

第10章 その他

収 集 資 料 リ ス ト

No.	資料の名称	形態	判型	ページ数	オリジナル又はコピー	発行機関
1	New Schedule of electricity tariffs	パンフレット	A4	1	コピー	WAPDA
2	Brief and Current Status	報告書	A4	30	コピー	WAPDA P&I
3	Draft National Power Plan 95-96 Update	報告書	A4	105	コピー	WAPDA
4	PC-II Proforma Munda dam multipurpose ...	報告書	A4	82	コピー	WAPDA P&I
5	電力系統図 (全国版 Not Scale)	地図	A1	1	オリジナル	WAPDA Planning
6	地形図 1/50,000	地図	A1	21	コピー (青焼)	WAPDA
7	ダム軸地形図	地図	A1	1	コピー	WAPDA (Peshawar)
8	Munda Dam 計画図 (Command Area)	地図	A1	1	コピー	WAPDA (Peshawar)
9	Index to Sheets of Pakistan	地図	A1	1	オリジナル	Survey of Pakistan
10	Specimen Indent Form	注文書	A4	1	コピー	Survey of Pakistan
11	Index of Maps published by Survey of Pakistan	文書	A1	3	コピー	Survey of Pakistan
12	Bill of Quantity	文書	A4	1	コピー	WAPDA

収集資料リスト

No.	資料の名称	形態	判型	ページ数	オリジナルはコピー	発行機関
13	Pehur High Level Canal	報告書	A4	70	コピー	WAPDA
14	Summary of Cost Estimates	用紙	A4	1	コピー	WAPDA
15	PC-II Proforma	報告書	A4	70	コピー	WAPDA (P&I)
16	Munda dam m. P. Pre-Feasibility Report v1 main	報告書	A4	300	コピー	NWFP & WAPDA (P&I)
17	Munda dam m. P. Pre-Feasibility Report v2 Hydrological	報告書	A4	100	コピー	NWFP & WAPDA (P&I)

第10章 その他

2. 質問並び回答 (農業灌溉)

Q/N	Questions	Answers
1.	Irrigation System	
	(1) About Amandarra Headworks	
a.	Please describe the components of Amandarra Headworks	Barrage and Gate
b.	When was Amandarra Headworks constructed?	1890
c.	Which organization are maintaining / operating this Head works?	Irrigation Dep. NWFP
d.	Which organization (Who) are maintaining / operating the Irrigation System?	Irrigation Dep. NWFP
e.	What is the quantity of intake water at this Headworks.	51m ³ /sec (1800cusecs)
f.	What is the size (area) of Irrigation System by this Head works.	112,900 ha
g.	Is there any organization like as water users association?	Proposed but none yet
h.	Is water for irrigation free or chargeable?	Yes
	(2) About Munda Headworks	
a.	Please describe the components of Munda Headworks	Barrage and Gate
b.	When was Munda Headworks constructed?	Not clear
c.	Which organization are maintaining / operating this Head works?	Irrigation Dep. NWFP
d.	Which organization (Who) are maintaining / operating the Irrigation System?	Irrigation Dep. NWFP
e.	What is the quantity of intake water at this Headworks.	26.6m ³ /sec (940cusecs)
f.	What is the size (area) of Irrigation System by this Head works.	73,650 ha
g.	Is there any organization like as water users association?	Proposed but none yet
h.	Is water for irrigation free or chargeable?	Yes

Munda Head Works

1. Length of weir : 543 ft (165.5 m)
2. No. of bays : 8 No.
3. Width of each bay : 60 ft (18.3 m)
4. Up stream weir crest: 1120ft
5. Dawn stream R.L. : 1117ft
6. R.L. of top of gate : 1124.5ft
7. R.L. of top of bridge plate
from : 1151ft (350.8 m)
8. Highest flood level : 1141ft
passed on 28. 8. 1924
9. Highest discharge: 159000 cusecs
(4502m³/sec)
10. Minimum water level :
1122.22ft (342.0 m) on 8.3.1971

