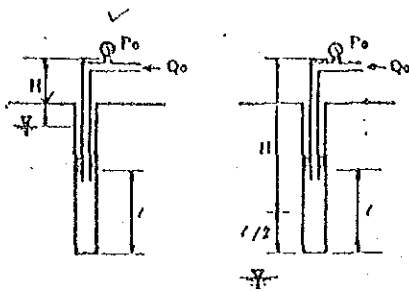


A 1-4 Lugeon Test Results

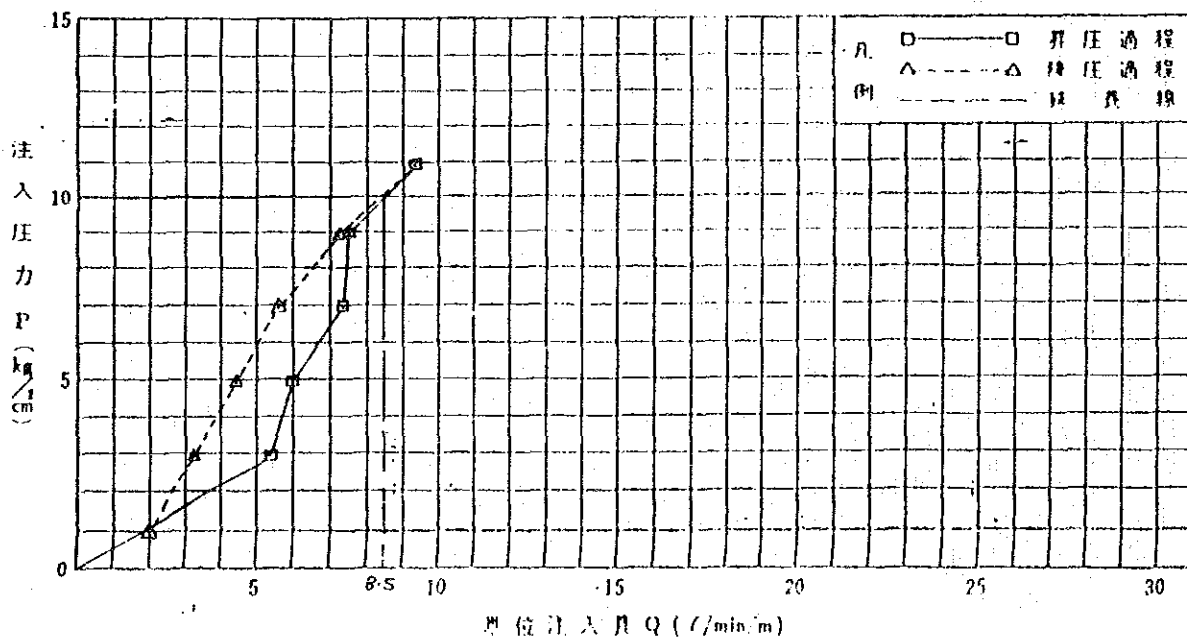
ルジオン・テスト

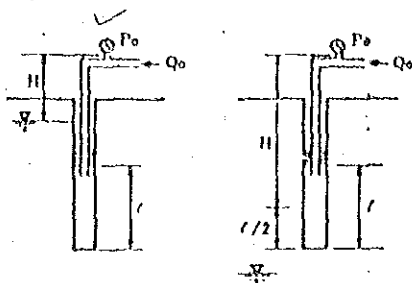


● 注入圧力(P) = 口元注入圧力(P₀) + 静水圧(H)
 - 損失水圧(α · Q₀ · L) × 0.1

LR-1 DH-1 孔 25.05 m ~ 30.05 m
 ルジオン管 Lu 8.5 Lu'
 限界圧力 10.9 kg/cm² 地下水位 GL- 6.29 m Before
 5.90 m After
 計器高 GL+ 2.8 m 静水圧(H) 0.909 kg/cm²
 区間長(L) 5.0 m 孔径(φ) 75 mm
 管内径 失係数(n) × 10⁻⁴ min^{1/2} 注入管長(L) 37.85 m
 傾斜 90° 地質 Phyllite

口元注入圧力 P ₀ (kg/cm ²)	注 入 量 (ℓ/min)					平均注入量 Q ₀ (ℓ/min)	注入圧力 P(kg/cm ²)	単位注入量 Q(ℓ/min/m)	
	1	2	3	4	5				
0	—	—	—	—	—	0	0	0	
2	29	27	25	26	25	26.4	2.9	5.3	
4	31	30	30	30	29	30.0	4.9	6.0	
6	38	37	37	36	35	36.6	6.9	7.3	
8	38	38	38	37	37	37.6	8.9	7.5	
10	46	48	48	47	46	47.0	10.9	9.4	
β	36	36	36	36	35	35.8	8.9	7.2	
6	28	28	28	28	27	27.8	6.9	5.6	
4	22	22	22	23	22	22.2	4.9	4.4	
2	15	17	15	17	16	16.0	2.9	3.2	
0	10	11	10	10	10	10.2	0.9	2.0	





LR-SECTION-1 JL 35.0 m 40.0 m

ルジオン例 Lu 11.6 Lu'

限界压力	10.8	kg/cm ²	地下水位 GL—	6.10	m Before
				9.78	m After

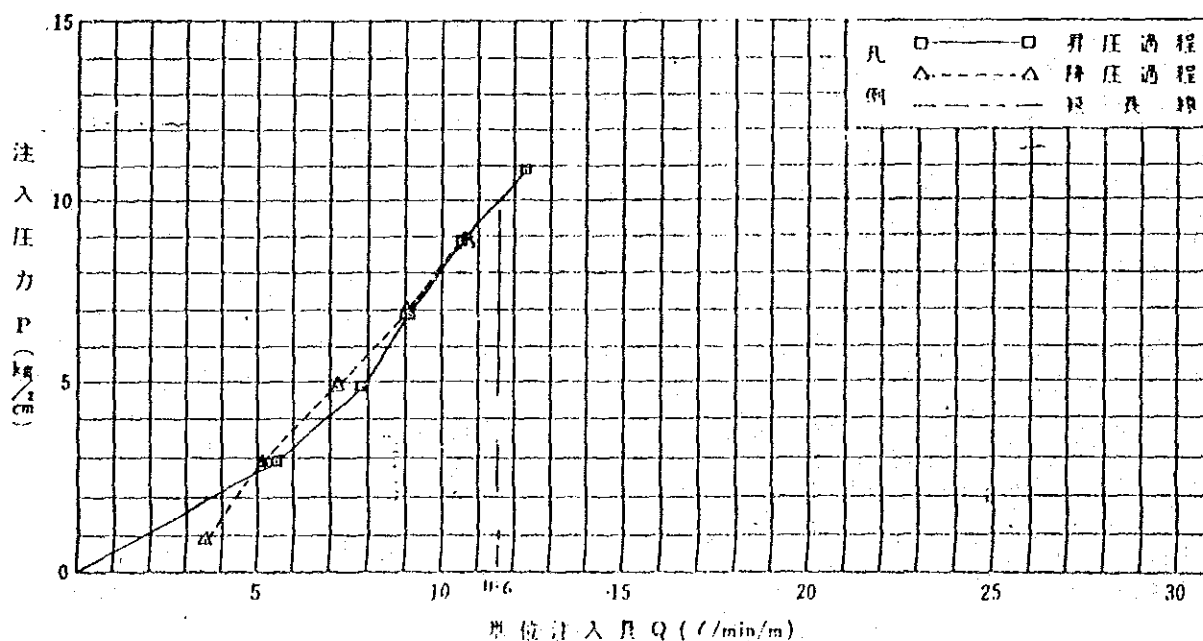
1123 高 G1.4 2.10 m 静水压力(H) 0.82 kg/cm^2

区間長(l) 5.0 m 孔徑(ϕ) 75 mm

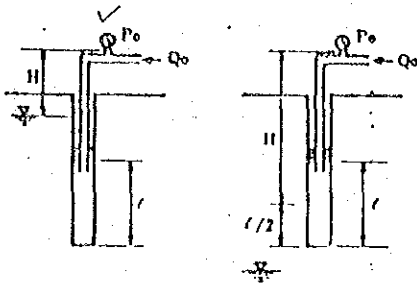
骨内損

失保数(n)	$\times 10^{-4} \text{ min}^{-1} / \text{L}$	注入清血(L)	47-10	m
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0891 90° 18.14 Phyllite

[illegible]

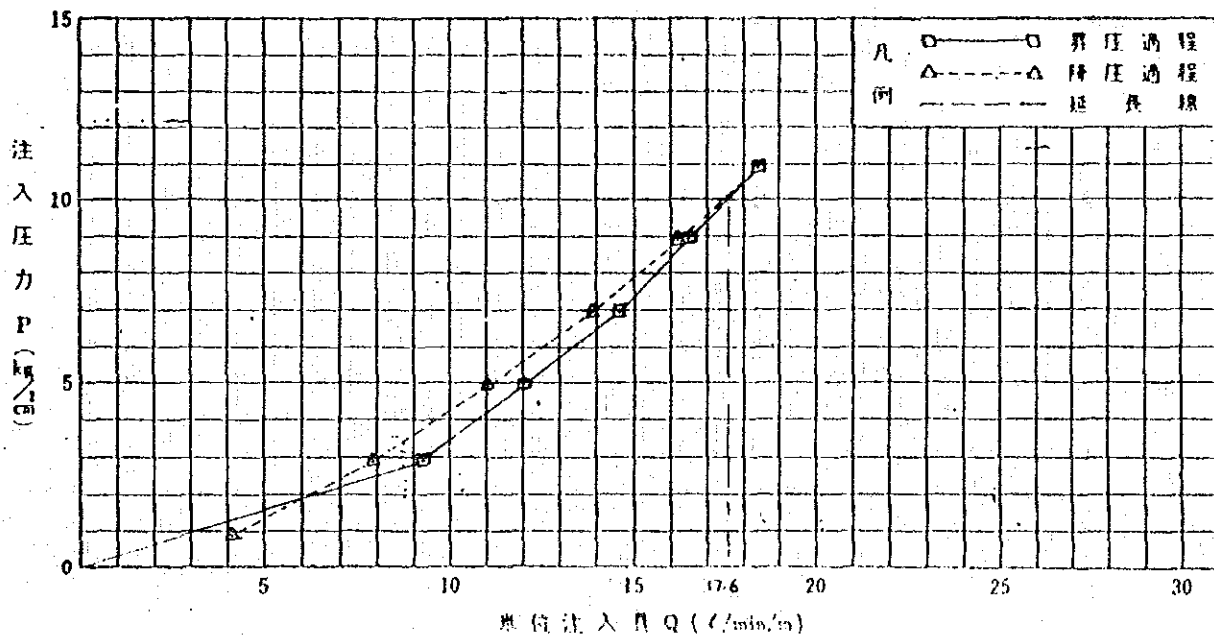
ルジオン・テスト



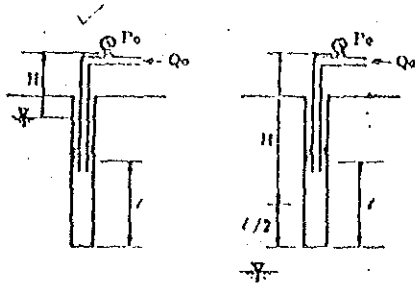
■ 注入圧力(P) = □ 元注入圧力(P₀) + 静水圧(H)
 - 損失水圧(0.1 Q₀ L) × 0.1

LR-1	ΔH-1	孔	40.0	m	45.0	m
ルジオン値			Lu	17.6	Lu'	
境界圧力		10.9	kg/cm ²	地下水位 GL-	5.78	m
					4.08	
計器高 GL+		3.05	m	静水圧(H)	0.883	kg/cm ²
区間長(L)		5.0	m	孔径(φ)	75	mm
管内径						
失係数(α)			× 10 ⁻⁴ min ^{1/2} /l	注入管長(L)	53.05	m
傾斜		90°	度	地質	Phyllite	

□ 元注入圧力 P ₀ (kg/cm ²)	注 入 量 (ℓ/min)					平均注入量 Q ₀ (ℓ/min)	注入圧力■ P(kg/cm ²)	単位注入量 Q(ℓ/min/m)	
	1	2	3	4	5				
0	—	—	—	—	—	—	—	—	
2	46	46	46	46	45	45.8	2.9	9.2	
4	61	60	60	60	60	60.2	4.9	12.0	
6	74	73	73	73	72	73.0	6.9	14.6	
8	84	82	82	83	82	82.6	8.9	16.5	
10	92	91	92	92	93	92.0	10.9	18.4	
8	81	82	80	82	80	81.0	8.9	16.2	
6	69	70	70	69	69	69.4	6.9	13.9	
4	56	55	55	55	55	55.2	4.9	11.0	
2	40	40	40	39	39	39.6	2.9	7.9	
0	21	20	21	20	20	20.4	0.9	4.1	



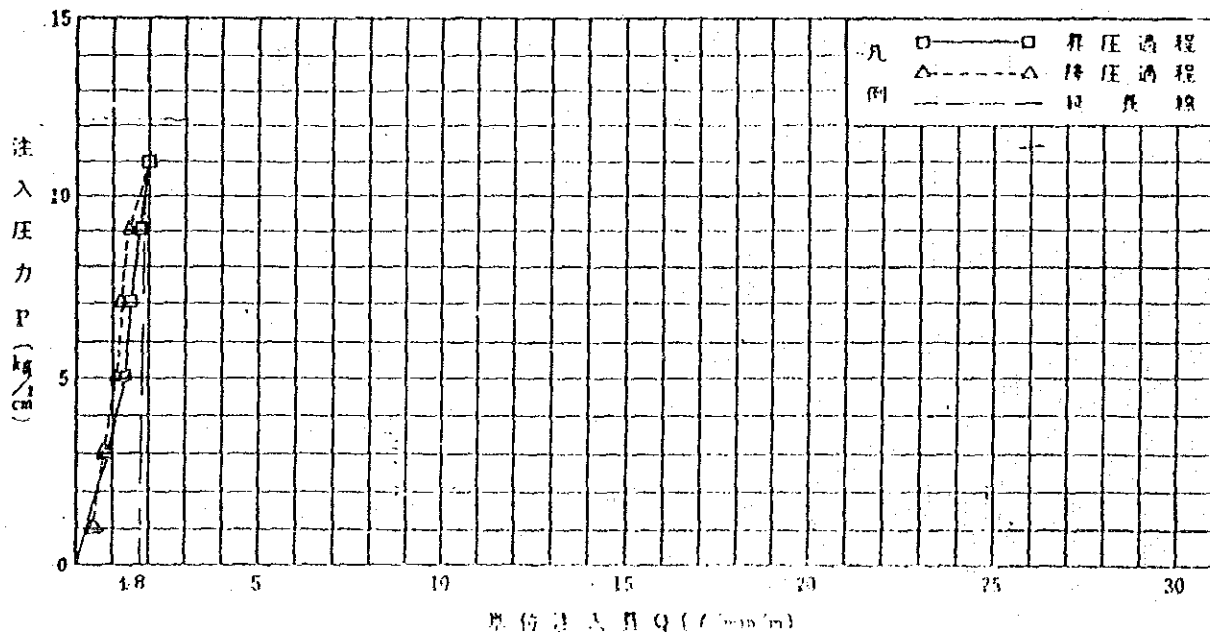
ルジオン・テスト



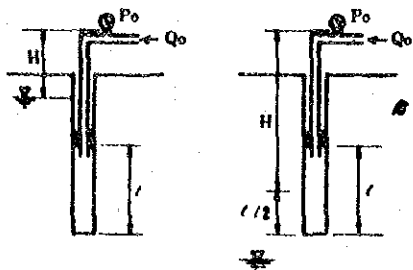
● 注入圧力(P) = ① 注入圧力(P₀) + 静水圧(H)
 - 静水圧(α · Q₀ · L) × 0.1

LA-1	6H-1	孔	45.0	m	50.0	m
ルジオン管			Lu	1.8	Lu'	
静水圧	11.0	kg/cm ²	地丁水位 GL	6.05	m	Before
				5.90		After
井筒深 GL	4.20	m	静水圧(H)	1.025	kg/cm ²	
区間長(L)	5.0	m	孔径(φ)	75	mm	
管内径						
失係数(α)		× 10 ⁻¹ min ⁻¹ /l	注入管長(L)	59.20	m	
傾斜	90°	度	地質	Phyllite		

口元注入圧力 P ₀ (kg/cm ²)	注 入 量 (L/min)					平均注入量 Q ₀ (l/min)	注入圧力 P(kg/cm ²)	単位注入量 Q(l/min/m)	
	1	2	3	4	5				
0	—	—	—	—	—	—	—	—	
2	4.5	4.5	4.0	4.5	4.0	4.3	3.0	0.9	
4	6.5	6.5	6.5	6.0	6.0	6.3	5.0	1.3	
6	8.0	7.5	7.5	7.5	7.0	7.5	7.0	1.5	
8	9.0	9.0	9.0	8.5	9.5	9.0	9.0	1.8	
10	10.0	10.5	10.0	10.0	9.5	10.0	11.0	2.0	
8	8.0	8.0	7.5	7.5	7.5	7.7	9.0	1.5	
6	7.0	7.0	6.5	6.5	6.5	6.7	7.0	1.3	
4	5.0	5.5	5.5	5.0	5.5	5.3	5.0	1.4	
2	4.0	4.0	3.5	4.0	4.0	3.9	3.0	0.8	
0	3.0	2.5	2.5	3.0	2.5	2.7	1.0	0.5	



ルジオン・テスト


$$= \text{原注入压力}(P) - \text{口元注入压力}(P_0) + \text{静水压}(H) - \text{损失水压}(\sigma \cdot Q_0 \cdot L) \times 0.1$$

CR2/DH1 N 10.79 m - 14.79 m

ルジオン値 21.6 Lu 21.1 Lu'

Fixing Heat Loss

限界压力 0.025 kg/cm² 地下水位 GL-2.03 m

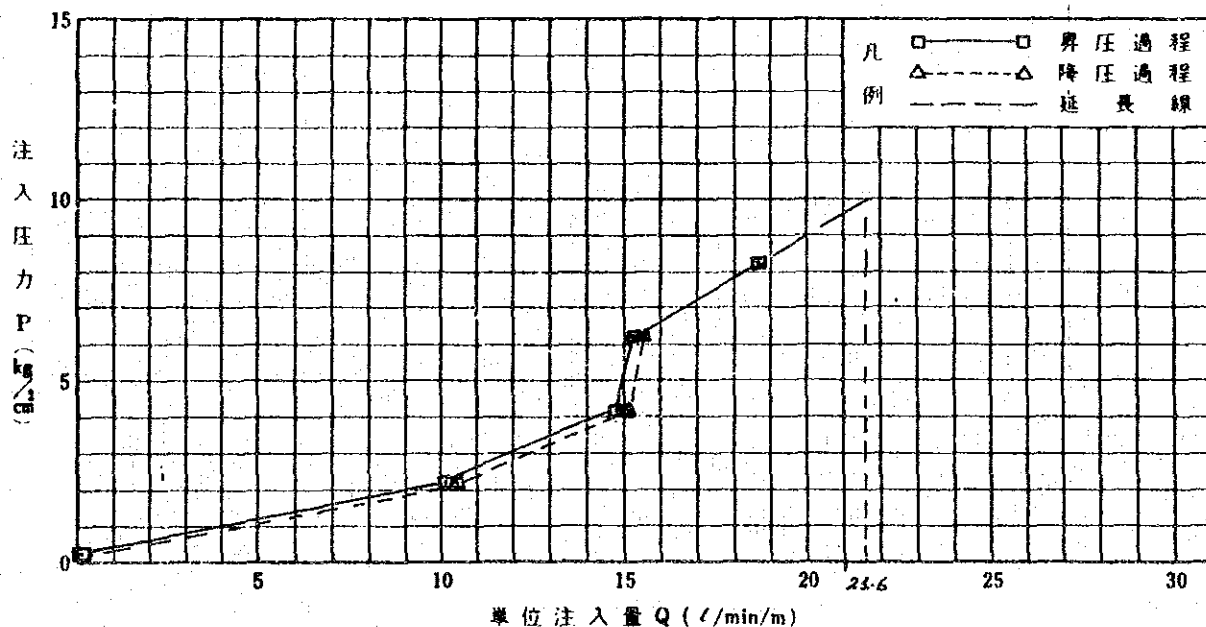
計器高 GL+ 0.70 m 静水压(H) 0.273 kg/cm²

区間長(1) 4.0 m 孔径(φ) 76.00 mm

管内損

失係數(a) $\times 10^{-4} \text{ min}^2/\text{ft}^2$ 注入管長(L) 9.79 m

傾斜 Vertical 度 地質 Phyllite, fresh, calcareous

[illegible]

Project Hole No: CR2/DH1 Test Section From 10.79 m to 14.79 m

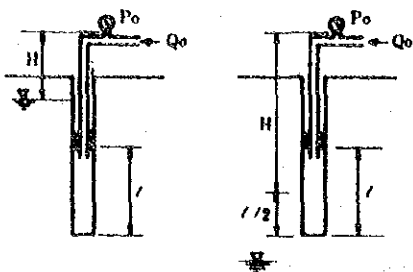
Location _____ Depth of Hole 14.79 m Test Date 28.01.93
Elevation _____ m Diameter of Hole 76.00 m/m Test by A.N. Bhandary
Coordinate _____ Length of Test Section 4.0 m Drilled by T.B. Chhetri
Height of Pressure Gauge 0.70 m Checked by per.
Depth of Water Table: Before Test WL- 2.03 m After Test. WL- 2.15 m

[illegible]
$$H_f (\text{Head loss}) = 0.025 \text{ kg/cm}^2$$

$$L_U = \frac{10 \times W_L}{p} \quad \text{where } W_L - \text{water loss, l/min/m}$$

p - Effective pressure

ルジオン・テスト


$$\text{泵注入压力}(P) = \text{口元注入压力}(P_0) + \text{静水压}(H) \\ - \text{损失水压}(\alpha \cdot Q_0^2 \cdot L) \times 0.1$$

CR2/DH1 R 21.92 m ~ 26.92 m

ルジオン値 19.3 Lu 19.3 Lu'

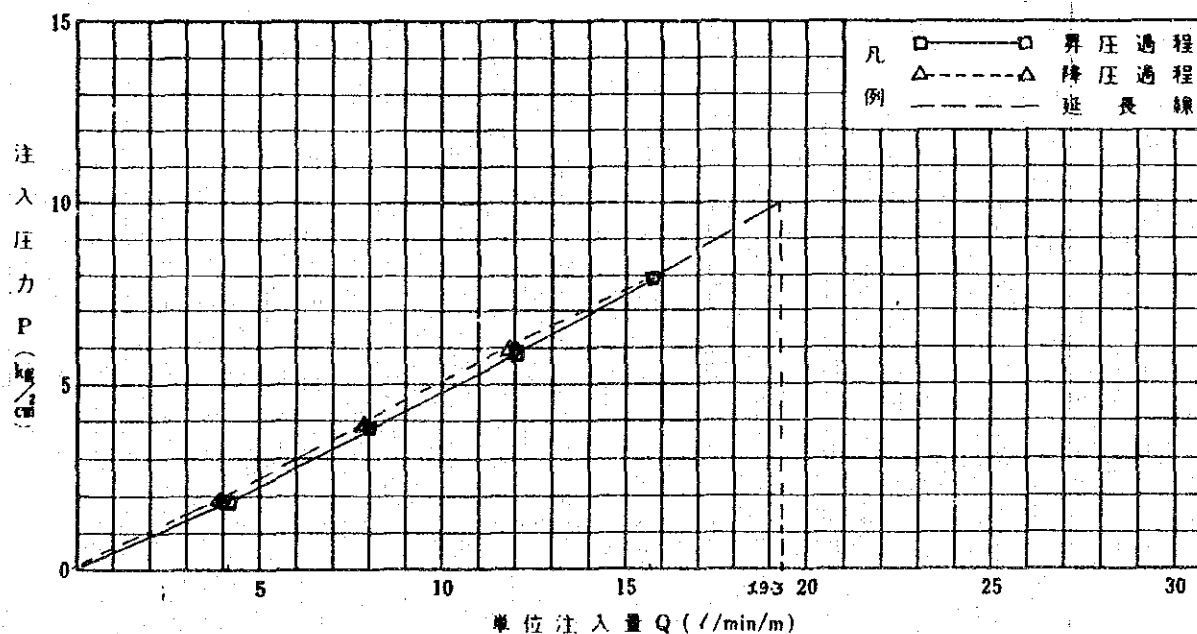
限界压力 0.25 kg/cm² 地下水位 GL-1.75 m

計器高 GL+ 0.60 m 静水压(H) 0.235 kg/cm²

区間長(1) 5.00 m 孔径(φ) 76.00 mm

管内損失係數(α)	$\times 10^{-4} \text{ min}^2/\text{ft}^2$	注入管長(L)	20.92	m
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傾斜 Vertical 度 地質 Calcareous Phyllite

[illegible]

Project Hole No: CR2/DH1 Test Section From 21.92 m to 26.92 m

Location _____ Depth of Hole 26.92 m Test Date 03.02.'93
Elevation _____ m Diameter of Hole _____ m/m Test by A.N. Bhandary
Coordinate _____ Length of Test Section 5.0 m Drilled by T.B. Chhetri
Height of Pressure Gauge 0.60 m Checked by prof.
Depth of Water Table: Before Test WL- 1.75 m After Test, WL- 2.47 m

[illegible]

Remarks: H_f (Head loss) = 0.25 kg/cm^2

Project _____ Hole No: _____ Test Section From 32.20 m to 35.40 m

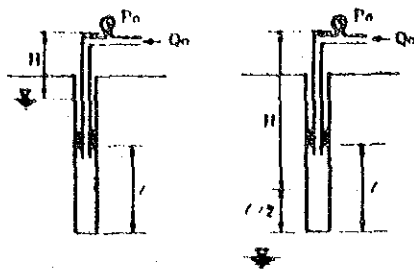
Depth of Water Table: Before Test WL- 1.85 m After Test. 1.95 m

[illegible]

Remarks:

$$H_f (\text{Head loss}) = 0.65 \text{ kg/cm}^2$$

ルジオン・テスト



単位注入圧力(P) = 単位注入圧力(P₀) + 静水圧(H)
 - 損失水圧(α · Q · L) × 0.1

CR2/DH1 井 32.20 m - 35.40 m

ルジオン値 16.5 Lu 17.3 Lu'

隙水圧力 0.65 kg/cm² 地下水位 GL - 485 m

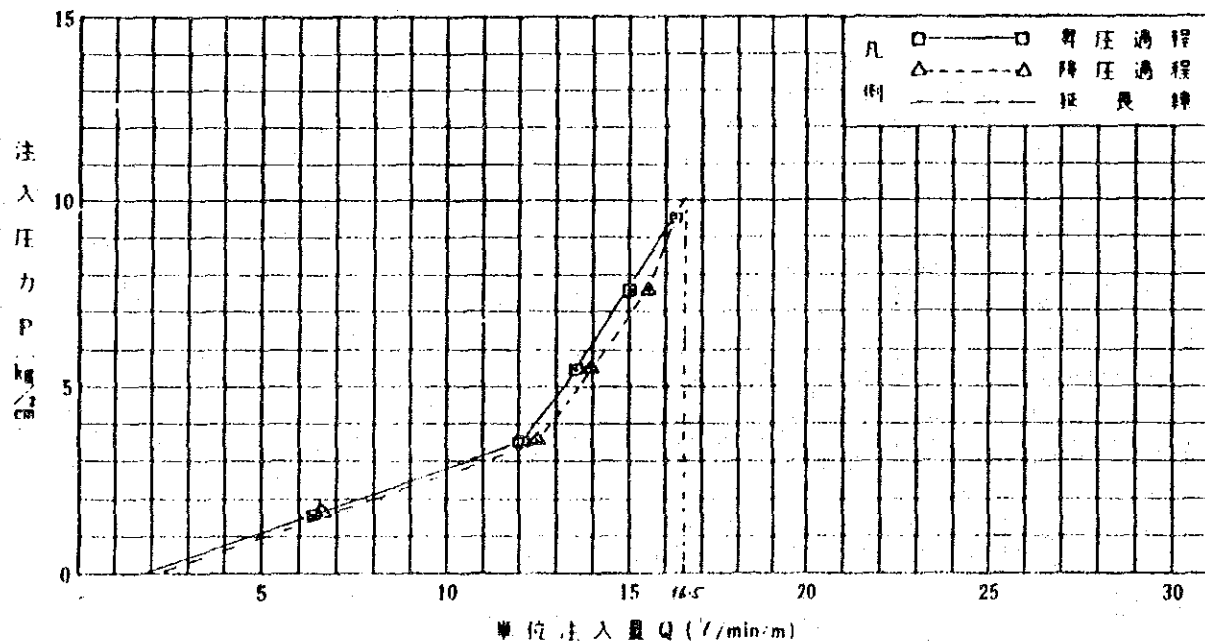
計器高 GL + 0.60 m 静水圧(H) 0.245 kg/cm²

区間長(l) 3.20 m 孔径(φ) 76.00 mm

管内損失係数(α) × 10⁴ min²/l² 注入管長(L) 32.20 m

傾斜 Vertical 度 地質 Quarzitic Phyllite

単位注入圧力 P ₀ (kg/cm ²)	注 入 量 (ℓ/min)					平均注入量 Q ₀ (ℓ/min)	注入圧力率 P (kg/cm ²)	単位注入量 Q (ℓ/min/m)	
	1	2	3	4	5				
0						0.4	-0.405	0.125	
2						20.4	1.595	6.375	
4						38.8	3.595	12.125	
6						41.8	5.595	13.062	
8						48.0	7.595	15.000	
10						52.0	9.595	16.250	
8						50.0	7.595	15.625	
6						44.8	5.595	14.000	
4						40.0	3.595	12.500	
2						20.8	1.595	6.500	
0						0.4	-0.595	0.125	



