



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 19/02/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 56** Co-ordinates E=468119.000 N=1947133.000

Field Test	Nos	Samples	Nos	Commencement Date : 12/02/15
Penetrometer (SPT)	20	Undisturbed (UDS)	1	Completion Date : 14/02/15
Cone (Pc)		Penetrometer (SPT)	20	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 98.578 m.
		Water Sample (WS)	1	Water Struck At :
				Standing Water Level : 1.57 m.

DESCRIPTION	SYMBOL	N-VALUE				SAMPLES	
		EACH DIVN. = 7.5cm.				Ref. No	Depth (m)
10.50m		50	Refusal			*SPT-12	10.50-10.53 10.50
			3.0 cm Penth.			R9	CR=12% RQD=NIL
		52	Refusal			*SPT-13	11.25-11.28 11.25
			3.0 cm Penth.			R10	CR=15% RQD=NIL
		51	Refusal			*SPT-14	12.00-12.02 12.00
			2.0 cm Penth.			R11	CR=NIL RQD=NIL
		50	Refusal			*SPT-15	12.75-12.78 12.75
			3.0 cm Penth.			R12	CR=NIL RQD=NIL
		52	Refusal			*SPT-16	13.50-13.54 13.50
			4.0 cm Penth.			R13	CR=13% RQD=NIL
		51	Refusal			*SPT-17	14.25-14.28 14.25
			3.0 cm Penth.			R14	CR=17% RQD=NIL
		52	Refusal			*SPT-18	15.00-15.02 15.00
			2.0 cm Penth.			R15	CR=16% RQD=NIL
		53	Refusal			*SPT-19	15.75-15.77 15.75
			2.0 cm Penth.			R16	CR=19% RQD=NIL
		52	Refusal			*SPT-20	16.50-16.52 16.50
			2.0 cm Penth.			R17	CR=21% RQD=NIL
							17.25
						R18	CR=22% RQD=NIL
							18.00
						R19	CR=24% RQD=NIL
							18.75
18.75m						R20	CR=29% RQD=NIL
							19.50
						R21	CR=28% RQD=NIL
							20.00
20.00m							

Completely to highly weathered, light grey to blackish grey, medium grained, highly fractured rock. Obs. decomposed & as disintegrated rock particle collected sludge on R11, R12.

Highly weathered, light grey to blackish grey, medium grained, highly fractured rock.

N.B. - '*' means sample could not be recovered.





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST

Job No : 3421 Created by : Chandrani Created on : 12/02/2015 Sheet No:

BORE LOG DATA SHEET BORE HOLE NO. 57 Co-ordinates E=468074.000 N=1947191.000

Field Test	Nos	Samples	Nos	Commencement Date : 03/02/15
Penetrometer (SPT)	11	Undisturbed (UDS)	1	Completion Date : 06/02/15
Cone (Pc)		Penetrometer (SPT)	11	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	9	Level Of Ground : 97.212 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 0.90 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m									
Top soil consists of deep grey, silty clay. Obs. gravels & sand mixture.								DS-1	0.50
1.20m								SPT-1	1.00-1.45
Medium dense, light grey / brownish grey, clayey sandy silt / silty sand. Obs. calcareous nodules.								UDS-1	2.00-2.45
2.00m									
Very dense, light grey / brownish grey, silty sand with decomposed rock.								SPT-2	3.00-3.19
3.40m								*SPT-3	3.40-3.43 3.40
Completely weathered, light grey with brownish grey, medium to fine grained, decomposed & disintegrated rock collected as sludge.								R1	CR=NIL RQD=NIL
								*SPT-4	4.15-4.19 4.15
								R2	CR=NIL RQD=NIL
								*SPT-5	4.90-4.93 4.90
								R3	CR=NIL RQD=NIL
								*SPT-6	5.65-5.68 5.65
								R4	CR=NIL RQD=NIL
								*SPT-7	6.40-6.42 6.40
								R5	CR=31% RQD=NIL
								R6	CR=37% RQD=NIL
6.40m									
Highly weathered, whitish grey, medium to fine grained, highly fractured rock.									
7.90m									
Completely weathered, light brownish grey to whitish grey, medium to fine grained, decomposed & disintegrated rock collected as sludge.								R7	CR=NIL RQD=NIL
								*SPT-8	8.65-8.68 8.65
								R8	CR=NIL RQD=NIL
								*SPT-9	9.40-9.44 9.40
								R9	CR=NIL RQD=NIL
								*SPT-10	10.15-10.18 10.15
								R10	CR=NIL RQD=NIL
								*SPT-11	10.90-10.92 10.90
								R11	CR=24% RQD=NIL
								R12	CR=23% RQD=NIL
10.90m									
Highly weathered, whitish grey, medium grained, highly fractured rock.									
13.00m								R13	CR=20% RQD=NIL



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Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST

Job No : 3421 Created by : Chandrani Created on : 12/02/2015 Sheet No:

BORE LOG DATA SHEET BORE HOLE NO. 57 Co-ordinates E=468074.000 N=1947191.000

Field Test	Nos	Samples	Nos	Commencement Date : 03/02/15
Penetrometer (SPT)	11	Undisturbed (UDS)	1	Completion Date : 06/02/15
Cone (Pc)		Penetrometer (SPT)	11	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	8	Level Of Ground : 97.212 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 0.90 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Highly weathered, whitish grey, medium grained, highly fractured rock.	13.00m 13.15m							R14	13.15 CR=21% RQD=NIL
Highly weathered, light grey to brownish grey, coarse to fine grained, highly fractured rock.	13.90m							R15	13.90 CR=34% RQD=NIL
Highly weathered, light grey to brownish grey, coarse to fine grained, highly fractured rock.	14.65m							R16	14.65 CR=61% RQD=NIL
Moderately to slightly weathered, light brownish grey to steel grey, medium to fine grained, moderately fractured rock.								R17	15.40 CR=57% RQD=21%
								R18	16.15 CR=50% RQD=NIL
								R19	16.90 CR=55% RQD=15%
								R20	17.65 CR=89% RQD=58%
								R21	18.40 CR=84% RQD=51%
								R22	19.15 CR=80% RQD=NIL
									20.00
								R23	21.50 CR=87% RQD=15%
								R24	22.00 CR=82% RQD=NIL
								R25	23.50 CR=80% RQD=NIL
Slightly weathered, steel grey to yellowish brown, medium to fine grained, highly fractured rock.								R26	25.00 CR=78% RQD=18%
									25.00

N.B. — '*' means sample could not be recovered.





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 19/02/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 58** Co-ordinates E=468122.000 N=1947181.000

Field Test	Nos	Samples	Nos	Commencement Date : 07/02/15
Penetrometer (SPT)	6	Undisturbed (UDS)	1	Completion Date : 11/02/15
Cone (Pc)		Penetrometer (SPT)	6	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.738 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.4 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m									
Very stiff, deep grey, silty clay with fine sand. Obs. gravels & kankars.								DS-1	0.50
		2	2	3	4	22	6	SPT-1	1.00-1.45
								UDS-1	2.00-2.45
						61		SPT-2	3.00-3.45
3.00m		3	4	6	14	14	27		
Hard, light grey to yellowish brown, silty clay. Obs. calcareous nodules.								SPT-3	4.00-4.20
		42	49	50					
4.30m									
Highly weathered, blackish grey, coarse to fine grained, highly fractured rock.								*SPT-4	4.30-4.34 4.30
								R1	CR=21% RQD=NIL
									5.00
								R2	CR=22% RQD=NIL
6.50m									5.75
								R3	CR=12% RQD=NIL
								*SPT-5	6.50-6.53 6.50
Highly weathered, light grey, medium grained, moderately fractured rock.								R4	CR=13% RQD=NIL
								*SPT-6	7.25-7.29 7.25
8.00m								R5	CR=25% RQD=NIL
Moderately weathered, light grey, medium grained, moderately fractured rock.									8.00
								R6	CR=51% RQD=NIL
									8.75
								R7	CR=60% RQD=32%
10.25m									9.50
								R8	CR=62% RQD=16%
Slightly weathered, light grey, fine grained, moderately fractured rock.									10.25
								R9	CR=81% RQD=20%
11.00m									11.00



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Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 23/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 59** Co-ordinates E=468079.000 N=1947322.000

Field Test	Nos	Samples	Nos	Commencement Date : 14/02/15
Penetrometer (SPT)	13	Undisturbed (UDS)	1	Completion Date : 16/02/15
Cone (Pc)		Penetrometer (SPT)	13	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 99.198 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.7 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES		
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)	
0.00m Top soil consists of deep grey, silty clay with sand mixture.								DS-1	0.50	
0.70m Dense, brownish grey, clayey silty sand. Obs. residual soil & gravels.		1	3	6	8	10	10	SPT-1	1.00-1.45	
2.30m Very dense, light grey, silty sand with decomposed rock.		38	43	50	>100			UDS-1	2.00-2.45	
3.45m		50	3.0 cm Pentn. Refusal			SPT-2			3.00-3.18	
Completely to highly weathered, light grey, medium to fine grained, highly fractured, rock. Obs. decomposed & disintegrated rock particle collected as sludge on R5 & R6.		51	3.0 cm Pentn. Refusal			*SPT-3			3.45-3.48	
		53	3.0 cm Pentn. Refusal			R1			CR=15% RQD=NIL	
		52	3.0 cm Pentn. Refusal			*SPT-4			4.00-4.03	
		51	2.0 cm Pentn. Refusal			R2			CR=12% RQD=NIL	
		52	3.0 cm Pentn. Refusal			*SPT-5			4.75-4.79	
		50	3.0 cm Pentn. Refusal			R3			CR=12% RQD=NIL	
		52	2.0 cm Pentn. Refusal			*SPT-6			5.50-5.53	
		51	3.0 cm Pentn. Refusal			R4			CR=16% RQD=NIL	
		50	3.0 cm Pentn. Refusal			*SPT-7			6.25-6.27	
		52	2.0 cm Pentn. Refusal			R5			CR=NIL RQD=NIL	
		50	3.0 cm Pentn. Refusal			*SPT-8			7.00-7.03	
		52	3.0 cm Pentn. Refusal			R6			CR=NIL RQD=NIL	
10.00m Highly weathered, blackish grey, medium grained, highly fractured rock.			NX rotary drilling from 3.45m to 20.00m						*SPT-9	7.75-7.78
10.50m									R7	CR=19% RQD=NIL
									*SPT-10	8.50-8.52
									R8	CR=17% RQD=NIL
									*SPT-11	9.25-9.29
									R9	CR=24% RQD=NIL
									R10	CR=27% RQD=NIL







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Job No : 3421 Created by : Chandrani Created on : 09/03/2015 Sheet No:

BORE LOG DATA SHEET BORE HOLE NO. 60 Co-ordinates E=468108.000 N=1947252.000

Field Test	Nos	Samples	Nos	Commencement Date : 05/02/15
Penetrometer (SPT)	9	Undisturbed (UDS)	1	Completion Date : 20/02/15
Cone (Pc)		Penetrometer (SPT)	9	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.332 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.8 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of brownish grey, clayey sandy silt with gravels, moorum & kankars.								DS-1	0.50
0.80m Stiff, deep brownish grey, silty clay with gravels. Obs. calcareous nodules.		4	3	3	4	15	4	SPT-1	1.00-1.45
2.40m								UDS-1	2.00-2.45
Very dense, light grey with yellowish brown, sandy silt with decomposed rock.		7	9	13	18	82	23	SPT-2	3.00-3.45
4.50m		17	30	38	43	50	50	SPT-3	4.00-4.34
4.50m		52						*SPT-4	4.50-4.53 4.50
Highly weathered, light brownish grey, medium to fine grained, highly fractured rock.		53						R1	CR=18% RQD=NIL
6.00m		52						*SPT-5	5.25-5.27 5.25
								R2	CR=12% RQD=NIL
								*SPT-6	6.00-6.02 6.00
								R3	CR=30% RQD=NIL
								R4	CR=41% RQD=NIL
								R5	CR=37% RQD=NIL
								R6	CR=35% RQD=NIL
								R7	CR=24% RQD=NIL
								R8	CR=27% RQD=NIL
10.50m									10.50




Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST
Job No : 3421 Created by : Chandrani Created on : 09/03/2015 Sheet No:
BORE LOG DATA SHEET BORE HOLE NO. 60 Co-ordinates E=468108.000 N=1947252.000

Field Test	Nos	Samples	Nos	Commencement Date : 05/02/15
Penetrometer (SPT)	9	Undisturbed (UDS)	1	Completion Date : 20/02/15
Cone (Pc)		Penetrometer (SPT)	9	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.332 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.8 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
10.50m								R9	CR=53% RQD=NIL
Moderately weatherd, light grey to blackish grey, medium grained, highly fractured rock.								R10	CR=71% RQD=35%
								R11	CR=65% RQD=NIL
								R12	CR=64% RQD=17%
								R13	CR=60% RQD=NIL
								R14	CR=33% RQD=NIL
14.50m								R15	CR=40% RQD=NIL
Highly to moderately weathered, light grey to blackish grey, medium grained, highly fractured rock.								R16	CR=45% RQD=NIL
								*SPT-7	16.75-16.78 16.75
								R17	CR=NIL RQD=NIL
16.75m		50	Refusal	3.0 cm	Penth.			*SPT-8	17.50-17.52 17.50
Completely weathered, brownish grey, medium grained, decomposed & disintegrated rock collected as sludge.		50	Refusal	2.0 cm	Penth.			R18	CR=NIL RQD=NIL
		50	Refusal	3.0 cm	Penth.			*SPT-9	18.25-18.28 18.25
18.00m		50						R19	CR=69% RQD=NIL
Moderaely weathered to fresh, blackish grey with brownish spots, medium grained, highly to moderately fractured rock.								R20	CR=96% RQD=69%
20.00m									
N.B. - '*' means sample could not be recovered.									





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 09/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 61** Co-ordinates E=468143.000 N=1947201.000

Field Test	Nos	Samples	Nos	Commencement Date : 11/02/15
Penetrometer (SPT)	10	Undisturbed (UDS)	1	Completion Date : 18/02/15
Cone (Pc)		Penetrometer (SPT)	10	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.584 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.8 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of brownish grey, silty clay with gravels & kankars. Obs. boulder.								DS-1	0.50
0.70m Stiff, deep grey, silty clay. Obs. gravels.		3	3	2	2	10	3	SPT-1	1.00-1.45
3.00m Hard, deep grey, silty clay with gravels & sand mixture. Obs. calcareous nodules.		7	9	10	11	48	14	UDS-1	2.00-2.45
4.00m Very dense, light grey, silty sand with decomposed rock.		21	23	42	50	>100		SPT-2	3.00-3.45
4.50m		50				3.5 cm Penth.		SPT-3	4.00-4.26
						Refusal		*SPT-4	4.50-4.53 4.50
						3.0 cm Penth.		R1	CR=NIL RQD=NIL
						Refusal		*SPT-5	5.25-5.30 5.25
						5.0 cm Penth.		R2	CR=NIL RQD=NIL
						Refusal		*SPT-6	6.00-6.04 6.00
						4.0 cm Penth.		R3	CR=NIL RQD=NIL
						Refusal		*SPT-7	6.75-6.79 6.75
						4.0 cm Penth.		R4	CR=NIL RQD=NIL
						Refusal		*SPT-8	7.50-7.53 7.50
						3.0 cm Penth.		R5	CR=NIL RQD=NIL
						Refusal		*SPT-9	8.25-8.27 8.25
						2.0 cm Penth.		R6	CR=NIL RQD=NIL
						Refusal		*SPT-10	9.00-9.03 9.00
						3.0 cm Penth.		R7	CR=16% RQD=NIL
									9.75
9.00m Highly weathered, light grey, medium grained, highly fractured rock.								R8	CR=24% RQD=NIL
10.50m									10.50

NX rotary drilling from 4.50m to 20.00m


Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST
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BORE LOG DATA SHEET BORE HOLE NO. 61 Co-ordinates E=468143.000 N=1947201.000

Field Test	Nos	Samples	Nos	Commencement Date : 11/02/15
Penetrometer (SPT)	10	Undisturbed (UDS)	1	Completion Date : 18/02/15
Cone (Pc)		Penetrometer (SPT)	10	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.584 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.8 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Highly to moderately weathered, light blackish grey, medium grained, highly to moderately fractured rock.	10.50m							R9	CR=26% RQD=NIL
								R10	CR=28% RQD=NIL
								R11	CR=30% RQD=NIL
								R12	CR=31% RQD=NIL
								R13	CR=34% RQD=14%
								R14	CR=36% RQD=15%
								R15	CR=32% RQD=NIL
								R16	CR=29% RQD=NIL
								R17	CR=52% RQD=18%
								R18	CR=58% RQD=13%
								R19	CR=36% RQD=NIL
								R20	CR=32% RQD=NIL
N.B. — '*' means sample could not be recovered.	20.00m							R21	CR=30% RQD=NIL





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 13/02/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 62** Co-ordinates E=468147.467 N=1947259.15

Field Test	Nos	Samples	Nos	Commencement Date : 31/01/15
Penetrometer (SPT)	16	Undisturbed (UDS)	0	Completion Date : 05/02/15
Cone (Pc)		Penetrometer (SPT)	16	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 96.743 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.30 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of deep greyish brown, silty clay with gravels & kankars.								DS-1	0.50
0.90m Very dense, light grey, silty sand / sandy silt.		19	17	13	15	14	13	SPT-1	1.00-1.45
2.00m		7	8	14	14	26	22	SPT-2	2.00-2.45
Very dense, light grey to yellowish brown, silty sand with calcareous nodules & clay binders.		9	13	14	16	23	34	SPT-3	3.00-3.45
		37	42	50				SPT-4	4.00-4.20
4.40m		52						*SPT-5	4.40-4.44
		50						R1	CR=18% RQD=NIL
		50						*SPT-6	5.00-5.04
		50						R2	CR=12% RQD=NIL
		50						*SPT-7	5.75-5.78
		50						R3	CR=16% RQD=NIL
		50						*SPT-8	6.50-6.53
		50						R4	CR=15% RQD=NIL
		50						*SPT-9	7.25-7.29
		50						R5	CR=19% RQD=NIL
		50						*SPT-10	8.00-8.04
		50						R6	CR=17% RQD=NIL
		50						*SPT-11	8.75-8.78
		50						R7	CR=17% RQD=NIL
		50						*SPT-12	9.50-9.54
		50						R8	CR=15% RQD=NIL
		50						*SPT-13	10.25-10.29
		50						R9	CR=17% RQD=NIL
		50						*SPT-14	11.00-11.03
		50						R10	CR=15% RQD=NIL
		50						*SPT-15	11.75-11.79
		50						R11	CR=17% RQD=NIL
		50						*SPT-16	12.50-12.53
		50						R12	CR=20% RQD=NIL
12.50m Highly weathered, light grey, medium grained, highly fractured rock.								R13	CR=24% RQD=NIL
14.00m Moderately weathered, light grey, medium grained, highly fractured rock.								R14	CR=47% RQD=NIL
14.75m Moderately to slightly weathered, light grey, medium grained, highly to moderately fractured rock.								R15	CR=58% RQD=NIL
16.00m								R16	CR=55% RQD=NIL





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 13/02/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 62** Co-ordinates E=468147.467
N=1947259.15

Field Test	Nos	Samples	Nos	Commencement Date : 31/01/15
Penetrometer (SPT)	16	Undisturbed (UDS)	0	Completion Date : 05/02/15
Cone (Pc)		Penetrometer (SPT)	16	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	2	Level Of Ground : 96.743 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.30 m.

DESCRIPTION	SYMBOL	N-VALUE							SAMPLES	
		EACH DIVN. = 7.5cm.							Ref. No	Depth (m)
16.00m										
Moderately to slightly weathered, light grey, medium grained, highly to moderately fractured rock.									R17	16.25 CR=67% RQD=NIL
									R18	17.00 CR=72% RQD=NIL
									R19	17.75 CR=85% RQD=15%
									R20	18.50 CR=80% RQD=NIL
21.00m										
Slightly weathered, steel grey, medium grained, moderately fractured rock.									R21	20.00 CR=78% RQD=08%
									R22	21.50 CR=87% RQD=NIL
									R23	23.00 CR=88% RQD=25%
									R24	24.50 CR=47% RQD=NIL
24.50m										
Moderately to slightly weathered, light grey, medium grained, moderately fractured rock.									R25	26.00 CR=53% RQD=NIL
									R26	27.00 CR=73% RQD=18%
									R27	28.00 CR=54% RQD=NIL
									R28	29.00 CR=85% RQD=NIL
										30.00
30.00m										
N.B. — '*' means sample could not be recovered.										





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 20/02/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 63** Co-ordinates E=468159.000 N=1947239.000

Field Test	Nos	Samples	Nos	Commencement Date : 07/02/15
Penetrometer (SPT)	10	Undisturbed (UDS)	1	Completion Date : 09/02/15
Cone (Pc)		Penetrometer (SPT)	10	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	3	Level Of Ground : 96.568 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.4 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m								DS-1	0.50
Stiff, deep grey, silty clay with gravels. Obs. calcareous nodules.		2	2	3	4	15	4	SPT-1	1.00-1.45
								UDS-1	2.00-2.45
						77		SPT-2	3.00-3.45
3.00m		5	8	10	9	21	37	SPT-3	4.00-4.20
Very dense, steel grey with yellowish brown, sandy silt with decomposed rock.		27	38	52		>100		SPT-3	4.00-4.20
						5.0 cm Penth.			
4.30m		53				Refusal		*SPT-4	4.30-4.34 4.30
Completely weathered, steel grey, medium to fine grained, decomposed & disintegrated rock collected as sludge.						4.0 cm Penth.		R1	CR=NIL RQD=NIL
		52				Refusal		*SPT-5	5.05-5.08 5.05
						3.0 cm Penth.		R2	CR=NIL RQD=NIL
		53				Refusal		DS-2 *SPT-6	5.80-5.82 5.80
						2.0 cm Penth.		R3	CR=NIL RQD=NIL
6.50m		53				Refusal		DS-3 *SPT-7	6.50-6.51 6.50
Highly weathered, brownish grey, medium to fine grained, highly fractured rock.						1.0 cm Penth.		R4	CR=17% RQD=NIL
		51				Refusal		*SPT-8	7.25-7.27 7.25
						2.0 cm Penth.		R5	CR=20% RQD=NIL
						NX rotary drilling from 4.30m to 20.00m			8.00
						Refusal		R6	CR=13% RQD=NIL
		53				2.0 cm Penth.		*SPT-9	8.75-8.77 8.75
						Refusal		R7	CR=15% RQD=NIL
		52				3.0 cm Penth.		*SPT-10	9.50-9.53 9.50
								R8	CR=24% RQD=NIL
10.25m								R9	CR=30% RQD=NIL
Highly to moderately weathered, light grey to brownish grey, medium to fine grained, moderately fractured rock.									10.25
11.00m									11.00




Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST
Job No : 3421 Created by : Chandrani Created on : 20/02/2015 Sheet No:
BORE LOG DATA SHEET BORE HOLE NO. 63 Co-ordinates E=468159.000 N=1947239.000

Field Test	Nos	Samples	Nos	Commencement Date : 07/02/15
Penetrometer (SPT)	10	Undisturbed (UDS)	1	Completion Date : 09/02/15
Cone (Pc)		Penetrometer (SPT)	10	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	3	Level Of Ground : 96.568 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.4 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Highly to moderately weathered, light grey to brownish grey, medium to fine grained, moderately fractured rock.	11.00m							R10	CR=35% RQD=NIL
								R11	CR=43% RQD=NIL
								R12	CR=39% RQD=NIL
								R13	CR=33% RQD=NIL
								R14	CR=37% RQD=NIL
								R15	CR=34% RQD=NIL
								R16	CR=39% RQD=NIL
								R17	CR=48% RQD=NIL
								R18	CR=57% RQD=NIL
								R19	CR=58% RQD=NIL
Moderately weathered, light grey to brownish grey, medium to fine grained, moderately fractured rock.	17.00m							R20	CR=53% RQD=NIL
								R21	CR=52% RQD=NIL
	20.00m								
N.B. — '*' means sample could not be recovered.									





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 23/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 64** Co-ordinates E=468253.000 N=1947181.000

Field Test	Nos	Samples	Nos	Commencement Date : 16/02/15
Penetrometer (SPT)	11	Undisturbed (UDS)	1	Completion Date : 18/02/15
Cone (Pc)		Penetrometer (SPT)	11	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.777 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.52 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m									
Top soil consists of deep grey, silty clay with sand mixture.								DS-1	0.50
0.80m									
Loose, brownish grey, clayey silty sand. Obs. gravels & residual soil.		1	1	2	2	9	3	SPT-1	1.00-1.45
		NX rotary drilling from 4.00m to 20.00m						UDS-1	2.00-2.45
3.00m									
Very dense, light grey, silty sand with decomposed rock.		25	32	42	48	53		SPT-2	3.00-3.32
4.00m									
		52						*SPT-3	4.00-4.04 4.00
								R1	CR=NIL RQD=NIL
		54						*SPT-4	4.75-4.78 4.75
								R2	CR=NIL RQD=NIL
		55						*SPT-5	5.50-5.52 5.50
								R3	CR=10% RQD=NIL
		52						*SPT-6	6.25-6.28 6.25
								R4	CR=11% RQD=NIL
		52						*SPT-7	7.00-7.02 7.00
								R5	CR=NIL RQD=NIL
		53						*SPT-8	7.75-7.79 7.75
								R6	CR=NIL RQD=NIL
		51						*SPT-9	8.50-8.52 8.50
								R7	CR=13% RQD=NIL
		50						*SPT-10	9.25-9.28 9.25
								R8	CR=14% RQD=NIL
		51						*SPT-11	10.00-10.02 10.00
								R9	CR=21% RQD=NIL
10.50m									





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST

Job No : 3421 Created by : Chandrani Created on : 23/03/2015 Sheet No:

BORE LOG DATA SHEET BORE HOLE NO. 64 Co-ordinates E=468253.000 N=1947181.000

Field Test	Nos	Samples	Nos	Commencement Date : 16/02/15
Penetrometer (SPT)	11	Undisturbed (UDS)	1	Completion Date : 18/02/15
Cone (Pc)		Penetrometer (SPT)	11	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.777 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.52 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Completely to highly weathered, light brownish grey, medium grained, highly fractured rock. Obs. decomposed & disintegrated rock particle collected as sludge on R1, R2, R5 & R6.	10.50m 10.75m							R10	10.75
								R11	11.50
								R12	12.25
								R13	13.00
								R14	13.75
Highly weathered, pinkish grey to light grey, medium grained, highly fractured rock.								R15	14.50
								R16	15.25
								R17	16.00
								R18	16.75
								R19	17.50
								R20	18.25
Moderately weathered, blackish grey, medium grained, highly to moderately fractured rock.	16.00m 20.00m							R21	19.00
									20.00

N.B. — '*' means sample could not be recovered.




Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST
Job No : 3421 Created by : Chandrani Created on : 23/03/2015 Sheet No:
BORE LOG DATA SHEET BORE HOLE NO. 65 Co-ordinates E=468253.000 N=1947215.000

Field Test	Nos	Samples	Nos	Commencement Date : 21/02/15
Penetrometer (SPT)	7	Undisturbed (UDS)	1	Completion Date : 22/02/15
Cone (Pc)		Penetrometer (SPT)	7	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.751 m.
		Water Sample (WS)	1	Water Struck At :
				Standing Water Level : 1.3 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m									
Very stiff, deep grey, silty clay with sand mixture.								DS-1	0.50
		6	8	10	6	25	5	SPT-1	1.00-1.45
								WS-1	1.30
1.80m								*UDS-1	2.00-2.10
Very dense, blackish grey, clayey silty sand with gravels, boulder.		18	32	45	50	>100		SPT-2	2.20-2.45
						2.5 cm Pentn.			
						Refusal		*SPT-3	3.00-3.03
3.00m		52				3.0 cm Pentn.		R1	CR=15% RQD=NIL
						Refusal		*SPT-4	3.75-3.78
		50				3.0 cm Pentn.		R2	CR=19% RQD=NIL
						Refusal		*SPT-5	4.50-4.52
Completely to highly weathered, light brownish grey, medium grained, highly fractured rock.		52				2.0 cm Pentn.		R3	CR=21% RQD=NIL
						NX rotary drilling from 3.00m to 20.00m			5.25
						Refusal		R4	CR=08% RQD=NIL
		50				3.0 cm Pentn.		*SPT-6	6.00-6.03
						Refusal		R5	CR=11% RQD=NIL
		50				2.0 cm Pentn.		*SPT-7	6.75-6.77
								R6	CR=24% RQD=NIL
7.50m									7.50
								R7	CR=34% RQD=NIL
									8.25
								R8	CR=37% RQD=NIL
									9.00
								R9	CR=43% RQD=16%
									9.75
								R10	CR=52% RQD=NIL
10.50m									10.50



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Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 23/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 65** Co-ordinates E=468253.000
N=1947215.000

Field Test	Nos	Samples	Nos	Commencement Date : 21/02/15
Penetrometer (SPT)	7	Undisturbed (UDS)	1	Completion Date : 22/02/15
Cone (Pc)		Penetrometer (SPT)	7	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.751 m.
		Water Sample (WS)	1	Water Struck At :
				Standing Water Level : 1.3 m.

DESCRIPTION	SYMBOL	N-VALUE							SAMPLES	
		EACH DIVN. = 7.5cm.							Ref. No	Depth (m)
Highly to moderately weathered, light grey, medium grained, moderately fractured rock.	10.50m								R11	CR=37% RQD=NIL
	11.25m								R12	CR=37% RQD=NIL
									R13	CR=40% RQD=NIL
									R14	CR=33% RQD=NIL
									R15	CR=36% RQD=NIL
									R16	CR=35% RQD=NIL
									R17	CR=31% RQD=NIL
									R18	CR=30% RQD=18%
									R19	CR=36% RQD=NIL
									R20	CR=32% RQD=NIL
									R21	CR=32% RQD=NIL
									R22	CR=35% RQD=NIL
									R23	CR=40% RQD=NIL
	20.00m									
N.B. - '*' means sample could not be recovered.										





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 18/02/2015 Sheet No:

BORE LOG DATA SHEET

BORE HOLE NO. 66

Co-ordinates E=468081.000
N=1947238.000

Field Test	Nos	Samples	Nos	Commencement Date : 10/02/15
Penetrometer (SPT)	10	Undisturbed (UDS)	1	Completion Date : 12/02/15
Cone (Pc)		Penetrometer (SPT)	10	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	6	Level Of Ground : 97.324 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 0.8 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of deep grey, silty clay with gravels, calcareous nodules.								DS-1	0.50
0.80m Very stiff, yellowish brown, silty clay with sand mixture, gravels & kankars.		5	5	7	7	22	4	SPT-1	1.00-1.45
3.00m Very dense, light brownish grey, sandy silt (decomposed rock).		25	34	42	52	>100		SPT-2	3.00-3.25
3.50m Completely weathered, pinkish grey, fine grained, highly fractured rock.		53				Refusal		*SPT-3	3.50-3.53 3.50
4.25m Completely weathered, light brownish grey, medium to fine grained, decomposed & disintegrated rock, collected as sludge.		52				Refusal		R1	CR=NIL RQD=NIL
6.50m Completely weathered, pinkish grey, medium to fine grained, highly fractured rock.		51				Refusal		*SPT-4	4.25-4.28 4.25
8.00m Completely weathered, deep brownish grey, medium to fine grained, decomposed & disintegrated rock collected as sludge.		50				Refusal		R2	CR=NIL RQD=NIL
9.50m Highly to moderately weathered, light brownish grey, medium to fine grained, moderately fractured rock.		51				Refusal		DS-2 *SPT-5	5.00-5.04 5.00
10.50m								R3	CR=NIL RQD=NIL
								DS-3 *SPT-6	5.75-5.78 5.75
								R4	CR=NIL RQD=NIL
								DS-4 *SPT-7	6.50-6.53 6.50
								R5	CR=23% RQD=NIL
									7.25
								R6	CR=10% RQD=NIL
								*SPT-8	8.00-8.03 8.00
								R7	CR=NIL RQD=NIL
								DS-5 *SPT-9	8.75-8.77 8.75
								R8	CR=NIL RQD=NIL
								DS-6 *SPT-10	9.50-9.54 9.50
								R9	CR=28% RQD=NIL
									10.25




Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST
Job No : 3421 Created by : Chandrani Created on : 18/02/2015 Sheet No:
BORE LOG DATA SHEET BORE HOLE NO. 66 Co-ordinates E=468081.000 N=1947238.000

Field Test	Nos	Samples	Nos	Commencement Date : 10/02/15
Penetrometer (SPT)	10	Undisturbed (UDS)	1	Completion Date : 12/02/15
Cone (Pc)		Penetrometer (SPT)	10	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	6	Level Of Ground : 97.324 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 0.8 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Highly to moderately weathered, light brownish grey, medium to fine grained, moderately fractured rock.	10.50m							R10	CR=51% RQD=13% 11.00
								R11	CR=56% RQD=NIL 11.75
								R12	CR=48% RQD=NIL 12.50
								R13	CR=45% RQD=15% 13.25
								R14	CR=37% RQD=NIL 14.00
								R15	CR=21% RQD=NIL 14.75
Highly weathered, light brownish grey, medium to fine grained, highly fractured rock.	14.00m							R16	CR=29% RQD=NIL 15.50
								R17	CR=27% RQD=NIL 16.25
								R18	CR=29% RQD=NIL 17.00
								R19	CR=32% RQD=NIL 17.75
								R20	CR=21% RQD=NIL 18.50
								R21	CR=23% RQD=NIL 19.25
Highly weathered, light brownish grey, medium to fine grained, highly fractured rock.	17.75m							R22	CR=24% RQD=NIL 20.00
	20.00m								

N.B. — '*' means sample could not be recovered.





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 67** Co-ordinates E=466223.000 N=1948367.000

Field Test	Nos	Samples	Nos	Commencement Date : 18/03/15
Penetrometer (SPT)	17	Undisturbed (UDS)	1	Completion Date : 19/03/15
Cone (Pc)		Penetrometer (SPT)	17	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 99.214 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 3.5 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of light grey, silty clay with kankars & ash.								DS-1	0.50
1.00m Hard, brownish grey to light grey, silty clay with calcareous nodules. Obs. kankars.		6	7	7	8	34	9	SPT-1	1.00-1.45
		NX rotary drilling from 4.50m to 15.00m						UDS-1	2.00-2.45
3.00m Medium dense / very dense, light grey to whitish grey, sandy silt with pebbles. Obs. decomposed rock.		2	5	7	5	25	6	SPT-2	3.00-3.45
		9	15	27	50	>100		SPT-3	4.00-4.25
4.50m		53				2.5 cm Pentn. Refusal		*SPT-4	4.50-4.55 4.50
						5.0 cm Pentn. Refusal		R1	CR=NIL RQD=NIL
		51				3.0 cm Pentn. Refusal		*SPT-5	5.25-5.28 5.25
						5.0 cm Pentn. Refusal		R2	CR=NIL RQD=NIL
		50				3.0 cm Pentn. Refusal		*SPT-6	6.00-6.03 6.00
						5.0 cm Pentn. Refusal		R3	CR=NIL RQD=NIL
		51				5.0 cm Pentn. Refusal		*SPT-7	6.75-6.80 6.75
						3.0 cm Pentn. Refusal		R4	CR=NIL RQD=NIL
		50				3.0 cm Pentn. Refusal		*SPT-8	7.50-7.53 7.50
						5.0 cm Pentn. Refusal		R5	CR=NIL RQD=NIL
		50				5.0 cm Pentn. Refusal		*SPT-9	8.25-8.30 8.25
						5.0 cm Pentn. Refusal		R6	CR=NIL RQD=NIL
		50				5.0 cm Pentn. Refusal		*SPT-10	9.00-9.05 9.00
						3.0 cm Pentn. Refusal		R7	CR=NIL RQD=NIL
		51				3.0 cm Pentn. Refusal		*SPT-11	9.75-9.78 9.75
10.00m									



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Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. 67** Co-ordinates E=466223.000
N=1948367.000

Field Test	Nos	Samples	Nos	Commencement Date : 18/03/15
Penetrometer (SPT)	17	Undisturbed (UDS)	1	Completion Date : 19/03/15
Cone (Pc)		Penetrometer (SPT)	17	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 99.214 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 3.5 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
10.00m								R8	CR=NIL RQD=NIL
								*SPT-12	10.50-10.54 10.50
		50						R9	CR=NIL RQD=NIL
								*SPT-13	11.25-11.27 11.25
Completely weathered, light grey to brownish grey, medium grained, decomposed & disintegrated rock particle collected & disintegrated rock particle collected as sludge.		51						R10	CR=NIL RQD=NIL
								*SPT-14	12.00-12.04 12.00
		51						R11	CR=11% RQD=NIL
								*SPT-15	12.75-12.80 12.75
12.75m		50						R12	CR=10% RQD=NIL
								*SPT-16	13.50-13.54 13.50
		50						R13	CR=13% RQD=NIL
Completely weathered, light grey, medium grained, highly fractured rock.								*SPT-17	14.25-14.30 14.25
		51						R14	CR=20% RQD=NIL
15.00m									15.00

N.B. - '*' means sample could not be recovered.







Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 20/03/2015 Sheet No:

BORE LOG DATA SHEET

BORE HOLE NO. 68

Co-ordinates E=468163.000
N=1947350.000

Field Test	Nos	Samples	Nos	Commencement Date : 05/03/15
Penetrometer (SPT)	22	Undisturbed (UDS)	1	Completion Date : 07/03/15
Cone (Pc)		Penetrometer (SPT)	22	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 97.452 m.
		Water Sample (WS)	1	Water Struck At :
				Standing Water Level : 1.6 m.

DESCRIPTION	SYMBOL	N-VALUE				SAMPLES	
		EACH DIVN. = 7.5cm.				Ref. No	Depth (m)
10.50m		50	Refusal			*SPT-12	10.50-10.5310.50
Completely weathered, light grey, medium to fine grained, decomposed & disintegrated rock collected as sludge.		51	3.0 cm Pentn.			R10	CR=NIL RQD=NIL
		51	Refusal			*SPT-13	11.25-11.2911.25
		51	4.0 cm Pentn.			R11	CR=NIL RQD=NIL
12.00m		52	Refusal			*SPT-14	12.00-12.0312.00
Highly weathered, light grey to deep grey, medium to fine grained, highly fractured rock.			3.0 cm Pentn.			R12	CR=20% RQD=NIL
							12.75
						R13	CR=23% RQD=NIL
							13.50
						R14	CR=21% RQD=NIL
							14.25
						R15	CR=16% RQD=NIL
		51	Refusal			*SPT-15	15.00-15.0315.00
			3.0 cm Pentn.			R16	CR=12% RQD=NIL
15.75m		52	Refusal			*SPT-16	15.75-15.7815.75
Completely weathered, light brownish grey, medium to fine grained, decomposed & disintegrated rock particle collected as sludge.			3.0 cm Pentn.			R17	CR=NIL RQD=NIL
		51	Refusal			*SPT-17	16.50-16.5416.50
			4.0 cm Pentn.			R18	CR=NIL RQD=NIL
		52	Refusal			*SPT-18	17.25-17.2817.25
			3.0 cm Pentn.			R19	CR=NIL RQD=NIL
		50	Refusal			*SPT-19	18.00-18.0318.00
			3.0 cm Pentn.			R20	CR=NIL RQD=NIL
		52	Refusal			*SPT-20	18.75-18.7918.75
			4.0 cm Pentn.			R21	CR=NIL RQD=NIL
		52	Refusal			*SPT-21	19.50-19.5419.50
			4.0 cm Pentn.			R22	CR=NIL RQD=NIL
20.00m		51	Refusal			*SPT-22	20.00-20.0320.00
			3.0 cm Pentn.				

N.B. - '*' means sample could not be recovered.



BH-68/Sheet-2



Project : **Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.** **CETEST**

Job No : 3421 Created by : Chandrani Created on : 16/04/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO.CST-1** Co-ordinates E=467915.000 N=1947144.000

Field Test	Nos	Samples	Nos	Commencement Date : 16/03/15
Penetrometer (SPT)	1	Undisturbed (UDS)	0	Completion Date : 18/03/15
Cone (Pc)		Penetrometer (SPT)	1	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	2	Level Of Ground : 98.212 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.055 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m								DS-1	0.50
Top soil consists of blackish grey, silty clay / clayey silt with gravels & kankars.								DS-2	1.50
2.00m								*SPT-1	2.00-2.02 2.00
								R1	CR=12% RQD=NIL
Completely weathered, fully decomposed & disintegrated rock.								R2	CR=NIL RQD=NIL
								R3	CR=NIL RQD=NIL
5.00m								R4	CR=15% RQD=NIL
								R5	CR=25% RQD=NIL
Completely to highly weathered, grey, fine grained, highly fractured rock.								R6	CR=28% RQD=NIL
								R7	CR=25% RQD=NIL
9.00m								R8	CR=23% RQD=NIL
Highly to moderately weathered, deep grey, fine grained, moderately fractured rock.									10.00
10.50m									





Project : **Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.** **CETEST**

Job No : 3421 Created by : Chandrani Created on : 16/04/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. CST-1** Co-ordinates E=467915.000
N=1947144.000

Field Test	Nos	Samples	Nos	Commencement Date : 16/03/15
Penetrometer (SPT)	1	Undisturbed (UDS)	0	Completion Date : 18/03/15
Cone (Pc)		Penetrometer (SPT)	1	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	3	Level Of Ground : 98.212 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.055 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Highly to moderately weathered, deep grey, fine grained, moderately fractured rock.								R9	CR=35% RQD=NIL 11.00
								R10	CR=40% RQD=NIL 12.00
								R11	CR=48% RQD=20% 13.00
								R12	CR=36% RQD=10% 14.00
								R13	CR=30% RQD=NIL 15.00
								R14	CR=52% RQD=30% 16.00
								R15	CR=40% RQD=20% 17.00
								R16	CR=48% RQD=40% 18.00
								R17	CR=47% RQD=43% 19.00
								R18	CR=50% RQD=NIL 20.00
Fresh, deep grey, fine grained, moderately fractured rock.								R19	CR=85% RQD=40% 21.00



BH-1/Sheet-2





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 01/04/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO.CST-2** Co-ordinates E=467986.000
N=1947107.000

Field Test	Nos	Samples	Nos	Commencement Date : 19/03/15
Penetrometer (SPT)	3	Undisturbed (UDS)	0	Completion Date : 22/03/15
Cone (Pc)		Penetrometer (SPT)	3	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	1	Level Of Ground : 96.443 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.3 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
Highly to moderately weathered, light grey, medium grained, highly fractured rock.								R8	CR=35% RQD=NIL 11.00
								R9	CR=32% RQD=NIL 12.00
								R10	CR=42% RQD=NIL 13.00
Moderately weathered, light grey, medium grained, highly fractured rock.								R11	CR=61% RQD=NIL 14.00
								R12	CR=63% RQD=NIL 15.00
								R13	CR=62% RQD=NIL 16.00
								R14	CR=60% RQD=NIL 17.00
								R15	CR=68% RQD=NIL 18.00
								R16	CR=66% RQD=NIL 19.00
								R17	CR=62% RQD=NIL 20.00
								R18	CR=69% RQD=NIL 21.00
N.B. - '*' means sample could not be recovered.									





Project : **Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.** **CETEST**

Job No : 3421 Created by : Chandrani Created on : 16/04/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. CST-3** Co-ordinates E=467999.000 N=1947180.000

Field Test	Nos	Samples	Nos	Commencement Date : 15/03/15
Penetrometer (SPT)	1	Undisturbed (UDS)	0	Completion Date : 16/03/15
Cone (Pc)		Penetrometer (SPT)	1	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	2	Level Of Ground : 98.379 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.85 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m									
Top soil consists of grey, silty clay / clayey silt with gravels & kankars.								DS-1	0.50
								DS-2	1.50
2.50m	50							*SPT-1	2.50-2.53 2.50
								R1	CR=NIL RQD=NIL
Completely weathered, fully decomposed & disintegrated rock.								R2	CR=NIL RQD=NIL
								R3	CR=NIL RQD=NIL
								R4	CR=NIL RQD=NIL
6.50m								R5	CR=17% RQD=NIL
Completely weathered, whitish grey, fine grained, highly fractured rock. Obs. quartzite.								R6	CR=NIL RQD=NIL
7.80m								R7	CR=NIL RQD=NIL
Completely weathered, fully decomposed & disintegrated rock.								R8	CR=NIL RQD=NIL
10.50m									10.50





Project : **Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.** **CETEST**

Job No : 3421 Created by : Chandrani Created on : 16/04/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. CST-3** Co-ordinates E=467999.000
N=1947180.000

Field Test	Nos	Samples	Nos	Commencement Date : 15/03/15
Penetrometer (SPT)	1	Undisturbed (UDS)	0	Completion Date : 16/03/15
Cone (Pc)		Penetrometer (SPT)	1	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	3	Level Of Ground : 98.379 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.85 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
10.50m								R9	CR=18% RQD=NIL
Completely weathered, grey, medium grained, moderately fractured rock. Obs. mica.									11.50
								R10	CR=15% RQD=NIL
									12.50
								R11	CR=13% RQD=NIL
14.50m									13.50
								R12	CR=14% RQD=NIL
									14.50
								R13	CR=15% RQD=NIL
Completely weathered, whitish grey, fine grained, highly fractured rock. Obs. quartzite.									15.50
								R14	CR=15% RQD=NIL
									16.50
								R15	CR=45% RQD=11%
16.80m									17.50
								R16	CR=43% RQD=10%
									18.50
								R17	CR=34% RQD=NIL
Highly to moderately weathered, deep grey to light grey, medium grained, moderately fractured rock. Obs. alteration of shale & rock.									19.50
								R18	CR=47% RQD=NIL
									21.00
N.B. - '*' means sample could not be recovered.									
21.00m									



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Project : **Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.** **CETEST**

Job No : 3421 Created by : Chandrani Created on : 16/04/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO.CST-4** Co-ordinates E=467999.000
N=194780.000

Field Test	Nos	Samples	Nos	Commencement Date : 15/03/15
Penetrometer (SPT)	1	Undisturbed (UDS)	0	Completion Date : 16/03/15
Cone (Pc)		Penetrometer (SPT)	1	Bore Hole Diameter : 150 mm. / N.X.
Vane (V)		Disturbed (DS)	3	Level Of Ground : 98.379 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.45 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
10.50m								R9	CR=20% RQD=NIL 11.00
Completely to highly weatherd, deep grey to light grey, medium grained, highy fractured rock, alteration of shale & sandstone.								R10	CR=13% RQD=NIL 12.00
								R11	CR=14% RQD=NIL 13.00
								R12	CR=20% RQD=NIL 14.00
13.00m								R13	CR=16% RQD=NIL 15.00
Completely weathered, grey, fine grained, highly fractured rock.								R14	CR=14% RQD=NIL 16.00
								R15	CR=13% RQD=NIL 17.00
								R16	CR=13% RQD=NIL 18.00
								R17	CR=11% RQD=NIL 19.00
								R18	CR=10% RQD=NIL 20.00
N.B. - '*' means sample could not be recovered.								R19	CR=09% RQD=NIL 21.00
21.00m									




Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST
Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:
BORE LOG DATA SHEET
BORE HOLE NO. PMT-1

 Co-ordinates E=467947.000
N=1947079.000

Field Test	Nos	Samples	Nos	Commencement Date : 09/03/15
Penetrometer (SPT)	0	Undisturbed (UDS)	0	Completion Date : 11/03/15
Cone (Pc)		Penetrometer (SPT)	0	Bore Hole Diameter : 150 mm.
Vane (V)		Disturbed (DS)	4	Level Of Ground : 99.435 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.85 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of deep grey, silty clay. Obs. calcareous nodules & bouler.		NX rotary drilling from 4.50m to 20.50m						DS-1	0.50
								DS-2	1.00
1.80m Light grey, with yellowish brown, clayey silty sand with calcareous nodules.								DS-3	2.00
2.50m								DS-4	3.00
Light grey, silty sand with decomposed rock.								DS-5	4.00
4.50m								R1	4.50 CR=NIL RQD=NIL
Completely weathered, light grey, medium to fine grained, decomposed & disintegrated rock.								R2	5.50 CR=NIL RQD=NIL
								R3	6.50 CR=NIL RQD=NIL
7.80m								R4	7.50 CR=14% RQD=NIL
Completely weathered, light grey, medium to fine grained, decomposed & disintegrated rock.								R5	8.50 CR=21% RQD=NIL
								R6	9.50 CR=19% RQD=NIL
10.50m									10.50



BH-1/Sheet-1



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET

BORE HOLE NO. PMT-1

Co-ordinates E=467947.000
N=1947079.000

Field Test	Nos	Samples	Nos	Commencement Date : 09/03/15
Penetrometer (SPT)	0	Undisturbed (UDS)	0	Completion Date : 11/03/15
Cone (Pc)		Penetrometer (SPT)	0	Bore Hole Diameter : 150 mm.
Vane (V)		Disturbed (DS)	4	Level Of Ground : 99.435 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.85 m.

DESCRIPTION	SYMBOL	N-VALUE							SAMPLES	
		EACH DIVN. = 7.5cm.							Ref. No	Depth (m)
10.50m Completely weathered, light grey, medium to fine grained, decomposed & disintegrated rock.									R7	CR=13% RQD=NIL 11.50
									R8	CR=14% RQD=NIL 12.50
									R9	CR=10% RQD=NIL 13.50
									R10	CR=16% RQD=NIL 14.50
									R11	CR=18% RQD=NIL 15.50
									R12	CR=19% RQD=NIL 16.50
									R13	CR=22% RQD=NIL 17.50
									R14	CR=18% RQD=NIL 18.50
									R15	CR=23% RQD=NIL 19.50
									R16	CR=16% RQD=NIL 20.50
14.50m Completely weathered, deep grey, medium to fine grained, highly fractured rock.										
20.50m										



BH-1/Sheet-2



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. PMT-2** Co-ordinates E=467984.000
N=1947149.000

Field Test	Nos	Samples	Nos	Commencement Date : 11/03/15
Penetrometer (SPT)	0	Undisturbed (UDS)	0	Completion Date : 13/03/15
Cone (Pc)		Penetrometer (SPT)	0	Bore Hole Diameter : 150 mm.
Vane (V)		Disturbed (DS)	4	Level Of Ground : 97.738 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.75 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m Top soil consists of deep grey, silty clay with sand mixture, gravels & calcareous nodules.		NX rotary drilling from 3.50m to 20.50m						DS-1	0.50
								DS-2	1.00
1.50m Light grey, clayey sandy silt with calcareous nodules.								DS-3	2.00
3.00m Light grey, silty sand with decomposed rock.								DS-4	3.00
3.50m									
Completely weathered, light grey, medium grained, highly fractured rock.								R1	3.50 CR=17% RQD=NIL
								R2	4.50 CR=18% RQD=NIL
								R3	5.50 CR=07% RQD=NIL
								R4	6.50 CR=NIL RQD=NIL
6.50m									
Completely weathered, light grey, decomposed & disintegrated rock collected as sludge.								R5	7.50 CR=NIL RQD=NIL
								R6	8.50 CR=NIL RQD=NIL
								R7	9.50 CR=14% RQD=NIL
9.50m									
Highly weathered, light grey to deep grey, medium to fine grained, highly fractured rock.									
10.50m									





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. CETEST

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET BORE HOLE NO. PMT-2 Co-ordinates E=467984.000 N=1947149.000

Field Test	Nos	Samples	Nos	Commencement Date : 11/03/15
Penetrometer (SPT)	0	Undisturbed (UDS)	0	Completion Date : 13/03/15
Cone (Pc)		Penetrometer (SPT)	0	Bore Hole Diameter : 150 mm.
Vane (V)		Disturbed (DS)	4	Level Of Ground : 97.738 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 2.75 m.

DESCRIPTION	SYMBOL	N-VALUE							SAMPLES	
		EACH DIVN. = 7.5cm.							Ref. No	Depth (m)
10.50m										
Highly weathered, light grey to deep grey, medium to fine grained, highly fractured rock.									R8	CR=25% RQD=NIL
11.50m										
Highly to moderately weathered, light grey to deep grey, medium to fine grained, highly fractured rock.									R9	CR=29% RQD=NIL
									R10	CR=40% RQD=NIL
									R11	CR=45% RQD=24%
14.50m										
Completely weathered, deep grey, medium grained, highly fractured rock.									R12	CR=22% RQD=NIL
									R13	CR=24% RQD=NIL
									R14	CR=25% RQD=NIL
									R15	CR=23% RQD=NIL
									R16	CR=21% RQD=NIL
									R17	CR=22% RQD=NIL
20.50m										





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET **BORE HOLE NO. PMT-3** Co-ordinates E=468126.000 N=1947227.000

Field Test	Nos	Samples	Nos	Commencement Date : 14/03/15
Penetrometer (SPT)	0	Undisturbed (UDS)	0	Completion Date : 15/03/15
Cone (Pc)		Penetrometer (SPT)	0	Bore Hole Diameter : 150 mm.
Vane (V)		Disturbed (DS)	4	Level Of Ground : 97.023 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.95 m.