O/N	Questions	Answers
	(3) Irrigation system by Amandarra Headworks and System by Mund Headworks, Are there related systems or independent systems?	Independent
	(4) Relevant matter between Headworks, Irrigation system and Munda dam, Which organization will be responsible for the coordination.	Irrigation Dep. NWFP
	(5) We understand that irrigation area by Munda dam will be 29,380 acres (11,889 ha). Is this land cultivated already by farmer?	Yes, but 43% only
	(6) What type of the ownership will be expected in developed Command area?	any
	(7) Is construction fee of irrigation system included in the dam Project fee for economic analysis? exp. 30 miles of Canal, 25 off-takes, 126 aqueducts, 70 super passages, 62 culverts	Yes
2.	Others	
	(1) Whether salinity damage is exist or not in the Project area?	Not so in the CA
	(2) Whether the soil study for salinity status held or not before?	Provably in the SCARP Project
	(3) Do farmers have the interest to planting the tobacco, vegetable and etc.?	Yes
	(4) Whether the rapid rural appraisal or agricultural census for cropping held or not before?	Agriculture Census 1980

2. Questionnaire on Topographic Map

REMARKS Category A, B and C refer to followings;

- A Items is available during our stay in Pakistan. please fill out it with A.
- B Items is available. please fill out it with B.
- C Items is not available. please fill out it with C.

Item	Description	Your Assessment Availability	Notes
1. Topographic Map Covering the Kabul-Swat-Chitral Basin	Scale 1: 250,000 1: 50,000	B B	1/500,000 A 1/1,000,000 A
2. Aerophotograph	Scale 1: 20,000	C	
3. Topographic Map at Reservoir Area	Scale 1: 5,000 1: 2,000 1: 1,000	C A C	Feet Contour
4. Cross Section of Dam Site	Scale 1: 2,000 1: 1,000	A C	Feet Contour
5. Longitudinal Section of the River of the Project Area	Vertical scale 1: 1,000 1: 2,000 Horizontal scale 1: 1,000 1: 2,000	C C C C	
6. Survey	List and data of triangulation net for Project site List and data of leveling net for Project area List and data of bench-marks near Project area	Obscure Obscure Obscure	
7. Capable Local Contractors	Aerial Photogrammetric Mapping Grand Survey	A A	Survey of Pakistan Survey of Pakistan
8. Current Prices	Aerial Photogrammetric Mapping Grand Survey	Obscure Obscure	

3. Questionnaire on Geological Data

REMARKS Category A, B and C refer to followings:

- A Items is available during our stay in Pakistan, please fill out it with A.
- B Items is available, please fill out it with B.
- C Items is not available, please fill out it with C.

Item	Description	Your Assessment Availability	Notes
1. Published Geological Map on Rock and Soil Classification	Extensive geological maps with geological structures and explanation Scale 1:250,000 Scale 1:100,000 Scale 1:50,000	B C C	Geological Survey Of Pakistan
2. Project Site			
(a) Geological Drawings	Plans, profiles and sections Scale 1: 2,000	A	Draft
(b) Investigation Report	Geological investigation report	A	Local consultant
(c) Results of Geological Investigation work	Drilling log diagrams	A	Local consultant
	Permeability test	A	
	Loading test	C	
	Seismic exploration	C	
	Laboratory tests on drilling core samples	A	Local consultant
3. Upper and Lower Reservoir Geological Map and Report	Plans, profiles and sections Scales 1:100,000 Geological investigation reports	C	
4. Sources of Construction Materials	Distribution maps of quarry/borrow and concrete aggregate Scale : 1:100,000	A	Local consultant
	Report and laboratory tests results on samples	A	
	Observation of all drilling core in vicinity of proposed dam-site	A	Local consultant and WAPDA