Project Hole No: CR2/DH1 Test Section From 42.00 m to 45.12 m

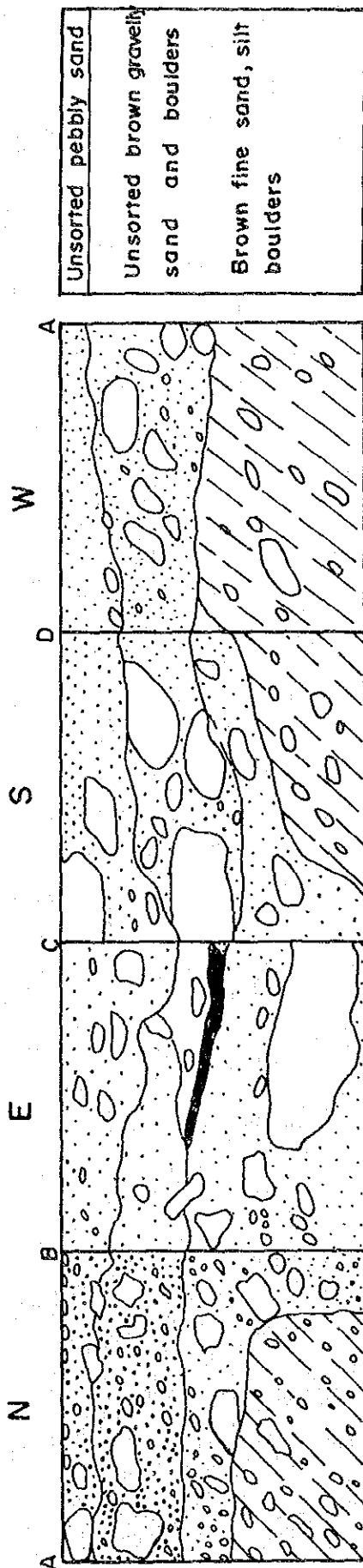
Location _____ Depth of Hole 45.12 m Test Date 09.02.93
Elevation _____ m Diameter of Hole _____ m/in Test by A.N. Bhandary
Coordinate _____ Length of Test Section 3.12 m Drilled by T.B. Chhoti
Height of Pressure Gauge 0.60 m Checked by pl
Depth of Water Table: Before Test WL- 1.82 m After Test. WL- 1.88 m

Start Time	Injection Test				Injection Test			
	Progress Time in min	Pressure Kg/cm ²	Water Volume		Progress Time in min	Pressure Kg/cm ²	Water Volume	
			Total, L	ℓ/min			Total, L	ℓ/min
11.44	5	0	0	0.0				
11.50	5	2	6	1.2				3
11.56	5	4	7	1.4				6
12.02	5	6	13	2.6				
12.08	5	8	26	5.2				
12.14	5	10	41	8.2				
12.20	5	8	30	6.0				
12.26	5	6	17	3.4				
12.32	5	4	9	1.8				
12.38	5	2	7	1.4				
12.44	5	0	0	0.0				

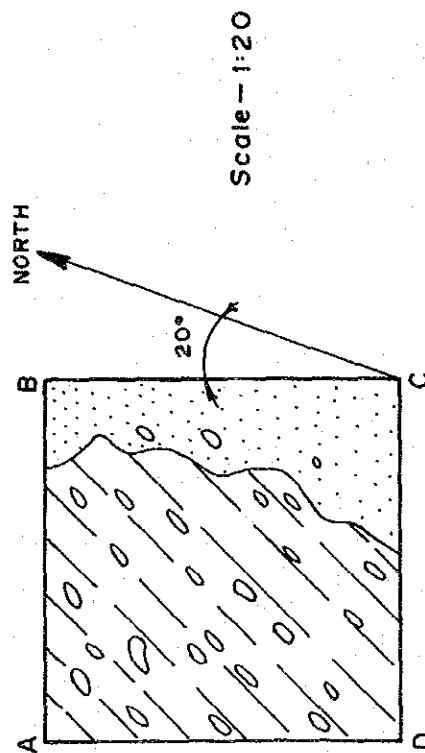
Remarks: H_f (head loss) = 1.5 kg/cm^2

A 1-5 Sketches of Pits

Pit No. 1 (BR-I, Bheri)

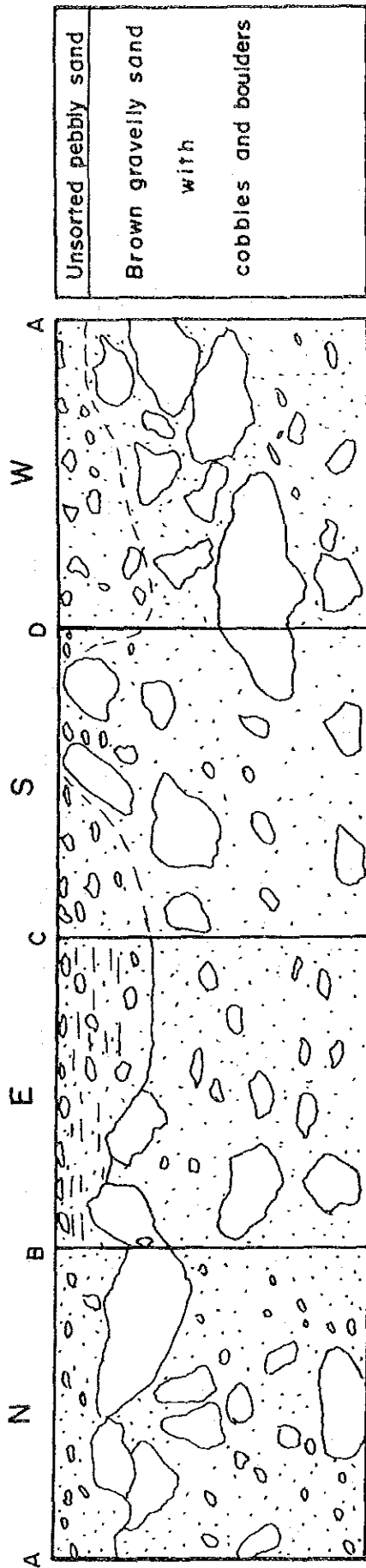


Sketch of Pit Wall Section

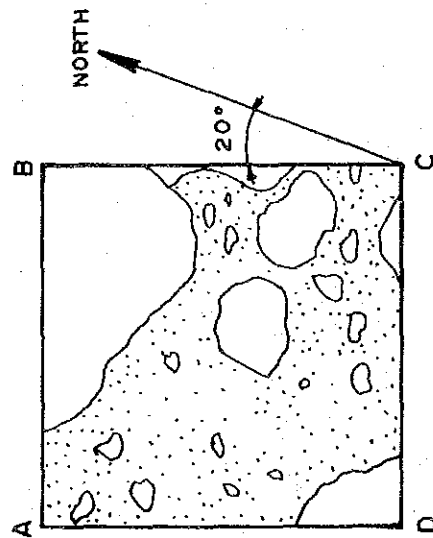


Plan of Pit-1

Pit No. 2 (BR-I, Bheri)



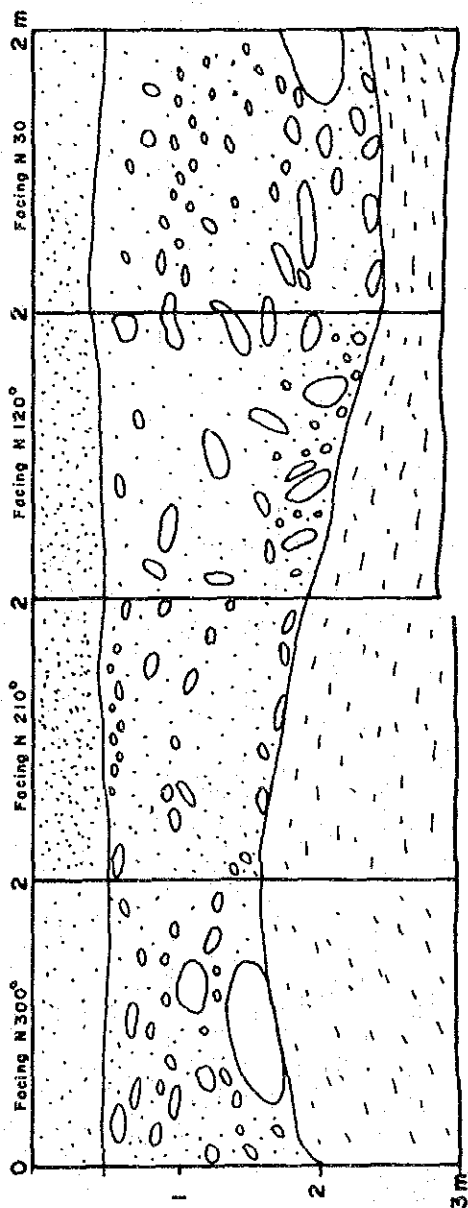
Sketch of Pit Wall Section



Scale - 1:20

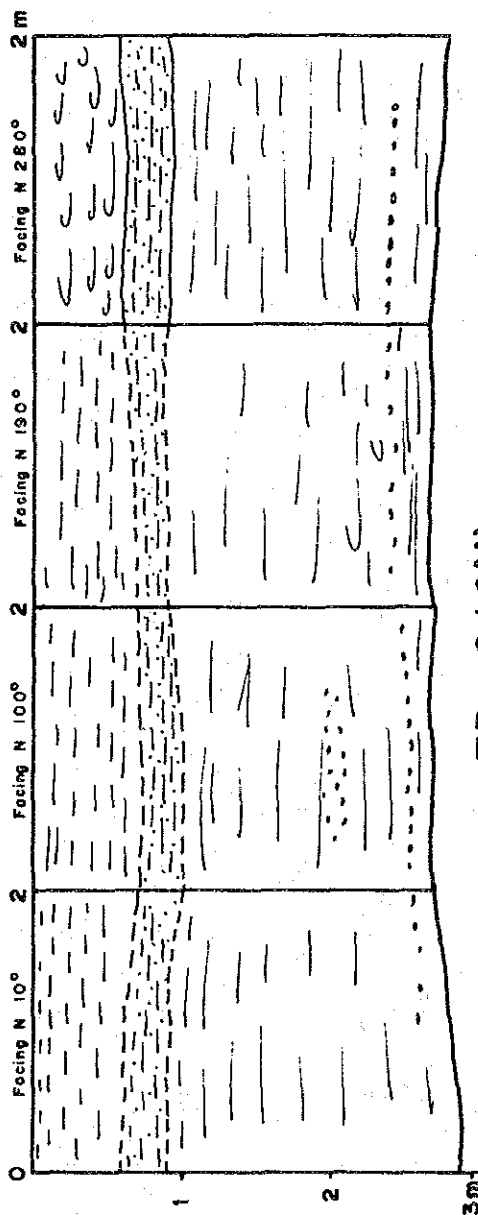
Plan of Pit-2

TP-1 (CM)



Yellowish grey sandy silty clay
Yellowish grey micaceous silty clay with altered phyllite boulders (20-40%)
Yellowish and reddish sandy silty clay with subordinate coarse sand pebbles and boulders.

Scale - 1:50

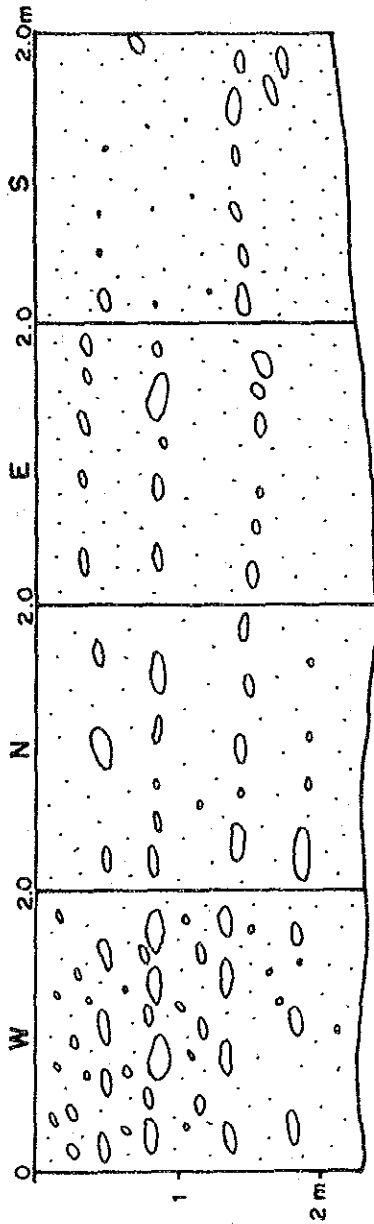


Dull yellowish brown sandy silty lateritic clay with altered phyllite fragments.
Gravelly (20%) dark brown lateritic clay.
Dark brown lateritic clay with altered phyllite clasts (15%).

TP-2 (CM)

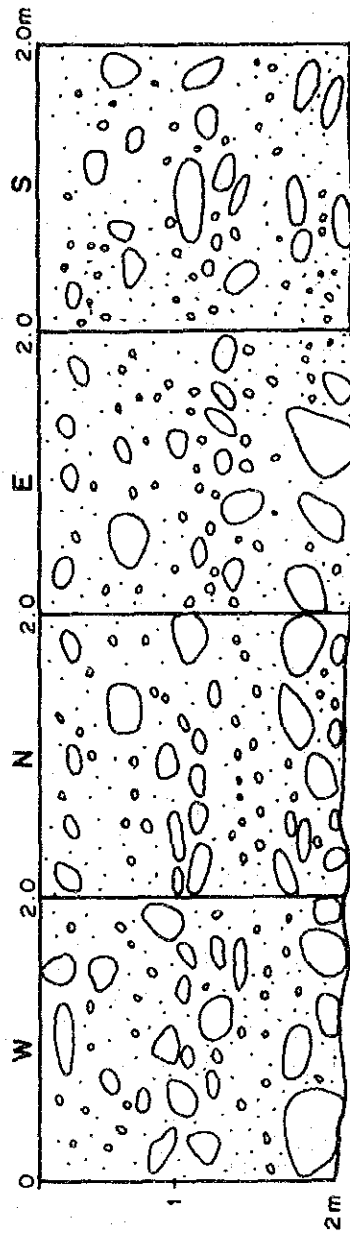
Sketch of Test Pits TP-1 & TP-2

TP-3 (CA)



Scale - 1:50

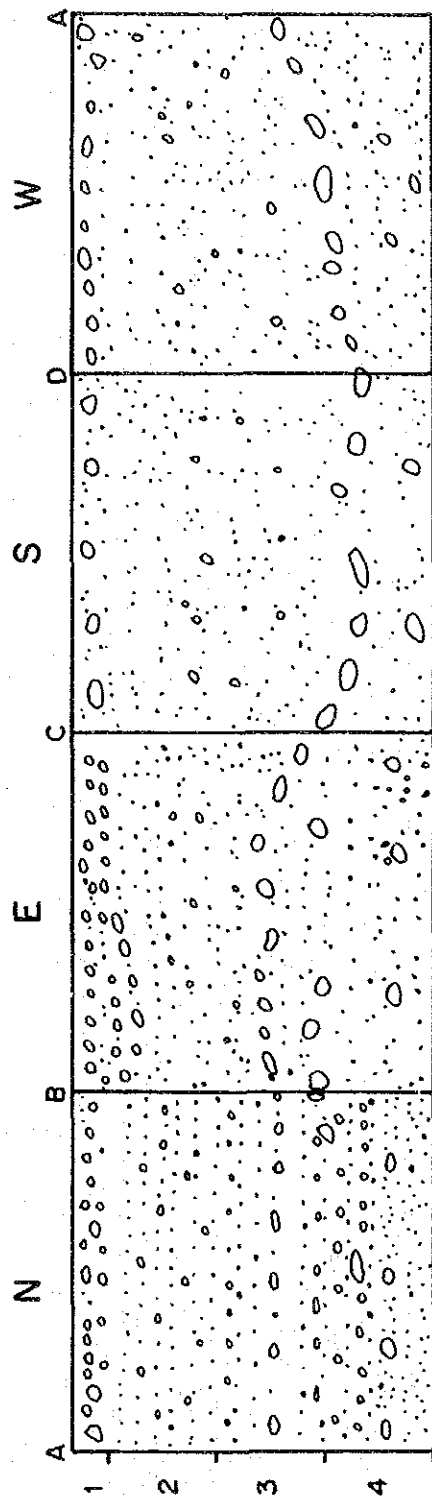
Non-graded gravelly pebbly cobbly fine sand.



TP-4 (CA)

Sketch of Test Pits TP-3 & TP-4

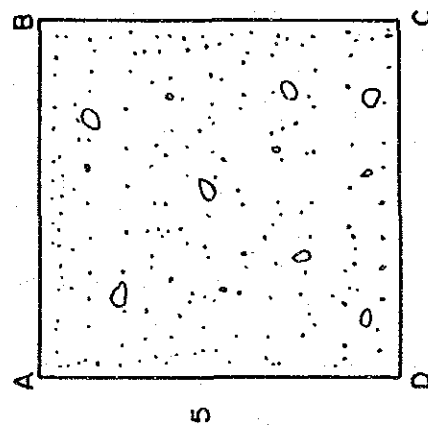
Pit No. 1(SR-3)



Sketch of Pit Wall Section



SCALE - 1:20

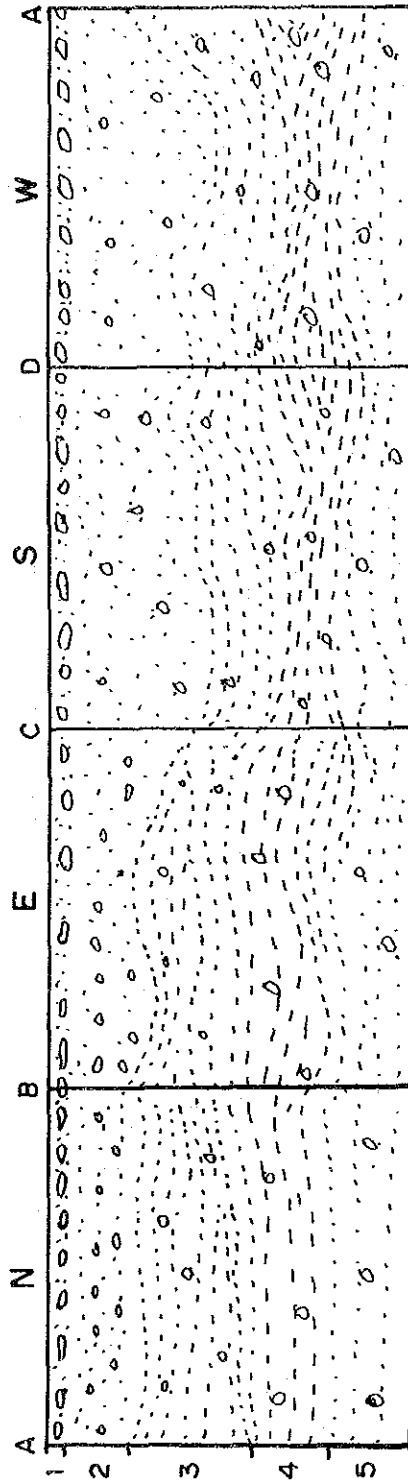


Plan of Pit-1

LEGEND

1. Silty sand gravel and boulder.
2. Arkosic sand with pebble.
3. Pebble with gravel horizon
4. Arkosic sand
5. Arkosic sand with silt and pebble

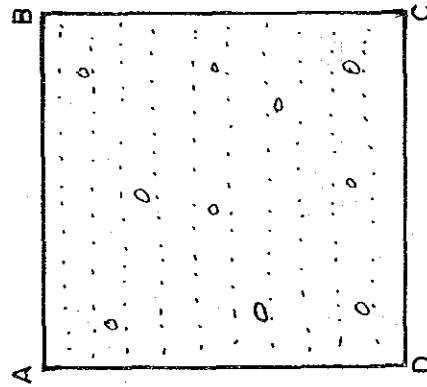
Pit No. 2 (SR-3)



Sketch of Pit Wall Section

LEGEND:

1. Well sorted gravel with sand.
2. Arkosic sand with pebble
3. Fine sand
4. Clayey sand with few gravel
5. Medium grained sand and silt
6. Sand and silt with few pebbles

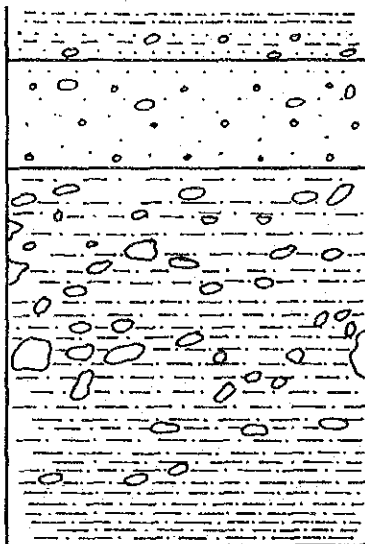


Plan of Pit-2

N

SCALE - 1:20

Pit No. — 1



Top soil : dark brown silty soil (50%), silty sand (20%), sand (2%) and gravel (28%)

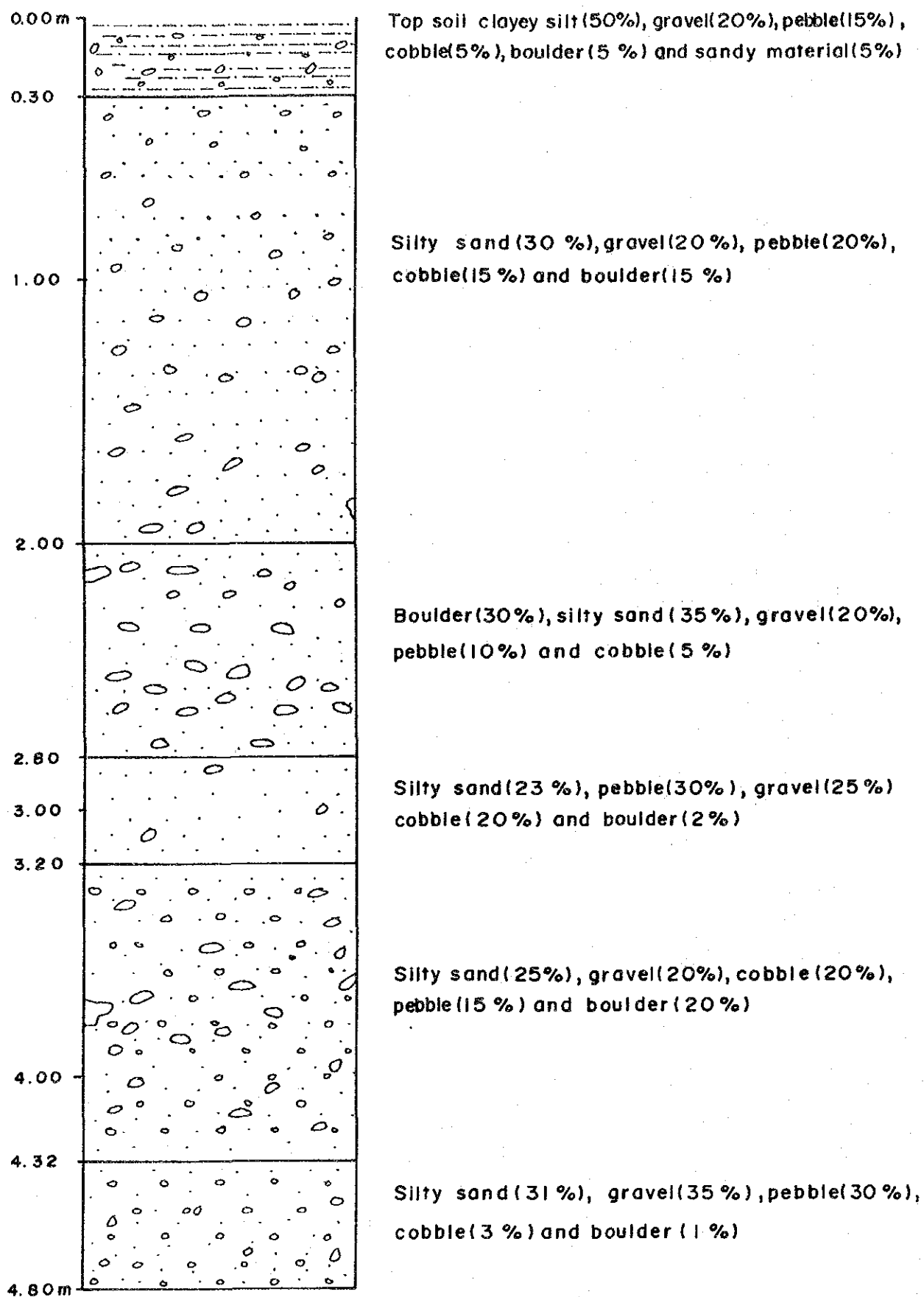
Silty sand (), gravel (), pebbles (), cobbles () and boulder (, %)

Silty sand (35%), gravel (20%), pebble (10%)
cobble (15%) and boulder (20%)

Sketch of Pit/Trench No.1 west facing wall section
Chameliya Left Bank

SCALE- 1:20

Pit No.-2



**Sketch of Pit/Trench No.2 east facing wall section
Chameliya Right Bank**

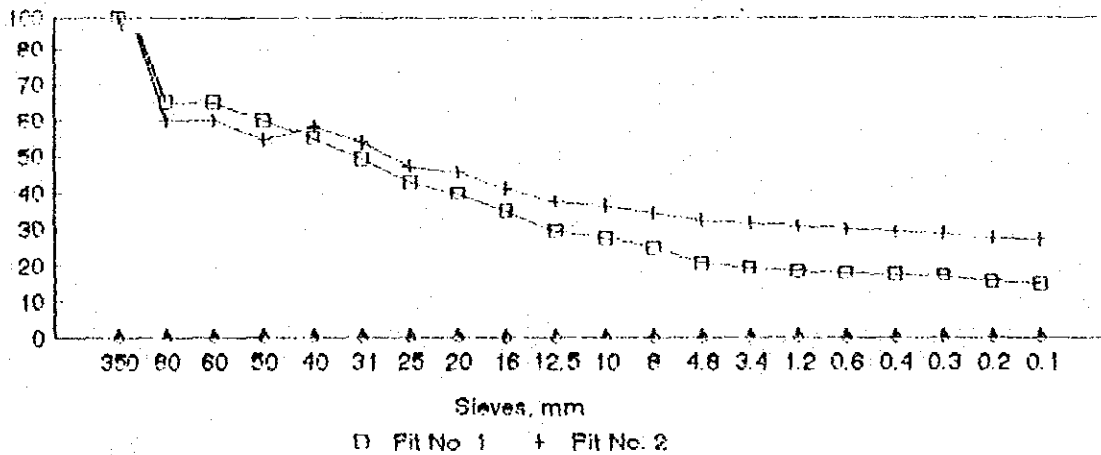
SCALE - 1:20

A 1-6 Laboratory Test Results

SIEVE ANALYSIS

Project : Karnali and Mahakali Upper Basin Master Plan Study
Client : ITECO, Nepal