DESCRIPTION	SYMBOL	N-VALUE						SAMPLES	
		EACH DIVN. = 7.5cm.						Ref. No	Depth (m)
0.00m									
Top soil consists of grey, silty clay / clayey silt with sand mixture, gravels & kankars.								DS-1	0.50
								DS-2	1.00
								DS-3	2.00
								DS-4	3.00
								DS-5	3.50
3.50m									
Whitish grey, different size & shape boulder (filled up with clay).								R1	CR=06% RQD=NIL
4.20m									
Completely weathered, fully decomposed & disintegrated soft rock.								R2	CR=NIL RQD=NIL
								R3	CR=NIL RQD=NIL
								R4	CR=10% RQD=NIL
6.50m									
Completely weathered, grey, medium grained, highly fractured rock.								R5	CR=12% RQD=NIL
								R6	CR=14% RQD=NIL
								R7	CR=12% RQD=NIL
10.50m									





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana. **CETEST**

Job No : 3421 Created by : Chandrani Created on : 27/03/2015 Sheet No:

BORE LOG DATA SHEET

BORE HOLE NO. PMT-3

Co-ordinates E=468126.000
N=1947227.000

Field Test	Nos	Samples	Nos	Commencement Date : 14/03/15
Penetrometer (SPT)	0	Undisturbed (UDS)	0	Completion Date : 15/03/15
Cone (Pc)		Penetrometer (SPT)	0	Bore Hole Diameter : 150 mm.
Vane (V)		Disturbed (DS)	4	Level Of Ground : 97.023 m.
		Water Sample (WS)	0	Water Struck At :
				Standing Water Level : 1.95 m.

DESCRIPTION	SYMBOL	N-VALUE							SAMPLES	
		EACH DIVN. = 7.5cm.							Ref. No	Depth (m)
10.50m										
Completely weathered, whitish grey, medium grained, highly fractured rock.									R8	CR=15% RQD=NIL
										11.50
									R9	CR=14% RQD=NIL
										12.50
									R10	CR=14% RQD=NIL
										13.50
									R11	CR=16% RQD=NIL
										14.50
									R12	CR=14% RQD=NIL
										15.50
Completely weatherd, deep grey to light grey, medium grained, highly fractured rock.									R13	CR=13% RQD=NIL
										16.50
									R14	CR=12% RQD=NIL
										17.50
									R15	CR=13% RQD=NIL
										18.50
									R16	CR=11% RQD=NIL
										19.50
									R17	CR=18% RQD=NIL
										20.50





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 14 / 03 / 2015

Sheet No:

Commenced on: 04/03/2015
 Completed on: 05/03/2015
 Pit size: 3.00mX3.00mX3.00m(depth)
 Load on pr.guage/divn.=20kg/sq.cm
 Load on jack/divn. = 1.42t
 Plate size: 060mX0.60m
 Load on plate/divn.= 3.94t/sq.m
Test Type: Routine PLT

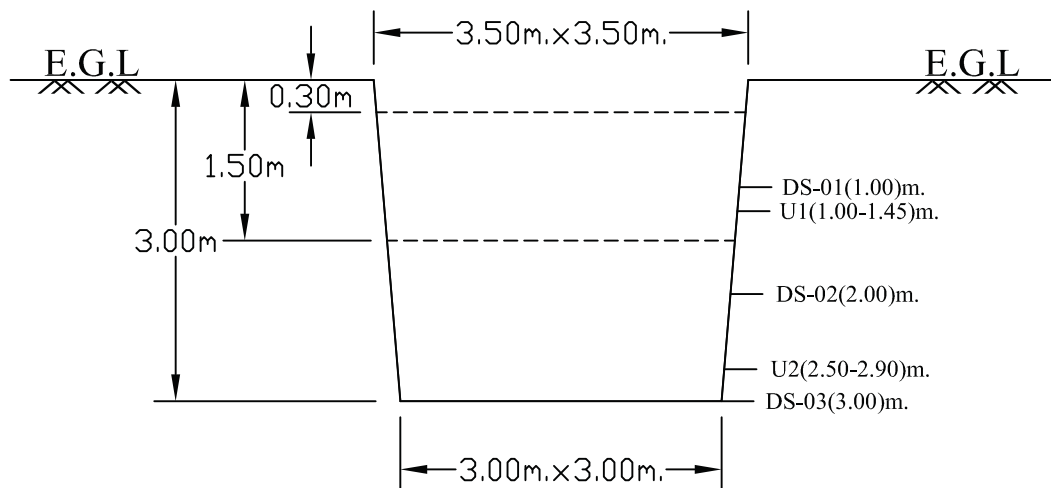
Co-ordinates:

E = 466245.000M.

N = 1947743.000M.

RL = 111.742M.

SWL = Not found



Description of Soil:-

(EGL - 0.30)m :- Top soil consists of clayey silt. Obs. moorum & boulder.

(0.30-1.50)m :- Light grey, sandy silt with dcomposed rock.

(1.50-3.00)m :- Reddish brown, moorum. Obs. boulder & decomposed rock.

PIT LOG OF PLT - 01





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 14 / 01 / 2015

Sheet No:

Commenced on: 05/03/2015
 Completed on: 05/03/2015
 Pit size: 3.00mX3.00mX3.00m(depth)
 Load on pr.guage/divn.=20kg/sq.cm
 Load on jack/divn. = 1.42t
 Plate size: 060mX0.60m
 Load on plate/divn.= 3.94t/sq.m
Test Type: Routine PLT

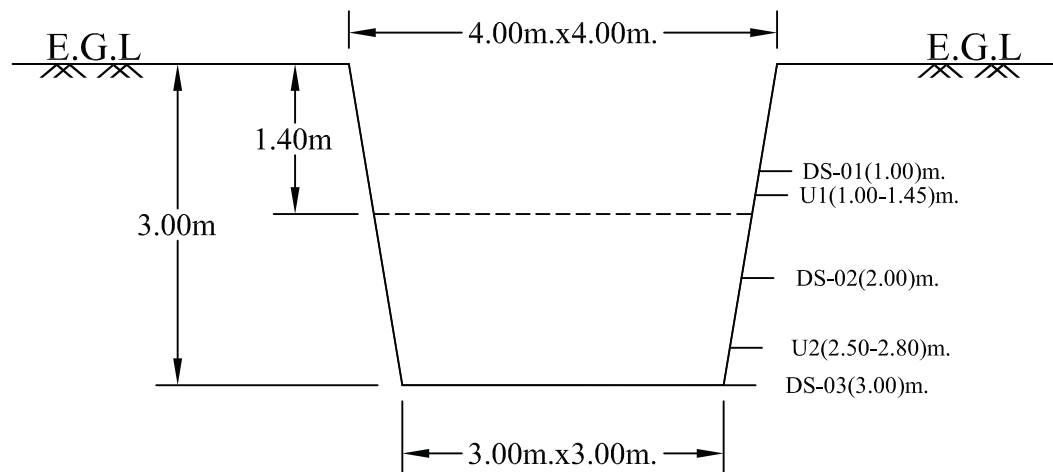
Co-ordinates:

E = 467684.000M.

N = 1946893.085M.

RL = 103.022M.

SWL = Not found



Description of Soil:-

(EGL - 1.40)m :- Blackish grey, silty clay with gravels. Obs. calcareous nodules.

(1.40-3.00)m :- Light grey, silty sand with decomposed rock & boulder.

PIT LOG OF PLT - 02





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 14 / 01 / 2015

Sheet No:

Commenced on: 26/02/2015
 Completed on: 27/02/2015
 Pit size: 3.00mX3.00mX3.00m(depth)
 Load on pr.guage/divn.=20kg/sq.cm
 Load on jack/divn. = 1.42t
 Plate size: 060mX0.60m
 Load on plate/divn.= 3.94t/sq.m
Test Type: Routine PLT

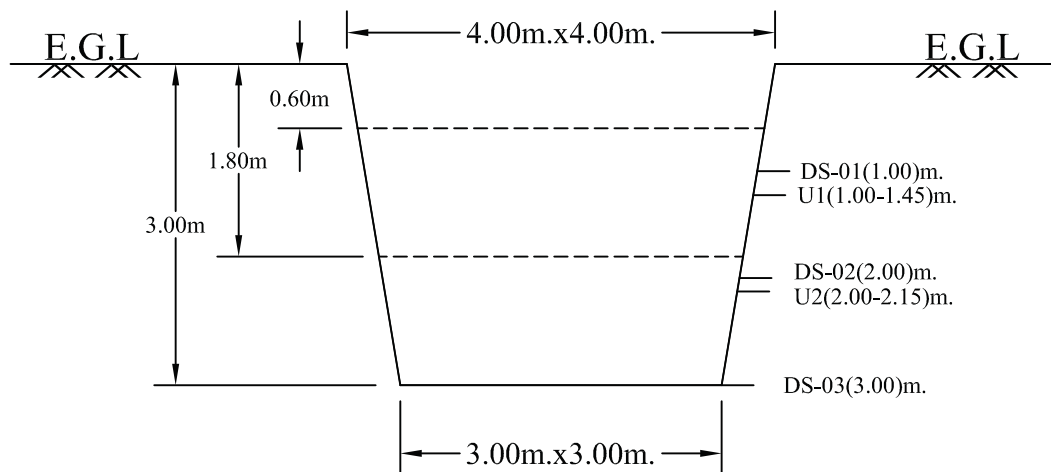
Co-ordinates:

E = 467836.000M.

N = 1947037.000M.

RL = 99.370M.

SWL = 2.70 m.



Description of Soil:-

(EGL - 0.60)m :- Deep grey, silty clay with sand mixture. Obs. calcareous nodules & gravels.

(0.60-1.80)m :- Brownish grey to whitish grey, clayey silty sand with high % of calcareous nodules.
 Obs. gravels.

(1.80-3.00.)m :- Light grey to brownish grey, silty sand with decomposed rock.

PIT LOG OF PLT - 03





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 14 / 03 / 2015

Sheet No:

Commenced on: 31/03/2015
 Completed on: 01/04/2015
 Pit size: 3.00mX3.00mX3.00m(depth)
 Load on pr.guage/divn.=20kg/sq.cm
 Load on jack/divn. = 1.42t
 Plate size: 060mX0.60m
 Load on plate/divn.= 3.94t/sq.m
Test Type: Routine PLT

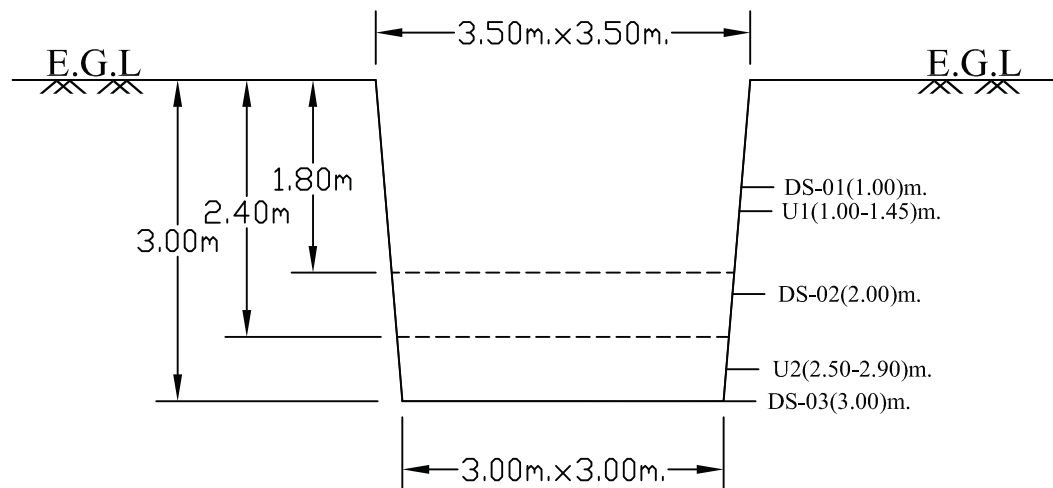
Co-ordinates:

E = 468212.000M.

N = 1947206.000M.

RL = 97.520M.

SWL = Not found



Description of Soil:-

(EGL - 1.80)m :- Deep grey, silty clay with kankars.

(1.80-2.40)m :- Yellowish brown, moourm with calcareous nodules.

(2.40-3.00)m :- Light grey, decomposed rock. Obs. clay binder.

PIT LOG OF PLT - 05





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 19 / 02 / 2015

Sheet No:

Commenced on: 25/03/2015

Completed on: 26/03/2015

Pit size: 3.00mX3.00mX3.00m(depth)

Load on pr.guage/divn.=20kg/sq.cm

Load on jack/divn. = 14.20t

Plate size: 060mX0.60m

Load on plate/divn.= 3.94t/sq.m

Test Type: Cyclic PLT

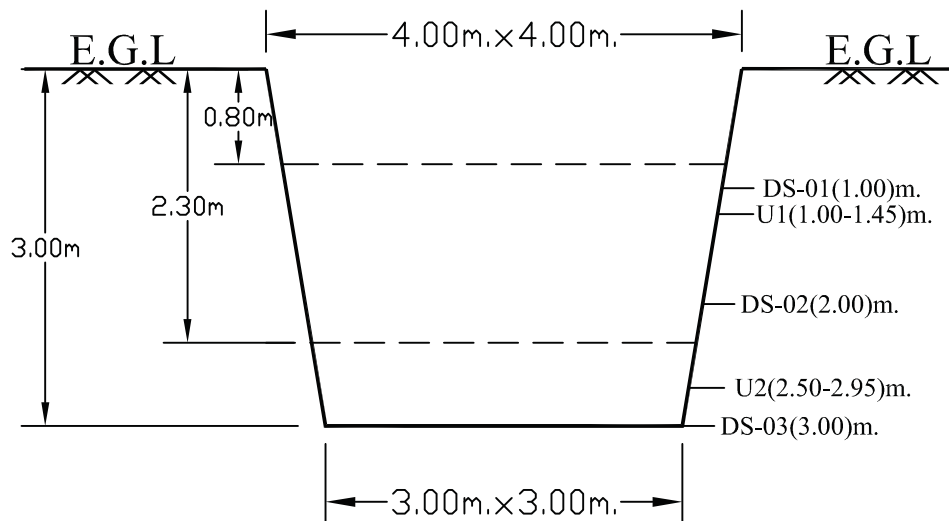
Co-ordinates:

E = 467945.000M.

N = 1947030.000M.

RL = 98.902M.

SWL = 2.80 m.



Description of Soil:-

(EGL - 0.80)m:- Deep grey, silty clay with sand mixture. Obs. calcareous nodules.

(0.80 - 2.30)m:- Brownish grey, clayey silty sand. Obs. calcareous nodules & residual soil.

(2.30 - 3.00)m:- Light grey, silty sand with decomposed rock.

PIT LOG OF CPLT - 01





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 19 / 02 / 2015

Sheet No:

Commenced on: 10/03/2015

Completed on: 11/03/2015

Pit size: 3.00mX3.00mX3.00m(depth)

Load on pr.guage/divn.=20kg/sq.cm

Load on jack/divn. = 14.20t

Plate size: 060mX0.60m

Load on plate/divn.= 3.94t/sq.m

Test Type: Cyclic PLT

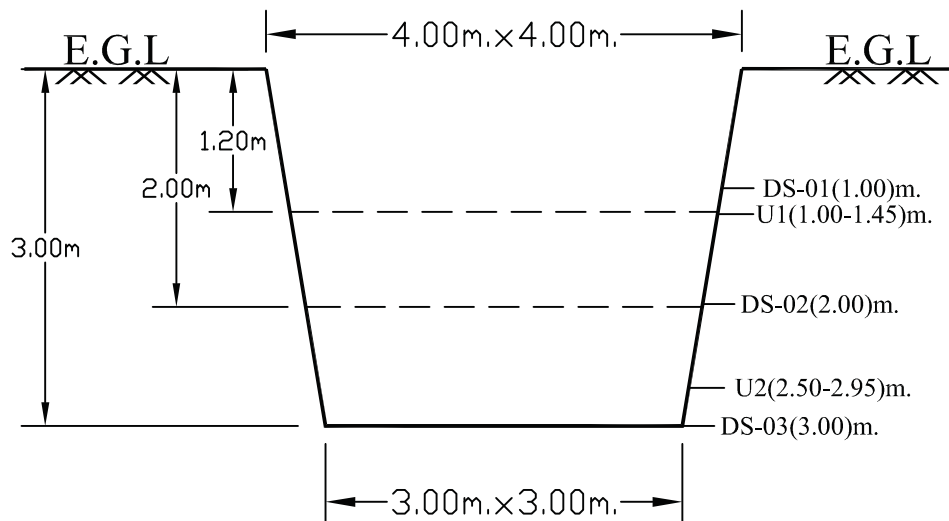
Co-ordinates:

E = 467919.000M.

N = 1947103.000M.

RL = 99.385M.

SWL = 2.50 m.



Description of Soil:-

(EGL - 1.20)m:- Deep grey, silty clay. Obs. gravels & calcareous nodules.

(1.20 - 2.00)m:- Light grey, clayey silty sand with decomposed & calcareous nodules.

(2.00 - 3.00)m:- Light grey, silty sand with decomposed rock.

PIT LOG OF CPLT - 02





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 19 / 02 / 2015

Sheet No:

Commenced on: 14/03/2015

Completed on: 15/03/2015

Pit size: 4.00mX4.00mX3.00m(depth)

Load on pr.guage/divn.=20kg/sq.cm

Load on jack/divn. = 14.20t

Plate size: 060mX0.60m

Load on plate/divn.= 3.94t/sq.m

Test Type: Cyclic PLT

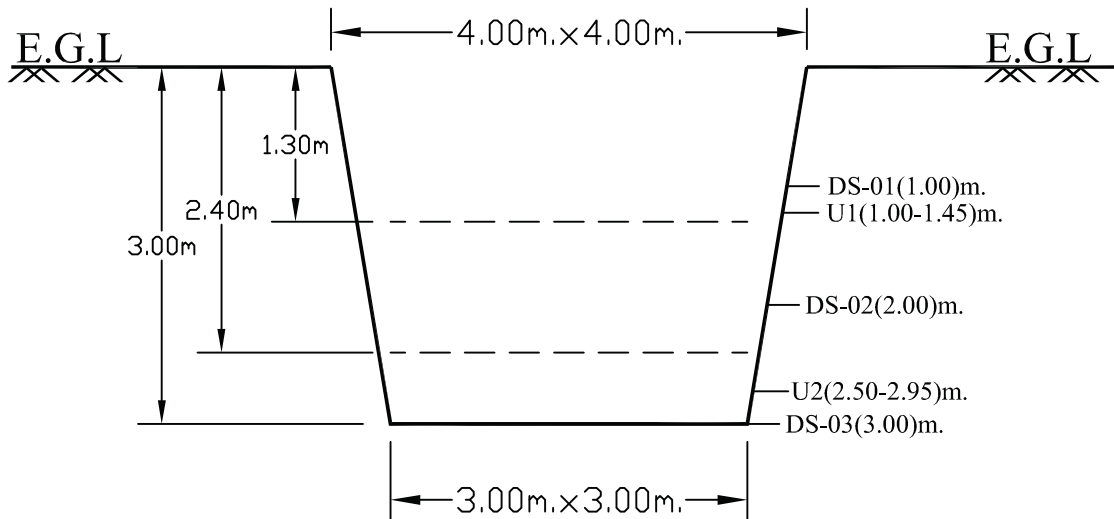
Co-ordinates:

E = 468003.000M.

N = 1947162.000M.

RL = 98.239M.

SWL = Not found



Description of Soil:-

(EGL - 1.30)m:- Deep grey, silty clay with sand mixture.

(1.30 - 2.40)m:- Brownish grey to whitish grey, clayey silt with sand mixture & calcareous nodules. Obs. gravels.

(2.40 - 3.00)m:- Brownish grey, silty sand with decomposed rock.

PIT LOG OF CPLT - 03





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 19 / 02 / 2015

Sheet No:

Commenced on: 16/03/2015

Completed on: 17/03/2015

Pit size: 4.00mX4.00mX3.00m(depth)

Load on pr.guage/divn.=20kg/sq.cm

Load on jack/divn. = 14.20t

Plate size: 060mX0.60m

Load on plate/divn.= 3.94t/sq.m

Test Type: Cyclic PLT

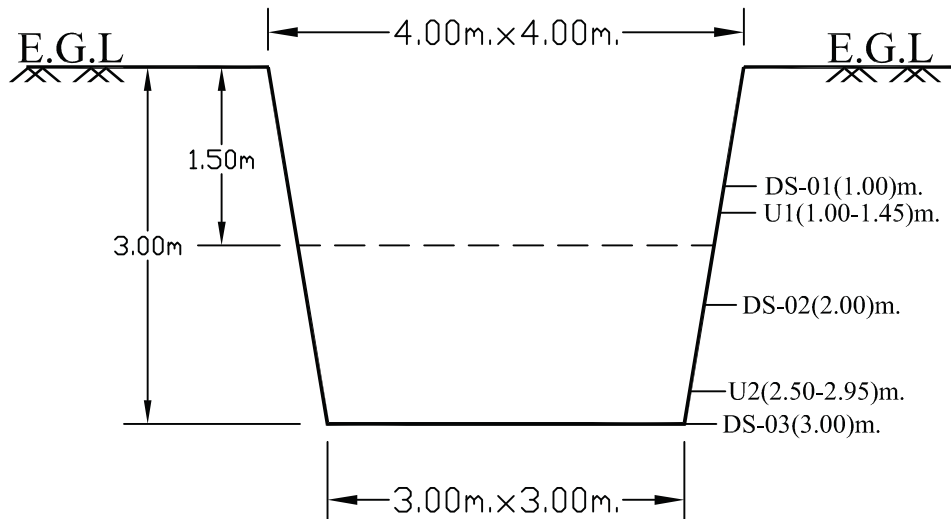
Co-ordinates:

E = 468094.000M.

N = 1947162.000M.

RL = 98.012M.

SWL = 2.70 m.



Description of Soil:-

(EGL - 1.50)m:- Deep grey, silty clay with sand mixture. Obs. calcareous nodules & gravels.

(1.50-3.00)m:- Brownish grey with white patches, clayey silty sand with decomposed rock.

PIT LOG OF CPLT - 04





Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 19 / 02 / 2015

Sheet No:

Commenced on: 21/03/2015

Completed on: 22/03/2015

Pit size: 3.00mX3.00mX3.00m(depth)

Load on pr.guage/divn.=20kg/sq.cm

Load on jack/divn. = 14.20t

Plate size: 060mX0.60m

Load on plate/divn.= 3.94t/sq.m

Test Type: Cyclic PLT

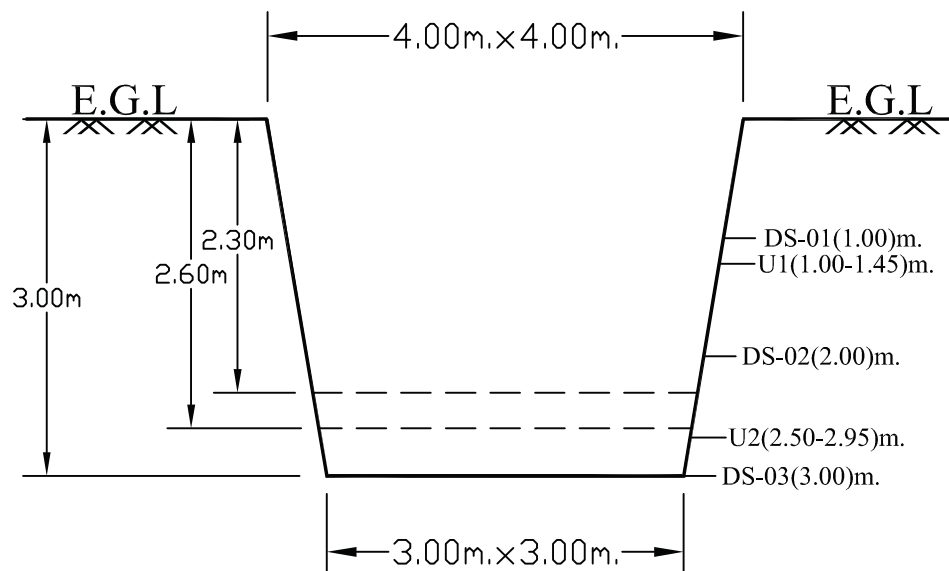
Co-ordinates:

E = 468136.000M.

N = 1947271.000M.

RL = 97.209M.

SWL = Not found



Description of Soil:-

(EGL - 2.30)m:- Deep grey, silty clay with calcareous nodules.

(2.30 - 2.60)m:- Whitish grey, clayey silt with calcareous nodules & decomposed rock.

(2.60 - 3.00)m:- Ligh grey, clayey silty sand with decomposed rock.

PIT LOG OF CPLT - 05



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

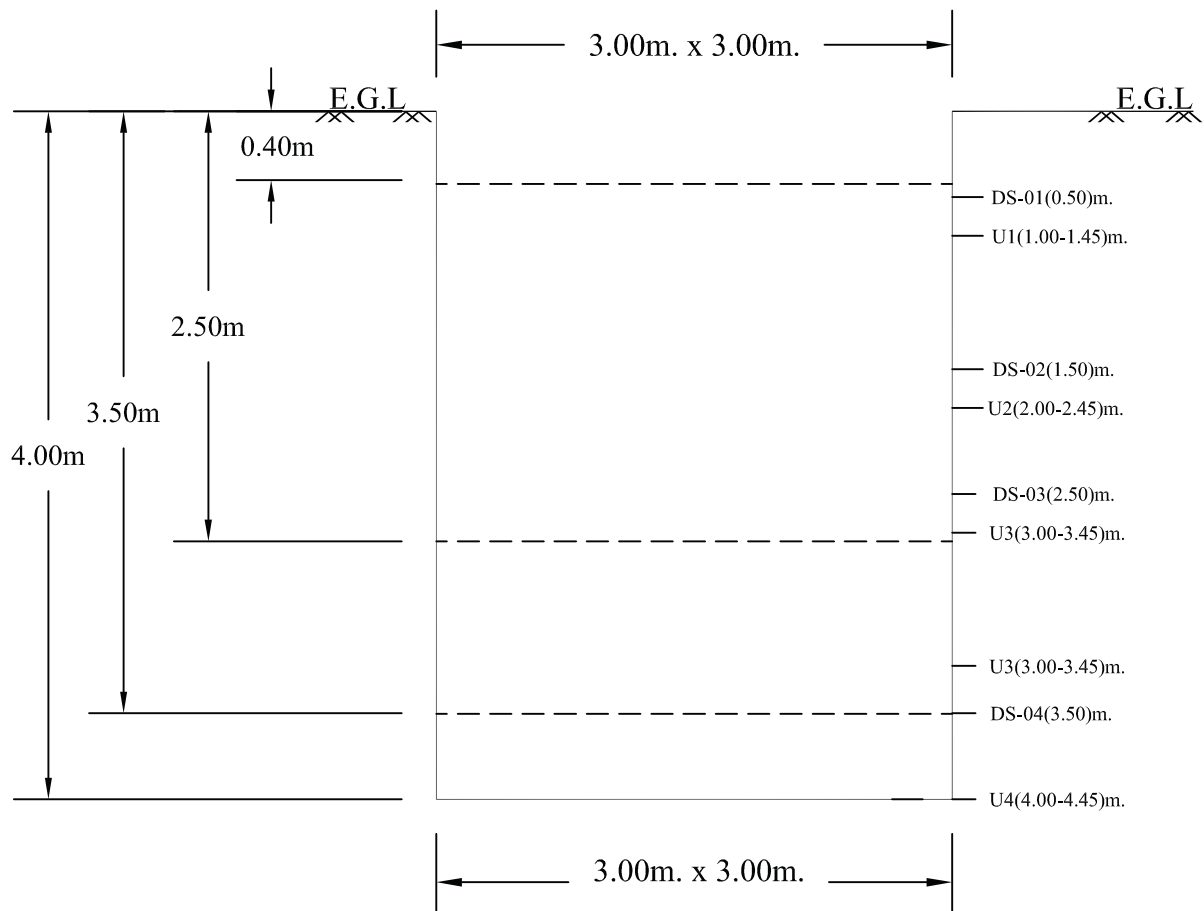
Co-Ordinate:-

E = 466214

N = 1948420

RL = 95.734

S.W.L. = 3.60m.



Description Of Soil:-

EGL - 0.40m :- Filled up by blackish grey, silty clay with kankars.

0.40m - 2.50m :- Whitish grey, sandy silt with moorum. Obs. gravels, calcareous nodules.

2.50m - 3.50m :- Blackish grey, silty clay. Obs. decomposed rock.

3.50m - 4.00m :- Light yellowish grey, silty clay. Obs. steel grey patches.

PIT LOG FOR TP - 01

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

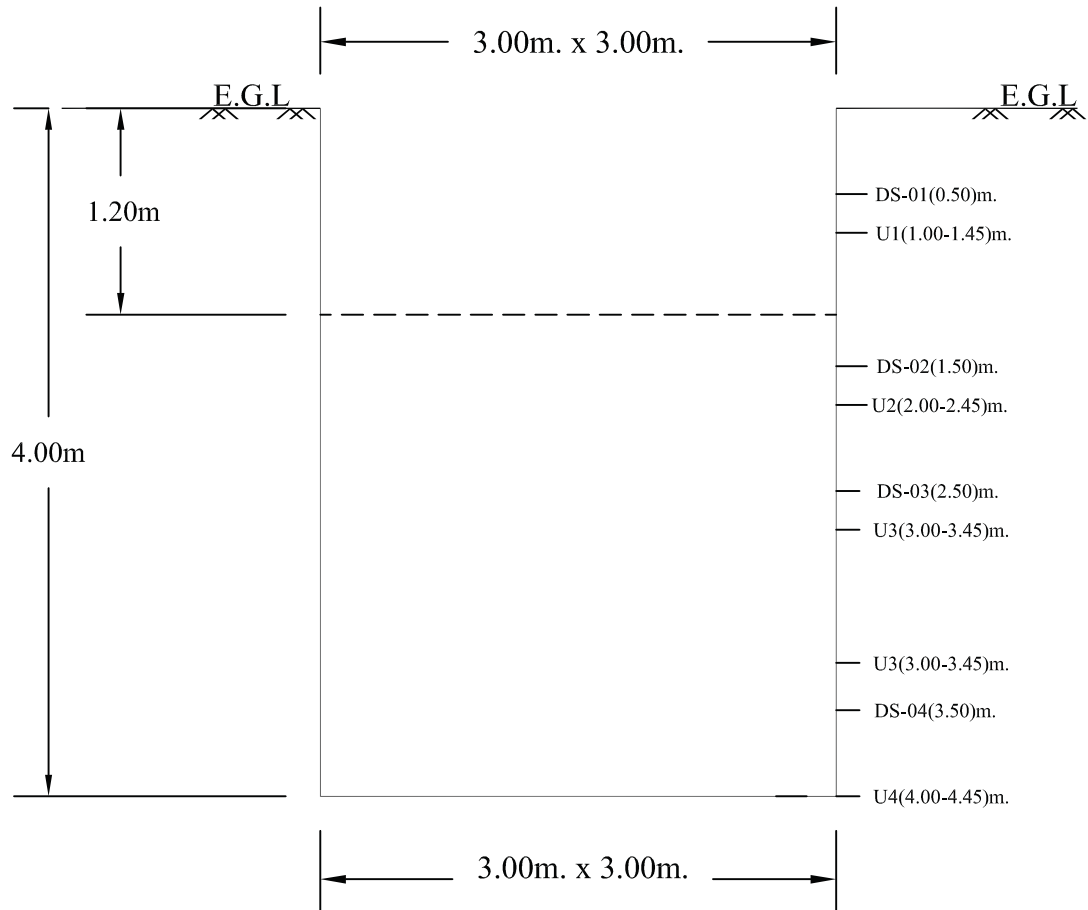
Co-Ordinate:-

E = 466130

N = 1948124

RL = 102.101

S.W.L. = Not found



Description Of Soil:-

EGL - 1.20m :- Reddish brown, sandy silt with moorum. Obs. gravels, calcareous nodules..

1.20m - 4.00m :- Light grey, decomposed rock with boulder.

PIT LOG FOR TP - 02

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

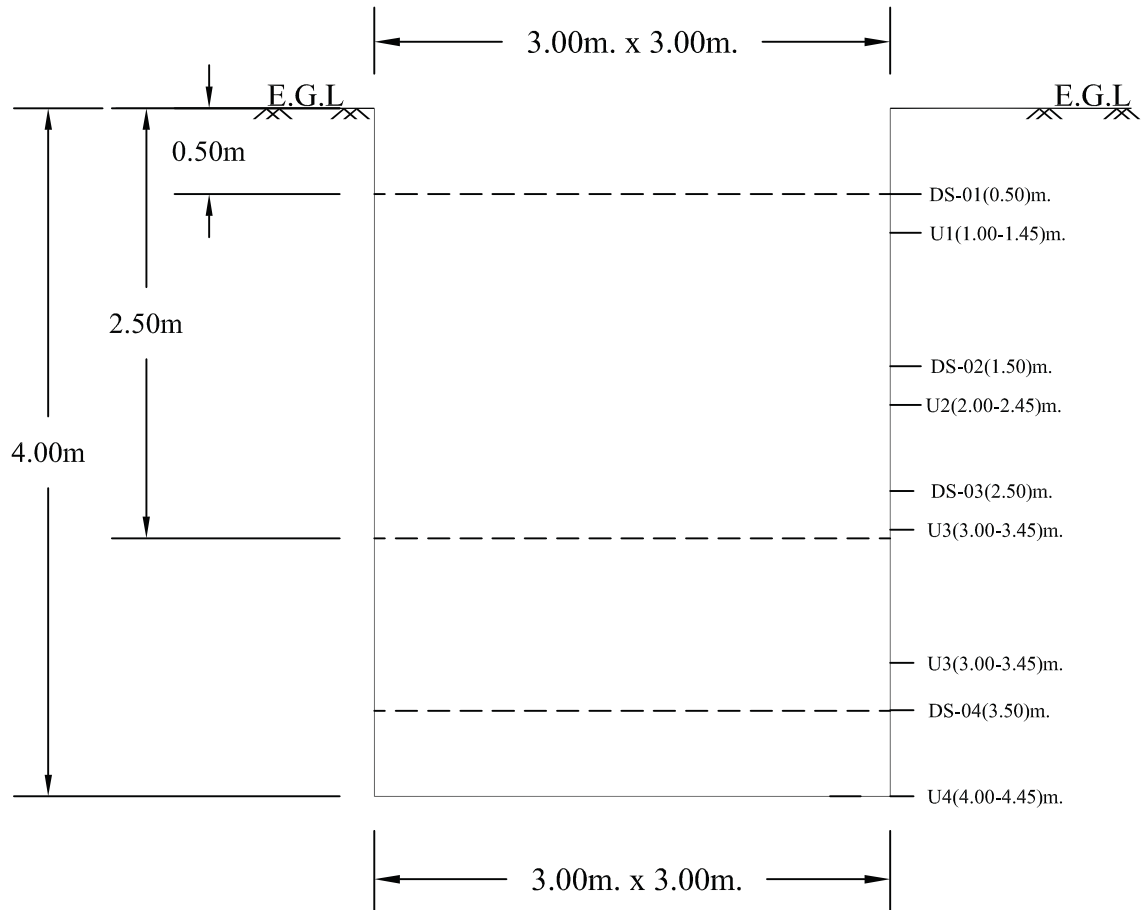
Co-Ordinate:-

E = 466578

N = 1947475

RL = 113.413

S.W.L. = Not found



Description Of Soil:-

EGL - 0.50m :- Whitish grey, clayey silt with boulder. Obs. kankars.

0.50m - 2.50m :- Whitish grey, sandy silt with moorum. Obs. calcareous nodules, gravels.

3.50m - 4.00m :- Light grey, sandy silt with decomposed rock. Obs. moorum.

PIT LOG FOR TP - 03

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

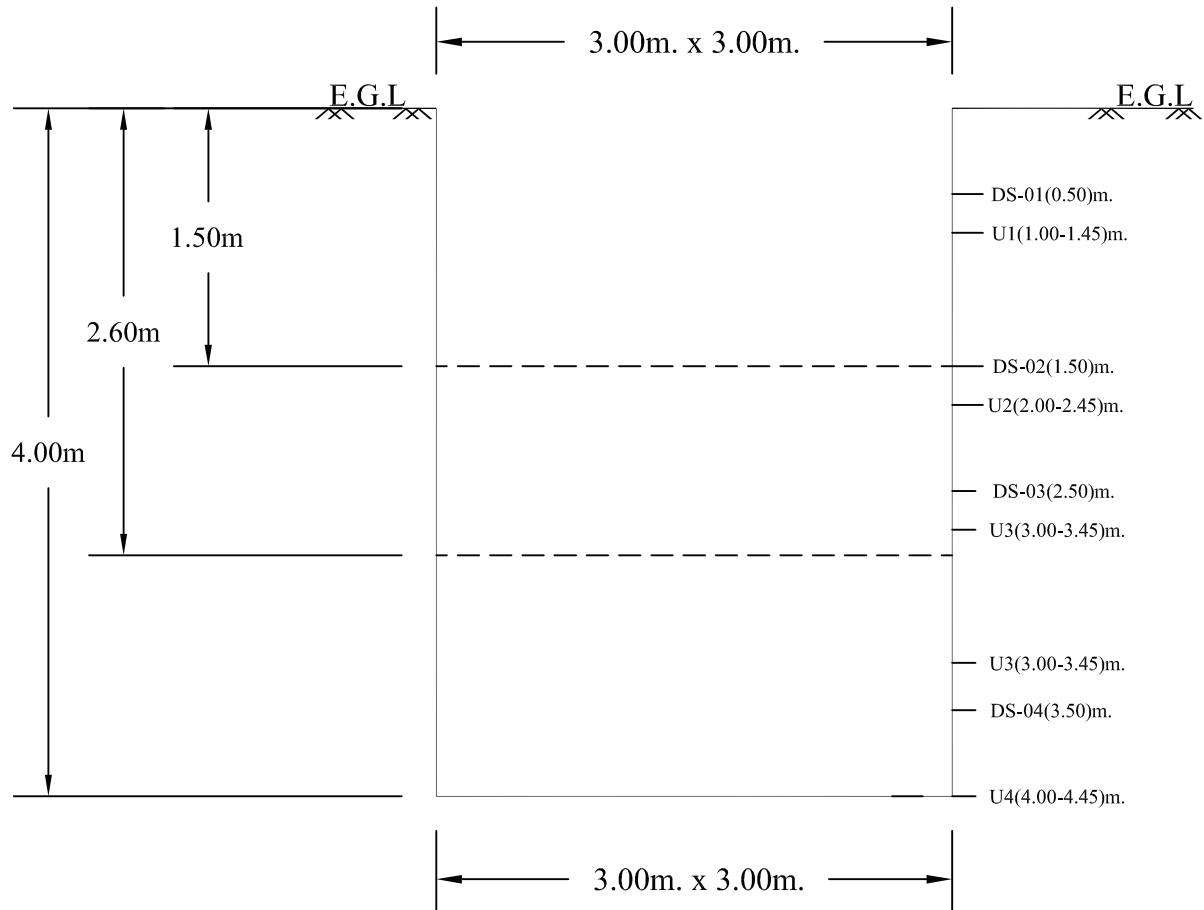
Co-Ordinate:-

E = 467256.341

N = 1946893.857

RL = 104.396

S.W.L. = Not found



Description Of Soil:-

EGL - 1.50m :- Deep grey, silty clay. Obs. kankars.

1.50m - 2.60m :- Reddish brown, sandy silt with moorum. Obs. gravels, calcareous nodules.

2.60m - 4.00m :- Whitish brown, sandy silt with moorum. Obs. gravels, calcareous nodules.

PIT LOG FOR TP - 04

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

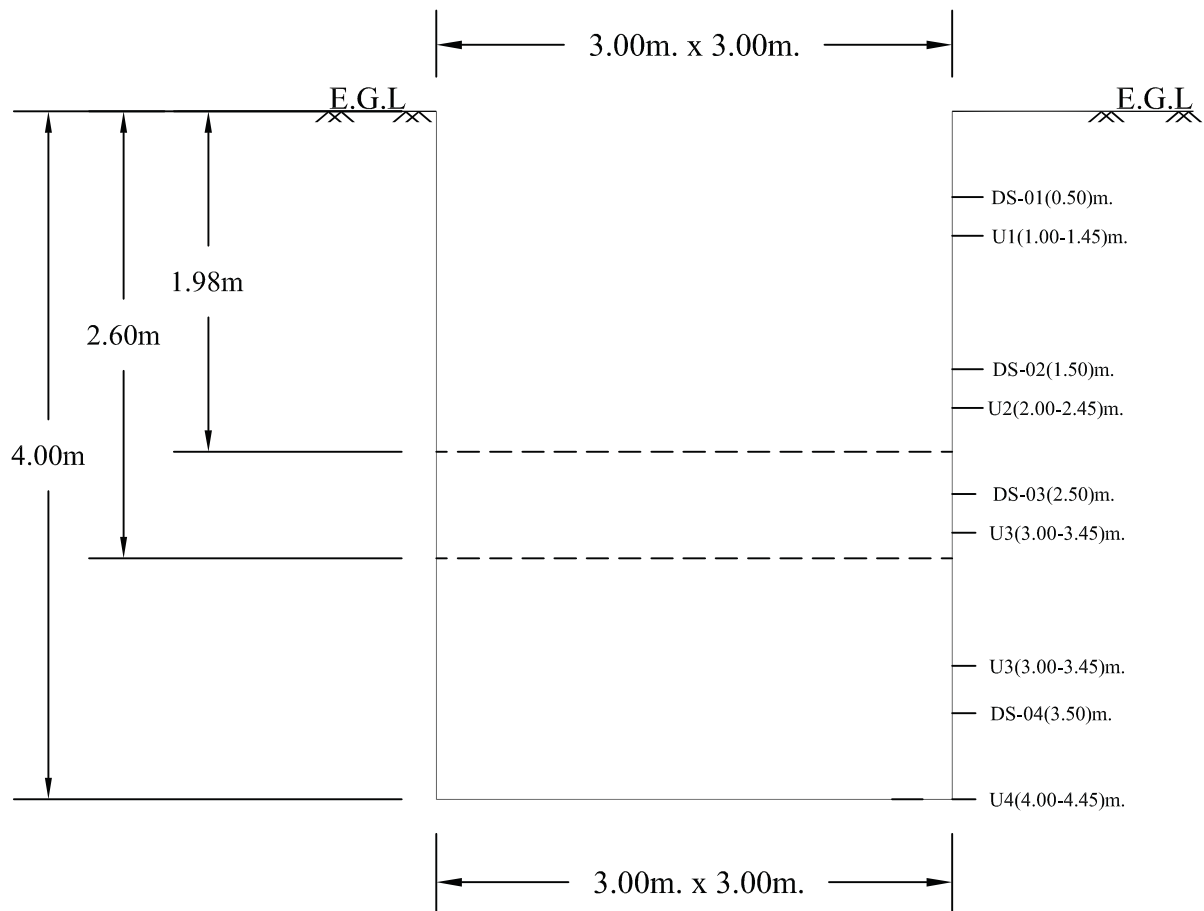
Co-Ordinate:-

E = 467546.000

N = 1946771.000

RL = 105.071

S.W.L. = Not found



Description Of Soil:-

EGL - 1.98m :- Deep grey, silty clay. Obs. kankars.

1.98m - 2.60m :- Light grey, sandy silt with moourm. Obs. gravels, calcareous nodules.

2.60m - 4.00m :- Light grey, decomposed rock with boulder.

PIT LOG FOR TP - 05



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

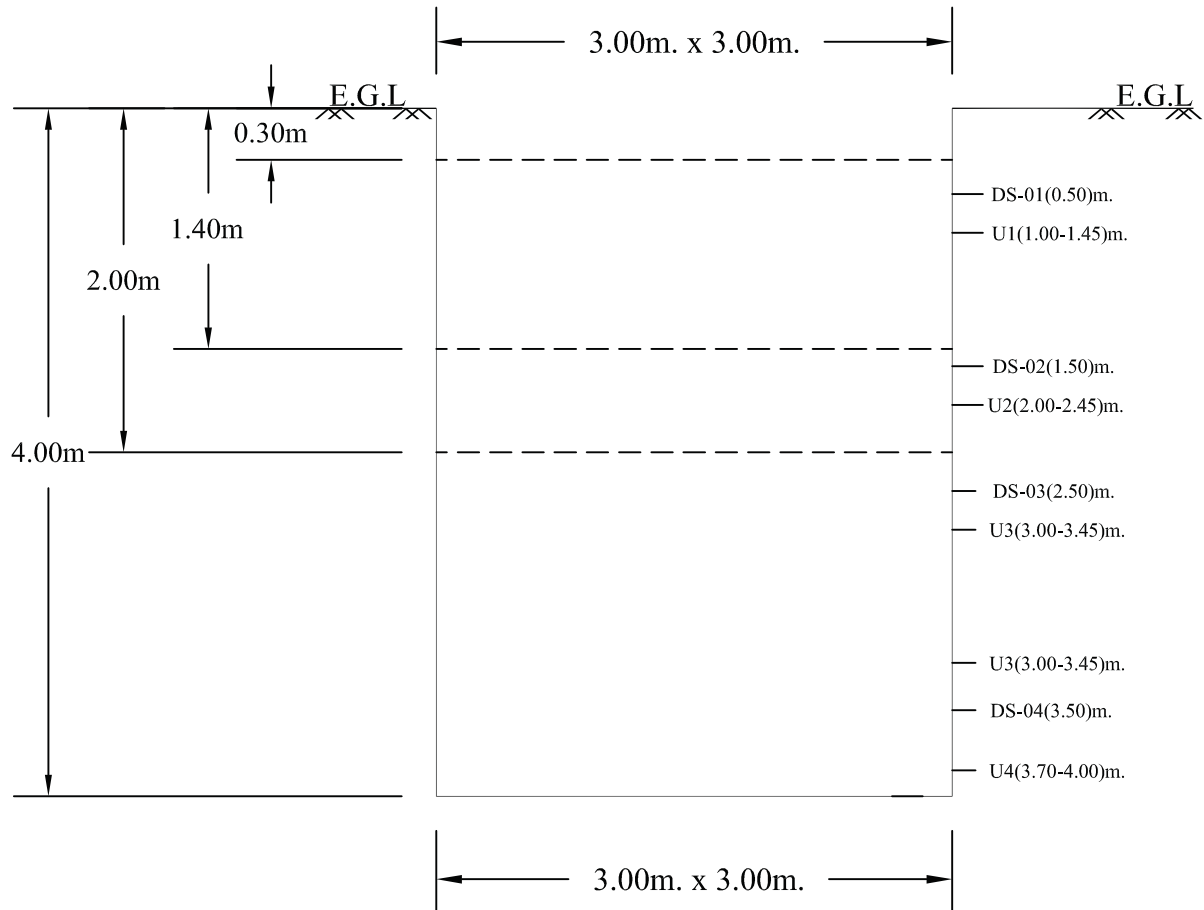
Co-Ordinate:-

E = 467749.000

N = 1946953.000

RL = 102.023

S.W.L. = 3.70m.



Description Of Soil:-

EGL - 0.30m :- Filled up by light grey ash with gravels, boulders. Obs. brick pieces & sand mixture.

0.30m - 1.40m :- Deep grey, silty clay. Obs. gravels, calcareous nodules.

1.40m - 2.00m :- Light grey, moorum. Obs. calcareous nodules.

2.00m - 4.00m :- Light grey, sandy silt with decomposed rock.

PIT LOG FOR TP - 06



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

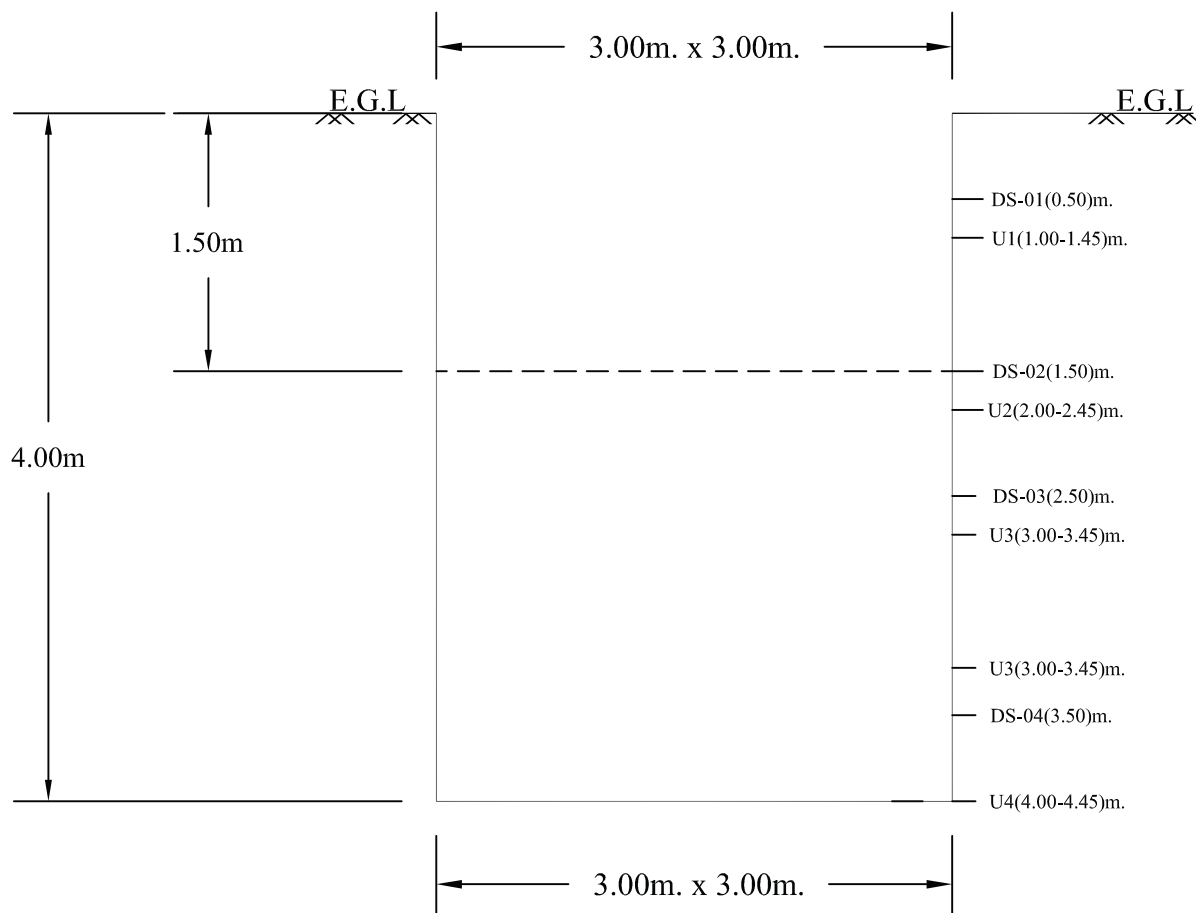
Co-Ordinate:-

E = 467913.000

N = 1947019.000

RL = 99.155

S.W.L. = 2.80 m.



Description Of Soil:-

EGL - 1.50m :- Blackish grey, silty clay. Obs. calcareous nodules.

1.50m - 4.00m :- Light grey to deep grey, sandy silt with decomposed rock. Obs. boulder & rock pieces.

