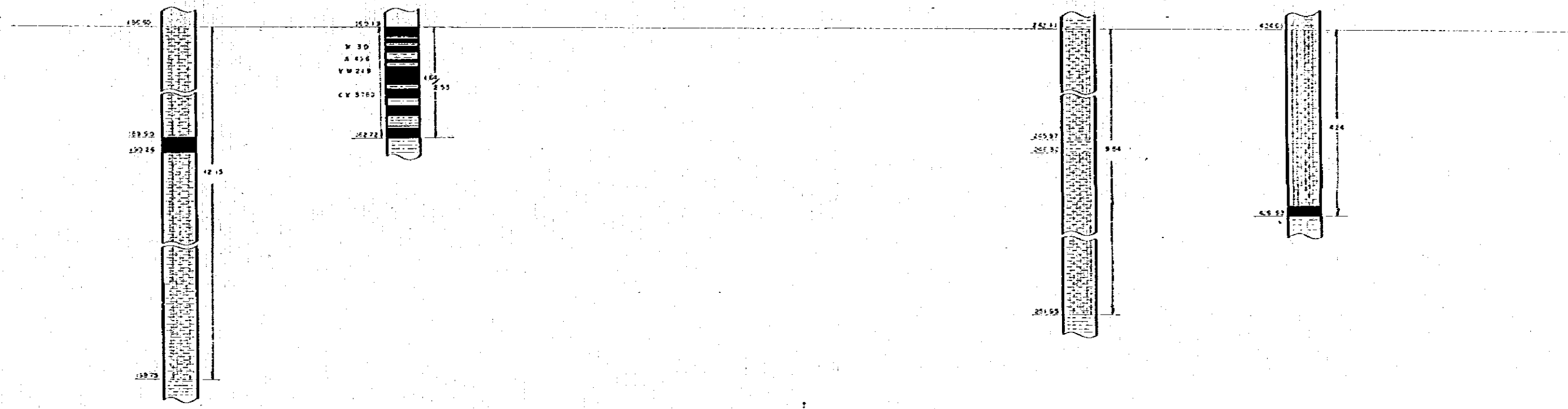


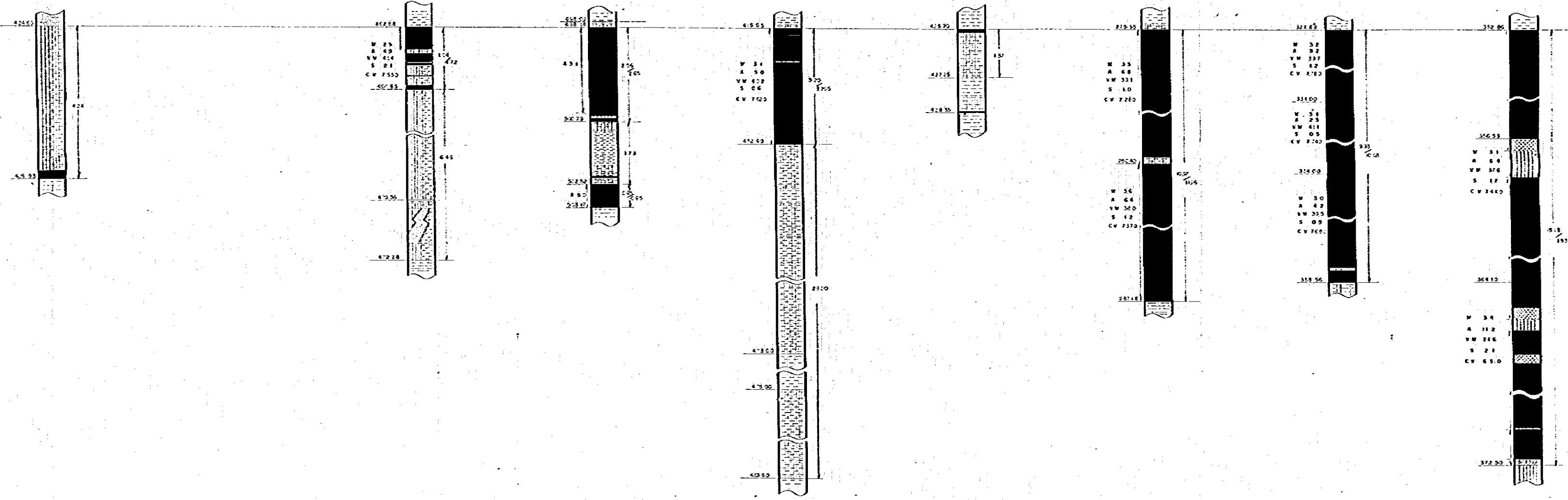
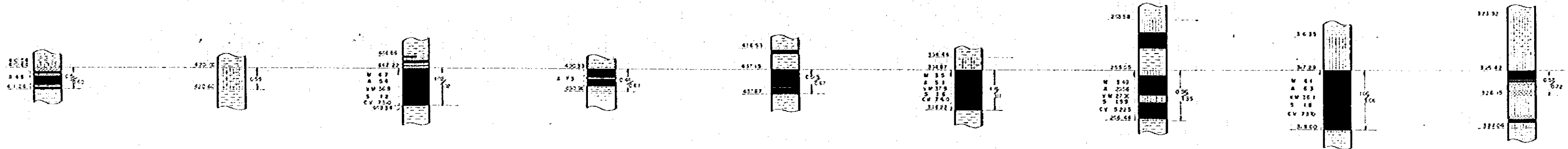
C seam

B seam

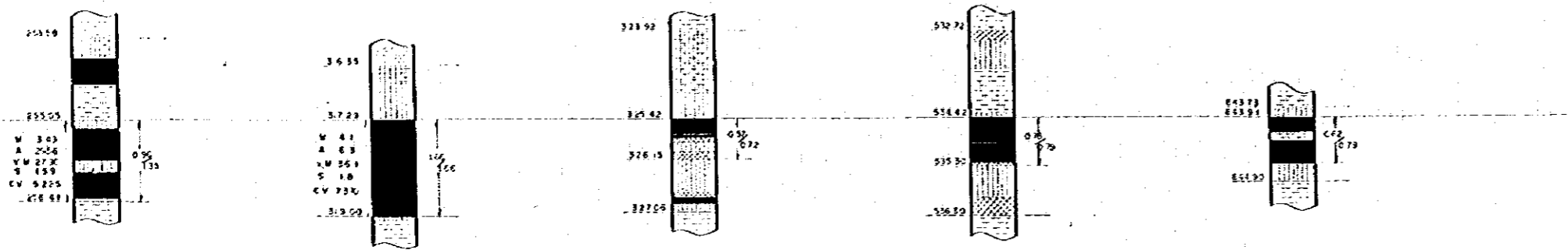


C seam

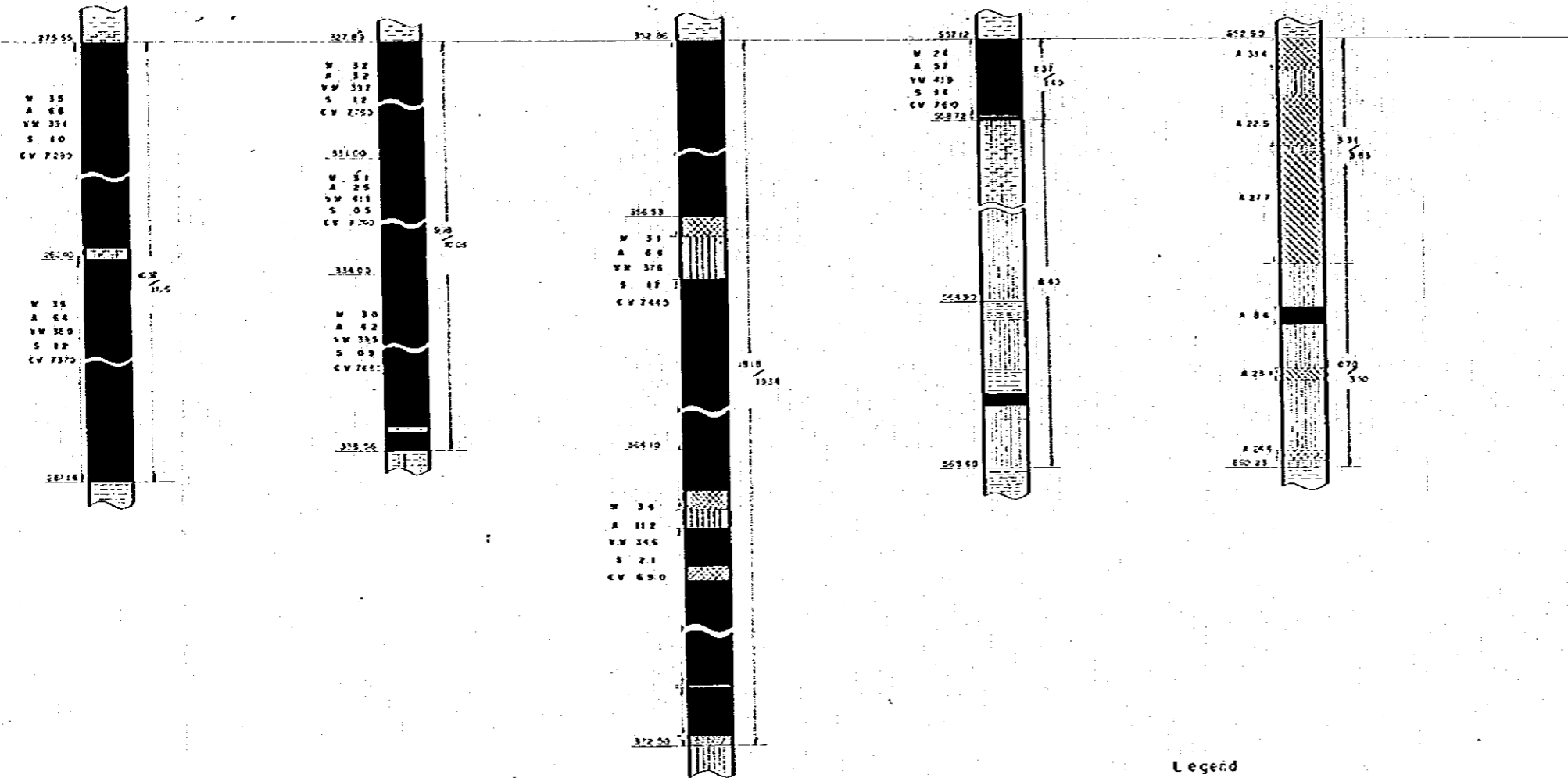




Remarks:
W-LW-2.W-3.W-4 W-7.W-
Others



B seam









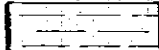
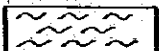
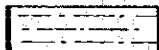
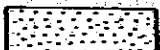
C seam

- Legend**
- Coal
 - Coal, inferior
 - Coaly shale
 - Carbonaceous mudstone
 - mudstone
 - Siltstone
 - Sandstone
- M. Inherent moisture %
 A. Ash %
 VM. Volatile matter %
 S. Total sulfur %
 C.V. Calorific Value kcal/kg.

Remarks;
 W-1, W-2, W-3, W-4, W-7, W-8, S-1, S-2 --- True thickness
 Others --- Apparent thickness

JAPAN INTERNATIONAL COOPERATION AGENCY			
THE SURVEY FOR THE REHABILITATION OF OUSLIN COAL FIELD			
Coal Seam Correlation			
Dwg. No.	7	Scale	1 : 50
Date	July, 1979	Prepared by	K. Ito

Legend

	coal, bright
	coal, medium bright (midreeneous)
	coal, dull
	coal, inferior
	coaly shale
	carbonaceous mudstone
	mudstone
	clay
	siltstone
	sandstone

JAPAN INTERNATIONAL COOPERATION AGENCY

(THE SURVEY FOR THE REHABILITATION OF OMBLIN COAL MINE)

Columnar Coal Section

Dwg. No.	8	Scale	1 : 20
Date	July, 1979	Prepared by	K. Ito, T. Negishi



COLUMNAR COAL SECTION FOR A-SEAM, W-2

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
A-seam	415.50					mudstone dark grey	
	415.50	1.08	0.07			coaly shale	
	415.63	0.07	0.06			mudstone carbonaceous	
	416.00	0.35	0.31			coaly shale w/ bright coal streaks	
	416.15	0.15	0.13			mudstone, carbonaceous	
	416.44	0.29	0.26			coaly shale w/ bright coal streaks	
	416.60	0.18	0.14			coal, brittle	
	416.63	1.03	1.03			coaly shale	
	416.80	0.17	0.15			coal, brittle	
	416.83	0.03	0.03			clay, carbonaceous	
	416.95	0.12	0.11			coal, brittle	
	224 /3AA (true)	417.43	0.10	0.13			coal, bright brittle & porous in parts
417.59		0.06	0.05			mudstone, very dark grey	
226 /231 (true)	419.10	1.61	1.43			coal, bright brittle in some part	
	419.22	0.12	0.11			mudstone, carbonaceous	
	419.28	0.06	0.05			coaly shale	
	419.37	0.09	0.08			mudstone, carbonaceous	
						mudstone massive pale grey	

COLUMNAR COAL SECTION FOR B-SEAM, W-2

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
						midstone ch. coal band hard, massive	
	446.86						
	446.91	0.05	0.05			sh. dull, waxy shale	
	447.00	0.09	0.08			waxy shale	
B-seam	447.07	0.07	0.06			coal dull, powdered	
	447.12	0.05	0.05			waxy shale	
	447.15	0.03	0.03			coal, dull	
	447.22	0.07	0.06			waxy shale	
							slipping 25'
						coal, bright, massive	
						dull in the lower part	
	448.26	1.04	0.95				
	448.34	0.08	0.07			coal, dull, hard	
						midstone pale gray massive, rather soft	

102/135
102/102
(true)