3. Geological Data (Continued)

Item	Description	Your Assessment Availability	Notes
5. Hydro-geology			
(a) Observed			
Underground Water Level	Scale 1:250,000	Obscure	
(b) Spring Spots	Scale 1:250,000	Obscure	
(c) Water Examination	Pumping tests, chemical analysis	Obscure	
6. Published Report		B	
on Earthquake			
7. Capable Local Contractors	Boring	B	Local consultant
	Permeability test in borehole	B	Local consultant
	Adit excavating	B	WAPDA
	Seismic prospecting and analysis	B	WAPDA
	Pitting and testing for construction material	B	WAPDA and college
	Laboratory test on rock samples	B	WAPDA and college

Questionnaire for Environment	
Description	Answer
1 Organization(s) responsible to environmental legislation and administration	got answer
2 Profile of organizations related with environment	got answer
3 Environmental law or regulation	got answer
4 Guidelines on initial environmental examination (IEE) and environmental impact assessment	got answer
5 International conventions on environmental conservation	not
6 Socio-economic environment	
(1) Number of beneficiaries of this project	not
(2) Current pattern of water use and supply (principle for water allocation)	not
(3) Control/ treatment of refugees in benefit area (Possibility of friction among local population)	not
7 Natural environment	
(1) Species of valuable animals and plants living in the project area	got answer
(2) Location of particular areas officially protected such as national parks	got answer
(3) Damage and destruction of cultural property / archeological site	got answer

添 付 資 料

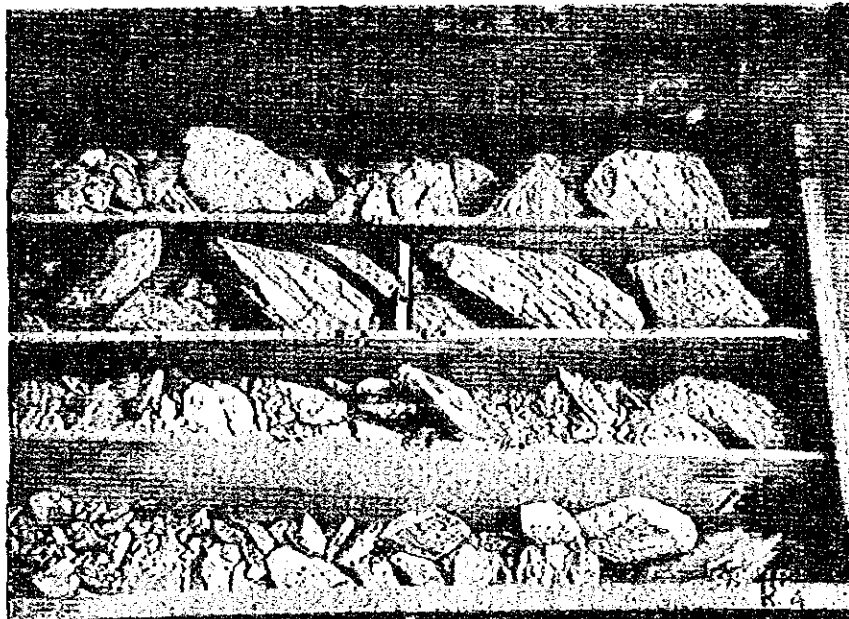
ボーリング・コア写真

ボーリングNo.M L. 8

標高 約1,820feet 深度 151.7feet

ML. 8号ボーリング
 Svat川本流左岸山腹
 標高 約 1,820 feet
 掘深深度 151.7 feet

0' 00" ⇨



⇨ 13' 04"

13' 04" ⇨



⇨ 25' 10"