PIT LOG FOR TP - 07

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

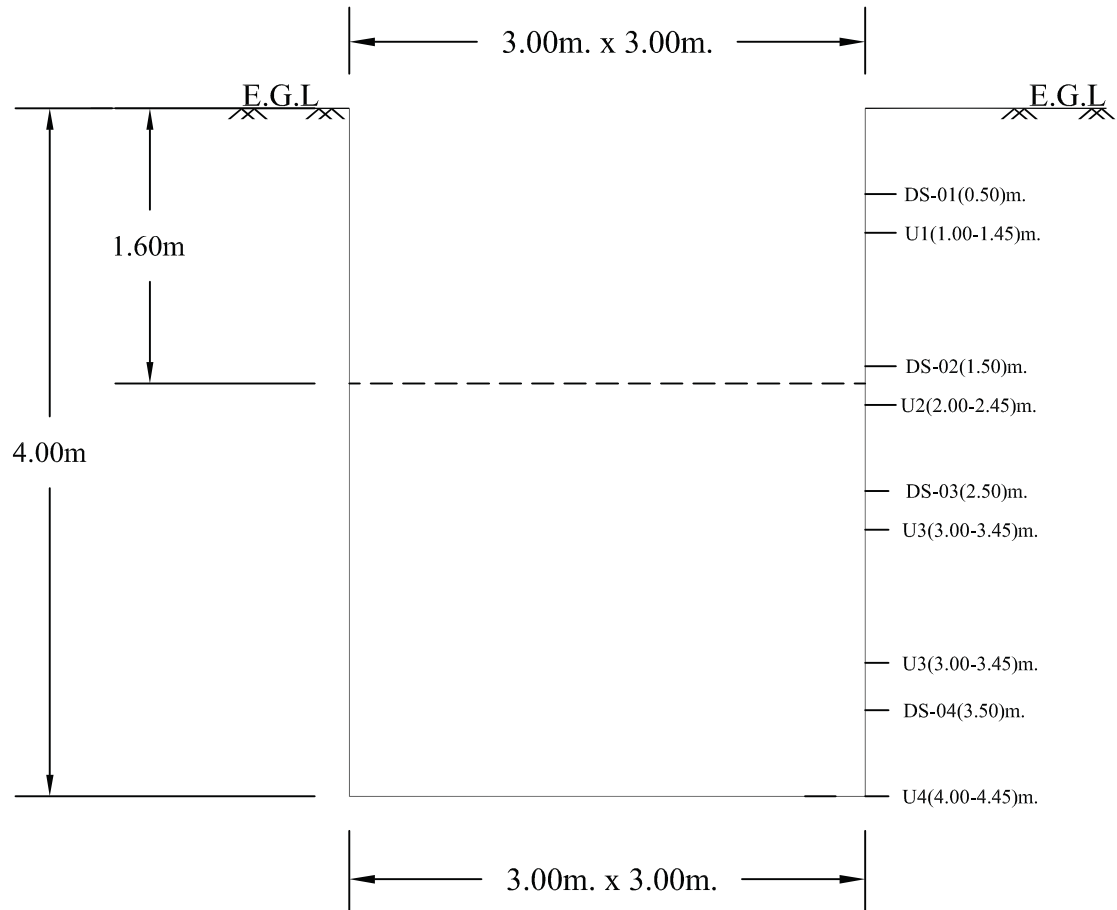
Co-Ordinate:-

E = 467919.000

N = 1946975.000

RL = 99.575

S.W.L. = 3.90m.



Description Of Soil:-

EGL - 1.60m :- Blackish grey, silty clay. Obs. gravels & calcareous nodules.

1.60m - 4.00m :- Light grey to deep grey, sandy silt with decomposed rock.

PIT LOG FOR TP - 08

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

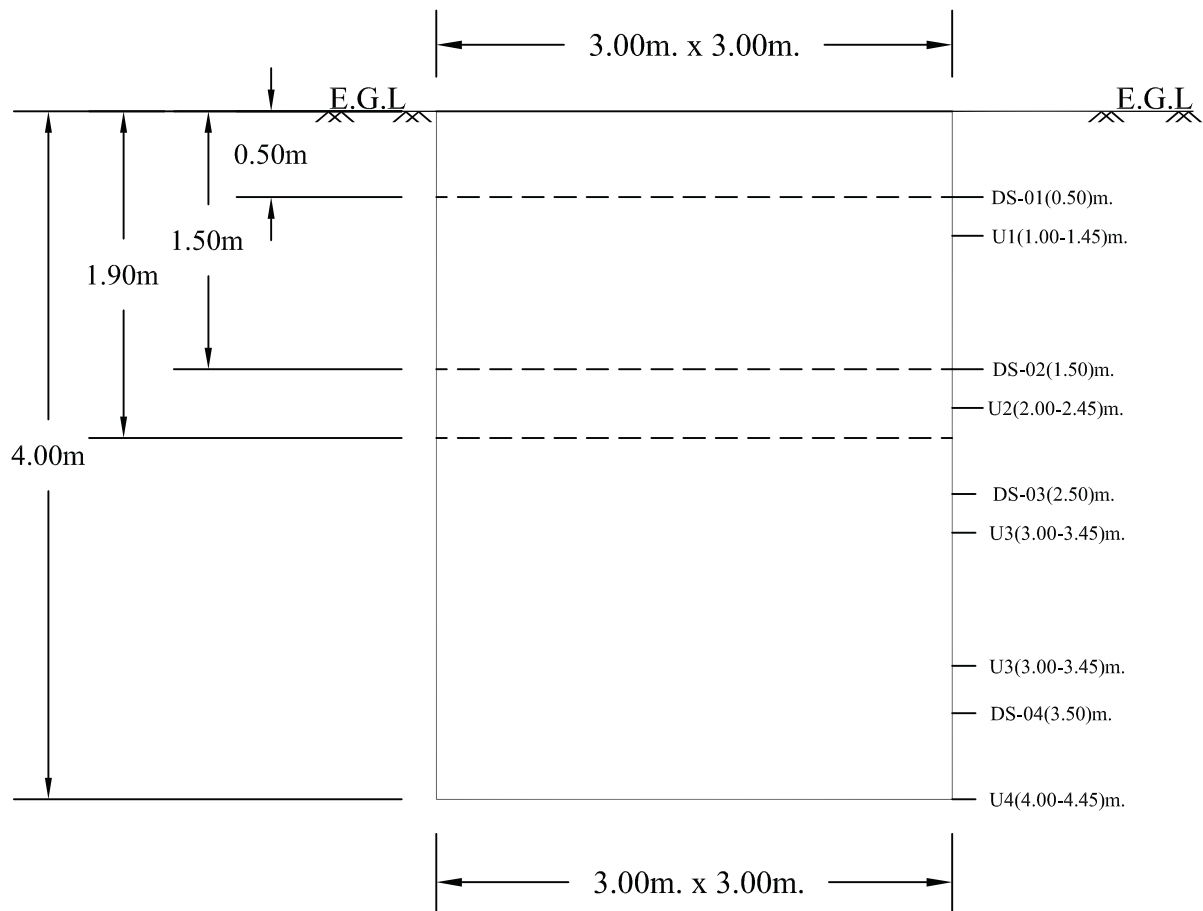
Co-Ordinate:-

E = 468101.000

N = 1947210.000

RL = 97.154

S.W.L. = 2.60m.



Description Of Soil:-

EGL - 0.50m :- Filled up soil consists of brownish grey, silty clay / clayey silt. Obs. gravels.

0.50m - 1.50m :- Blackish grey, silty clay. Obs. calcareous nodules.

1.50m - 1.90m :- Brownish grey, silty clay with moorum & gravels.

1.90m - 4.00m :- Whitish grey, sandy silt with decomposed rock.

PIT LOG FOR TP - 09

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No : 3 4 2 1

Created by : Chandrani

Created on : 13 / 02 / 2015

Sheet No:

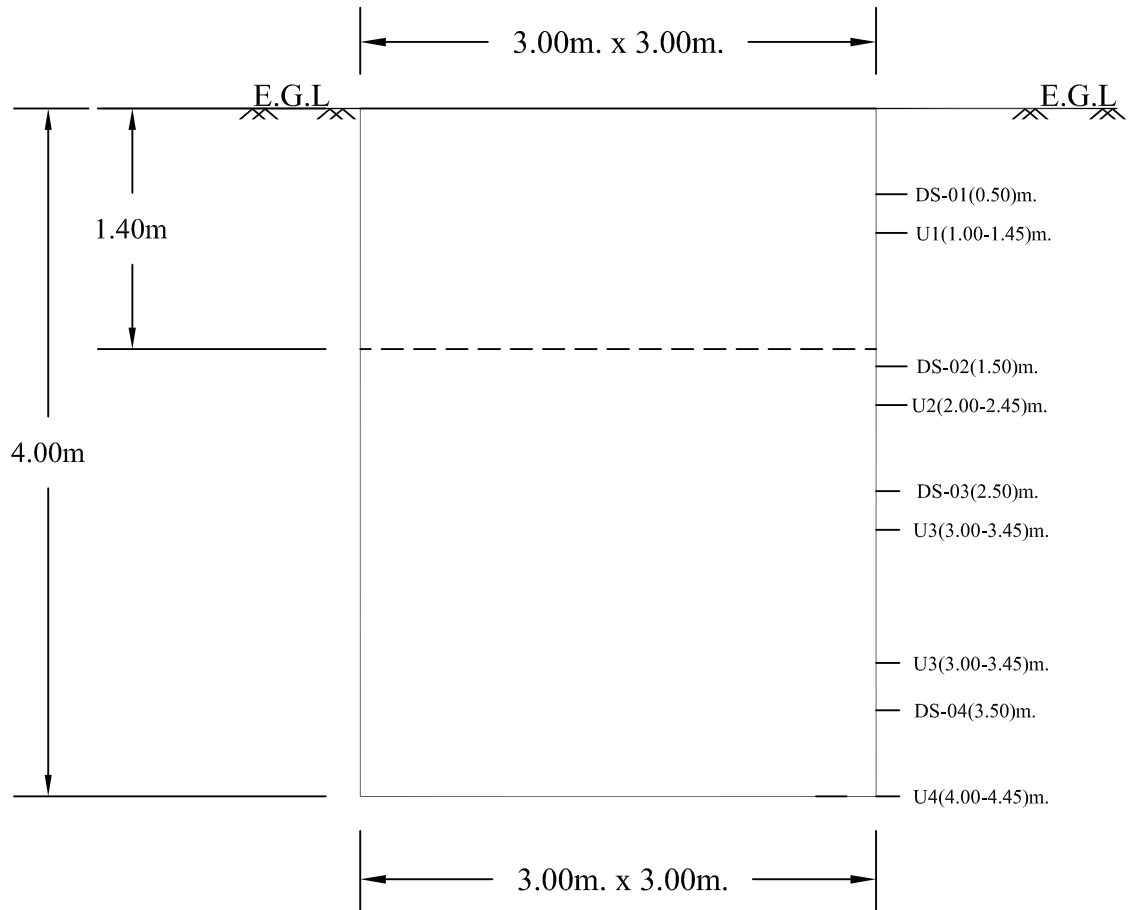
Co-Ordinate:-

E = 467864.000

N = 1946777.000

RL = 101.890

S.W.L. = Not found



Description Of Soil:-

EGL - 1.40m :- Blackish grey, silty clay. Obs. gravels & calcareous nodules.

1.40m - 4.00m :- Light grey / greenish grey, sandy silt with decomposed rock.

PIT LOG FOR TP - 10

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. : 3421

Sheet No.

DYNAMIC CONE PENETRATION TEST RESULTS

DCPT No.	Co-Ordinates		R.L. of Ground (M)	Starting Depth (M)	Ending Depth (M)	Average Depth (M)	Nc	Value
	Easting	Northinng						
DCPT-01	466161.000	1947925.000	107.781	0.00	0.30	0.15	56	
				0.30	0.60	0.45	115	
				0.60	0.90	0.75	53	
				0.90	1.20	1.05	44	
				1.20	1.50	1.35	46	
				1.50	1.80	1.65	110	
				1.80	2.10	1.95	154	
DCPT-02	466324.000	1947564.000	112.748	0.00	0.30	0.15	19	
				0.30	0.60	0.45	27	
				0.60	0.90	0.75	31	
				0.90	1.20	1.05	30	
				1.20	1.50	1.35	53	
				1.50	1.80	1.65	159	
DCPT-03	466784.000	1947411.000	113.408	0.00	0.30	0.15	12	
				0.30	0.60	0.45	14	
				0.60	0.90	0.75	18	
				0.90	1.20	1.05	25	
				1.20	1.50	1.35	32	
				1.50	1.80	1.65	34	
				1.80	2.10	1.95	50	
				2.10	2.40	2.25	102	
DCPT-04	467728.000	1946791.000	104.109	0.00	0.30	0.15	14	
				0.30	0.60	0.45	12	
				0.60	0.90	0.75	9	
				0.90	1.20	1.05	13	
				1.20	1.50	1.35	17	
				1.50	1.80	1.65	24	
				1.80	2.10	1.95	26	
				2.10	2.40	2.25	41	
				2.40	2.70	2.55	37	
				2.70	3.00	2.85	41	
				3.00	3.30	3.15	44	
				3.30	3.60	3.45	34	
				3.60	3.90	3.75	37	
				3.90	4.20	4.05	31	
				4.20	4.50	4.35	54	
DCPT-05	467729.000	1946895.000	103.289	4.50	4.80	4.65	103	
				4.80	5.10	4.95	200	
				0.00	0.30	0.15	19	
				0.30	0.60	0.45	16	
				0.60	0.90	0.75	18	
				0.90	1.20	1.05	18	
				1.20	1.50	1.35	525	
Extrapolated value								

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. : 3421

Sheet No.

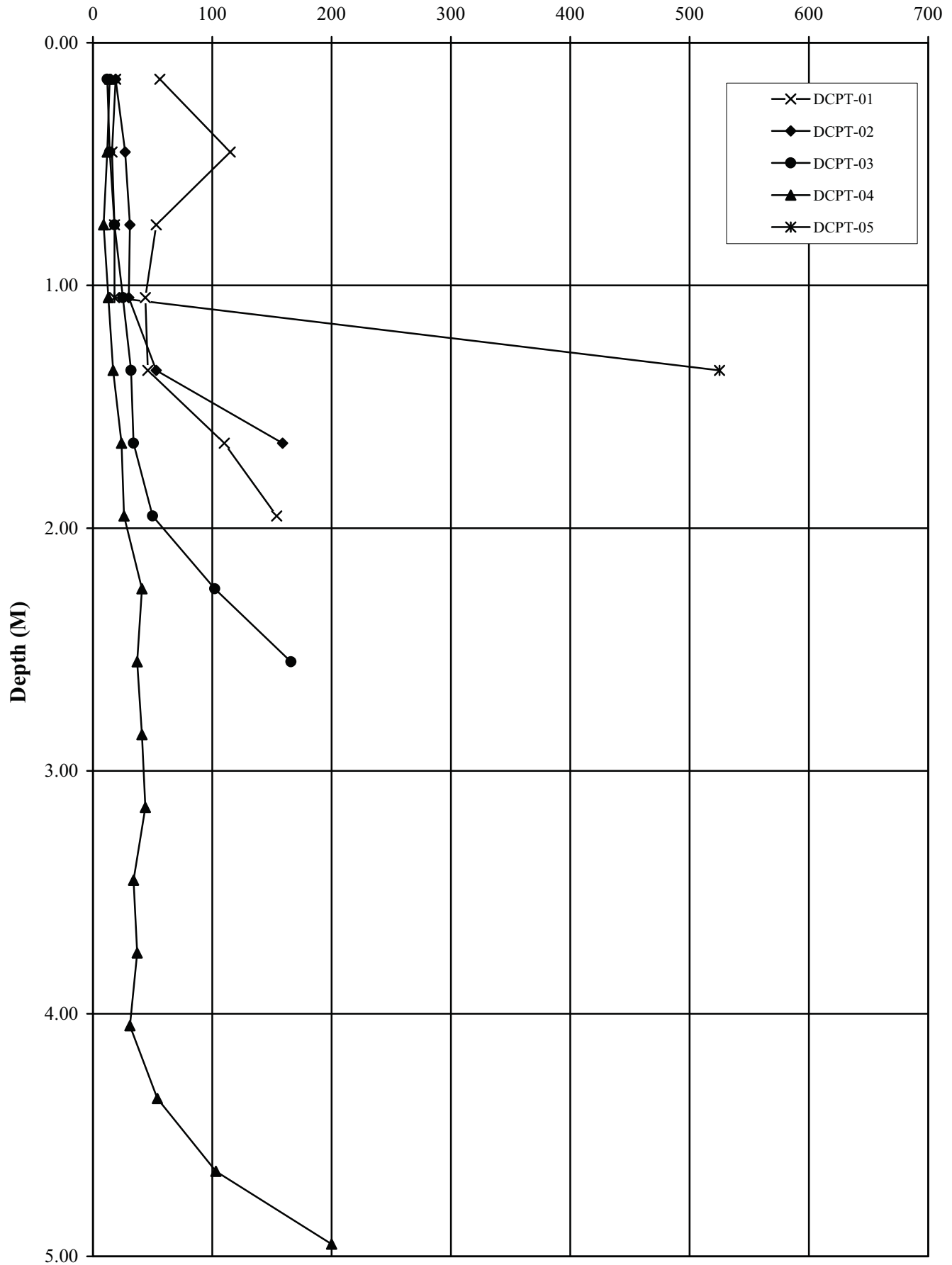
DYNAMIC CONE PENETRATION TEST RESULTS

DCPT No.	Co-Ordinates		R.L. of Ground (M)	Starting Depth (M)	Ending Depth (M)	Average Depth (M)	Nc	Value
	Easting	Northinng						
DCPT-06	467877.000	1947084.000	98.638	0.00	0.30	0.15	9	
				0.30	0.60	0.45	16	
				0.60	0.90	0.75	24	
				0.90	1.20	1.05	36	
				1.20	1.50	1.35	28	
				1.50	1.80	1.65	33	
				1.80	2.10	1.95	23	
				2.10	2.40	2.25	26	
				2.40	2.70	2.55	45	
				2.70	3.00	2.85	73	
				3.00	3.30	3.15	67	
				3.30	3.60	3.45	197	
								Extrapolated value
DCPT-07	467806.000	1947336.000	104.879	0.00	0.30	0.15	126	
				0.30	0.60	0.45	120	
				0.60	0.90	0.75	74	
				0.90	1.20	1.05	66	
				1.20	1.50	1.35	35	
				1.50	1.80	1.65	16	
				1.80	2.10	1.95	11	
				2.10	2.40	2.25	10	
				2.40	2.70	2.55	14	
				2.70	3.00	2.85	18	
				3.00	3.30	3.15	27	
				3.30	3.60	3.45	35	
				3.60	3.90	3.75	49	
				3.90	4.20	4.05	59	
				4.20	4.50	4.35	76	
				4.50	4.80	4.65	97	
				4.80	5.10	4.95	124	
				5.10	5.40	5.25	201	
DCPT-08	468047.000	1947172.000	97.680	0.00	0.30	0.15	2	
				0.30	0.60	0.45	3	
				0.60	0.90	0.75	3	
				0.90	1.20	1.05	5	
				1.20	1.50	1.35	11	
				1.50	1.80	1.65	14	
				1.80	2.10	1.95	27	
				2.10	2.40	2.25	30	
				2.40	2.70	2.55	28	
				2.70	3.00	2.85	70	
				3.00	3.30	3.15	423	
								Extrapolated value

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.**Job No. : 3421****Sheet No.****DYNAMIC CONE PENETRATION TEST RESULTS**

DCPT No.	Co-Ordinates		R.L. of Ground (M)	Starting Depth (M)	Ending Depth (M)	Average Depth (M)	Nc	Value
	Easting	Northinng						
DCPT-09	468163.000	1946990.000	100.984	0.00	0.30	0.15	11	
				0.30	0.60	0.45	19	
				0.60	0.90	0.75	16	
				0.90	1.20	1.05	16	
				1.20	1.50	1.35	16	
				1.50	1.80	1.65	34	
				1.80	2.10	1.95	13	
				2.10	2.40	2.25	16	
				2.40	2.70	2.55	27	
				2.70	3.00	2.85	38	
				3.00	3.30	3.15	51	
				3.30	3.60	3.45	50	
				3.60	3.90	3.75	64	
				3.90	4.20	4.05	60	
				4.20	4.50	4.35	50	
				4.50	4.80	4.65	150	
DCPT-10	468114.000	1947462.000	100.554	0.00	0.30	0.15	60	
				0.30	0.60	0.45	145	
				0.60	0.90	0.75	50	
				0.90	1.20	1.05	24	
				1.20	1.50	1.35	42	
				1.50	1.80	1.65	18	
				1.80	2.10	1.95	16	
				2.10	2.40	2.25	37	
				2.40	2.70	2.55	100	
				2.70	3.00	2.85	209	

DCPT Value (Nc)



DCPT Value (Nc) vs. Depth Plot

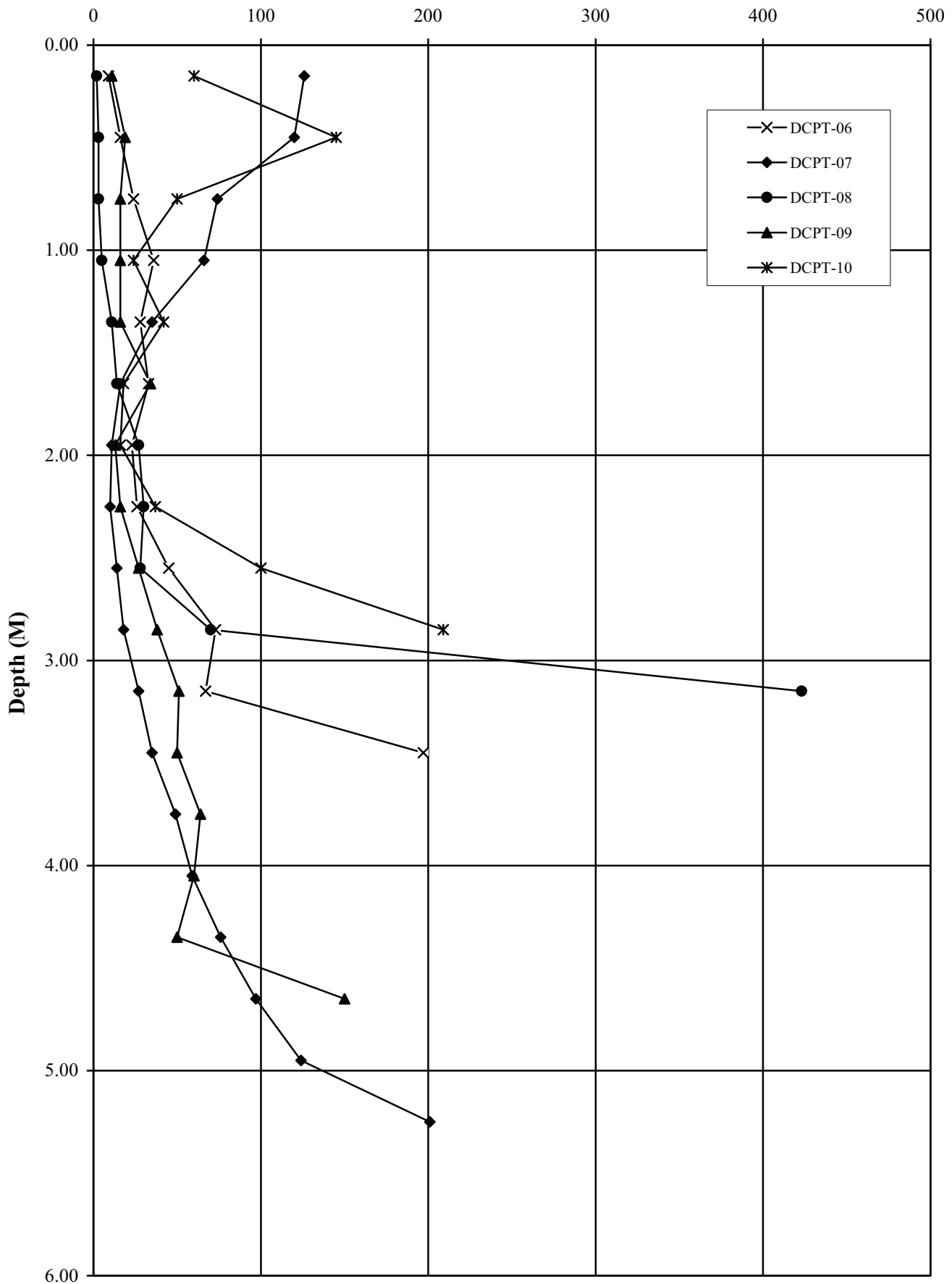
Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. : 3421

Sheet No.

DCPT Value (Nc)



DCPT Value (Nc) vs. Depth Plot

Job No. : 3421

Sheet No.

SCPT NO. - 1

Mass of cone(kg), m =	1.029	Area of friction jacket (sqcm), a =	100.57
Area of Cone (sqcm), b =	10	Mass of each rod (kg), m =	1.529
Plunger Area (sqcm), ap =	20	Ratio of plunger area to cone area =	2
		Mass of friction jacket(kg), mf =	1.111

Depth	Cone Resistance, Gauge Reading, kg/sqcm	Total Resistance, Gauge Reading, kg/sqcm	Corr. Cone Resistance, Qc, kg/sqcm	Corr. Friction Resistance, fs, kg/sqcm	Friction Ratio	No of bars
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.2	6.0	8.0	12	0.21	1.7	1
0.4	12.0	15.0	24	0.31	1.3	1
0.6	17.0	22.0	34	0.51	1.5	1
0.8	22.0	25.0	44	0.31	0.7	1
1.0	23.0	27.0	46	0.41	0.9	2
1.2	26.0	32.0	52	0.61	1.2	2
1.4	29.0	35.0	58	0.61	1.0	2
1.6	44.0	54.0	88	1.01	1.1	2
1.8	132.0	144.0	264	1.20	0.5	2
2.0	83.0	94.0	167	1.10	0.7	3
2.2	85.0	95.0	171	1.01	0.6	3
2.4	90.0	100.0	181	1.01	0.6	3
2.6	95.0	120.0	191	2.50	1.3	3
2.8	110.0	140.0	221	2.99	1.4	3
3.0	125.0	145.0	251	2.00	0.8	4
3.2	138.0	160.0	277	2.20	0.8	4
3.4	142.0	175.0	285	3.29	1.2	4
3.6	153.0	180.0	307	2.70	0.9	4

Layer No	Depth		Average Friction Ratio	Type of Soil	Average Qc kg/sqcm	Strength Parameters (c / ϕ)
	From (M)	To (M)				
IV	0	1.60	1.17	Silty sand	45.08	45°
V	1.60	3.60	0.86	Sand	231.21	46°

Job No. : 3421

Sheet No.

SCPT NO. - 2

Mass of cone(kg), m =	1.029	Area of friction jacket (sqcm), a =	100.57
Area of Cone (sqcm), b =	10	Mass of each rod (kg), m =	1.529
Plunger Area (sqcm), ap =	20	Ratio of plunger area to cone area =	2
		Mass of friction jacket(kg), mf =	1.111

Depth	Cone Resistance, Gauge Reading, kg/sqcm	Total Resistance, Gauge Reading, kg/sqcm	Corr. Cone Resistance, Qc, kg/sqcm	Corr. Friction Resistance, fs, kg/sqcm	Friction Ratio	No of bars
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.2	8.0	22.0	16	1.40	8.6	1
0.4	22.0	26.0	44	0.41	0.9	1
0.6	24.0	28.0	48	0.41	0.8	1
0.8	14.0	16.0	28	0.21	0.7	1
1.0	16.0	25.0	32	0.91	2.8	2
1.2	18.0	25.0	36	0.71	1.9	2
1.4	35.0	55.0	70	2.00	2.8	2
1.6	32.0	46.0	64	1.40	2.2	2
1.8	30.0	35.0	60	0.51	0.8	2
2.0	44.0	47.0	89	0.31	0.3	3
2.2	64.0	67.0	129	0.31	0.2	3
2.4	50.0	62.0	101	1.20	1.2	3
2.6	56.0	70.0	113	1.40	1.2	3
2.8	65.0	91.0	131	2.60	2.0	3
3.0	62.0	97.0	125	3.49	2.8	4
3.2	82.0	122.0	165	3.99	2.4	4
3.4	115.0	155.0	231	3.99	1.7	4
3.6	105.0	145.0	211	3.99	1.9	4

Layer No	Depth		Average Friction Ratio	Type of Soil	Average Qc kg/sqcm	Strength Parameters (c / ϕ)
	From (M)	To (M)				
II	0	0.20	8.60	Clay	16.00	0.59kg/sqcm
IV	0.20	2.00	1.50	Silty sand	52.60	44°
V	2.00	3.60	1.69	Sand	150.39	45°

Job No. : 3421

Sheet No.

SCPT NO. - 3

Mass of cone(kg), m =	1.029	Area of friction jacket (sqcm), a =	100.57
Area of Cone (sqcm), b =	10	Mass of each rod (kg), m =	1.529
Plunger Area (sqcm), ap =	20	Ratio of plunger area to cone area =	2
		Mass of friction jacket(kg), mf =	1.111

Depth	Cone Resistance, Gauge Reading, kg/sqcm	Total Resistance, Gauge Reading, kg/sqcm	Corr. Cone Resistance, Qc, kg/sqcm	Corr. Friction Resistance, fs, kg/sqcm	Friction Ratio	No of bars
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.2	10.0	15.0	20	0.51	2.5	1
0.4	8.0	10.0	16	0.21	1.3	1
0.6	13.0	15.0	26	0.21	0.8	1
0.8	10.0	12.0	20	0.21	1.0	1
1.0	12.0	15.0	24	0.31	1.3	2
1.2	13.0	18.0	26	0.51	1.9	2
1.4	20.0	22.0	40	0.21	0.5	2
1.6	10.0	17.0	20	0.71	3.5	2
1.8	35.0	40.0	70	0.51	0.7	2
2.0	35.0	40.0	71	0.51	0.7	3
2.2	25.0	30.0	51	0.51	1.0	3
2.4	40.0	52.0	81	1.20	1.5	3
2.6	105.0	115.0	211	1.01	0.5	3
2.8	130.0	160.0	261	2.99	1.1	3

Layer No	Depth		Average Friction Ratio	Type of Soil	Average Qc kg/sqcm	Strength Parameters (c / ϕ)
	From	To				
	(M)	(M)				
IVA	0	0.40	1.90	Sandy silt	18.26	44°
IV	0.40	2.40	1.30	Silty sand	43.02	46°
V	2.40	2.80	0.81	Sand	235.56	45°

Job No. : 3421

Sheet No.

SCPT NO. - 4

Mass of cone(kg), m =	1.029	Area of friction jacket (sqcm), a =	100.57
Area of Cone (sqcm), b =	10	Mass of each rod (kg), m =	1.529
Plunger Area (sqcm), ap =	20	Ratio of plunger area to cone area =	2
		Mass of friction jacket(kg), mf =	1.111

Depth	Cone Resistance, Gauge Reading, kg/sqcm	Total Resistance, Gauge Reading, kg/sqcm	Corr. Cone Resistance, Qc, kg/sqcm	Corr. Friction Resistance, fs, kg/sqcm	Friction Ratio	No of bars
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.2	23.0	30.0	46	0.71	1.5	1
0.4	36.0	40.0	72	0.41	0.6	1
0.6	18.0	22.0	36	0.41	1.1	1
0.8	10.0	15.0	20	0.51	2.5	1
1.0	10.0	15.0	20	0.51	2.5	2
1.2	15.0	19.0	30	0.41	1.3	2
1.4	13.0	18.0	26	0.51	1.9	2
1.6	15.0	19.0	30	0.41	1.3	2
1.8	10.0	15.0	20	0.51	2.5	2
2.0	12.0	19.0	25	0.71	2.9	3
2.2	30.0	40.0	61	1.01	1.7	3
2.4	40.0	45.0	81	0.51	0.6	3
2.6	30.0	35.0	61	0.51	0.8	3
2.8	20.0	25.0	41	0.51	1.3	3
3.0	30.0	45.0	61	1.50	2.5	4
3.2	120.0	160.0	241	3.99	1.7	4
3.4	160.0	210.0	321	4.98	1.6	4

Layer No	Depth		Average Friction Ratio	Type of Soil	Average Qc kg/sqcm	Strength Parameters (c / ϕ)
	From (M)	To (M)				
IV	0	3.00	1.67	Silty sand	42.04	43°
V	3.00	3.40	1.61	Sand	280.71	45°

Job No. : 3421

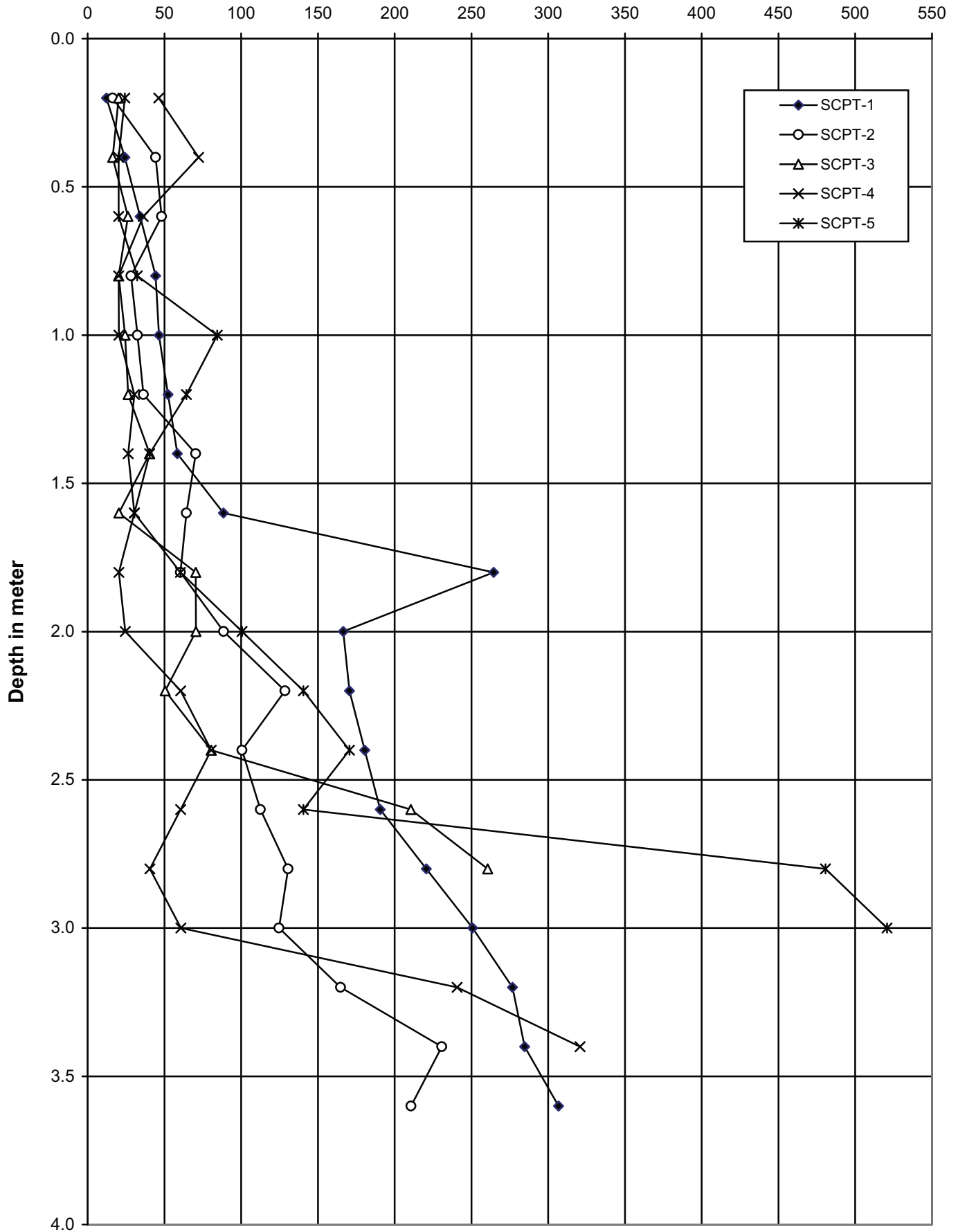
Sheet No.

SCPT NO. - 5

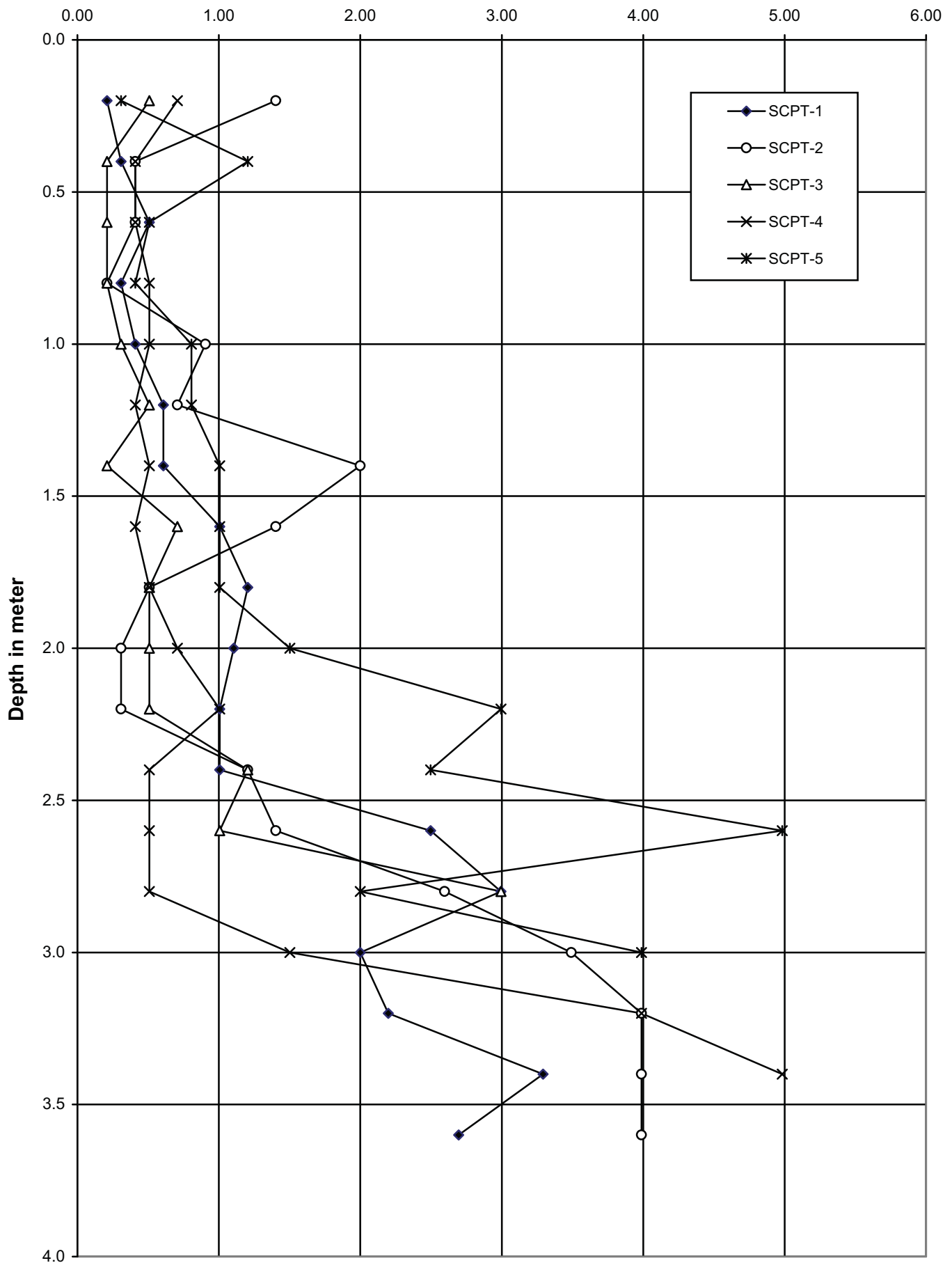
Mass of cone(kg), m =	1.029	Area of friction jacket (sqcm), a =	100.57
Area of Cone (sqcm), b =	10	Mass of each rod (kg), m =	1.529
Plunger Area (sqcm), ap =	20	Ratio of plunger area to cone area =	2
		Mass of friction jacket(kg), mf =	1.111

Depth	Cone Resistance, Gauge Reading, kg/sqcm	Total Resistance, Gauge Reading, kg/sqcm	Corr. Cone Resistance, Qc, kg/sqcm	Corr. Friction Resistance, fs, kg/sqcm	Friction Ratio	No of bars
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0.2	12.0	15.0	24	0.31	1.3	1
0.4	10.0	22.0	20	1.20	5.9	1
0.6	10.0	15.0	20	0.51	2.5	1
0.8	16.0	20.0	32	0.41	1.3	1
1.0	42.0	50.0	84	0.81	1.0	2
1.2	32.0	40.0	64	0.81	1.3	2
1.4	20.0	30.0	40	1.01	2.5	2
1.6	15.0	25.0	30	1.01	3.3	2
1.8	30.0	40.0	60	1.01	1.7	2
2.0	50.0	65.0	101	1.50	1.5	3
2.2	70.0	100.0	141	2.99	2.1	3
2.4	85.0	110.0	171	2.50	1.5	3
2.6	70.0	120.0	141	4.98	3.5	3
2.8	240.0	260.0	481	2.00	0.4	3
3.0	260.0	300.0	521	3.99	0.8	4

Layer No	Depth		Average Friction Ratio	Type of Soil	Average Qc kg/sqcm	Strength Parameters (c / ϕ)
	From (M)	To (M)				
IV	0	2.00	2.22	Silty sand	47.8	43°
V	2.00	3.00	1.66	Sand	290.59	46°

Corr. Cone Resistance, Q_c , kg/sqcm

Corr. Cone Resistance vs depth plot

Corr. Frictional Resistance, f_s , kg/sqcm

Corr. Frictional Resistance vs depth plot

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. : 3421

Sheet No.

FIELD PERMEABILITY TESTS:

Field permeability tests were conducted in five borehole locations. The test results are presented below.

Test Locations	Type of Test	Depth of Test (M)	Permeability (cm/sec)
BH-14	Falling Head	0.90-1.70	8.899×10^{-6}
	Falling Head	2.70-3.50	5.638×10^{-5}
	Falling Head	4.20-5.00	7.328×10^{-5}
	Falling Head	5.70-6.50	5.206×10^{-5}
BH-33	Falling Head	1.30 – 2.00	1.683×10^{-6}
	Falling Head	2.70 – 3.50	7.818×10^{-7}
	Falling Head	4.30 – 5.00	4.324×10^{-5}
	Falling Head	5.70 – 6.50	1.012×10^{-5}
BH-43	Falling Head	1.20-2.00	5.439×10^{-6}
	Falling Head	2.80-3.50	6.966×10^{-6}
	Falling Head	4.50-5.20	5.944×10^{-5}
	Falling Head	5.70-6.50	1.089×10^{-5}
BH-57	Falling Head	1.20-2.00	3.071×10^{-5}
	Falling Head	2.70-3.40	1.643×10^{-5}
	Falling Head	4.20-5.00	4.155×10^{-5}
	Falling Head	5.70-6.50	4.106×10^{-5}
BH-63	Falling Head	1.30 - 2.00	4.716×10^{-6}
	Falling Head	2.70 - 3.50	1.774×10^{-4}
	Falling Head	4.30 - 5.10	9.792×10^{-5}
	Falling Head	5.70 - 6.50	6.525×10^{-5}

PERCOLATION TEST RESULTS:

3Nos. percolation test was conducted by falling head method and the test results are presented below.

Percolation No.	Depth (M)	Permeability (cm/sec)
1 near TP-06	4.00	1.038×10^{-6}
2 near TP-08	4.00	1.434×10^{-6}
3 near TP-10	4.00	7.002×10^{-7}

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

Job No. : 3421

Sheet No.

PART II: LABORATORY TEST RESULTS



TEST REPORT

TEST REPORT NO : 3421 DATE: 01/05/2015

Name and Address of Customer: Bharat Heavy Electricals Limited,
Power Sector Southern Region,
690, Annasalai, Nandanam, Chennai - 600035

Customer Reference No : PSER:SCT:1565 PACKAGE B/18-Dec-14/3421

Customer Reference Date : 17/02/2015

Date of Sample Received at Lab : 11/02/2015

Date of Starting of Test : 18/02/2015

Date of Completion of Test : 29/04/2015

Sample ID Nos : 3421/BH-01/SPT01 to 3421/CPLT-04/DS01

Please refer the page nos. 185 of 274 to 202 of 274 of the Report for the following:

1. Sample Description
2. Test methods used
3. Test results

Further to note that the test parameters are mentioned at the header of test result table.

* The report related to the particular sample(s) tested under stated condition.

* All tests are based as per IS specifications.

* Any discrepancy in this report should be brought to the notice within 15 (fifteen) days from the date of certificate.

* Full/Partial use of this test results could not be done without the written permission of authorized signatory.

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana



Job No. : 3421

Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk		Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results					Atter. Limits			IS Classification	Grain Size					Test Method
				Dens. gms/cc	Ratio					Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Fricth Deg.	LL %	PL %	SL %	Gravl %		Sand %	Silt %	Clay %			
BH01	SPT01	1.00	Light whitish grey silty clay with kankar.											51	20		CH		48	52 (silt+clay)	* See the Note			
BH02	SPT01	1.00	Reddish brown silty clay with kankar.											54	19		CH		45	55 (silt+clay)	Do			
BH03	SPT01	1.00	Light grey silty clay with kankar.											44	18		CI		42	58 (silt+clay)	Do			
BH04	SPT01	1.00	Deep grey silty clay with kankar.											47	20		CI		40	60 (silt+clay)	Do			
BH05	SPT01	1.00	Deep grey silty clay with kankar.											68	25		CH		29	71 (silt+clay)	Do			
BH06	SPT01	1.00	Brownish grey, silty clay with high percentage of calcareous nodules.				2.73							45	21		SC		53**	30	17	Do		
BH06	UDS01	2.00	Brownish grey, silty clay with calcareous nodules.	1.99	1.66			19 S 20 T		TRSH-UU 3.0 2.0 1.0	0.61 0.691 0.577 0.555	0	54	18		SC		5	51**	44 (silt+clay)	Do			
BH07	SPT01	1.00	Brownish grey, silty clay with traces of calcareous nodules.										65	23	10	CH					Do			
BH07	UDS01	2.00	Brownish grey, silty sand with calcareous nodules, traces of clay binders.	1.78	1.58			13 S		DRSH-CU 0.5 1.0 2.0	0.07 0.475 0.710 1.520	35				SM		40	34	26 (silt+clay)	Do			
BH08	SPT01	1.00	Brownish grey, silty clay with high percentage of calcareous nodules.										41	18		SC		58**	39	3	Do			
BH08	UDS01	2.00	Brownish grey, silty clay / clayey silt with traces of calcareous nodules.	1.93	1.62			6 S 19 T		TRSH-UU 3.0 2.0 1.0	0.57 0.599 0.583 0.523	0	55	20		SC		5	53**	42 (silt+clay)	Do			

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana**Job No. : 3421****Sheet No.**

Bore Hole	Sample Number	Depth M	Sample Description	Bulk		Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits				IS Classification	Grain Size				Test Method
				Dens. gms/cc	Dens. gms/cc					Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Fricth Deg.	LL %	PL %	SL %	Gravl %		Sand %	Silt %	Clay %		
BH09	UDS01	2.00	Brownish grey, silty clay with calcareous nodules.	1.94	1.58	2.62	23 S	23 T		UNCONF	1.62	0	58	19		CH		27	55	18	Do		
										0.0	1.564												
										0.0	1.654												
										0.0	1.654												
										REMOULD	1.30	0											
										0.0	1.313												
										0.0	1.292												
										0.0	1.284												
BH10	UDS01	2.00	Brownish grey silty clay with traces of calcareous nodules.	1.94	1.58	2.62	23 S	23 T	0.669	TRSH-UU	1.89	0	59	20		CH	30	50	20	Do			
								24 C		3.0	1.902												
										2.0	1.885												
										1.0	1.883												
										UNCONF	1.42	0											
										0.0	1.438												
										0.0	1.403												
										0.0	1.419												
										REMOULD	1.09	0											
										0.0	1.108												
										0.0	1.081												
										0.0	1.081												
BH11	UDS01	2.00	Deep grey silty clay with calcareous nodules.	1.92	1.67	2.67	14 S	15 T	0.444	TRSH-UU	0.92	0	41	15	10	SC	54	36	10	Do			
								17 C		3.0	0.938												
										2.0	0.916												
										1.0	0.906												
										UNCONF	0.70	0											
										0.0	0.723												
										0.0	0.706												
										0.0	0.671												
										REMOULD	0.52	0											
										0.0	0.538												
										0.0	0.525												
										0.0	0.497												
BH12	SPT01	1.00	Brownish grey, silty clay with traces of calcareous nodules.										62	21		CH					Do		
BH12	UDS01	2.00	Yellowish brown silty sand with calcareous nodules.	1.77	1.65		8 S	7DR		DRSH-CU	0.12	36				SM-SW	25	65	10 (silt+clay)	Do			
										0.5	0.460												
										1.0	0.909												
										2.0	1.575												
BH13	UDS01	2.00	Brownish grey, silty clay with calcareous nodules.			2.76			0.902	TRSH-UU	0.25	6	57	20		CH	31	47	22	Do			
										3.0	0.583												
										2.0	0.532												
										1.0	0.369												

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Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Gravl %	Sand %	Silt %	Clay %	
									UNCONFD	0.49	0										
									0.0	0.363											
									0.0	0.548											
									0.0	0.548											
									REMOULD	0.31	0										
									0.0	0.216											
									0.0	0.351											
									0.0	0.351											
BH14	SPT01	1.00	Deep grey silty clay with calcareous nodules.										52	21		CH-SC		52	36	12	Do
BH15	SPT01	1.00	Brownish grey, silty clay.										56	19		CH					Do
BH16	SPT02	2.00	Yellowish brown silty sand with decomposed rock.													SM	10	49	41 (silt+clay)		Do
BH17	UDS01	2.00	Brownish grey, silty clay / clayey silt with traces of kankars.	1.97	1.60		22 S	0.758	TRSH-UU	0.62	0	0	50	17		CH		48	38	14	Do
							23 T		3.0	0.672											
							24 C		2.0	0.622											
									1.0	0.576											
BH18	DS01	1.00	Deep grey silty clay with sand mixture.										56	24		CH					Do
BH19	UDS01	2.00	Brownish grey silty clay with sand mixture, calcareous nodules & gravel pieces.										36	15		SC	30	46**	24 (silt+clay)		Do
BH20	UDS01	2.00	Brownish grey, silty clay with sand mixture.			2.62			UNCONFD	0.80	0	0	64	21		CH		31	53	16	Do
									0.0	0.818											
									0.0	0.798											
									0.0	0.784											
									REMOULD	0.62	0										
									0.0	0.638											
									0.0	0.622											
									0.0	0.600											
BH21	UDS01	2.00	Brownish grey, silty clay with sand mixture, traces of kankars & mica.													SC*	3	40	57 (silt+clay)		Do

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Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Gravl %	Sand %	Silt %	Clay %	
BH22	SPT01	1.00	Brownish grey, silty clay with calcareous nodules & traces of sand mixture										37	16		SC	32	39	29	(silt+clay)	Do
BH23	UDS01	1.00	Deep grey, silty clay with calcareous nodules.	2.03	1.71	2.77	18 S 19 T 21 C	0.762	TRSH-UU 3.0 2.0 1.0 UNCONFD	0.31 0.333 0.313 0.282	0	0	59	16		CH	27	50	23		Do
									0.0 0.0 0.0 REMOULD	0.317 0.300 0.279 0.18	0	0									
									0.0 0.0 0.0	0.179 0.193 0.163											
BH25	UDS01	2.00	Brownish grey, silty clay with traces of rock pieces, calcareous nodules.				15 S 15 C	0.417					36	14		SC	9	51**	31	9	Do
BH25	SPT02	3.00	Brownish grey, silty clay with rock dust.										38	17		CI					Do
BH26	UDS01	2.00	Brownish grey, silty clay with traces of rock pieces, calcareous nodules.			2.63							33	16		SC	14	40**	46	(silt+clay)	Do
BH26	SPT02	3.00	Brownish grey, silty sand with traces of calcareous nodules & mica.									NP	NP			SM	14	71	15	(silt+clay)	Do
BH27	SPT01	1.00	Brownish grey, silty sand.										NP			SM*					Do
BH27	SPT02	2.60	Brownish grey, silty sand with traces of mica.													SM	84	16	(silt+clay)		Do
BH28	SPT01	1.00	Deep grey, silty clay with calcareous nodules & kankars.										55	18		SC	42	35	16	7	Do