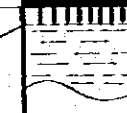

COLUMNAR COAL SECTION FOR C-SEAM, W-2

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
	462.88						
C-SEAM 104/ 172 (True) 104/ 651 (True)						coal, bright, 463.30~50 medium bright, luttled	slipping 30'
	463.60	0.72	0.63				
	463.74	0.14	0.12			waxy shale w/ bright coal streaks	
	464.00	0.26	0.23			coal, dull, luttled	
	464.03	0.03	0.03			waxy shale	
	464.09	0.06	0.05			coal, mid. bright, parting	
	464.41	0.32	0.28			waxy shale & carb. mudst. w/ bright coal streaks	
	464.46	0.05	0.04			coal, dull	
	464.75	0.29	0.25			waxy shale & carb. mudst. w/ bright coal streaks	
	464.85	0.10	0.09			coal, dull	
						waxy shale, blue & carb. mudstone, charcoal brown w/ bright coal streaks	
	470.36	5.51	4.77				
						mudstone, brownish gray, w/ waxy shale	

COLUMNAR COAL SECTION FOR A-SEAM, W-3

Scale, 1 : 20

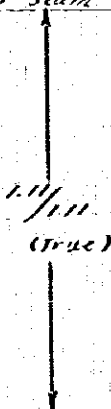
SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
	369.00					shale, grey, clayey	
	370.18	0.30	0.37			coaly shale	dip: 14°
	370.07	0.59	0.66			coal almost bright	
	370.89	0.02	0.02			coaly shale	
						coal almost bright	
	372.56	1.67	1.61				
	372.61	0.05	0.05			coaly shale	
						mudstone, grey	dip: 10°

2.27 / 2.29
(True)

COLUMNAR COAL SECTION FOR B-- SEAM, W-3

Scale 1:20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
	394.47					marlstone, dark gray	
						carbonaceous marlstone	
B seam	394.07	0.43	0.35			coal dull to mid,	dip: 35°
						coal Almost bright 395.20 - 395.55 (0.35 W. 0.01 - 0.20) carbonaceous & ppile	dip 35°
	396.22	1.35	1.11			carbonaceous shale	
	396.23	0.03	0.02			marlstone, dark gray	



COLUMNAR COAL SECTION FOR B-SEAM, W-4

Scol, I : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
	253.58					medium grey massive silty, in parts.	
	253.95	0.37	1.36			medium carbonaceous detrital coal & coaly shale, massive	
	254.10	0.15	0.43			coal, dull coaly shale in lower	
						medium, light grey/blue carbonaceous in parts	
B-seam	255.05	0.85	0.63			coaly shale	
	255.18	0.13	0.13			coal, dull & section bright	
	255.31	0.13	0.13			coal, dull	255.31-255.61 core flushed out
	255.70	0.41	0.40			coaly shale, massive	
0.96 / 1.35 (true)	255.93	0.21	0.20			coal, section bright	Dip : 15°
	255.98	0.05	0.05			coal, bright, massive	
	256.37	0.39	0.38			coaly shale, massive	
	256.44	0.07	0.06			medium massive dark grey.	

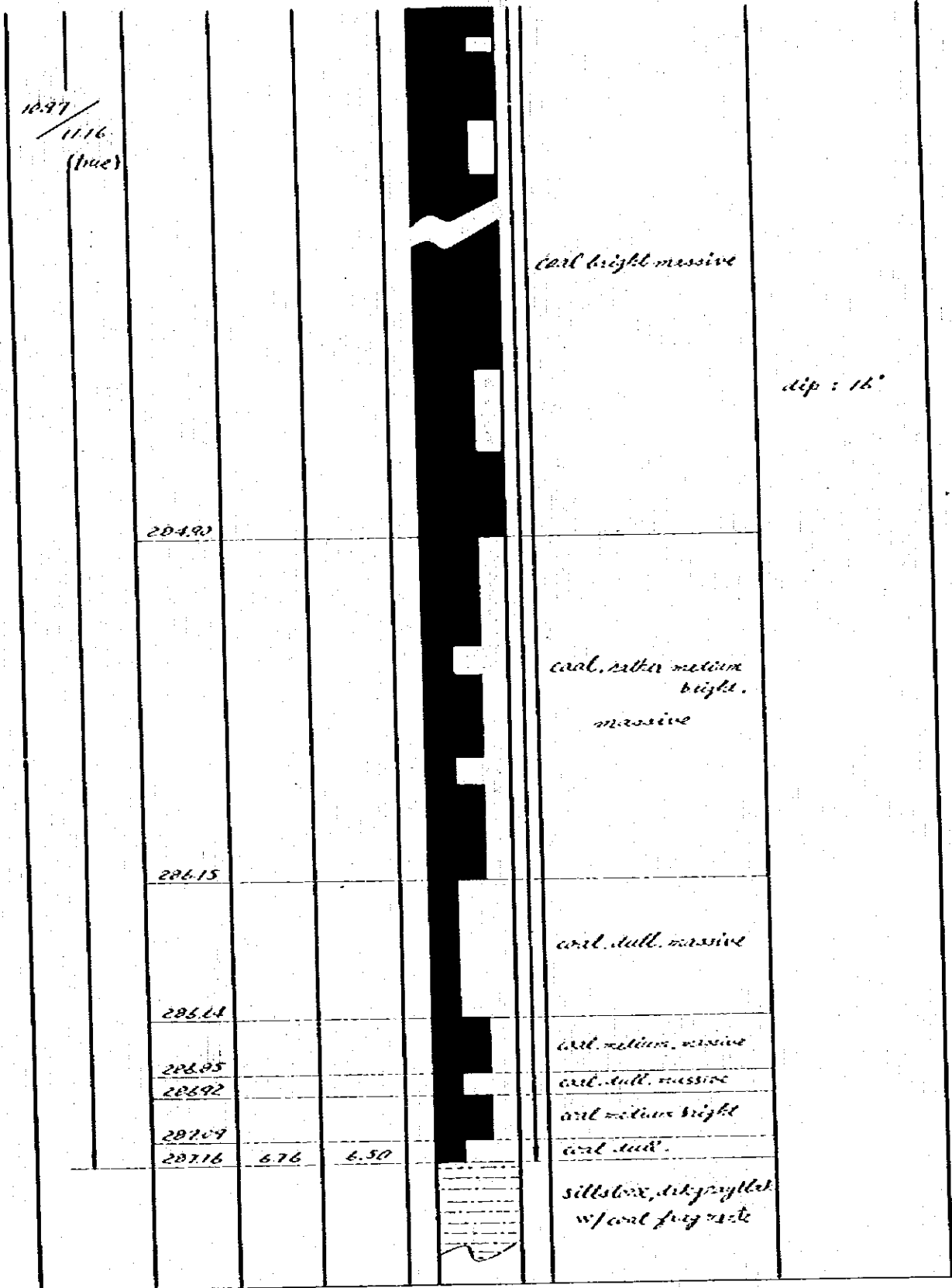
COLUMNAR COAL SECTION FOR C-SEAM, W-4

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
C-Seam	275.40					mudstone, bright, massive	
	275.55					mudstone, carbonaceous	
	276.90					coal, bright, massive	
	277.90					coal, medium bright, massive	
	280.20	1.65	1.47			coal, bright, massive	
	280.40	0.20	0.19			mudstone, carbonaceous hard.	

(continue)

1097 / 1116
(true)



coal bright massive

dip : 16°

20490

coal, rather medium
bright,
massive

20615

coal, dull, massive

20614

coal, rather, massive

20605

coal, dull, massive

20692

coal rather bright

20709

coal, dull.

20716

6.76

4.50

siltstone, dk gray blk
w/ coal frag r. s. l.

COLUMNAR SECTION FOR A-SEAM, W-7

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		AFFARENT	TRUE				
A seam	405.85					carbonaceous mudstone block	Dip: 14°
	405.97	0.12	0.12			coal, bright	
	406.26	0.29	0.28			craly shale	
	406.38	0.12	0.12			coal 2nd part, to soil dull & bright	
	406.76	0.38	0.37			coal, bright	
	406.90	0.14	0.13			coal, bright, w/ calcite vein	include calcite in sampling
	407.07	0.17	0.16			coal, bright	
	407.18	0.03	0.03			mudstone, dark gray	Dip: 14°
	205/215 (true)					coal, bright	
	407.80	0.70	0.67			carbonaceous mudstone	
407.87	0.07	0.07			coal, bright		
408.15	0.28	0.27			mudstone, dark gray		
408.155	0.05	0.05			coal, bright		
408.50	0.315	0.33			craly shale		
408.55	0.05	0.05			mudstone, gray silty		

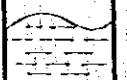



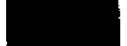



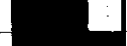




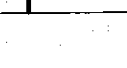
COLUMNAR SECTION FOR B-SEAM, W-7

Scale, 1 : 20

SEAM NAME	DEPTH (W)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
B-seam	436.53					mudstone, dark grey fractured	
	436.58	0.05	0.05			carbonaceous mudstone	
	436.70	0.12	0.11			coal, bright	
						mudstone, dark grey	
	437.15	0.45	0.42				
0.665 /0.67 (true)	437.70	0.55	0.51			coal, bright	Dip = 21°
	437.705	0.005	0.005			mudstone w/ pyrite	
	437.87	0.185	0.155			coal, bright w/ very thin (less than 1/4") concretion veins	
	437.90	0.03	0.03			early shale	
						mudstone, grey	

COLUMNAR SECTION FOR C-SEAM, W-7

Scale, 1:20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	DISCRIPTION	REMARKS
		APPARENT	TRUE			
C SEAM	448.95				mudstone gray	
	449.05				fractured	
	449.25	0.20	0.19		carbonaceous mudstone	
	449.255				coal	
					waxy shale	
					coal, bright	
	450.00	0.745	0.71		coal, bright & dull	
	450.05	0.05	0.05		coal, bright, dull, shaly	
	450.25	0.20	0.19		coal, bright & dull	
					coal, bright	Dip: 17°
	451.96	1.71	1.64		coal, bright & dull	Dip: 17°
				w/ calcite vein	include calcite in sampling	
	452.40	0.44	0.42		carbonaceous mudstone	
				black, silty		

3.20 / 3.205 (True)

COLUMNAR COAL SECTION FOR B-SEAM, W-8

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
B-seam (true thickness)	316.35					all. silty, gray, mudst. brown-gray Sandst. fine, white gray	
	316.65	0.30	0.29			carbonaceous mudstone, charcoal brown, massive	
	317.29	0.64	0.62			lark shale, massive, black w/ coal imp. streaks	
	317.60	0.31	0.30			coal, bright and slightly dull. (broken coal)	
1.64 / 2.56 (true)						coal, bright, massive	Dip = 15° (not clear)
	318.26	0.66	0.64			coal, not dull "pieces"	
1.24 / 1.66	318.38	0.12	0.12				
						coal, bright, massive	
	319.00	0.62	0.60			coal, not dull, massive 3:27	
	319.05	0.05	0.05				
						mudstone, massive, dark gray	

COLUMNAR COAL SECTION FOR C-SEAM, W-8

Scale, 1 : 20



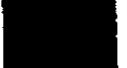



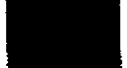

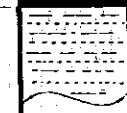
SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
C-seam	327.89					micstone dark grey massive, carbonaceous in lower	
						coal, bright slightly dull and dry in part brittle & phytic	
	330.10	2.21	2.08				dip: 20° (not sure)
						coal, bright, massive	
	332.00	1.96	1.79				(continues)

2.93
10.07
(total)

					coal, bright massive partly dull s. rather "heavy"
333.00	1.00	0.91			
					coal, bright, massive
337.00	1.00	3.76			
337.25	0.25	0.21			coal, bright massive (fisher core)
					coal, bright massive
338.09	0.04	0.79			
338.20	0.11	0.10			gray silt, massive
338.41	0.21	0.25			coal, bright, massive
338.56	0.09	0.00			coal, not bright, massive
					siltstone, dark gray, carbonaceous w/ coal lens streaks

COLUMNAR SECTION FOR A-SEAM, S-1

SCALE, 1: 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE			
A-seam	301.75				mudstone, gray to dark gray, soft, clayey, carbonaceous matter	dipping 15°
	301.92	0.07	0.07		coal, dull, barbed. End	
					coal, bright	
	302.12	0.30	0.29		coal, dull	
	302.20	0.08	0.07		coal, bright	
	302.28	0.08	0.07		coal, bright	
	302.31	0.03	0.03		siltstone, fine sand, gray	dipping 20°
					coal, bright	
	304.00	1.49	1.55		mudstone, gray, and siltstone to sandstone very fine, light gray, random alternation	dipping 27°

2.05 / 200 (true)