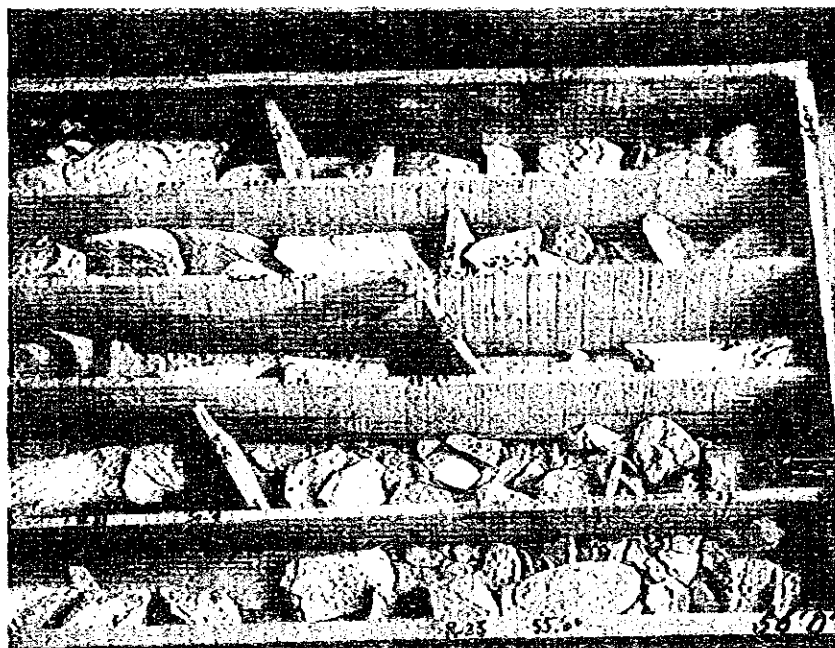
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⇨ 38' 06"

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38' 06" ⇨



⇨56' 00"

56' 00" ⇨



⇨72' 00"

72' 00" ⇨



⇨85' 06"

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85' 06" ⇨

⇨ 102' 08"

102' 08" ⇨

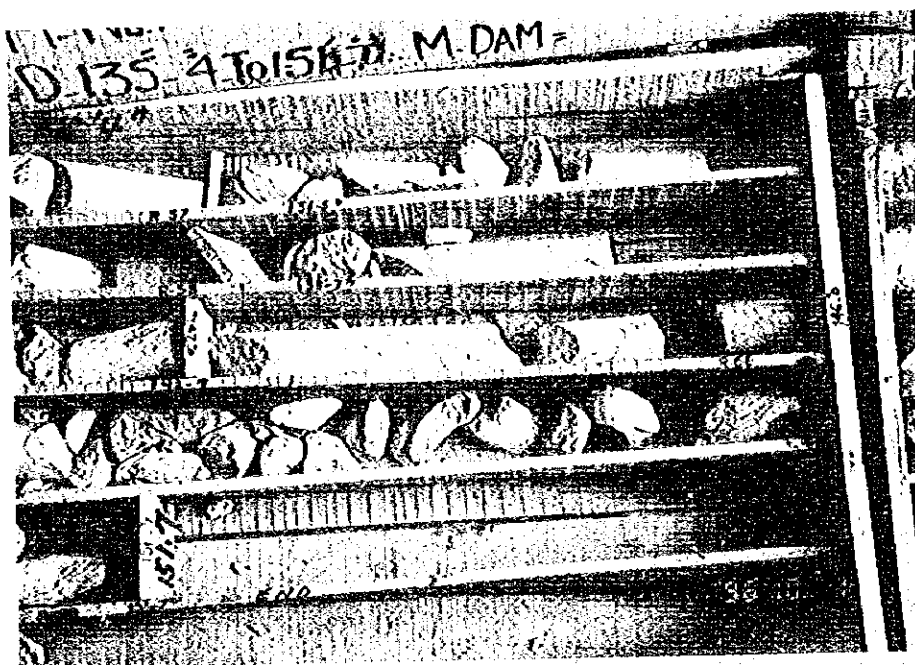
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118' 08" ⇨

⇨ 135' 04"