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Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Gravl %	Sand %	Silt %	Clay %	
BH29	UDS01	2.00	Brownish grey, silty clay with traces of kankars.	1.94	1.56	2.63	23 S	0.628	TRSH-UU	0.44	0.44	6	49	17		Cl		23	60	17	Do
							25 T		3.0	0.805											
							26 C		2.0	0.714											
									1.0	0.587											
									UNCONF	0.73	0										
									0.0	0.718											
									0.0	0.739											
									0.0	0.739											
									REMOULD	0.56	0										
									0.0	0.547											
									0.0	0.563											
									0.0	0.563											
BH30	SPT01	1.00	Deep brownish grey, silty clay / clayey silt with sand mixture.										41	14		Cl					Do
BH30	SPT02	2.30	Deep grey, silty sand with decomposed rock dust, rock pcs & traces of mica.													SM	24	50	26 (silt+clay)		Do
BH31	UDS01	2.00	Brownish grey, silty clay with decomposed rock.	1.76	1.53		16 S	0.544	TRSH-UU	0.46	0.46	12	45	15		SC		63**	28	9	Do
							15 T		3.0	1.336											
							16 C		2.0	1.089											
									1.0	0.832											
BH32	UDS01	2.00	Brownish grey, silty clay / clayey silt with traces of kankars.						UNCONF	0.57	0.57	0	45	16	10	Cl		37	42	21	Do
									0.0	0.791											
									0.0	0.458											
									0.0	0.458											
									REMOULD	0.43	0										
									0.0	0.621											
									0.0	0.337											
									0.0	0.337											
BH33	SPT01	1.00	Deep grey, silty clay with sand mixtures.													SC*		38	45	17	Do
BH34	UDS01	2.00	Brownish grey, silty sand with calcareous nodules & traces of clay binders.	1.76	1.65	2.65	6 S		DRSH-CU	0.14	0.14	37	NP			SM-SP	31	57	10	2	Do
							7DR		0.5	0.485											
									1.0	0.933											
									2.0	1.620											
BH34	SPT02	3.00	Whitish grey, silty sand with decomposed rock dust & traces of mica.													SM	3	75	22 (silt+clay)		Do

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Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Grav. %	Sand %	Silt %	Clay %	
BH35	UDS01	2.00	Brownish grey, silty clay with traces of kankars.						TRSH-UU	0.25	9					SC*	2	29	69 (silt+clay)		Do
									3.0	0.844											
									2.0	0.656											
									1.0	0.474											
BH36	SPT01	1.00	Yellowish brown silty sand with decomposed rock.													SM	31	38	31 (silt+clay)		Do
BH37	SPT01	1.00	Brownish grey, silty clay with calcareous nodules.										44	18		SC	47	23	21	9	Do
BH38	SPT01	1.00	Brownish grey, silty clay with traces of calcareous nodules.										56	19		CH					Do
BH39	UDS01	2.00	Brownish grey, silty clay with traces of kankars.	1.87	1.41	2.74	29 S 32 T 32 C	0.888	TRSH-UU	0.10	0		51	15		CH		39	44	17	Do
									3.0	0.128											
									2.0	0.086											
									1.0	0.086											
									UNCONF	0.14	0										
									0.0	0.140											
									0.0	0.140											
									0.0	0.140											
									REMOULD	0.09	0										
									0.0	0.090											
									0.0	0.090											
									0.0	0.090											
BH40	SPT01	1.00	Brownish grey, silty clay with traces of calcareous nodules & kankars.										59	18		CH					Do
BH40	SPT02	3.00	Brownish grey, silty sand with traces of rock dust & mica.													SM	3	60	37 (silt+clay)		Do
BH41	SPT01	1.00	Brownish grey, silty clay with traces of sand mixture.										50	15		CH					Do
BH41	UDS01	2.00	Brownish grey, silty clay with kankars & traces of brick bats.	1.90	1.49	2.72	27 S 28 T 26 C	0.720	TRSH-UU	2.13	10		46	19	12	CI		37	48	15	Do
									3.0	3.181											
									2.0	2.951											
									1.0	2.802											

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Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Gravl %	Sand %	Silt %	Clay %	
BH46	UDS01	2.00	Deep grey silty clay.										33	12		CL					Do
BH47	SPT01	1.00	Deep grey, silty clay with sand mixture.													SC**		30	48	22	Do
BH48	UDS01	2.00	Brownish grey silty sand with clay binder.	1.77	1.58		10 S 12 DR			DRSH-CU	0.11	30				SM		84	16	(silt+clay)	Do
									0.5	0.316											
									1.0	0.790											
									2.0	1.203											
BH49	UDS01	2.00	Deep grey, silty clay with calcareous nodules.	1.92	1.52		25 S 26 T 23 C	0.799		TRSH-UU	1.34	0	43	13		SC		52**	37	11	Do
									3.0	1.385											
									2.0	1.339											
									1.0	1.283											
BH50	UDS01	2.00	Brownish grey, silty clay with calcareous nodules & rock dust.			2.63			UNCONFD	1.91	0	39	14		SC		44	33	17	6	Do
									0.0	1.928											
									0.0	1.881											
									0.0	1.921											
									REMOULD	1.47	0										
									0.0	1.488											
									0.0	1.452											
									0.0	1.470											
BH51	UDS01	2.00	Deep grey, silty clay with kankars.	1.94	1.52		25 S 27 T 28 C	0.719		TRSH-UU	0.51	0	52	17	9	CH		32	45	23	Do
									3.0	0.562											
									2.0	0.508											
									1.0	0.460											
									UNCONFD	0.53	0										
									0.0	0.531											
									0.0	0.531											
									0.0	0.531											
									REMOULD	0.35	0										
									0.0	0.350											
									0.0	0.350											
									0.0	0.350											
BH52	SPT01	1.00	Deep grey, silty clay with sand mixture.										63	18		CH		37	43	20	Do
BH52	UDS01	2.00	Light grey, silty clay with sand mixture & traces of calcareous nodules.						TRSH-UU	0.33	13					SM	3	72**	25	(silt+clay)	Do
									3.0	1.280											
									2.0	0.974											
									1.0	0.713											

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Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Gravl %	Sand %	Silt %	Clay %	
BH53	SPT02	2.80	Whitish grey, silty sand with decomposed rock dust & traces of mica.													SM	3	80	17	(silt+clay)	Do
BH54	UDS01	2.00	Brownish grey, silty clay with traces of calcareous nodules.	1.91	1.53		26 S 25 T 29 C	0.820	TRSH-UU 3.0 2.0 1.0 UNCONF	1.16 1.192 1.146 1.141	1.16	0	45	16		CI		33	53	14	Do
									0.0 0.0 0.0 REMOULD	1.141 1.141 1.141 0.88	1.14	0									
									0.0 0.0 0.0	0.898 0.876 0.866											
BH55	UDS01	2.00	Brownish grey, silty clay with traces of calcareous nodules.			2.63							55	18		CH	17	32	39	12	Do
BH56	UDS01	2.00	Light grey, decomposed rock dust.						DRSH-CU 0.5 1.0 2.0	0.19 0.375 0.770 1.131	0.19	26	32	19		SC	10	80**	10	(silt+clay)	Do
BH57	UDS01	2.00	Whitish grey, silty sand with traces of mica.	1.85	1.68		9 S 10DR	0.522	DRSH-CU 0.5 1.0 2.0	0.27 0.610 1.053 1.743	0.27	37	NP			SM		58	42	(silt+clay)	Do
BH58	UDS01	2.00	Deep grey silty clay with sand mixture.	1.92	1.61	2.63	18 S 19 T 20 C		TRSH-UU 3.0 2.0 1.0 UNCONF	0.75 0.761 0.748 0.741	0.75	0	50	18	11	CH		45	47	8	Do
									0.0 0.0 0.0 REMOULD	0.573 0.559 0.518 0.43	0.55	0									
									0.0 0.0 0.0	0.453 0.442 0.395											

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Bore Hole	Sample Number	Depth M	Sample Description	Bulk		Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results					Atter. Limits				IS Classification	Grain Size				Test Method
				Dens. gms/cc	Dens. gms/cc					Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Fricth Deg.	LL %	PL %	SL %	Gravl %	Sand %		Silt %	Clay %			
BH59	UDS01	2.00	Light grey, decomposed rock dust with traces of clay binders.	1.76	1.58			11 S			DRSH-CU	0.28	0.63	36					7	60	33 (silt+clay)	Do		
								11DR			0.5	0.603												
											1.0	1.091												
											2.0	1.730												
BH60	UDS01	2.00	Light grey, silty clay with calcareous nodules.						0.524		TRSH-UU	0.63	0	0	43	13		SC	18	46	27	9	Do	
											3.0	0.679												
											2.0	0.634												
											1.0	0.577												
											UNCONFD	0.74	0											
											0.0	0.741												
											0.0	0.741												
											0.0	0.741												
											REMOULD	0.46	0											
											0.0	0.459												
											0.0	0.459												
											0.0	0.459												
BH61	UDS01	2.00	Brownish grey, silty clay with calcareous nodules & pocket sand.	1.94	1.29			24 S							53	19		CH		36	43	21	Do	
BH62	SPT01	1.00	Brownish grey, silty sand with traces of kankars.															SM-SP	1	89	10 (silt+clay)		Do	
BH62	SPT03	3.00	Brownish grey, silty sand with traces of rock pcs. & rock dust.																					
															NP			SM	21	64	15 (silt+clay)	Do		
BH63	UDS01	2.00	Brownish grey, silty clay with traces of calcareous nodules.				2.63				UNCONFD	0.25	0	0	40	14	12	CI		48	43	9	Do	
											0.0	0.228												
											0.0	0.329												
											0.0	0.198												
											REMOULD	0.18	0											
											0.0	0.160												
											0.0	0.232												
											0.0	0.140												
BH63	SPT03	4.00	Deep grey, silty sand with decomposed rock dust & mica.															SM	5	71	24 (silt+clay)	Do		
BH64	UDS01	2.00	Light grey, decomposed rock dust.	1.78	1.68			7 S			DRSH-CU	0.22	33					SM	25	53	22 (silt+clay)	Do		
								6DR			0.5	0.481												
											1.0	0.951												
											2.0	1.480												

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Sheet No.

Bore Hole	Sample Number	Depth M	Sample Description	Bulk Dens. gms/cc	Dry Dens. gms/cc	Spec. Grav.	Nat. Mois. %	Void Ratio	Strength Test Results				Atter. Limits			IS Classification	Grain Size				Test Method
									Pc/Pn kg/sqcm	Shear kg/sqcm	Cohesn kg/sqcm	Frictn Deg.	LL %	PL %	SL %		Gravl %	Sand %	Silt %	Clay %	
BH65	SPT02	2.20	Deep grey, silty sand with rock pcs, rock dust & traces of mica.													SM	25	56	19	(silt+clay)	Do
BH66	UDS01	2.00	Brownish grey, silty clay / clayey silt with decomposed rock.	1.90	1.64	2.71	17 S 16 T 17 C	0.527	TRSH-JUJ	0.23	19	0	63	17	25	SC		75	20	5	Do
									3.0 1.734												
									2.0 1.270												
									1.0 0.805												
									UNCONF	0.85	0										
									0.0 0.820												
									0.0 0.858												
									0.0 0.858												
									REMOULD	0.68	0										
									0.0 0.653												
									0.0 0.688												
									0.0 0.688												
BH67	UDS01	2.00	Brownish grey silty clay with calcareous nodules.	1.94	1.64	2.65	16 S 18 T 22 C	0.675	TRSH-JUJ	1.03	0	0	37	19		SC	55**	27	18		Do
									3.0 1.053												
									2.0 1.028												
									1.0 1.009												
									UNCONF	0.85	0										
									0.0 0.873												
									0.0 0.852												
									0.0 0.825												
									REMOULD	0.73	0										
									0.0 0.753												
									0.0 0.735												
									0.0 0.702												
BH68	UDS01	2.00	Deep brownish grey silty sand with decomposed rock.	1.78	1.59		10 S 12DR		DRSH-CU	0.15	39					SM-SP	5	85	10	(silt+clay)	Do
									0.5 0.455												
									1.0 1.101												
									2.0 1.708												
* Classification is based on average subsoil properties.																					
** - The apparent high percentage of sand content is presence of calcareous nodules & rock pieces.																					

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BH No.	Run No.	Depth (M)	Description	Density (gm/cc)		Water Content (%)		Porosity %	Specific Gravity	Unconfined Compressive Strength (kg/sqcm)		Coefficient of softening	Point Load Strength Index (kg/sqcm)	Slake Durability Index (%)	Hardness (based on Mohs' Scale)	Soundness* (% Loss)	E (Kg/sqcm)
				Bulk	Dry					In-situ	Saturated						
39	9	9.25-10.00	Highly weathered, light whitish grey, medium grained, highly fractured rock.	2.533	2.527	0.243		0.614	--	--	--	--	3.21	--	--	--	--
40	13	12.50-13.25	Moderately weathered, light grey, medium grained, fractured rock	--	--	--		--	--	448	392	0.88	--	93.69	Hard	2.25	6511
41	14	14.00-14.75	Slightly weathered, light grey, medium grained, fractured rock.	2.610	2.605	0.191		0.496	2.618	388	286	0.74	--	98.64	Hard	1.28	5025
42	7	9.40-10.15	Highly weathered, light grey, medium grained, highly fractured rock	--	--	--		--	--	--	--	--	6.61	--	--	--	--
44	17	16.45-17.20	Moderately weathered, light grey, medium grained, fractured rock	2.516	2.493	0.914		2.277	2.551	--	--	--	13.52	92.68	Moderately hard	5.96	--
45	12	12.75-13.50	Moderately weathered, light grey, medium grained, fractured rock	2.330	2.311	0.817		1.889	2.670	--	--	--	25.79	98.10	--	3.33	--
47	14	13.75-14.50	Highly weathered, brownish grey, medium grained, moderately fractured rock.	2.369	2.241	5.696		12.764	--	--	--	--	5.99	31.43	--	--	--
48	15	15.30-16.05	Moderately weathered, light grey, fine grained, highly fractured rock	2.705	2.642	2.385		6.249	--	--	--	--	3.28	--	--	7.78	--
49	17	16.25-17.00	Highly weathered, light grey, medium grained, moderately fractured rock.	--	--	--		--	--	--	--	--	10.26	90.55	Moderately hard	7.74	--
50	6	7.75-8.80	Highly weathered, light grey, medium grained, highly fractured rock	1.947	1.759	10.688		18.801	2.167	--	--	--	--	93.27	--	--	--
51	11	11.50-12.25	Highly weathered, light grey, medium grained, highly fractured rock	--	--	--		--	--	--	--	--	8.24	--	--	--	--
52	8	9.75-10.50	Moderately weathered, pinkish grey, medium grained, highly fractured rock.	2.770	2.766	0.147		0.408	--	--	349	--	--	97.81	Hard	6.65	3444
53	16	14.25-15.00	Moderately weathered, yellowish brown, medium grained, moderately fractured rock.	--	--	--		--	--	--	--	--	28.62	93.06	--	--	--
54	18	17.00-17.75	Highly weathered, light grey, medium grained, moderately fractured rock.	2.649	2.645	0.174		0.461	2.680	--	--	--	37.76	--	--	9.25	--
55	2	5.00-5.75	Highly weathered, medium grained, highly fractured rock.	--	--	--		--	--	--	--	--	--	87.64	Medium hard	--	--
56	3	6.00-6.75	Highly weathered, light grey, medium to fine grained, highly fractured rock	2.982	2.943	1.326		3.904	--	--	--	--	6.66	95.09	--	11.63	--

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana**Job No. : 3421****Sheet No.**

BH No.	Run No.	Depth (M)	Description	Density (gm/cc)		Water Content (%)		Porosity %	Specific Gravity	Unconfined Compressive Strength (kg/sqcm)		Coefficient of softening	Point Load Strength Index (kg/sqcm)	Slake Durability Index (%)	Hardness (based on Mohs' Scale)	Soundness* (% Loss)	E (Kg/sqcm)
				Bulk	Dry		(%)			In-situ	Saturated						
30	10	9.25-10.00	Moderately weathered, light grey, medium grained, moderately fractured rock.	2.780	2.778	0.083		0.231	2.710	302	294	0.97	--	98.88	Hard	--	6425
30	14	12.25-13.00	Slightly weathered, light grey, medium grained, moderately fractured rock.	--	--	--		--	--	415	361	0.87	--	98.98	Hard	0.75	--
30	18	17.50-19.00	Slightly weathered, light grey, medium grained, moderately fractured rock.	2.740	2.737	0.109		0.298	2.730	549	443	0.81	--	98.04	Hard	0.50	15245
31	10	10.75-11.50	Moderately weathered, light grey, medium grained, highly fractured rock.	--	--	--		--	--	--	--	--	14.34	96.42	--	--	--
32	5	7.50-8.25	Highly weathered, light grey, medium grained, highly fractured rock.	2.531	2.528	0.100		0.253	2.535	--	--	--	4.45	--	--	4.28	--
33	13	11.75-13.00	Slightly weathered, light grey, medium grained, moderately fractured rock.	3.028	3.025	0.099		0.356	3.035	448	351	0.78	--	90.69	Hard	--	--
33	18	17.50-19.00	Slightly weathered, light grey, medium grained, moderately fractured rock.	--	--	--		--	--	381	258	0.68	--	98.97	Hard	1.00	12745
34	3	6.30-7.05	Highly weathered, deep brownish grey, medium to fine grained, highly fractured rock.	2.558	2.554	0.181		0.463	--	--	--	--	3.88	95.45	--	--	--
35	2	4.75-5.50	Highly weathered, light brownish grey, medium grained, highly fractured rock.	--	--	--		--	2.780	--	--	--	4.51	97.28	--	--	--
35	21	19.00-20.00	Moderately weathered, light blackish grey, fine grained, highly fracture rock.	2.737	2.735	0.069		0.190	--	242	188	0.78	--	94.12	Moderately hard	6.62	7777
36	1	1.90-2.50	Highly weathered, yellowish brown, medium grained, highly fractured rock.	--	--	--		--	--	--	--	--	--	80.26	Soft	--	--
37	17	15.50-16.25	Moderately weathered, light grey, medium grained, highly fractured rock.	--	--	--		--	--	--	--	--	0.89	--	--	--	--
38	19	16.50-17.25	Moderately weathered, light grey, medium grained, moderately fractured rock.	2.697	2.693	0.156		0.420	2.704	515	434	0.84	--	99.2	Hard	5.72	--

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana



Job No. : 3421

Sheet No.

LABORATORY ROCK TEST RESULTS

BH No.	Run No.	Depth (M)	Description	Density (gm/cc)		Water Content (%)	Porosity %	Specific Gravity	Unconfined Compressive Strength (kg/sqcm)		Coefficient of softening	Point Load Strength Index (kg/sqcm)	Slake Durability Index (%)	Hardness (based on Mohs' Scale)	Soundness* (% Loss)	E (Kg/sqcm)
				Bulk	Dry				In-situ	Saturated						
1	17	14.50 - 15.00	Highly weathered, light yellowish grey, medium grained, highly fractured rock.	2.639	2.6287	0.392	1.030	2.656	--	--	--	7.33	--	--	6.11	--
2	5	5.25 - 6.00	Highly weathered, yellowish brown, medium grained, highly fractured rock.	--	--	--	--	--	--	--	--	--	80.36	Moderately hard	--	--
3	14	12.50 - 13.25	Highly weathered, whitish grey, medium grained, highly fractured rock.	2.691	2.648	1.624	--	--	--	--	--	--	97.39	Moderately hard	--	--
4	10	9.50 - 10.25	Highly weathered, light yellowish grey, medium to fine grained, highly fractured rock.	--	--	--	--	2.630	--	--	--	--	--	--	5.11	--
5	17	14.50 - 15.00	Highly weathered, light grey, medium grained, highly fractured rock.	2.951	2.948	0.078	0.229	2.955	--	--	--	3.23	80.22	--	6.25	--
6	3	5.50 - 6.25	Highly weathered, brownish grey, fine grained, highly fractured rock.	2.321	2.31	0.476	1.201	2.412	--	--	--	3.52	--	--	--	--
7	19	17.25 - 18.00	Moderately weathered, light grey, medium grained, moderately fractured rock.	2.698	2.693	0.207	0.558	2.708	440	368	0.84	--	97.71	Hard	1.25	6845
8	2	4.50 - 5.25	Highly weathered, light grey, medium grained, highly fractured rock.	2.770	2.769	0.018	0.050	2.770	--	--	--	4.55	95.24	--	--	--
10	7	8.50 - 9.25	Highly weathered, light brownish grey, medium grained, highly fractured rock.	2.238	2.233	0.224	0.470	2.244	--	--	--	4.51	--	--	--	--
10	18	16.75 - 17.50	Moderately weathered, light brownish grey, medium grained, fractured rock.	2.663	2.576	3.379	8.706	2.822	321	229	0.71	--	98.21	Hard	1.11	4024
11	11	11.00 - 11.75	Highly weathered, yellowish brown, medium grained, highly fractured rock.	2.659	2.636	0.873	2.637	--	--	--	--	5.13	84.32	Medium hard	--	--
12	15	14.25 - 15.00	Highly weathered, light grey, medium grained, moderately fractured rock.	2.960	2.949	0.361	1.066	2.981	--	--	--	--	--	--	--	--
13	21	19.25 - 20.00	Highly weathered, light grey, medium grained, highly fractured rock.	2.857	2.853	0.139	0.397	2.864	--	--	--	20.21	96.32	--	6.25	--
14	19	14.75 - 15.00	Highly weathered, yellowish brown, medium grained, moderately fractured rock.	2.629	2.543	3.381	8.599	2.790	--	--	--	1.83	76.40	--	5.01	--

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana**Job No. : 3421****Sheet No.**

BH No.	Run No.	Depth (M)	Description	Density (gm/cc)		Water Content (%)	Porosity %	Specific Gravity	Unconfined Compressive Strength (kg/sqcm)		Coefficient of softening	Point Load Strength Index (kg/sqcm)	Slake Durability Index (%)	Hardness (based on Mohs' Scale)	Soundness* (% Loss)	E (Kg/sqcm)
				Bulk	Dry				In-situ	Saturated						
15	15	13.25 - 14.00	Highly weathered, light grey, medium grained, moderately fractured rock.	--	--	--	--	--	--	--	--	5.44	--	Medium hard	--	--
16	12	11.25 - 12.00	Highly weathered, whitish grey, medium grained, highly fractured rock.	2.603	2.603	0.011	0.029	2.604	--	--	--	--	75.31	Very hard	--	--
17	17	16.25 - 17.00	Highly weathered, whitish grey, medium grained, highly fractured rock.	2.723	2.721	0.074	0.283	2.728	--	--	--	--	--	Moderately hard	--	--
18	14	11.75 - 12.50	Highly weathered, light grey, medium grained, moderately fractured rock.	--	--	--	--	2.680	--	--	--	19.13	--	--	4.44	--
19	1	4.18 - 4.75	Completely weathered, whitish grey, medium grained, highly fractured rock.	1.9821	1.9676	0.736	1.447	2.71	--	--	--	2.32	--	--	--	--
19	17	16.00 - 16.75	Moderately weathered, steel grey, medium grained, moderately fractured rock.	--	--	--	--	--	309	291	0.94	--	95.27	Moderately hard	4.63	8480
20	19	17.75 - 18.50	Highly weathered, light grey, medium grained, highly fractured rock.	2.857	2.845	0.401	1.141	2.878	--	--	--	10.21	95.95	--	4.45	--
22	11	10.50 - 11.25	Highly weathered, dark grey, medium grained, highly fractured rock.	3.101	3.089	0.388	1.200	3.040	--	--	--	7.00	95.95	--	2.25	--
23	4	5.35 - 6.10	Highly weathered, whitish brown, medium grained, highly fractured rock.	2.133	2.113	0.947	2.217	--	--	--	--	--	94.18	Medium hard	--	--
25	8	12.00 - 13.00	Moderately weathered, light grey, medium grained, highly fractured rock.	2.5092	2.5012	0.319	0.798	--	--	--	--	10.22	--	--	8.82	--
26	18	16.75 - 17.50	Highly weathered, steel grey, medium to fine grained, highly fractured rock.	--	--	--	--	--	--	--	--	9.89	--	--	--	--
27	15	13.50 - 14.25	Highly weathered, whitish grey, medium grained, moderately fractured rock.	2.704	2.695	0.327	0.881	2.719	--	--	--	17.76	95.32	--	--	--
28	10	9.75 - 10.50	Highly weathered, whitish grey, medium grained, highly fractured rock.	2.692	2.688	0.161	0.432	--	--	--	--	35.24	--	Hard	4.80	--
29	2	4.75 - 5.50	Highly weathered, yellowish brown, medium grained, highly fractured rock.	2.243	2.243	0.007	0.017	--	--	--	--	10.52	91.39	--	--	--

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana**Job No. : 3421****Sheet No.**

BH No.	Run No.	Depth (M)	Description	Density (gm/cc)		Water Content (%)	Porosity %	Specific Gravity	Unconfined Compressive Strength (kg/sqcm)		Coefficient of softening	Point Load Strength Index (kg/sqcm)	Slake Durability Index (%)	Hardness (based on Mohs' Scale)	Soundness* (% Loss)	E (Kg/sqcm)
				Bulk	Dry				In-situ	Saturated						
57	20	17.65 - 18.40	Slightly weathered, light brownish grey, medium to fine grained, moderately fractured rock.	2.6931	2.6165	2.929	7.664	2.834	102	89	0.87	--	75.75	Moderately hard	1.05	5914
57	21	18.40 - 19.15	Slightly weathered, steel grey, medium to fine grained, moderately fractured rock.	--	--	--	--	--	388	321	0.83	--	63.54	--	5.48	--
58	13	14.50 - 16.00	Slightly weathered, light grey, fine grained, moderately fractured rock.	3.067	3.067	0.008	0.026	3.068	947	821	0.87	--	--	Hard	--	8550
59	11	10.75 - 11.50	Highly weathered, blackish grey, medium grained, highly fractured rock.	--	--	--	--	--	--	21	--	--	--	--	--	1142
60	20	19.00 - 20.00	Fresh blackish grey medium grained, highly to moderately fractured rock	3.336	3.332	0.102	0.341	3.344	198	73	0.37	--	98.67	Medium hard	0.40	1996
61	17	16.50 - 17.25	Moderately weathered, light blackish grey, medium grained, highly fractured rock.	2.728	2.720	0.309	0.840	--	--	142	--	--	95.05	Moderately hard	--	--
62	23	23.00 - 24.50	Slightly weathered, steel grey, medium grained, moderately fractured rock.	3.146	3.1427	0.107	0.338	3.153	440	360	0.82	--	98.37	Hard	1.05	12786
63	18	17.00 - 17.75	Moderately weathered, brownish grey, medium to fine grained, moderately fractured rock.	--	--	--	--	--	--	--	--	64.50	--	--	--	--
64	21	19.00 - 20.00	Moderately weathered, blackish grey, medium grained, highly fractured rock.	3.125	3.123	0.065	0.202	3.050	501	323	0.65	--	95.47	Hard	1.63	7523
65	19	16.50 - 17.25	Moderately weathered, light grey, medium grained, moderately fractured rock.	3.085	3.083	0.050	0.154	--	--	246	--	--	98.10	Hard	--	--
66	11	11.00 - 11.75	Moderately weathered, light brownish grey, medium to fine grained, moderately fractured rock.	2.742	2.739	0.110	0.312	2.710	--	--	--	38.86	--	Moderately hard	--	--
67	14	14.25 - 15.00	Highly weathered, light grey, medium grained, highly fractured rock	3.318	3.314	0.138	0.457	--	--	--	--	--	84.31	--	4.12	--
68	13	12.75 - 13.50	Highly weathered, deep grey, medium to fine grained, highly fractured rock	2.607	2.569	1.508	3.873	--	--	--	--	--	75.03	Moderately hard	--	--

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana**Job No. : 3421****Sheet No.****SWELLING TEST RESULTS**

Bore Hole No.	Sample No.	Depth (M)	Description	Free Swell Index, (%)	Swelling Pressure, (kg/sqcm)	PI (%)	Test Method
BH-10	UDS-01	2.00	Brownish grey silty clay with traces of calcareous nodules.	10.55	0.340	39	* See the Note
BH-11	UDS-01	2.00	Deep grey silty clay with calcareous nodules	10.50	0.440	26	Do
BH-17	UDS-01	2.00	Brownish grey, clayey silt / silty clay with traces of kankars.	50.00	0.240	33	Do
BH-23	UDS-01	2.00	Deep grey, silty clay with calcareous nodules	30.23	0.930	75	Do
BH-25	UDS-01	2.00	Brownish grey silty clay with rock pieces & rock dust.	11.90	0.470	22	Do
BH-34	UDS-01	2.00	Brownish grey, silty sand with calcareous nodules & traces of clay binders	15.00	0.000	NP	Do
BH-41	UDS-01	2.00	Brownish grey, silty clay with kankars & traces of brick bats	30.77	0.124	27	Do
BH-43	UDS-01	2.00	Whitish grey silty clay with traces of calcareous nodules.	30.12	0.910	26	Do
BH-51	UDS-01	2.00	Deep grey, silty clay with kankars	36.11	0.180	35	Do
BH-66	UDS-01	2.00	Brownish grey, clayey silt / silty clay with decomposed rock	94.87	0.630	46	Do

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana**Job No. : 3421****Sheet No.****SUMMERISED LABORATORY COMPACTION AND CBR TEST RESULTS**

SL No	Test No.	Sample No	Depth (M)	Description	Standard Proctor Compaction Test		CBR (%)		Recommended CBR Value (%)		Test Method
					OMC (%)	MDD (gm/cc)	Soaked Condition Penetration	2.50mm Penetration	5.00mm Penetration	Soaked Condition	
1	TP01	DS01	0.50	Whitish grey sandy silt with moorum.	13.45	1.649	--	--	--	--	*See the Note
2	TP03	DS02	1.50	Whitish grey sandy silt with moorum.	15.88	1.717	6.80	5.49	6	6	Do
3	TP05	DS02	1.50	Deep grey silty clay. Obs. kankar.	18.38	1.612	--	--	--	--	Do
4	TP06	DS02	1.50	Light grey moorum.	18.67	1.581	5.49	5.21	5	5	Do
5	TP08	DS04	3.50	Light grey sandy silt with decomposed rock.	13.55	1.805	--	--	--	--	Do
6	TP10	DS02	1.50	Light grey sandy silt with decomposed rock.	14.02	1.584	7.60	6.87	7	7	Do
7	PLT-03	DS01	1.00	Light grey moorum with boulders.	11.65	1.877	8.22	8.02	8	8	Do
8	PLT-05	DS01	1.00	Deep grey silty clay with kankar.	18.31	1.607	--	--	--	--	Do
9	CPLT-02	DS02	2.00	Light grey clayey silty sand with decomposed rock	14.70	1.801	--	--	--	--	Do
10	CPLT-04	DS01	1.00	Deep grey silty clay with sand mixture.	19.70	1.646	5.23	4.07	5	5	Do

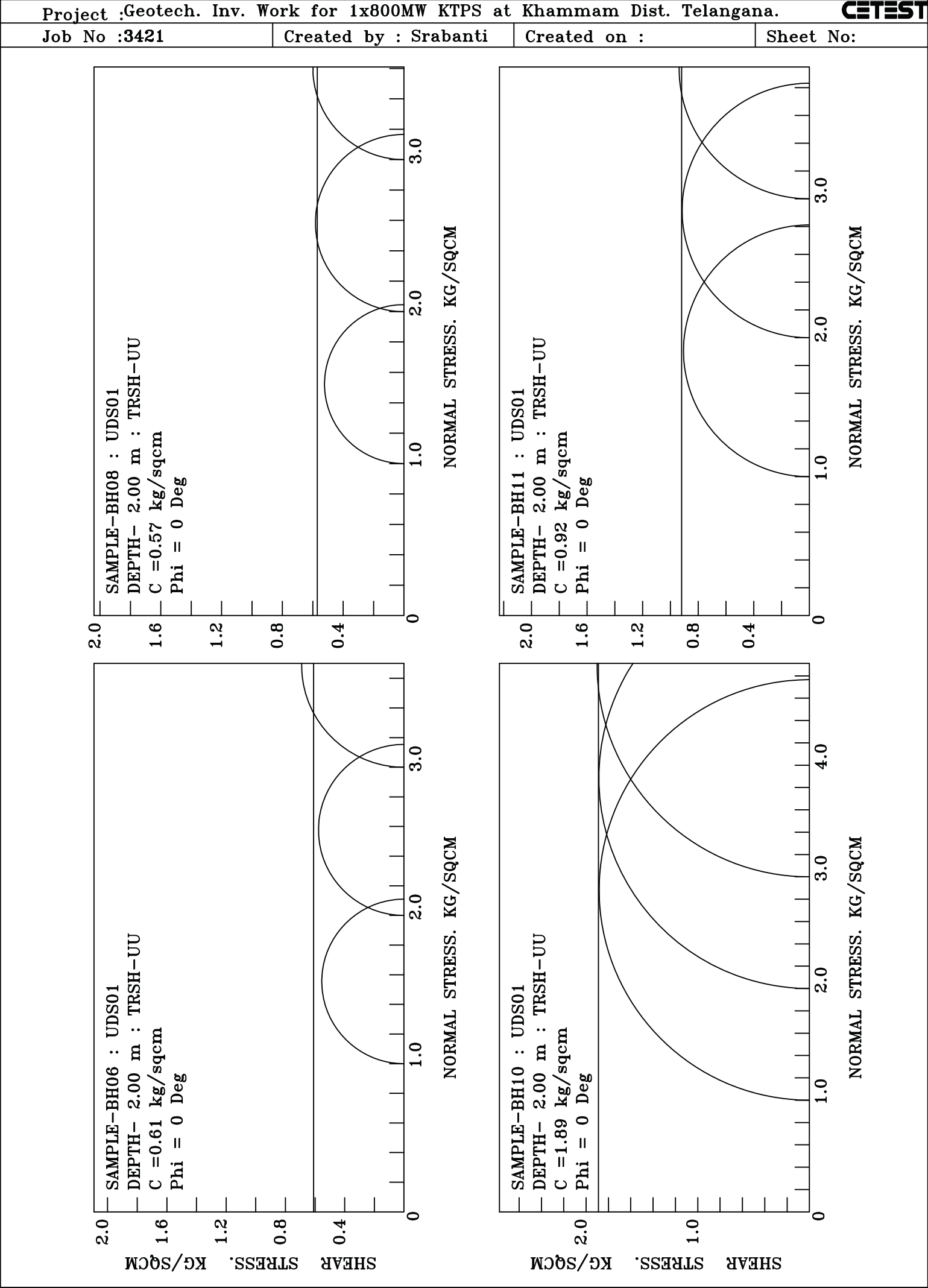
Note: Test Methods*Bulk Density & Dry Density: Ref. CET/SOP/01, Issue No. 01-(Page 27 & 39 of 40)****Natural Moisture Content: IS 2720 (Part 2)****Specific Gravity: IS 2720 (Part 3).****Grain size analysis: IS 2720 (Part 4)****Liquid Limit & Plastic Limit: IS 2720 (Part 5)****Shrinkage Limit: IS 2720 (Part 6)****Standard Proctor Compaction Test (Light Compaction): IS 2720 (Part 7)****Unconfined Compressive Strength Test: IS 2720 (Part 10)****Triaxial Test (TRSH-UU): IS 2720 (Part 11)****Direct Shear Test (DRSH-CU): IS 2720 (Part 13)****Rock Hardness, Soundness : Out of NABL scope****Consolidation Properties (Void Ratio): IS 2720 (Part 15)****California Bearing Ratio (CBR) Test: IS 2720 (Part 16)****Free Swell Index: IS 2720 (Part 40)****Swelling Pressure: IS 2720 (Part 41)****Laboratory Permeability : IS 2720 (Part 17)****Point Load Index: IS 8764.****Water Content, Bulk & Dry Density and Porosity: IS 13030****Slake Durability Index : IS 10050.****Unconfined Compressive Strength: IS 9143.****C.E. Testing Company Pvt. Ltd.****Prepared By**
(N.P. Garai)**Deputy Technical Manager****Checked & Approved By**
Sudip Nath**Technical Manager**

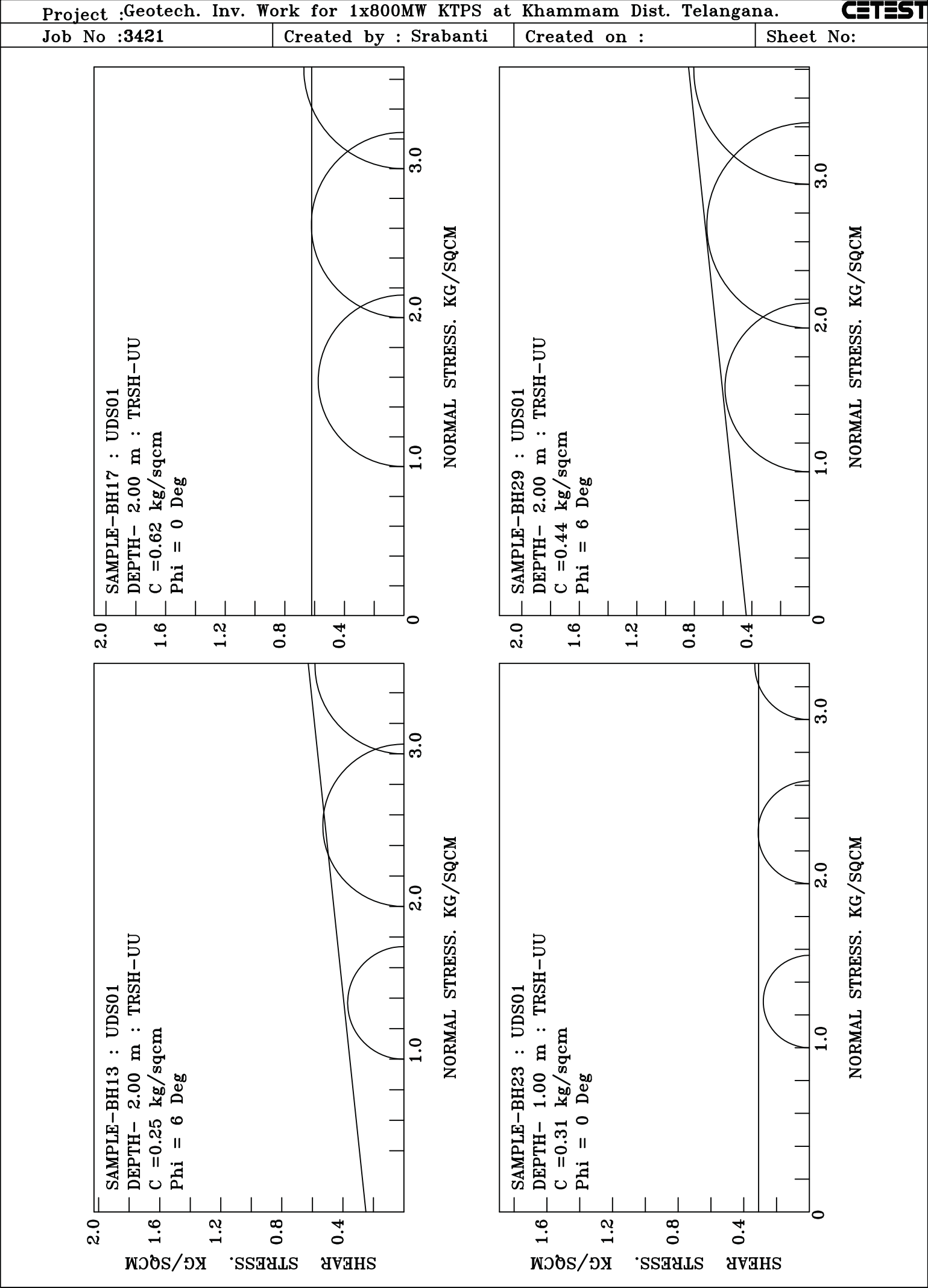
Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

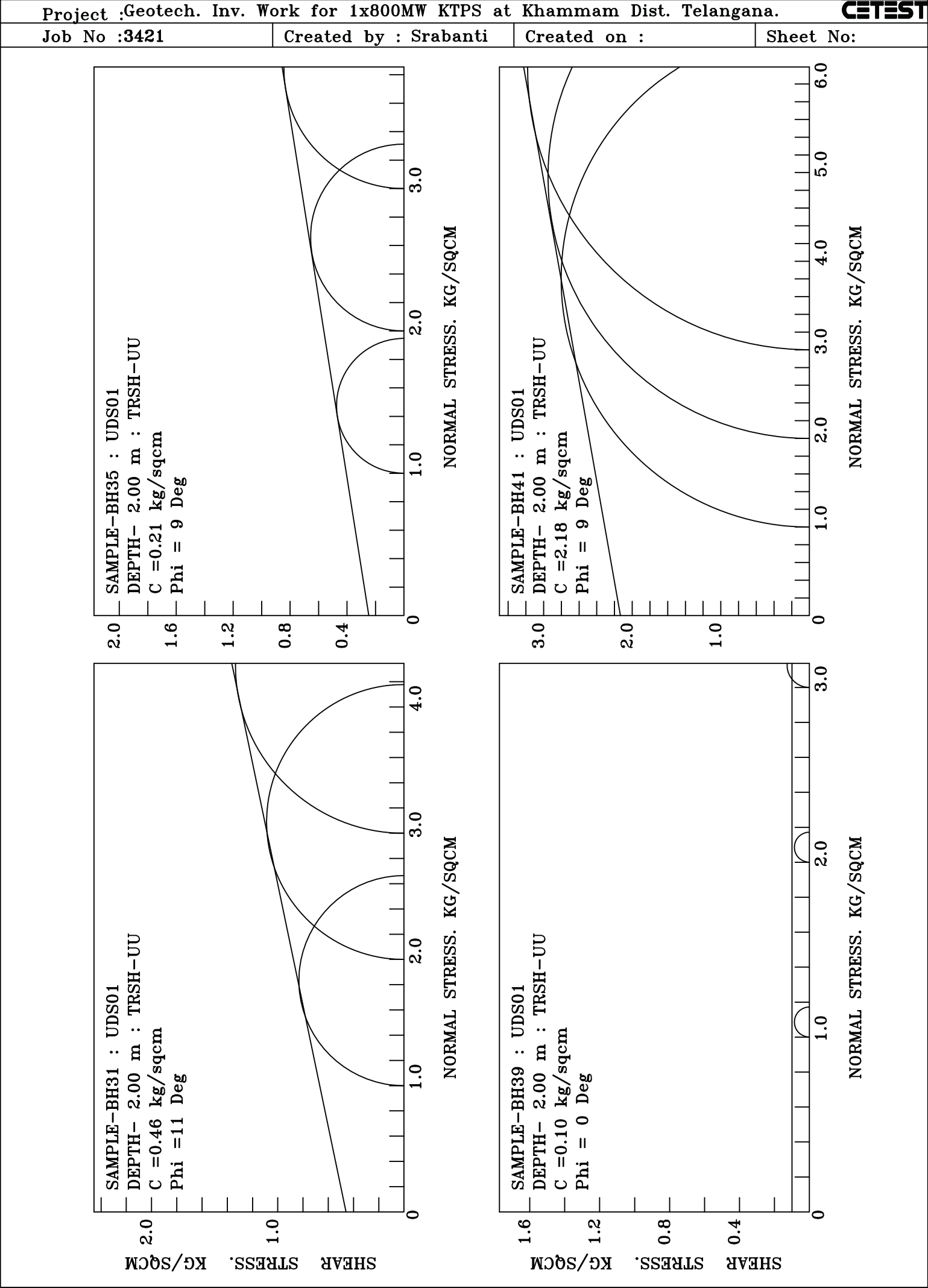
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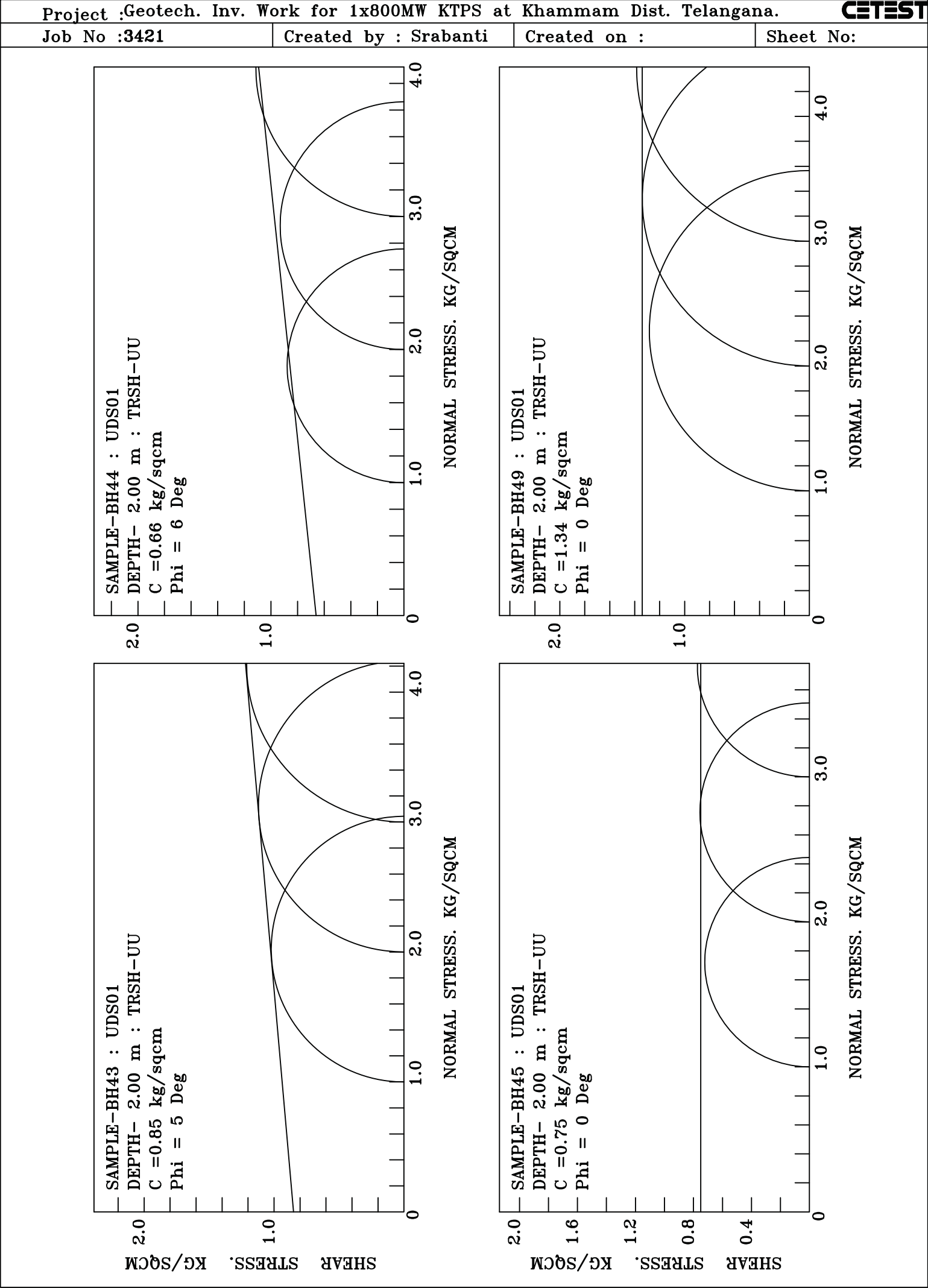
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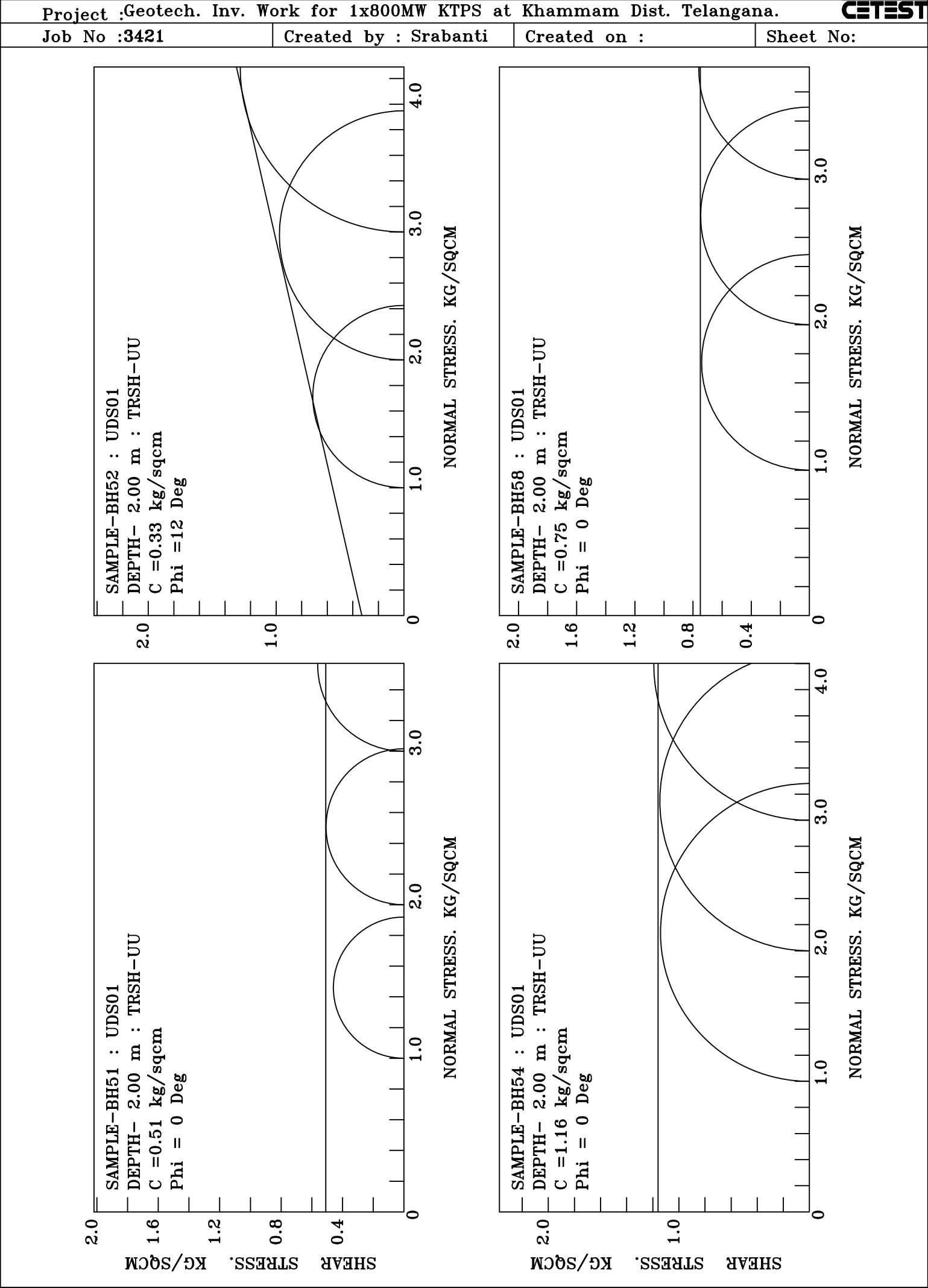
PART III: CHARTS & GRAPHS