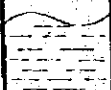



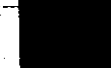





COLUMNAR SECTION FOR B-SEAM S-1

Scale, 1 : 20

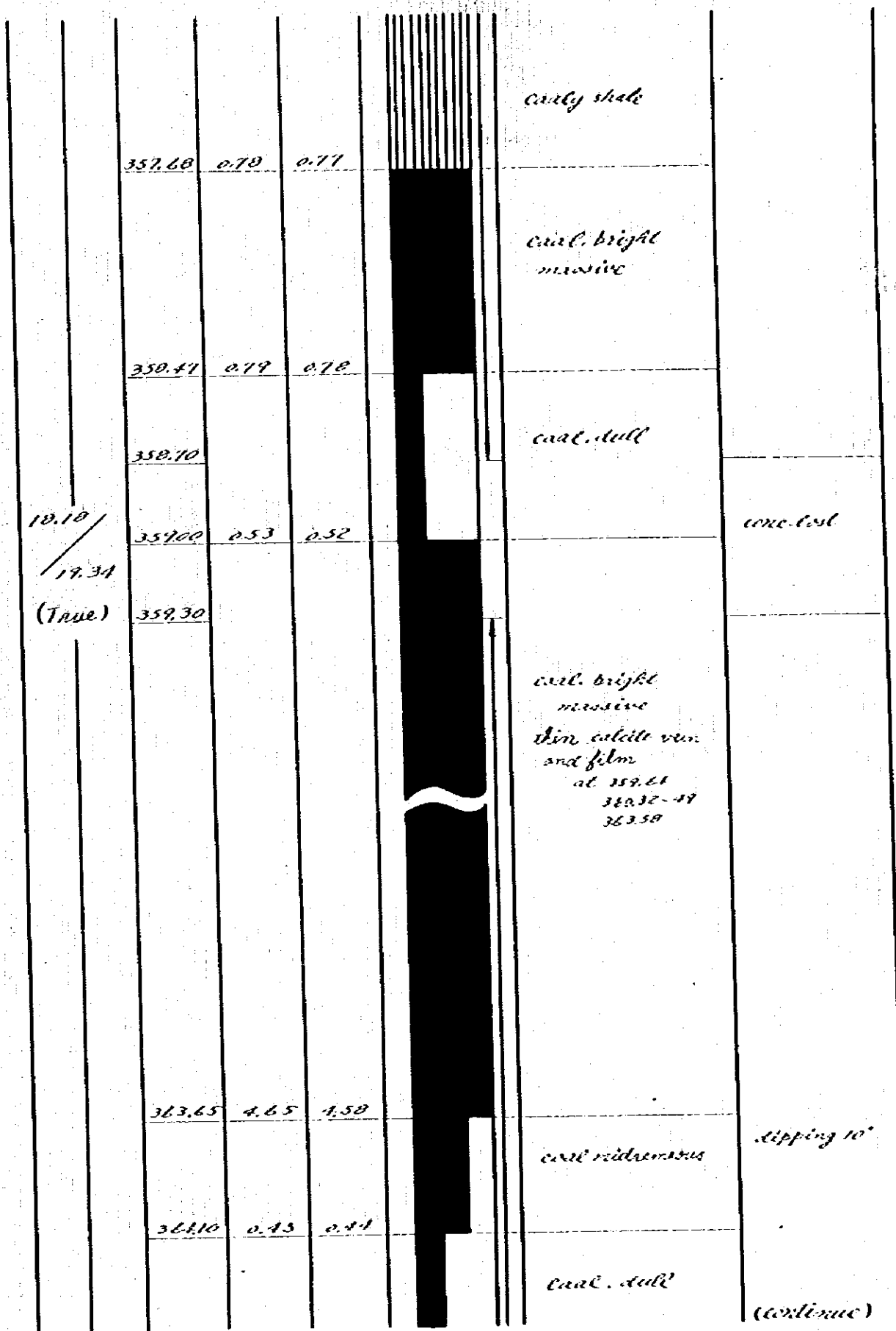
SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
	325.00					mudstone, carb. black to darkgray	dipping 10°
B. SEAM	325.42	0.42	0.41			coaly shale crushed	
0.37 10.72 (true)	325.70	0.28	0.27			coal, bright	
	325.72	0.02	0.02			coaly shale	
	325.76	0.04	0.04			coal, bright	
	325.87	0.11	0.11			coal, dull, banded, inferior	
	326.00	0.13	0.13			coaly shale	
	326.15	0.15	0.15			coal, dull, banded inferior quality	
						coaly shale crushed at top corner	
	326.70	0.55	0.54			coal, dull, inferior	
	326.81	0.11	0.11			coal, bright	
	326.90	0.09	0.09			coaly shale	
	327.06	0.16	0.16			mudstone, gray massive	

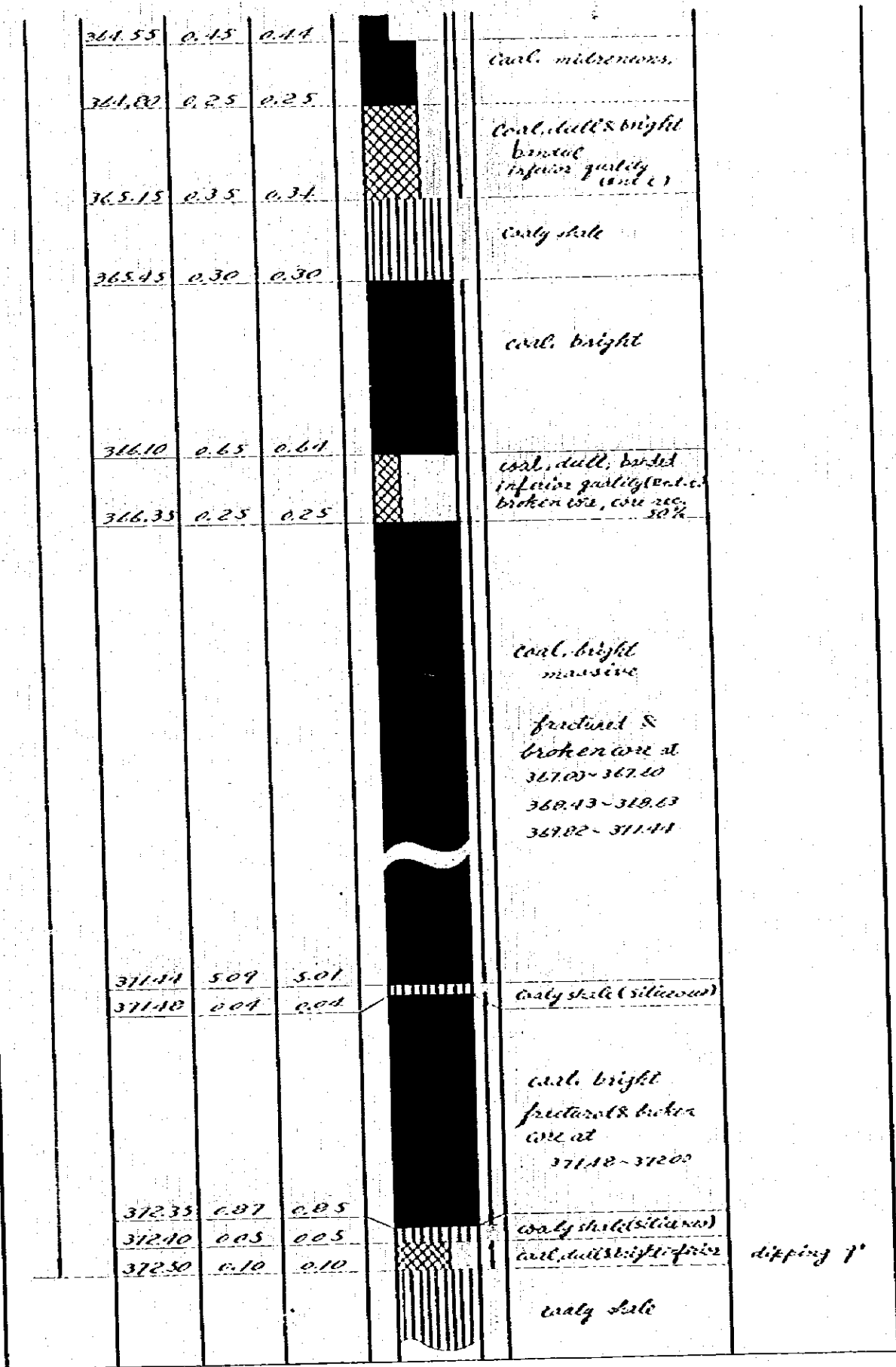
COLUMNAR SECTION FOR C-SEAM, S-1

Scale, 1:20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
C-SEAM	352.06					mudstone dark gray	
	353.00	0.14	0.14			Coal, bright fractured completely crushed at top	
						Coal, bright massive	dipping 10°
	355.10	2.10	2.07			Coal, bright fractured	
	355.32	0.22	0.22			coal, dull & bright crushed laminated	
	355.72	0.40	0.39			coal bright	
	356.00	0.20	0.20			coal, micaceous	
	356.53	0.53	0.52			coal, dull bedded, inferior quality (first coal)	dipping 10°
	356.90	0.37	0.36				
							

(continue)





COLUMNAR COAL SECTION FOR A-SEAM, S-2

Scale, 1 : 20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
A-seam (true thickness)	509.20					mudstone, dark gray	
103 / 109						coal, bright broken core	
	510.02	0.82	0.63			carbonaceous mudstone	dip: 36°
	.21	0.02	0.03				
	510.65	0.59	0.45			coal, bright broken core	
	.18	0.03	0.02			coal, dull	
	.72	0.04	0.03			carbonaceous mudstone	dip: 34°
	511.10	0.46	0.35			coal, bright	
	.21	0.03	0.02			coal, bandlet, inferior	
	511.67	0.36	0.36			coal, bright w/ pyrite in upper part (fill in with)	
						mudstone gray to dark gray	dip: 34°

COLUMNAR COAL SECTION FOR B-SEAM, S-2

Scale, 1 : 20

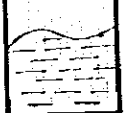



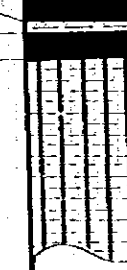
SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS
		APPARENT	TRUE				
B-seam (true thickness)	531.30					midstone, gray to black	
	.42	0.12	0.10			coaly shale	Dip: 20°
	534.63	0.21	0.19			coal, bright	
	.71	0.00	0.07			coal, dull	
	.82	0.11	0.10			coal, bright	
	.87	0.05	0.045			coal, dull	
	.88	0.01	0.01			coaly shale	
						coal, bright	
	535.25	0.37	0.33			coal, banded inferior	
	.30	0.05	0.045				
						coaly shale	
	535.91	0.61	0.54			coal, banded inferior	Dip: 26°
	536.30	0.39	0.35			midstone, silty gray to dark gray	