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135' 04" ⇨



⇨ 151' 07"
Hole bottom

ボーリング・コア写真

ボーリングNo.M L. 9

標高 約1,280feet 深度 200.0feet

ML. 9号ボーリング

Swat川本流河床部

標高 約 1,280 feet

掘深深度 200 feet

0' 00' ⇔

12' 00' ⇔

23' 10' ⇔

⇔12' 00'

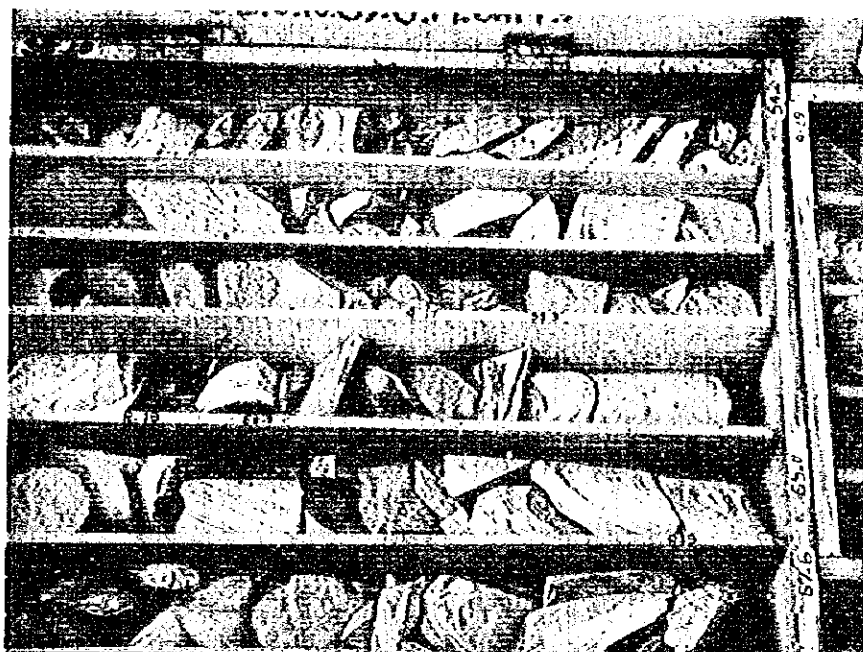
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⇔35' 10'



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35' 10' ⇔



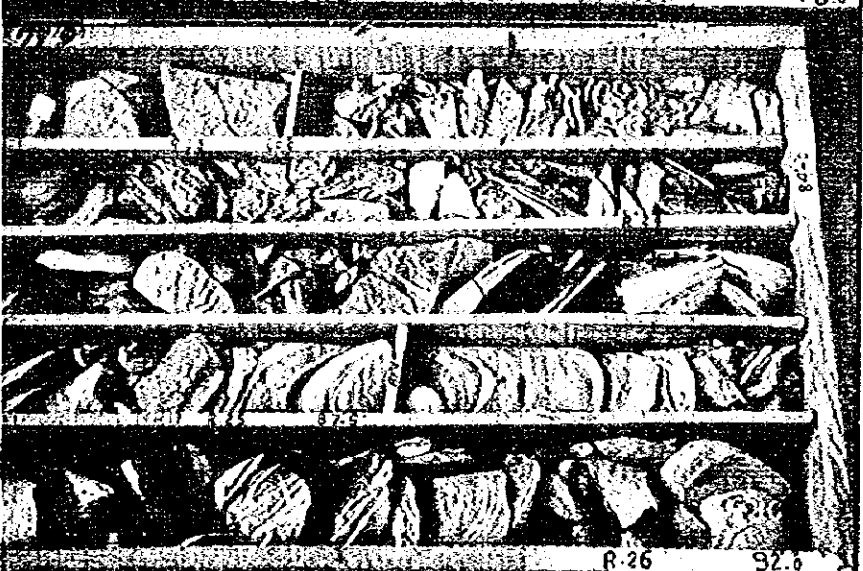
⇔67' 06"