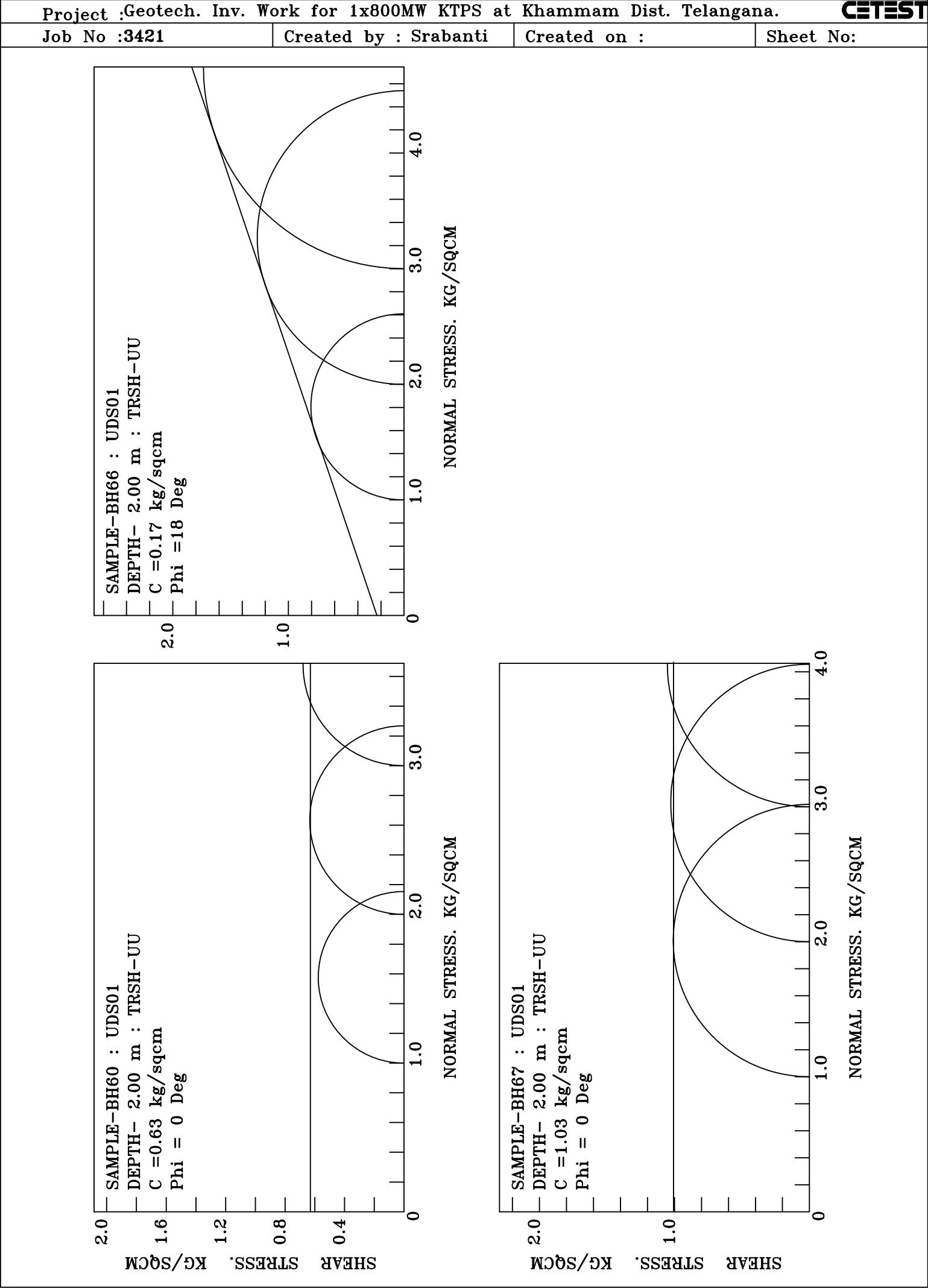












Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

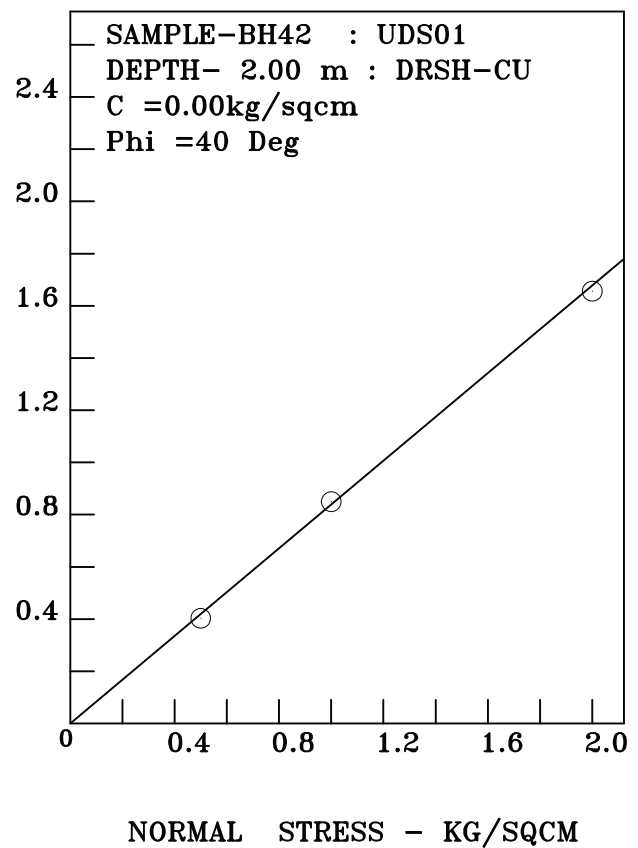
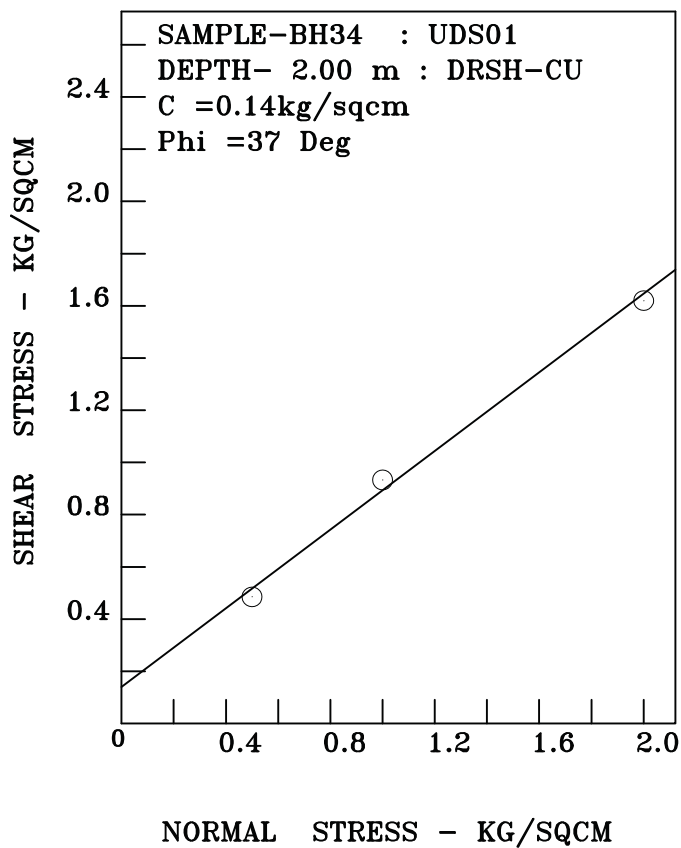
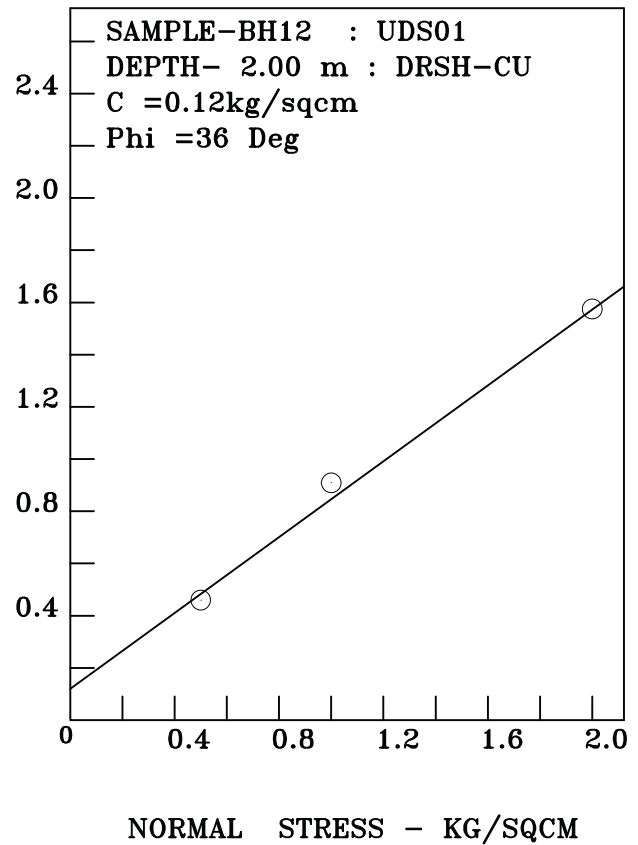
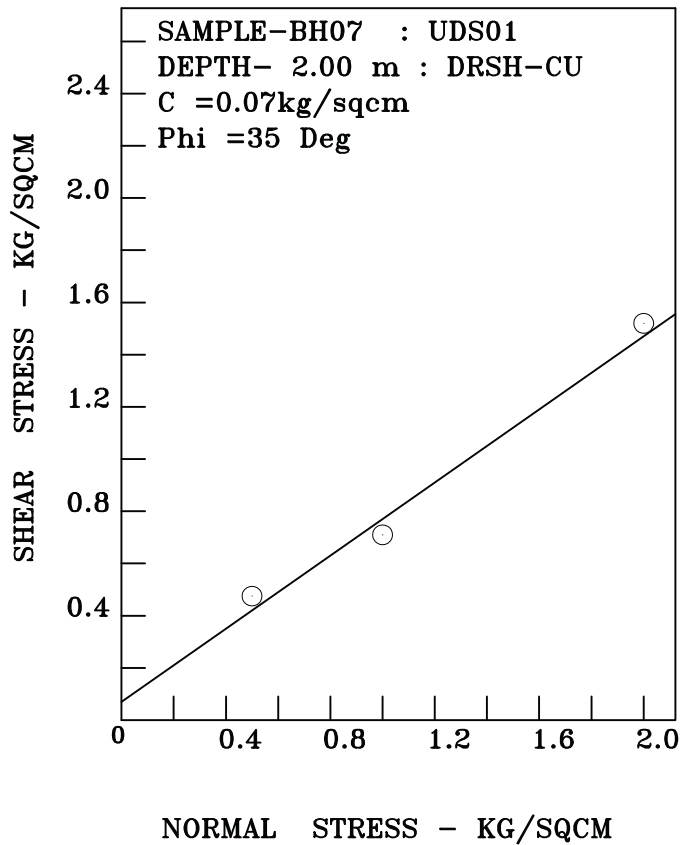
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Project :Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

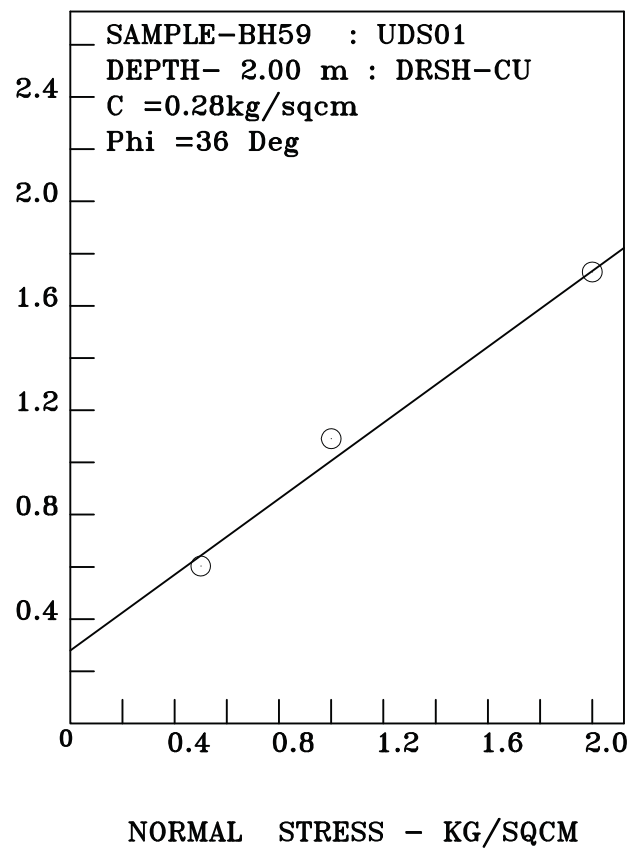
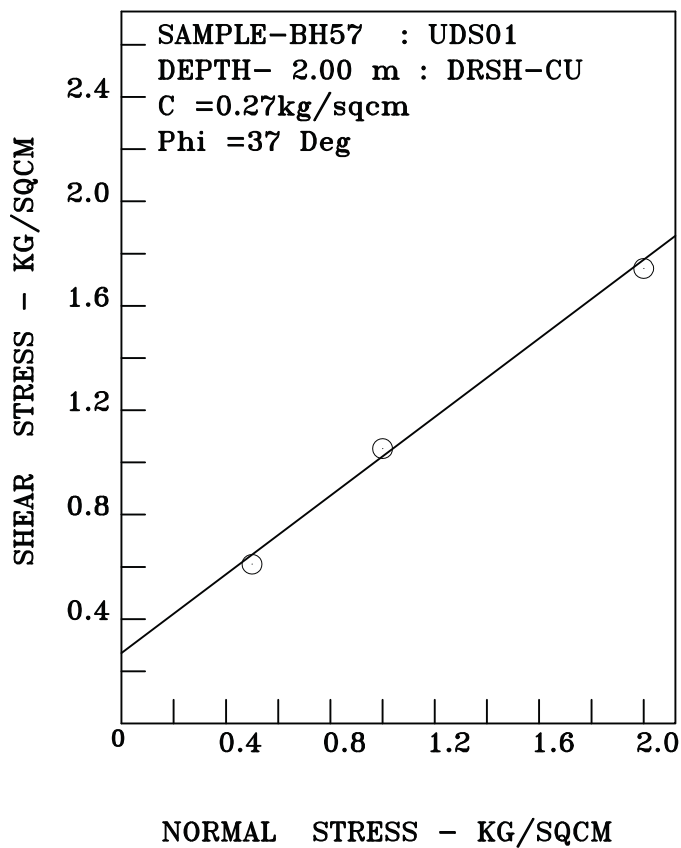
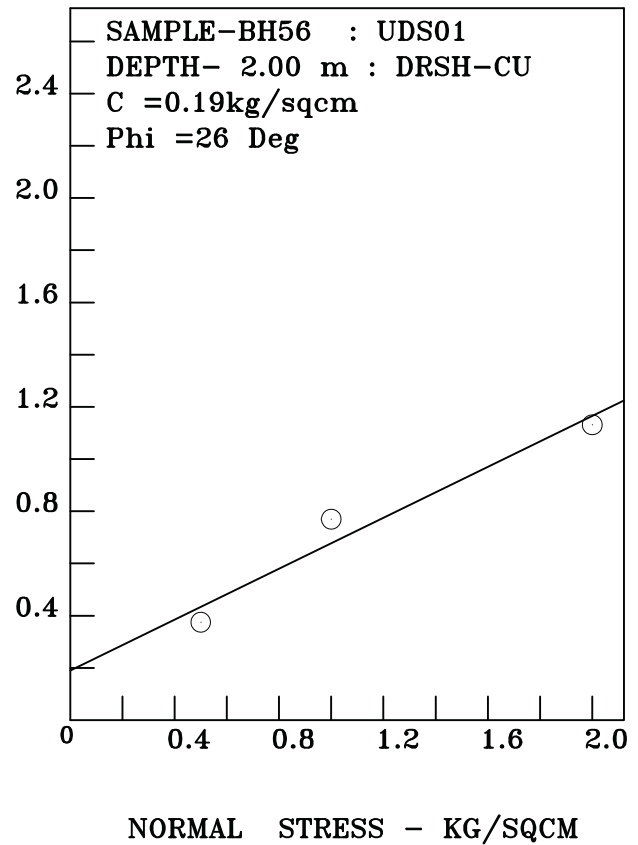
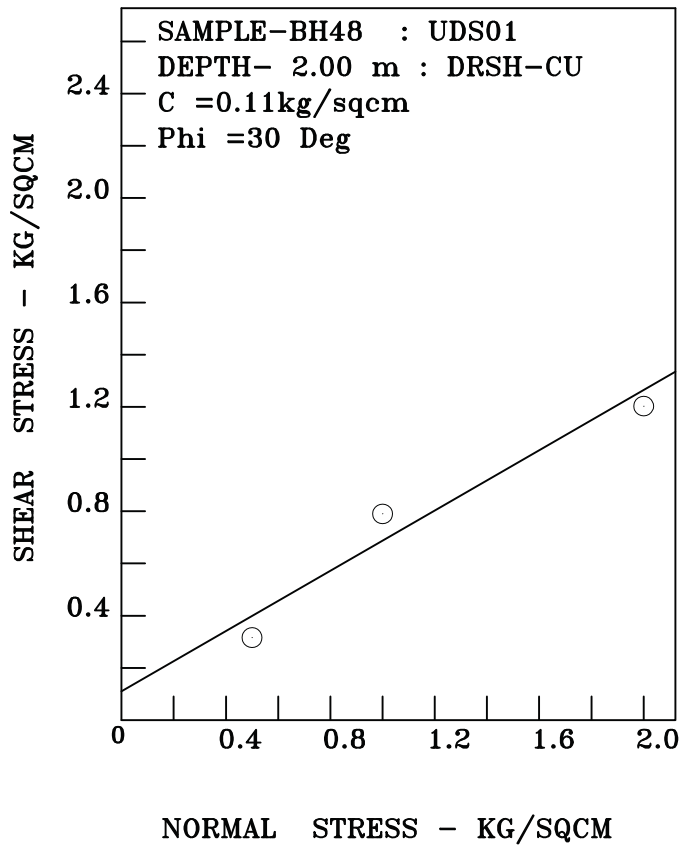
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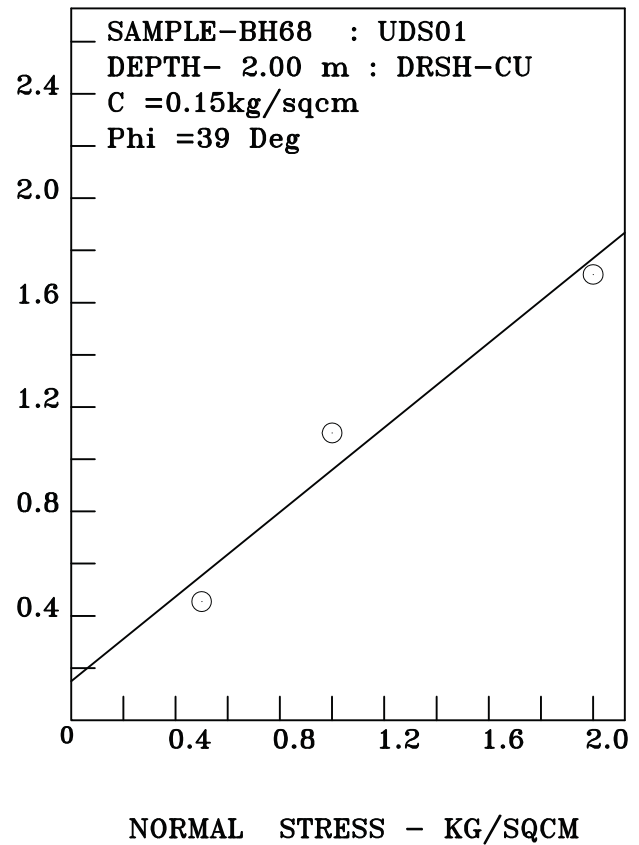
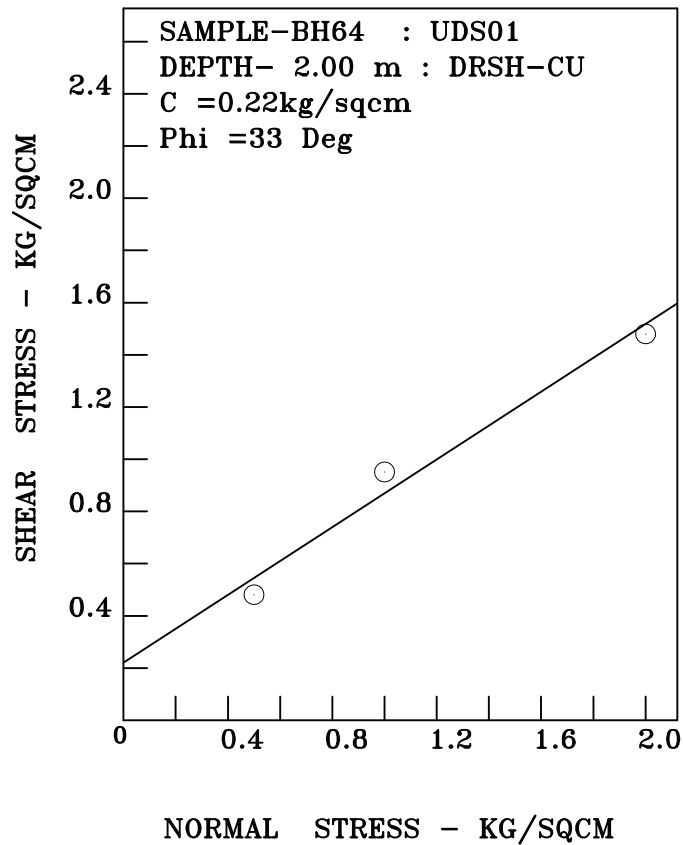
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Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

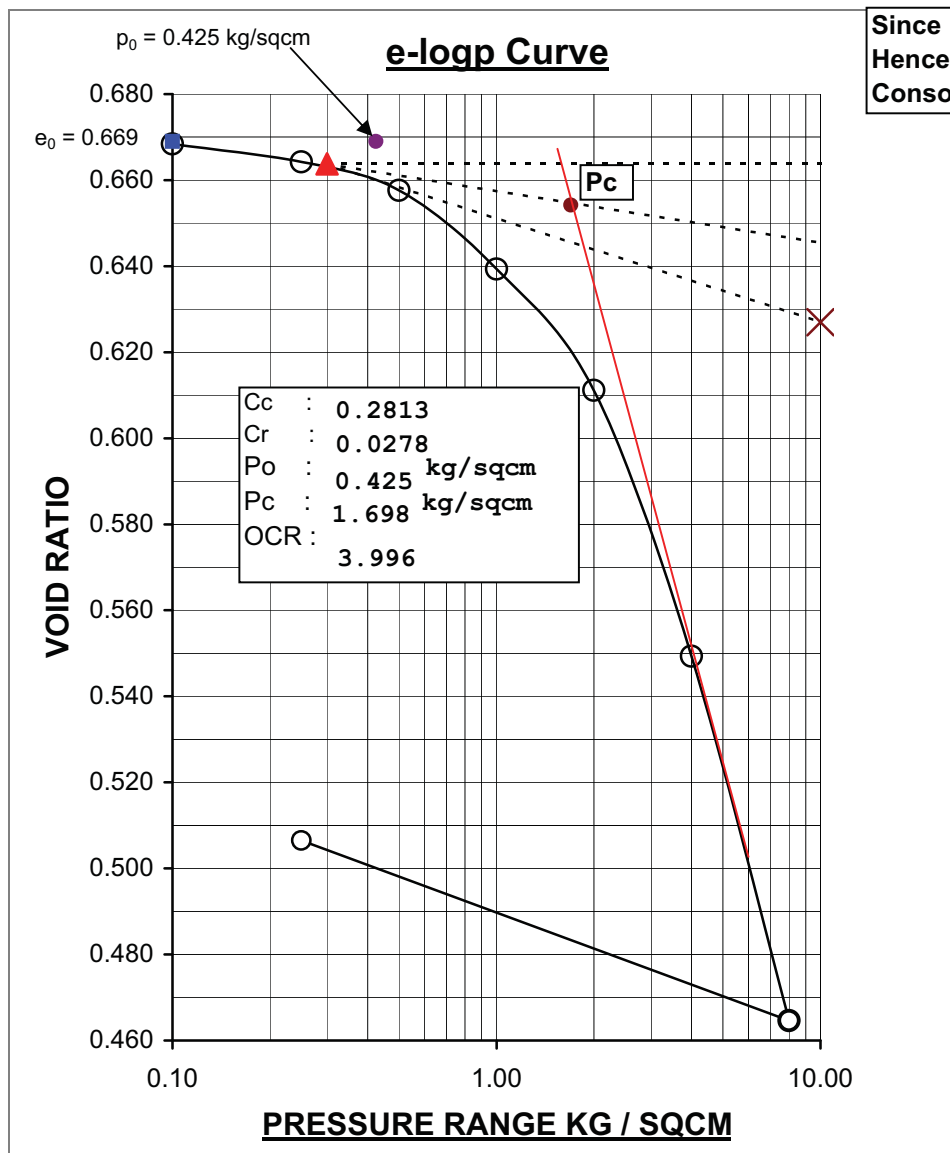
Sample Number: BH-10/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with sand mixture.

Water content: Initial=23.6% Final =20.9% Initial Void Ratio =0.669

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	3	0.668	0.0030				
0.10 - 0.25	25	0.664	0.0166	16.20	0.0139	105.3	8.084
0.25 - 0.50	40	0.658	0.0160	30.50	0.0111	178.0	4.720
0.50 - 1.00	110	0.639	0.0220	33.20	0.0147	269.0	3.030
1.00 - 2.00	170	0.611	0.0172	29.80	0.0121	242.3	3.175
2.00 - 4.00	372	0.549	0.0192	35.00	0.0125	188.4	3.631
4.00 - 8.00	510	0.465	0.0137	20.80	0.0108	210.1	2.648
8.00 - 0.25	252	0.506	0.0037				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

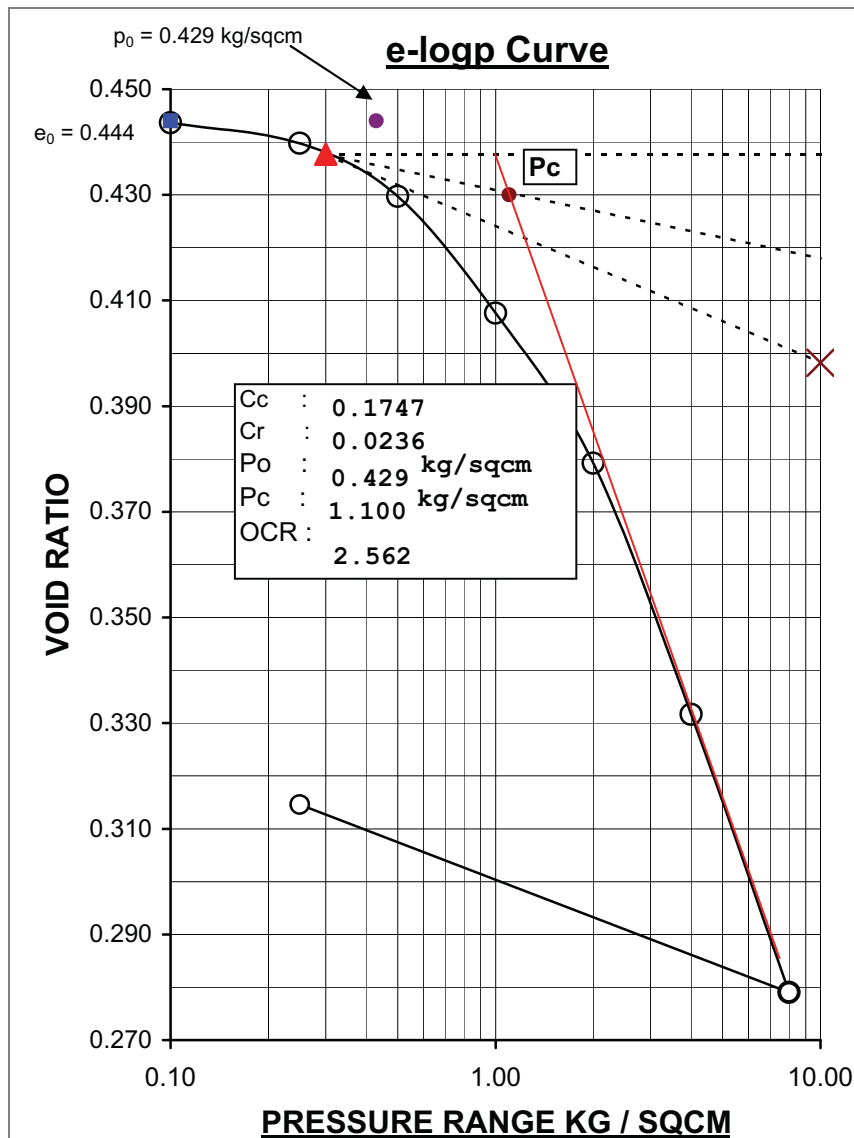
Sample Number: BH-11/UDS-01

Depth : 2-2.45 meters

Description : Whitish grey silty clay with traces of calcareous nodules.

Water content: Initial=17.3% Final =13.9% Initial Void Ratio =0.444

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	5	0.444	0.0051				
0.10 - 0.25	26	0.440	0.0178	25.20	0.0133	212.6	3.764
0.25 - 0.50	68	0.430	0.0280	34.80	0.0182	390.5	2.010
0.50 - 1.00	149	0.408	0.0309	45.10	0.0170	235.4	3.185
1.00 - 2.00	192	0.379	0.0202	34.90	0.0132	200.6	3.471
2.00 - 4.00	321	0.332	0.0172	42.20	0.0100	317.1	1.954
4.00 - 8.00	355	0.279	0.0099	31.80	0.0067	236.4	2.223
8.00 - 0.25	240	0.315	0.0036				



Since $P_c > P_o$
Hence Over
Consolidated Clay

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-13/UDS-01

Depth : 2-2.45 meters

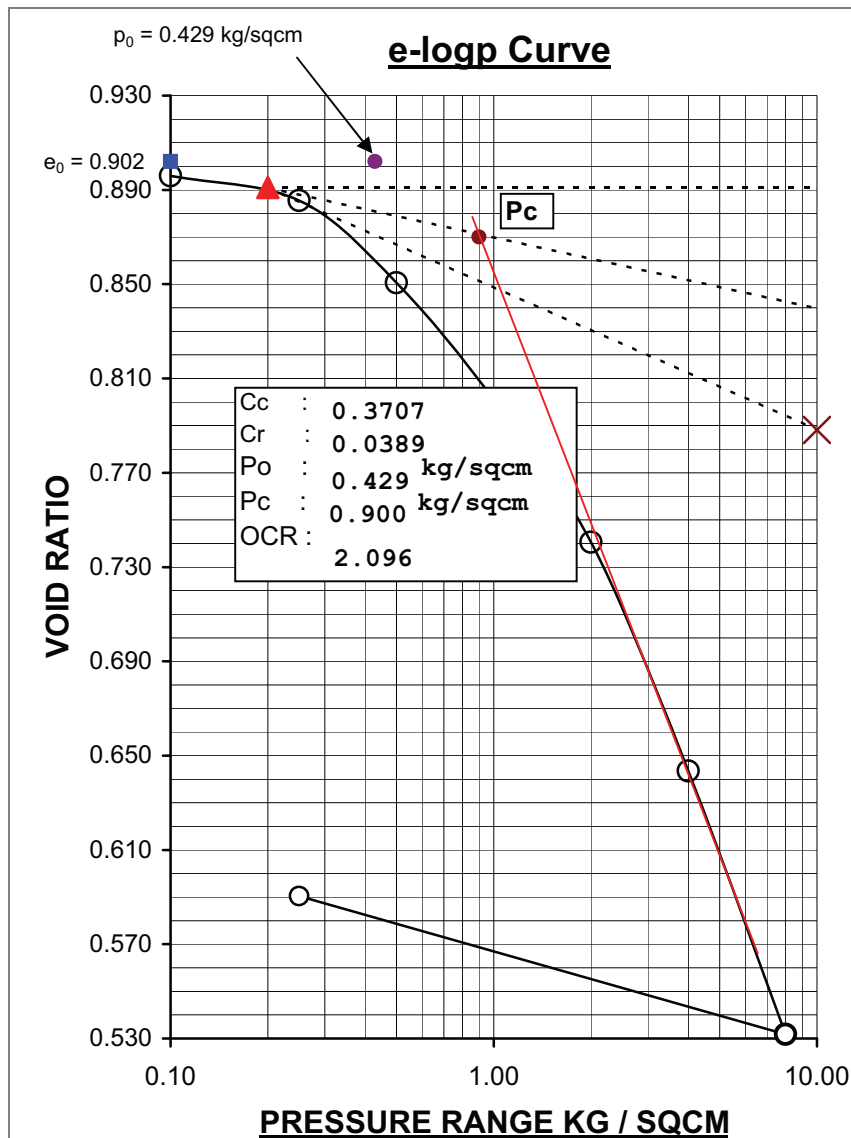
Description : Brownish grey silty clay with traces of calcareous nodules.

Water content: Initial=32.3%

Final =22.6%

Initial Void Ratio =0.902

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	32	0.896	0.0327				
0.10 - 0.25	54	0.885	0.0369	15.50	0.0311	231.4	3.435
0.25 - 0.50	180	0.851	0.0741	25.10	0.0555	285.9	2.648
0.50 - 1.00	255	0.801	0.0535	22.90	0.0412	160.4	4.295
1.00 - 2.00	312	0.740	0.0336	18.40	0.0274	281.0	2.153
2.00 - 4.00	500	0.643	0.0279	16.60	0.0233	307.9	1.605
4.00 - 8.00	575	0.532	0.0170	14.20	0.0146	262.2	1.391
8.00 - 0.25	302	0.590	0.0049				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-17/UDS-01

Depth : 2-2.45 meters

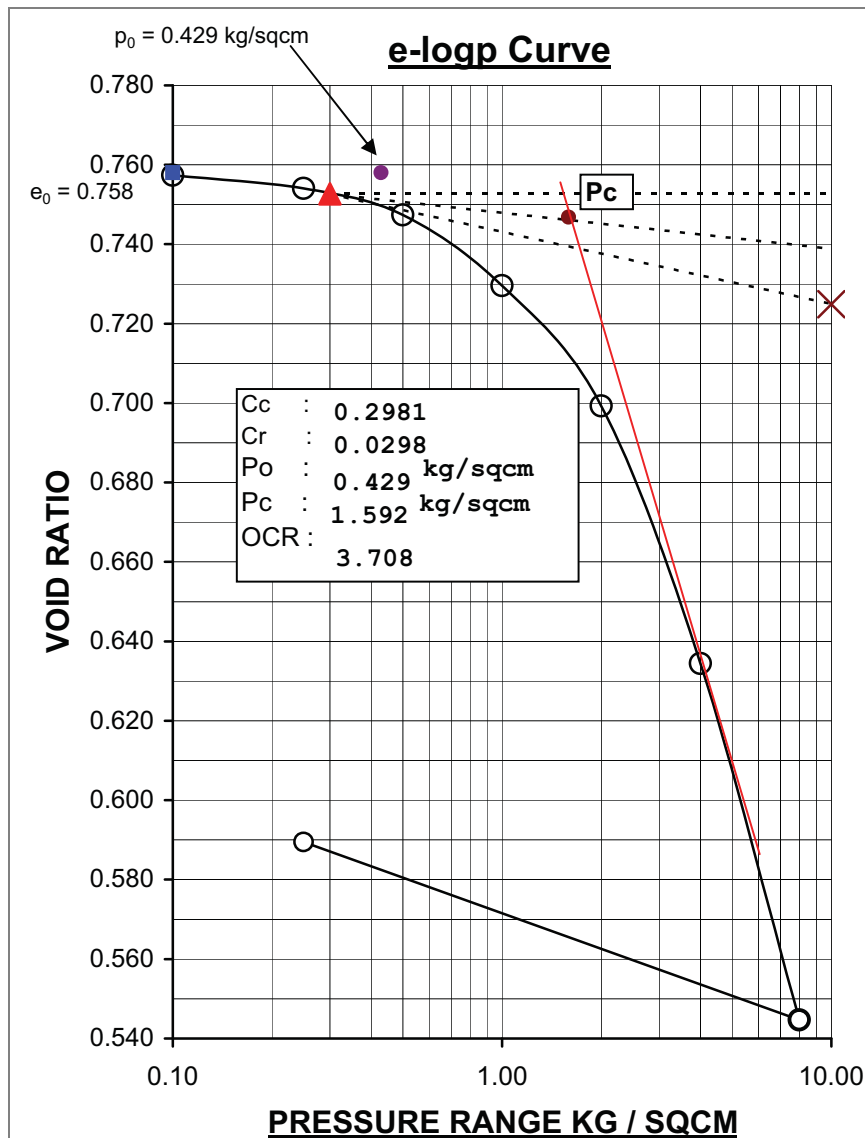
Description : Brownish grey silty clay to clayey silt with sand mixture.

Water content: Initial=23.6%

Final =20.9%

Initial Void Ratio =0.758

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	4	0.757	0.0040				
0.10 - 0.25	19	0.754	0.0126	15.79	0.0106	95.3	8.943
0.25 - 0.50	38	0.747	0.0152	29.50	0.0107	78.0	10.801
0.50 - 1.00	102	0.730	0.0204	31.37	0.0140	369.0	2.219
1.00 - 2.00	173	0.699	0.0175	19.65	0.0141	142.3	5.436
2.00 - 4.00	371	0.634	0.0191	26.95	0.0139	280.1	2.456
4.00 - 8.00	513	0.545	0.0137	22.81	0.0106	180.8	3.095
8.00 - 0.25	256	0.589	0.0037				



Since $P_c > P_o$
Hence Over
Consolidated Clay

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-23/UDS-01

Depth : 1-1.45 meters

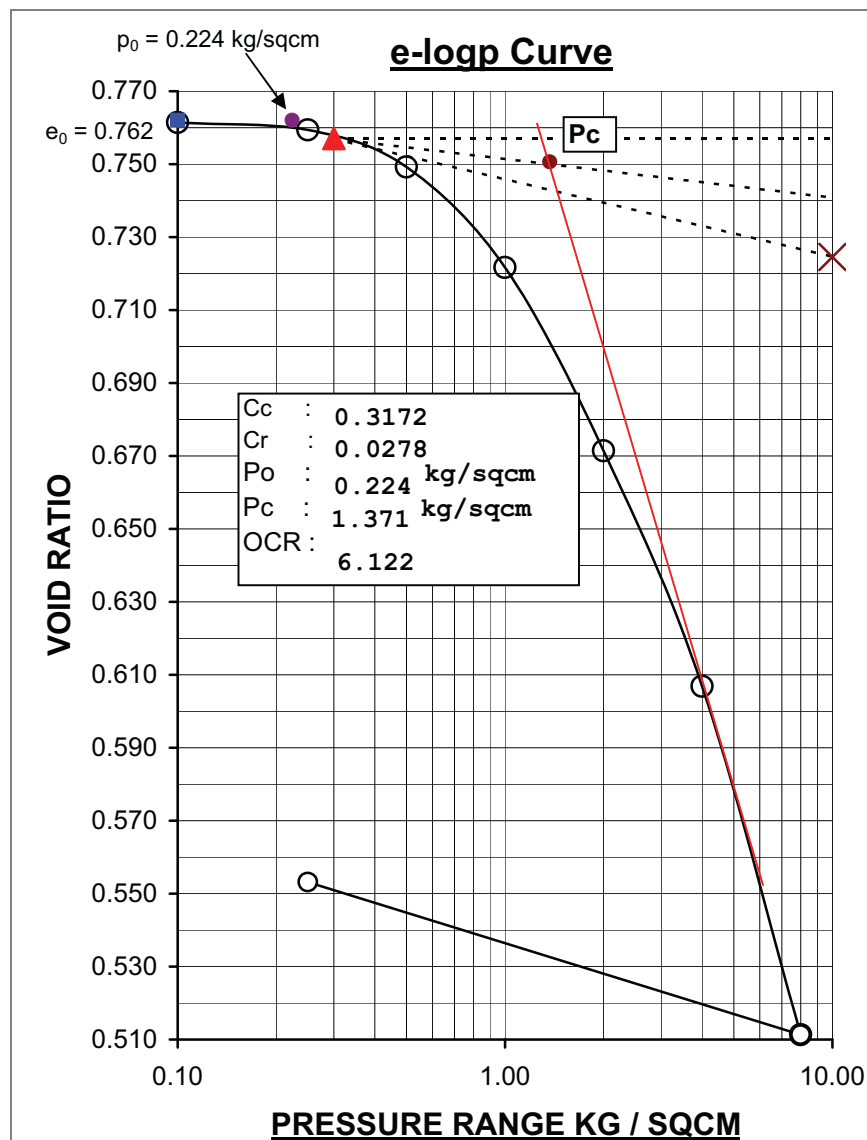
Description : Brownish grey silty clay with traces of calcareous nodules.

Water content: Initial=21.4%

Final =25%

Initial Void Ratio =0.762

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	2	0.761	0.0021				
0.10 - 0.25	11	0.759	0.0076	36.36	0.0048	185.9	4.236
0.25 - 0.50	56	0.749	0.0232	42.86	0.0133	122.7	6.327
0.50 - 1.00	151	0.722	0.0315	22.52	0.0244	240.0	3.096
1.00 - 2.00	275	0.671	0.0292	25.45	0.0217	127.9	5.293
2.00 - 4.00	354	0.607	0.0193	48.02	0.0100	351.4	1.665
4.00 - 8.00	523	0.511	0.0149	23.52	0.0114	561.8	0.833
8.00 - 0.25	229	0.553	0.0036				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

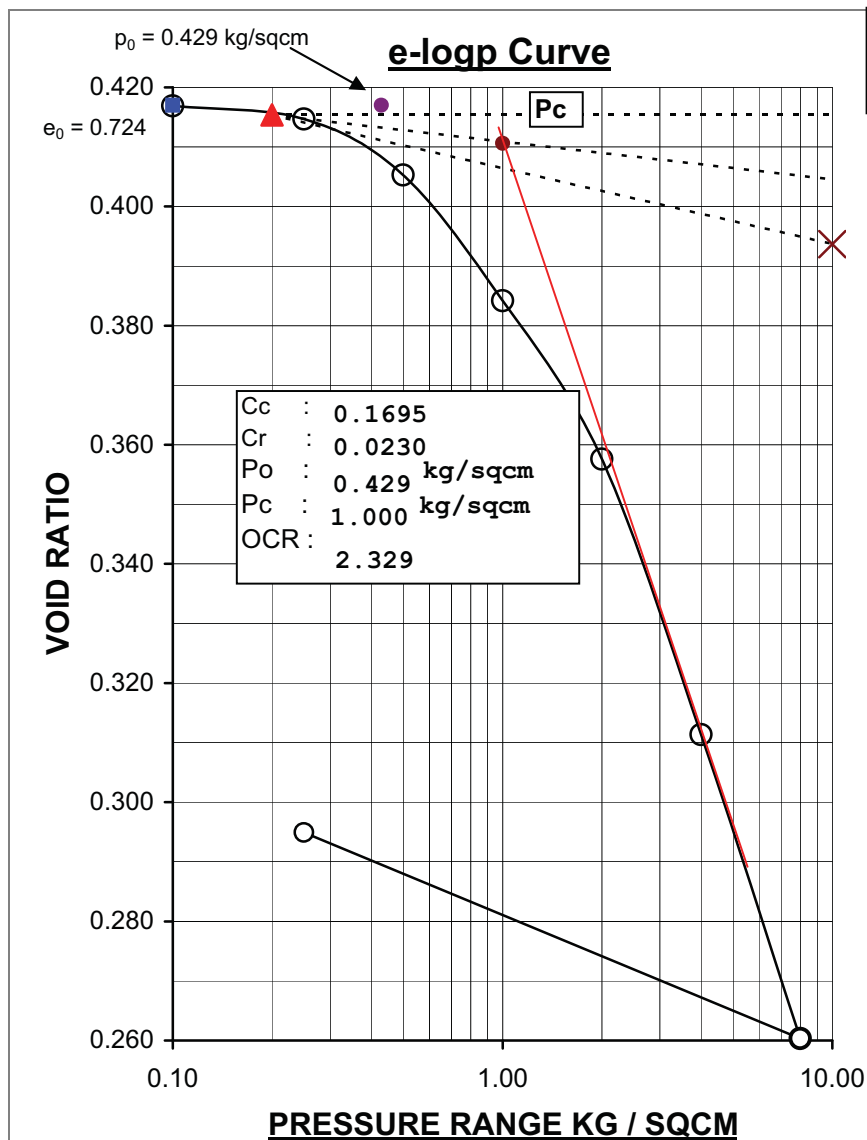
Sample Number: BH-25/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with traces of rock pcs.

Water content: Initial=15.4% Final =13.9% Initial Void Ratio =0.417

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	3	0.417	0.0031				
0.10 - 0.25	15	0.415	0.0103	26.67	0.0075	99.8	8.039
0.25 - 0.50	65	0.405	0.0267	33.85	0.0177	393.2	2.008
0.50 - 1.00	145	0.384	0.0300	46.21	0.0161	232.9	3.245
1.00 - 2.00	183	0.358	0.0192	33.88	0.0127	179.6	3.920
2.00 - 4.00	318	0.311	0.0170	44.97	0.0094	817.0	0.769
4.00 - 8.00	351	0.260	0.0097	33.05	0.0065	536.4	0.997
8.00 - 0.25	238	0.295	0.0035				



Since $P_c > P_o$
Hence Over
Consolidated Clay

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

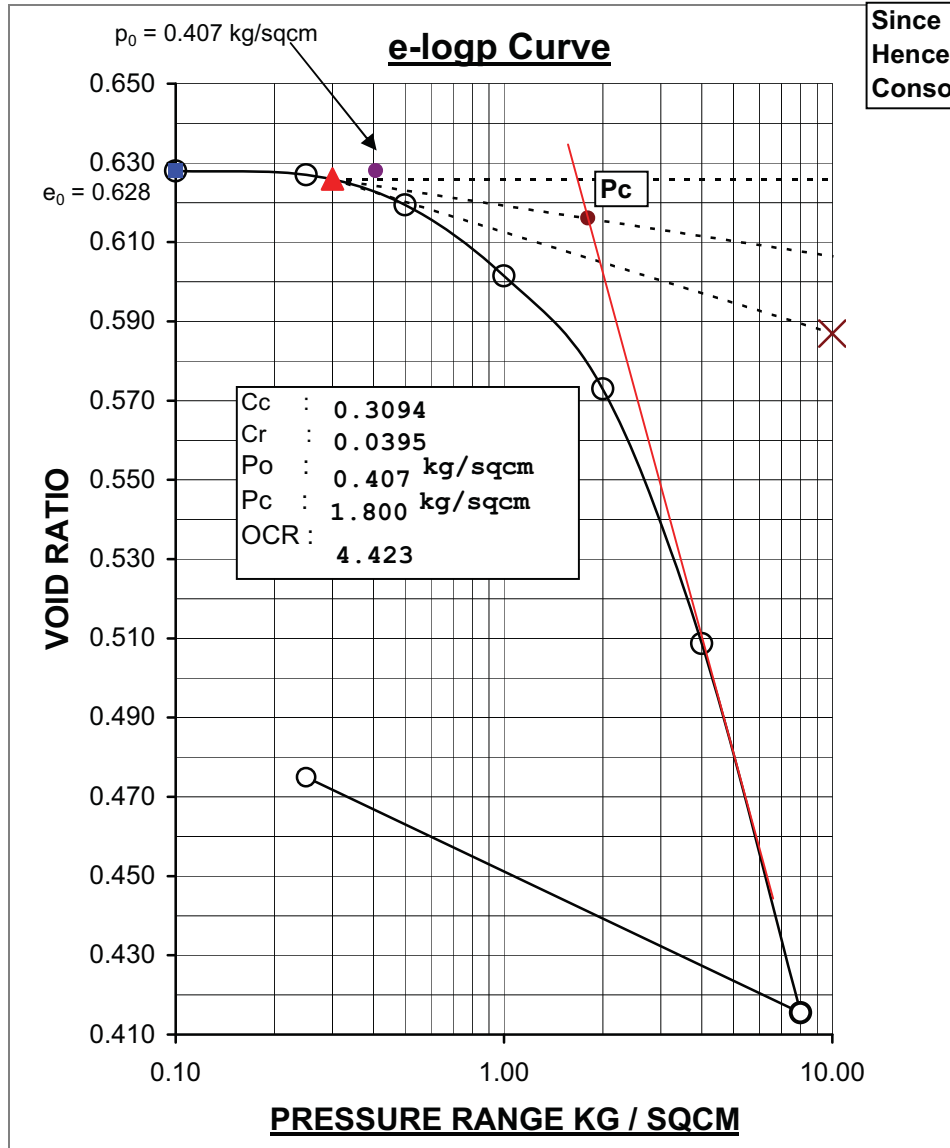
Sample Number: BH-29/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with calcareous nodules.

Water content: Initial=25.8% Final =21.8% Initial Void Ratio =0.628

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	3	0.628	0.0031				
0.10 - 0.25	6	0.627	0.0041	33.33	0.0028		
0.25 - 0.50	45	0.619	0.0187	26.67	0.0137	209.8	3.715
0.50 - 1.00	106	0.601	0.0221	17.92	0.0181	424.5	1.779
1.00 - 2.00	169	0.573	0.0178	31.95	0.0121	249.7	2.850
2.00 - 4.00	381	0.509	0.0204	27.56	0.0148	221.2	2.843
4.00 - 8.00	552	0.416	0.0154	16.67	0.0129	402.5	1.242
8.00 - 0.25	352	0.475	0.0054				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-31/UDS-01

Depth : 2-2.45 meters

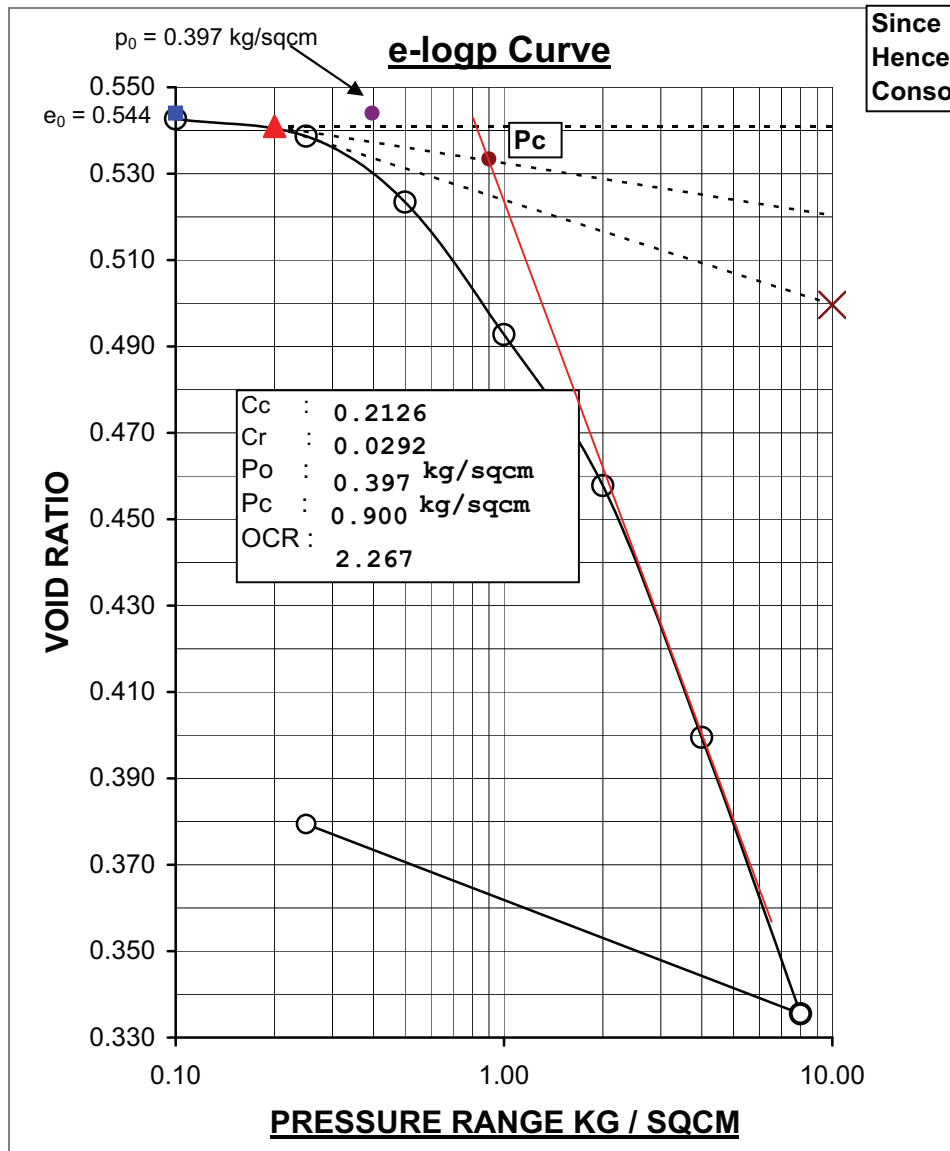
Description : Brownish grey clayey silt with sand mixture.