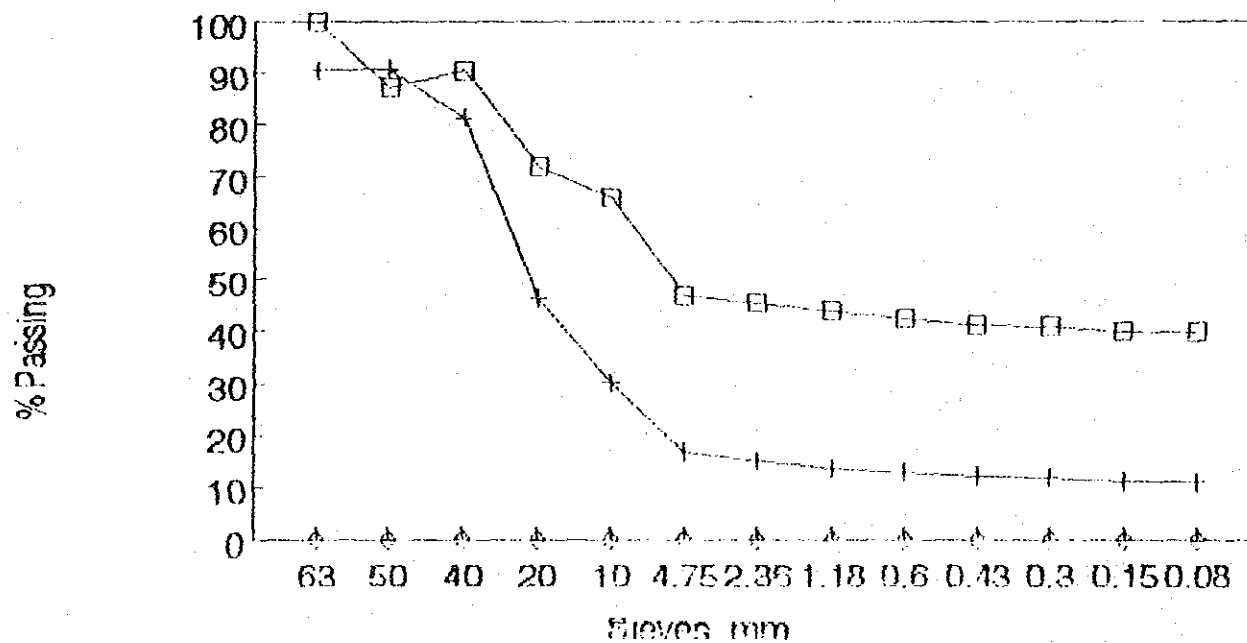
Site	BR 1	
Sample No.	Pit No. 1	Pit No. 2
Sieve	% Passing	% Passing
350 mm.	100.00	100.00
80 mm.	65.00	60.00
60 mm.	65.00	60.00
50 mm.	60.10	54.82
40 mm.	55.25	58.25
31 mm.	49.34	54.07
25 mm.	42.93	47.45
20 mm.	39.95	45.71
16 mm.	35.07	41.28
12.5 mm.	29.61	37.82
10 mm.	27.73	36.47
8 mm.	24.90	34.40
4.75 mm.	20.55	32.41
3.36 mm.	19.29	31.62
1.18 mm.	18.27	30.72
600 mcr.	17.82	30.04
425 mcr.	17.33	29.28
300 mcr.	17.09	28.79
150 mcr.	15.44	27.29
75 mcr.	14.88	27.04



SIEVE ANALYSIS

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal

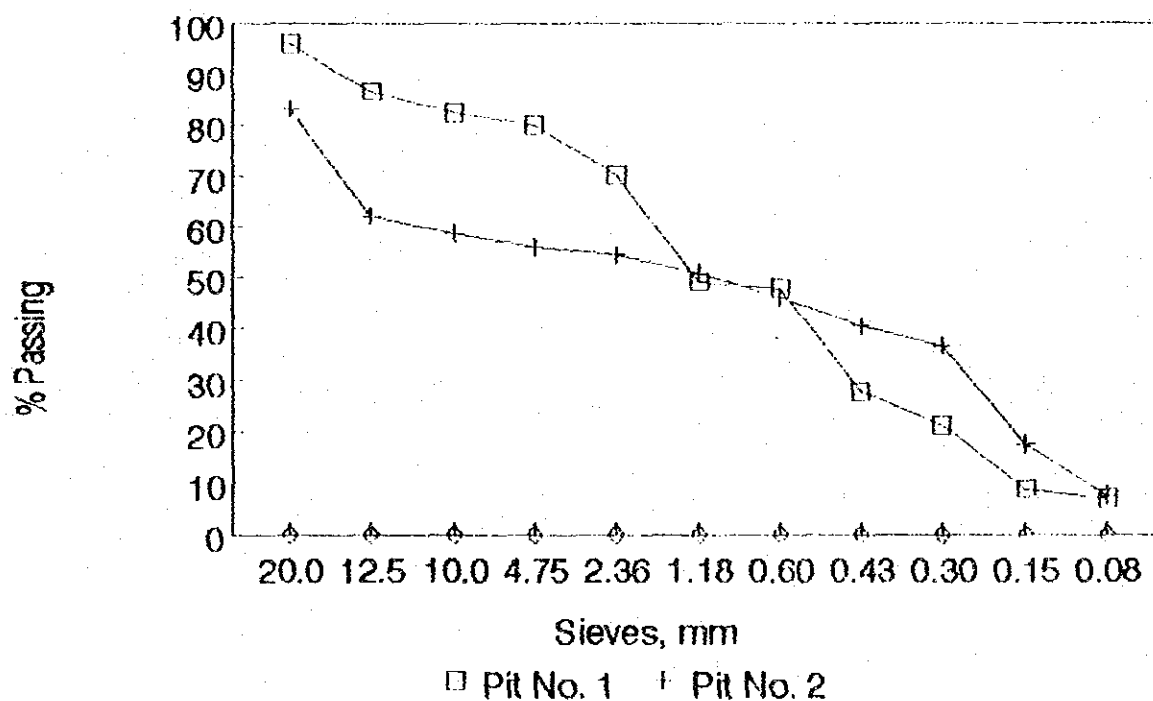
Site	CR 2	
Sample No.	Pit No. 1	Pit No. 2
Sieve	% Passing	% Passing
80 mm.	100.00	100.00
63 mm.	100.00	90.48
50 mm.	87.30	90.73
40 mm.	90.50	81.30
31 mm.	83.20	65.60
25 mm.	77.43	53.90
20 mm.	72.00	46.30
12.5 mm.	67.07	41.73
10 mm.	65.98	30.03
8 mm.	62.85	27.17
4.75 mm.	46.90	16.68
3.35 mm.	45.47	14.81
1.18 mm.	43.89	13.30
600 micr.	42.46	12.60
425 micr.	41.19	11.94
300 micr.	40.92	11.77
150 micr.	39.95	11.02
75 micr.	39.81	10.91



SIEVE ANALYSIS

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal

Location Sample No. Sieves mm.	SR - 3	
	Pit No. 1 % Passing	Pit No. 2 % Passing
20 mm.	95.96	83.20
12 mm.	86.66	62.20
10 mm.	82.56	58.90
4.75 mm.	80.02	55.96
2.36 mm.	70.32	54.46
1.18 mm.	49.22	50.96
600 micr.	47.92	46.10
425 micr.	27.66	40.50
300 micr.	21.12	36.60
150 micr.	8.77	17.34
75 micr.	6.90	7.34



LOS ANGELES ABRASION TEST

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal
 Date : 28 February, 1993

Sample		BR 1	
No. of Spheres		Pit No. 1 12	Pit No. 2 12
Initial weight of Aggregate	W1	5000.00	5000.00
Weight of Aggregate retained on 1.70 mm sieves after the test	W2	3620.00	3460.00
Loss in weight due to wear	(W1 - W2)	1380.00	1540.00
Percentage wear	$(W1 - W2) / W1 \times 100$	27.60	30.80

LOS ANGELES ABRASION TEST

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal
 Date : 28 February, 1993

Sample		CR 2	
No. of Spheres		Pit No. 1	Pit No. 2
		12	12
Initial weight of Aggregate	W1	5000.00	5000.00
Weight of Aggregate retained on 1.70 mm sieves after the test	W2	4025.00	3940.00
Loss in weight due to wear	(W1 - W2)	975.00	1060.00
Percentage wear	$(W1 - W2) / W1 \times 100$	19.50	21.20

SOUNDNESS OF AGGREGATE BY USE OF SODIUM SULPHATE

Project : Karnali and Mahakali Upper Basin Master Plan Study

Client : ITECO, Nepal

Location : BR 1

Date : 4 March 1993

Sample : Pit No. 1

Sieve Size mm.		Initial Wt. of sample	Weight of fractions after Test		Wt. loss during test	Wt. Loss %	Original grading sample	Weighted % loss	Total no. of pieces	Qualitative Examination							
										Particles Exhibiting Distress							
										Crumbling		Splitting		Flaking		Cracking	
Passing	Retained		Passing	Retained						No	%	No	%	No	%	No	%
63.00	40.00	250.0		246.0	4.0	1.60	25.00	0.40	2								
40.00	20.00	250.0		244.0	6.0	2.40	25.00	0.60	12	2	16.7					1	8.3
20.00	10.00	250.0		248.0	2.0	0.80	25.00	0.20	23	4	17.4					1	4.3
10.00	4.75	250.0		223.0	27.0	10.80	25.00	2.70	280	11	3.9					5	1.8
Total		500.0						1.00									

Sample : Pit No. 2

Sieve Size mm.		Initial Wt. of sample	Weight of fractions after Test		Wt. loss during test	Wt. Loss %	Original grading sample	Weighted % loss	Total no. of pieces	Qualitative Examination							
										Particles Exhibiting Distress							
										Crumbling		Splitting		Flaking		Cracking	
Passing	Retained		Passing	Retained								No	%	No	%	No	%
63.00	40.00	250.0		206.0	44.0	17.60	25.00	4.40	1	1.0							
40.00	20.00	250.0		235.0	15.0	6.00	25.00	1.50	6	1.0	16.7					4.0	66.7
20.00	10.00	250.0		229.0	21.0	8.40	25.00	2.10	59	9.0	15.3					5.0	8.5
10.00	4.75	250.0		226.5	23.5	9.40	25.00	2.35	268	12.0	4.5					7.0	2.6
Total		1000.0						10.35									

SOUNDNESS OF AGGREGATE BY USE OF SODIUM SULPHATE

Project : Karnali and Mahakali Upper Basin Master Plan Study

Client : ITECO, Nepal

Location : Chameliya

Date : 4 March 1993

Sample : Coarse Agg. (CR-2, Pit No. 1)

Sieve Size mm.		Initial Wt. of sample	Weight of fractions after Test		Wt. loss during test	Wt. Loss %	Original grading sample	Weighted % loss	Total no. of pieces	Qualitative Examination Particles Exhibiting Distress							
Passing	Retained		Passing	Retained						Crumbling		Splitting		Flaking		Cracking	
										No	%	No	%	No	%	No	%
63.00	40.00	250.0		247.0	3.0	1.20	25.00	0.30	2							1	50.0
40.00	20.00	250.0		243.0	7.0	2.80	25.00	0.70	9	1	11.1					1	11.1
20.00	10.00	250.0		242.0	8.0	3.20	25.00	0.80	32	2	6.3					3	9.4
10.00	4.75	250.0		224.0	26.0	10.40	25.00	2.60	412	10	2.3	1.00	0.9	2.00	0.5	9	2.0
Total		1000.0						4.40									

Sample : Coarse Agg. (CR-2, Pit No. 2)

Sieve Size mm.		Initial Wt. of sample	Weight of fractions after Test		Wt. loss during test	Wt. Loss %	Original grading sample	Weighted % loss	Total no. of pieces	Qualitative Examination							
										Particles Exhibiting Distress							
Passing	Retained		Passing	Retained						Crumbling		Splitting		Flaking		Cracking	
										No	%	No	%	No	%	No	%
63.00	40.00	250.0		249.0	1.0	0.40	25.00	0.10	2	1.0	50.0						
40.00	20.00	250.0		248.5	1.5	0.60	25.00	0.15	7	1.0	14.3					1.0	14.3
20.00	10.00	250.0		248.0	2.0	0.80	25.00	0.20	33	2.0	6.1	1.0	3.0			2.0	6.1
10.00	4.75	250.0		220.0	30.0	12.00	25.00	3.00	420	11.0	2.6	5.0	1.2	2.00	0.5	7.0	1.7
Total		1000.0						3.45									

SOUNDNESS OF AGGREGATE BY USE OF SODIUM SULPHATE

Project : Karnali and Mahakali Upper Basin Master Plan Study

Client : ITECO, Nepal

Sample : Fine Aggregate

Location : SR - 3, Pit No. 1

Date : 4 March 1993

Sieve Size mm.		Initial Wt. of sample	Weight of fractions after Test		Wt loss during test	Wt Loss %	Original grading sample	Weighted % loss	Total no. of pieces	Qualitative Examination							
										Particles Exhibiting Distress							
										Crumbling		Splitting		Flaking		Cracking	
Passing	Retained		Passing	Retained						No	%	No	%	No	%	No	%
9.50	4.75	100.0		85.25	14.8	14.75	1.00	0.148									
4.75	2.36	100.0		70.85	29.2	29.15	1.00	0.292									
2.36	1.18	100.0		62.20	37.8	37.80	1.00	0.378									
1.18	0.60	100.0		50.69	49.3	49.31	1.00	0.493									
Total		400.0						1.31									

Location : SR - 3, Pit No. 2

Sieve Size mm.		Initial Wt. of sample	Weight of fractions after Test		Wt. loss during test	Wt Loss %	Original grading sample	Weighted % loss	Total no. of pieces	Qualitative Examination							
										Particles Exhibiting Distress							
Passing	Retained		Passing	Retained						Crumbling		Splitting		Flaking		Cracking	
												No	%	No	%	No	%
9.50	4.75	100.0		79.65	20.35	20.35	1.00	0.203									
4.75	2.36	100.0		80.95	19.05	19.05	1.00	0.190									
2.36	1.18	100.0		82.77	17.23	17.23	1.00	0.172									
1.18	0.60	100.0		80.45	19.55	19.55	1.00	0.195									
Total		400.0						0.76									

SOUNDNESS OF AGGREGATES BY USE OF SODIUM SULFATE OR MAGNESIUM SULFATE

Project : Karnali Basin Study Location : LR-1
 Source of Material : TP-3(CA)
 Sample No. : _____ Tested by : _____ Date : _____
 Solution used : Sodium Sulfate / Magnesium Sulfate S.G. 2.7

Quantitative Data

Sieve Size	Grading of Original Sample, %	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test	Weighted Percentage Loss
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Soundness of Fine Aggregate

Bin No.	Can No.
No. 50 to No. 100	5
No. 30 to No. 50	3
No. 16 to No. 30	12
No. 8 to No. 16	
No. 4 to No. 8	
No. 0 to No. 4	
Totals	2815

Soundness of Coarse Aggregate Loss (%)

Sieve Size	g.	Weight	Loss (%)
2" to 1 1/2"	g.	1500 gm	0.66
1 1/2" to 1"	g.	1000 gm	0.5
1" to 3/4"	g.	294 gm	2.04
3/4" to 1/2"	g.		
1/2" to 3/8"	g.		
3/8" to No. 4	g.		
Totals		2794	

Quantitative Examination of Coarse Aggregate (larger than 3/4")

Sieve Size	Particles Exhibiting Distress								
	Splitting		Crumbling		Cracking		Flaking		Total No. of Particles Before Test
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
1 1/2" to 1 1/2"	No		No		14		No		130
1 1/2" to 3/4"									

Total loss = 0.75

SOUNDNESS OF AGGREGATES BY USE OF SODIUM SULFATE OR MAGNESIUM SULFATE

Project : Karnali Basin Study Location : LR-1
 Source of Material : QA-2
 Sample No. : _____ Tested by : _____ Date : _____
 Solution used : Sodium Sulfate / Magnesium Sulfate S.G. 2.7

Quantitative Data

Sieve Size	Grading of Original Sample, %	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test	Weighted Percentage Loss
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Soundness of Fine Aggregate

Can No.	Can No.
50 to No. 100	J-1-
30 to No. 50	33
16 to No. 30	5
8 to No. 16	
4 to No. 8	
2 to No. 4	
Totals	2810

Soundness of Coarse Aggregate loss(%)

Sieve Size	g.	40-20 mm	1505 gm	0.33
2 1/2" to 2"	g.	40-20 mm	1505 gm	0.33
2" to 1 1/2"	g.	20-10 mm	1000 gm	0
1 1/2" to 1"	g.	10-5 mm	296 gm	1.35
1" to 3/4"	g.			
3/4" to 1/2"	g.			
1/2" to 3/8"	g.			
3/8" to No. 4	g.			
Totals			2801	

Quantitative Examination of Coarse Aggregate (larger than 3/4")

Sieve Size	Particles Exhibiting Distress								
	Splitting		Crumbling		Cracking		Flaking		Total No. of Particles Before Test
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	
1/2" to 1/4"	No.		3		8		No		132
1/4" to 3/16"									

Total loss = 0.32

**SOUNDNESS OF AGGREGATES BY USE OF SODIUM SULFATE
OR MAGNESIUM SULFATE**

Project : Karnali Basin Study Location : LR-1
 Source of Material : TP-4 (CA)
 Sample No. : _____ Tested by : _____ Date : _____
 Solution used : Sodium Sulfate / Magnesium Sulfate S.G. 2.7

Quantitative Data

Sieve Size	Grading of Original Sample, %	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test	Weighted Percentage Loss
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Soundness of Fine Aggregate

Finos No. 100	Can No.
No. 50 to No. 100	15
No. 20 to No. 50	9
No. 16 to No. 30	17
No. 8 to No. 16	
No. 4 to No. 8	
No. 2 to No. 4	

Totals 2800

Soundness of Coarse Aggregate Loss (%)

2 1/2" to 2"	g.	40-20 mm	1495 gm	0.33
2" to 1 1/2"	g.	20-10 mm	994 gm	0.60
1 1/2" to 1"	g.	10-5 mm	295 gm	1.69
1" to 3/4"	g.			
3/4" to 1/2"	g.			
1/2" to 3/8"	g.			
3/8" to No. 4	g.			

Totals 2783

Quantitative Examination of Coarse Aggregate (larger than 3/4")

Sieve Size	Particles Exhibiting Distress							
	Splitting		Crumbling		Cracking		Flaking	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
2 1/2" to 2"	No		No		12		No	
2" to 1 1/2"								
1 1/2" to 1"								
1" to 3/4"								
3/4" to 1/2"								
1/2" to 3/8"								
3/8" to No. 4								

Total loss = 0.60

SOUNDNESS OF AGGREGATES BY USE OF SODIUM SULFATE OR MAGNESIUM SULFATE

Project : Karnali Basin Study Location : LR-1
 Source of Material : S # AQ-1
 Sample No. : Tested by : Date :
 Solution used : Sodium Sulfate / Magnesium Sulfate S.G. 2.7

Quantitative Data

Sieve Size	Grading of Original Sample, %	Weight of Test Fractions Before Test, g	Percentage Passing Designated Sieve After Test	Weighted Percentage Loss
Soundness of Fine Aggregate				
Minus No. 100			Can No.	
No. 50 to No. 100	40 - 20 mm	1500 gm	24	
No. 20 to No. 50	20 - 10 mm	1000 gm	31	
No. 10 to No. 20	10 - 5 mm	300 gm	J-9	
Totals		2800		

Soundness of Coarse Aggregate				Loss (%)
2" to 1 1/2"	q.			
1 1/2" to 1"	q.	40 - 20 mm	1492 gm	0.54
1" to 3/4"	c.			
3/4" to 1/2"	q.	20 - 10 mm	995 gm	0.5
1/2" to 3/8"	q.	10 - 5 mm	300 gm	0
3/8" to No. 4	q.			
Totals			2787	

Quantitative Examination of Coarse Aggregate (larger than 3/4")

Particles Exhibiting Distress								
Sieve Size	Splitting	Crumbling	Cracking	Flaking	Total No.			
	No. Percent	No. Percent	No. Percent	No. Percent	of Particles			
					Before Test			
1 1/2" to 1"	No	4	15	No	115			
1" to 3/4"								

Total Loss = 0.46

SPECIFIC GRAVITY

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal
 Date : 28 February, 1993

Site		BR - 1	BR - 1
Location		Pit No. 1	Pit No. 2
Sample		Coarse Sand	Coarse Sand
Wt. of Bottle + soil + Water, gm	W1	1864.00	1876.00
Wt. of bottle + water, gm.	W2	1465.00	1465.00
Wt. of saturated surface dry soil in air, gm	W3	605.00	619.00
Wt. of over dry soil, gm	W4	552.00	559.00
Specific Gravity	$W4 / (W3 - (W1 - W2))$	2.68	2.69
Apparent Specific Gravity	$W4 / (W4 - (W1 - W2))$	3.61	3.78
Saturated surface dry specific gravity	$W3 / (W3 - (W1 - W2))$	2.94	2.98
Water Absorption	$(W3 - W4) / W4$	9.60	10.73

SPECIFIC GRAVITY

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal
 Date : 28 February, 1993

Site		BR-1	BR-1
Location		Pit No. 1	Pit No. 2
Sample		Coarse Agg.	Coarse Agg.
Wt of saturated aggregate and basket in water, gm	W1	2120.00	2125.00
Wt. of basket in water, gm.	W2	838.00	838.00
Wt. of saturated surface dry aggregate in air, gm	W3	2011.00	2017.00
Wt. of oven dry aggregate in air, gm	W4	1980.00	1985.00
Specific Gravity	$W4 / (W3 - (W1 - W2))$	2.72	2.72
Apparent Specific Gravity	$W4 / (W1 - (W1 - W2))$	2.84	2.84
Saturated surface dry specific gravity	$W3 / (W3 - (W1 - W2))$	2.76	2.76
Water Absorption	$(W3 - W1) / W4$	1.57	1.61

SPECIFIC GRAVITY

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal
 Date : 28 February, 1993

Site		CR -2	CR -2
Location		Fit No. 1	Fit No. 2
Sample		Coarse Agg.	Coarse Agg.
Wt of saturated aggregate and basket in water, gm	W1	1680.00	1711.00
Wt. of basket in water, gm.	W2	807.50	807.50
Wt. of saturated surface dry aggregate in air, gm	W3	1359.00	1388.00
Wt. of oven dry aggregate in air, gm	W4	1325.00	1318.00
Specific Gravity	$W4 / W3 - (W1 - W2)$	2.72	2.72
Apparent Specific Gravity	$W4 / W4 - (W1 - W2)$	2.93	3.18
Saturated surface dry specific gravity	$W3 / W3 - (W1 - W2)$	2.79	2.86
Water Absorption	$(W3 - W4) / W4$	2.57	5.31

SPECIFIC GRAVITY

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal
 Date : 28 February, 1993

Site		SR-3	SR-3
Location		Pit No. 1	Pit No. 2
Sample		Coarse Sand	Coarse Sand
Wt. of Bottle + soil + Water, gm	W1	1888.90	1850.00
Wt. of bottle + water, gm.	W2	1465.00	1465.00
Wt. of saturated surface dry soil in air, gm	W3	611.00	580.00
Wt. of over dry soil, gm	W4	509.90	499.90
Specific Gravity	$W1/(W3 - (W1 - W2))$	2.73	2.70
Apparent Specific Gravity	$W1/(W4 - (W1 - W2))$	5.93	4.77
Saturated surface dry specific gravity	$W3/(W3 - (W1 - W2))$	3.27	3.14
Water Absorption	$(W3 - W4)/W4$	19.83	16.02

MOISTURE CONTENT DETERMINATIONS

Project : Karnali and Mahakali Upper Basin Master Plan Study
Client : ITECO, Nepal
Site : BR 1

Sample No.	Moisture Content
Pit - 1	7.90
Pit - 1	8.00
Pit - 1	8.11
Pit - 2	2.31
Pit - 2	2.32
Pit - 2	2.32

UNCONFINED COMPRESSION TEST

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal

Site	BR - 1		SR-3, BH-1 (Chainpur)		
Depth, m	41.84 ~ 42.00 m.	65.13 ~ 65.33 m.	49.78 ~ 49.90 m.	38.26 ~ 38.42 m.	21.62 ~ 21.80 m.
Diameter of Core mm.	45.00	45.00	45.00	45.00	45.00
Surface Area sq. mm.	1590.43	1590.43	1590.43	1590.43	1590.43
Failure Strength Kg/sq.cm.	102.00	204.00	238.00	374.00	136.00

Site	CR - 2			BR - 1		
Depth, m	13.43 ~ 13.59 m.	25.74 ~ 25.93 m.	44.50 ~ 44.71 m.	10.74 ~ 10.90 m.	14.45 ~ 14.80 m.	37.00 ~ 37.34 m.
Diameter of Core mm.	45.00	45.00	45.00	45.00	45.00	45.00
Surface Area sq. mm.	1590.43	1590.43	1590.43	1590.43	1590.43	1590.43
Failure Strength Kg/sq.cm.	136.00	817.00	331.00	204.00	204.00	102.00

WATER ABSORPTION TEST

Project : Karnali and Mahakali Upper Basin Master Plan Study
Client : ITECO, Nepal

March 4, 1993

S. No.	Sample No.	Depth, m.	Container No.	Wet Soil gn.	Dry Soil gn.	Wt. of water	Water Absorption
	BR 1	10.74 - 10.90	Core Sample		291.20		Dissolved
	BR 1	14.45 - 14.80	Core Sample		371.90		Dissolved
	BR 1	37.00 - 37.34	Core Sample		340.60		Dissolved
	BR 1	41.51 - 42.00	Core Sample		323.50		Dissolved
	BR 1	65.13 - 65.33	Core Sample		335.30		Dissolved
	CR 2	13.43 - 13.39	Core Sample	295.50	282.50	13.00	4.40
	CR 2	25.74 - 25.93	Core Sample	424.70	424.10	0.60	0.14
	CR 2	36.19 - 36.29	Core Sample	242.50	242.10	0.40	0.16
	CR 2	44.50 - 44.71	Core Sample	321.80	321.20	0.60	0.19
	SR 3	16.08 - 16.22	Core Sample	302.00	301.30	0.70	0.23
	SR 3	45.30 - 45.45	Core Sample	348.50	347.50	1.00	0.29

POINT LOAD TEST

Project : Karnali and Mahakali Upper Basin Master Plan Study
 Client : ITECO, Nepal

Sample No.	Depth m.	Test	Width mm.	Height mm.	Pressure mm.	De mm.	Is, MPa	P	Is (50) Absorption
BR 1	10.74 ~ 10.90	d 11	45	45	700.00	45.00	0.39	0.95	0.37
CR 2	25.74 ~ 25.93	d 11	45	45	350.00	45.00	0.20	0.95	0.19
CR 2	36.19 ~ 36.29	d 11	45	45	700.00	45.00	0.39	0.95	0.37
CR 2	44.50 ~ 44.71	d 11	45	45	525.00	45.00	0.29	0.95	0.28

d = diametal l = Irregular lump test
 a = axial test L = perpendicular
 b = block test 11 = parallel to the plane of weakness

Mean IS (50) L	—
Mean IS (50) 11	0.32

SOIL, ROCK AND CONCRETE LABORATORY

Nepal Electricity Authority

Laboratory Test Result

Core Materials

Test Pit No.	Sample No.	Specific gravity	Grain size			Classification	Natural Water Content %	Atterberg Limits			Coefficient of Permeability cm/sec	U U		Compaction		Organic Content %
			Gravel %	Sand %	Fines %			LL %	PL %	PI %		c t/m ³	Ø Degree	OMC %	rd t/m ³	
TP-1		2.66	2.4	37.5	60.1	ML	13.93			NP	1.72×10^{-5}	3.5	24	17.49	1.70	None
TP-2		2.70	7.9	14.1	78.0	CL	10.531	38	23	15	3.533×10^{-7}	5.5	11.5	18.50	1.54	None
TP-3			40.0	59.4	0.6	GP										
TP-4			74.3	25.0	0.7	GP										