67' 06' ⇔



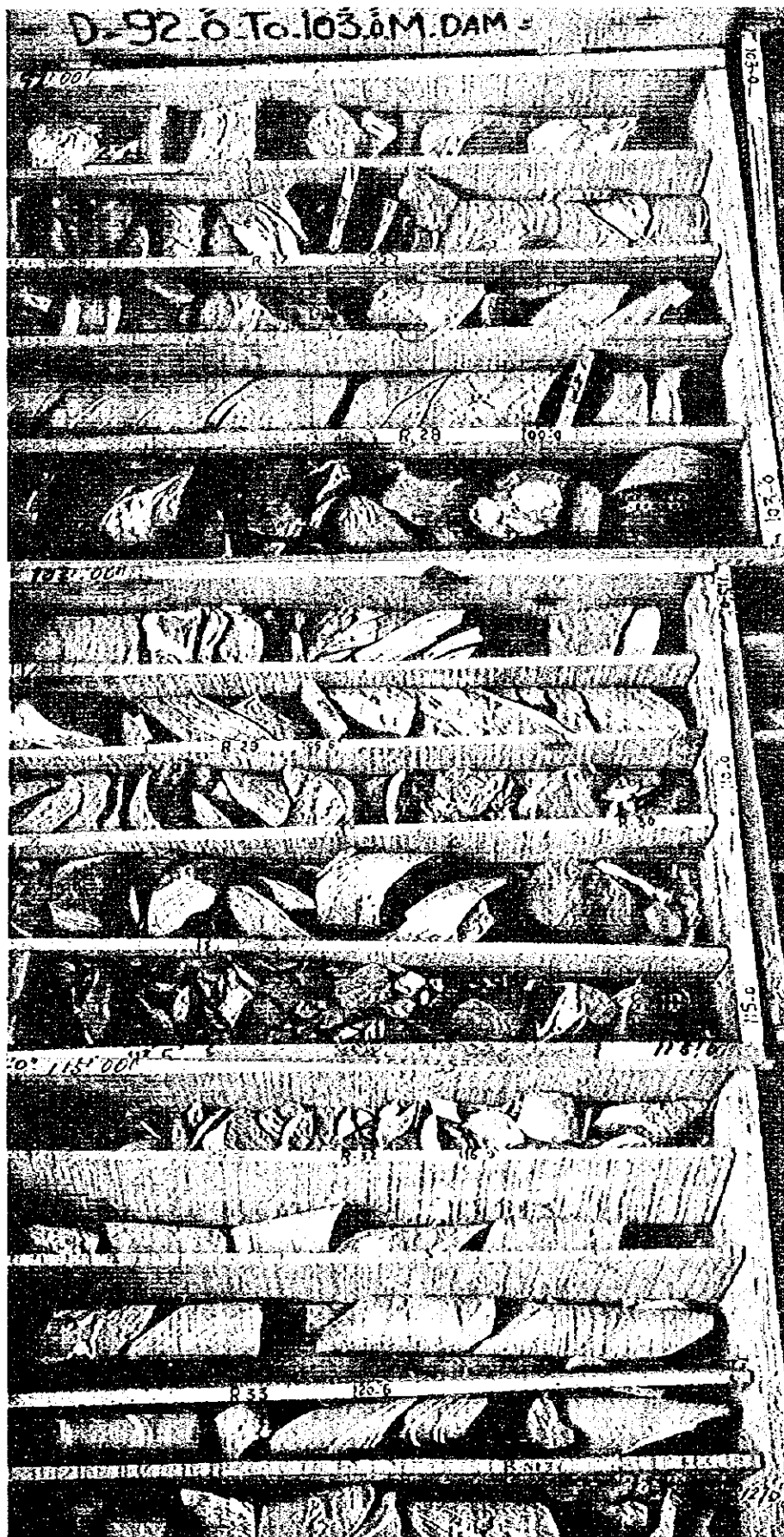
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79' 00' ⇔