Water content: Initial=16.3%

Final =19.4%

Initial Void Ratio =0.544

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	6	0.543	0.0063				
0.10 - 0.25	25	0.539	0.0175	56.00	0.0077	135.0	5.685
0.25 - 0.50	94	0.523	0.0395	43.62	0.0223	226.6	3.302
0.50 - 1.00	190	0.493	0.0403	52.63	0.0191	242.4	2.903
1.00 - 2.00	216	0.458	0.0234	34.72	0.0153	111.0	5.789
2.00 - 4.00	361	0.399	0.0200	47.09	0.0106	142.3	3.936
4.00 - 8.00	396	0.335	0.0114	49.75	0.0057	214.3	2.149
8.00 - 0.25	272	0.379	0.0042				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

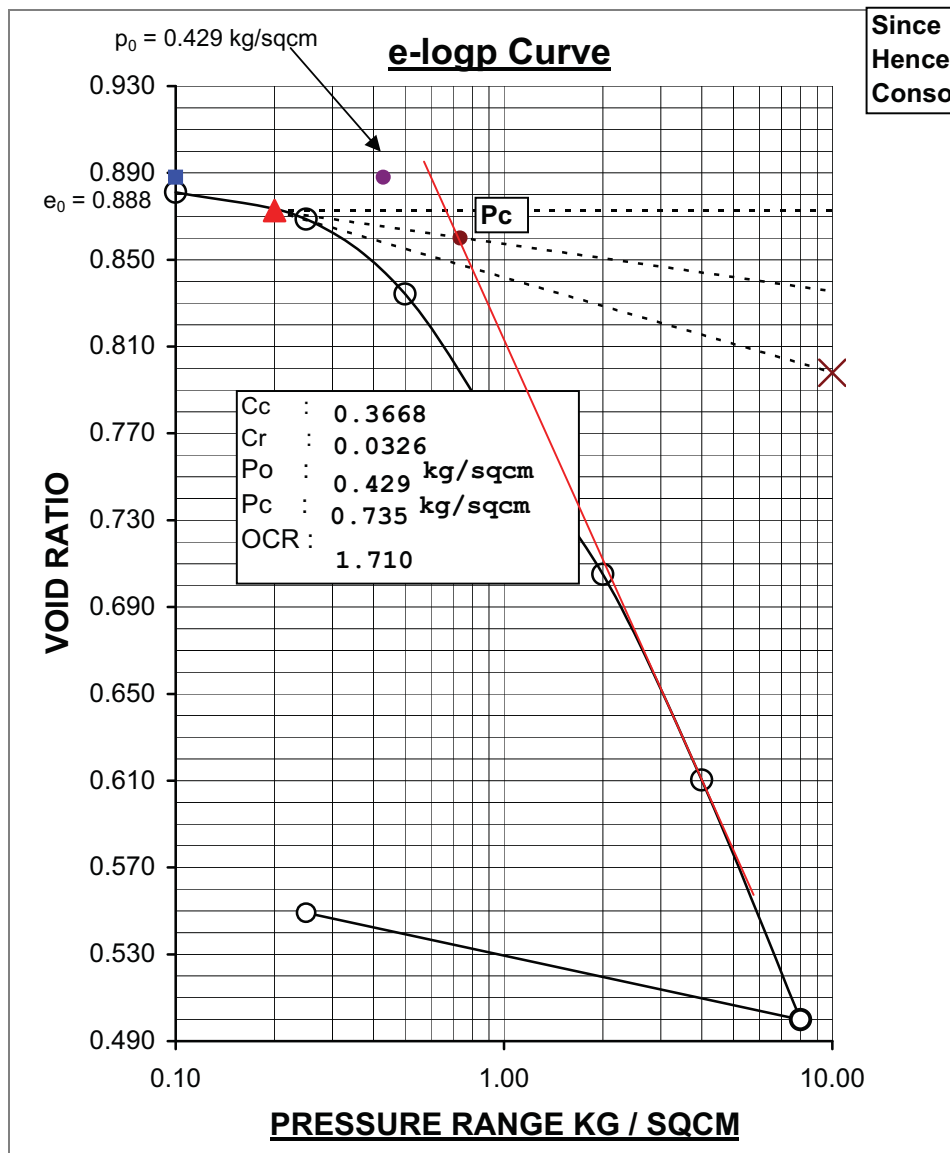
Sample Number: BH-39/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with traces of calcareous nodules.

Water content: Initial=32.3% Final =22.6% Initial Void Ratio =0.888

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	38	0.881	0.0388				
0.10 - 0.25	64	0.869	0.0437	25.00	0.0328	331.4	2.388
0.25 - 0.50	179	0.834	0.0738	15.08	0.0627	185.9	4.046
0.50 - 1.00	350	0.767	0.0735	12.86	0.0641	260.4	2.573
1.00 - 2.00	320	0.705	0.0349	15.00	0.0297	381.0	1.503
2.00 - 4.00	492	0.610	0.0278	15.45	0.0235	407.9	1.140
4.00 - 8.00	573	0.500	0.0171	12.39	0.0150	361.2	0.944
8.00 - 0.25	255	0.549	0.0042				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-41/UDS-01

Depth : 2-2.45 meters

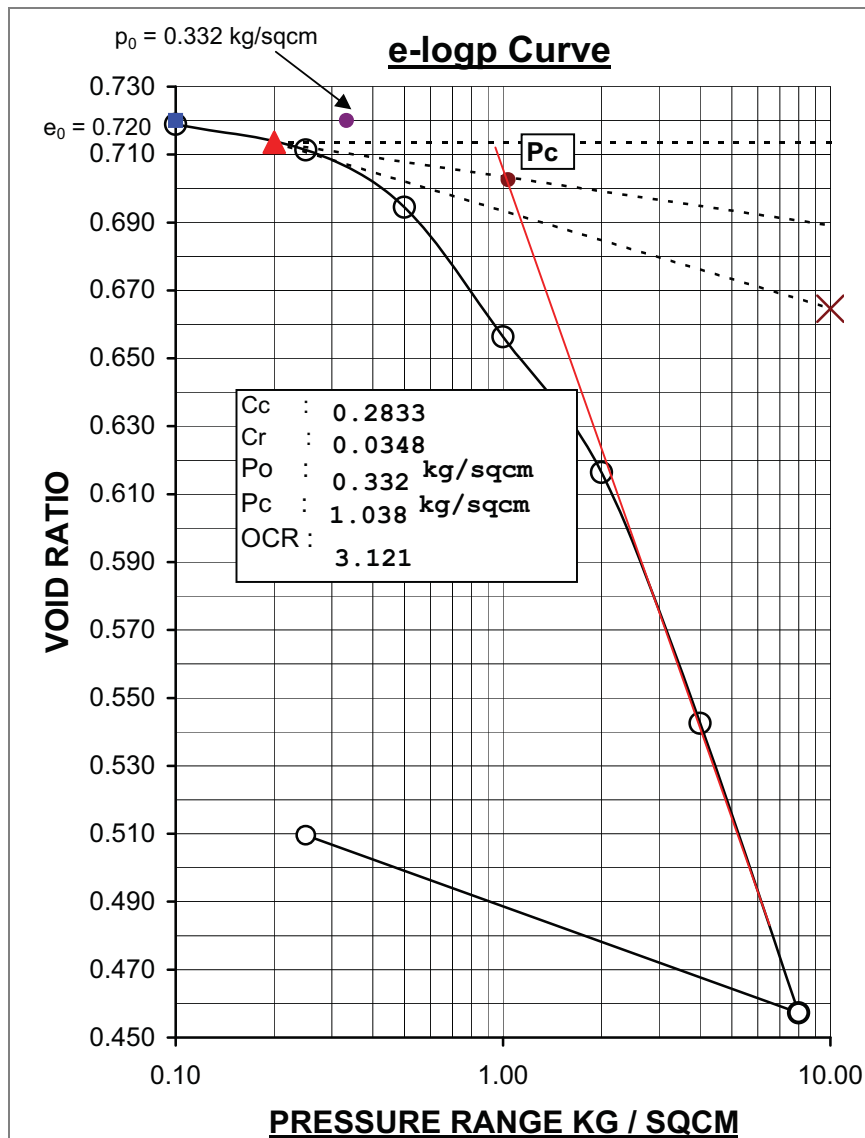
Description : Brownish grey silty clay with rock pcs.

Water content: Initial=25.8%

Final =22%

Initial Void Ratio =0.72

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	7	0.719	0.0073				
0.10 - 0.25	42	0.711	0.0292	52.38	0.0139	109.4	7.064
0.25 - 0.50	94	0.694	0.0394	25.53	0.0293	177.5	4.228
0.50 - 1.00	213	0.656	0.0450	46.48	0.0241	176.9	3.971
1.00 - 2.00	223	0.616	0.0241	34.60	0.0158	262.4	2.426
2.00 - 4.00	412	0.543	0.0228	31.31	0.0157	363.1	1.506
4.00 - 8.00	476	0.457	0.0138	19.96	0.0111	430.9	1.004
8.00 - 0.25	292	0.510	0.0046				



Since $P_c > P_o$
Hence Over
Consolidated Clay

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

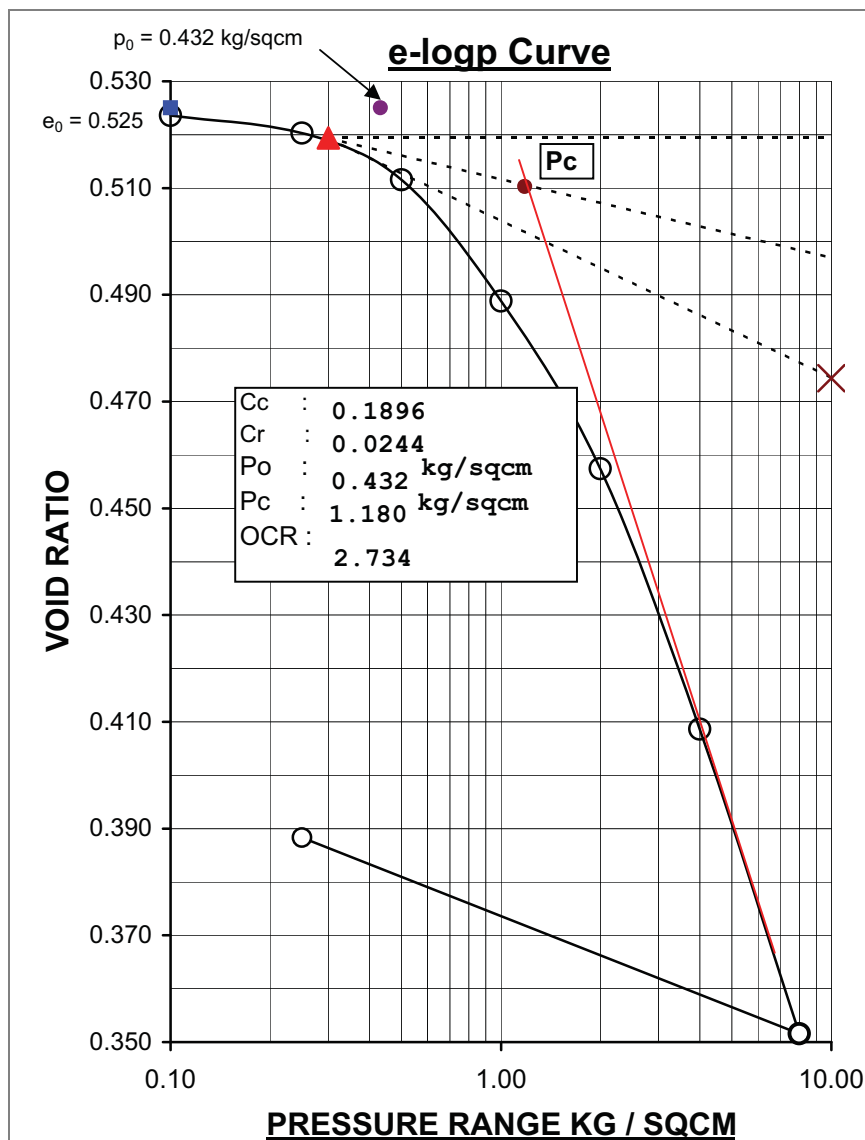
Sample Number: BH-43/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey clayey silt with decomposed rock dust.

Water content: Initial=12.3% Final =13.8% Initial Void Ratio =0.525

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	8	0.524	0.0082				
0.10 - 0.25	21	0.520	0.0144	21.20	0.0113	202.6	3.949
0.25 - 0.50	56	0.512	0.0230	32.80	0.0155	290.5	2.710
0.50 - 1.00	145	0.489	0.0300	40.40	0.0179	135.4	5.575
1.00 - 2.00	201	0.457	0.0211	33.60	0.0140	188.2	3.722
2.00 - 4.00	312	0.409	0.0167	41.40	0.0098	217.4	2.869
4.00 - 8.00	365	0.352	0.0101	30.20	0.0071	136.4	3.879
8.00 - 0.25	235	0.388	0.0035				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

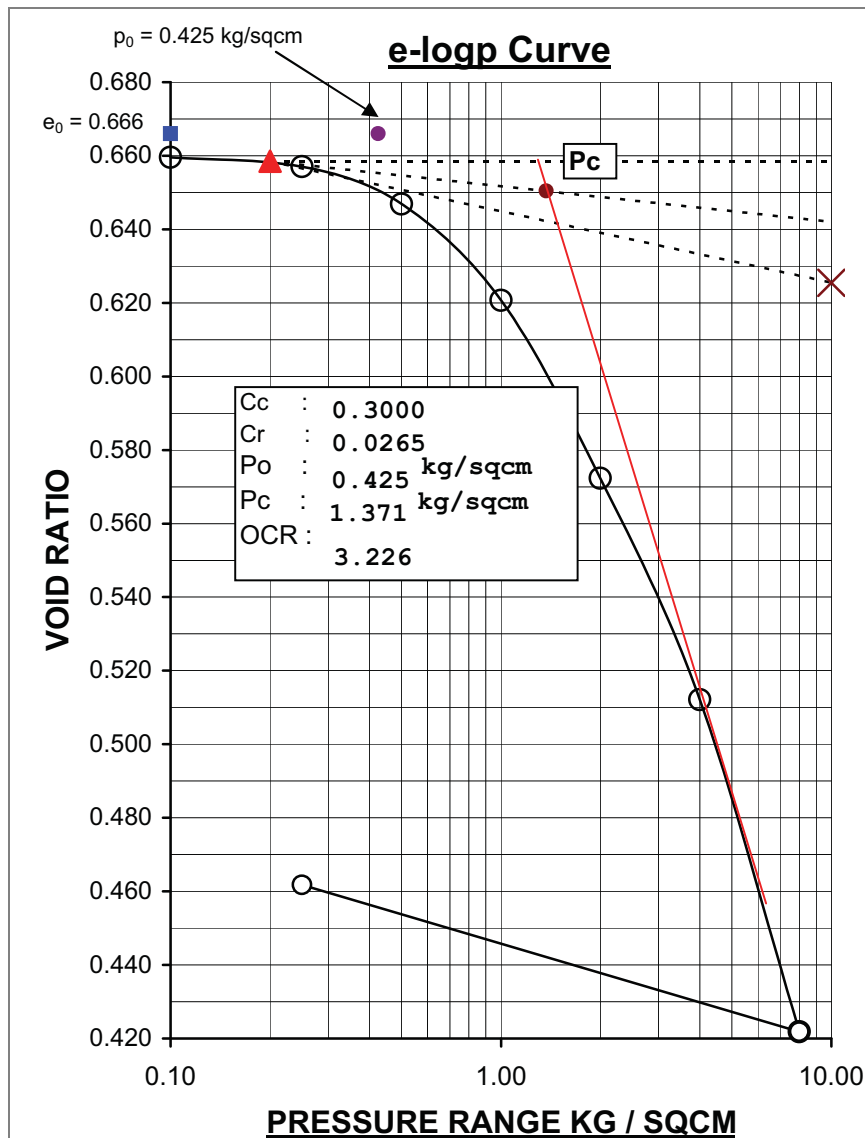
Sample Number: BH-45/UDS-01

Depth : 2-2.45 meters

Description : Whitish grey silty clay with traces of calcareous nodules.

Water content: Initial=22.3% Final =24.8% Initial Void Ratio =0.66

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	3	0.660	0.0031				
0.10 - 0.25	15	0.657	0.0104	32.60	0.0070	285.5	2.754
0.25 - 0.50	59	0.647	0.0245	41.50	0.0143	222.7	3.476
0.50 - 1.00	152	0.621	0.0318	32.50	0.0214	340.0	2.178
1.00 - 2.00	281	0.572	0.0298	35.50	0.0192	227.9	2.955
2.00 - 4.00	350	0.512	0.0191	42.00	0.0111	251.4	2.313
4.00 - 8.00	525	0.422	0.0149	33.50	0.0099	361.8	1.285
8.00 - 0.25	232	0.462	0.0036				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

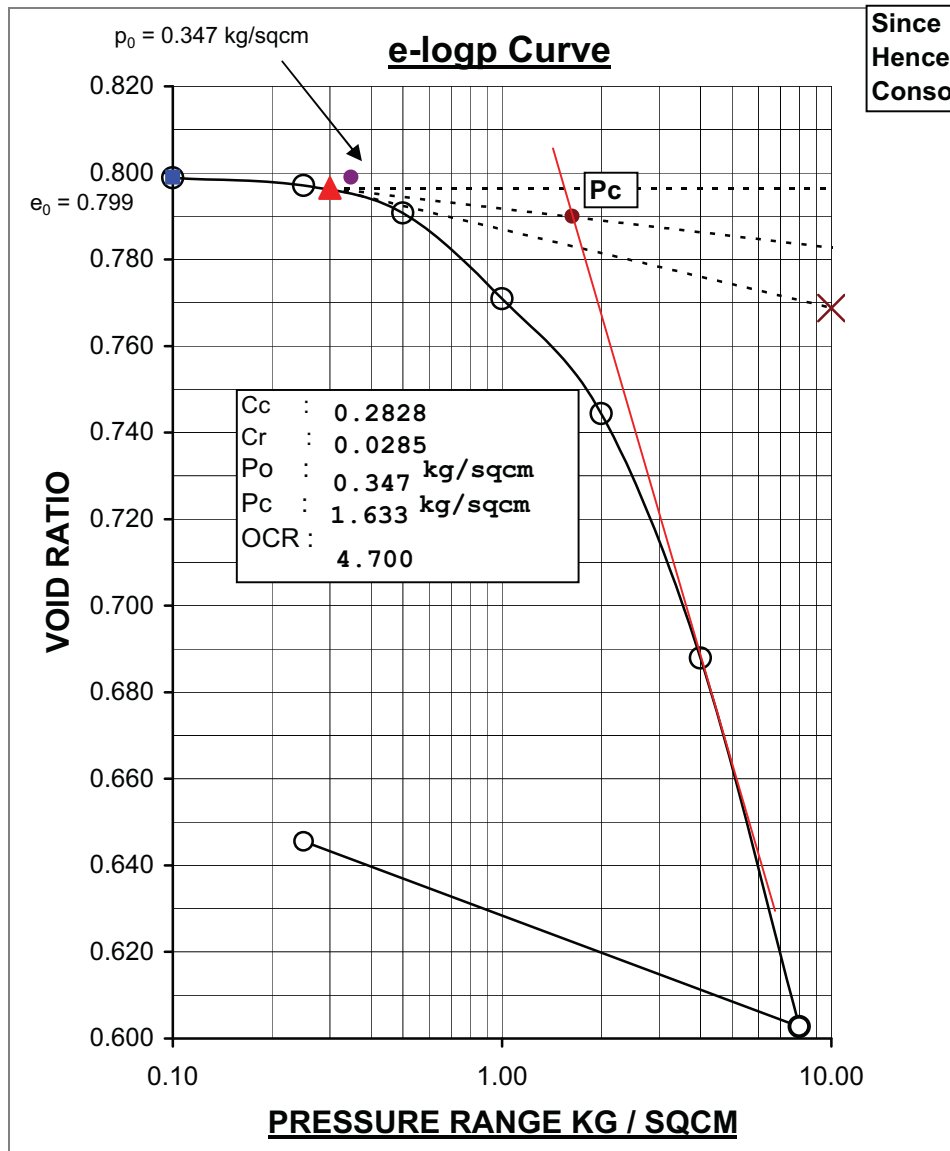
Sample Number: BH-49/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with traces of kankars.

Water content: Initial=23.1% Final =21.2% Initial Void Ratio =0.799

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	3	0.799	0.0029				
0.10 - 0.25	10	0.797	0.0065	10.00	0.0059		
0.25 - 0.50	36	0.791	0.0141	36.11	0.0090	309.2	2.847
0.50 - 1.00	113	0.771	0.0222	34.51	0.0145	247.3	3.456
1.00 - 2.00	151	0.744	0.0150	35.76	0.0096	111.0	7.301
2.00 - 4.00	322	0.688	0.0162	34.16	0.0107	142.3	5.157
4.00 - 8.00	485	0.603	0.0126	18.56	0.0103	190.1	3.219
8.00 - 0.25	244	0.646	0.0034				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-51/UDS-01

Depth : 2-2.45 meters

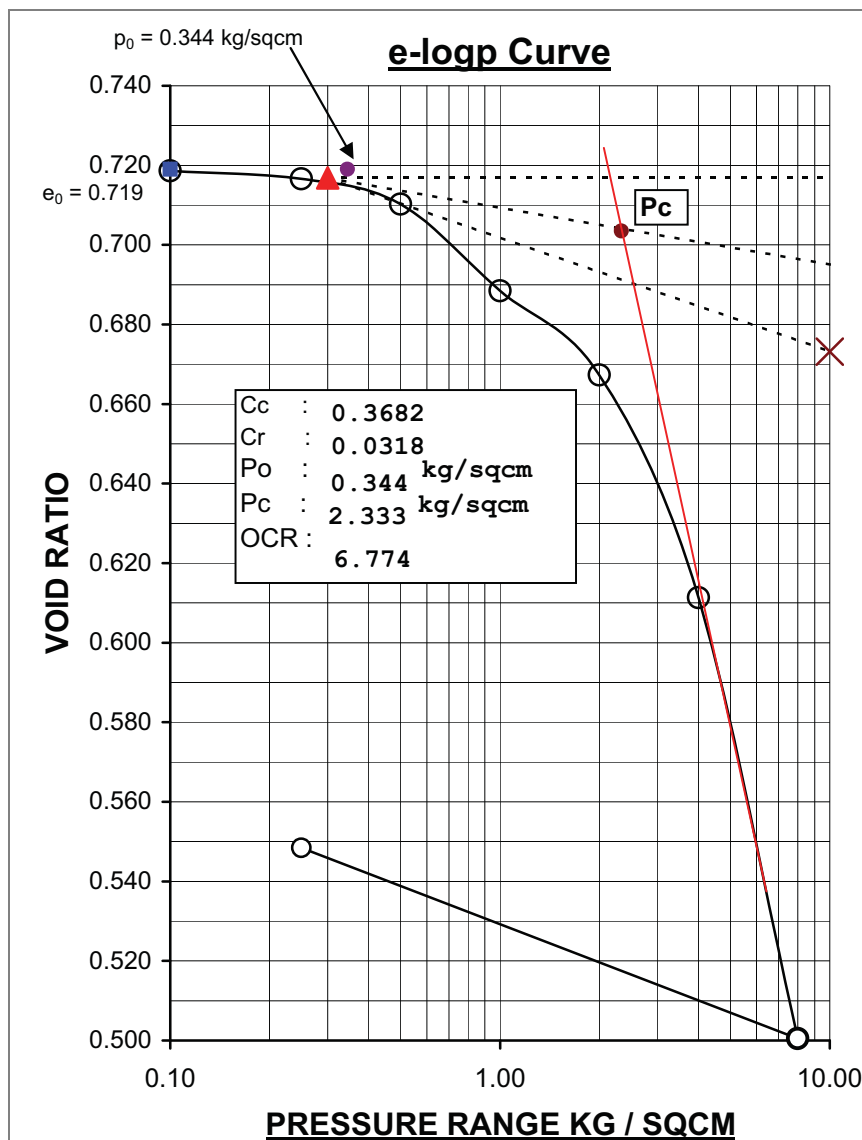
Description : Deep brown silty clay with traces of calcareous nodules..

Water content: Initial=27.9%

Final =23.8%

Initial Void Ratio =0.719

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	5	0.719	0.0052				
0.10 - 0.25	11	0.717	0.0076	36.36	0.0048		
0.25 - 0.50	36	0.710	0.0149	30.56	0.0104	228.2	3.413
0.50 - 1.00	122	0.688	0.0254	31.97	0.0173	200.9	3.748
1.00 - 2.00	119	0.667	0.0126	15.13	0.0107	172.7	4.141
2.00 - 4.00	314	0.611	0.0168	17.83	0.0138	328.5	1.976
4.00 - 8.00	622	0.500	0.0172	14.63	0.0147	265.4	1.951
8.00 - 0.25	269	0.548	0.0041				



Since $P_c > P_o$
Hence Over
Consolidated Clay

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

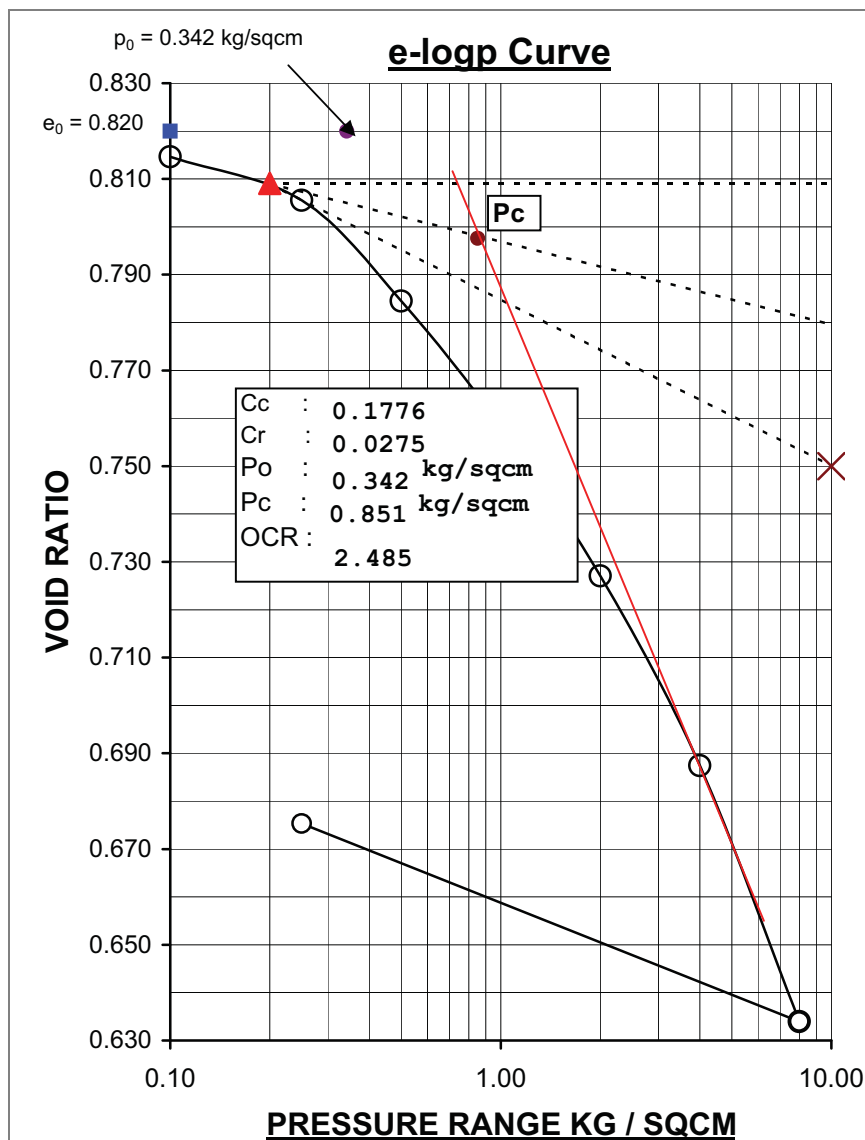
Sample Number: BH-54/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with traces of kankars.

Water content: Initial=28.7% Final =24.4% Initial Void Ratio =0.82

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	28	0.815	0.0292				
0.10 - 0.25	48	0.806	0.0334	12.50	0.0293	261.2	2.928
0.25 - 0.50	111	0.784	0.0466	29.20	0.0330	188.4	3.924
0.50 - 1.00	138	0.758	0.0293	36.40	0.0186	203.5	3.442
1.00 - 2.00	165	0.727	0.0178	29.00	0.0126	155.5	4.209
2.00 - 4.00	209	0.687	0.0115	28.80	0.0082	131.4	4.565
4.00 - 8.00	282	0.634	0.0079	20.30	0.0063	101.2	5.256
8.00 - 0.25	218	0.675	0.0033				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-58/UDS-01

Depth : 2-2.45 meters

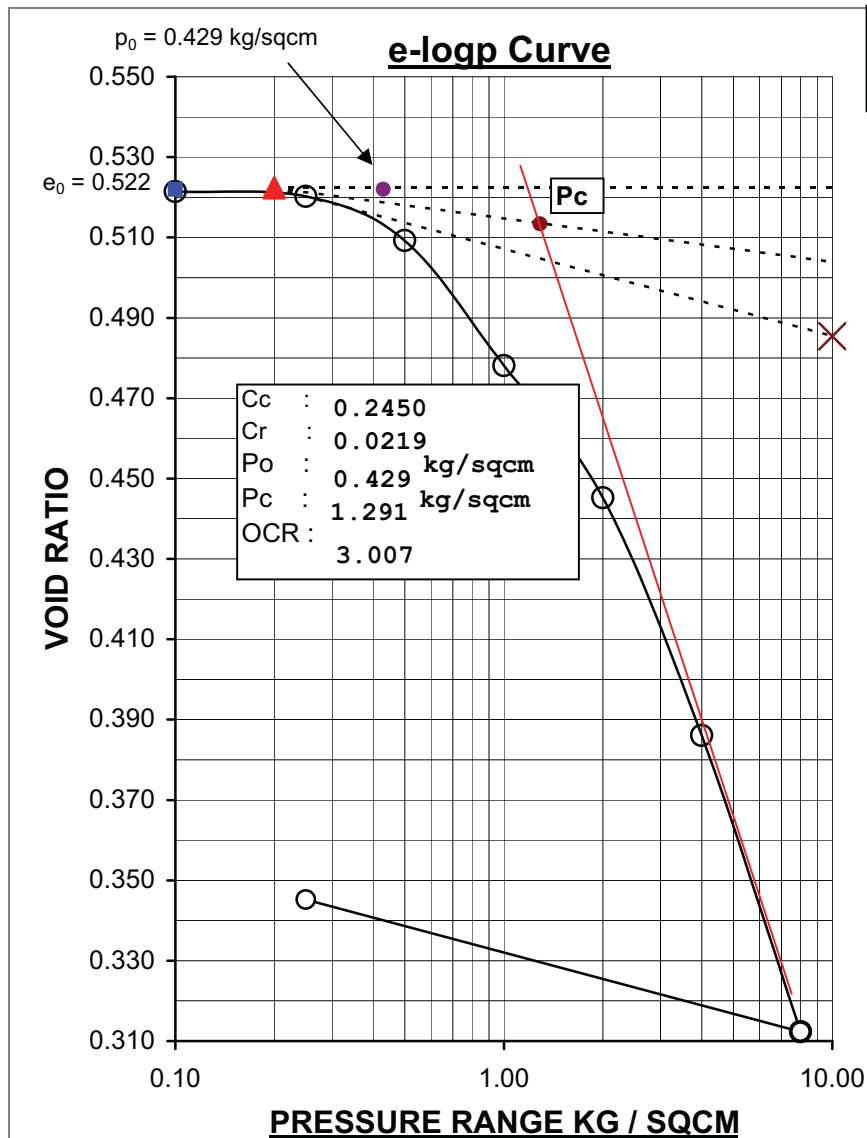
Description : Brownish grey silty clay with sand mixture.

Water content: Initial=20.1%

Final =23.8%

Initial Void Ratio =0.522

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	4	0.521	0.0041				
0.10 - 0.25	8	0.520	0.0055	30.20	0.0038	104.3	7.625
0.25 - 0.50	70	0.509	0.0289	28.40	0.0207	160.2	4.884
0.50 - 1.00	198	0.478	0.0412	30.50	0.0286	240.4	3.076
1.00 - 2.00	210	0.445	0.0223	26.10	0.0165	260.6	2.595
2.00 - 4.00	377	0.386	0.0205	32.50	0.0138	262.4	2.249
4.00 - 8.00	470	0.312	0.0133	33.90	0.0088	168.4	2.830
8.00 - 0.25	210	0.345	0.0032				



Since $P_c > P_o$
Hence Over
Consolidated Clay

Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. 3421

Sheet No.

CONSOLIDATION TEST RESULTS

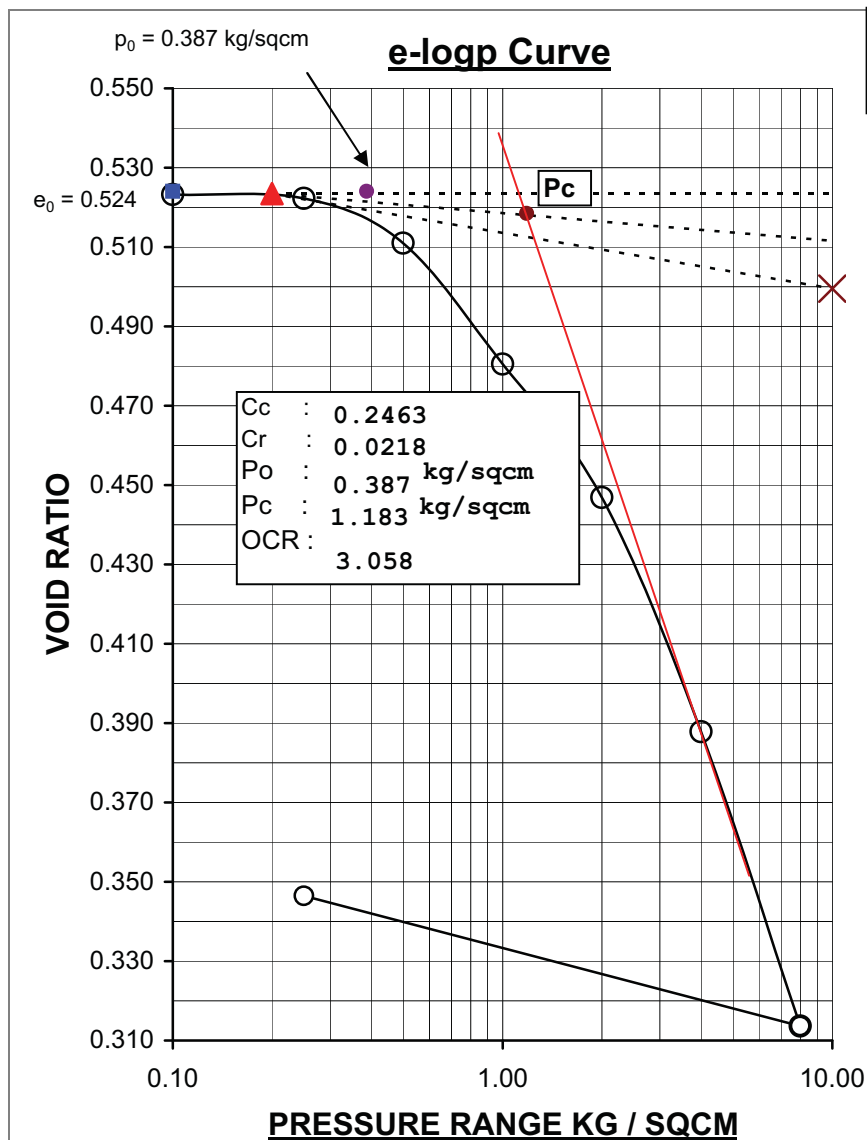
Sample Number: BH-60/UDS-01

Depth : 2-2.45 meters

Description : Brownish grey silty clay with sand mixture.

Water content: Initial=20.2% Final =24.9% Initial Void Ratio =0.524

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	3	0.523	0.0031				
0.10 - 0.25	6	0.522	0.0041	33.33	0.0027		
0.25 - 0.50	72	0.511	0.0297	27.78	0.0215	158.4	4.944
0.50 - 1.00	194	0.480	0.0403	28.87	0.0287	244.8	3.024
1.00 - 2.00	214	0.447	0.0227	24.77	0.0171	257.1	2.634
2.00 - 4.00	376	0.388	0.0204	42.82	0.0117	363.1	1.627
4.00 - 8.00	472	0.314	0.0134	23.94	0.0102	266.3	1.790
8.00 - 0.25	209	0.346	0.0032				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



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Sheet No.

CONSOLIDATION TEST RESULTS

Sample Number: BH-66/UDS-01

Depth : 2-2.45 meters

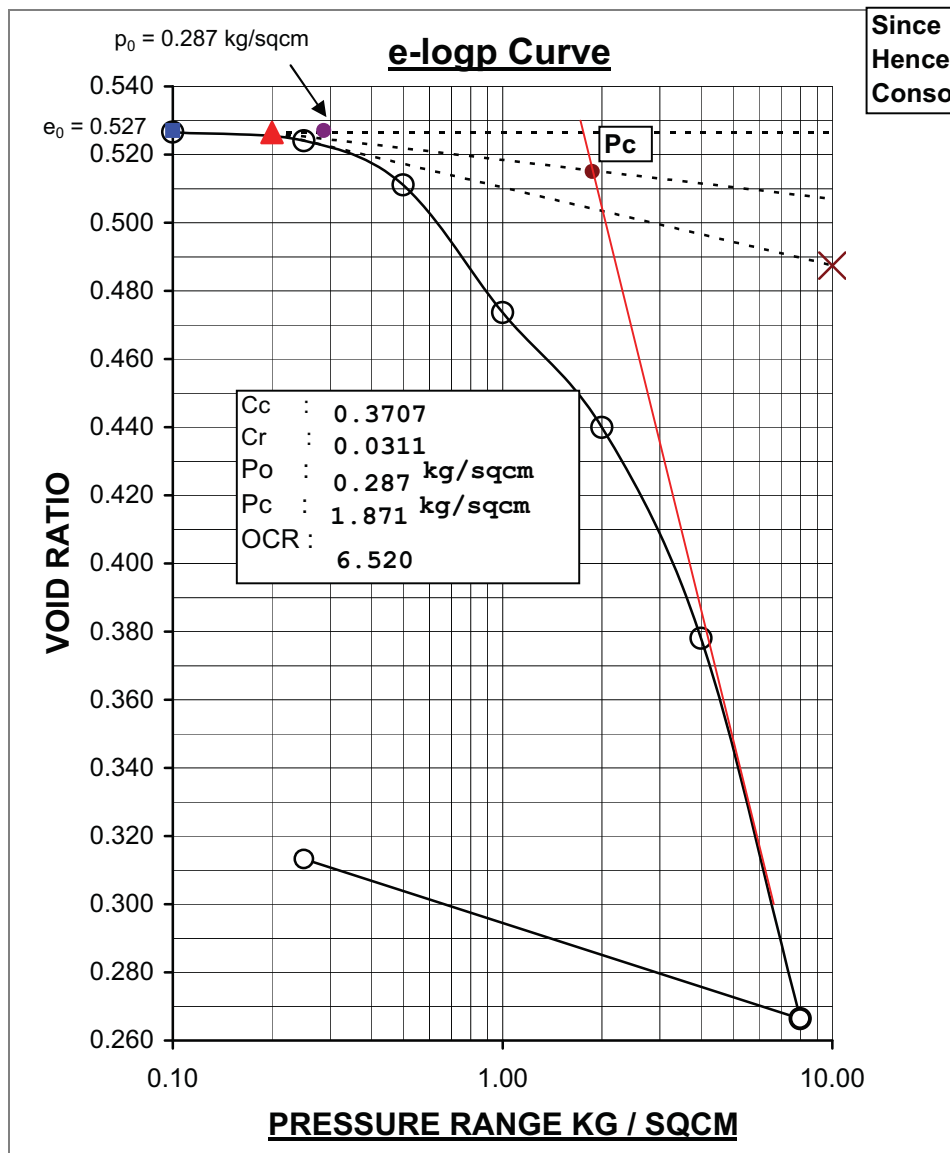
Description : Yellowish grey silty clay with rock dust.

Water content: Initial=16.6%

Final =19.8%

Initial Void Ratio =0.527

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	2	0.527	0.0021				
0.10 - 0.25	16	0.524	0.0112	18.75	0.0091	1198.9	0.642
0.25 - 0.50	81	0.511	0.0340	13.58	0.0294	839.3	0.899
0.50 - 1.00	234	0.474	0.0495	19.66	0.0398	922.1	0.765
1.00 - 2.00	211	0.440	0.0229	23.22	0.0176	587.8	1.085
2.00 - 4.00	387	0.378	0.0215	20.41	0.0171	216.6	2.553
4.00 - 8.00	698	0.266	0.0202	9.74	0.0183	361.2	1.147
8.00 - 0.25	293	0.313	0.0048				



Project : Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



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CONSOLIDATION TEST RESULTS

Sample Number: BH-67/UDS-01

Depth : 2-2.45 meters

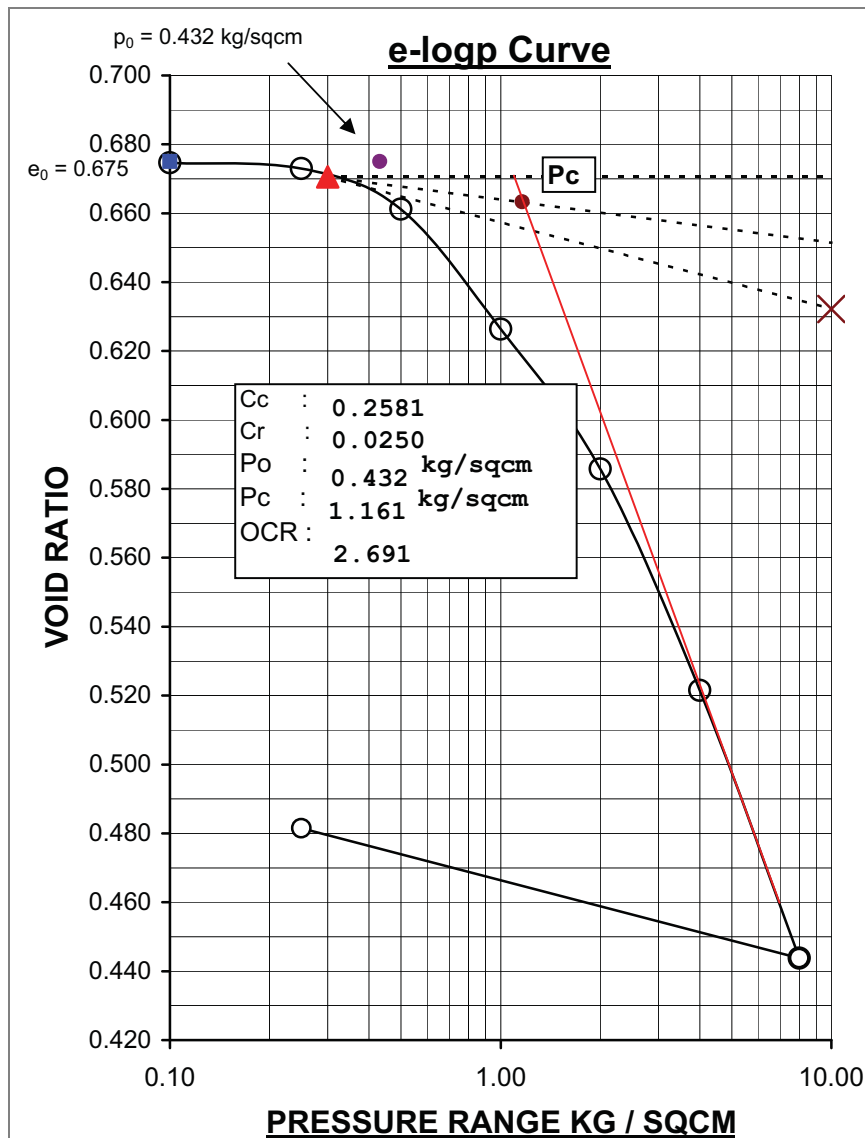
Description : Brownish grey silty clay with calcareous nodules.

Water content: Initial=22.2%

Final =26%

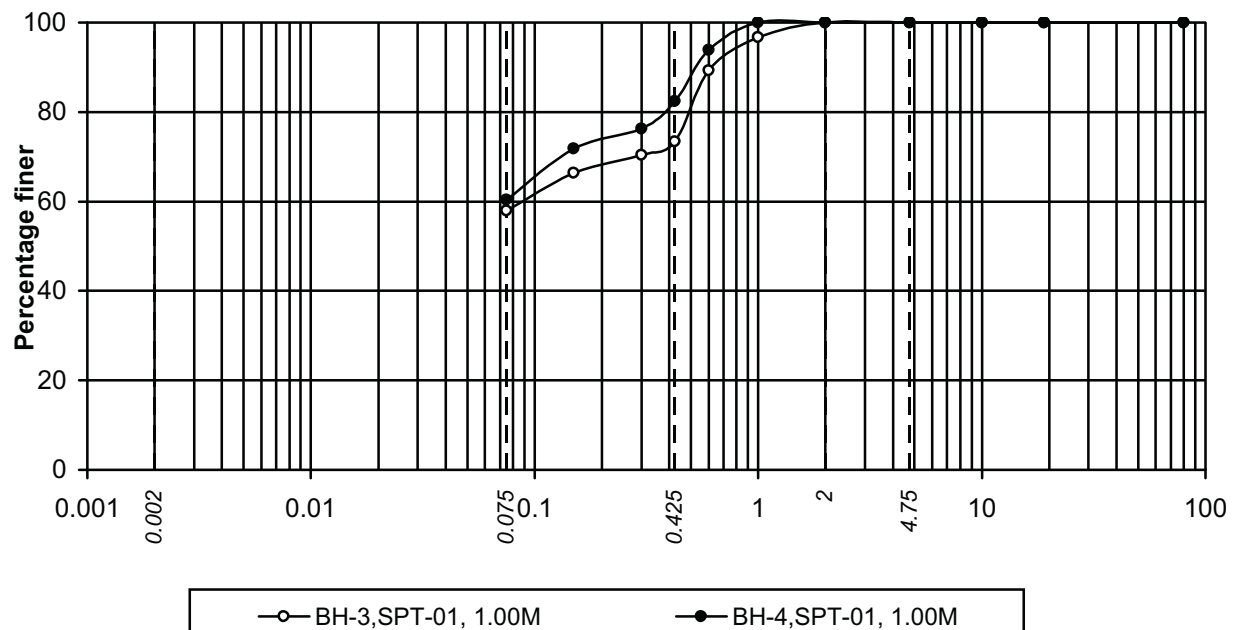
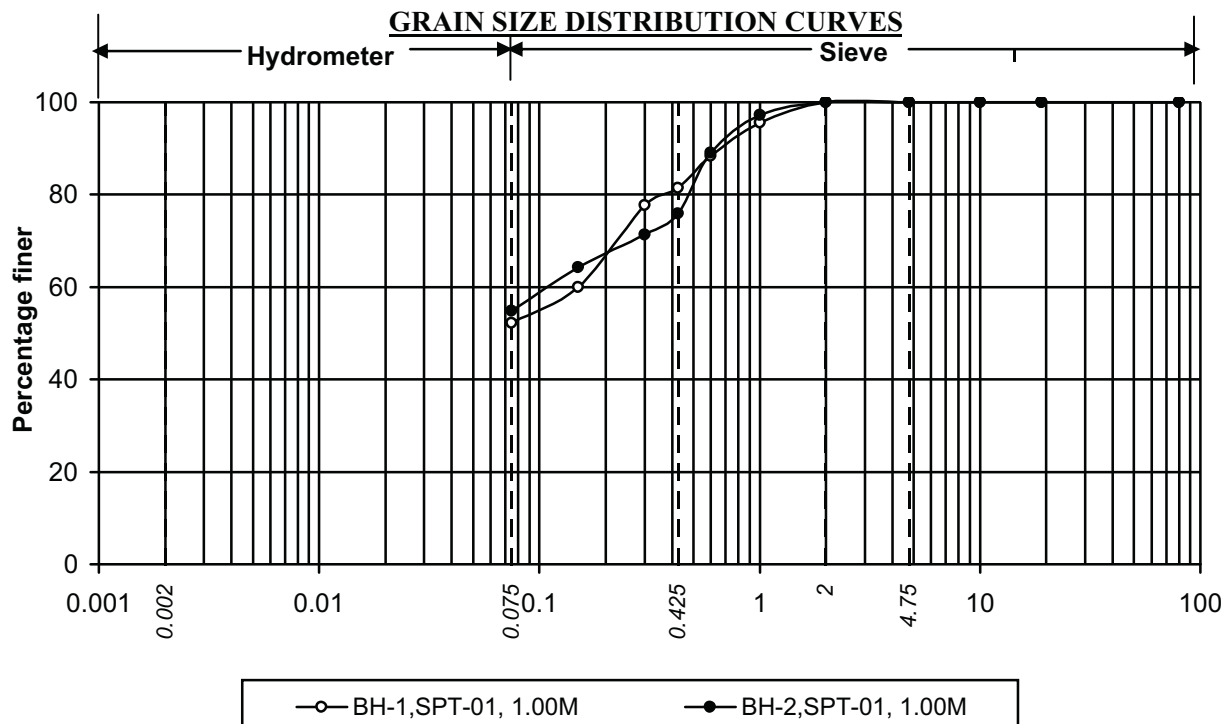
Initial Void Ratio =0.675

P1-P2 Kg/Sqcm	Dial Change	Void Ratio	Mv Sqcm/kg	Comprn %	Mvc sqcm/kg	T90 Sec	1000.Cv sqcm/sec
0.00 - 0.10	2	0.675	0.0021				
0.10 - 0.25	10	0.673	0.0069	35.40	0.0044	111.2	7.155
0.25 - 0.50	68	0.661	0.0281	25.60	0.0209	158.4	4.942
0.50 - 1.00	202	0.626	0.0420	31.30	0.0289	232.1	3.186
1.00 - 2.00	235	0.586	0.0250	27.20	0.0182	304.2	2.209
2.00 - 4.00	372	0.522	0.0203	30.40	0.0141	215.6	2.706
4.00 - 8.00	450	0.444	0.0128	28.60	0.0091	175.2	2.702
8.00 - 0.25	218	0.481	0.0034				



C. E. Testing Company Pvt. Ltd.

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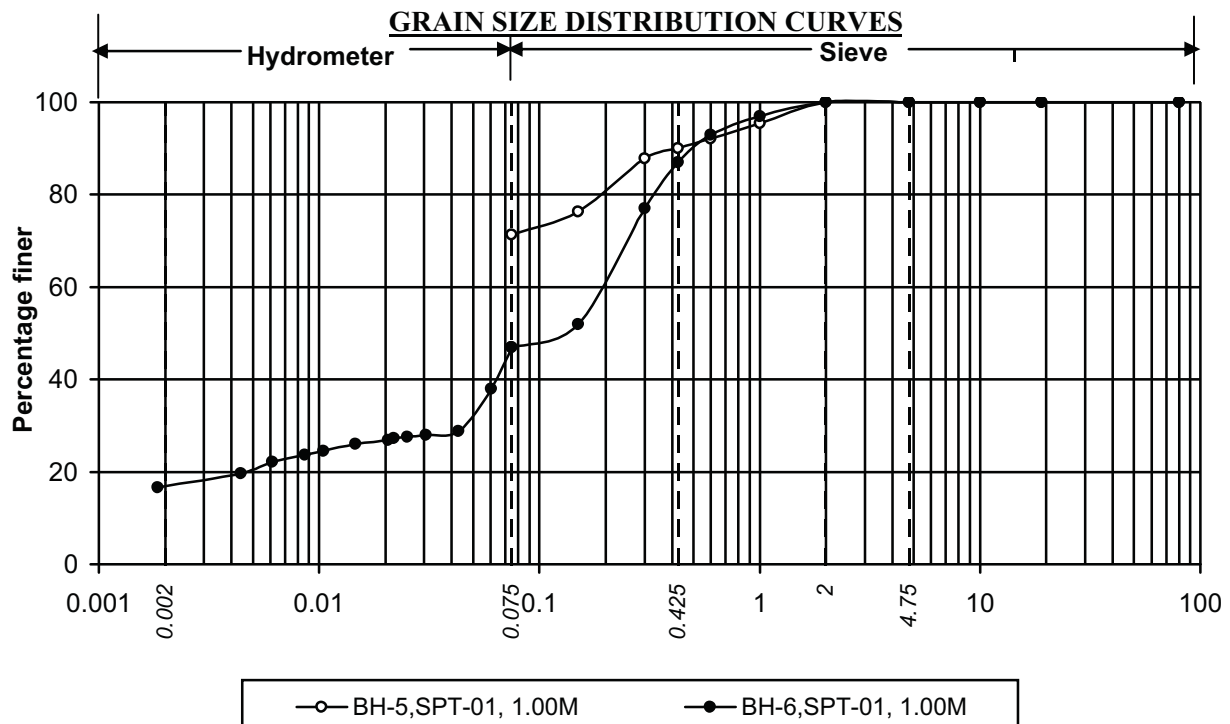


Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

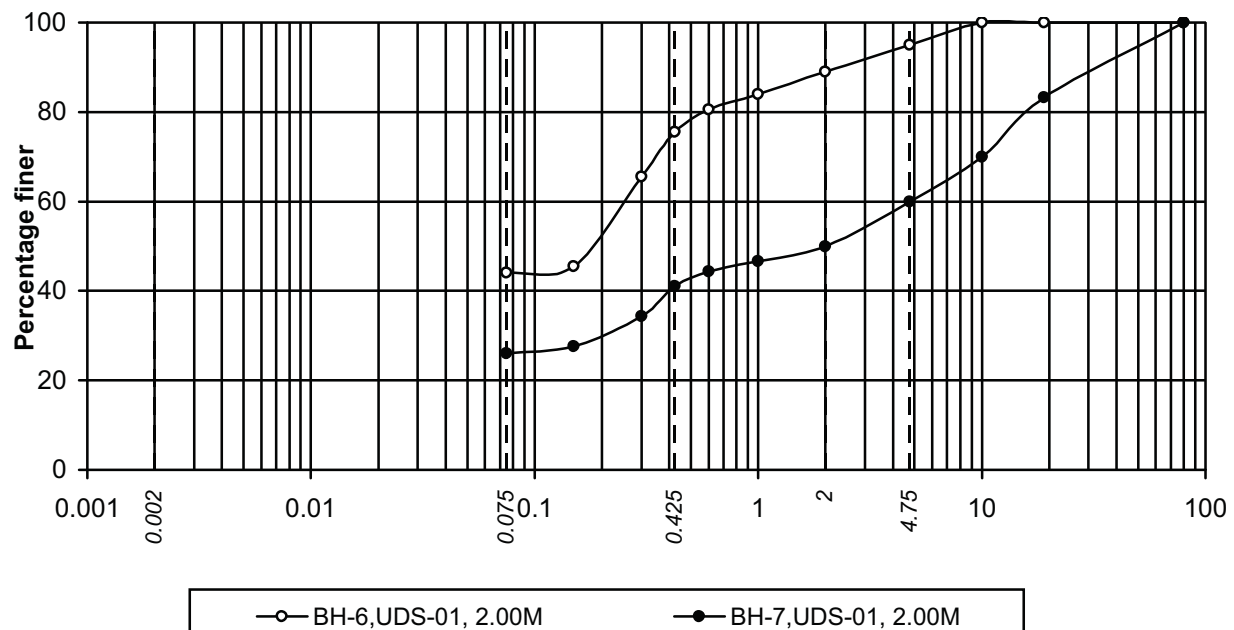
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C. E. Testing Company Pvt. Ltd.