SOIL, ROCK AND CONCRETE LABORATORY, NEA

Laboratory Test Results

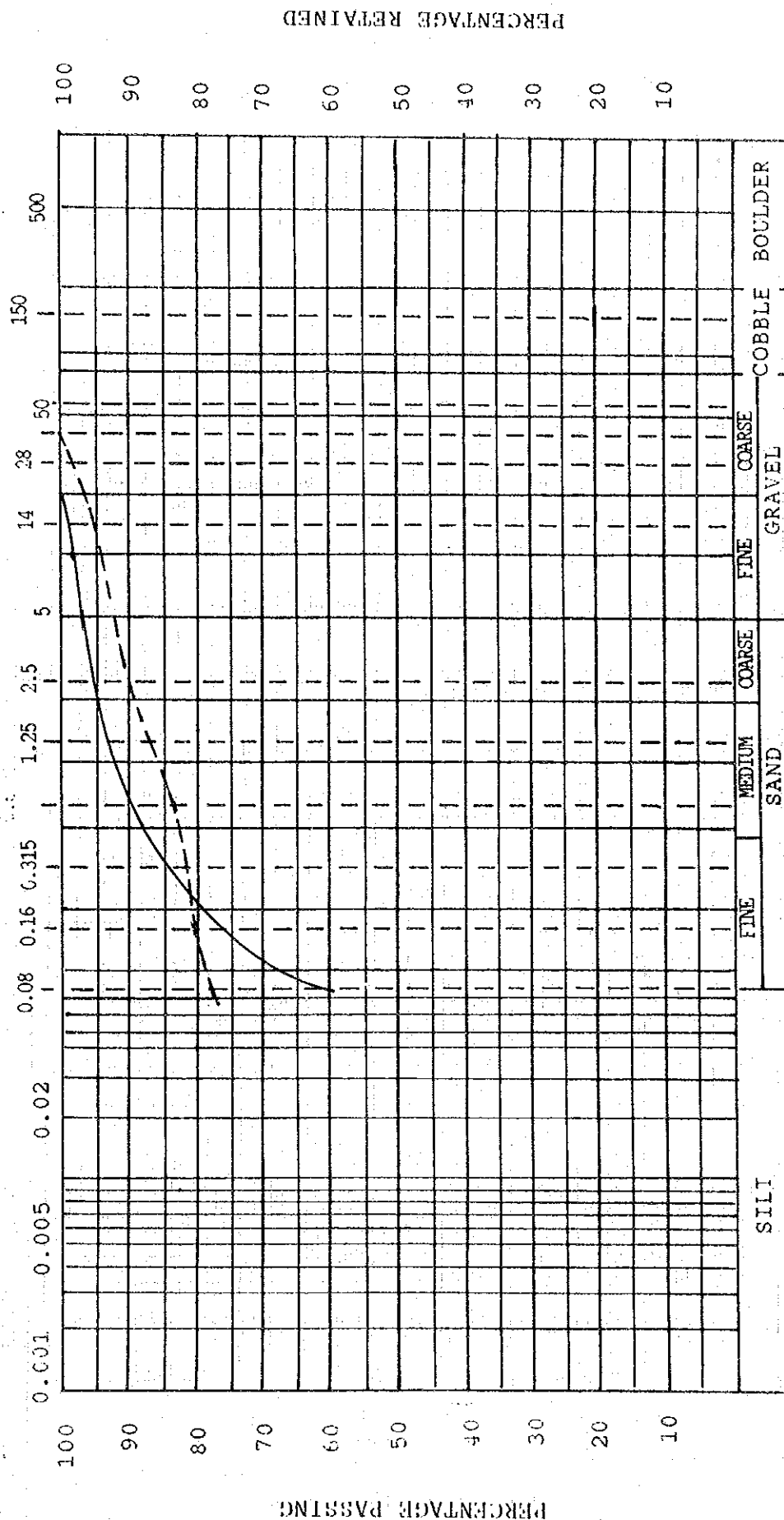
Concrete Aggregates & Drilled Core

Sample No.	Depth, m	Unit Weight g/cm ³	Specific gravity	Absorption %	Uniaxial compressive strength kg/cm ²	Abrasion (L.A.) % wear	Sulphate soundness % loss	Porosity, %
TP-3		2.664	2.691	0.585		30.1		
TP-4		2.687	2.705	0.400		40.7		
QA-1		2.70	2.71	0.45		29.97		
QA-2		2.67	2.68	0.30		35.014		
Drilled Core	17.8	2.69	2.72	0.46	299.0			0.28
"	25.7	2.69	2.71	0.32	498.0			0.35
"	30.4	2.70	2.72	0.57	119.0			0.63
"	39.0	2.69	2.71	0.50	147.0			0.37
"	41.6	2.71	2.72	0.45	209.0			0.90

PROJECT KARNALI BASIN STUDY

LOCATION LOHORE KHOLA (LR - 1))

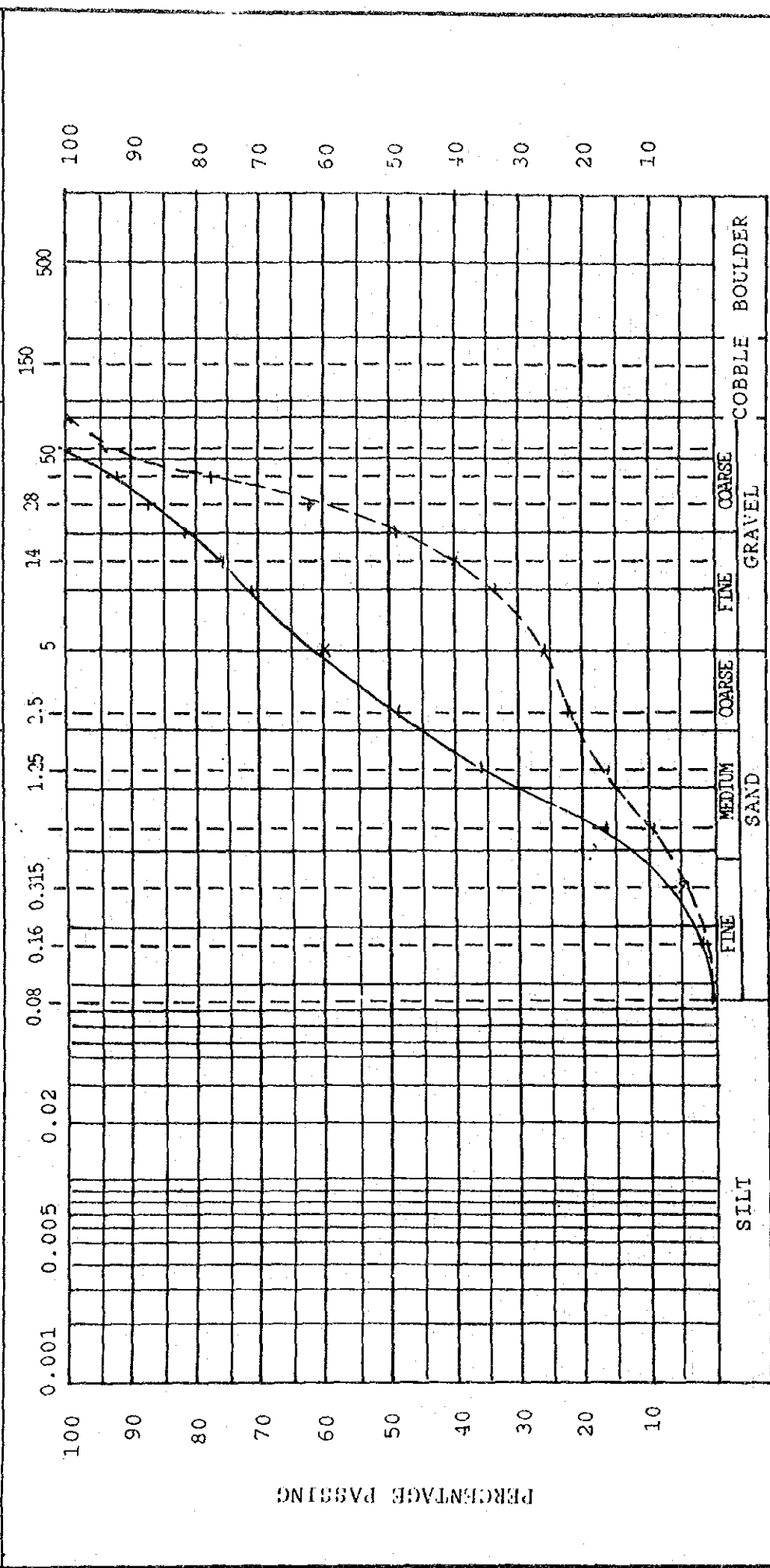
TEST PIT NO.	DATE
1 & 2	07 03 1993



SAMPLE NO	DEPTH (M)	USCS	WC	LL	PL	PI	PROCTOR TEST	
							OMC %	DRY DENSITY
TP - 1		ML						
TP - 2		CL						

NOTES

PROJECT KARNALI BASIN STUDY	
LOCATION LOHORE KHOLA (LR-1)	
TEST PIT NO. 3 & 4	DATE 07 03 1993

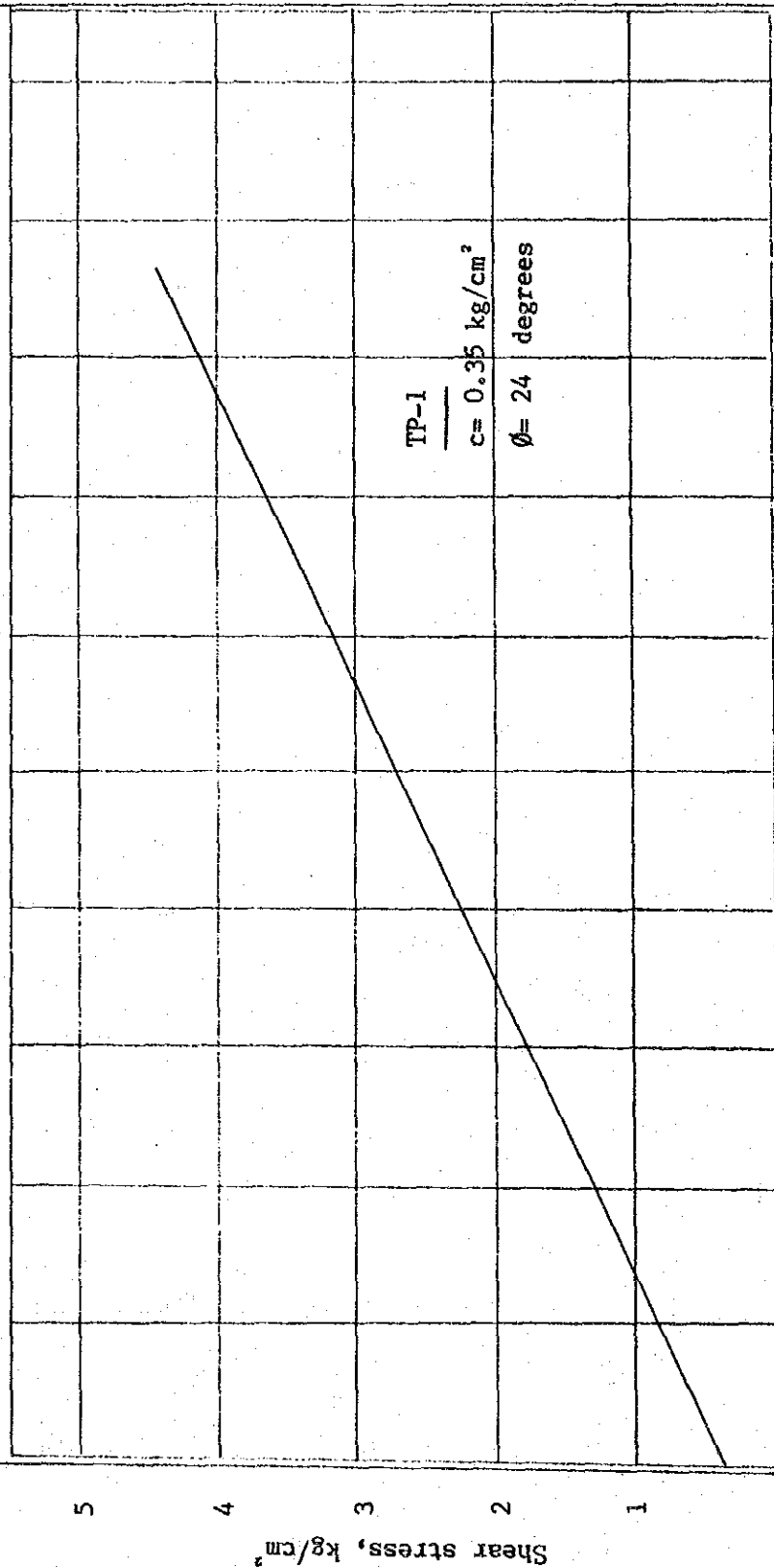


SAMPLE NO	DEPTH (M)	USCS	WC	LL	PL	PI	PROCTOR TEST		NOTES
							OMC %	DRY DENSITY	
TP - 3		GP							
TP - 4		GP							

TRIAXIAL TEST RESULTS (UU)

CORE MATERIAL

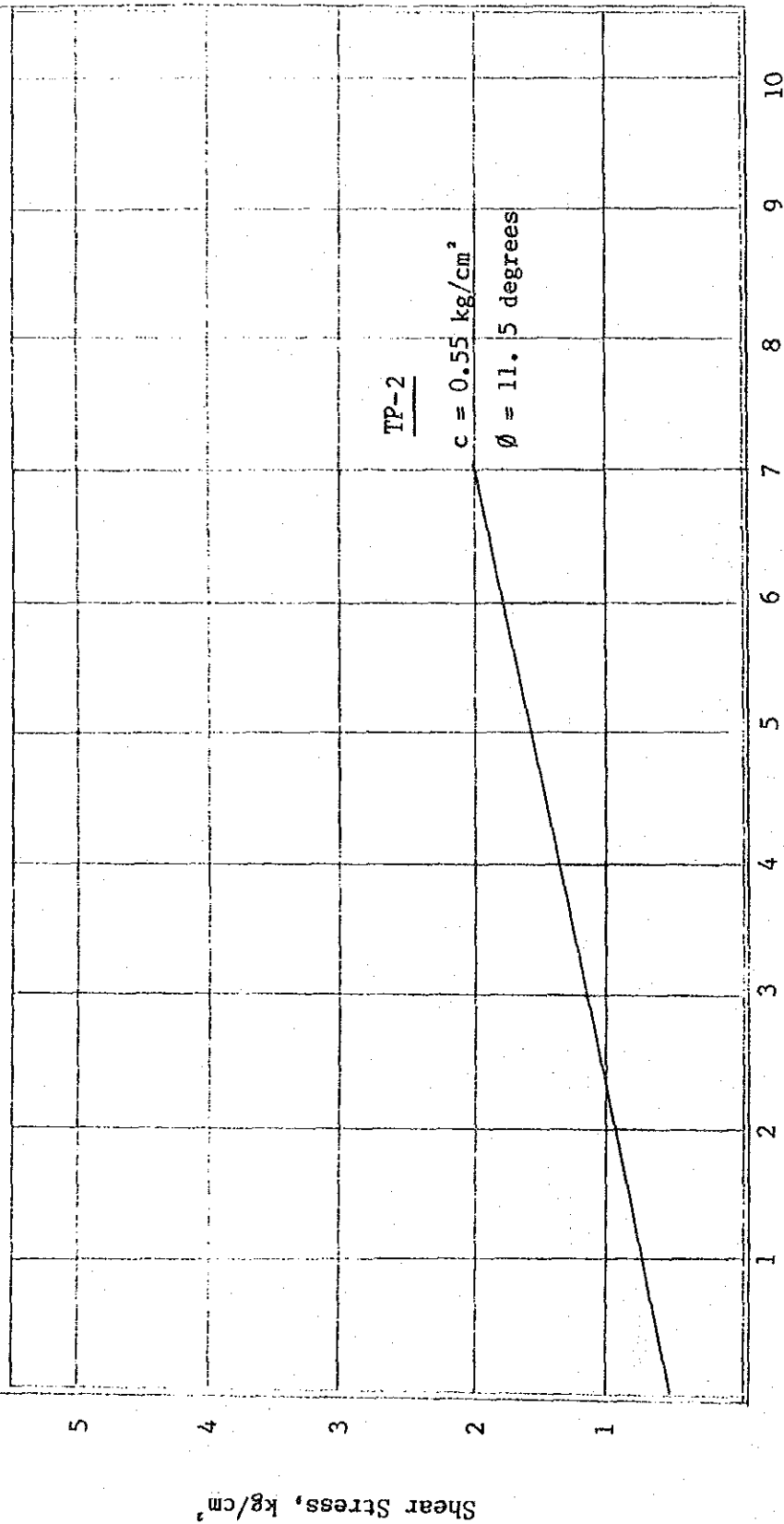
Sample # TP - 1



TRIAXIAL TEST RESULTS (UU)

CORE MATERIAL

Sample # TP - 2



A 1-7 Earthquake Data

***** EARTHQUAKE DATA BASE SYSTEM *****

FILE CREATED: 6-MAY-1993 09:48:59.84
 Geographic Grid Search Earthquakes= 1099
 Latitude: 36.000N - 25.000N
 Longitude: 90.000E - 75.000E
 Year: 1850 - 1993
 Selected Catalogs: PDE INDIA LEE MEAST PEK

CATALOG	DATE		ORIGIN	***COORDINATES**		DEPTH	pp STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
											VALUES
INDIA	1857	01	07		25.450	81.833					308
INDIA	1859	10			26.166	85.900					309
INDIA	1864	09			26.800	82.200					308
INDIA	1865	12	20		26.010	87.950					309
INDIA	1868	11	16		31.083	77.666					308
INDIA	1878	12	29		29.367	79.517					308
INDIA	1880	11	01		26.467	84.433					309
INDIA	1881	12	10		25.050	88.200					315
INDIA	1883	10	06		26.117	85.383					309
INDIA	1885	03			25.333	83.000					308
INDIA	1885	08	21		25.400	86.483					308
INDIA	1889	05	12		25.633	88.733					315
INDIA	1890	05			25.333	83.000					308
INDIA	1890	05	17		25.550	84.167					308
INDIA	1894	01			25.450	81.833					308
INDIA	1896	09	20		26.300	89.533					315
INDIA	1897	07	29		25.050	88.200					315
INDIA	1897	10			25.633	88.733					315
INDIA	1897	10	08		25.050	88.200					315
INDIA	1897	10	19		25.517	84.400					308
INDIA	1897	11	02		26.300	89.533					315
INDIA	1897	11	30		25.317	86.500					308
INDIA	1898	03	27		26.350	78.083					308
INDIA	1898	04	04		25.517	84.400					308
INDIA	1898	08			25.633	85.050					308
INDIA	1898	10	09		25.750	89.350					315
INDIA	1899	02	06		26.300	89.533					315
INDIA	1899	09	17		25.633	88.733					315
INDIA	1900	05	02		26.300	89.533					315
LEE	1908	08	20	095300.00	32.000	89.000				7.00UKLEE	306
LEE	1911	10	14	232400.0	31.000	80.500				6.75UKLEE	306
LEE	1913	03	06	020900.0	30.000	83.000				6.20UKLEE	306
LEE	1913	03	06	110400.0	30.000	83.000				6.40UKLEE	306
LEE	1914	10	09	023910.0	35.000	78.000				6.50UKLEE	302
LEE	1918	02	04	175449.0	29.600	87.800				6.00UKLEE	306
LEE	1920	10	12	065448.0	36.000	81.000				6.25UKLEE	321

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	PP STN	*****MAGNITUDE S****				
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED	
VALUES													
LEE	1924	10	08	203257.0	30.000	90.000						6.50UKLEE	306
LEE	1926	06	04	065058.0	35.000	89.500						6.00UKLEE	306
LEE	1926	08	06	224559.0	35.400	78.700						6.25UKLEE	302
LEE	1934	12	15	015740.0	31.300	89.000						7.10UKLEE	306
LEE	1935	01	03	015017.0	30.800	88.200						6.50UKLEE	306
LEE	1935	05	21	042234.0	28.800	89.500	140					6.25UKLEE	306
LEE	1937	11	15	213734.0	35.000	78.000	100					6.50UKLEE	302
LEE	1944	10	17	183656.0	31.400	83.300						6.75UKLEE	306
LEE	1944	10	29	001130.0	31.300	83.400						6.75UKLEE	306
LEE	1944	11	06	054905.0	31.300	83.400						6.00UKLEE	306
LEE	1946	02	19	185523.0	35.000	88.500						6.00UKLEE	306
LEE	1946	11	06	195623.0	34.500	80.600						6.25UKLEE	306
LEE	1947	02	10	040202.0	31.800	85.400						6.25UKLEE	306
LEE	1948	02	13	045709.0	36.000	80.500						6.25UKLEE	321
PDE	1953	02	16	010202.00	29.500	81.000							310
SHL	1953	03	01	145800.00	35.000	75.000							302
SHL	1953	05	27	224115.00	30.500	80.000							305
LEE	1953	10	08	191100.0	32.300	82.800						6.00UKLEE	306
LEE	1953	10	11	170803.0	32.300	82.800						6.25UKLEE	306
LEE	1953	12	03	145408.0	31.400	85.700						6.25UKLEE	306
PDE	1954	08	05	091741.00	36.000	77.500							324
PDE	1954	09	04	064514.00	28.000	83.500							310
SHL	1954	11	20	130925.00	30.500	82.000							306
SHL	1954	11	20	190618.00	27.500	82.500							309
PDE	1955	01	28	170233.00	33.000	82.500						6.37UKPAS	306
LEE	1955	01	28	170238.0	33.200	82.400						6.50UKLEE	306
PDE	1955	02	09	103524.00	33.000	83.000							306
PDE	1955	02	23	231330.00	28.000	85.500							310
SHL	1955	02	24	151515.00	28.500	85.300							310
PDE	1955	03	10	211620.00	32.500	77.000							303
SHL	1955	04	14	010040.00	32.400	76.100							303
PDE	1955	04	17	034932.00	26.500	90.000						4.50UKSHL	317
PDE	1955	06	27	101406.00	32.000	78.500						5.75UKSHL	304
LEE	1955	06	27	101409.0	32.500	78.600						6.00UKLEE	304
PDE	1955	06	27	134610.00	31.500	78.500							305
PDE	1955	09	20	202113.00	27.500	90.000						5.68UKSHL	312
PDE	1955	11	23	023347.00	26.500	90.000						5.00UKSHL	317
PDE	1955	12	05	072724.00	30.000	89.500						4.80UKSHL	306
PDE	1955	12	18	223745.00	30.000	90.000							306
PDE	1956	01	19	195034.00	30.000	81.000							306
PDE	1956	07	03	101757.00	28.000	84.500							310
PDE	1956	10	10	153134.00	28.500	78.000						6.01UKKIR	308
LEE	1957	04	14	071156.0	30.580	84.270						6.50UKLEE	306
PDE	1957	04	22	001816.00	30.500	84.500							306
PDE	1957	04	22	014215.00	30.500	84.500							306
LEE	1957	04	22	014218.0	30.850	84.310						6.00UKLEE	306
QUE	1957	12	09	211730.00	30.000	79.750							305
SHL	1958	04	30	093335.00	28.500	82.000							310
QUE	1958	08	15	160015.00	29.750	81.250							310
LEE	1958	10	28	104632.0	30.630	84.480						6.25UKLEE	306

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	pp	STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS	CONTRIBUTED
													VALUES
SHL	1958	11	25	040015.00	26.500	86.500							309
PDE	1958	12	03	022340.00	27.000	86.000							310
PDE	1958	12	28	053436.00	29.500	80.000				6.00UKMOS			309
PEK	1959	10	17	104649.0	34.000	79.000							304
PEK	1959	10	17	104649.00	34.000	79.000							304
PDE	1960	01	04	035703.00	26.000	90.000							317
PDE	1960	02	04	102039.00	35.500	78.000	100						302
PDE	1960	03	05	112500.00	29.000	81.000							310
PDE	1960	03	05	235038.00	29.000	81.000							310
PDE	1960	05	09	143627.00	25.500	89.500							315
SHI	1960	06	08	013820.00*	35.000	79.000							304
PDE	1960	08	21	032904.90	27.000	88.500	29			5.50UKSHL			311
QUE	1960	08	27	123102.00	27.000	90.000							312
PDE	1960	08	27	155859.00	28.600	76.700	58						308
PDE	1961	02	13	161019.80	29.900	81.000	35						310
PDE	1961	02	15	112851.00	30.800	84.400	25 N						306
PDE	1961	03	26	231138.90	30.600	84.400	24						306
LEE	1961	06	04	073303.0	34.150	81.900				6.50UKLEE			306
PDE	1961	06	04	073306.00	34.100	82.000	32			6.50UKPAS			306
PDE	1961	06	04	074343.60	34.400	82.200	30						306
PDE	1961	06	04	135129.90	33.900	82.100	32			4.50UKMOS			306
PDE	1961	06	04	233526.90	33.500	75.400	25 N						302
PDE	1961	06	18	062606.10	33.700	81.800	33 N						306
PDE	1961	07	11	172342.30	27.100	81.000	25 N						309
PDE	1961	09	11	052040.70	28.200	88.300	23						306
PDE	1961	09	29	223628.50	28.000	87.600	100						306
PDE	1961	12	08	101953.10	30.600	87.000	33 N			4.50UKMOS			306
PDE	1961	12	24	071327.50	29.500	80.800	33 N			5.70UKUPP			309
PDE	1962	01	11	030131.70	27.900	84.900	39						309 032
PDE	1962	01	22	202217.60	30.700	80.600	25						305 006
PDE	1962	06	17	043930.10	33.100	75.900	34						302 021
PDE	1962	07	07	030022.60	30.700	84.400	25						306 007
PDE	1962	07	13	050108.60	30.500	79.600	25						305 011
PDE	1962	07	14	155853.70	30.400	79.500	40						305 013
PDE	1962	08	29	113039.30	30.900	78.400	36						308 005
PDE	1963	01	22	045518.40	31.400	89.600	58						306 023
PDE	1963	01	30	103359.70	29.700	80.600	59						309 021
PDE	1963	02	22	013224.10	27.700	87.700	18	4.2					310 032
PDE	1963	03	05	023507.80	29.200	81.200	33						310 011
PDE	1963	04	06	174853.60	33.500	82.400	33	4.6					306 037
PDE	1963	04	12	004127.70	32.000	78.800	28	5.1					304 052
PDE	1963	06	11	180724.10	30.900	87.300	33	4.5					306 053
PDE	1963	07	14	144828.40	30.300	78.500	33	4.8					308 006
PDE	1963	09	02	222551.70	26.200	90.000	220						317 005
PDE	1963	11	12	152843.90	31.700	78.500	33	4.6					305 008
PDE	1963	11	27	211039.90	30.800	79.100	33	5.1					305 020
PDE	1963	12	15	073320.20	34.300	88.800	33	4.8					306 006
PDE	1964	01	25	071330.80	28.500	86.800	44	4.5					306 008
PDE	1964	02	01	112819.40	27.400	87.800	33	4.8					310 010
PDE	1964	02	08	115423.10	29.000	82.200	33						310 011