0.70
/ 0.79

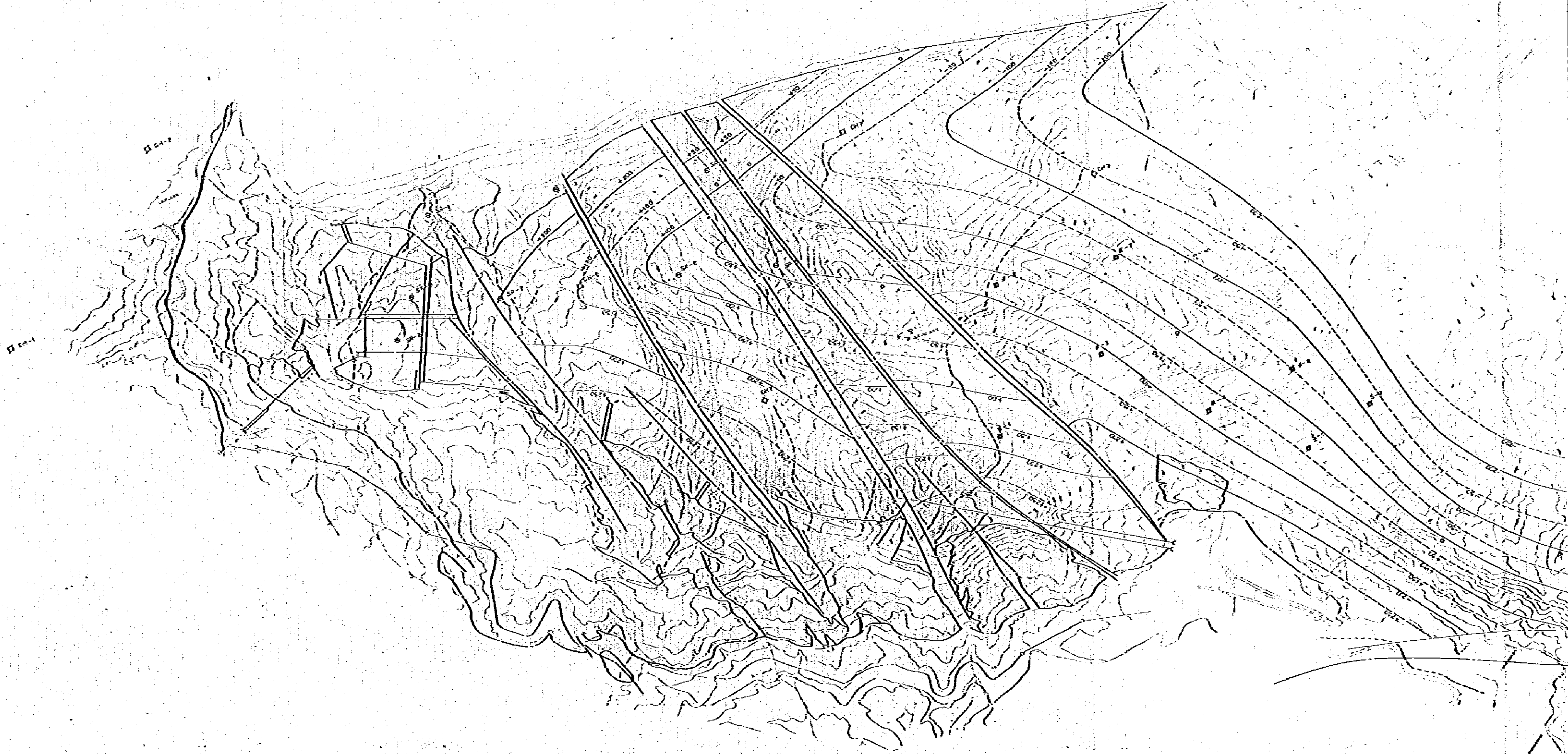
1.13
/ 1.18

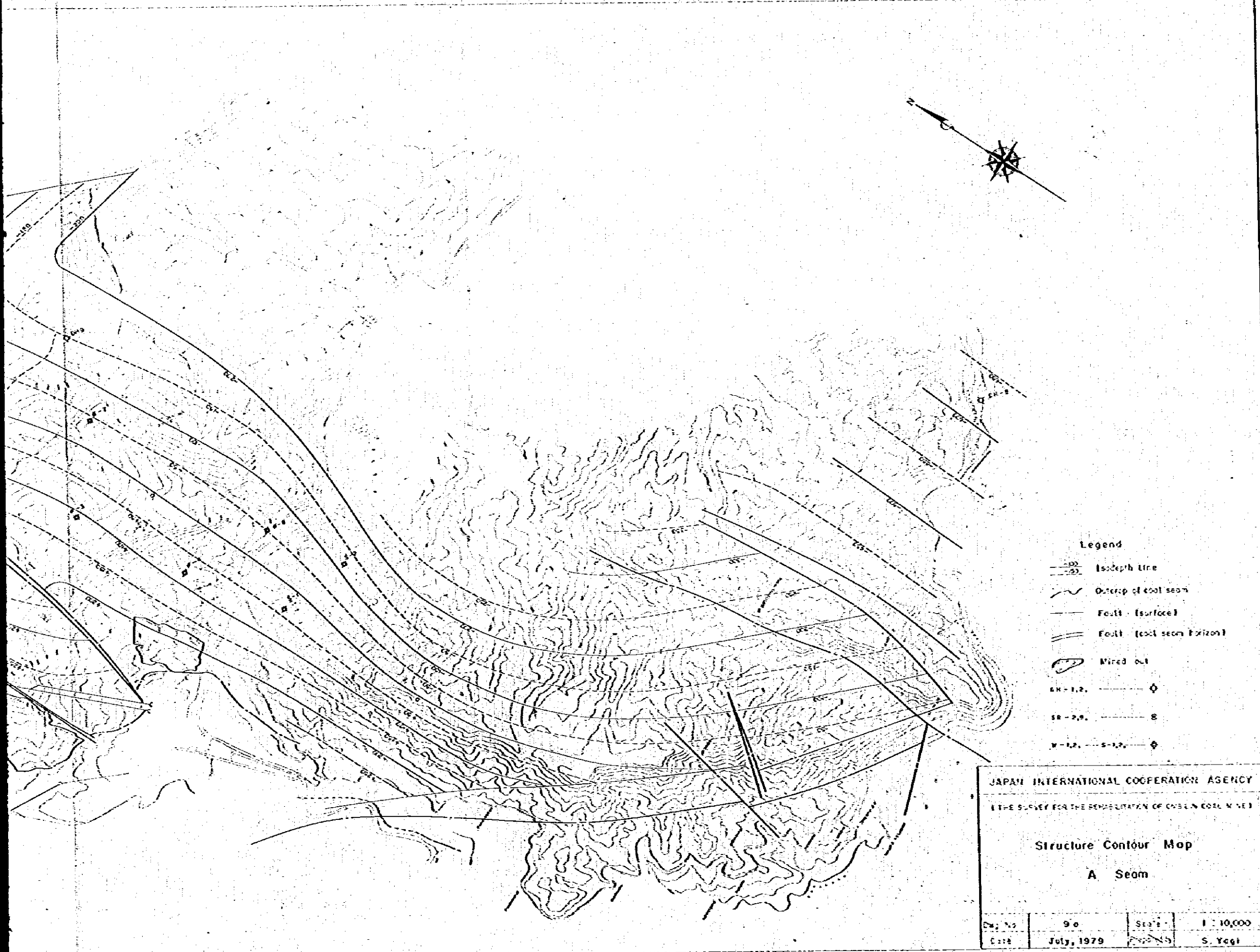
COLUMNAR COAL SECTION FOR C-SEAM, S-2

Scale, 1:20

SEAM NAME	DEPTH (M)	THICKNESS (M)		COLUMN	SAMPLE	DESCRIPTION	REMARKS	
		APPARENT	TRUE					
C-seam <i>Urea. Mich.</i>	557.12					mudstone dark grey fractured & slickensided	dip: 20°	
	557.44	0.32	0.20			coal, bright w/ pyrite		
	557.72	0.28	0.24				coal, dull w/ calcite vein 1.5cm width	occlude calcite vein in sample
	558.61	0.89	0.78				coal, bright	
	.64	0.03	0.03				mudstone, grey	
	.72	0.08	0.07				coal, bright	dip: 30°
						mudstone, silty carbonaceous w/ abundant carb. matter		

1.37
1.50





Legend

- Isodepth line
- Outcrop of coal seam
- Fault (surface)
- Fault (coal seam horizon)
- Mined out
- AH-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
- SB-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90
- W-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90

JAPAN INTERNATIONAL COOPERATION AGENCY
 THE SURVEY FOR THE DEMONSTRATION OF CASUAL COAL MINES
 Structure Contour Map
 A Seam

Doc. No.	90	Scale	1:10,000
Date	July, 1979	Sheet	S. Yagi





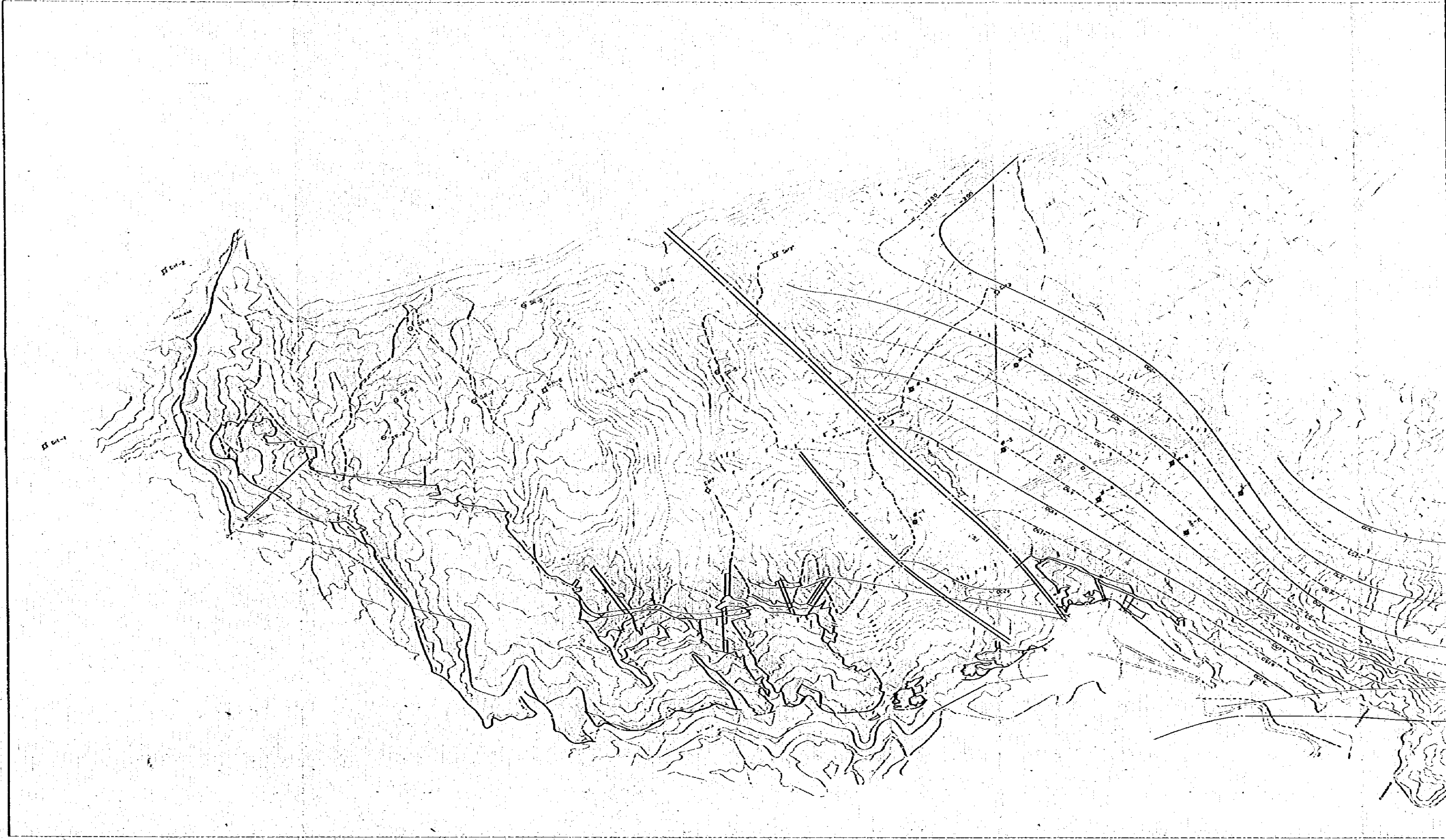
Legend

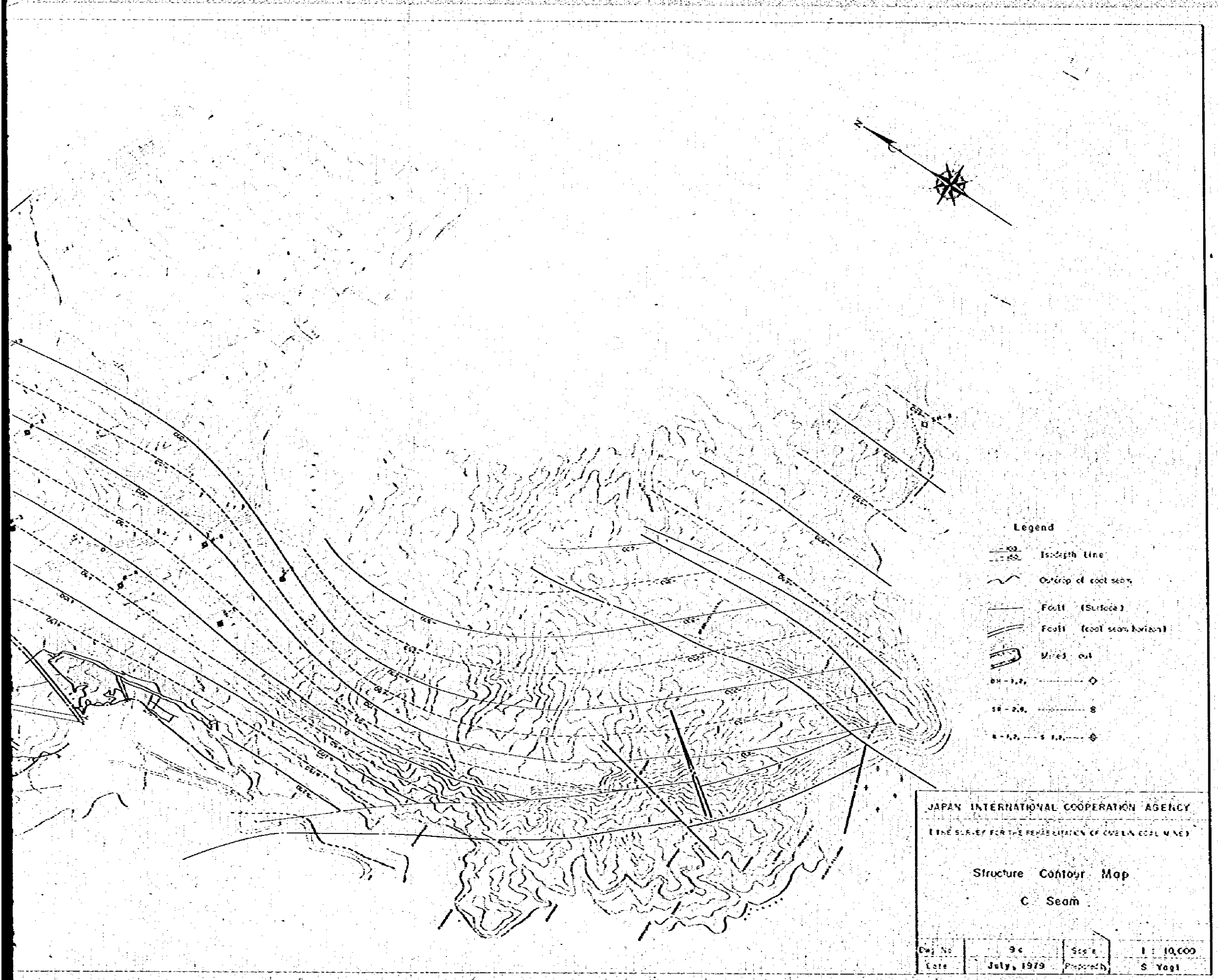
- 150- Isodepth line
- 150- Isodepth line
- ==== Fault (cool seam horizon)
- Mined out
- CN-1,2. ———— ⊙
- SR-2,8. ———— ⊙
- W-1,2. ———— ⊙

JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SURVEY FOR THE DEVELOPMENT OF COAL IN COAL MINE)









Structure Contour Map
 B Seam

Map No.	9b	Scale	1 : 10,000
Date	July, 1979	Project	S. Ycpl





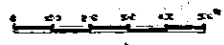
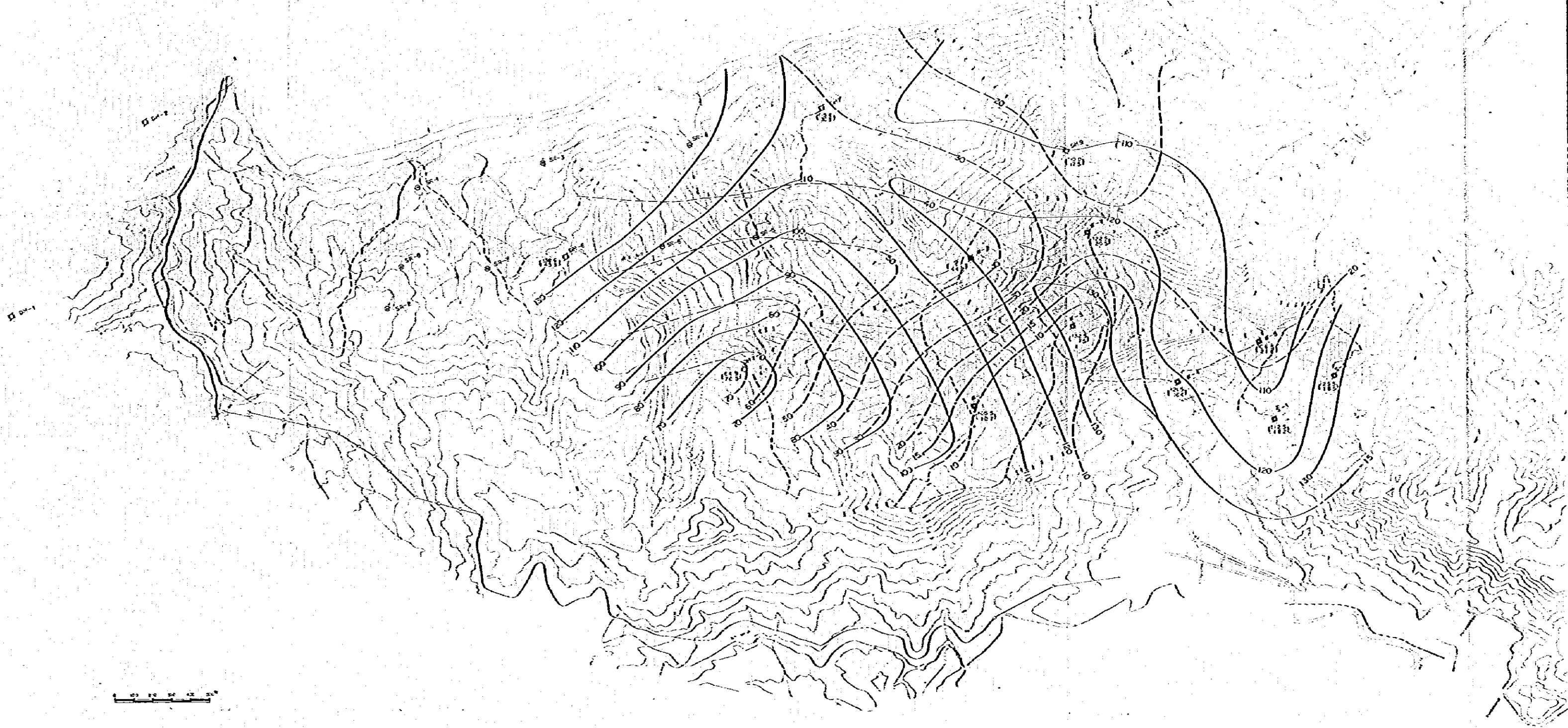
Legend