Sheet No.:



Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-5, SPT-01, 1.00M		71.4	18.6	10.0	0.0	28.6		0.0
BH-6, SPT-01, 1.00M	16.9	30.1	40.0	13.0	0.0	53.0		0.0



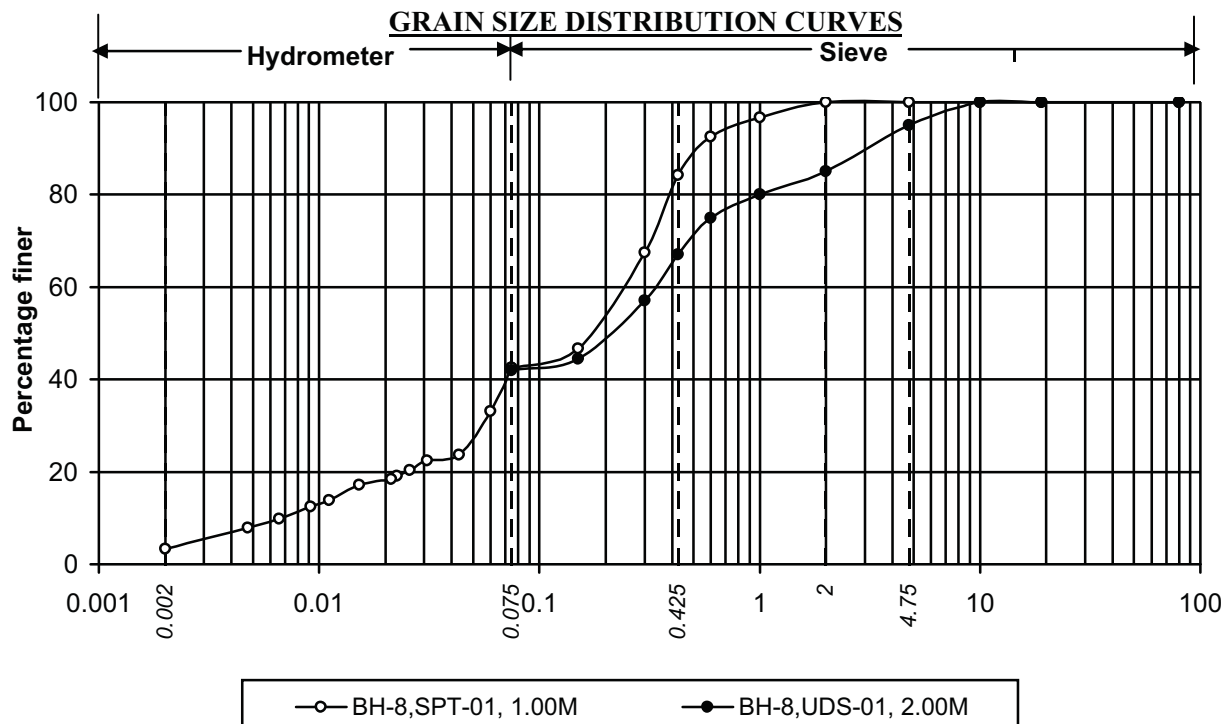
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-6, UDS-01, 2.00M		44.0	31.5	13.5	6.0	51.0		5.0
BH-7, UDS-01, 2.00M		26.0	15.0	9.0	10.0	34.0		40.0

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

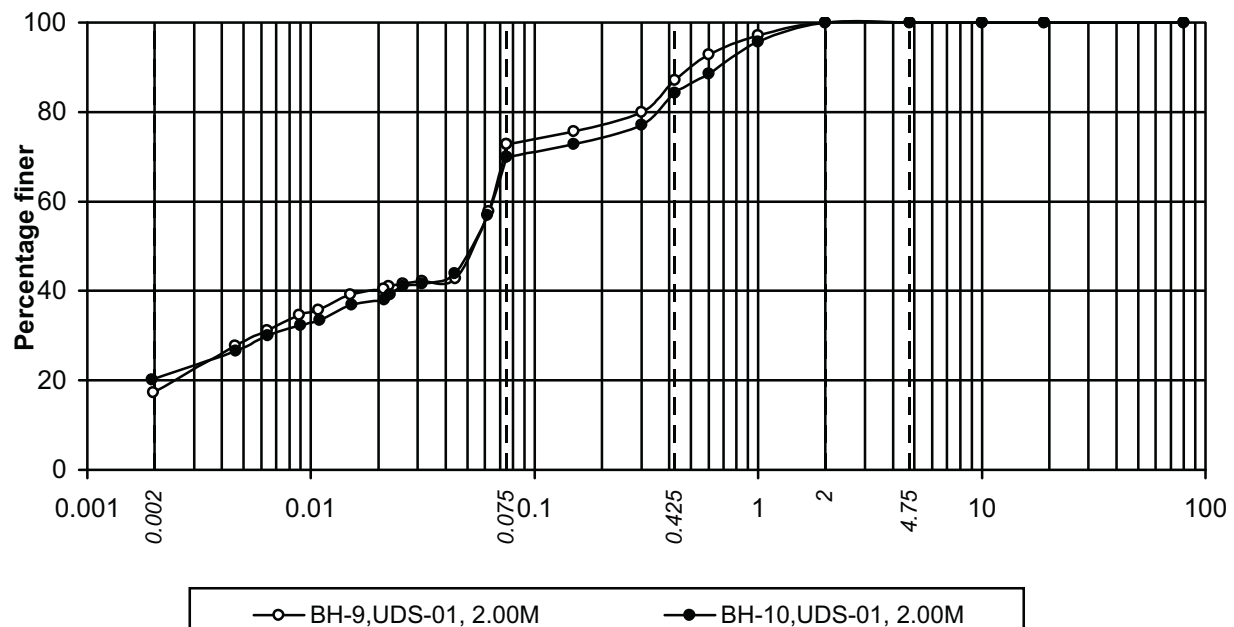
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-8,SPT-01, 1.00M	3.3	39.2	41.7	15.8	0.0	57.5		0.0
BH-8,UDS-01, 2.00M		42.0	25.0	18.0	10.0	53.0		5.0



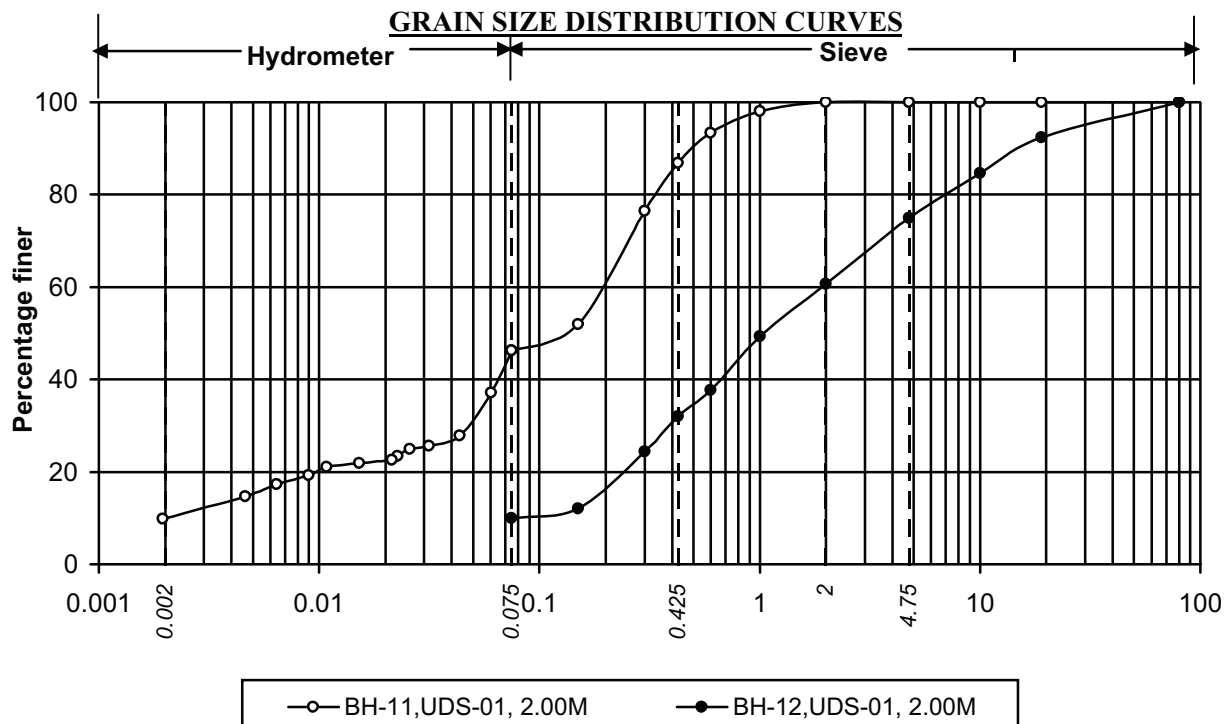
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-9,UDS-01, 2.00M	17.5	55.3	14.3	12.9	0.0	27.2		0.0
BH-10,UDS-01, 2.00M	20.4	49.6	14.3	15.7	0.0	30.0		0.0

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

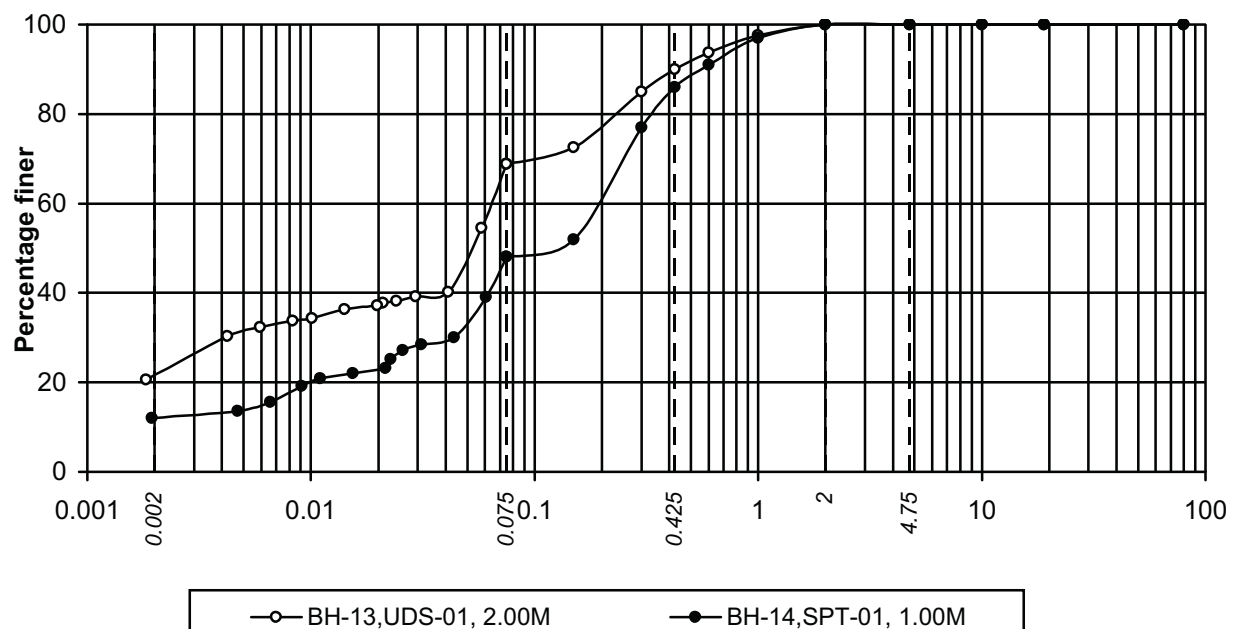
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-11,UDS-01, 2.00M	9.9	36.3	40.6	13.2	0.0	53.8		0.0
BH-12,UDS-01, 2.00M		10.0	22.0	28.7	14.3	65.0		25.0



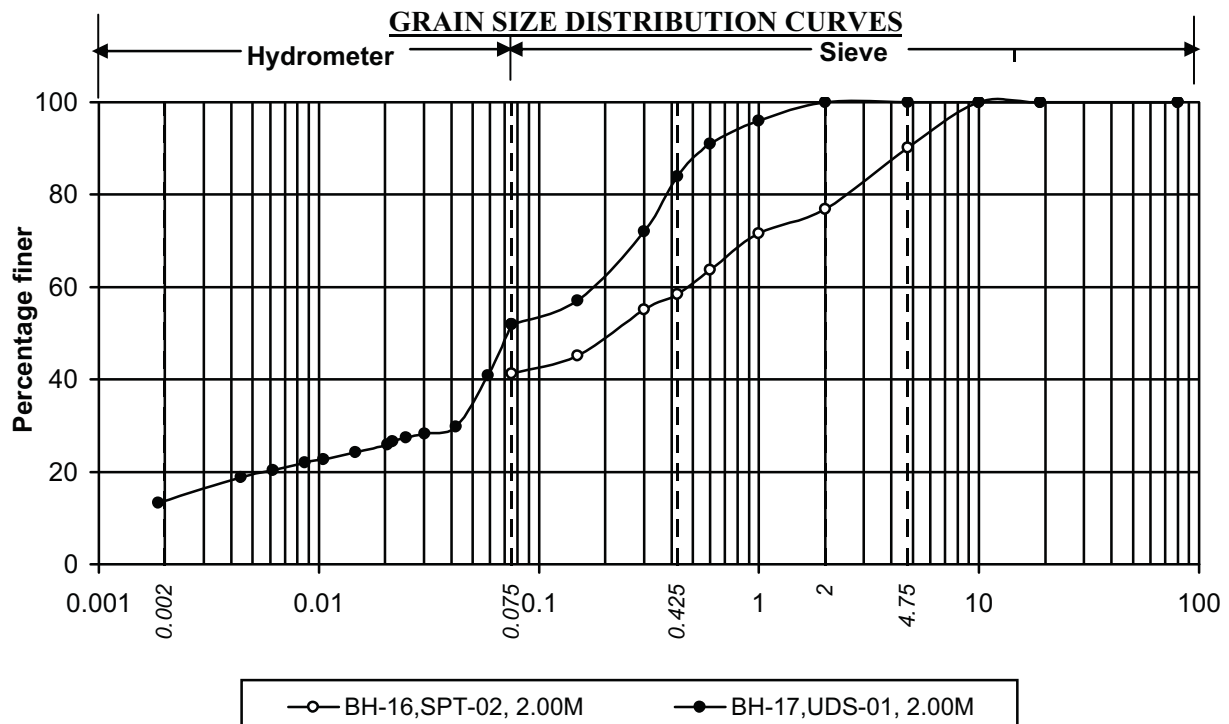
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-13,UDS-01, 2.00M	21.6	47.1	21.3	10.0	0.0	31.3		0.0
BH-14,SPT-01, 1.00M	12.1	35.9	38.0	14.0	0.0	52.0		0.0

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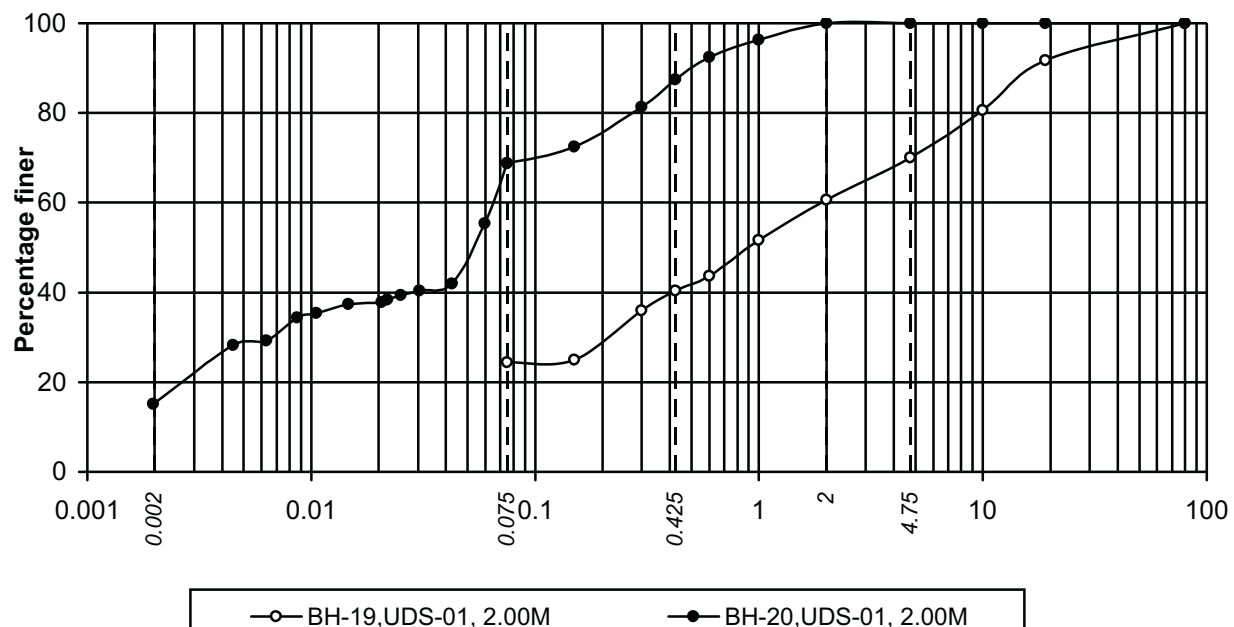
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-16,SPT-02, 2.00M		41.3	17.2	18.4	13.3	48.9		9.8
BH-17,UDS-01, 2.00M	13.8	38.2	32.0	16.0	0.0	48.0		0.0



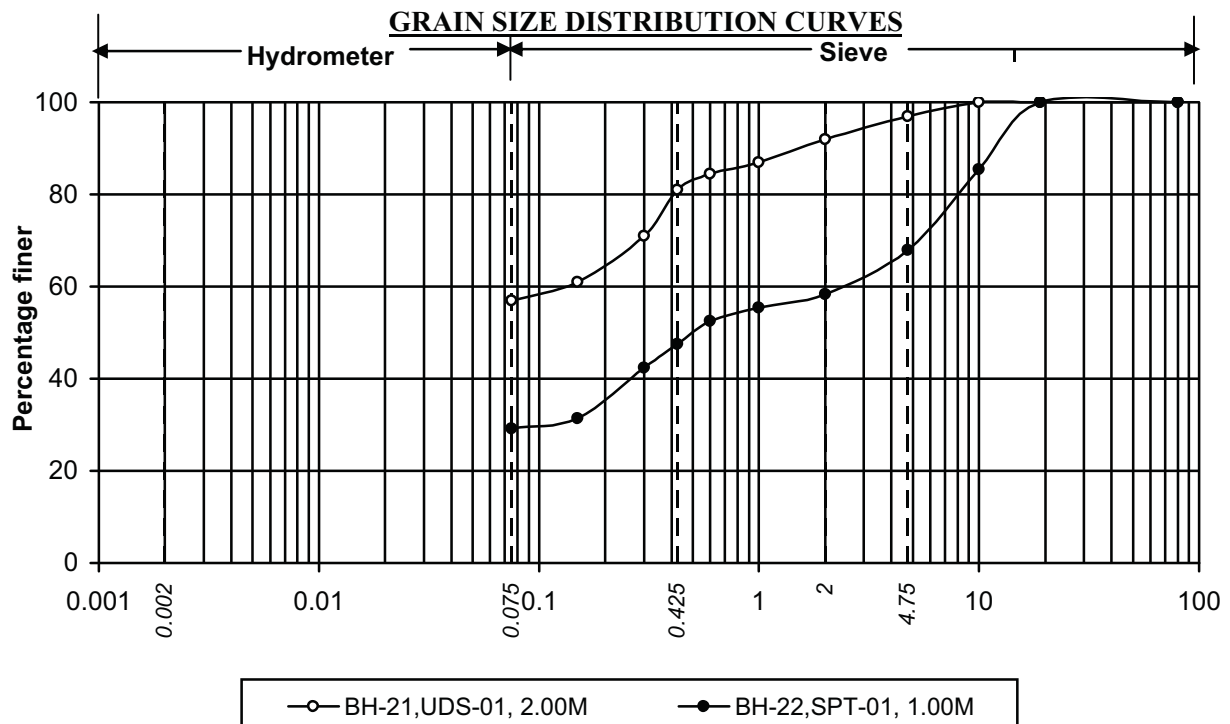
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-19,UDS-01, 2.00M		24.3	16.1	20.3	9.3	45.7		30.0
BH-20,UDS-01, 2.00M	15.4	53.3	18.8	12.5	0.0	31.3		0.0

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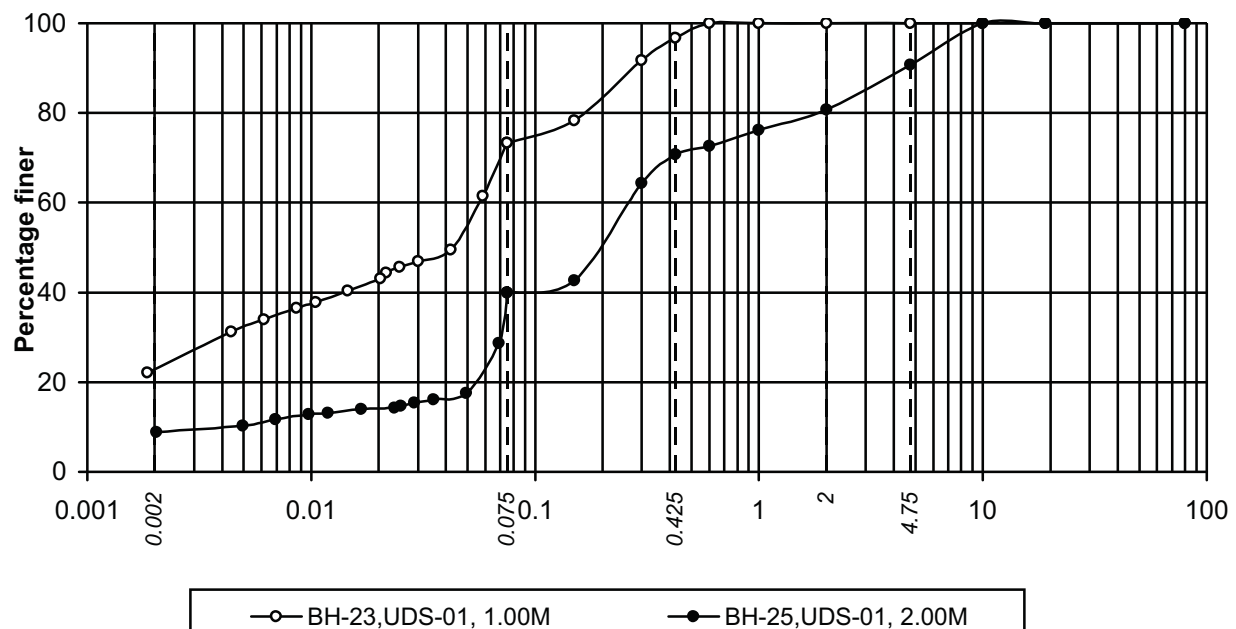
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-21, UDS-01, 2.00M		57.0	24.0	11.0	5.0	40.0		3.0
BH-22, SPT-01, 1.00M		29.2	18.3	10.9	9.5	38.7		32.1



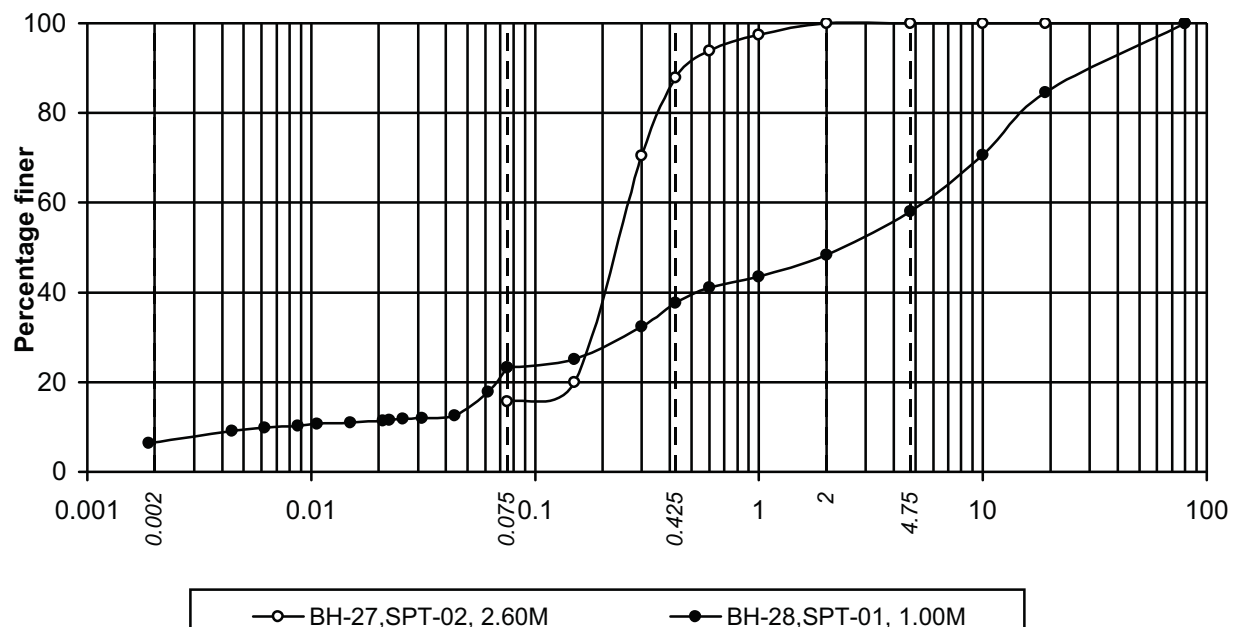
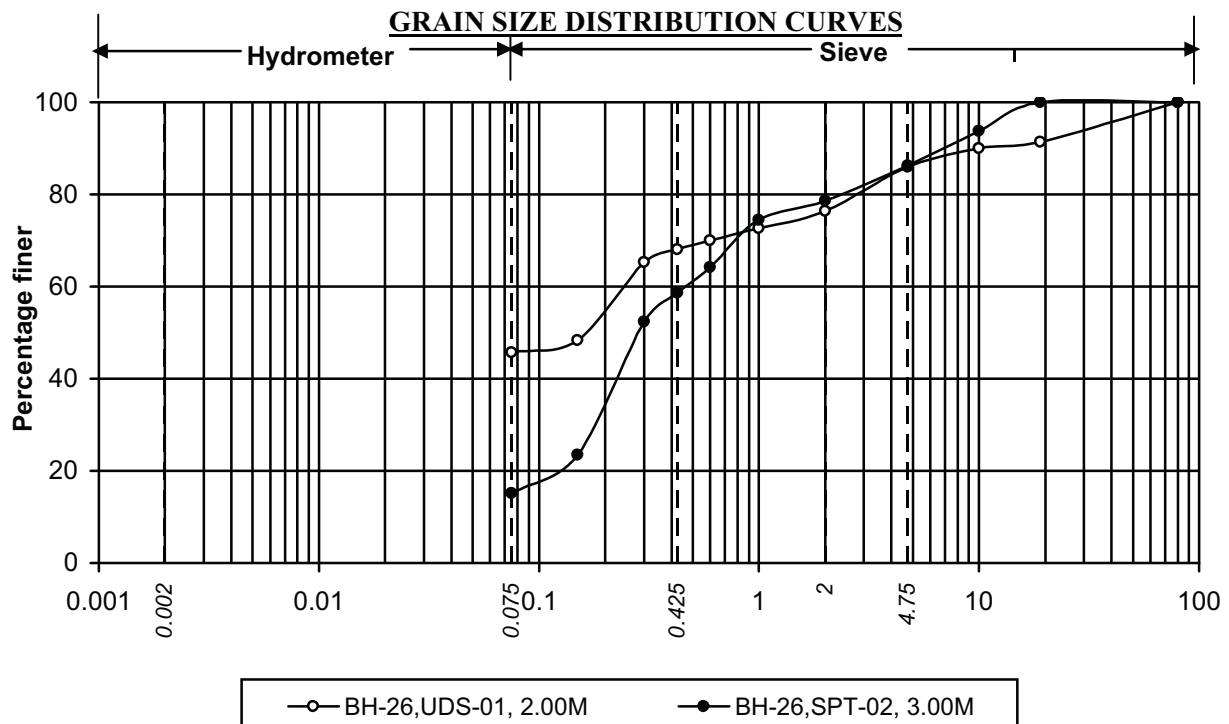
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-23, UDS-01, 1.00M	22.9	50.4	23.4	3.3	0.0	26.7		0.0
BH-25, UDS-01, 2.00M	8.8	31.1	30.8	10.0	10.0	50.8		9.3

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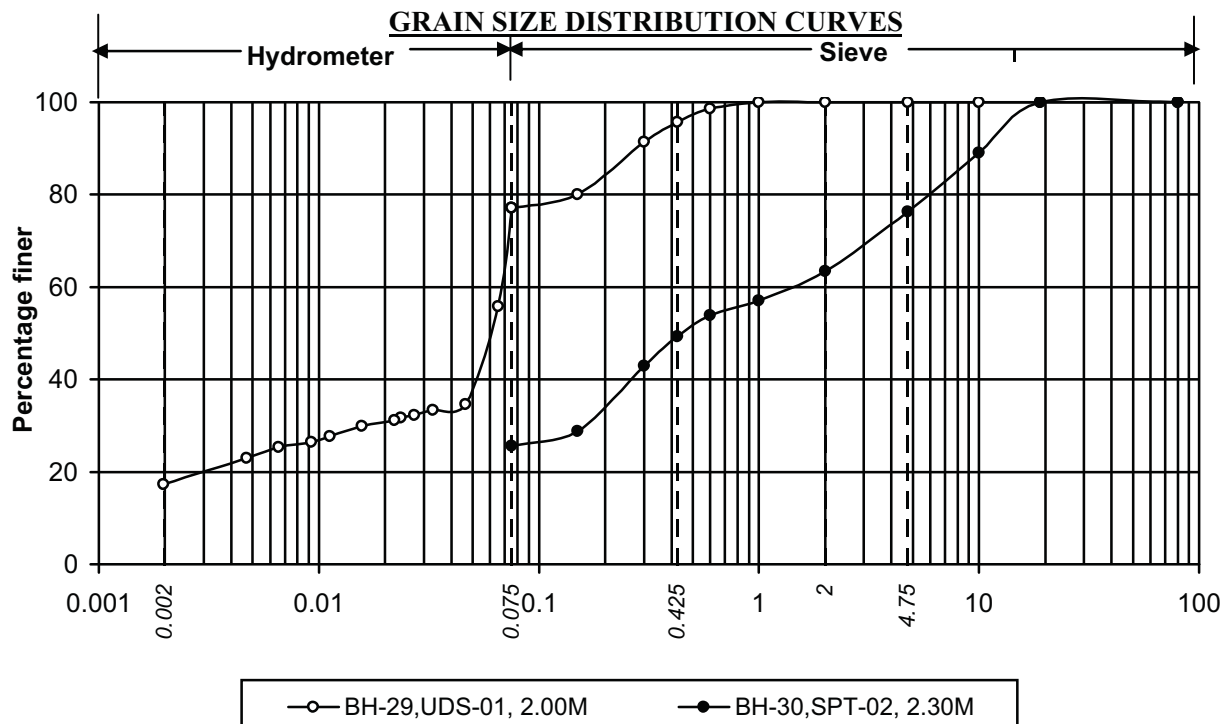


Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

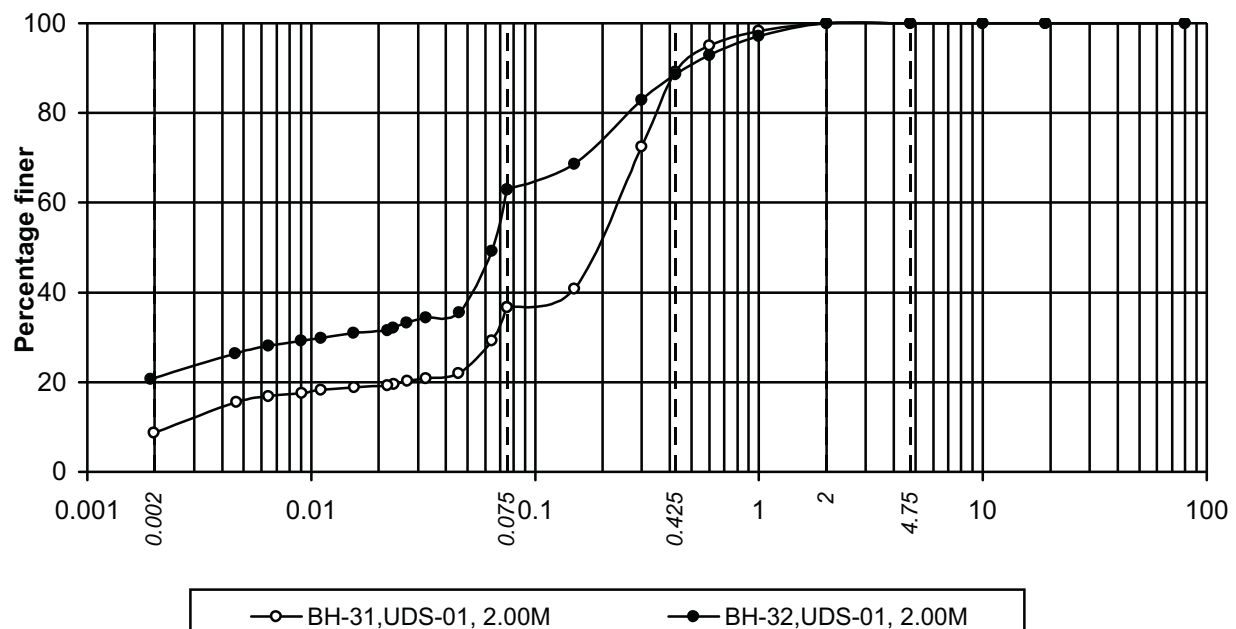
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-29,UDS-01, 2.00M	17.4	59.7	18.6	4.3	0.0	22.9		0.0
BH-30,SPT-02, 2.30M		25.6	23.8	14.1	12.8	50.7		23.7



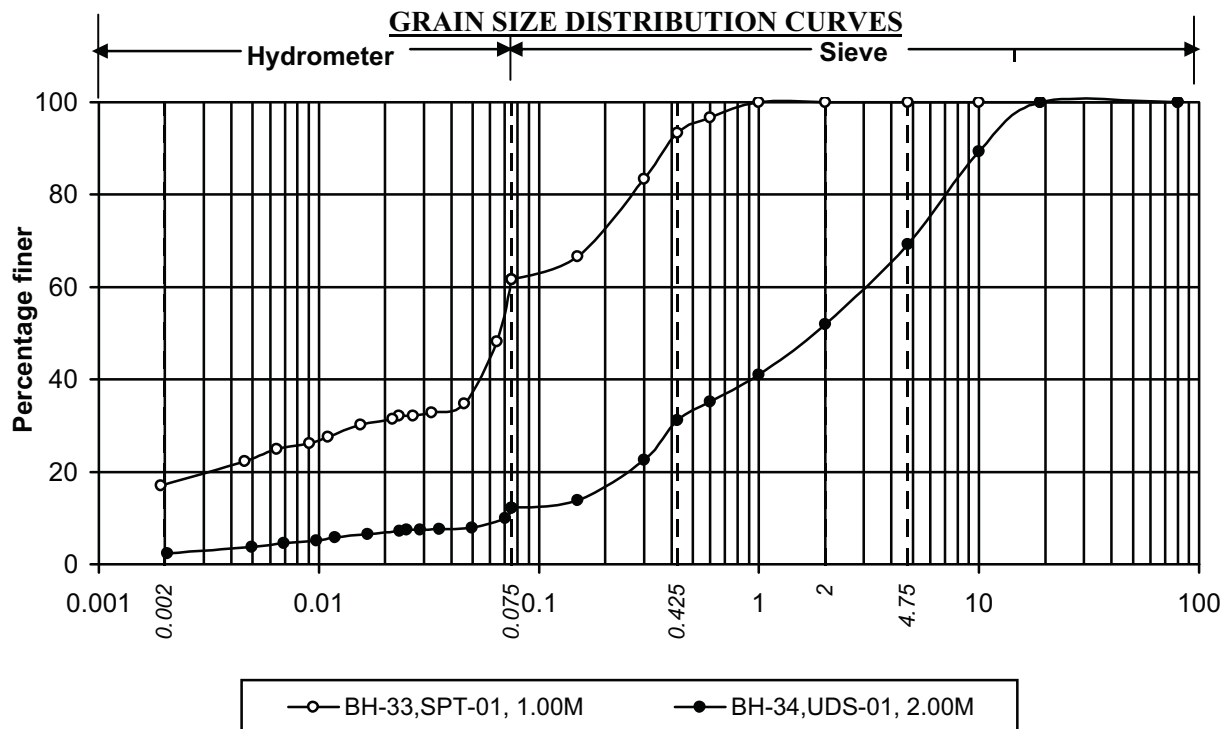
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-31,UDS-01, 2.00M	8.8	27.9	52.5	10.8	0.0	63.3		0.0
BH-32,UDS-01, 2.00M	20.9	41.9	25.8	11.4	0.0	37.2		0.0

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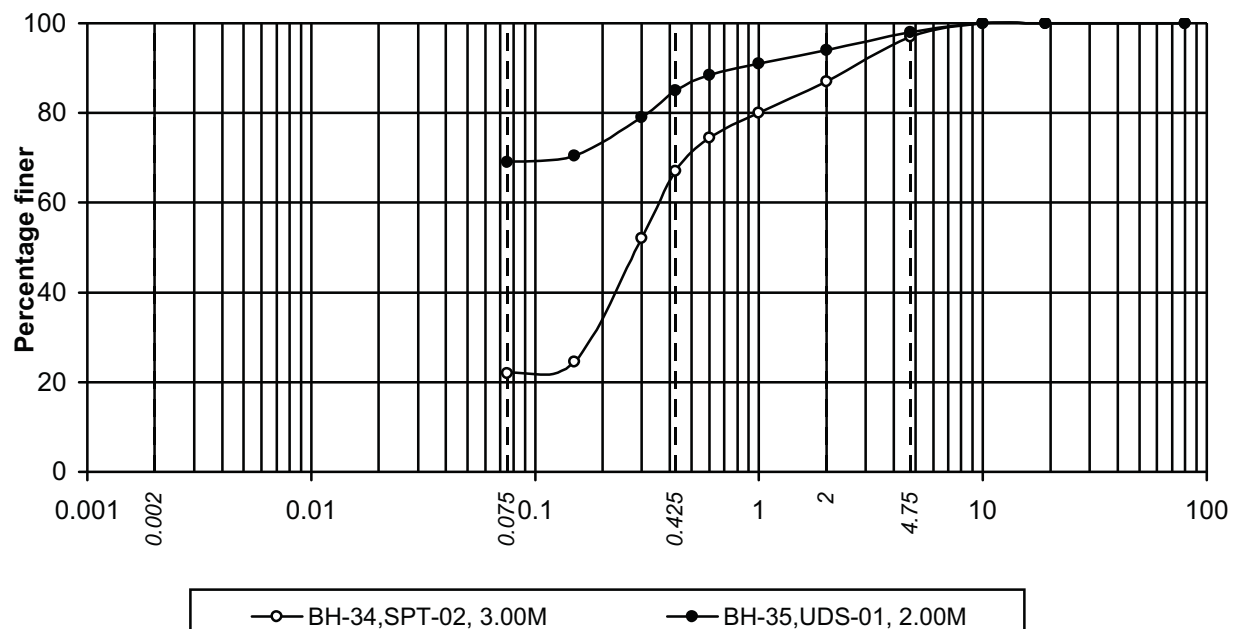
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-33,SPT-01, 1.00M	17.3	44.4	31.6	6.7	0.0	38.3		0.0
BH-34,UDS-01, 2.00M	2.3	9.8	19.1	20.8	17.3	57.2		30.7



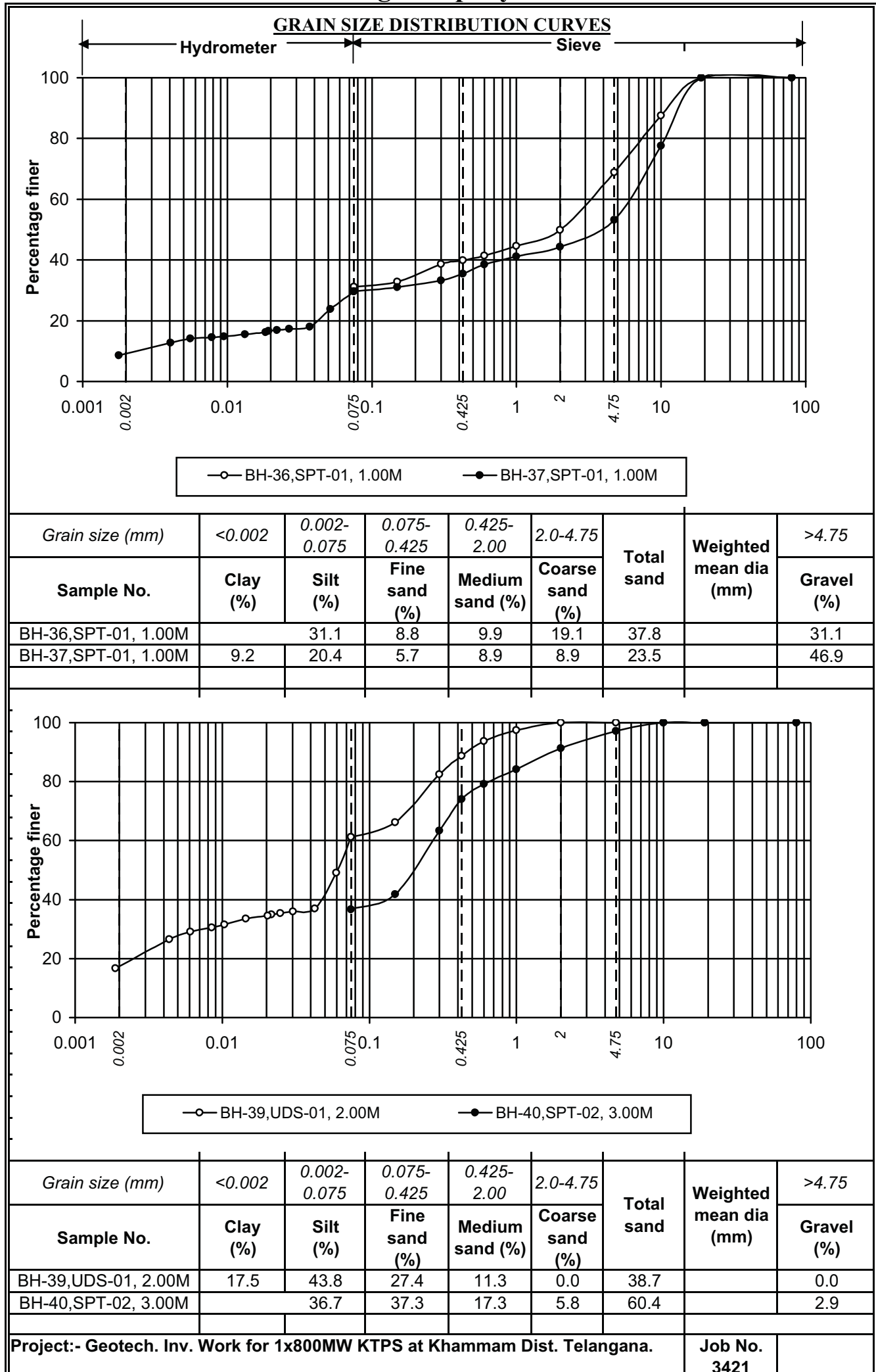
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-34,SPT-02, 3.00M		22.0	45.0	20.0	10.0	75.0		3.0
BH-35,UDS-01, 2.00M		69.0	16.0	9.0	4.0	29.0		2.0

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

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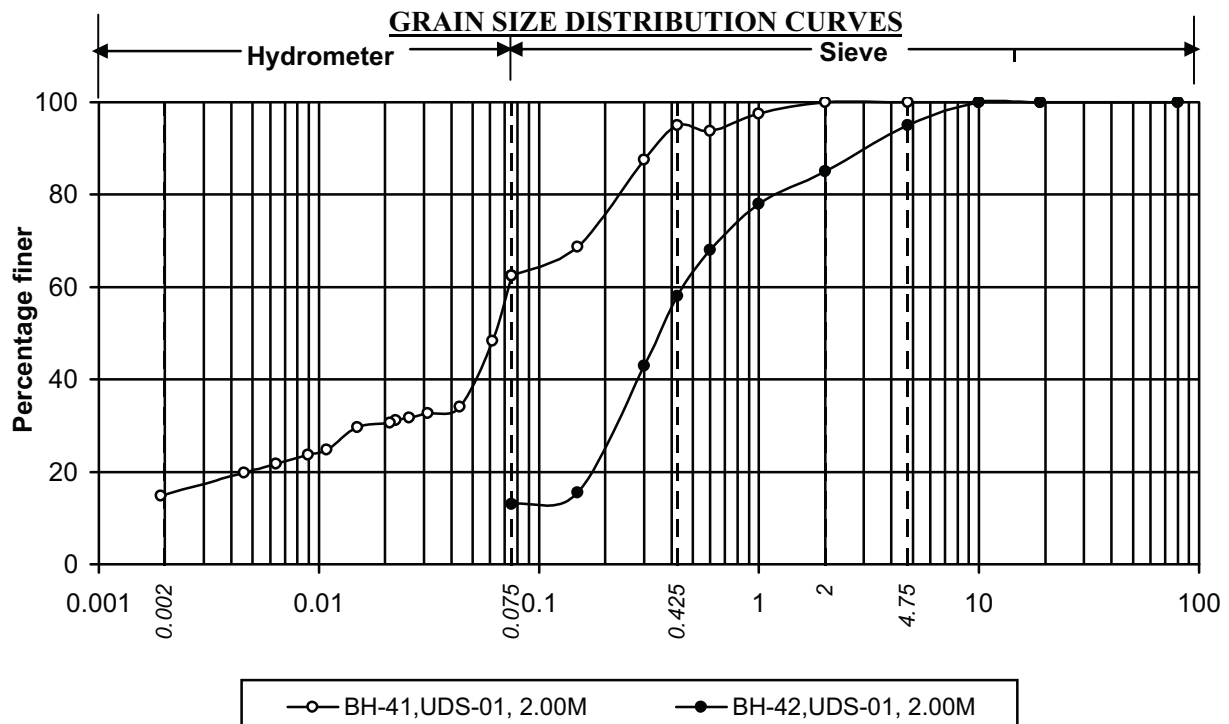
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Sheet No.:

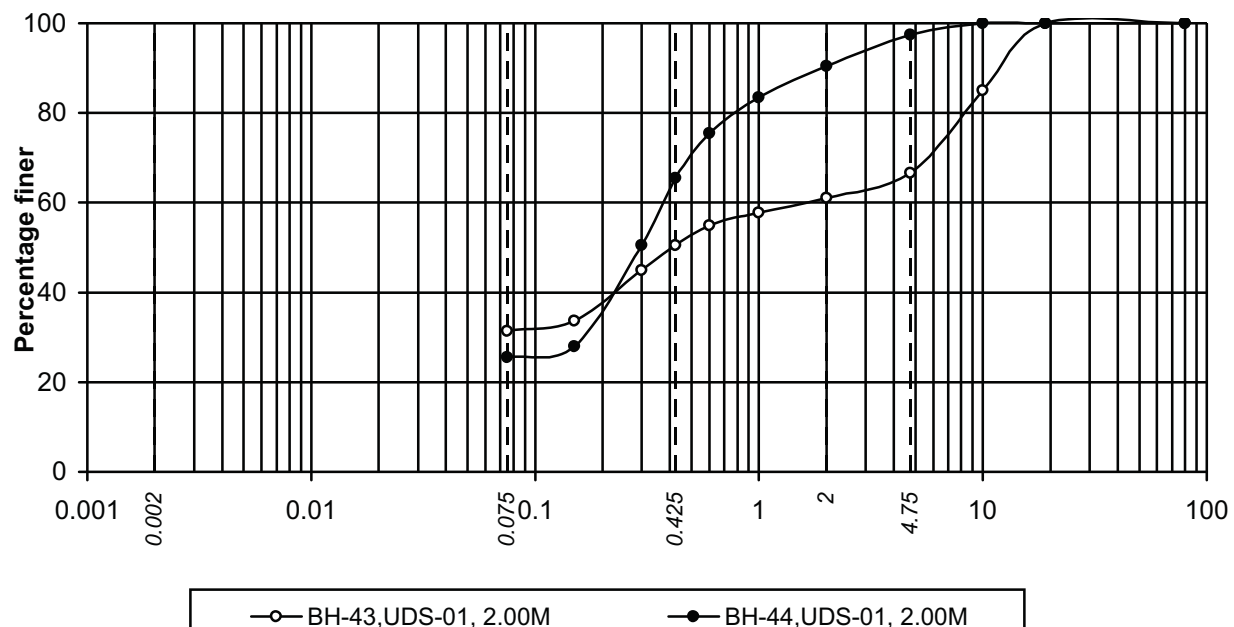


C. E. Testing Company Pvt. Ltd.

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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-41,UDS-01, 2.00M	15.1	47.4	32.5	5.0	0.0	37.5		0.0
BH-42,UDS-01, 2.00M		13.0	45.0	27.0	10.0	82.0		5.0



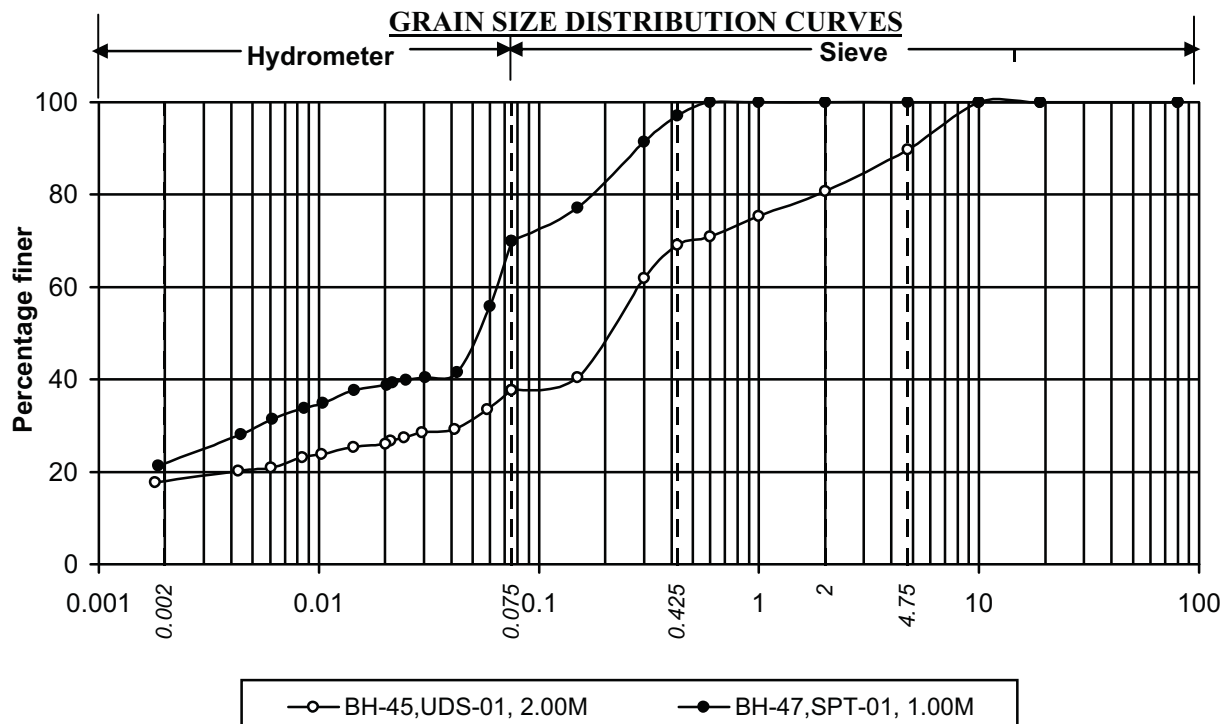
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-43,UDS-01, 2.00M		31.4	19.1	10.6	5.6	35.3		33.3
BH-44,UDS-01, 2.00M		25.5	40.0	25.0	7.0	72.0		2.5