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	PP STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
												VALUES
PDE	1964	02	25	133645.60	36.000	83.900	42					321 005
PDE	1964	03	27	230341.70	27.200	89.300	32	6.3				312 018
PDE	1964	05	24	000050.20	30.100	82.100	33	5.1				306 011
PDE	1964	08	30	023508.10	27.600	88.300	21	5.2				311 024
PDE	1964	09	26	004602.80	30.100	80.700	50	6.2				305 032
PDE	1964	10	06	201934.10	29.300	80.900	27	5.1				309 030
PDE	1964	10	07	230447.90	32.700	83.900	33					306 006
PDE	1964	10	10	044745.70	32.000	87.300	20					306 006
PDE	1964	10	19	021558.10	31.400	79.000	33	4.8				305 006
PDE	1964	11	09	161250.60	29.500	86.000	33	4.7				306 018
PDE	1964	12	02	082143.30	29.500	81.300	23	5.1				310 015
PDE	1964	12	20	033136.00	29.500	81.000	33	5.2				310 009
PDE	1965	01	12	133224.00	27.600	88.000	23	6.1				311 018
PDE	1965	01	12	135520.00	27.300	87.700	33	5.3				310 022
PDE	1965	01	21	133129.40	34.600	86.900	33	5.0				306 014
PDE	1965	02	21	032535.10	32.400	76.900	33	4.5				303 007
PDE	1965	03	18	024127.60	29.900	80.300	33	5.2				309 013
PDE	1965	04	20	051524.40	34.100	82.000	33					306 005
PDE	1965	05	13	105115.50	29.800	80.500	33	5.1				309 017
PDE	1965	05	31	020442.90	32.600	78.200	33	5.3				304 051
PDE	1965	06	01	075224.20	28.500	83.200	20	5.3				310 071
PDE	1965	06	14	131701.20	32.000	87.700	32	5.6				306 040
PDE	1965	06	16	234907.40	32.100	87.500	62	5.1				306 029
PDE	1965	06	17	201449.80	32.000	87.700	16	5.3				306 062
PDE	1965	06	18	011841.10	32.200	87.700	60	5.2				306 056
PDE	1965	07	03	171016.00	32.100	82.800	15	4.4				306 010
PDE	1965	11	14	051315.80	34.500	80.200	33	4.8				306 005
PDE	1966	01	11	124206.20	27.600	85.900	33	4.5				310 006
PDE	1966	03	06	021053.60	31.600	80.600	12	5.7				306 067
PDE	1966	03	06	021557.20	31.500	80.500	50	6.0				306 081
LEE	1966	03	06	021558.0	31.400	80.500					6.50UKPAS	306
PDE	1966	03	06	190924.60	31.500	80.300	14	4.8			6.60UKLEE	306 006
PDE	1966	03	09	150627.50	34.700	80.400	33	4.5				306 006
PDE	1966	03	16	000817.90	33.300	76.000	36	5.0				303 029
PDE	1966	03	17	054447.70	31.600	82.900	11	4.9				306 014
PDE	1966	03	23	225224.20	25.900	90.000	20	4.4				315 008
PDE	1966	06	07	234654.30	35.700	80.100	39	4.7				304 013
PDE	1966	06	20	134256.50	28.700	76.900	34	4.7				308 012
PDE	1966	06	25	120503.80	30.500	82.300	46	5.1				306 017
PDE	1966	06	27	104745.20	29.500	80.900	43	5.3				309 014
PDE	1966	06	27	104946.00	29.600	80.900	16	5.9				309 038
PDE	1966	06	27	105914.10	29.700	81.000	13	6.0				310 096
PDE	1966	06	27	112143.30	29.700	80.900	33	5.3				309 038
PDE	1966	06	27	135549.80	29.700	80.900	19	5.4				309 073
PDE	1966	06	28	154340.80	29.600	80.900	48	5.2				309 009
PDE	1966	06	29	004209.30	29.800	81.000	15	5.3				310 011
PDE	1966	08	05	010302.40	32.700	79.500	36	5.2				304 079
PDE	1966	10	05	075720.00	29.200	81.100	33					310 007
PDE	1966	10	13	124242.00	31.400	80.300	29	5.1				306 027
PDE	1966	10	20	005339.80	33.600	78.600	33	5.0				304 046

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	PP STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
VALUES												
PDE	1966	11	05	185303.30	28.200	84.000	33		5.1			310 030
PDE	1966	11	07	040814.40	34.100	80.700	45		4.7			306 024
PDE	1966	12	16	205216.00	29.700	80.900	15		5.8			309 155
PDE	1966	12	16	221249.10	29.600	80.900	7		5.1			309 013
PDE	1966	12	18	224239.30	29.500	80.900	33		4.9			309 016
PDE	1966	12	21	221059.80	29.700	80.800	21		5.4			309 062
PDE	1967	01	02	221756.30	30.644	79.279	25	G	4.8			305 013
PDE	1967	02	10	054631.80	33.347	75.293	35		4.8			302 040
PDE	1967	02	20	142348.20	33.686	75.457	34		4.7			302 022
PDE	1967	02	20	151838.80	33.662	75.335	18		5.6			302 151
PDE	1967	02	20	153949.50*	33.844	75.138	33	N	4.3		6.40UKUPP	302 005
PDE	1967	02	21	123746.10	33.689	75.414	41		5.1			302 063
PDE	1967	02	24	001739.70	33.625	75.351	39		5.0			302 023
PDE	1967	03	02	114712.70	28.725	86.395	23		4.9			306 010
PDE	1967	03	11	184544.50	29.320	81.414	33	N	4.8			310 019
PDE	1967	03	16	173826.90	29.851	85.004	15		3.9			306 007
PDE	1967	06	18	012021.60	35.200	87.600	33		3.9			306 012
PDE	1967	07	02	083238.50	33.200	75.600	33		4.8			302 024
PDE	1967	07	07	234923.60	35.500	87.800	33					306 007
PDE	1967	08	24	011709.60	35.300	88.000	31		4.5			306 008
PDE	1967	09	20	202505.60	32.600	76.100	59					303 006
PDE	1967	12	18	105134.80	29.100	81.900	42		5.2			310 025
PDE	1967	12	30	123655.80	31.700	86.800	24		4.9			306 012
PDE	1968	01	05	064244.70	30.400	79.100	7		5.4			305 029
PDE	1968	02	10	170303.80	34.100	78.500	37		5.2			304 037
PDE	1968	02	11	022501.20	34.200	78.400	33		4.8			304 011
PDE	1968	02	11	203829.40	34.200	78.600	44		5.1			304 037
PDE	1968	02	11	231816.00	34.300	78.200	33		4.5			304 007
PDE	1968	05	27	183557.00*	29.674	80.437	27		5.1			309 014
PDE	1968	05	31	030135.70	29.911	79.952	33	N	5.1			308 016
PDE	1968	06	04	051052.00*	35.691	82.108	33	N	4.8			306 009
PDE	1968	07	03	194653.70	34.656	75.098	113		4.5			302 016
PDE	1968	10	28	174829.10	27.323	86.135	37		4.8			310 010
PDE	1968	11	05	020244.20	32.379	76.378	33	N	4.9			303 017
PDE	1968	11	05	030708.30*	32.375	76.568	33	N				303 007
PDE	1969	01	05	095641.10*	28.029	85.220	33	N				310 007
PDE	1969	01	23	200119.50*	32.240	76.060	33	N	4.0			303 007
PDE	1969	01	23	234626.00*	32.165	76.030	33	N				303 006
PDE	1969	03	03	062021.80	30.168	79.918	20		5.3			305 041
PDE	1969	03	05	111500.60	29.246	81.054	63		5.2			310 006
PDE	1969	06	21	173256.60	35.641	81.895	33	N	4.5			321 011
PDE	1969	06	22	013324.10	30.631	79.368	19		5.4			305 043
PDE	1969	08	12	005345.00	32.307	83.006	39		4.7			306 016
PDE	1969	12	05	184517.40	29.664	80.773	33	N	4.9			309 011
PDE	1970	01	23	120208.50	32.365	87.874	33	N	4.6			306 017
PDE	1970	02	12	015151.40	29.356	81.636	44		5.4			310 034
PDE	1970	02	26	193007.70	27.670	85.919	33	N	5.2			310 036
PDE	1970	03	05	183422.50	32.421	76.497	33	N	4.9			303 017
PDE	1970	03	16	034706.40	33.863	86.303	52		4.9			306 021
PDE	1970	07	21	153744.70	27.871	84.806	40		4.7			309 017

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	PP	STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms	OBS CONTRIBUTED
													VALUES
PDE	1970	07	25	013526.30	25.711	88.496	33	N	5.2				315 043
PDE	1970	08	11	010619.30*	34.099	79.334	33	N	4.8				304 017
PDE	1971	01	30	201540.80*	30.485	79.058	56		4.6				305 017
PDE	1971	05	03	003322.50	30.783	84.473	16		5.4				306 043
PDE	1971	06	06	103449.00	28.091	85.634	34		4.9				310 010
PDE	1971	10	24	085904.60*	28.249	87.159	44		5.1				306 023
PDE	1971	10	29	171652.10	34.122	86.281	33	N	5.0				306 021
PDE	1971	12	04	083800.70*	27.895	87.874	32		5.0				310 023
PDE	1972	01	29	064911.10	32.855	75.956	58		4.7				303 012
PDE	1972	02	04	140821.70	30.382	84.613	18		5.2				306 032
PDE	1972	02	20	030214.00	34.574	80.323	33	N	4.8				306 030
PDE	1972	03	15	060032.40	30.425	84.502	33	N	5.3				306 057
PDE	1972	04	08	064213.30	29.674	89.471	33	N	4.8				306 013
PDE	1972	04	21	211929.50	34.987	81.033	33	N	4.8				306 034
PDE	1972	04	28	005256.80	31.259	84.903	33	N	5.1				306 048
PDE	1972	07	24	145813.90*	35.811	80.572	33	N	4.8				304 015
PDE	1972	08	21	140433.90	27.232	87.976	33	N	4.8				310 031
PDE	1972	08	21	185507.10	27.229	88.019	33	N	5.1				311 011
PDE	1972	09	06	025132.00	32.503	78.310	44		5.3				304 017
PDE	1972	11	06	105608.80*	26.958	88.708	33	N	4.8				315 022
PDE	1972	11	22	180550.90	35.935	77.375	33	N	4.9				302 009
PDE	1972	12	30	132935.50	33.674	87.567	33	N	4.5				306 019
PDE	1972	12	30	235405.90	33.597	87.724	33	N	4.9				306 033
PDE	1973	01	02	222557.00	31.241	88.088	33	N	5.2				306 036
PDE	1973	01	14	113925.10*	32.948	75.340	90		4.0				303 007
PDE	1973	01	16	213126.00*	33.209	75.715	42		5.1				302 043
PDE	1973	03	22	010657.20	28.135	86.993	33	N	5.2				306 034
PDE	1973	04	04	175308.20	30.485	83.680	48		4.8				306 008
PDE	1973	04	10	001002.10*	33.077	75.673	62		4.3				302 006
PDE	1973	07	13	220338.70	33.095	75.496	52		4.8				302 034
PDE	1973	07	13	225426.10*	33.143	75.585	33	N	4.3				302 011
LEE	1973	07	14	045121.00	35.300	86.500	32					7.00UKLEE	306
PDE	1973	07	14	045121.00	35.178	86.481	33	N	6.0	6.9H		6.70UKPAS	306 130
LEE	1973	07	14	133930.00	35.400	86.600	30					6.00UKLEE	306
PDE	1973	07	14	133930.00	35.256	86.602	33	N	5.9	5.5H			306 109
PDE	1973	07	16	194538.20	35.071	86.450	15		5.4				306 054
PDE	1973	07	18	225510.50*	33.200	75.568	33	N	4.6				302 009
PDE	1973	07	21	195006.30	35.112	86.423	33	N	5.3				306 024
PDE	1973	08	01	140516.20	29.604	89.088	71		4.9				306 041
PDE	1973	08	16	080253.80	33.081	86.877	33	N	5.3	5.5H			306 035
PDE	1973	09	08	072543.90	33.243	86.749	33	N	5.5	5.2H			306 067
LEE	1973	09	08	072545.40	33.300	86.900						6.00UKLEE	306
PDE	1973	09	08	075931.20	33.175	86.723	33	N	5.1				306 022
PDE	1973	09	30	142624.00*	32.962	84.641	33	N	4.1				306 011
PDE	1973	10	16	095043.30	28.219	82.945	33	N	5.2				310 052
PDE	1973	10	24	052350.90	33.113	75.891	33	N	5.4				302 079
PDE	1973	10	24	195717.90	33.062	75.731	52		5.0				302 032
PDE	1973	10	25	025203.30*	32.858	75.546	105		4.1				303 009
PDE	1973	10	30	155043.10*	33.336	76.341	35		3.9				303 008
PDE	1973	11	21	194756.30	34.657	80.968	26		5.0	5.2H			306 050

CATALOG	DATE		ORIGIN	***COORDINATES**		DEPTH	pP	STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
												VALUES
PDE	1973	11	27	093110.80	33.009	86.723	33	N		5.0		306 022
PDE	1973	12	16	091614.10	32.284	76.028	33	N		4.9		303 028
PDE	1974	02	24	213208.80	30.943	78.053	45			4.7		308 13
PDE	1974	03	03	045315.60	30.825	86.292	33	N		5.3		306 20
PDE	1974	03	06	173621.20	32.295	85.730	33	N		4.7		306 8
PDE	1974	03	13	064752.00*	29.251	81.569	65			4.5		310 7
PDE	1974	03	24	141603.10	27.727	86.110	33	N		5.7	5.7H	310 125
PDE	1974	03	24	161739.60*	27.594	86.021	33	N		4.8		310 22
PDE	1974	05	06	010700.60*	29.325	81.652	33	N		4.5		310 10
PDE	1974	06	11	091721.10*	34.022	88.476	40			4.1		306 7
PDE	1974	07	02	162553.30*	35.579	80.908	33	N		4.7		304 7
PDE	1974	07	07	205649.70	30.638	78.692	33	N		4.9		308 44
PDE	1974	08	03	040813.80	35.449	80.639	20			5.0		304 18
PDE	1974	09	27	052639.40	28.596	85.496	70	D		5.6		310 122
PDE	1974	10	13	212952.20	34.680	87.218	33	N		5.0		306 33
PDE	1974	10	30	023336.60*	35.597	77.543	103			4.8		302 10
PDE	1974	10	31	042623.50*	31.240	85.330	33	N		4.6		306 8
PDE	1974	11	10	065550.90*	31.501	86.359	33	N		4.5		306 12
PDE	1974	11	16	161836.60*	32.849	76.137	63			4.8		303 20
PDE	1974	12	23	094542.80	29.412	81.393	45			5.2		310 32
PDE	1975	01	19	080024.30	32.437	78.599	60			5.3		304 67
LEE	1975	01	19	080202.50	31.900	79.200					7.10UKLEE	305
PDE	1975	01	19	080202.50	32.455	78.430	33	N		6.2	6.8H	304 180
PDE	1975	01	19	081208.10	31.950	78.521	33	N		6.0	6.80UKPAS	304 66
PDE	1975	01	19	081823.80*	32.113	78.508	33	N		4.8		304 10
PDE	1975	01	19	091255.60	32.414	78.531	33	N		4.7		304 8
PDE	1975	01	19	103938.60*	32.203	78.627	33	N		3.8		304 5
PDE	1975	01	19	130436.60	32.131	78.642	33	N		5.0		304 41
PDE	1975	01	19	174110.90*	32.602	78.725	33	N		4.1		304 5
PDE	1975	01	20	110653.90	32.502	78.566	48			4.8		304 43
PDE	1975	01	20	132412.70	32.127	78.546	33	N		4.6		304 9
PDE	1975	01	22	172638.10	31.899	78.507	51			4.7		305 24
PDE	1975	01	23	013742.90*	27.314	88.255	33	N		4.8		311 19
PDE	1975	01	27	081018.70	32.464	78.728	33	N		5.0		304 11
PDE	1975	01	27	092337.70*	32.029	78.637	33	N		4.9		304 26
PDE	1975	01	27	134138.80	32.316	78.496	33	N		4.8		304 13
PDE	1975	01	27	155806.10*	32.718	78.476	33	N		4.5		304 6
PDE	1975	01	29	154925.90	31.879	78.485	33	N		4.9		305 16
PDE	1975	01	31	123852.40	28.100	84.729	33	N		5.4		310 57
PDE	1975	01	31	140411.00	32.417	78.479	45			4.6		304 12
PDE	1975	02	02	191409.70	32.595	78.529	21			5.1		304 38
PDE	1975	02	06	063944.60*	27.891	87.826	33	N		4.7		310 9
PDE	1975	02	11	064133.20	32.153	78.477	33	N		4.7		304 9
PDE	1975	03	10	030703.40	32.211	78.781	49			4.9		304 24
LEE	1975	03	18	184416.40	35.300	86.600					6.30UKLEE	306
PDE	1975	03	18	184416.40	35.167	86.571	33	N		5.3	5.8H	306 81
PDE	1975	04	01	161844.00*	31.877	78.470	33	N		4.7		305 10
PDE	1975	04	09	032828.60	30.410	84.889	33	N		4.9		306 25
PDE	1975	04	09	214540.70*	31.586	78.512	33	N		4.5		305 7
PDE	1975	04	24	013551.30	27.238	86.902	33	N		5.1		310 33

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	pp	STN	*****MAGNITUDE S****					OBS CONTRIBUTED
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms			VALUES
PDE	1975	04	28	091901.50	35.672	79.935	33	N	4.8						304 15
LEE	1975	04	28	110643.50	35.700	78.400							6.00	OUKLEE	302
PDE	1975	04	28	110643.50	35.819	79.915	33	N	5.8	6.3H					304 120
PDE	1975	04	28	115834.20	35.880	80.016	31		5.2	5.9H					304 73
PDE	1975	04	28	130559.60*	35.675	79.951	53		4.8						304 12
PDE	1975	04	29	030759.60	35.829	80.036	33	N	5.0						304 50
PDE	1975	04	29	050929.90*	35.890	79.702	33	N	4.8						304 9
PDE	1975	04	30	030627.00	35.963	80.148	29		5.1						321 39
PDE	1975	05	04	075147.00	35.939	79.811	33	N	4.8						304 18
PDE	1975	05	05	192744.50	35.942	79.934	22		5.0						304 54
PDE	1975	05	06	030515.20*	35.925	79.949	33	N	3.7						304 5
PDE	1975	05	08	115607.00	32.383	78.508	33	N	4.8						304 43
PDE	1975	05	11	064838.50	31.963	78.581	26		4.8						304 27
PDE	1975	05	19	194744.80	35.160	80.801	26		5.5	5.1Z					304 165
PDE	1975	05	28	211225.20*	35.857	79.743	38		4.7						304 19
PDE	1975	06	04	022432.90	35.866	79.848	33	N	5.7	5.8Z					304 148
PDE	1975	06	04	023749.70	35.886	79.660	58		4.8						304 26
PDE	1975	06	04	042841.80	35.868	79.889	33	N	4.5						304 8
PDE	1975	06	04	142124.20	35.936	79.898	33	N	4.3						304 8
PDE	1975	06	06	105005.70	35.253	80.758	33	N	4.8						304 31
PDE	1975	06	10	094417.50	32.554	78.626	28		4.9						304 37
PDE	1975	06	24	153827.80	27.473	87.294	33	N	5.2						310 20
PDE	1975	07	02	110629.50	32.537	78.592	33		4.9						304 47
PDE	1975	07	08	145131.90	35.499	87.681	33	N	4.8						306 29
PDE	1975	07	17	133531.10	35.504	79.795	12		4.7						304 32
PDE	1975	07	19	061054.90	31.920	78.605	40		5.3	4.7Z					305 114
PDE	1975	07	19	072630.50*	32.335	78.623	33	N	4.4						304 11
PDE	1975	07	21	072637.10	32.122	78.533	33	N	4.7						304 27
PDE	1975	07	23	081135.90*	35.809	79.499	122		4.2						304 8
PDE	1975	07	29	024058.20	32.555	78.457	51		5.5						304 137
PDE	1975	08	14	151640.50	31.858	78.380	61		3.9						305 16
PDE	1975	08	23	030856.30	30.614	79.453	33	N	4.0						305 6
PDE	1975	08	27	074016.30	34.771	80.492	16		4.8	4.1Z					306 42
PDE	1975	09	06	044435.70	29.283	82.161	33	N	5.1						310 20
PDE	1975	09	08	220618.70	31.534	84.874	22		4.9						306 30
PDE	1975	09	16	042025.10	32.379	76.454	44		4.6						303 12
PDE	1975	09	19	175313.90*	32.221	78.937	33	N	4.3						304 7
PDE	1975	09	19	175933.00*	31.973	78.476	33	N	5.1						304 11
PDE	1975	09	27	194639.40*	30.413	85.640	33	N	4.3						306 7
PDE	1975	10	24	174415.30*	26.848	86.293	33	N	4.2						309 6
PDE	1975	10	30	142057.20	32.704	75.383	112		4.9						303 11
PDE	1975	10	30	143642.50	32.901	75.991	34		5.2						303 13
PDE	1975	11	05	003557.20	32.035	78.809	28		5.2						304 44
PDE	1975	11	06	001133.90*	29.497	78.084	33		4.9						308 27
PDE	1975	11	13	143537.80	34.518	82.634	19		4.8						306 31
PDE	1975	11	26	150232.90*	28.343	87.636	33	N	5.1						306 12
PDE	1975	12	05	073711.40	33.029	76.022	33		5.4	4.7Z					303 73
PDE	1975	12	10	032608.40	33.017	76.095	21		5.4	5.0Z					303 106
PDE	1975	12	10	050342.30	32.825	76.190	33	N	5.0						303 10
PDE	1975	12	10	050843.60	33.062	76.217	54		4.7						303 12

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	PP STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
												VALUES
PDE	1975	12	11	100951.80	32.841	75.989	59		5.1			303 25
PDE	1975	12	15	194429.50	35.728	79.681	67		4.7			304 11
PDE	1975	12	18	082714.00	35.691	79.693	33	N	4.9			304 48
PDE	1975	12	18	085752.90*	35.824	79.813	33	N	4.7			304 6
PDE	1975	12	28	134909.00	32.251	87.473	33		4.9			306 25
PDE	1976	01	07	002454.10	32.854	75.964	50		5.4			303 35
PDE	1976	01	08	223424.90	33.021	76.186	33	N	5.0			303 18
PDE	1976	01	09	235010.60	32.985	76.024	22		4.7			303 23
PDE	1976	01	16	212023.20*	28.527	75.906	79					308 7
PDE	1976	01	17	175420.70	35.784	79.576	60		4.9			304 28
PDE	1976	01	27	192319.80	33.079	76.071	33	N	4.8			303 17
PDE	1976	02	05	120434.30	31.320	76.953	37		5.0			308 33
PDE	1976	02	14	181957.10	34.684	82.051	33	N	4.6			306 35
PDE	1976	02	24	215803.00	35.278	80.816	33	N	4.8			304 33
PDE	1976	03	04	184543.00*	32.558	75.427	121		3.7			303 8
PDE	1976	04	10	070918.00	32.727	76.511	50		4.5			303 11
PDE	1976	04	12	231653.60*	33.142	76.051	58		3.7			303 8
PDE	1976	04	16	201515.10	32.871	76.011	92		4.0			303 8
PDE	1976	04	21	220846.70*	32.232	85.483	33	N	4.2			306 7
PDE	1976	05	06	082135.40	31.787	78.669	51		4.5			305 10
PDE	1976	05	10	184353.50	29.284	81.460	33	N	5.2	4.6Z		310 87
PDE	1976	05	22	183253.90*	32.730	75.694	89		4.3			303 10
PDE	1976	05	31	213858.20*	33.490	76.311	33	N				303 6
PDE	1976	07	06	025551.90	32.284	78.275	56		4.8			304 22
PDE	1976	07	12	031248.00	33.743	85.558	33	N	4.8			306 23
PDE	1976	07	13	073734.90	35.790	79.787	33	N	4.8			304 18
PDE	1976	07	13	184028.10	35.683	79.679	62		3.6			304 13
PDE	1976	07	13	184943.10	35.730	79.625	44		4.6			304 27
PDE	1976	07	14	211932.30	35.643	79.479	33	N	4.5			304 14
PDE	1976	07	15	000618.30	35.789	79.427	47		4.5			304 28
PDE	1976	07	16	150353.40	35.738	79.489	33	N	4.8			304 35
PDE	1976	07	23	015606.70*	31.662	83.934	29		4.8			306 16
PDE	1976	07	31	154644.70	35.697	79.644	16		3.8			304 9
PDE	1976	08	01	020526.80	34.724	79.319	15		4.6			304 18
PDE	1976	09	08	201302.30	32.046	78.684	18		5.4	5.0Z		304 87
PDE	1976	09	12	153611.80*	27.672	85.752	33	N	4.8			310 16
PDE	1976	09	14	064352.30	29.795	89.559	82		5.5			306 174
PDE	1976	09	14	064414.30*	30.372	89.391	15					306 9
PDE	1976	09	29	025127.00*	29.817	81.390	33	N	5.0			310 44
PDE	1976	09	29	074717.50	31.771	78.348	29		5.0			305 64
PDE	1976	10	03	150343.20	31.909	78.760	16		4.7			305 33
PDE	1976	10	23	160919.80*	28.676	86.228	63		5.1			306 9
PDE	1976	11	24	035848.30*	30.437	79.626	62					305 6
PDE	1977	01	06	215008.10	31.048	88.052	33	N	5.2			306 34
PDE	1977	01	14	120933.10	34.697	82.711	33	N	4.7			306 20
PDE	1977	01	21	145745.50*	32.838	75.794	51		4.6			303 13
PDE	1977	01	28	034854.10*	31.539	78.275	55		4.7			305 8
PDE	1977	02	19	061525.00	31.786	78.417	40		5.4			305 72
PDE	1977	02	19	063942.60*	31.581	78.220	33	N	4.7			305 18
PDE	1977	02	19	234326.40	34.701	81.258	19		5.1			306 53

CATALOG	DATE		ORIGIN	***COORDINATES**		DEPTH	P P STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO DA	TIME	LAT.	LONG.	km	DEV	mb	OBS Ms	OBS CONTRIBUTED	VALUES
PDE	1977	02 20	014533.90*	34.653	80.700	33	N	4.5			306 6
PDE	1977	03 15	010139.90	31.352	89.336	33	N	4.7			306 46
PDE	1977	03 16	125652.00	31.261	89.411	33	N	4.8			306 38
PDE	1977	03 20	083549.80*	28.180	87.815	33	N				306 11
PDE	1977	03 27	053649.20	32.706	78.545	26		5.0			304 65
PDE	1977	04 14	182648.80	32.024	78.547	33	N	4.3			304 14
PDE	1977	04 14	203239.70	35.162	81.161	33	N	3.8			321 21
PDE	1977	04 20	042109.40	30.519	79.352	33	N	4.8	4.3Z		305 20
PDE	1977	05 16	223739.80*	29.724	81.647	33	N				310 5
PDE	1977	06 05	192140.50	26.224	88.317	33	N	4.8			315 29
PDE	1977	06 22	155327.60	33.149	76.012	36		4.8			303 81
PDE	1977	09 13	205922.00*	34.895	76.496	213		4.7			302 7
PDE	1977	09 20	055136.00*	29.518	81.096	23		5.0			310 10
PDE	1977	10 19	071446.70	32.738	78.412	33	N	4.8			304 11
PDE	1977	10 21	121613.60*	30.015	79.923	125					305 8
PDE	1977	11 04	235444.70	29.597	81.279	15		4.9			310 39
PDE	1977	11 18	052011.30	32.693	88.388	33	N	5.7	6.5Z	6.30UKPAS	306 199
PDE	1977	11 18	053319.70	32.640	88.431	33	N	4.6			306 11
PDE	1977	11 18	112727.60	32.655	88.469	33	N	4.6			306 28
PDE	1977	11 18	151041.80*	32.719	88.316	33	N	4.4			306 8
PDE	1977	11 18	172324.40	32.610	88.315	33	N	4.9			306 77
PDE	1977	11 18	231249.50	32.698	88.422	33	N	4.7			306 27
PDE	1977	11 20	234035.90*	32.395	87.765	33	N	4.7			306 5
PDE	1977	12 20	191234.90	33.397	76.075	33	N	4.7			303 25
PDE	1977	12 21	020810.00*	32.837	76.634	33	N	5.1			303 19
PDE	1978	01 07	072320.50	30.565	79.380	33	N	4.7			305 47
PDE	1978	01 15	011021.80*	31.947	77.578	33	N				308 5
PDE	1978	01 15	023030.60*	31.917	78.306	60		4.5			305 10
PDE	1978	02 10	172952.00	28.072	84.644	33	N	5.2	4.7Z		310 103
PDE	1978	02 11	092658.90*	34.046	88.114	33	N	4.3			306 12
PDE	1978	02 19	045227.80	29.298	84.994	16		4.7			306 28
PDE	1978	02 19	185631.90*	31.681	75.256	59		4.0			308 8
PDE	1978	02 23	020128.40	33.487	76.050	36		4.9	4.1Z		303 66
PDE	1978	03 07	102159.10*	29.279	81.052	33	N	4.2			310 8
PDE	1978	03 14	113838.60*	35.906	77.933	33	N	4.7			302 11
PDE	1978	03 21	000552.60*	30.005	81.131	76					306 6
PDE	1978	03 29	090042.50	32.750	88.358	33	N	4.3			306 10
PDE	1978	03 30	234447.60*	32.849	78.304	50		4.2			304 5
PDE	1978	04 04	004029.20	33.033	82.285	27		5.6	6.0Z		306 156
PDE	1978	04 10	124113.50*	32.880	82.460	33	N	4.4			306 7
PDE	1978	04 11	075539.40	32.633	78.618	33	N	4.5			304 12
PDE	1978	06 01	062341.70	34.474	80.477	57		4.6			306 19
PDE	1978	06 14	161206.80	32.310	76.522	18	D	5.0	4.9Z		303 85
PDE	1978	06 15	061820.50*	34.475	80.678	33	N	4.5			306 8
PDE	1978	07 14	201309.40*	32.175	82.940	33	N	4.3			306 9
PDE	1978	07 31	115539.70	35.378	81.947	33	N	5.0	5.4Z		321 99
PDE	1978	08 08	101234.40	32.356	83.043	37		5.2	4.9Z		306 120
PDE	1978	08 09	170430.40*	32.233	83.101	33	N	4.6			306 15
PDE	1978	08 13	222804.60	28.042	85.211	33	N	4.4			310 32
PDE	1978	08 15	120024.10*	31.285	84.608	33	N	4.8			306 11