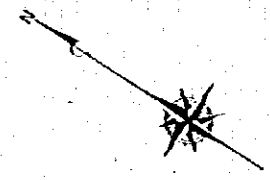
-  Iso-depth line
-  Outcrop of coal seam
-  Fault (Surface)
-  Fault (coal seam horizon)
-  Mines out
-  BH-1,2
-  SB-2,3
-  B-1,2, S-1,2

JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SLAVEY FOR THE REHABILITATION OF OVERSEA CHINA MEN)

Structure Contour Map
 C Seam

Doc. No.	9c	Scale	1 : 10,000
Date	July, 1979	Prepared by	S. Yagi





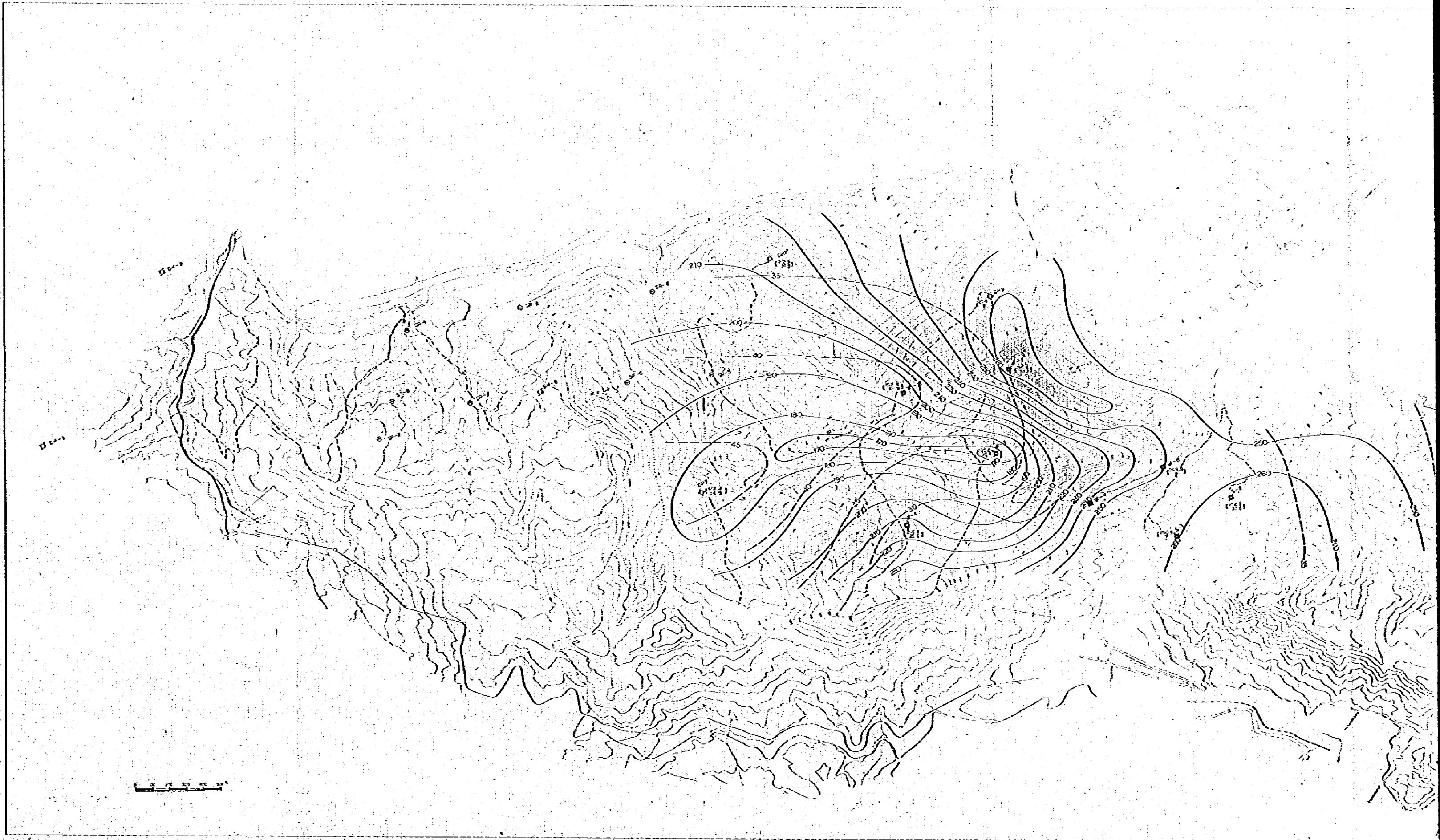
Legend

- W-5 Thickness of the formation (M)
- 1065 Sand ratio (%)
- 1216
- 110 Isopach (M)
- 20 Sand ratio (%)
- 15
- W-1, 2, ⬠
- W-3, 4, ⬠
- W-5, 6, ⬠
- W-7, 8, ⬠
- W-9, 10, ⬠
- W-11, 12, ⬠
- W-13, 14, ⬠
- W-15, 16, ⬠
- W-17, 18, ⬠
- W-19, 20, ⬠
- W-21, 22, ⬠
- W-23, 24, ⬠
- W-25, 26, ⬠
- W-27, 28, ⬠
- W-29, 30, ⬠
- W-31, 32, ⬠
- W-33, 34, ⬠
- W-35, 36, ⬠
- W-37, 38, ⬠
- W-39, 40, ⬠
- W-41, 42, ⬠
- W-43, 44, ⬠
- W-45, 46, ⬠
- W-47, 48, ⬠
- W-49, 50, ⬠
- W-51, 52, ⬠
- W-53, 54, ⬠
- W-55, 56, ⬠
- W-57, 58, ⬠
- W-59, 60, ⬠
- W-61, 62, ⬠
- W-63, 64, ⬠
- W-65, 66, ⬠
- W-67, 68, ⬠
- W-69, 70, ⬠
- W-71, 72, ⬠
- W-73, 74, ⬠
- W-75, 76, ⬠
- W-77, 78, ⬠
- W-79, 80, ⬠
- W-81, 82, ⬠
- W-83, 84, ⬠
- W-85, 86, ⬠
- W-87, 88, ⬠
- W-89, 90, ⬠
- W-91, 92, ⬠
- W-93, 94, ⬠
- W-95, 96, ⬠
- W-97, 98, ⬠
- W-99, ⬠
- W-100 ⬠
- Access road

JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SLAVEY FOR THE PERMISSIBILITY OF COAL MINE)

**Isopach and Sand Ratio
 in Sawah Luntó Formation**

Map No.	100	Scale	1 : 10,000
Date	July, 1979	Prepared by	T. Nagishi





Legend

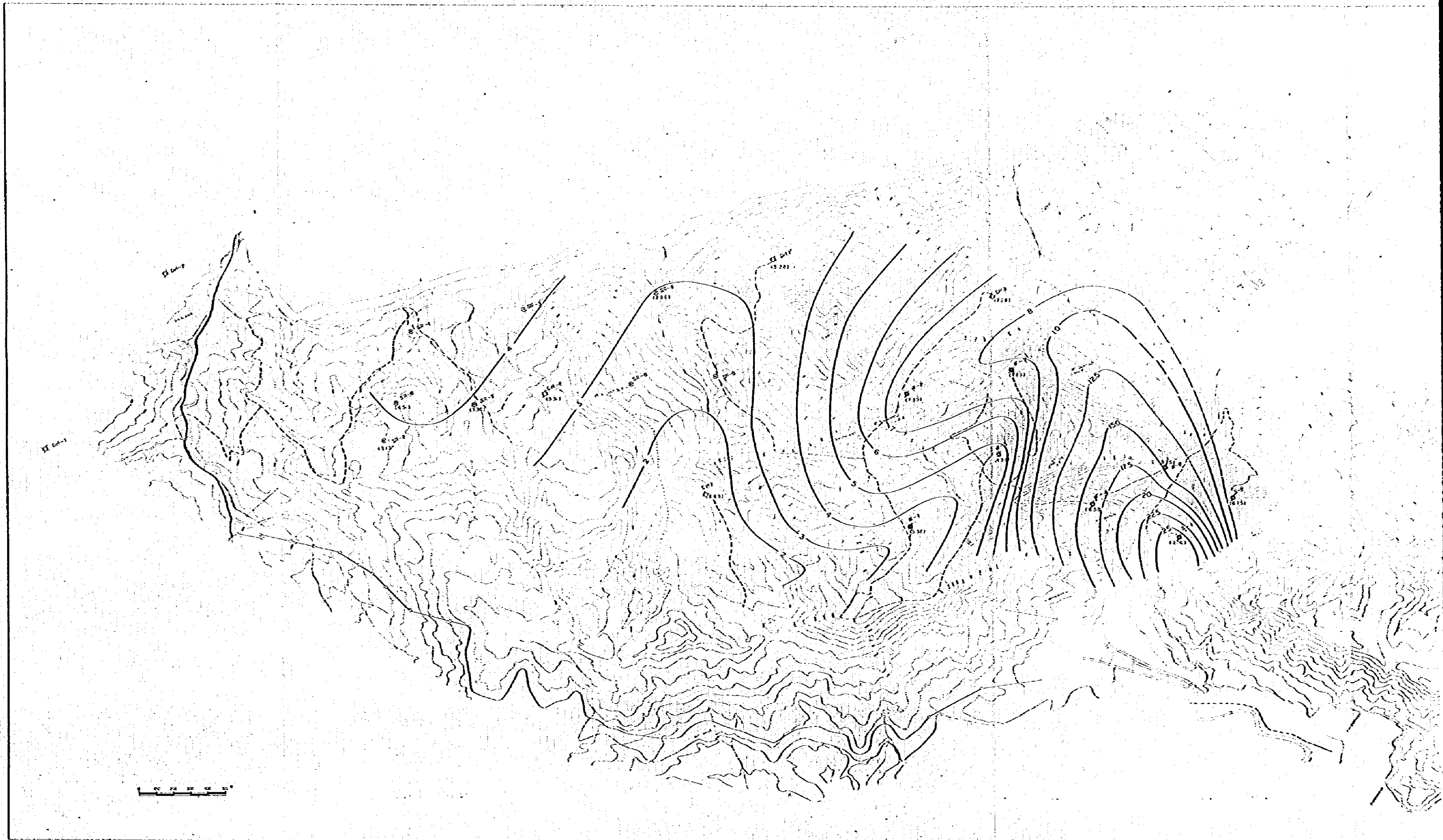
- Thickness of the formation (30)
- Sand ratio (10)
- Isopach (20)
- Sand ratio (50)
- 10-1.2
- 10-2.5
- 10-1.2, 5-1.2
- Road

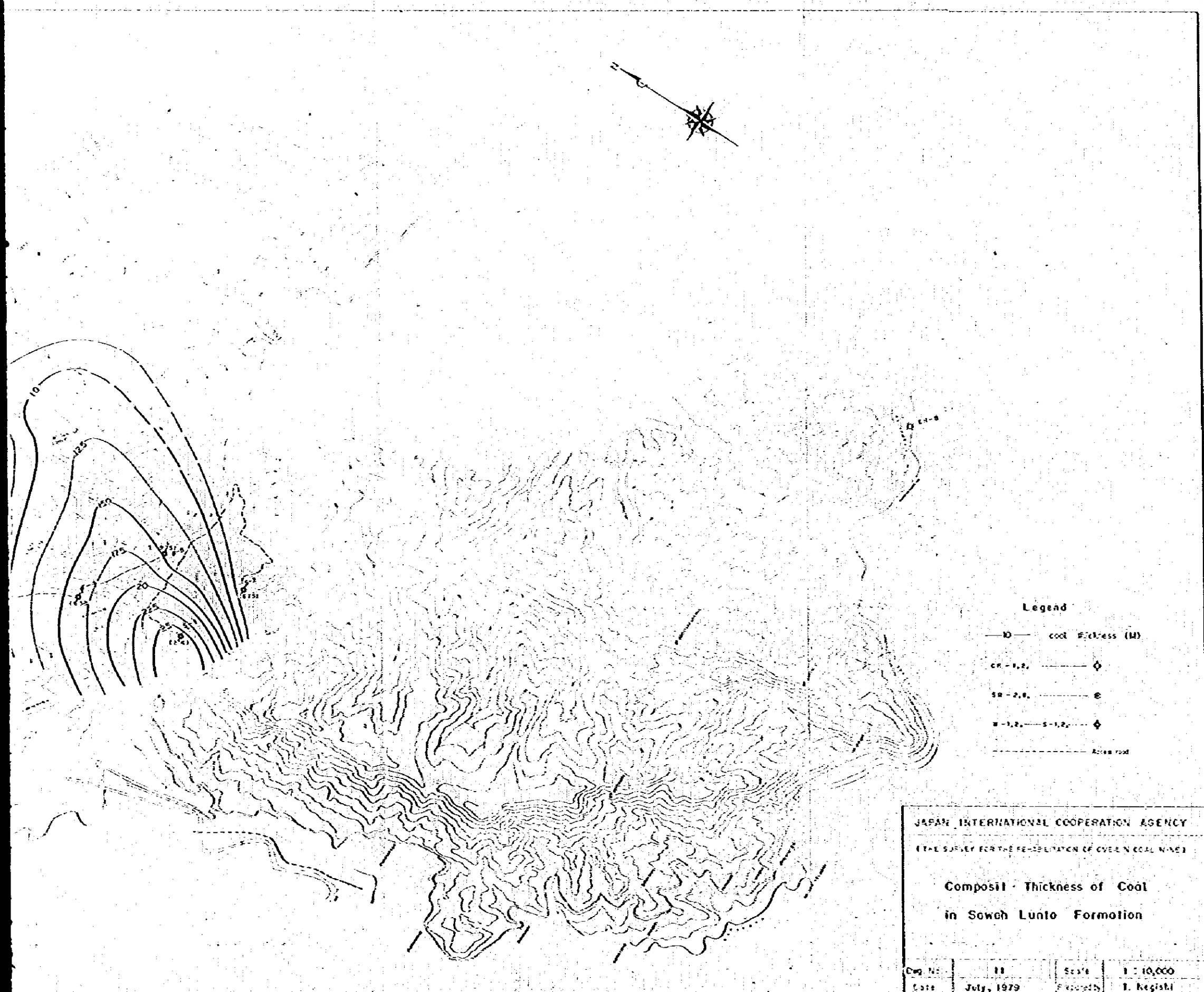
JAPAN INTERNATIONAL COOPERATION AGENCY

(THE SURVEY FOR THE PENETRATION OF OVERSEAS COAL MINES)