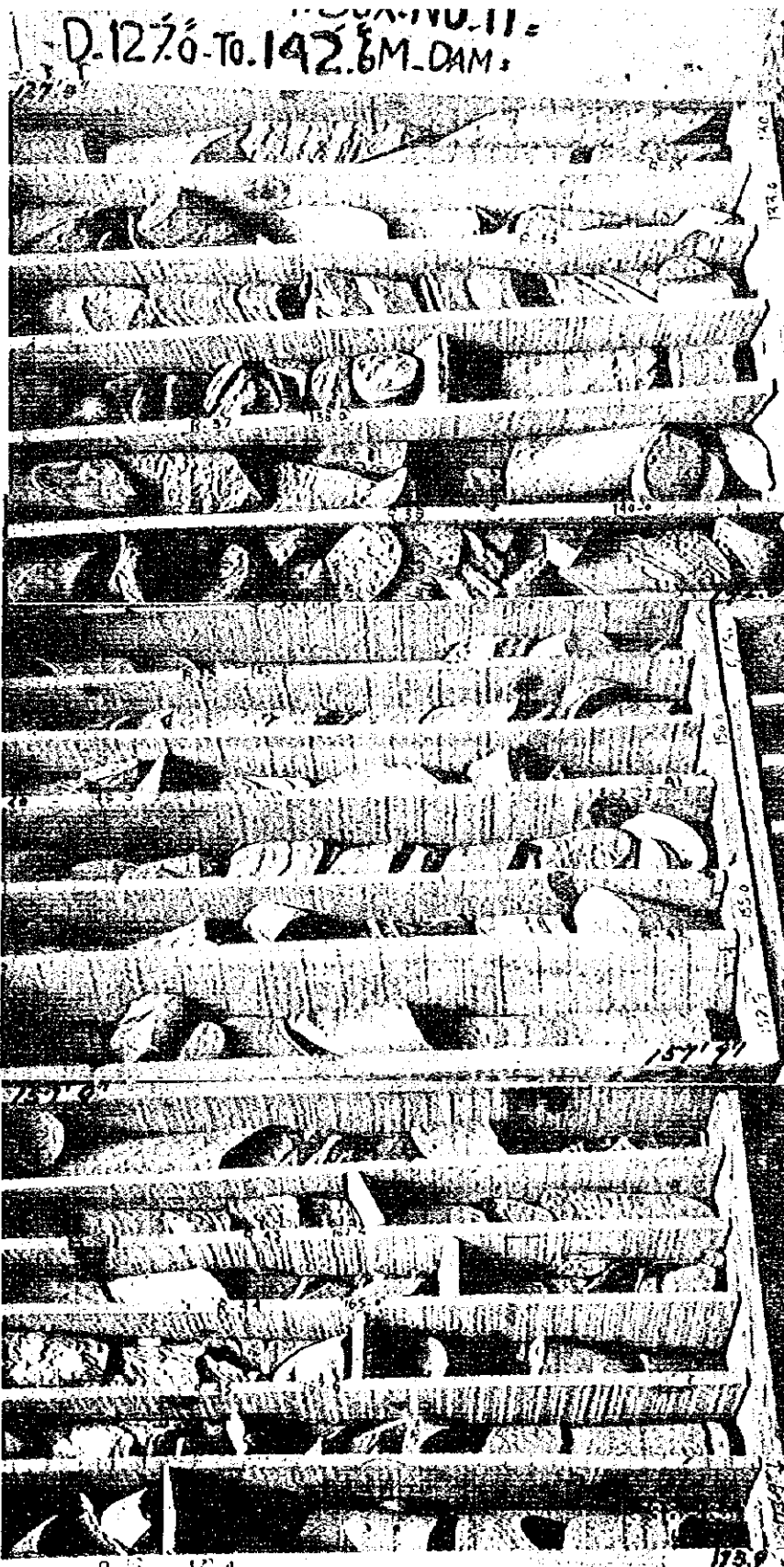


⇔92' 00"