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	PP STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS	CONTRIBUTED
													VALUES
PDE	1978	09	03	203345.60*	32.340	82.886	44		4.5				306 40
PDE	1978	09	28	053216.30	33.512	76.152	35		4.7				303 28
PDE	1978	10	04	135352.00	27.834	85.963	33	N	5.2				310 63
PDE	1978	10	17	201013.00*	32.196	76.359	69						303 9
PDE	1978	10	23	143651.40*	28.817	86.812	33	N	4.4				306 9
PDE	1978	10	26	211757.60	32.575	85.492	33	N	4.8				306 22
PDE	1978	10	26	220219.80*	32.649	85.610	33	N	4.7				306 9
PDE	1978	11	29	144212.80*	32.613	85.618	33	N	4.2				306 6
PDE	1978	11	30	064915.40*	32.693	85.590	33	N	4.8				306 19
PDE	1978	12	07	020422.00*	32.731	86.022	39		4.8				306 14
PDE	1978	12	12	100052.50*	29.046	81.232	56		4.3				310 8
PDE	1978	12	25	200002.70	28.115	83.912	33	N	4.5				310 11
PDE	1979	01	24	084512.20*	33.099	88.495	33	N	4.6				306 7
PDE	1979	03	04	185300.10*	35.980	77.361	33	N	4.6				324 7
PDE	1979	03	05	235452.50	30.476	79.727	33	N	4.3				305 12
PDE	1979	03	27	052754.70*	32.059	78.611	33	N	4.3				304 6
PDE	1979	03	31	155814.20	32.704	89.295	33	N	4.7	4.7Z			306 46
PDE	1979	04	11	160812.90*	25.978	88.823	33	N	4.8				315 16
PDE	1979	04	19	220039.20	32.985	83.358	33	N	4.5	4.3Z			306 39
PDE	1979	05	05	112248.90	27.246	85.540	33	N	4.3				310 10
PDE	1979	05	11	215638.60*	32.087	78.809	33	N	4.4				304 11
PDE	1979	05	20	225914.20	30.029	80.310	33	N	5.8	5.9Z			305 284
PDE	1979	05	27	061125.60	33.548	76.373	20		4.8				303 37
PDE	1979	06	11	154651.90	34.942	80.792	33	N	4.7	4.3Z			306 85
PDE	1979	06	11	232535.30	33.108	76.230	46		4.6				303 30
PDE	1979	06	12	162619.20*	35.101	81.253	33	N	4.5				321 8
PDE	1979	06	19	162911.60	26.741	87.506	24	D	5.1	4.5Z			309 165
PDE	1979	06	30	091849.00*	33.911	87.850	33	N	4.4				306 11
PDE	1979	07	03	165653.70	27.972	84.476	33	N	4.2				310 7
PDE	1979	07	16	060012.20	34.525	87.630	33	N	4.6	4.2Z			306 29
PDE	1979	08	29	172332.60*	35.856	78.318	33	N	4.4				302 10
PDE	1979	09	06	025305.30	32.732	85.528	33	N	4.8	5.1Z			306 56
PDE	1979	11	06	063822.60	32.831	85.696	33	N	4.6				306 9
PDE	1979	11	16	191727.70	27.243	88.159	33	N	4.6				311 10
PDE	1979	12	03	183813.60*	35.702	79.738	33	N	4.2				304 11
PDE	1979	12	22	222847.30	33.151	75.836	33	N	4.8	4.1Z			302 45
PDE	1979	12	28	015918.80*	30.628	78.445	33	N	5.0				308 16
PDE	1980	01	07	124520.60*	33.140	75.854	33	N	4.8				302 15
PDE	1980	01	09	102920.60*	32.831	88.750	33	N	4.3				306 7
PDE	1980	01	27	032925.40	33.763	82.153	33	N	4.7	4.2Z			306 32
PDE	1980	01	27	033715.80	33.714	82.219	33	N	4.5				306 17
PDE	1980	01	27	034712.10	33.640	82.033	33	N	4.6				306 14
PDE	1980	02	22	030247.20	30.506	88.583	33	N	5.8	6.2Z			306 224
PDE	1980	02	22	032055.80*	30.505	88.626	33	N	4.8				306 17
PDE	1980	02	22	041650.40*	30.644	88.754	33	N	4.7				306 19
PDE	1980	02	22	070543.70*	30.630	88.771	33	N	4.7				306 16
PDE	1980	02	22	110723.60*	30.543	88.743	33	N	4.6				306 12
PDE	1980	02	22	115842.00*	30.506	88.795	33	N	4.8				306 26
PDE	1980	02	23	090559.50*	30.565	88.776	33	N	4.3				306 6
PDE	1980	02	27	002602.50*	32.884	82.430	33	N	4.4				306 10

CATALOG	D A T E			ORIGIN	***COORDINATES**		DEPTH	PP STN	*****M A G N I T U D E S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
VALUES												

PDE	1980	02	27	003036.10*	32.787	82.455	33	N	4.7			306	11
PDE	1980	02	28	113642.00*	30.567	88.983	33	N	4.6			306	11
PDE	1980	03	04	071647.60	30.513	88.683	33	N	4.7			306	21
PDE	1980	03	13	132441.00	34.245	87.760	15	D	5.0			306	62
PDE	1980	04	27	170033.30	28.607	77.644	33	N	4.7			308	27
PDE	1980	05	01	053904.20	33.055	75.985	35		4.7			303	19
PDE	1980	05	01	054312.70	33.019	75.918	33	N	5.0			302	47
PDE	1980	05	29	224052.00*	31.562	76.570	33	N	4.2			308	6
PDE	1980	06	03	203210.10	30.659	88.600	33	N	4.8	5.1Z		306	43
PDE	1980	06	10	074837.50*	30.559	88.604	33	N	4.6			306	14
PDE	1980	06	22	143853.70	30.100	81.768	33	N	5.1			306	126
PDE	1980	06	24	073548.00	32.821	88.517	33	N	5.2	5.4Z		306	90
PDE	1980	06	25	025358.80	32.734	88.562	33		4.7			306	44
PDE	1980	06	25	213249.50*	30.701	88.794	33	N	4.3			306	11
PDE	1980	07	29	122312.30	29.331	81.258	34		5.7	5.2Z		310	171
PDE	1980	07	29	145840.80	29.598	81.092	18	D	6.1	6.5Z	6.60UKBRK	310	257
PDE	1980	07	29	184424.00*	29.447	80.712	33	N	4.4			309	12
PDE	1980	07	29	215736.20	29.118	81.006	33	N	4.6	3.9Z		310	20
PDE	1980	07	30	010042.70*	29.596	80.743	33	N	4.8			309	49
PDE	1980	07	30	053048.20*	29.438	80.825	33	N	4.5			309	5
PDE	1980	07	31	142201.50*	29.430	80.851	33	N	4.5	4.3Z		309	13
PDE	1980	08	04	165240.40	29.411	80.771	33	N	4.5			309	9
PDE	1980	08	11	073320.90	35.676	77.578	77		5.0			302	84
PDE	1980	08	14	214502.70	32.863	88.444	33	N	4.9	4.9Z		306	50
PDE	1980	08	20	010551.30*	29.517	81.189	33	N	4.3			310	8
PDE	1980	08	23	213651.60	32.913	75.633	25		5.2	4.9Z		303	116
PDE	1980	08	23	215003.00	32.834	75.629	33	N	5.2	4.8Z		303	92
PDE	1980	09	08	074207.30*	29.999	80.434	33	N	4.5			305	6
PDE	1980	09	22	203755.00*	32.458	78.519	65		4.7			304	20
PDE	1980	10	06	225859.30	35.670	82.032	33	N	4.5			306	12
PDE	1980	10	07	093208.50	35.598	82.073	33		5.4	5.5Z		306	135
PDE	1980	10	07	093845.80	35.553	82.005	33	N	4.8			306	12
PDE	1980	10	08	065702.30	35.131	77.105	33	N	5.1	4.7Z		302	71
PDE	1980	10	08	071441.00	35.181	77.198	33	N	4.6	4.4Z		302	17
PDE	1980	10	08	080406.20*	35.475	76.958	33	N	4.1			302	6
PDE	1980	10	08	161957.60	31.354	87.666	33	N	5.0			306	38
PDE	1980	10	10	140226.70	29.170	81.208	33	N	5.0			310	31
PDE	1980	11	18	134622.00	29.558	85.173	33	N	4.7			306	24
PDE	1980	11	19	190046.90	27.394	88.752	17		6.0	6.1Z	6.10UKPAS	311	232
PDE	1980	11	20	140328.80	29.593	85.222	33	N	4.8	3.9Z		306	17
PDE	1980	11	25	092705.70*	27.788	85.388	33	N	4.0			310	10
PDE	1980	12	22	043609.00	26.335	89.312	33	N	4.5			315	8
PDE	1981	01	26	101153.30*	35.163	77.981	33	N	4.5			302	7
PDE	1981	02	09	154922.90	27.038	89.752	33	N	5.1			312	52
PDE	1981	03	06	055849.90	29.806	80.659	43		4.9			309	63
PDE	1981	04	09	171931.30	28.006	84.409	33	N	4.5			310	22
PDE	1981	04	14	170142.10	35.066	86.430	33	N	4.5			306	13
PDE	1981	05	13	020754.00	32.682	82.403	33	N	4.9			306	83
PDE	1981	05	15	172243.60	29.504	81.942	33	D	5.1	4.3Z		310	98
PDE	1981	05	28	231409.50	31.851	78.411	33	N	5.1	5.6Z		305	116

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	pP	STN	*****MAGNITUDE S****					OBS CONTRIBUTED	
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms				VALUES	
PDE	1981	06	10	135241.10	32.630	88.448	33	N	0.98	4.4	4					306	23
PDE	1981	06	13	005656.33	31.704	78.335	33	N	0.92	5.0	39	4.5Z	3			305	92
PDE	1981	06	19	104144.46*	30.541	79.217	63		0.84	4.4	8					305	12
PDE	1981	07	12	084541.15	32.735	76.001	49		0.74	4.5	8					303	23
PDE	1981	08	10	105824.69	31.263	77.935	33	N	0.67	4.6	6					308	13
PDE	1981	08	17	091121.51	33.268	75.439	57		0.82	4.8	25					302	71
PDE	1981	08	31	123144.18	34.580	78.972	33	N	0.91	4.8	10	3.8Z	1			304	34
PDE	1981	09	10	034707.32	29.320	81.122	33	N	1.06	4.6	22					310	49
PDE	1981	09	15	033159.02	34.826	77.379	48		0.97	4.5	6	4.2Z	2			302	22
PDE	1981	09	27	111041.97*	33.240	75.518	33	N	1.12	4.5	3					302	8
PDE	1981	10	17	093207.46?	35.844	88.173	53		1.70	4.0	2					306	6
PDE	1981	10	19	104618.31*	31.814	88.424	33	N	1.41	4.5	3					306	10
PDE	1981	11	09	193102.05	33.348	75.754	33	N	0.83	4.6	2					302	10
PDE	1981	11	21	042505.17	29.525	89.109	47		1.19	4.7	14					306	44
PDE	1981	12	14	182543.90	33.028	75.463	64		0.81	4.5	4					302	14
PDE	1982	01	22	043000.25	30.829	89.822	33	N	0.92	5.3	48	5.3Z	2			306	104
PDE	1982	01	23	173730.26	31.696	82.246	33	N	1.11	6.0	59	6.5Z	11	6.20MsPAS		306	217
PDE	1982	01	23	174802.14	31.582	82.205	33	N	0.90	5.4	40	6.0Z	1			306	86
PDE	1982	01	23	181946.37	31.557	82.290	44		0.89	5.0	32					306	67
PDE	1982	01	23	185835.95*	31.662	82.600	33	N	0.51	4.2	2					306	8
PDE	1982	01	23	191708.38	31.631	82.444	33	N	1.17	4.7	8					306	20
PDE	1982	01	23	195208.43	31.539	82.340	33	N	0.94	5.0	28					306	58
PDE	1982	01	23	204321.32*	31.774	82.356	33	N	0.81	4.4	4					306	10
PDE	1982	01	24	033154.12	31.536	82.389	33	N	1.31	4.6	9					306	23
PDE	1982	01	24	034606.95	31.589	82.438	33	N	0.97	4.5	8					306	17
PDE	1982	01	24	100335.11*	31.650	82.175	33	N	0.97	4.6	8					306	22
PDE	1982	01	24	104615.13*	31.467	82.384	33	N	1.31	4.4	6					306	15
PDE	1982	01	24	172749.07*	31.598	82.354	33	N	0.91	4.5	7					306	15
PDE	1982	01	25	172617.47	31.649	82.309	33	N	0.93	5.1	35	4.4Z	2			306	57
PDE	1982	02	04	060649.75	31.387	82.193	33	N	0.92	4.6	7					306	19
PDE	1982	02	19	214650.89	33.708	80.830	33	N	1.29	4.7	3					306	11
PDE	1982	03	24	231750.78*	30.569	88.735	33	N	1.44	4.6	4					306	12
PDE	1982	04	05	021944.59	27.419	88.864	33	N	0.85	5.1	38	4.7Z	2			311	100
PDE	1982	05	07	074415.35	32.611	75.887	33	N	0.65	4.8	20					303	30
PDE	1982	06	10	212745.92	31.547	82.119	33	N	1.21	4.9	17	4.6Z	1			306	42
PDE	1982	07	16	041529.94*	30.715	77.031	103		1.27	4.2	3					308	8
PDE	1982	07	28	070751.14*	35.767	79.512	33	N	1.15	4.5	4					304	6
PDE	1982	08	03	080331.06	27.895	85.465	33	N	0.91	4.6	12					310	26
PDE	1982	08	18	180108.36	27.083	89.494	57		1.34	4.6	4					312	18
PDE	1982	09	04	123356.63	33.012	76.107	33	N	0.99	4.3	4					303	10
PDE	1982	09	09	120530.96*	28.639	81.109	33	N	1.34	4.4	3	4.2Z	1			309	14
PDE	1982	10	03	045208.87	35.115	88.551	33	N	1.11	4.5	7	4.4Z	1			306	17
PDE	1982	10	16	022256.78*	30.326	79.129	71		1.37	4.5	6					305	12
PDE	1982	10	30	083344.65*	34.587	81.230	33	N	0.48	4.3	5					306	10
PDE	1982	10	31	184052.69	35.847	82.494	33	N	1.00	5.2	47	5.0Z	2			306	105
PDE	1982	11	22	135704.29	27.759	84.918	64		0.15	4.2	1					309	8
PDE	1982	12	14	235732.75*	31.459	78.910	33	N	1.42	4.6	6					305	15
PDE	1982	12	21	120846.68	29.198	81.378	33	N	1.00	4.7	11					310	30
PDE	1982	12	21	131346.21	29.296	81.374	32		1.41	4.3	2					310	19
PDE	1982	12	29	000920.20*	30.273	79.809	33	N	1.05	4.8	13					305	25

CATALOG	DATE			ORIGIN	***COORDINATES**		DEPTH	PP	STN	*****MAGNITUDE S****				OBS CONTRIBUTED	
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms		OBS	VALUES
PDE	1983	01	06	202920.32	31.309	82.132	33	N	0.85	4.7	7				306 23
PDE	1983	01	27	044540.25	29.056	81.394	33	N	1.11	4.8	6				310 15
PDE	1983	01	29	203140.66*	33.174	88.190	33	N	1.34	4.5	2				306 13
PDE	1983	02	25	083708.86	35.730	77.918	40		1.40	4.9	17				302 43
PDE	1983	02	27	203306.50	32.613	78.553	33	N	1.43	5.3	26	4.9Z	2		304 112
PDE	1983	05	31	210545.48	34.534	79.734	46		1.03	5.0	32	4.3Z	1		304 76
PDE	1983	07	05	172649.27*	29.492	80.692	33	N	0.45	4.6	1				309 6
PDE	1983	08	23	224312.22	27.965	84.963	60		1.35	4.3	6				309 22
PDE	1983	10	12	024441.29*	33.521	75.464	33	N	1.41	4.6	2				302 13
PDE	1983	11	05	194824.51	33.967	89.950	33	N	1.05	5.1	52	5.2Z	5		306 167
PDE	1983	11	11	083214.25?	33.695	82.728	33	N	1.36						306 6
PDE	1983	11	23	050552.37*	30.354	83.105	33	N	1.33	4.6	1				306 6
PDE	1983	12	23	193543.22*	25.382	87.626	33	N	0.63	4.3	1				308 5
PDE	1984	01	06	234808.29	27.777	84.740	33	N	1.17	4.5	5				309 15
PDE	1984	01	08	015313.19	31.991	79.499	33	N	0.94	4.2	3				305 14
PDE	1984	01	14	060227.23*	31.747	88.051	33	N	1.17	4.3	2				306 8
PDE	1984	01	25	234947.47	27.486	86.089	33	N	1.22	4.6	8				310 23
PDE	1984	02	11	101150.57	35.827	82.381	33	N	1.07	4.7	26	4.0Z	2		306 44
PDE	1984	02	19	154625.77	29.867	80.546	21		1.00	5.0	30	4.3Z	2		309 91
PDE	1984	03	14	013213.96	29.105	81.119	39		0.78	4.9	21				310 51
PDE	1984	03	14	153234.01	34.216	79.636	33	N	0.93	5.2	36				304 82
PDE	1984	03	23	003408.72?	29.990	78.871	33	N	0.48	5.1	3				308 5
PDE	1984	04	11	025606.11?	32.075	85.831	33	N	0.99	4.7	1				306 7
PDE	1984	04	11	081529.94	34.667	79.633	49		1.08	4.8	20				304 65
PDE	1984	04	15	045644.82	31.667	82.272	33	N	0.91	5.0	29	4.4Z	1		306 74
PDE	1984	04	22	202237.10	30.648	84.158	33	N	1.06	4.8	4				306 15
PDE	1984	04	27	231627.17*	33.676	89.450	33	N	0.80	4.9	6				306 7
PDE	1984	05	03	131758.15	30.500	78.404	33	N	0.95	4.5	3				308 14
PDE	1984	05	18	042857.14	29.577	81.869	33	N	0.81	5.6	53	4.5Z	3		310 145
PDE	1984	05	19	063624.78	29.294	81.884	45		0.81	4.7	16				310 30
PDE	1984	05	23	031421.57	32.949	75.919	57	D 3	1.35	4.8	14				303 33
PDE	1984	05	23	222446.48?	31.859	83.759	33	N	0.15						306 5
PDE	1984	05	30	222726.04	28.828	83.936	33	N	0.94	4.5	5				310 21
PDE	1984	07	21	200243.13	28.689	82.158	63		1.18	4.3	1				310 9
PDE	1984	07	29	163708.13	29.411	81.799	43		1.61	4.5	2				310 12
PDE	1984	08	06	084006.85	32.148	88.036	33	N	1.26	4.9	11				306 37
PDE	1984	09	15	101522.38*	29.212	81.525	33	N	1.33	4.6	6				310 14
PDE	1984	09	28	213846.25	34.483	82.558	56		1.11	4.7	15				306 48
PDE	1984	10	02	221333.55	30.982	88.761	33	N	1.19	4.4	3				306 20
PDE	1984	10	24	081931.30	29.704	80.053	56		1.38	4.2	5				309 13
PDE	1984	11	18	220432.07*	28.799	84.073	33	N	1.12	5.3	3				310 7
PDE	1984	11	23	061418.37	29.386	81.571	33	N	1.47	4.4	4				310 7
PDE	1984	11	26	033537.73*	30.489	79.252	33	N	1.08	4.5	10				305 14
PDE	1984	11	28	002931.84	31.759	89.042	33	N	1.36	4.5	8				306 30
PDE	1984	12	05	141415.71	27.202	81.728	33	N	1.07	4.7	9				309 42
PDE	1984	12	15	105410.50*	31.284	77.805	33	N	1.11	4.7	5				308 13
PDE	1984	12	18	224657.50*	29.425	80.862	33	N	1.39	4.7	3				309 9
PDE	1985	01	30	220212.50	31.029	85.582	33	N	1.15	4.7	27	4.4Z	1		306 67
PDE	1985	02	15	045444.08	30.129	81.609	33	N	1.20	4.4	5				306 18
PDE	1985	02	15	172123.33	34.306	82.422	33	N	1.34	5.0	29	4.2Z	1		306 69

CATALOG	DATE		ORIGIN	***COORDINATES**		DEPTH	PP	STN	*****MAGNITUDE S****				OBS	CONTRIBUTED
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms			VALUES
PDE	1985	02	16	111629.17*	30.618	85.586	33	N	1.13	4.3	3			306 10
PDE	1985	03	11	143608.59*	31.252	77.045	33	N	1.50	4.8	8			308 24
PDE	1985	03	22	004804.10*	31.386	76.712	33	N	0.67					308 5
PDE	1985	04	16	191434.20	35.635	87.183	33	N	1.50	3.3	1			306 15
PDE	1985	04	21	132127.54	35.527	87.283	33	N	1.01	5.0	34	5.42	2	306 106
PDE	1985	05	06	205946.32	28.328	82.305	46	*	1.36	4.5	6			310 23
PDE	1985	05	20	151140.68	35.489	87.173	33	N	1.14	5.2	50	6.12	7	306 140
PDE	1985	06	14	171905.91*	29.808	79.312	33	N	1.46	3.9	1			308 9
PDE	1985	06	15	151742.98	34.620	82.992	43		0.94	5.4	73	5.22	4	306 196
PDE	1985	06	15	213434.20*	34.717	83.269	33	N	1.37	4.3	2			306 12
PDE	1985	06	17	024832.03	34.599	82.831	33	N	0.94	4.8	26			306 59
PDE	1985	06	17	042405.14*	31.644	82.305	33	N	1.32	4.6	6			306 14
PDE	1985	06	18	111048.85*	34.299	83.874	33	N	0.95	4.8	6			306 8
PDE	1985	06	21	151338.58	31.921	85.085	33	N	1.51	4.3	4			306 27
PDE	1985	06	30	182949.17	34.006	83.559	33	N	0.71	4.5	11			306 19
PDE	1985	07	12	045115.32	31.679	82.370	33	N	1.24	4.7	10			306 27
PDE	1985	07	12	054509.80*	31.367	82.234	33	N	1.49	4.4	6			306 10
PDE	1985	07	28	144538.69	30.364	88.804	33	N	0.46	4.5	3			306 10
PDE	1985	09	13	053308.11	29.824	84.052	33	N	1.40	4.5	6			306 24
PDE	1985	09	13	115259.32?	34.164	84.652	33	N	0.74	3.8	2			306 5
PDE	1985	10	02	163350.77	27.082	89.745	45	*	1.38	4.4	3			312 14
PDE	1985	10	03	083735.12*	32.876	85.634	33	N	0.67	4.3	3			306 6
PDE	1985	10	03	202323.14*	29.219	83.895	14		1.21	4.1	3			310 13
PDE	1985	10	21	085709.13	28.845	83.974	33	N	1.41	4.5	6			310 22
PDE	1985	10	30	201852.47	31.593	82.948	33	N	1.53	4.6	4			306 23
PDE	1985	11	13	110333.37?	35.400	81.794	33	N	0.66					321 6
PDE	1985	12	08	133500.73	30.922	86.598	37	*	1.21	4.8	28	4.72	1	306 66
PDE	1985	12	08	133634.19	30.751	86.621	33	N	1.25	4.9	19			306 38
PDE	1985	12	08	142432.20	30.893	86.535	33	N	1.26	4.9	19			306 53
PDE	1985	12	15	114532.14	30.831	86.394	33	N	1.22	4.5	5			306 11
PDE	1985	12	23	134944.99	27.610	85.722	45	*	1.37	4.6	4			310 21
PDE	1985	12	25	044708.04	32.128	89.713	33	N	1.03	4.9	8			306 48
PDE	1985	12	29	213105.02*	32.624	76.104	33	N	0.71	4.9	1			303 8
PDE	1986	01	06	095042.29*	27.800	85.392	33	*	1.41	4.5	4			310 14
PDE	1986	01	07	202001.68*	26.930	88.325	69	*	0.94	5.0	4			315 15
PDE	1986	01	10	034629.91	28.648	86.527	54		0.98	5.4	61	3.62	1	306 155
PDE	1986	01	25	213017.36	31.575	85.139	33	N	1.38	4.7	8			306 29
PDE	1986	02	12	115412.99	34.670	82.938	33	N	0.60	5.0	23			306 42
PDE	1986	02	27	210636.43*	29.050	81.125	33	N	0.99					310 6
PDE	1986	02	28	205121.67*	29.108	81.909	63	*	0.97	4.6	11			310 18
PDE	1986	03	01	150944.39	34.682	82.968	33	N	0.98	5.0	14			306 41
PDE	1986	03	02	004240.44	32.523	89.327	33	N	1.24	4.9	12			306 24
PDE	1986	03	05	060248.15	34.771	88.272	33	N	1.09	4.4	3			306 15
PDE	1986	03	23	005728.07*	34.215	88.916	33	N	0.97	4.8	4			306 11
PDE	1986	03	28	180546.77?	30.801	79.166	33	N	1.32	4.2	2			305 7
PDE	1986	04	04	075837.37*	30.858	88.256	33	N	1.25	4.5	8			306 13
PDE	1986	04	12	124400.76*	28.781	86.480	33	N	0.79	4.4	1			306 6
PDE	1986	04	13	212827.08	32.539	85.287	53	*	1.19	4.9	21			306 53
PDE	1986	04	22	092951.69	31.850	76.789	33	N	0.79	4.7	9			308 18
PDE	1986	04	26	073516.10	32.128	76.374	33	N	0.97	5.5	60	5.32	6	303 172