Isopach and Sand Ratio
in Lower Sawah Tambora Formation

Map No.	106	Scale	1 : 10,000
Date	July, 1979	Project	T Negishi





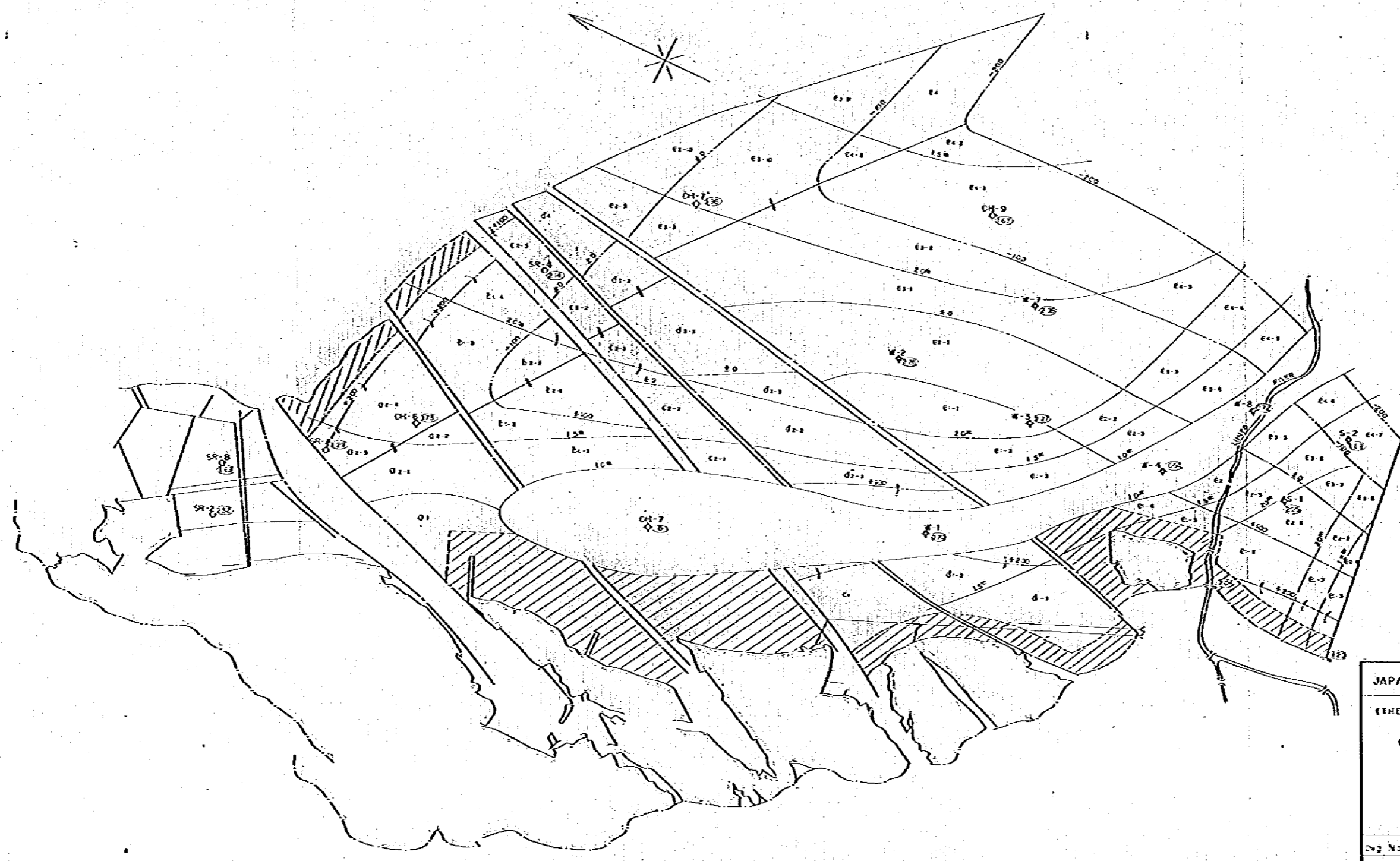
Legend

- 10 — coal thickness (M)
- CR-1,2, ———— ◆
- SR-2,3, ———— ⊙
- W-1,2, ———— S-1,2, ———— ◆
- Access road

JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SURVEY FOR THE RE-EVALUATION OF OVERSEAS COAL MINES)

**Compositional Thickness of Coal
 in Sowch Lunto Formation**

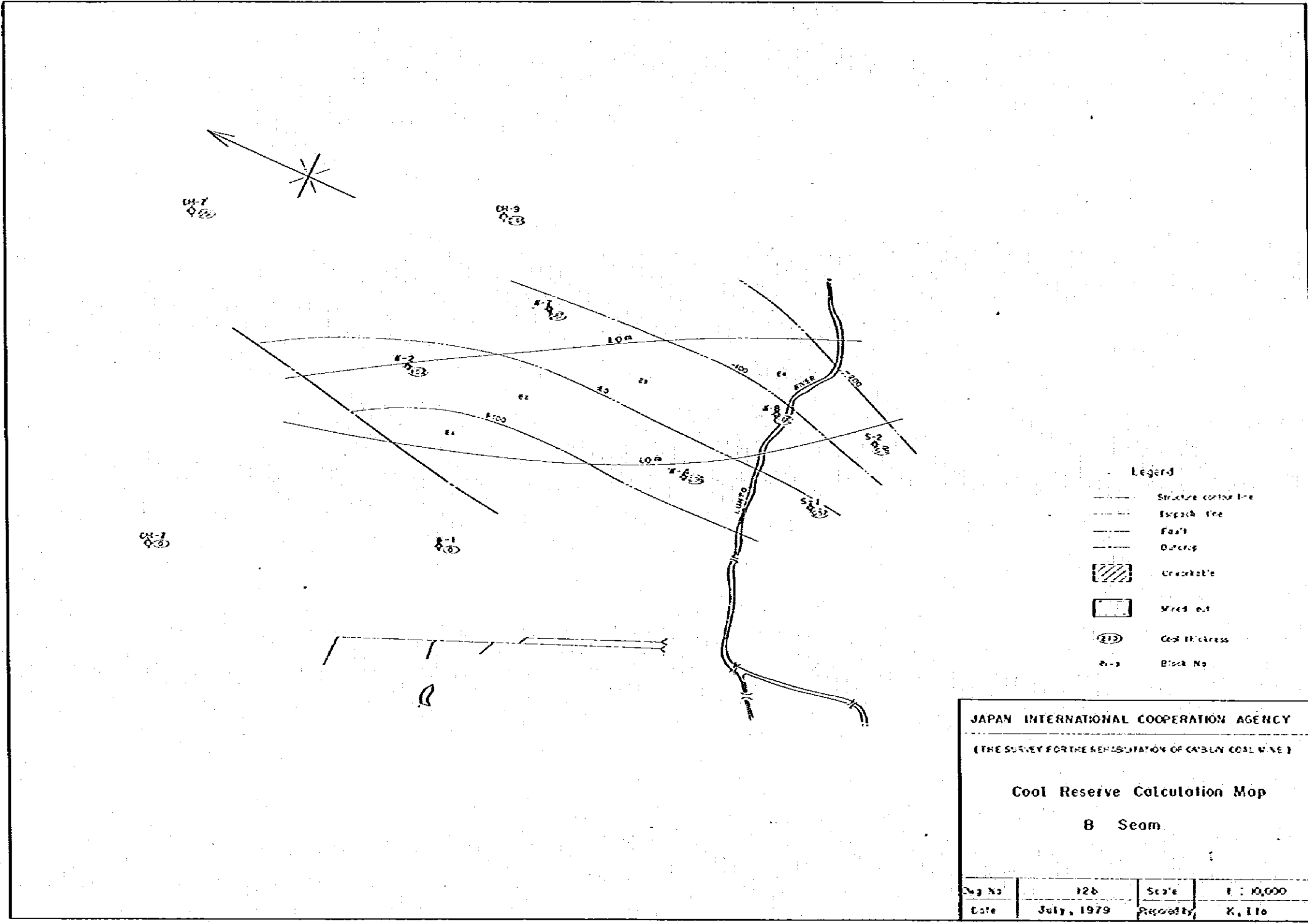
Map No.	11	Scale	1 : 10,000
Date	July, 1979	Geologist	T. Kojima



- Legend
- Structural contour line
 - Isopach line
 - - - Fault
 - - - Outcrop
 - ▨ Unworkable
 - ▭ Workable
 - ⊙ Coal thickness
 - E-1 Block No.

JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SURVEY FOR THE REHABILITATION OF COALIN COAL MINE)
Coal Reserve Calculation Map
A Seam