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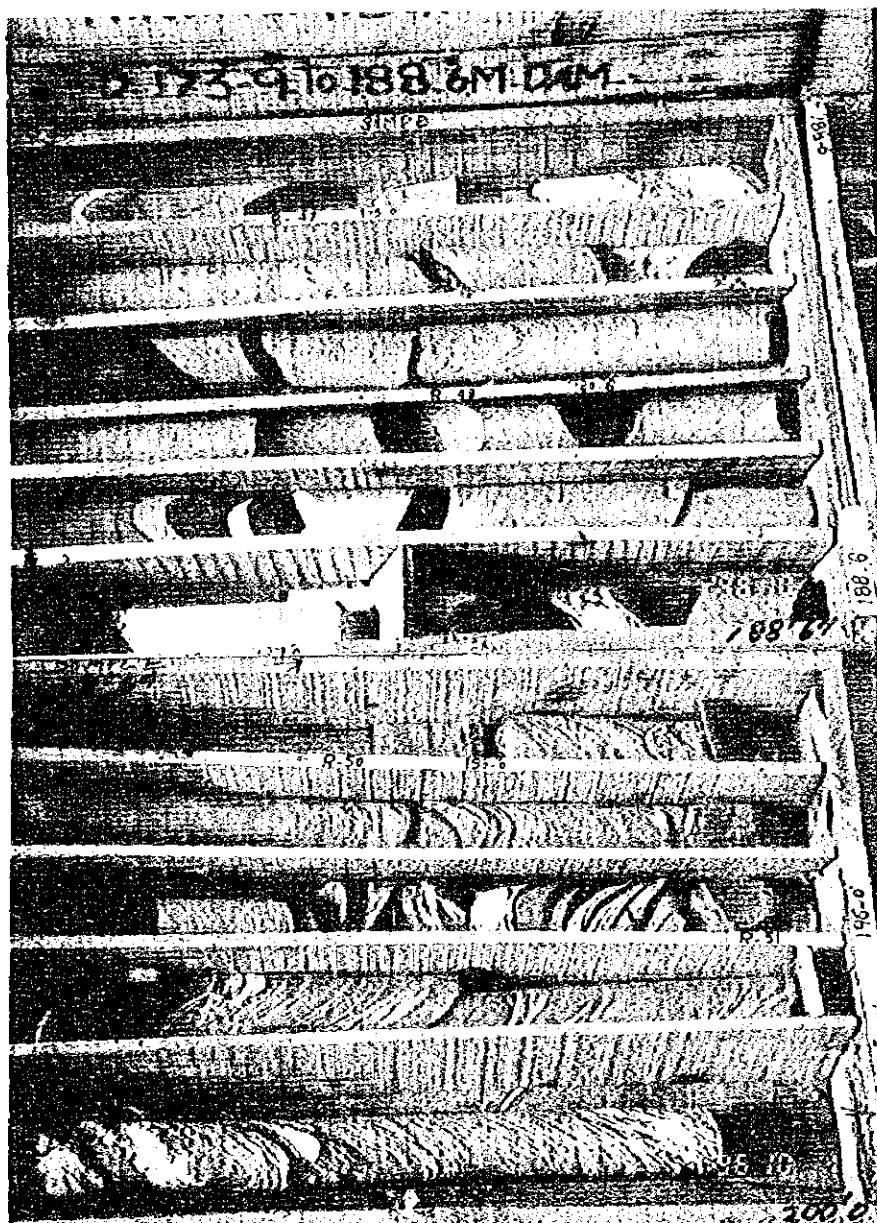
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173' 09" ⇔

188' 06" ⇔



⇔ 188' 06"

⇔ 200' 00"

Hole bottom

JICA