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	pP	STN	*****MAGNITUDE*****					OBS CONTRIBUTED	
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms				VALUES	
PDE	1986	04	29	152310.68*	31.400	88.331	33	N	1.58	4.6	5					306	10
PDE	1986	05	11	175133.04*	35.197	78.712	33	N	0.92	4.4	3					302	8
PDE	1986	06	20	171246.94	31.240	86.847	33	N	1.19	5.9	71	6.1Z	20			306	232
PDE	1986	06	23	171929.65	31.230	87.014	33	N	1.12	4.8	12	4.4Z	1			306	26
PDE	1986	06	25	002822.01	31.146	86.778	33	N	1.03	4.7	20	4.5Z	1			306	53
PDE	1986	06	29	112235.60*	31.255	86.750	33	N	1.44	4.5	5					306	14
PDE	1986	06	30	015721.34*	34.524	87.776	33	N	1.41	4.4	5					306	11
PDE	1986	07	06	192422.99	34.424	80.161	9	G	1.27	5.8	86	6.1Z	17			306	266
PDE	1986	07	06	202155.35?	34.665	79.725	33	N	1.64	4.3	4					304	8
PDE	1986	07	06	203959.31	34.488	80.032	33	N	1.01	4.5	10					306	20
PDE	1986	07	06	214524.48	34.458	80.108	33	N	0.81	4.8	10					306	20
PDE	1986	07	16	220310.79	31.049	77.997	33	N	1.03	5.6	93	5.2Z	7			308	257
PDE	1986	07	19	104703.35*	34.126	79.659	33	N	1.16	4.6	7					304	14
PDE	1986	07	19	201255.23	31.260	86.910	33	N	1.15	5.1	47	4.6Z	3			306	113
PDE	1986	07	27	173902.56*	34.580	80.156	33	N	1.13	4.7	4					306	13
PDE	1986	07	28	011914.24	33.545	87.860	33	N	0.78	4.8	27					306	69
PDE	1986	07	30	040324.81	33.160	75.793	33	N	0.62	4.6	9					302	18
PDE	1986	08	07	181909.84	34.615	80.290	33	N	0.99	4.8	18					306	41
PDE	1986	08	07	182035.60	34.662	80.254	33	N	0.72	4.8	8					306	20
PDE	1986	08	30	074546.62?	34.500	88.204	33	N	1.42	4.2	1					306	6
PDE	1986	08	30	181222.83?	33.479	82.135	33	N	1.63	4.1	1					306	6
PDE	1986	09	05	083425.66*	29.147	85.142	33	N	1.44	4.1	1					306	12
PDE	1986	09	09	162251.95	31.621	85.026	33	N	1.07	4.8	21					306	42
PDE	1986	09	09	162426.63	31.546	85.067	33	N	1.06	5.2	25	4.9Z	4			306	91
PDE	1986	09	09	164013.20	31.587	85.040	33	N	1.27	4.8	14					306	28
PDE	1986	09	11	042230.69	32.662	78.559	33	N	1.44	4.8	25					304	54
PDE	1986	09	16	132904.86*	31.172	86.673	33	N	1.50	4.4	4					306	16
PDE	1986	09	16	160137.21*	30.993	86.607	33	N	1.32	4.5	4					306	11
PDE	1986	10	25	212529.77*	26.069	88.245	33	N	1.22							315	8
PDE	1986	11	02	061643.67*	26.527	76.897	33	N	1.16							308	5
PDE	1987	01	10	033401.37*	34.558	80.333	33	N	1.34	4.6	7	4.0Z	1			306	15
PDE	1987	01	19	074624.49	28.385	83.682	33	N	1.00	5.2	50	4.3Z	1			310	119
PDE	1987	01	19	081205.81	28.243	83.572	33	N	1.08	4.9	30					310	71
PDE	1987	01	24	135327.63?	33.688	86.349	33	N	1.65	4.5	2					306	8
PDE	1987	02	02	221715.14*	34.841	75.571	82	?	1.50	4.4	4					302	15
PDE	1987	02	07	073009.45?	35.520	80.374	33	N	0.59							304	5
PDE	1987	02	08	032918.68*	34.598	81.190	33	N	1.32	4.5	1					306	9
PDE	1987	02	24	221707.52*	29.052	81.854	111	?	0.89	4.4	4					310	11
PDE	1987	03	05	023339.31	35.410	87.386	33	N	1.58	4.5	4					306	18
PDE	1987	04	02	133044.41	35.755	80.819	33	N	1.39	4.8	10	4.1Z	1			304	24
PDE	1987	04	09	072535.72	35.499	87.074	33	N	1.21	4.8	15	4.9Z	1			306	52
PDE	1987	04	09	200119.50	35.509	80.646	33	N	1.29	4.9	18					304	34
PDE	1987	04	18	204828.23	34.486	80.281	33	N	1.31	4.6	21	4.7Z	1			306	57
PDE	1987	04	23	090556.92	27.991	87.102	47		0.84	4.7	20					310	39
PDE	1987	05	10	051040.05*	28.220	86.739	33	N	0.85	4.6	3					306	7
PDE	1987	06	06	031424.49	30.555	79.267	33	N	0.98	4.7	12					305	25
PDE	1987	06	06	110241.59	30.470	79.202	44	*	0.88	4.9	19					305	44
PDE	1987	06	22	230651.77*	28.610	87.223	33	N	1.21	4.1	2					306	6
PDE	1987	07	18	162918.88	31.144	78.049	54	*	1.25	4.7	6					305	25
PDE	1987	07	23	210145.01*	29.909	80.879	33	N	0.81	4.0	3					309	8

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	PP	STN	*****MAGNITUDE S****					OBS CONTRIBUTED	
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms				VALUES	
PDE	1987	08	09	211500.01	29.502	83.714	47		0.96	5.6	81	4.8Z	2			310	297
PDE	1987	08	21	002607.04	31.723	80.183	54	*	1.34	4.7	19					306	28
PDE	1987	08	29	175810.61	34.584	79.888	33	N	0.97	4.6	13					304	31
PDE	1987	09	22	012556.41	35.742	78.006	49	*	0.87	4.7	21	3.9Z	1			302	38
PDE	1987	09	27	061242.95	34.163	80.749	33	N	0.99	4.9	27	4.5Z	1			306	65
PDE	1987	10	06	163315.65*	31.922	76.445	33	N	1.36	4.7	2					308	11
PDE	1987	10	19	193831.24*	29.502	80.739	33	N	0.09							309	5
PDE	1987	10	22	212356.63?	27.299	89.152	33	N	1.17							312	8
PDE	1987	10	28	150402.08*	33.413	83.033	33	N	1.59	3.8	3					306	5
PDE	1987	11	03	182449.71	33.115	86.961	33	N	1.29	5.0	22	4.3Z	1			306	70
PDE	1987	11	25	192039.84?	27.950	85.879	33	N	1.32	4.6	1					310	10
PDE	1987	12	16	135656.85*	29.212	82.273	33	N	0.41							310	7
PDE	1987	12	26	010300.23*	32.126	76.695	33	N	1.11	4.3	4					303	10
PDE	1988	01	23	153729.39	29.476	81.612	33	N	1.60	4.7	4					310	23
PDE	1988	02	05	164709.73	34.739	80.530	33	N	1.38	4.3	4					306	18
PDE	1988	02	05	234415.90?	31.554	85.733	33	N	0.12	3.2	1					306	5
PDE	1988	02	12	014115.16	30.515	82.887	33	N	0.98	4.6	5					306	24
PDE	1988	03	06	202131.32	34.452	87.472	33	N	1.25	4.4	4	4.2Z	1			306	18
PDE	1988	03	13	111349.55*	28.903	81.359	90	?	1.62	4.3	4					309	11
PDE	1988	03	14	072954.09	35.747	80.699	33	N	1.45	4.8	10					304	27
PDE	1988	03	19	112426.22*	29.147	81.620	89	?	1.14	4.3	2					310	11
PDE	1988	03	24	184526.39?	31.849	89.606	33	N	1.12							306	6
PDE	1988	04	09	125755.86	29.779	86.909	33	N	1.15	4.5	7					306	22
PDE	1988	04	11	121131.03	27.516	85.860	38	*	1.39	4.9	6					310	26
PDE	1988	04	12	164316.96	34.634	79.555	46	*	1.24	4.5	11					304	25
PDE	1988	04	20	064025.91	27.042	86.694	54		0.90	5.4	68					310	237
PDE	1988	04	25	160402.76	26.817	86.625	66	*	1.28	4.8	4					309	22
PDE	1988	05	02	132619.55	26.983	84.381	94		0.67	3.8	4					309	12
PDE	1988	05	10	071641.75?	25.099	88.250	33	N	0.52							315	6
PDE	1988	05	15	202305.70	29.862	80.479	25	*	1.09	4.8	24					309	66
PDE	1988	05	26	163005.77*	27.415	88.558	43	*	1.14	4.7	6					311	25
PDE	1988	05	30	180059.62	33.435	88.462	53	*	0.94	4.9	8					306	27
PDE	1988	06	09	121149.84	30.654	79.216	25	*	0.91	4.8	13					305	37
PDE	1988	06	12	101547.43	28.477	82.354	33	N	1.16	4.8	21	4.3Z	2			310	64
PDE	1988	06	30	123140.37	33.433	89.490	35	*	1.45	4.6	4					306	24
PDE	1988	07	25	164106.54*	34.594	79.634	56	?	1.08	4.2	3					304	12
PDE	1988	07	27	070742.91	31.605	78.627	33	N	0.97	4.4	3	3.7Z	1			305	12
PDE	1988	08	07	192441.16	33.346	89.583	33	N	1.11	4.6	5					306	27
PDE	1988	08	13	143334.64*	35.707	75.927	33	N	1.24	4.2	5	4.7Z	1			302	15
PDE	1988	08	20	212407.91?	27.915	85.659	33	N	0.66							310	4
PDE	1988	08	20	230909.56	26.755	86.616	57	G	1.14	6.4	87	6.6Z	18	6.80MsBRK 6.50MsPAS		309	555
PDE	1988	08	21	001231.40S&	26.750	86.620	33	N								309	3
PDE	1988	08	21	001413.70S&	26.750	86.620	33	N								309	5
PDE	1988	08	21	003618.20S&	26.750	86.620	33	N								309	4
PDE	1988	08	21	005456.60S&	26.750	86.620	33	N								309	5
PDE	1988	08	21	010641.80S&	26.750	86.620	33	N								309	5
PDE	1988	08	21	010949.90S&	26.750	86.620	33	N								309	5
PDE	1988	08	21	012512.80S&	26.750	86.620	33	N								309	4
PDE	1988	08	21	012612.60S&	26.750	86.620	33	N								309	4

CATALOG	DATE		ORIGIN	***COORDINATES**		DEPTH	PP	STN	*****MAGNITUDE S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS CONTRIBUTED
VALUES												

PDE	1988	08	21	020009.70S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	023409.90S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	040322.00S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	054239.20S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	061100.00S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	070206.30S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	072932.40S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	092559.90S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	093012.00S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	102046.70S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	120644.90S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	121529.30S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	131810.90S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	140657.70S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	142404.10S&	26.750	86.620	33	N				309	5
PDE	1988	08	21	150902.30S&	26.750	86.620	33	N				309	4
PDE	1988	08	21	163259.01?	27.841	85.359	33	N	0.68			310	4
PDE	1988	08	21	185844.90S&	26.750	86.620	33	N				309	4
PDE	1988	08	22	010423.10S&	26.750	86.620	33	N				309	5
PDE	1988	08	22	050901.20S&	26.750	86.620	33	N				309	4
PDE	1988	08	22	061352.30S&	26.750	86.620	33	N				309	4
PDE	1988	08	22	101309.50S&	26.750	86.620	33	N				309	5
PDE	1988	08	22	113433.34*	26.662	86.916	33	N	0.54	4.3	1	309	7
PDE	1988	08	22	133652.20S&	26.750	86.620	33	N				309	3
PDE	1988	08	22	170217.70S&	26.750	86.620	33	N				309	3
PDE	1988	08	22	190121.70S&	26.750	86.620	33	N				309	4
PDE	1988	08	22	235327.90S&	26.750	86.620	33	N				309	5
PDE	1988	08	23	030345.50S&	26.750	86.620	33	N				309	3
PDE	1988	08	23	033437.70S&	26.750	86.620	33	N				309	5
PDE	1988	08	23	034554.50S&	26.750	86.620	33	N				309	5
PDE	1988	08	23	155342.80S&	26.750	86.620	33	N				309	4
PDE	1988	08	23	225925.40S&	26.750	86.620	33	N				309	4
PDE	1988	08	24	095533.62	26.746	86.549	33	N	0.80	4.7	4	4.1Z	1
PDE	1988	09	01	220411.24*	26.766	86.564	33	N	1.35	4.6	1		
PDE	1988	09	02	063533.13*	26.616	86.518	33	N	1.26	4.4	4		
PDE	1988	09	21	135114.77	28.715	85.568	53	*	1.16	4.7	10		
PDE	1988	09	23	042340.25*	32.595	79.785	33	N	1.27	4.6	9	4.7Z	1
PDE	1988	09	26	180440.87*	32.736	80.050	33	N	1.48	4.4	4		
PDE	1988	09	27	191010.70	27.175	88.293	33	N	1.11	5.0	38	5.0Z	2
PDE	1988	10	24	160721.71*	31.684	85.214	33	N	1.17	4.3	5		
PDE	1988	10	29	091052.55	27.871	85.648	17	D	12	0.99	5.4	43	4.8Z
PDE	1988	11	04	043538.75*	34.711	80.747	33	N	0.51	4.8	9	4.1Z	1
PDE	1988	11	11	141416.35?	27.547	86.023	33	N	0.21				
PDE	1988	11	13	022314.55?	28.592	85.787	33	N	1.19				
PDE	1988	11	14	090311.42*	30.161	82.137	101	?	1.08	4.5	4		
PDE	1988	11	18	092255.12?	28.334	85.169	33	N	1.82				
PDE	1988	11	24	142600.17?	29.725	80.678	33	N	0.61				
PDE	1988	12	02	165913.31	29.554	81.164	33	N	1.42	4.5	3		
PDE	1988	12	07	090640.25	31.694	83.504	33	N	1.09	4.8	5		
PDE	1988	12	10	152434.69*	26.421	86.339	33	N	1.29				

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	PP	STN	*****MAGNITUDE S****				
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km	DEV	mb	OBS	Ms	OBS	CONTRIBUTED	VALUES	
PDE	1988	12	13	062915.89	27.139	87.808	33 N	1.16	4.0	2				310 19	
PDE	1988	12	15	231424.52?	29.118	81.636	112 ?	1.13	4.5	8				310 18	
PDE	1988	12	24	105101.82?	29.724	83.716	31 *	1.46						310 7	
PDE	1988	12	26	111111.04	30.611	77.981	33 N	1.00	4.2	5				308 12	
PDE	1988	12	27	025603.85	27.887	87.773	64 *	1.33	4.6	5				310 20	
PDE	1989	01	13	230933.74*	30.190	83.056	33 N	0.28						306 7	
PDE	1989	01	19	133703.76?	28.501	84.175	29 *	0.61						310 6	
PDE	1989	01	27	110330.78*	30.988	78.655	33 N	1.06	3.7	3			4.10MLNDI	308 7	
PDE	1989	02	03	174958.63	30.231	89.958	10 G	1.32	5.5	75	5.2Z	3		306 225	
PDE	1989	02	05	015910.02	34.851	84.912	33 N	0.81						306 7	
PDE	1989	02	12	234455.49*	30.041	89.958	33 N	1.38	3.5	1				306 11	
PDE	1989	02	21	140942.54	35.597	80.592	33 N	1.10	4.5	8	4.0Z	1		304 31	
PDE	1989	03	01	225249.57*	28.191	83.954	33 N	1.31	4.2	3				310 7	
PDE	1989	03	03	010656.35?	34.633	83.884	10 G	1.24	4.0	3				306 9	
PDE	1989	03	07	055853.89	35.830	77.675	45 *	1.11	4.6	23				302 39	
PDE	1989	03	08	072126.04*	28.001	84.028	33 N	0.84	4.5	3				310 6	
PDE	1989	03	17	040207.76	35.628	80.532	34 *	1.46	4.8	8				304 28	
PDE	1989	03	25	231819.41*	35.966	80.769	33 N	0.90	3.8	3				304 7	
PDE	1989	03	26	150356.43?	35.910	80.516	33 N	0.72	4.0	2				304 5	
PDE	1989	04	11	135008.53?	35.858	81.233	33 N	1.24	4.1	3				321 5	
PDE	1989	04	24	165948.45	33.916	87.896	33 N	1.02	4.4	7				306 17	
PDE	1989	04	26	134035.15*	27.850	85.229	33 *	1.55						310 8	
PDE	1989	04	27	193737.91	33.585	80.645	33 N	1.35	4.7	5				306 33	
PDE	1989	05	05	091717.88?	28.792	86.742	10 G	1.43						306 5	
PDE	1989	05	10	200527.44	33.313	75.447	33 N	0.47	3.9	2				302 8	
PDE	1989	05	10	201921.91	33.221	75.519	41 *	1.11	4.8	14	4.0Z	1		302 43	
PDE	1989	05	22	192434.98	27.243	87.886	33 *	0.85	5.0	39				310 97	
PDE	1989	05	25	093442.51?	29.767	83.778	33 N	0.21						310 6	
PDE	1989	06	24	001553.74?	32.900	88.523	10 G	1.15						306 7	
PDE	1989	07	13	125305.54*	35.696	80.691	33 N	1.12	4.5	3				304 10	
PDE	1989	07	14	105708.84*	31.184	84.685	33 N	1.30	4.3	4				306 12	
PDE	1989	08	28	190855.99*	29.160	80.787	33 N	1.56	3.9	4				309 8	
PDE	1989	10	10	041100.63*	28.653	87.481	75 *	0.94	4.6	4				306 16	
PDE	1990	01	09	022926.69	28.225	88.163	79 D 25	0.97	5.5	53				306 265	
PDE	1990	01	10	230121.96	26.559	86.663	68 *	1.44	4.7	4				309 24	
PDE	1990	01	11	211457.83	35.786	80.757	10 G	1.37	5.3	35	4.9Z	1		304 110	
PDE	1990	01	30	150626.08	28.599	85.714	52 ?	1.52	4.5	3				310 22	
PDE	1990	02	02	115424.01*	34.654	86.872	33 N	1.44	3.6	2				306 11	
PDE	1990	02	07	220052.29*	34.365	76.647	83 ?	1.13	4.6	7				302 17	
PDE	1990	02	09	155123.02	29.925	80.730	33 N	1.02	4.6	15				309 39	
PDE	1990	02	21	072117.30*	28.082	82.430	33 N	1.17	4.8	7				310 14	
PDE	1990	02	23	175158.69?	28.242	84.582	33 N	0.91						310 5	
PDE	1990	02	27	100433.04*	31.357	86.870	33 N	1.51	4.1	4				306 15	
PDE	1990	03	01	184726.79?	28.503	88.599	33 N	1.29	4.3	1				306 9	
PDE	1990	03	04	115111.43	34.616	79.849	33 N	1.15	4.7	27	4.2Z	1		304 53	
PDE	1990	04	03	010817.01*	31.736	78.731	51 ?	1.43	3.9	5				305 18	
PDE	1990	04	20	202301.82	32.771	85.887	33 N	1.12	4.3	6				306 16	
PDE	1990	05	11	013720.60*	33.414	81.125	33 N	0.92	4.0	1				306 7	
PDE	1990	05	13	153450.91*	31.806	87.896	33 N	1.64	4.3	5				306 12	
PDE	1990	05	15	171922.04*	29.178	76.730	33 N	1.19	4.1	3			3.80MDNDI	308 14	

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	DP	STN	*****MAGNITUDE S****				
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms	OBS	CONTRIBUTED	
														VALUES	
PDE	1990	05	19	043606.26*	33.746	89.755	33	N	1.09	4.1	1			306 5	
PDE	1990	05	20	091002.32	28.458	83.343	33	N	0.77	4.8	27		4.90MLNDI	310 60	
PDE	1990	05	20	180157.39*	28.260	83.193	62	?	0.83	4.5	6			310 14	
PDE	1990	07	11	060050.90	32.844	84.762	63	*	1.45	4.4	11			306 29	
PDE	1990	07	28	184328.63	33.726	86.941	33	N	1.19	4.6	7			306 17	
PDE	1990	08	05	013005.03?	34.760	80.213	33	N	0.32	4.3	1			306 7	
PDE	1990	08	21	175240.98?	30.392	83.115	33	N	0.44					306 6	
PDE	1990	08	21	201344.29?	30.463	82.758	33	N	0.54					306 6	
PDE	1990	08	23	155723.03?	30.198	83.131	33	N	0.52					306 6	
PDE	1990	08	30	050524.22?	29.049	84.374	33	N	0.27					306 6	
PDE	1990	09	15	061113.79*	30.448	85.460	33	N	1.52	4.3	2			306 8	
PDE	1990	09	21	160820.75	29.741	79.791	33	N	0.97	5.1	33			308 57	
PDE	1990	10	03	182035.99?	31.096	78.557	33	N	0.82	4.4	1			305 8	
PDE	1990	10	08	161144.49*	35.994	81.091	10	G	0.76	4.4	3			321 10	
PDE	1990	10	14	095241.01	30.823	86.385	12	D	2 1.43	4.9	27			306 63	
PDE	1990	10	14	161324.02?	28.762	81.951	143	?	0.78	4.3	2			309 6	
PDE	1990	10	21	164431.11?	30.483	82.157	33	N	0.40					306 6	
PDE	1990	10	27	150902.85?	29.273	83.614	33	N	0.50					310 6	
PDE	1990	10	28	171450.91	30.682	81.555	33	N	1.05	4.5	8	4.0Z	1	306 22	
PDE	1990	11	09	165042.70	30.632	86.233	10	G	1.11	4.7	22	3.9Z	1	306 43	
PDE	1990	11	09	190923.47	30.733	86.289	10	G	1.32	4.9	21	4.4Z	1	306 45	
PDE	1990	11	09	191339.68	30.921	86.327	10	G	1.03	4.9	23			306 45	
PDE	1990	11	12	154520.48	33.414	75.715	67	*	1.19	4.7	18		4.80MDNDI	302 36	
PDE	1990	11	23	204223.82?	30.494	83.222	33	N	0.46					306 6	
PDE	1990	12	13	082855.76	31.573	77.438	33	N	0.97	4.7	15		4.20MDNDI	308 33	
PDE	1990	12	18	024049.76	30.336	79.117	18	D	2 1.05	4.9	30	4.5Z	2	305 61	
PDE	1990	12	20	054649.12*	34.845	75.078	33	N	1.49	4.2	4			302 10	
PDE	1990	12	20	170444.08	28.138	82.944	66	*	1.16	4.8	9			310 25	
PDE	1990	12	23	002136.95?	35.660	78.475	33	N	0.45	4.1	3			302 8	
PDE	1990	12	25	035646.13	33.331	75.712	51	*	0.98	5.3	69			302 148	
PDE	1991	01	05	145007.28?	28.585	88.074	33	N	0.62					306 6	
PDE	1991	01	20	124317.07	31.532	77.463	33	N	1.01	4.9	26		4.50MLNDI	308 57	
PDE	1991	01	28	002609.37*	32.275	83.205	33	N	1.12	3.5	1			306 7	
PDE	1991	02	12	140256.30*	30.614	79.288	33	N	1.24	4.1	2	3.6Z	1	3.70MLNDI	305 10
PDE	1991	02	20	122618.00?	33.483	83.316	33	N	1.58				3.50MDNDI	306 6	
PDE	1991	02	22	224145.64*	33.813	78.188	33	N	0.68					304 7	
PDE	1991	02	25	105233.90*	34.695	79.059	33	N	0.89	4.6	6			304 12	
PDE	1991	02	26	191932.74*	32.811	86.277	33	N	1.05	4.3	4			306 10	
PDE	1991	03	04	164125.44?	30.810	79.215	33	N	0.37	3.2	1			305 6	
PDE	1991	03	06	160408.81*	35.874	80.955	33	N	0.71	4.1	1			304 9	
PDE	1991	03	15	042816.30	28.317	87.683	42	?	1.21	4.6	7			306 16	
PDE	1991	03	18	151749.71*	34.353	86.200	33	N	0.88	4.0	3			306 11	
PDE	1991	03	19	154410.61?	32.653	88.987	33	N	1.57	4.4	4			306 8	
PDE	1991	03	21	150219.13*	32.814	86.804	33	N	0.77	4.6	9			306 10	
PDE	1991	03	23	203334.94*	34.325	79.730	33	N	0.79	4.5	9			304 14	
PDE	1991	04	22	084829.99	30.080	79.720	33	N	0.84	4.6	20			305 42	
PDE	1991	04	26	085512.67*	35.899	79.736	118	?	0.33	3.3	1			304 7	
PDE	1991	05	01	074748.37*	29.714	89.992	33	N	0.87					306 8	
PDE	1991	05	18	045219.07	31.654	80.092	24	*	1.27	4.6	19		4.70MLNDI	306 43	
PDE	1991	05	18	065922.13	31.675	80.092	42	*	1.03	4.5	13		4.20MDNDI	306 26	

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	PP	STN	*****MAGNITUDE S****					OBS CONTRIBUTED	
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms				VALUES	
PDE	1991	05	20	002039.92	30.985	86.774	33	N	1.11	4.6	20	4.0Z	1			306	45
PDE	1991	05	23	183809.26	31.411	86.755	33	N	1.37	4.3	10	4.3Z	2			306	25
PDE	1991	05	26	052914.87	29.340	80.332	64	*	0.99	4.5	19					309	30
PDE	1991	05	27	210657.36	29.349	80.304	52	*	1.03	4.6	19	4.3Z	1			309	66
PDE	1991	05	28	084435.41?	30.235	80.379	33	N	0.65							305	6
PDE	1991	05	31	075019.28	35.684	80.939	58	?	0.97	4.3	5					304	13
PDE	1991	06	01	024924.70*	28.743	81.714	33	N	1.32	4.3	7					309	15
PDE	1991	06	10	213011.95	29.266	80.281	58	*	1.21	4.6	11					309	25
PDE	1991	06	15	174212.51*	31.175	86.582	33	N	1.21	4.4	4	4.1Z	1			306	13
PDE	1991	06	17	065515.59	35.793	84.872	22	D	4	1.44	4.9	26	4.7Z	5		306	55
PDE	1991	06	18	201806.29*	35.805	84.559	33	N	1.27	4.0	3					306	9
PDE	1991	06	23	024541.20	32.306	76.716	33	N	1.46	4.6	17					303	48
PDE	1991	07	02	233158.58	32.110	85.101	16	D	7	1.20	4.7	29	4.5Z	4		306	55
PDE	1991	08	07	113630.84*	25.099	88.791	33	N	1.62	5.0	6					315	10
PDE	1991	08	16	012327.54*	30.861	78.651	33	N	0.22	4.2	2					308	7
PDE	1991	08	20	050625.86*	30.630	79.767	33	N	1.47	4.2	5			4.10MLNDI		305	9
PDE	1991	09	24	124248.87?	30.584	82.878	33	N	1.12							306	6
PDE	1991	09	25	192649.25?	26.693	88.431	33	N	0.14							315	6
PDE	1991	10	15	191100.95	30.565	79.311	33	N	1.15	4.5	9					305	29
PDE	1991	10	19	212314.30	30.780	78.774	10	D	57	1.19	6.5	99	7.0Z	28	7.00msBRK	308	525
PDE	1991	10	19	224115.44	30.747	78.723	17	D	2	0.97	4.8	13	4.6Z	1	4.70MLNDI	308	32
PDE	1991	10	19	233941.13?	29.880	78.891	33	N	0.63							308	6
PDE	1991	10	20	033430.86?	30.945	78.922	33	N	0.71	4.3	2					308	7
PDE	1991	10	20	042028.93	30.899	78.832	33	N	0.94	4.5	6			4.50MLNDI		308	16
PDE	1991	10	20	043135.61?	30.341	78.830	33	N	1.01							308	7
PDE	1991	10	20	053226.85	30.790	78.686	26	D	5	0.94	4.9	39			5.30MLNDI	308	68
PDE	1991	10	20	075631.74?	30.847	78.777	33	N	0.59	4.2	2					308	8
PDE	1991	10	21	140247.38*	30.777	78.800	33	N	0.62	4.0	1			4.00MLNDI		308	8
PDE	1991	10	27	004023.37*	30.434	78.549	33	N	0.71	4.2	3					308	8
PDE	1991	10	27	131956.15*	29.500	79.049	33	N	0.67					3.90MLNDI		308	8
PDE	1991	10	30	131358.05?	26.377	88.758	33	N	0.68							315	6
PDE	1991	11	14	042034.87*	35.903	81.084	33	N	1.55	4.2	4					321	11
PDE	1991	11	24	073526.69	33.980	88.646	33	N	0.47	4.7	10					306	12
PDE	1991	11	25	100839.00	34.017	88.832	33	N	1.04	4.4	7					306	13
PDE	1991	11	26	153114.74*	33.919	88.746	33	N	1.05	4.1	4					306	12
PDE	1991	12	09	010246.51	29.543	81.632	29	D	23	0.91	5.6	96	4.6Z	15	5.40MLNDI	310	325
PDE	1991	12	12	185500.59	34.511	79.653	57	*	1.36	4.5	12					304	26
PDE	1991	12	14	082023.80	33.976	88.840	33	N	1.37	5.1	40	4.6Z	7			306	67
PDE	1991	12	17	202749.66	33.990	88.904	33	N	1.43	4.6	10					306	25
PDE	1991	12	21	195245.50	27.904	88.139	57	*	1.25	4.9	27	4.2Z	1			311	45
PDE	1991	12	23	015825.19	33.917	88.863	33	N	1.06	5.2	49	4.6Z	7			306	82
PDE	1991	12	23	021454.54	33.966	88.942	33	N	0.65	5.0	34					306	49
PDE	1992	01	02	023537.20	33.990	88.859	33	N	1.08	4.8	16					306	31
PDE	1992	01	05	165849.41*	25.620	79.505	100	G	1.22							308	7
PDE	1992	01	26	234856.10	32.282	76.415	33	N	1.22	4.5	8					303	17
PDE	1992	01	30	055547.87*	29.291	81.128	33	N	1.34	4.6	6					310	10
PDE	1992	02	05	020740.28*	34.224	78.729	33	N	1.33	4.3	7					304	16
PDE	1992	02	13	224334.18	32.637	76.514	33	N	1.10	4.6	10					303	20
PDE	1992	03	02	144818.15*	30.542	78.538	33	N	0.59	4.0	2					308	9
PDE	1992	03	05	021417.68	35.625	80.585	35	*	1.26	4.7	44					304	71