Map No.	126	Scale	1:10,000
Date	July, 1973	Prepared by	K. Ito

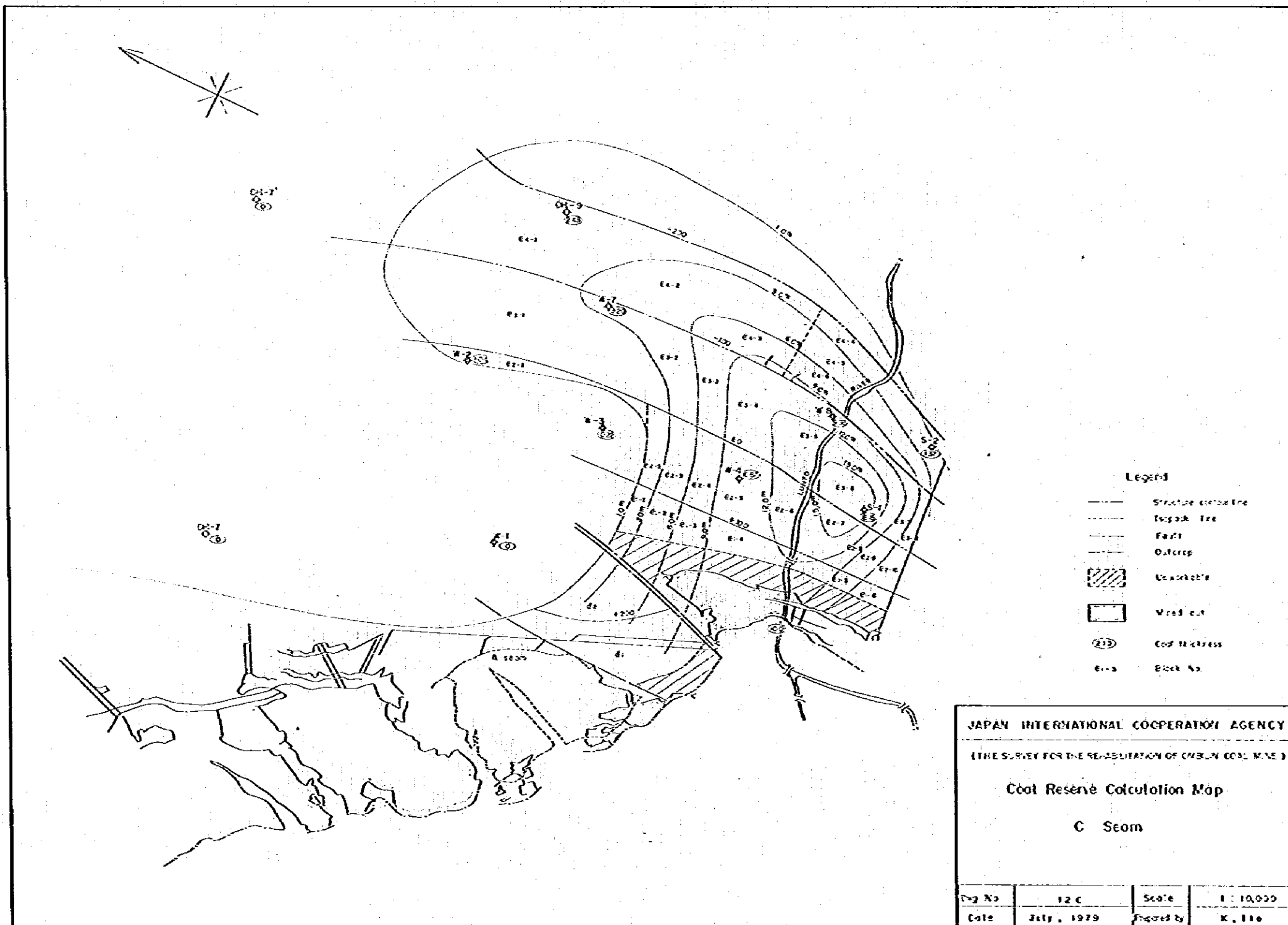


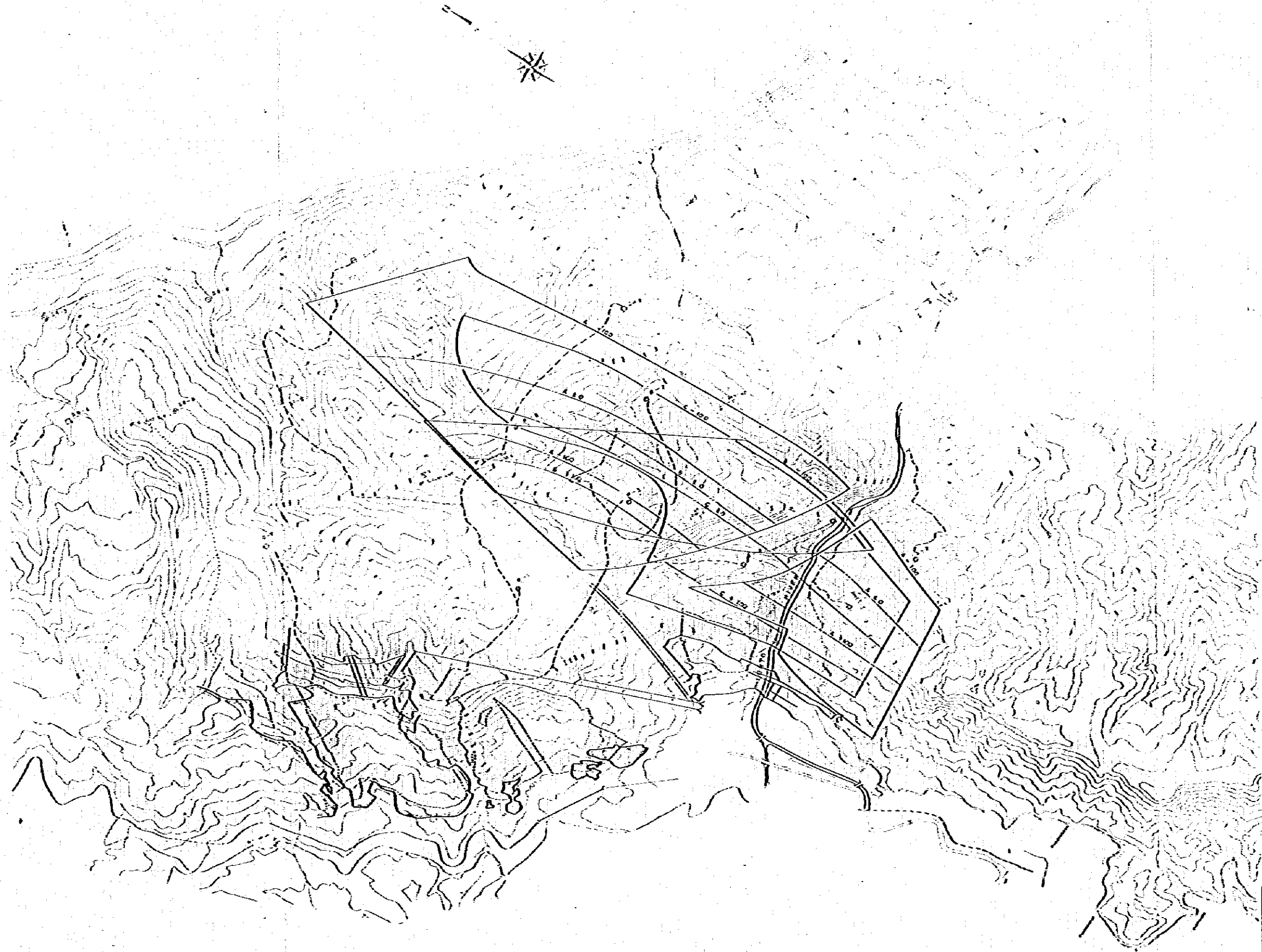
Legend




- Structure contour line
- Isopach line
- Fault
- Outcrop
- ▨ Unworkable
- ▭ Mined out
- ⊖ Coal thickness
- ⊖ Block No.

JAPAN INTERNATIONAL COOPERATION AGENCY
 [THE SURVEY FOR THE REHABILITATION OF CABUYAN COAL MINE]
Cool Reserve Calculation Map
B Seam

Map No.	126	Scale	1 : 10,000
Date	July, 1979	Prepared by	K. Ito





- Legend
-  Area of reserves to be mined at early stage
 -  Mined out area, A seam
 -  Mined out area, C seam

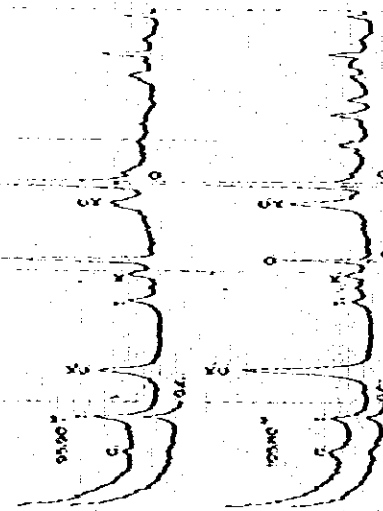
JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SURVEY FOR THE REHABILITATION OF CHIBU COAL MINE)

Proposed Mining Area
 at
 Initial Development Stage

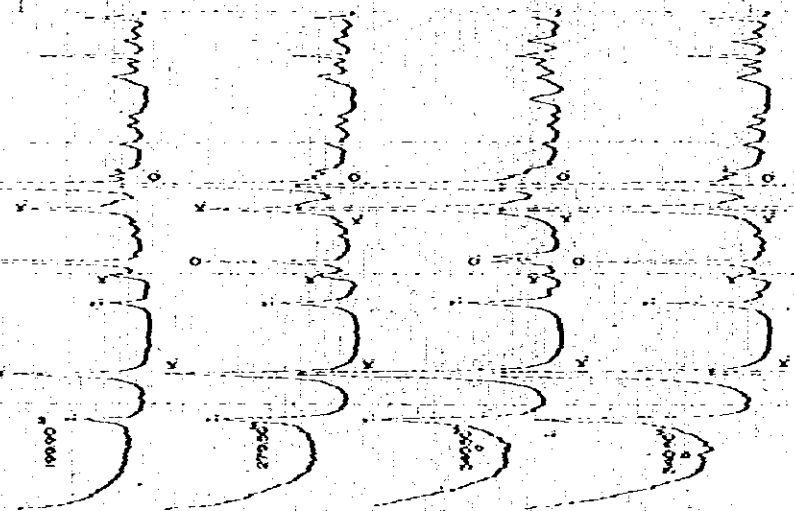
Doc No.	13	Scale	1:10,000
Date	July, 1979	Prepared by	K. Ito

W-2

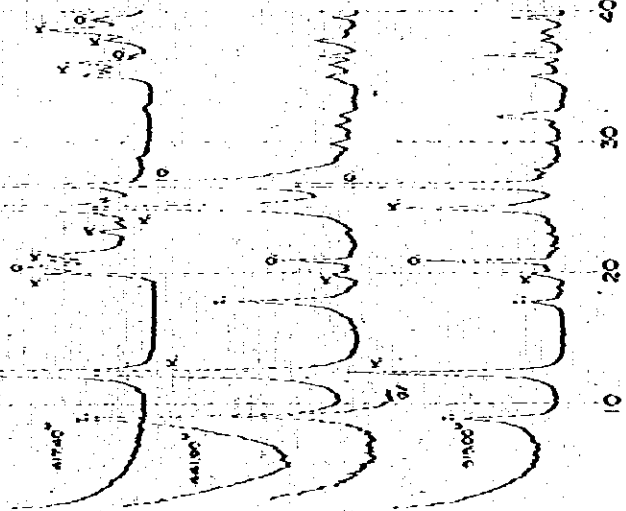
Upper Sash. Tertiary Formation



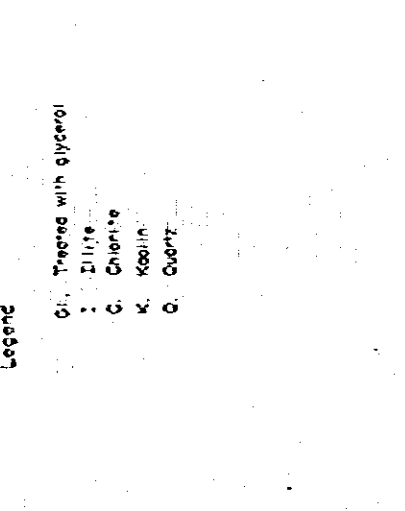
Lower Sash. Tertiary Formation



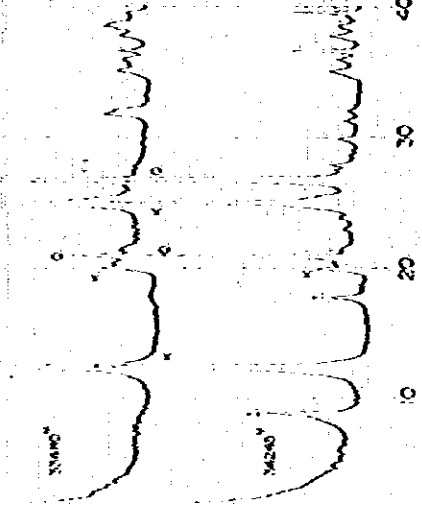
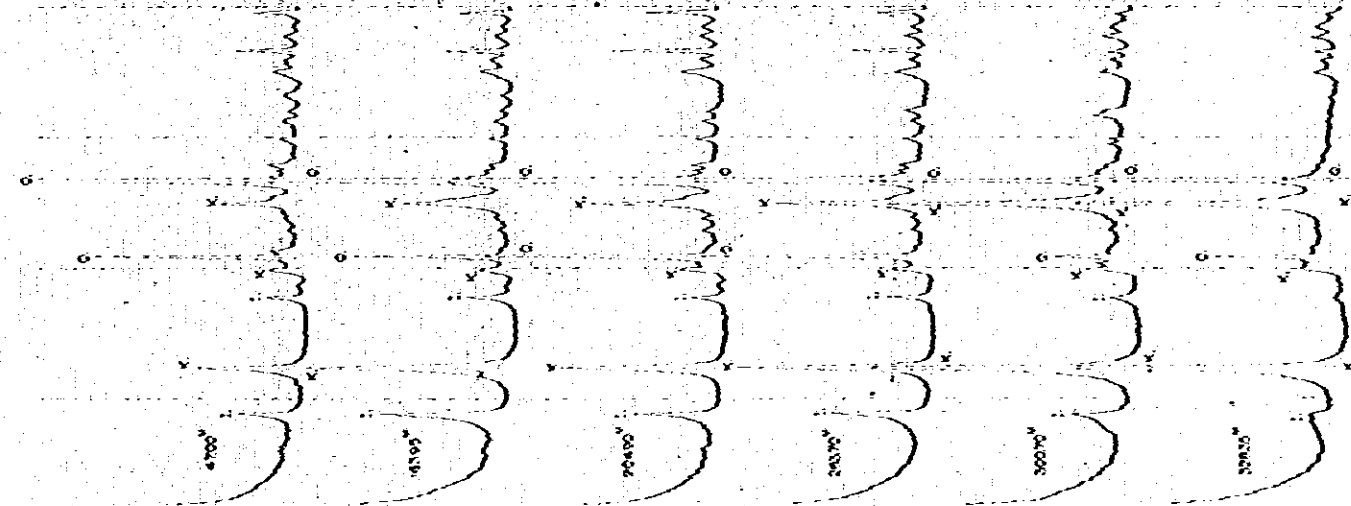
Sash Lute. Formation



Sash-gray. Formation



W-4



Legend

- G, Treated with glycerol
- : Illite
- G, Chlorite
- K, Kaolin
- O, Quartz

(2θ, Kα)

JAPAN INTERNATIONAL COOPERATION AGENCY
 (THE SURVEY FOR THE MOBILIZATION OF OVERLAIN COAL MINES)
 X-ray Diffraction Pattern of Clayminerals
 in W-2 and W-4

Draw. No.	14	Date	
Opic.	JULY, 1979	Prepared by	T. Nagahashi

W-1 (500.00m)

Depth	1st Run Direction	1st Run Angle	2nd Run Direction	2nd Run Angle	Average Direction	Average Angle
50m	N45E	0°50'	N55E	0°55'	N50E	0°53'
100	N45E	1°05'	N50E	1°00'	N48E	1°03'
150	N45E	0°55'	N50E	0°50'	N48E	0°53'
200	E	0°30'	E	0°25'	E	0°28'
250	S30W	0°40'	S60W	0°45'	N40W	0°38'
300	S	0°55'	S	0°55'	S	0°55'
350	N50E	0°45'	N20E	0°40'	N35E	0°43'
400	S20W	0°55'	S30W	0°55'	S28W	0°55'
450	N45E	1°00'	N55E	1°00'	N50E	1°00'

W-2 (515.30m)

Depth	1st Run Direction	1st Run Angle	2nd Run Direction	2nd Run Angle	Average Direction	Average Angle
50m	S	1°20'	S	1°20'	S	1°20'
100	S20W	1°20'	S30W	1°15'	S25W	1°18'
150	S45W	2°25'	S30W	2°40'	S38W	2°33'
200	S45W	1°45'	S45W	1°30'	S45W	1°40'
250	S45E	3°00'	S20E	2°55'	S30E	2°58'
300	S30W	1°25'	S20W	3°00'	S25W	2°50'
350	S20W	2°20'	S30W	2°20'	S25W	2°25'
400	S15E	5°30'	S	4°55'	S15E	4°58'
450	S35W	3°45'	S30W	3°50'	S32W	3°35'
500	S50W	1°30'	S40W	1°00'	S45W	1°00'

W-3 (499.20m)

Depth	1st Run Direction	1st Run Angle	2nd Run Direction	2nd Run Angle	Average Direction	Average Angle
50m	S	1°30'	S45E	1°50'	S20E	1°45'
100	S	2°40'	S	2°00'	S	2°20'
150	S20E	2°40'	S8W	2°20'	S10E	2°30'
200	S20E	2°30'	S20E	2°30'	S10E	2°30'
250	S50W	2°25'	S50E	2°30'	S50E	2°28'
300	S20W	2°30'	S30W	2°30'	S20E	2°30'
350	S40E	2°35'	S40E	2°30'	S40E	2°30'
400	S40E	1°50'	S40E	1°55'	S40E	1°50'
450	N45E	2°40'	N50E	2°00'	N45E	2°20'

W-4 (347.50m)

Depth	1st Run Direction	1st Run Angle	2nd Run Direction	2nd Run Angle	Average Direction	Average Angle
50m	S50W	2°40'	S60W	3°40'	S70W	2°40'
100	S30E	3°30'	S40E	2°40'	S30E	2°50'
150	N50E	2°30'	S30E	2°30'	S40E	2°40'
200	S20E	5°00'	S10E	4°00'	S20E	4°30'

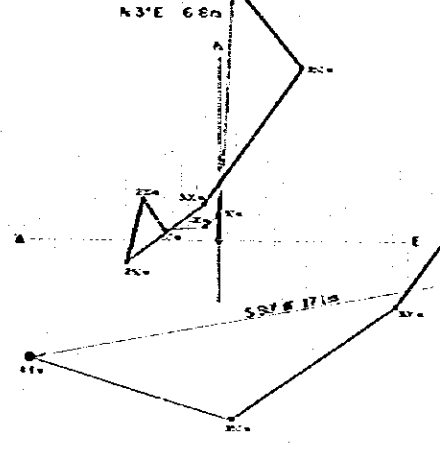
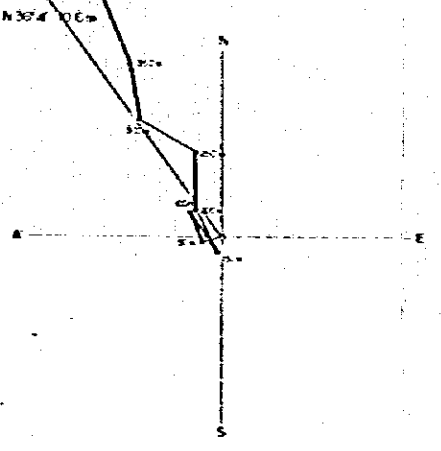
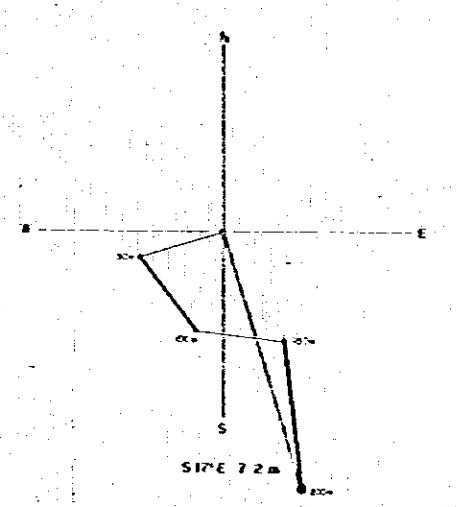
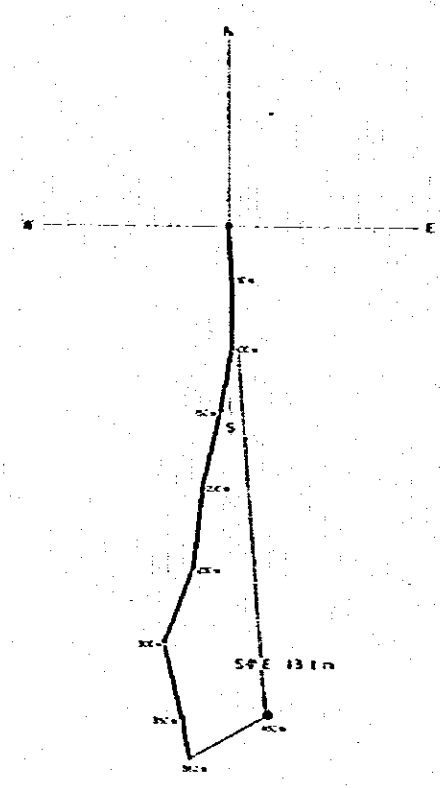
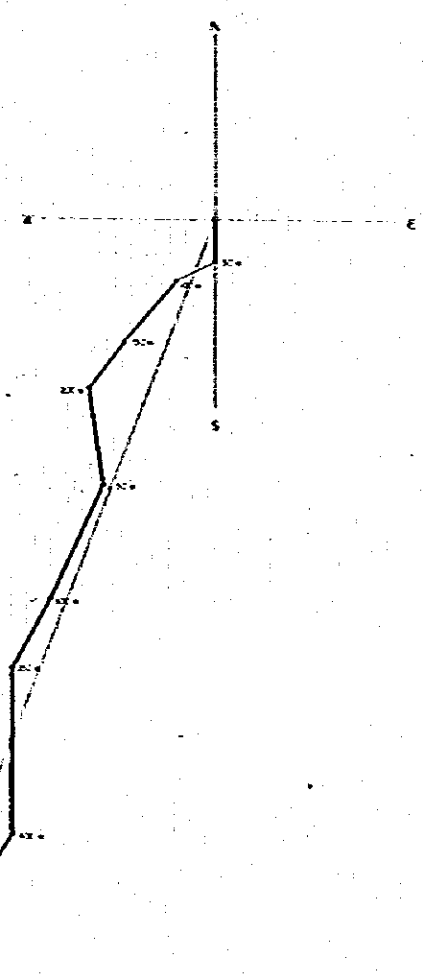
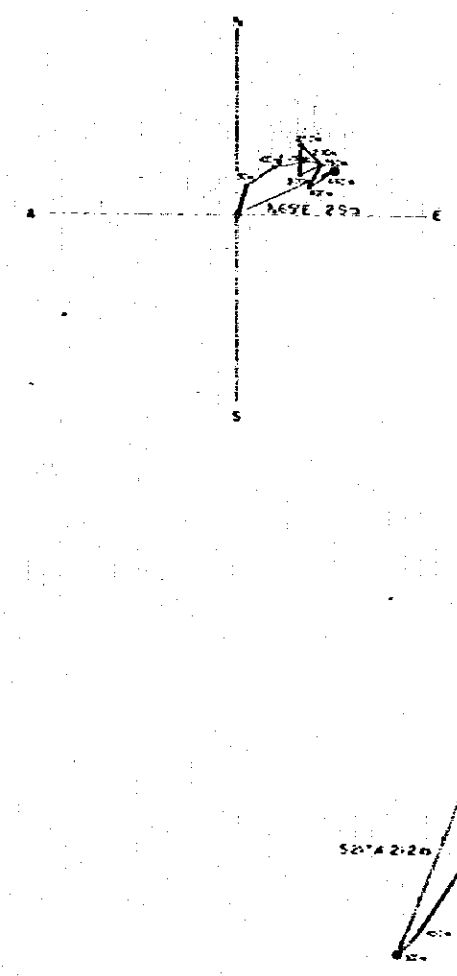
This could not go past 200m because of blocked casing.

W-7 (537.80m)

Depth	1st Run Direction	1st Run Angle	2nd Run Direction	2nd Run Angle	Average Direction	Average Angle
50m	S50W	0°45'	N40E	0°30'	S70W	0°30'
100	N20W	1°00'	N20W	1°00'	N20W	1°00'
150	S30E	1°30'	S30E	1°30'	S30E	1°30'
200	N40W	1°30'	N20E	1°30'	N30W	1°30'
250	S	1°50'	S	0°50'	S	1°20'
300	S50W	2°00'	N60W	2°00'	N60W	2°30'
350	S	1°45'	N20W	1°50'	N40W	1°45'
400	N20W	1°30'	N20W	2°30'	N20W	2°30'
450	N40W	2°30'	N50W	1°55'	N50W	2°30'
500	N20E	1°05'	N50W	0°50'	N40W	1°30'

W-8 (406.25m)

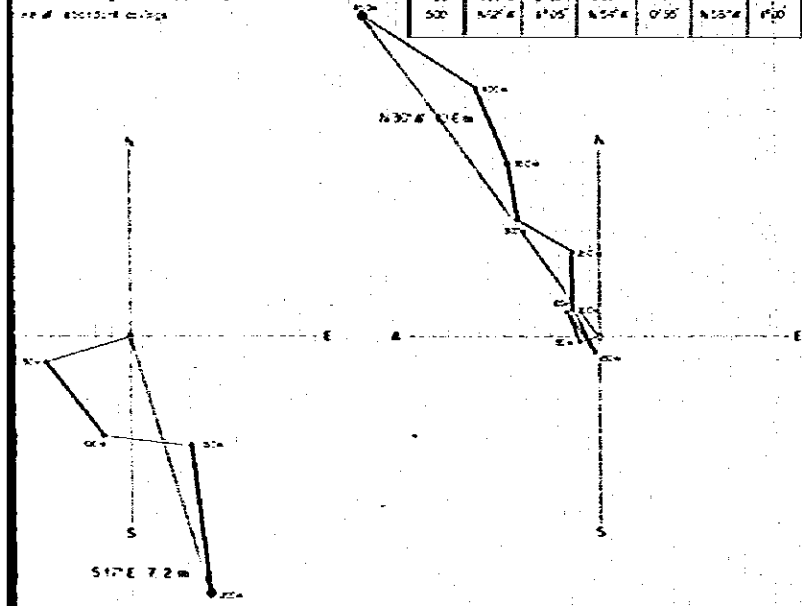
Depth	1st Run Direction	1st Run Angle	2nd Run Direction	2nd Run Angle	Average Direction	Average Angle
50m	S	0°45'	S	0°45'	S	0°45'
100	S50W	0°45'	S30W	0°30'	S40W	0°38'
150	S	1°30'	S40W	1°00'	S30W	1°15'
200	S20W	1°00'	N40W	1°00'	N30W	1°00'
250	S20W	2°00'	S0W	2°00'	S0W	2°00'
300	N40E	3°00'	N40E	2°50'	N40E	2°50'
350	N40E	4°00'	N20E	0°30'	N30E	5°00'
400	N20E	3°30'	N40W	3°00'	N40W	3°15'



W-4 (397.50m)

Sl. No.	1st Pt. Azimuth	2nd Pt. Azimuth	3rd Pt. Azimuth	4th Pt. Azimuth
1	270°	556°E	370°	575°E
2	575°E	547°E	275°	536°E
3	275°	556°E	275°	556°E
4	575°	575°E	400°	59°E

1st pt. not on line 22m
2nd pt. 800.5m

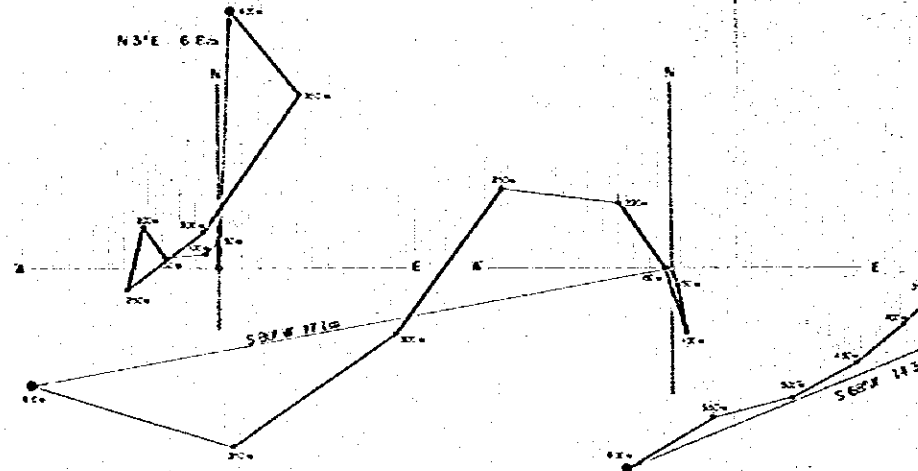


W-7 (537.80m)

Depth	1st Pt. Azimuth	2nd Pt. Azimuth	3rd Pt. Azimuth
50	575°E	0745°	425°E
100	425°E	0745°	425°E
150	536°E	1730°	536°E
200	425°E	1730°	425°E
250	N	0750°	N
300	425°E	2700°	425°E
350	N	1745°	425°E
400	425°E	1730°	425°E
450	425°E	1730°	425°E
500	425°E	1730°	425°E

W-8 (406.25m)

Depth	1st Pt. Azimuth	2nd Pt. Azimuth	3rd Pt. Azimuth
50	N	0745°	N
100	536°E	0745°	536°E
150	N	1730°	536°E
200	425°E	1730°	425°E
250	527°E	2700°	527°E
300	425°E	2700°	425°E
350	425°E	2700°	425°E
400	425°E	2700°	425°E

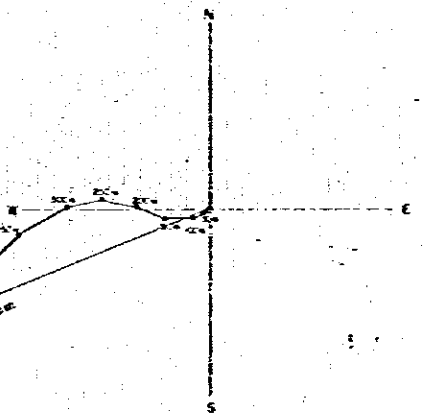


S-1 (416.50m)

Depth	1st Pt. Azimuth	2nd Pt. Azimuth	3rd Pt. Azimuth
50	58°E	0745°	536°E
100	536°E	1730°	536°E
150	425°E	1730°	425°E
200	425°E	1730°	425°E
250	425°E	1730°	425°E
300	425°E	1730°	425°E
350	425°E	1730°	425°E
400	425°E	1730°	425°E

S-2 (620.30m)

Depth	1st Pt. Azimuth	2nd Pt. Azimuth	3rd Pt. Azimuth
50	547°E	0745°	425°E
100	425°E	0745°	425°E
150	N	0745°	N
200	425°E	0745°	425°E
250	425°E	0745°	425°E
300	425°E	0745°	425°E
350	425°E	0745°	425°E
400	425°E	0745°	425°E
450	425°E	0745°	425°E
500	425°E	0745°	425°E
550	425°E	0745°	425°E
600	425°E	0745°	425°E



JAPAN INTERNATIONAL COOPERATION AGENCY
 BONE SURVEY FOR THE REHABILITATION OF OVERSEA COAL MINE
 Results of Hole Deviation Survey

Day No.	15	Scale	1:100
Date	July, 1979	Prepared by	T. Nagata

5412.10 2100

5429

MPN