CATALOG	DATE			ORIGIN	***COORDINATES**			DEPTH	PP	STN	*****MAGNITUDE S****				OBS CONTRIBUTED	
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms				VALUES

PDE	1992	03	07	224150.81	29.442	89.370	112	*	1.14	4.3	10					306 24
PDE	1992	03	14	124026.03	30.664	78.829	30	D 5	0.77	4.8	28					308 56
PDE	1992	03	16	011855.96	34.343	86.288	33	N	1.14	4.7	21	4.0Z	1			306 34
PDE	1992	03	24	193210.35	31.545	81.540	15	D 6	1.17	4.8	24	4.4Z	5			306 49
PDE	1992	03	31	002824.47*	32.160	80.746	33	N	0.48	3.6	1					306 8
PDE	1992	04	01	134103.93	27.392	87.065	33	N	1.36	4.3	10			4.30MLBJI		310 21
PDE	1992	04	01	205403.78	31.964	83.754	51	*	0.71	4.1	11					306 23
PDE	1992	04	04	174320.71*	28.147	87.979	33	N	1.06	4.9	41	4.6Z	1			306 77
PDE	1992	04	05	074747.66	35.696	80.661	17	D 44	1.12	5.5	85	5.4Z	7			304 249
PDE	1992	04	05	110923.19	35.665	80.599	33	N	1.32	4.0	7					304 16
PDE	1992	04	09	204019.25*	35.808	80.945	10	G	0.82	3.7	4					304 10
PDE	1992	04	13	034751.05	31.958	88.339	33	N	1.40	4.6	19	4.5Z	1			306 33
PDE	1992	04	22	060849.07	30.968	78.242	33	N	1.17	4.5	13					308 27
PDE	1992	04	28	013628.91*	32.145	85.066	33	N	1.31	3.8	2					306 8
PDE	1992	05	09	072344.85	34.503	84.774	10	G	1.00	4.6	16					306 28
PDE	1992	05	18	195538.80*	34.858	86.331	33	N	0.92	4.1	6					306 13
PDE	1992	06	02	220745.37	28.984	81.913	56	D 49	1.00	5.2	88					309 231
PDE	1992	06	03	024236.63	33.905	88.893	10	G	1.14	4.6	16					306 26
PDE	1992	06	12	114534.43?	30.125	78.885	33	N	1.56	4.8	3					308 11
PDE	1992	06	13	154005.41	28.945	82.927	32	D 2	1.13	4.6	38	4.9Z	2	5.00MLNDI		310 66
PDE	1992	06	19	140155.59?	34.669	75.160	33	N	1.49	4.2	3					302 5
PDE	1992	06	21	080746.57	30.428	89.394	27		0.99	4.2	2			3.80MLBJI		306 15
PDE	1992	06	24	195923.35*	35.894	75.522	33	N	1.28	3.9	1					302 8
PDE	1992	06	27	021318.34	35.148	81.079	33	N	1.12	4.5	36	4.6Z	7			321 75
PDE	1992	06	27	132120.90	35.139	81.131	33	N	0.98	5.0	78	4.7Z	10			321 134
PDE	1992	06	27	181128.00*	34.417	81.116	33	N	1.11	3.5	2					306 9
PDE	1992	07	17	084112.58	35.603	75.096	33	N	1.29	4.7	29					302 41
PDE	1992	07	17	123745.89*	35.798	75.475	33	N	1.50	4.0	5					302 9
PDE	1992	07	21	050607.58	31.473	78.046	33	N	0.69	3.9	2					305 8
PDE	1992	07	21	061657.80*	35.257	81.396	33	N	1.50	4.2	4					321 10
PDE	1992	07	26	233133.63*	29.064	80.202	33	N	1.29					3.50MLNDI		309 7
PDE	1992	08	09	151630.65	30.931	78.487	33	N	0.50	4.0	3					308 9
PDE	1992	08	09	223446.45	28.697	86.533	37	*	1.30	4.3	12					306 20
PDE	1992	08	21	111253.07	34.699	80.113	33	N	0.84	4.7	32	4.1Z	2			306 50
PDE	1992	08	22	072545.59*	34.274	80.739	33	N	0.85	3.9	2					306 9
PDE	1992	08	23	000638.38*	34.522	79.989	33	N	1.38	4.6	2					304 8
PDE	1992	08	24	094957.88	34.680	80.237	61	D 11	1.10	4.9	52					306 123
PDE	1992	08	24	095944.57	34.708	80.252	48	*	1.18	4.5	16					306 34
PDE	1992	08	26	023056.38	34.647	79.977	33	N	0.81	4.0	7					304 15
PDE	1992	09	01	081346.71*	34.717	81.318	10	G	1.15	4.6	2					306 11
PDE	1992	09	02	021235.08	35.858	80.859	10	G	1.05	4.6	13					304 29
PDE	1992	09	03	005838.32	34.660	80.122	33	N	1.10	4.8	27	5.2Z	1			306 55
PDE	1992	09	03	072946.54*	30.355	81.982	10	G	0.99							306 7
PDE	1992	09	04	075528.90*	29.847	78.181	33	N	0.34							308 7
PDE	1992	09	06	141055.98	32.436	76.338	33	N	0.88	4.6	7					303 18
PDE	1992	09	07	111008.13	34.651	80.234	14	D 5	1.06	4.8	31					306 52
PDE	1992	09	16	182550.53*	34.211	79.326	33	N	1.41	4.4	4					304 12
PDE	1992	09	16	185003.37	35.603	80.409	33	N	1.48	4.4	12					304 21
PDE	1992	10	18	091623.53?	35.156	81.637	33	N	0.89	4.3	1					321 8
PDE-W	1992	11	06	114741.49	34.539	80.147	10	G	0.74	4.6	18					306 25

CATALOG	D A T E			ORIGIN	***COORDINATES**		DEPTH	pP	STN	*****M A G N I T U D E S****			
SOURCE	YEAR	MO	DA	TIME	LAT.	LONG.	km		DEV	mb	OBS	Ms	OBS CONTRIBUTED VALUES

PDE-W	1992	11	26	124434.51*	31.823	84.048	33	N	0.57	4.3	7		306 8
PDE-W	1992	12	22	164234.34	34.414	88.003	14	D	6	1.01	5.0	28	306 58
PDE-W	1992	12	24	170848.74	35.786	80.691	33	N	1.16	4.6	16	4.6Z 1	304 37
PDE-W	1993	01	02	145339.67	29.092	81.232	27	D	3	0.91	4.9	35	310 50
PDE-W	1993	01	12	061921.18*	34.621	80.427	33	N	1.15	4.4	9		306 15
PDE-W	1993	01	12	085244.46*	31.300	80.613	33	N	1.19	4.8	7		306 12
PDE-W	1993	02	10	202556.69*	34.373	80.768	10	G	1.11	4.5	9		306 13
PDE-W	1993	02	15	142940.92	25.846	87.342	33	N	1.35	5.0	22		308 34
PDE-W	1993	03	20	145201.05	29.008	87.276	21	D	18	1.15	5.9	84	306 263
PDE-W	1993	03	20	212641.28	29.029	87.345	33	N	1.01	5.1	46	4.5Z 2	306 84
PDE-W	1993	03	24	003349.44*	33.110	82.606	33	N	0.97	4.4	5		306 14
PDE-W	1993	03	25	201655.47*	29.611	80.526	33	N	0.65	4.5	5		309 7
PDE-W	1993	03	31	134411.62	28.996	87.283	33	N	0.83	5.0	51	4.6Z 6	306 94
PDE-W	1993	04	08	034931.66	35.658	77.765	33	N	1.08	5.1	45	4.6Z 25	302 106

OUTPUT CODE EXPLANATIONS

CATALOG SOURCE

INDIA : Catalog of earthquakes for the Peninsular India, 1839 - 1900 (Srivastava and Ramachandran, 1985).

LEE : Catalog of earthquakes occurring in China, 1177 B.C. - 1976 (Lee and others, 1976; 1978). Catalog supplied by NOAA (Rinehart and others, 1985).

MEAST : Catalog of earthquakes occurring in the Middle East, 1900 - 1983, compiled at NOAA (Riad and Mayers, 1985). This catalog covers more than 20 countries, extending from Libya in the west to Pakistan and Afghanistan in the east, Ethiopia and Somalia in the south, and Turkey in the north. Many of the values of specific types of magnitudes are estimated from values of other types of magnitudes or from intensity observations, using equations derived by Riad and Mayers (1985).

PDE : Catalog of the earthquakes located by the USGS NEIC and its predecessors in the U.S. Coast and Geodetic Survey, the National Ocean Survey, and the Environmental Research Laboratories of the Department of Commerce. Listings are in most cases the final hypocentres and magnitudes of the USGS NEIC which are listed in the Geological Survey publication, "Preliminary Determination of Epicentres - Monthly Listing". The global catalog includes events occurring from circa 1900 - 1990. It is the principal component of the data base. There are gaps in the temporal and geographic coverage of the catalog. To get as complete coverage as possible for a given area, the user should search other catalogs that cover the time and area of interest. Part of the catalog was supplied by NOAA (Rinehart and others, 1985).

PEK : This catalog contains eight Chinese shocks that occurred in 1959. This catalog was included in the data base when the data base was first created. Its significance now is not known. Catalog supplied by NOAA (Rinehart and others, 1985).

ORIGIN TIME

Origin times given in Universal Time Coordinated(UTC).

DEPTH

DEPTH CONTROL

A = Assigned

D = Restrained by reported depth phases.

N = Restrained to normal depth (33Km).
 G = Restrained by Geophysicist.
 S = Depth control aided by use of S-phase data.
 * = Less reliable depth estimate. Accuracy of depth lies between 8.5km and 16km based on 90% confidence ellipse.
 ? = Poor depth estimated; depth accuracy is estimated to be greater than 16km based on 90% confidence ellipse.
 Blank = Good depth estimate and depth unrestrained in contributed hypocentres. Depth accuracy is estimated to be better than 8.5km based on 90% confidence ellipse.

pP

This field specifies the number of pP's identified by contributors or by the hypocentre - determination program associated with an event whose depth estimation was restrained by a subset of these phases.

STN DEV

Standard deviation of arrival-time residuals for the computed solution.

MAGNITUDE

mb : Average NEIS body-wave magnitude value.
 OBS : Number of mb amplitudes used in the calculation of the mb magnitude value.
 Ms : Average NEIS surface-wave magnitude (Z = vertical component; H = horizontal component).
 OBS : Number of Ms amplitudes used in the calculation of the Ms magnitude value.

CONTRIBUTED VALUES : Organizations that operate a station network may contribute magnitude values to the NEIS. The value may have been calculated from any one station or it may be an average magnitude value from a number of stations in the network. Two such magnitude values are allowed in the data base. The second value is coded on a line immediately beneath the first value. The magnitude field consists of 11 characters: positions 1-4 = magnitude value; positions 5-6 = magnitude scale; and positions 7-11 = organization source; if blank, the catalog listed under catalog source is the source organization.

A number of magnitude scales are defined by the source agencies or institutions. The list of magnitude scales in the data base include:
 UK = Unknown magnitude scale; Ms = Surface-wave magnitude (Bath, 1966);
 mb = Body-wave magnitude (Gutenberg and Richter, 1956); ML = Local magnitude (Richter, 1958); Mn = Nuttli magnitude (Nuttli, 1973); MD = Coda-length magnitude; FA = Felt area magnitude; approximately equivalent to an mb value; mB = Broad-band, body-wave magnitude (Abe, 1981, 1982, 1984); Abe and Kanamori, 1979; Abe and Noguchi (1983a, 1983b); MW = Moment magnitude (Hanks and Kanamori, 1979); Mz =

Magnitude based on the Sg amplitude at approximately 3Hz; MI =
Magnitude computed from the epicentral intensity value; K = Energy
class magnitude value (Kondorskaya and others, 1982).

Ref	Year	mo	d	h	min(GMT)	s	Lat	Long	Depth	Mag.1	Mag.2	Int N
*TR1	1901	11	18	0	4		32	77				
*TR1	1902	6	16	1	36		29	79				
*GUTE	1905	4	4	0	50		33	76	0	8 SPAS		
*SRS	1906	2	26				32	77				8MM
*TN2	1906	6	13				31	79				
*GUTE	1911	10	14	23	24		31	80.5	0	6.75 SPAS		
*GUTE	1913	3	6	2	9		30	83	0	6.2 SPAS		
IRK							29.1	85.1				
PUL							33	85				
ISS	1913	3	6	2	8	31	30	85				
*GUTE	1913	3	6	11	4		30	83	0	6.4 SPAS		
PUL							32	84				
ISS	1913	3	6	11	3	42	31	83				
*ISS	1914	10	9	2	39	10	35	78				
*ISS	1916	6	21	19	56	9	34.5	77				
*GUTE	1916	8	28	6	39	42	30	81	0	7.5 SPAS		
ISS	1916	8	28	6	39	29	30	81				
*ISS	1916	10	14	19	47	15	30.5	82				
*ISS	1916	12	24	7	53	6	30	80				
*ISS	1917	5	9	21	45	50	34.2	77.5				
*ISS	1918	2	4	17	54	49	29.6	87.8				
*ISS	1918	4	28	11	12	40	30.5	82				
*ISS	1921	11	11	1	18	45	34.2	77.5				
*ISS	1923	4	24	22	3	6	29.6	87.8				
*ISS	1924	2	9	22	54	5	32	88				
*ISS	1924	5	27	14	32	15	30	85				
*GUTE	1924	8	13	23	57	50	29.5	90	0	5.6 SPAS		
*GUTE	1924	10	8	20	32	57	30	90	0	6.5 SPAS		
*ISS	1925	11	6	19	20	45	26.5	81.5		5.5 TN2		
*ISS	1925	12	15	7	44	30	30	85				
*GUTE	1926	6	4	6	50	58	35	89.5	0	6 SPAS		
*ISS	1926	7	15	18	25	40	35	89				
*ISS	1926	7	27	7	23	36	30.5	80.5		6 TN2		
*ISS	1926	8	6	20	36	30	35	78				
ISS	1926	8	6	22	45	46	35	78				
*ISS	1926	12	4	11	15	23	29.6	87.8				
*ISS	1926	12	31	16	53	45	25	77.5				
*ISS	1927	9	29	6	14	55	29.6	87.8				
*ISS	1927	10	8	10	34	28	30.5	80.5		6 TN2		
*ISS	1927	11	29	11	34	26	30	83				
*ISS	1929	1	14	9	45	21	31.7	77				
*ISS	1929	4	10	23	53		25	77.5				
*ISS	1929	11	16	13	3	36	35	78				
*ISS	1930	5	11	11	30	36	31.7	77				
*ISS	1930	6	25	0	49		25	77.5				
*GUTE	1930	7	2	21	3	42	25.5	90	0	7.1 SPAS		
CGS	1930	7	2	21	3	36	27.5	90				
*GUTE	1931	6	18	12	58	29	30.5	84	0	5.6 SPAS		
ISS	1931	6	18	12	58	36	30.4	84				
*ISS	1931	8	2	18	4	39	32.8	84.3				
*ISS	1931	8	2	18	16	55	32.8	84.3				
*GUTE	1932	3	4	23	20	48	33.5	81	0	5.6 SPAS		
ISS	1932	3	4	23	20	55	33.5	81				
*GUTE	1932	3	24	16	8	36	25	90	0	5.6 SPAS		
*ISS	1932	3	25	4	29	32	30	89.2				
*TN1	1932	10	20				30.5	78.8				
*ISS	1933	5	18	10	24	12	29.5	80				
*GUTE	1934	1	15	8	43	18	26.5	86.5	0	8.3 SPAS		

Ref	Year	mo	d	h	min (GMT)	s	Lat	Long	Depth	Mag. 1	Mag. 2	Int N
ISS	1934	1	15	8	43	25	26.6	86.8				
CGS	1934	1	15	8	43	30	26	85.5				
*ISS	1934	1	16	4	59	22	28	86				
*ISS	1934	1	19	18	49	54	26.6	86.8				
*SRS	1934	4	14				29	75.5				5MM
*GUTE	1934	10	19	20	58	16	34	82	0	5.6 SPAS		
ISS	1934	10	19	20	58	20	33.6	80.2				
*ISS	1934	12	14	20	42	36	31.3	88.8				
*GUTE	1934	12	15	1	57	37	31.25	89.25	0	7.1 SPAS		
CGS	1934	12	15	1	57	36	32	90				
ISS	1934	12	15	1	57	44	31.5	89				
*ISS	1934	12	18	11	22	24	30.9	89.1				
*ISS	1934	12	21	6	34	42	30.9	89.1				
*ISS	1934	12	21	12	39	7	31.5	89				
*ISS	1935	1	2	22	23	24	29.8	87.9				
*GUTE	1935	1	3	1	50	8	30.5	88	0	6.5 SPAS		
BCIS	1935	1	3	1	3		31.5	88				17
ISS	1935	1	3	1	50	14	30.8	88				
CGS	1935	1	3	1	50	18	31.3	88.1				
*ISS	1935	1	6	7	10	33	30.5	86.9				
*ISS	1935	3	3	22	46	8	30.1	89				
*GUTE	1935	3	5	22	15	53	29.75	80.25	0	6 SPAS		
NDI	1						28.5	79				
ISS	1935	3	5	22	15	59	29.6	80.4				
*ISS	1935	3	15	10	33	52	29.6	80.4		5.5 TN2		
*GUTE	1935	5	21	4	22	31	28.75	89.25	140	6.25 SPAS		
ISS	1935	5	21	4	22	27	29	89.2				
*TN1	1936	1	13				26.5	86.5				
*GUTE	1936	2	11	4	48		27.5	87	50	5.6 SPAS		
ISS	1936	2	11	4	48	8	27	85				
*GUTE	1936	2	18	14	30	32	31	89	0	5.6 SPAS		
ISS	1936	2	18	14	30	39	30.9	89.1				
*GUTE	1936	5	27	6	19	19	28.5	83.5	0	7 SPAS		
ISS	1936	5	27	6	19	18	28.4	83.3				
CGS	1936	5	27	6	19	24	28.9	83.5	80			
*ISS	1936	6	9	0	2	42	27.5	87				
*ISS	1936	9	7	2	30	49	27.5	87				
*ISS	1936	11	23	1	30	16	30.5	86.9				
*ISS	1937	4	30	19	32	55	30	81.5		5.5 TN2		
*ISS	1937	4	30	20	3	24	30	81.5				
*ISS	1937	5	31	5	34	19	29.3	81				
*ISS	1937	8	15	11	36	48	30	90				
*GUTE	1937	10	20	1	23	43	31	78	0	5.5 SPAS		
ISS	1937	10	20	1	23	46	31.1	78.1				
*GUTE	1937	11	15	21	37	34	35	78	100	6.5 SPAS		
CGS	1937	11	15	21	37	30	35	78				
*ISS	1937	12	20	4	39	59	29.3	81				
*GUTE	1938	1	29	4	13	8	27.5	87	0	5.5 SPAS		
ISS	1938	1	29	4	13	8	27.5	87				
*ISS	1939	6	4	22	36		28.5	86.5				
*ISS	1940	4	7	14	28	38	31.5	77				
*ISS	1940	4	10	8	17	39	30	81.5		5.5 TN2		
*ISS	1941	1	10	7	38	14	34	77				
CGS	1941	1	21	12	42		27.7	82	200			
*GUTE	1941	8	1	3	48		33	85.25	0	5.6 SPAS		
ISS	1941	8	1	3	47	59	33	85.5				
*ISS	1943	10	10	0	43	12	35	82				
*GUTE	1944	10	17	18	36	54	31.5	83.5	0	6.75 SPAS		

Ref	Year	mo	d	h	min (GMT)	s	Lat	Long	Depth	Mag. 1	Mag. 2	Int N
ISS	1944	10	17	18	36	51	31.3	83.4				
CGS	1944	10	17	18	37		34	84				
*GUTE	1944	10	29	0	11	32	31.5	83.5	0	6.75 SPAS		
CGS	1944	10	29	0	11	30	34	84				
ISS	1944	10	29	0	11	30	31.3	83.4				
*ISS	1944	11	6	5	49	5	31.3	83.4				
*ISS	1945	1	4	5	20	50	31	83				
*GUTE	1945	6	4	12	9	6	30	80	60	6.5 SPAS		
CGS	1945	6	4	12	8	55	30	80		7 PAS		
ISS	1945	6	4	12	8	55	30.3	80				
*GUTE	1945	6	22	18	0	57	32.5	76	60	6.5 SPAS		
CGS	1945	6	22	18	0	48	32.5	76.5				
ISS	1945	6	22	18	0	51	32.6	75.9				
*ISS	1945	9	19	10	40	49	29.5	84				
*ISS	1946	2	19	18	55	23	35	88.5				
*ISS	1946	9	15	15	52	49	34	86.5				
*ISS	1946	11	6	19	56	17	34.3	80.6				
*ISS	1947	2	10	4	2		31.5	85				
*GUTE	1947	7	10	10	19	27	33	77	60	6 SPAS		
TN1	1947	7	10				34	76.5				
ISS	1947	7	10	10	19	20	32.6	75.9				
*ISS	1947	7	10	16	45	32	32.6	75.9				
*ISS	1947	8	19	20	7	6	31.2	79.9		5.5 TN2		
*ISS	1948	5	5	8	31	46	30.5	78.5				
*ISS	1948	9	15	3	52	26	33.4	84.2				
*ISS	1949	2	5	8	55	20	31.2	79.9		5.5 TN2		
*ISS	1949	8	11	20	59	5	31	89				
*ISS	1949	12	10	19	37	14	26	89				
*ISS	1950	8	12	3	59	6	32.6	75.9				
*ISS	1950	8	13	5	59	7	33.5	80				
*ISS	1950	8	17	3	26	15	33.5	80				
*ISS	1950	9	25	17	58	2	32.6	75.9				
*ISS	1950	10	6	21	20	59	33.3	76.5				
*ISS	1950	12	29	11	56	2	32.7	88				
CGS	1950	12	29	11	56	3	32.5	87.5				
*ISS	1951	5	28	15	59	19	29	87				
*ISS	1951	7	5	9	3	57	35	82				
BCIS	1951	7	5	9	3	48	35	84		5.75 SPC		
*ISS	1951	9	12	20	41	48	33.3	76.5				7MM
*ISS	1951	9	15	0	56	15	33.3	76.5				
*ISS	1951	9	20	23	19	33	32.6	75.9				
POO	B	1951	11	18	9	26	50	31.5	89.5			
POO	I							31.5	89.5			
*BCIS		1952	1	1	4	0	45	33	84.5			
*SCIS		1952	3	6	21	20		32	90			
*ISS		1952	4	1	20	35	58	34.1	83.6			
*ISS		1952	10	7	18	2	14	31.5	87.5			
BCIS		1952	10	7	18	2	14	31.4	87.5			
POO	B	1952	10	7	18	2	14	32	88			
*ISS		1952	10	19	10	44	28	27.8	85.7			
*ISS		1952	11	8	7	6		28.5	83.2			
QUE	B	1952	11	8	7	6	11	30	83	50		
*ISS		1952	11	8	10	41	54	27.9	82.2			
*ISS		1952	11	19	10	23	28	29.8	86.6			
PDE	B	1952	11	19	10	23	28	29.5	86.5			
POO	B	1952	11	19	10	23	34	28	86.5			
*ISS		1953	2	23	0	46	8	29.5	81.3			
*BCIS		1953	5	27	22	41	7	30.5	80	6 TN2		

Ref		Year	mo	d	h	min (GMT)	s	Lat	Long	Depth	Mag. 1	Mag. 2	Int N
*BCIS		1953	6	29	23	26	55	30.75	80.5				
*ISS		1953	7	9	20	43	32	33.9	78.3				
*ISS		1953	8	29	1	58	25	27.9	82.2				
PDE	B	1953	8	29	1	58	24	28	82				F
SHL	B	1953	8	29	1	58	24	27	83				F
*ISS		1953	10	8	19	11		32.3	82.8				
BCIS		1953	10	8	19	11		32	82.5				
PDE	B	1953	10	8	19	11		32	82.5				
SHL	B	1953	10	8	19	11	11	31.5	84				
*BCIS		1953	10	8	19	53	27	32	82.5				
*ISS		1953	10	11	17	8	3	32.3	82.8				
BCIS		1953	10	11	17	8		31.5	83			6.5 ROM	
PDE	B	1953	10	11	17	8		31.5	83				
SHL	B	1953	10	11	17	8	6	32	83				
*ISS		1953	12	3	14	54	5	31.4	85.6				
PDE	B	1953	12	3	14	54	3	31	85.5		6.37 HRB		
SHL	B	1953	12	3	14	54	12	31	86			6.25 KIR	
*BCIS		1954	6	28	21	31	44	29.25	86.25				
*ISS		1954	9	4	6	43	45	28.3	83.8				
CGS		1954	9	4	6	43	46	28	83.5				
SHL	B	1954	9	4	6	43	50	27.5	83.5			6.5 KIR	
*CGS		1954	9	4	6	45	14	28	83.5				
*SHL	B	1954	11	20	13	9	25	31.5	82				
*SHL	B	1954	11	20	19	6	18	27.5	82.5				
*ISS		1955	1	28	17	2	35	33.3	82.4				
CGS		1955	1	28	17	2	33	33	82.5		6.37 PAS		
SHL	B	1955	1	28	17	2	43	32.6	81.9			6.7 ROM	
*CGS		1955	2	9	10	35	24	33	83				
SHL	B	1955	2	9	10	35	26	32.5	82.5				
*CGS		1955	2	23	23	13	30	28	85.5				
SHL	B	1955	2	23	23	13	25	28	85				
*SHL	B	1955	2	24	15	15	15	28.5	85.3				
*CGS		1955	3	10	21	16	20	32.5	77				
BCIS		1955	3	10	21	16	21	33	76.5				
SHL	B	1955	3	10	21	16	26	34	78				
CGS		1955	3	27	14	38	44	30	90				
SHL	B	1955	3	27	14	38	50	29	90			5.8 SHL	
*SHL	B	1955	4	14	1	0	40	32.4	76.1				
*CGS		1955	4	17	3	49	32	26.5	90				
*ISS		1955	6	27	10	14	9	32.5	78.6				
CGS		1955	6	27	10	14	6	32	78.5				
BCIS		1955	6	27	10	14	10	32.25	78.25		6 UPP		
SHL	B	1955	6	27	10	14	33	31	80			5.75 SHL	
*CGS		1955	6	27	13	46	10	31.05	78.5				
BCIS		1955	6	27	13	46	10	32.25	78.25				
*ISS		1955	8	4	6	40	45	30.8	86.4				
BCIS		1955	8	4	6	40	46	30.5	86.5			5.75 UPP	
CGS		1955	8	4	6	40	46	30.5	86.5				
SHL	B	1955	8	4	6	40	49	29	86.5				
*CGS		1955	9	20	20	21	13	27.5	90				
SHL	B	1955	9	20	20	21	19	26	89.6				
*CGS		1955	11	23	2	33	47	26.5	90				
*CGS		1955	12	5	7	27	24	30	89.5				
SHL	B	1955	12	5	7	27	30	29.6	90			4.8 SHL	
*CGS		1955	12	18	22	37	45	30	90				
QUE	B	1955	12	29	8	25	33	30	90		5.8 SHL		
SHL	B	1955	12	29	8	25	38	29.5	90			5.8 SHL	
*CGS		1956	1	19	19	50	34	30	81				