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

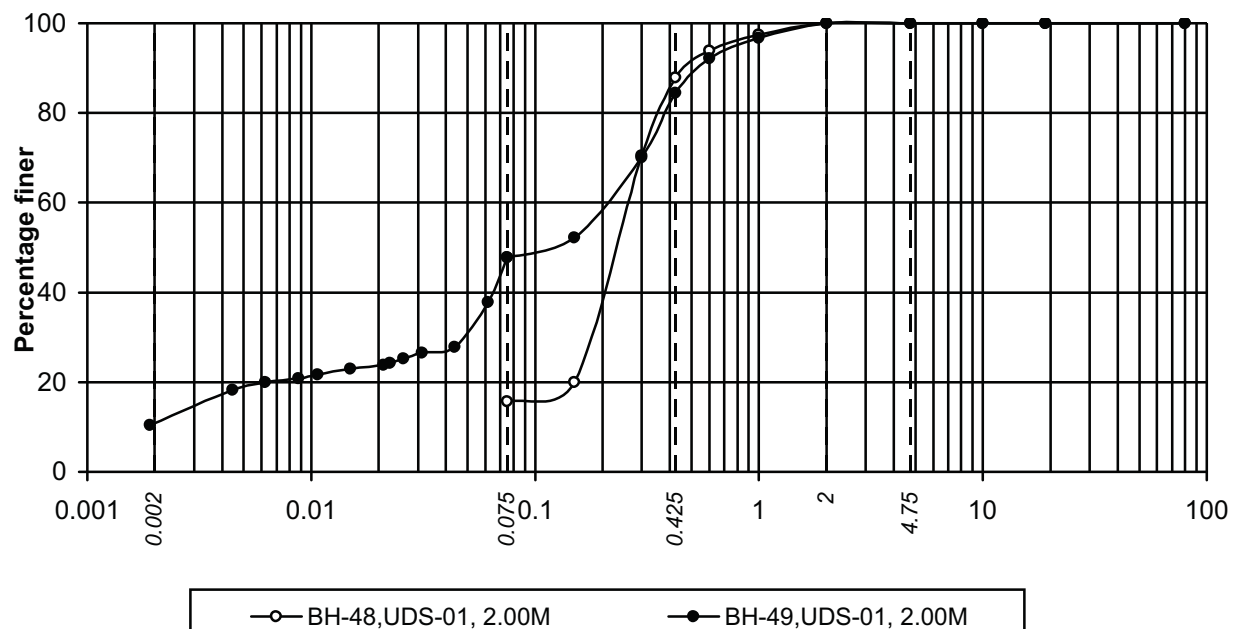
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-45,UDS-01, 2.00M	18.0	19.7	31.4	11.7	9.0	52.1		10.2
BH-47,SPT-01, 1.00M	21.9	48.1	27.1	2.9	0.0	30.0		0.0

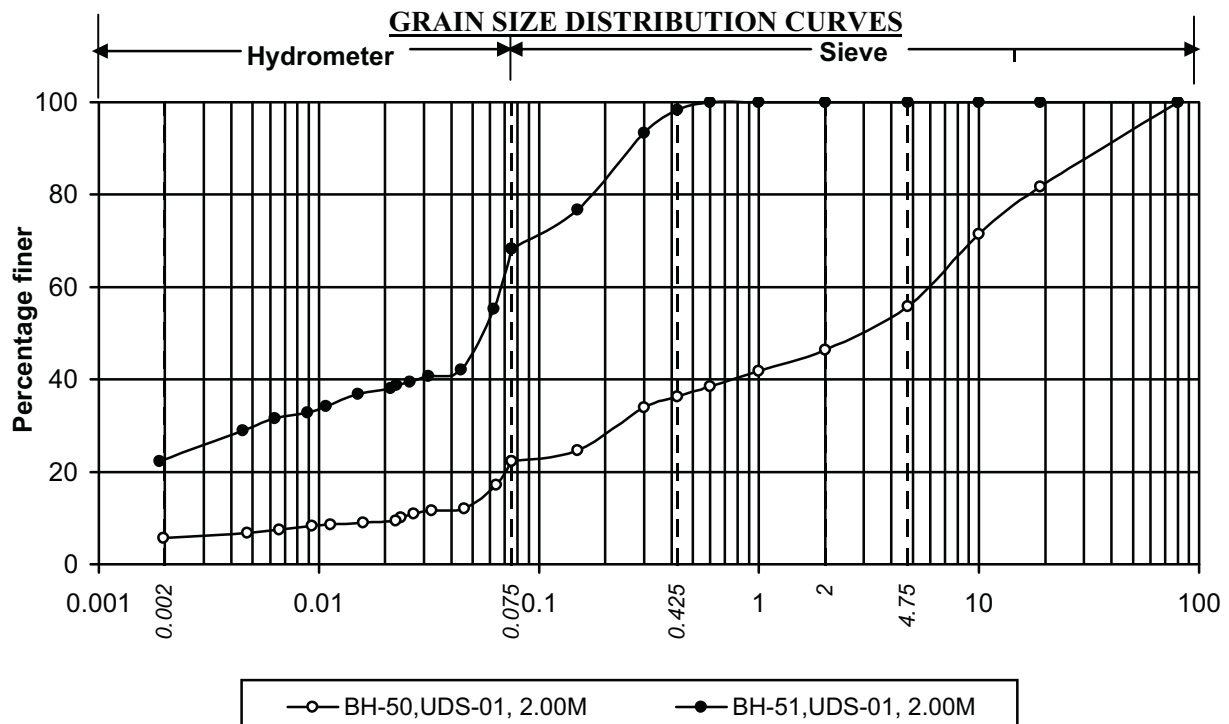


Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-48,UDS-01, 2.00M		15.7	72.1	12.2	0.0	84.3		0.0
BH-49,UDS-01, 2.00M	10.8	36.9	36.7	15.6	0.0	52.3		0.0

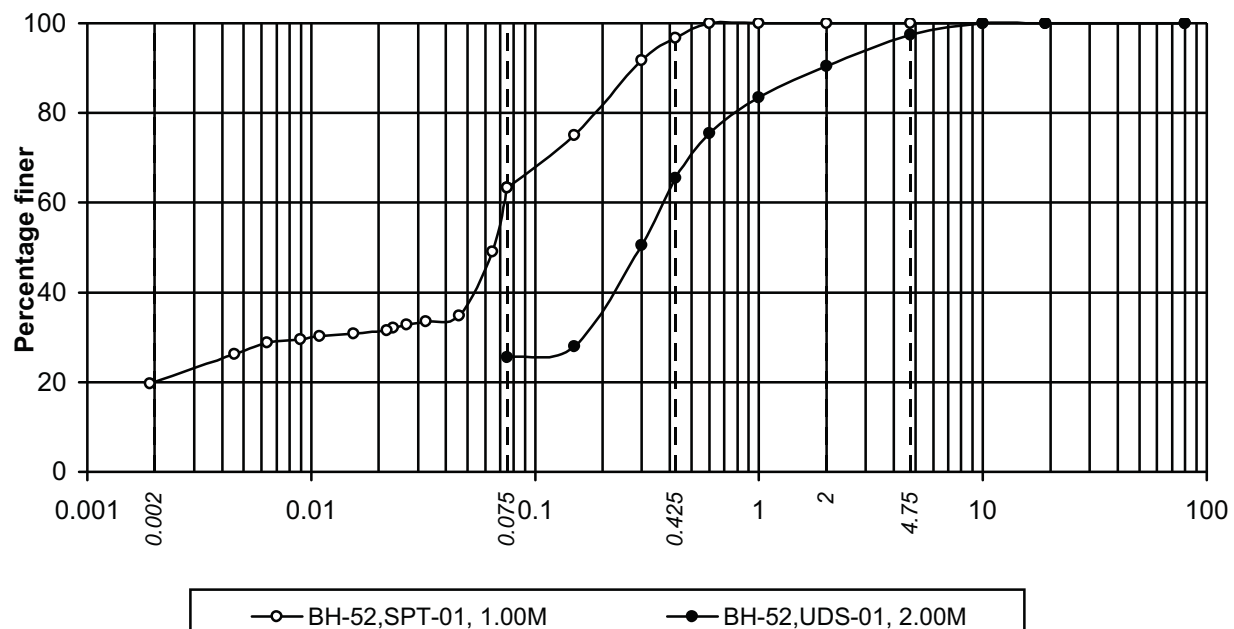
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-50,UDS-01, 2.00M	5.6	16.7	13.9	10.2	9.3	33.4		44.3
BH-51,UDS-01, 2.00M	22.8	45.5	30.0	1.7	0.0	31.7		0.0



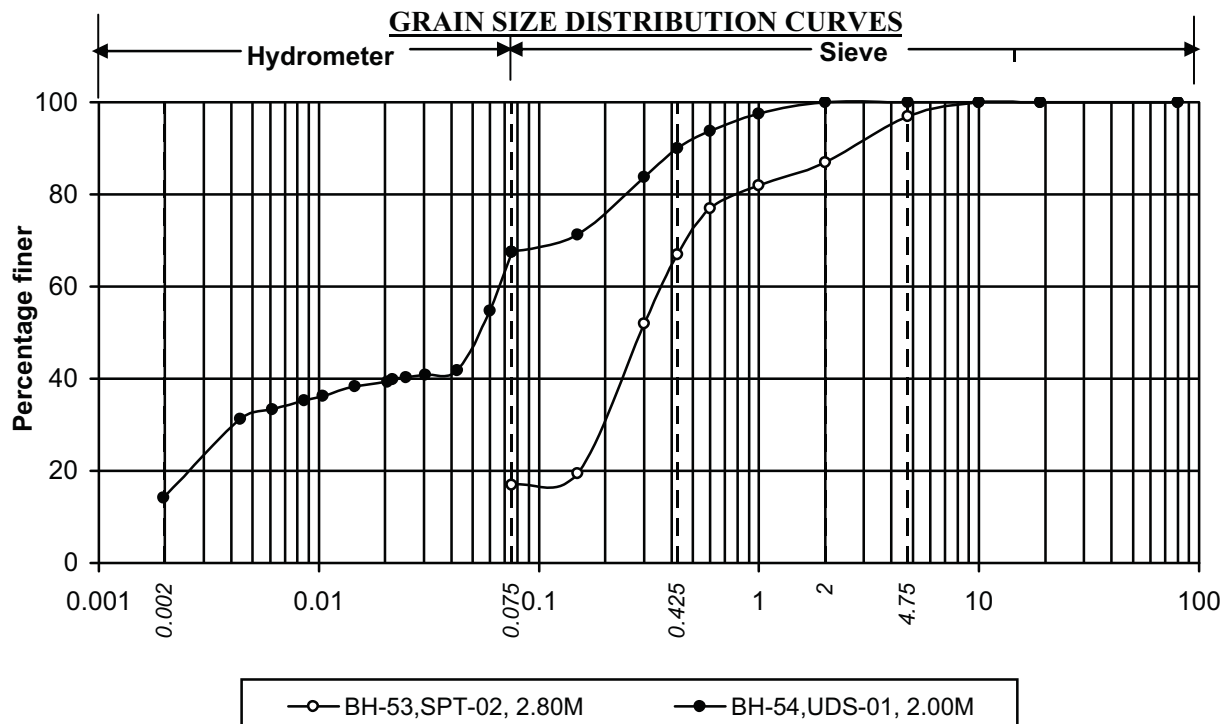
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-52,SPT-01, 1.00M	20.1	43.3	33.3	3.3	0.0	36.6		0.0
BH-52,UDS-01, 2.00M		25.5	40.0	25.0	7.0	72.0		2.5

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

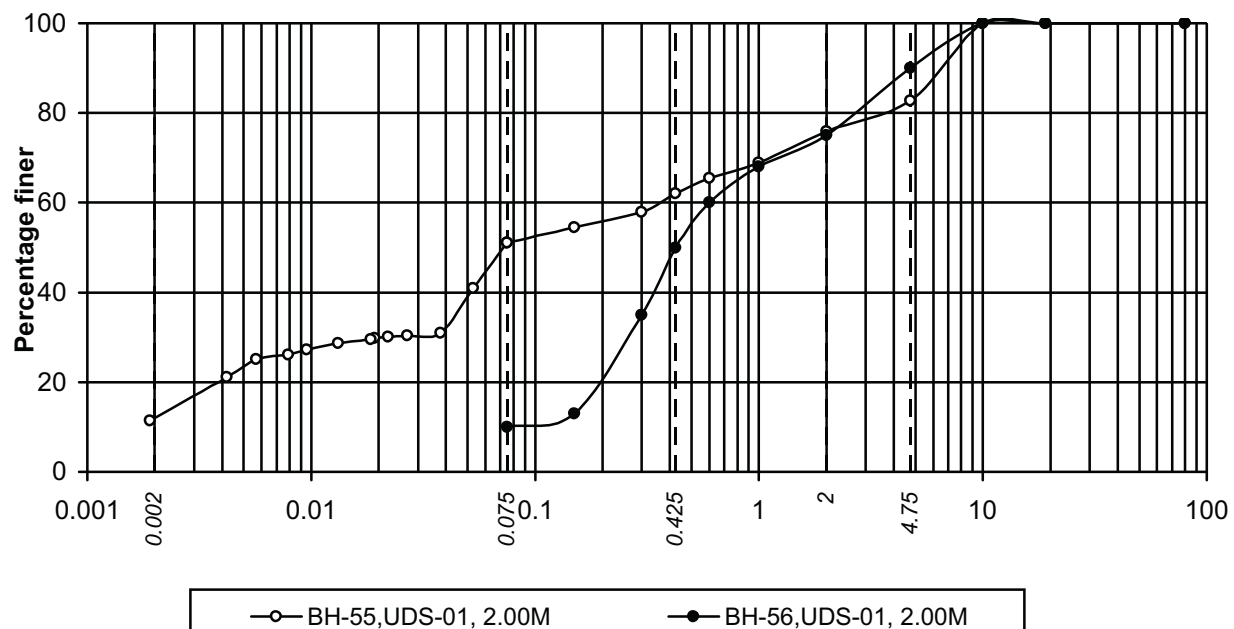
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-53, SPT-02, 2.80M		17.0	50.0	20.0	10.0	80.0		3.0
BH-54, UDS-01, 2.00M	14.4	53.1	22.5	10.0	0.0	32.5		0.0



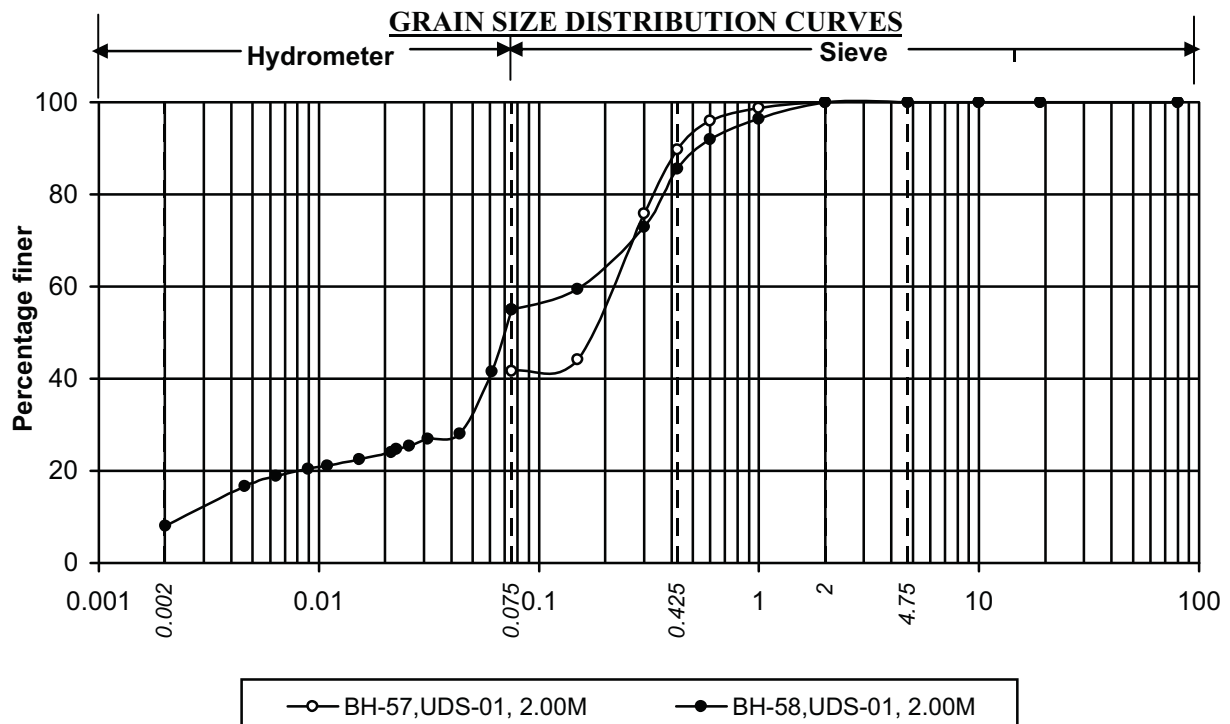
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-55, UDS-01, 2.00M	12.0	39.0	11.1	13.8	6.9	31.8		17.2
BH-56, UDS-01, 2.00M		10.0	40.0	25.0	15.0	80.0		10.0

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

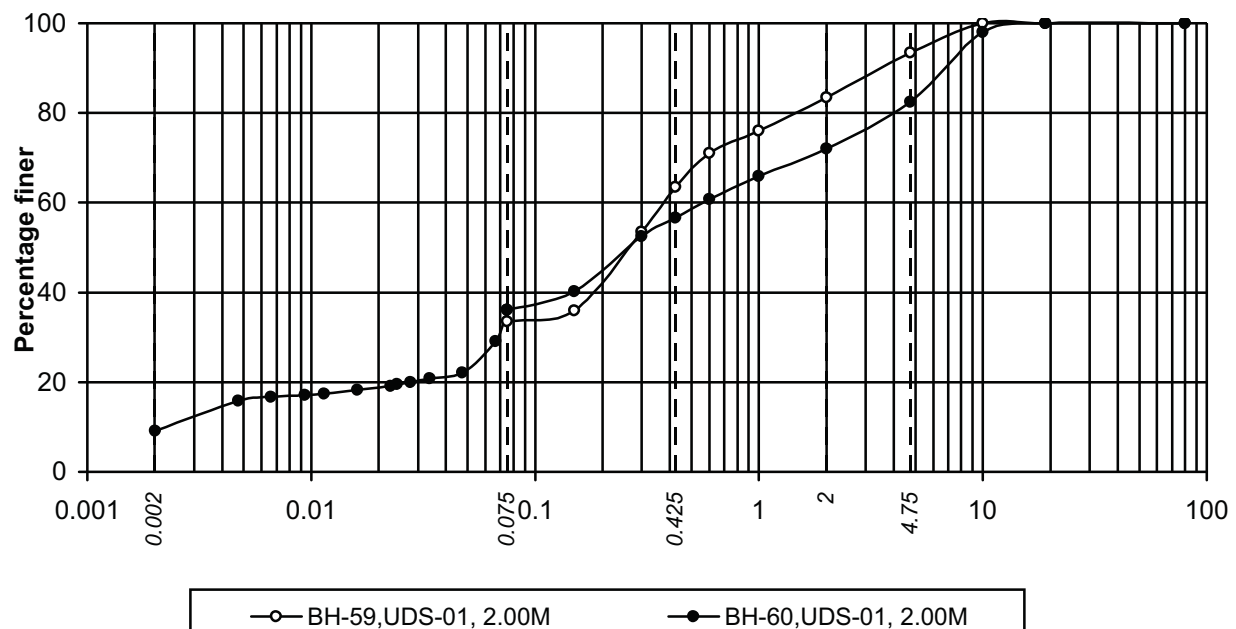
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-57,UDS-01, 2.00M		41.6	48.2	10.2	0.0	58.4		0.0
BH-58,UDS-01, 2.00M	8.0	47.0	30.6	14.4	0.0	45.0		0.0



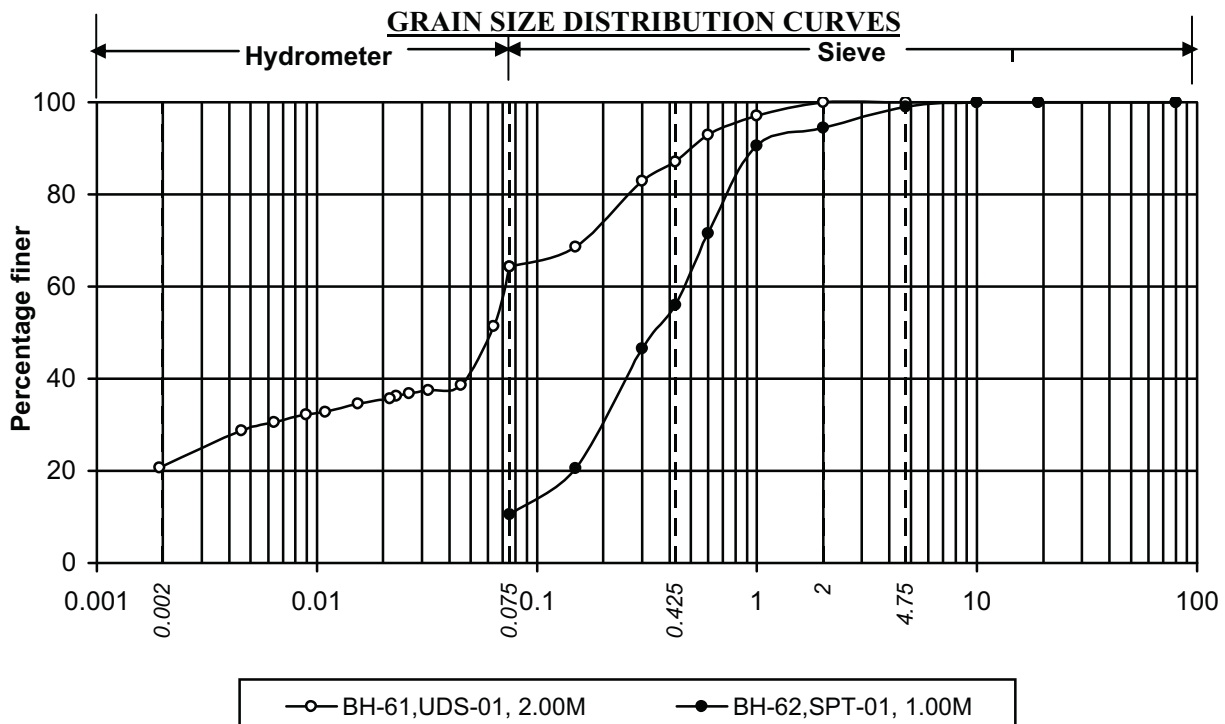
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-59,UDS-01, 2.00M		33.5	30.0	20.0	10.0	60.0		6.5
BH-60,UDS-01, 2.00M	9.1	26.9	20.6	15.5	10.3	46.4		17.6

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

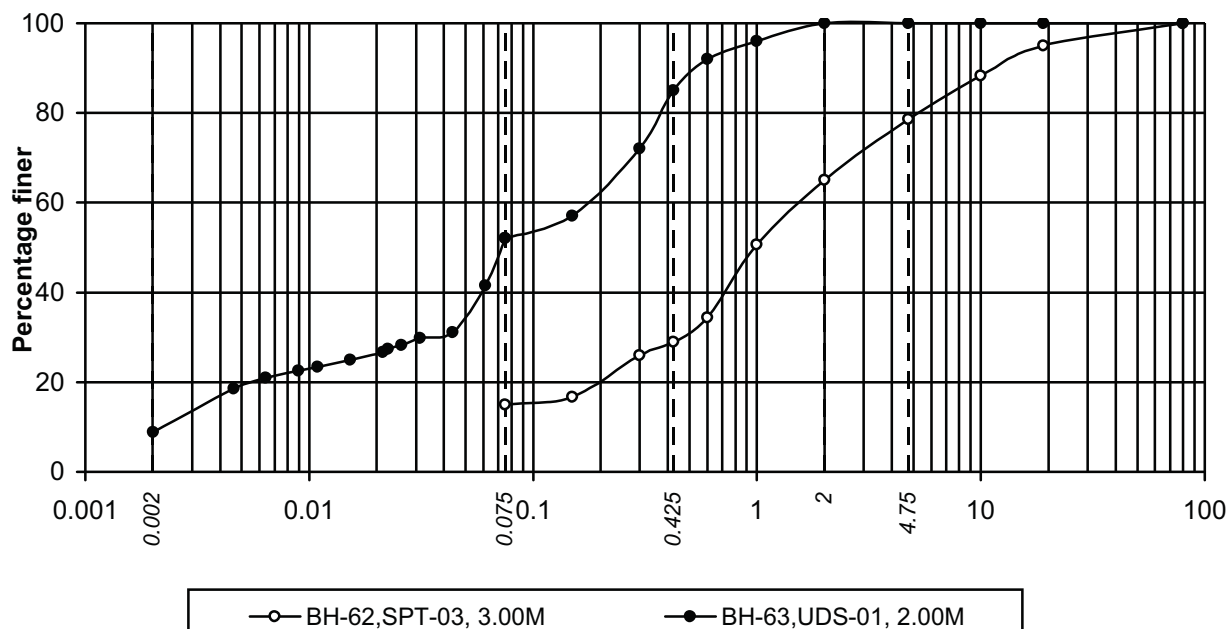
Job No.
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-61,UDS-01, 2.00M	21.1	43.2	22.8	12.9	0.0	35.7		0.0
BH-62,SPT-01, 1.00M		10.5	45.5	38.5	4.5	88.5		1.0



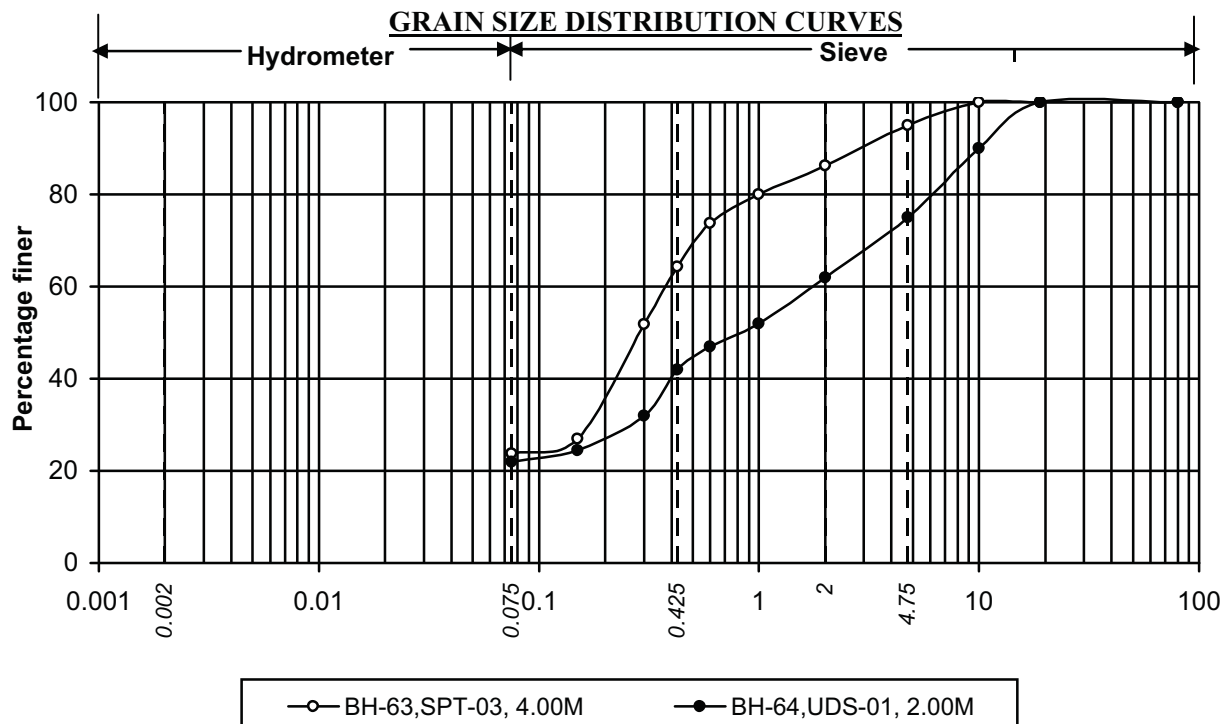
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-62,SPT-03, 3.00M		15.0	14.0	36.0	13.7	63.7		21.3
BH-63,UDS-01, 2.00M	8.9	43.1	33.0	15.0	0.0	48.0		0.0

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

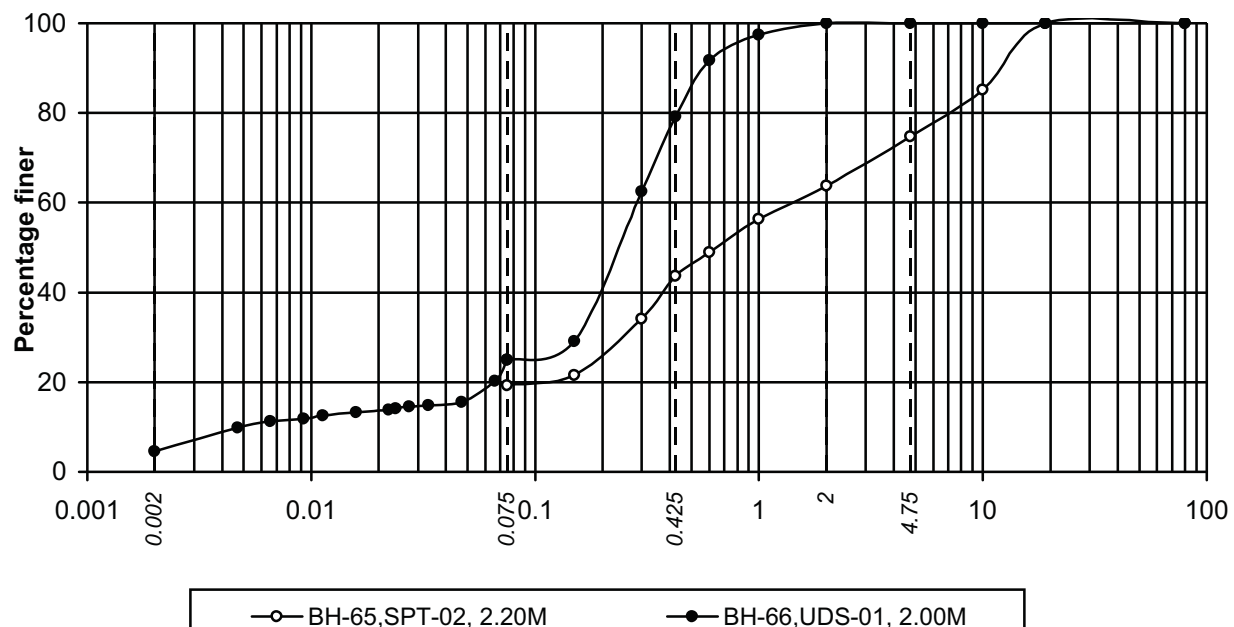
Job No.
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Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-63,SPT-03, 4.00M		23.8	40.5	21.9	8.8	71.2		5.0
BH-64,UDS-01, 2.00M		22.0	20.0	20.0	13.0	53.0		25.0



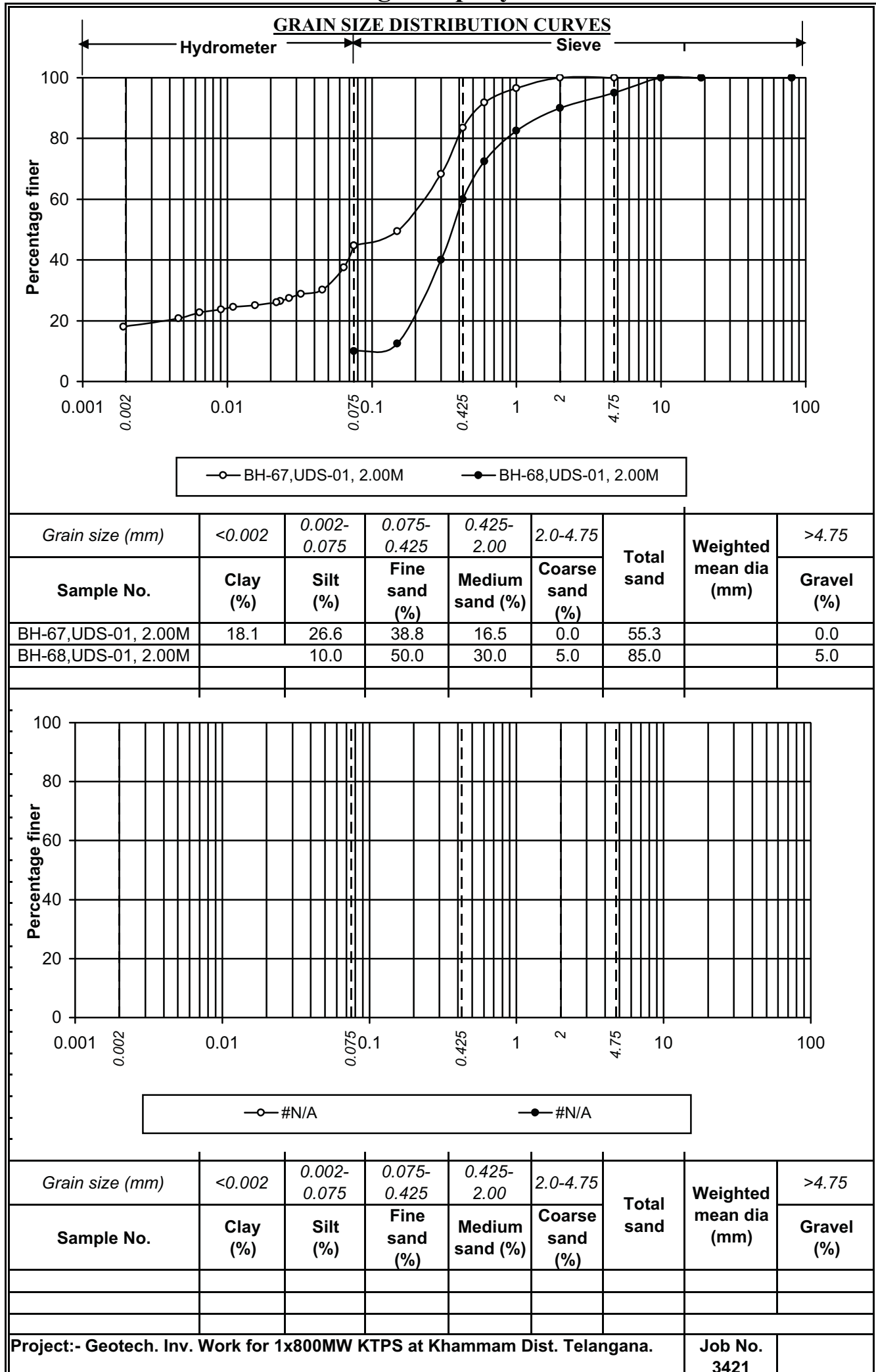
Grain size (mm)	<0.002	0.002-0.075	0.075-0.425	0.425-2.00	2.0-4.75	Total sand	Weighted mean dia (mm)	>4.75
Sample No.	Clay (%)	Silt (%)	Fine sand (%)	Medium sand (%)	Coarse sand (%)			Gravel (%)
BH-65,SPT-02, 2.20M		19.3	24.4	20.0	11.1	55.5		25.2
BH-66,UDS-01, 2.00M	4.6	20.4	54.2	20.8	0.0	75.0		0.0

Project:- Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

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Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

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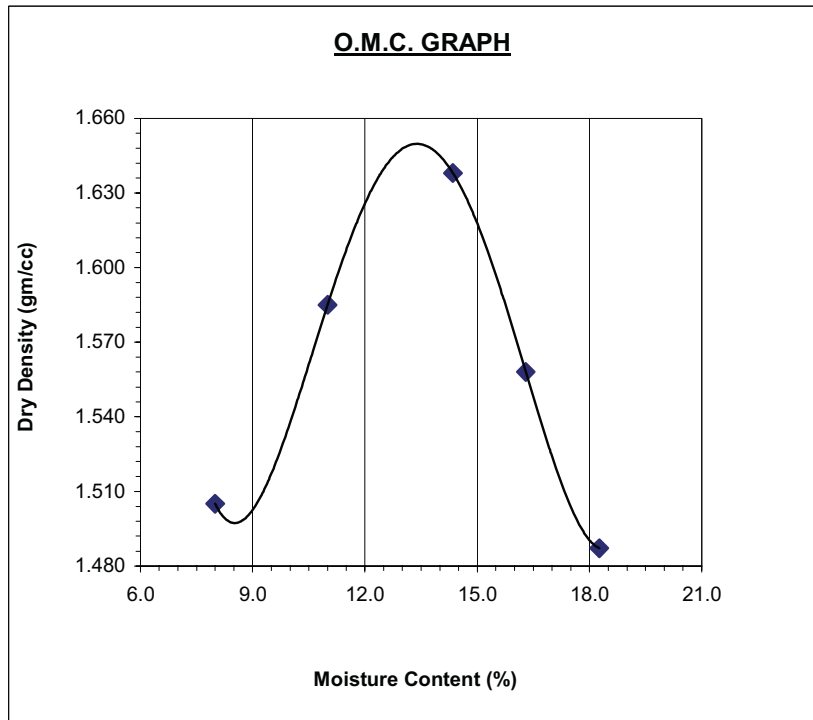
Sheet No.

C.B.R. & PROCTOR TEST RESULTS.

TP01 / DS01

Depth = 0.50m

Maximum Dry Density : 1.649 gm/cc
Optimum Moisture Content: 13.45 %



Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. : 3421

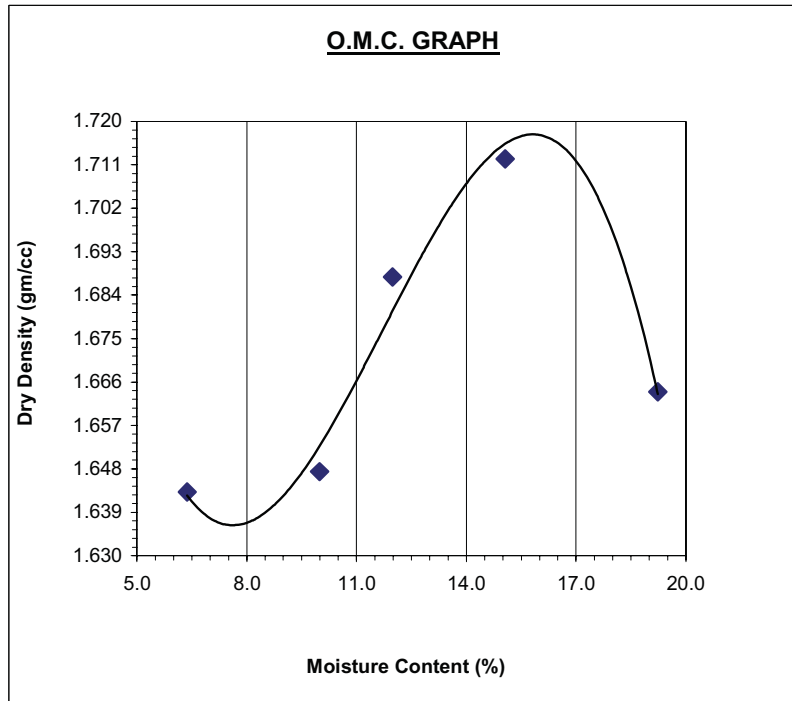
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C.B.R. & PROCTOR TEST RESULTS.

TP03 / DS02

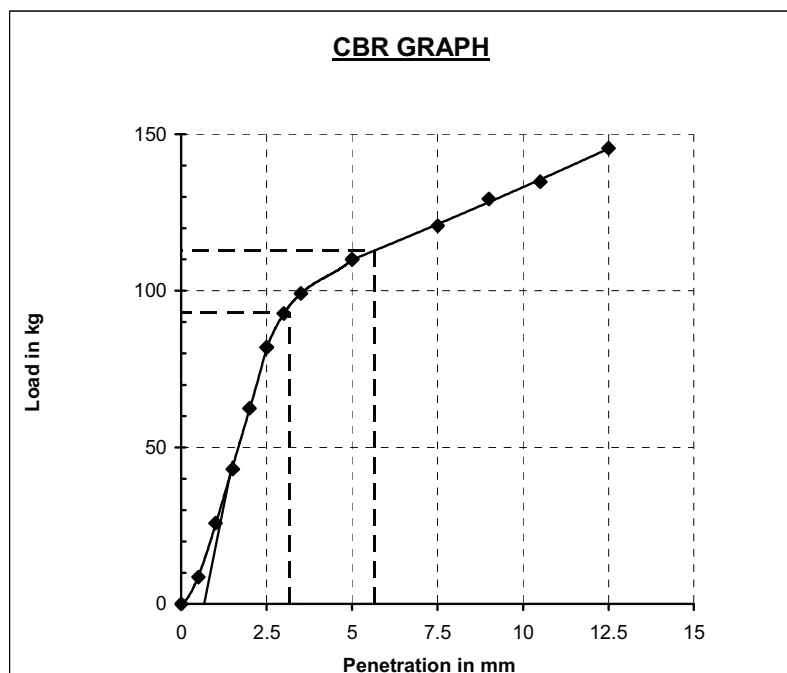
Depth = 1.50m

Maximum Dry Density : 1.717 gm/cc
 Optimum Moisture Content: 15.88 %



TYPE :- SOAKED

Penetration (mm)	CBR (%)
2.5	6.80
5.0	5.49



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CETEST

Job No. : 3421

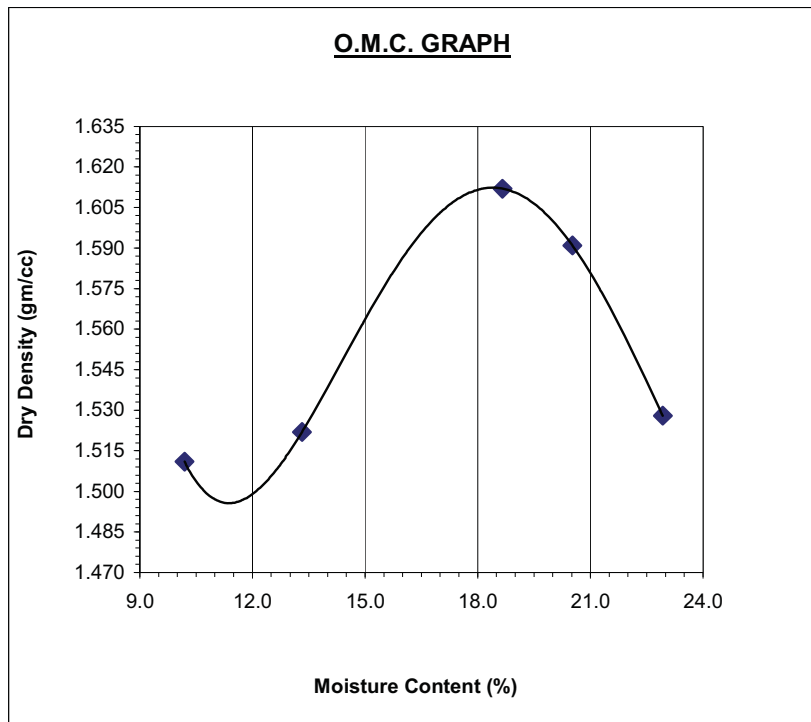
Sheet No.

C.B.R. & PROCTOR TEST RESULTS.

TP05 / DS02

Depth = 1.50m

Maximum Dry Density : 1.612 gm/cc
Optimum Moisture Content: 18.38 %



Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. : 3421

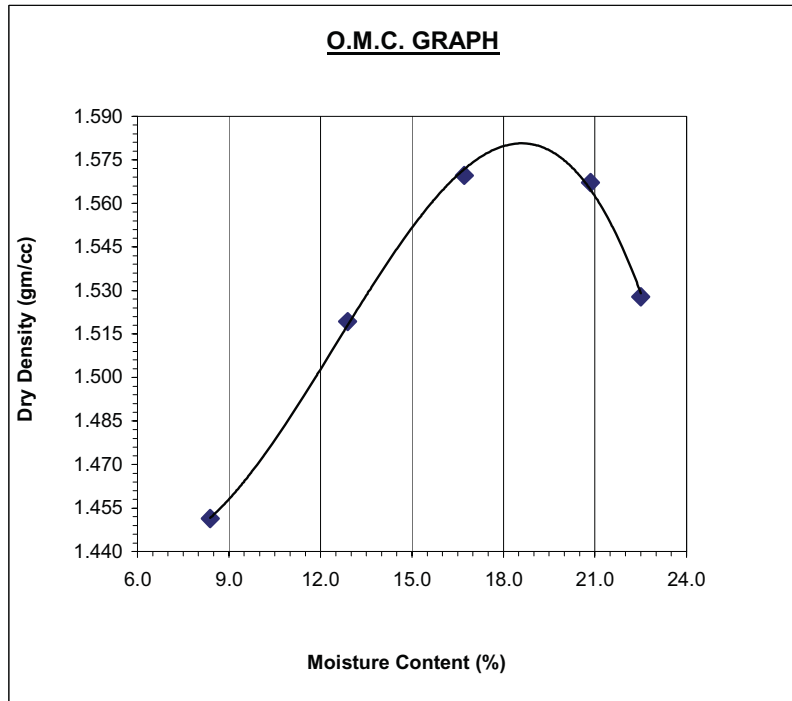
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C.B.R. & PROCTOR TEST RESULTS.

TP06 / DS02

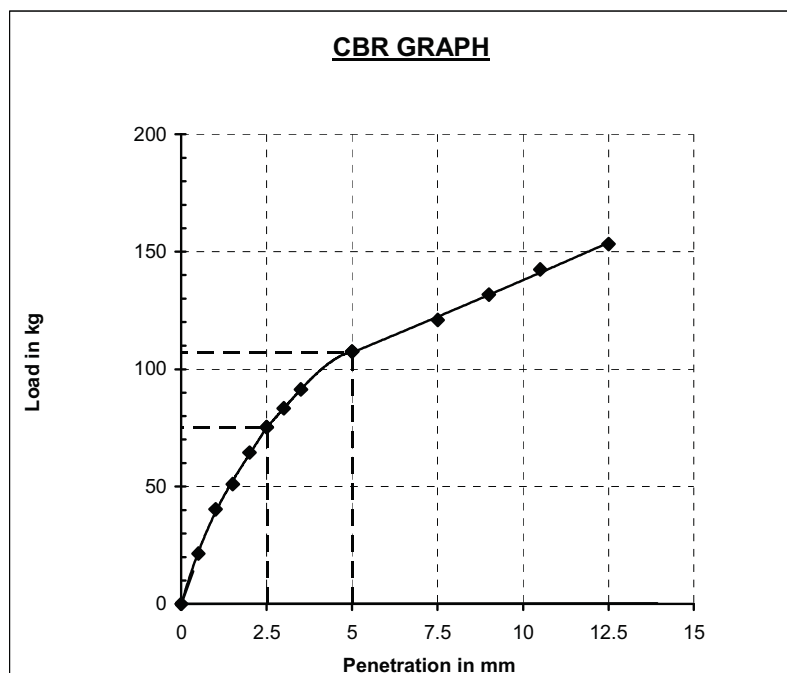
Depth = 1.50m

Maximum Dry Density : 1.581 gm/cc
 Optimum Moisture Content: 18.67 %



TYPE :- SOAKED

Penetration (mm)	CBR (%)
2.5	5.49
5.0	5.21



Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. : 3421

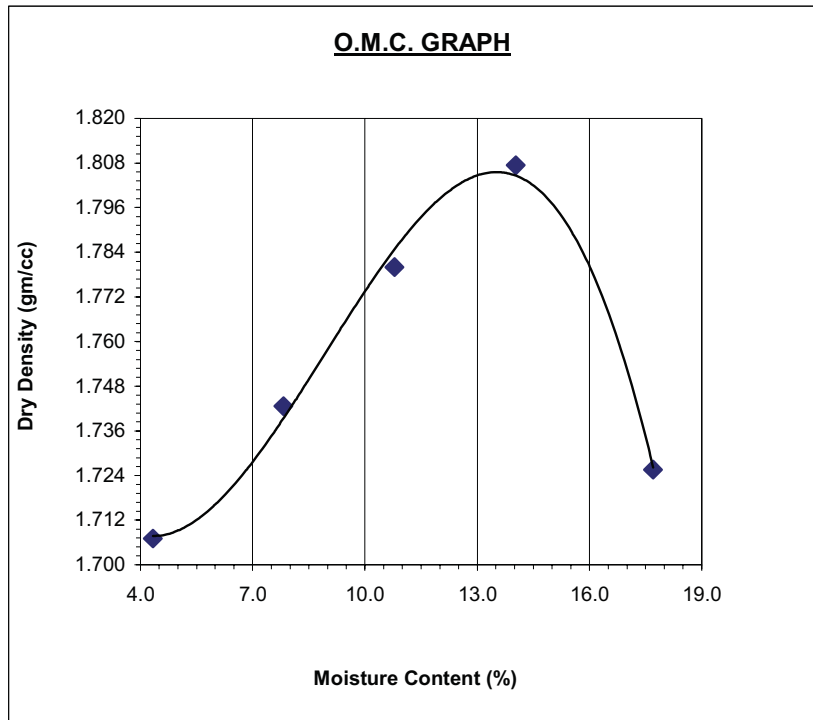
Sheet No.

C.B.R. & PROCTOR TEST RESULTS.

TP08 / DS04

Depth = 3.50m

Maximum Dry Density : 1.805 gm/cc
Optimum Moisture Content: 13.55 %



Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. : 3421

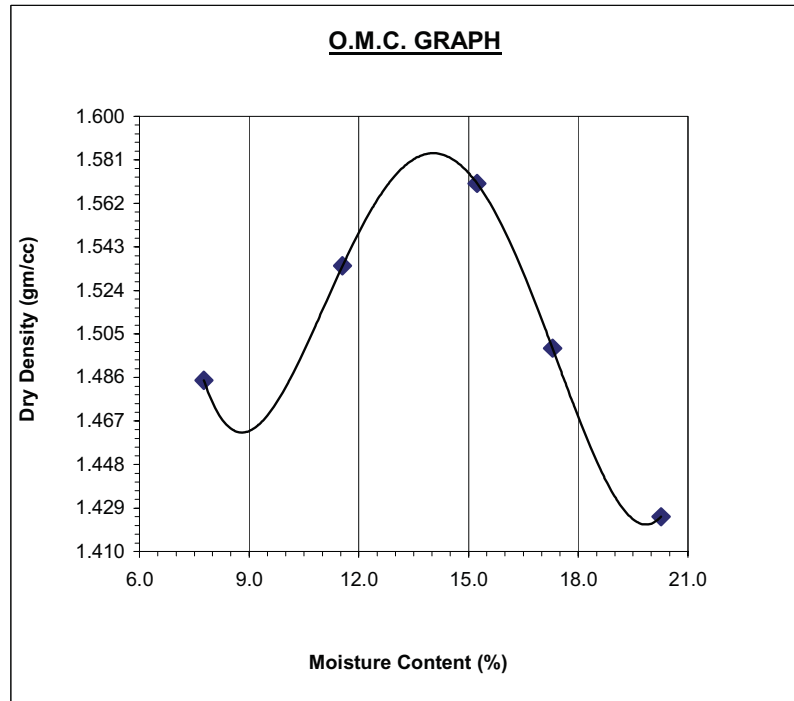
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C.B.R. & PROCTOR TEST RESULTS.

TP10 / DS02

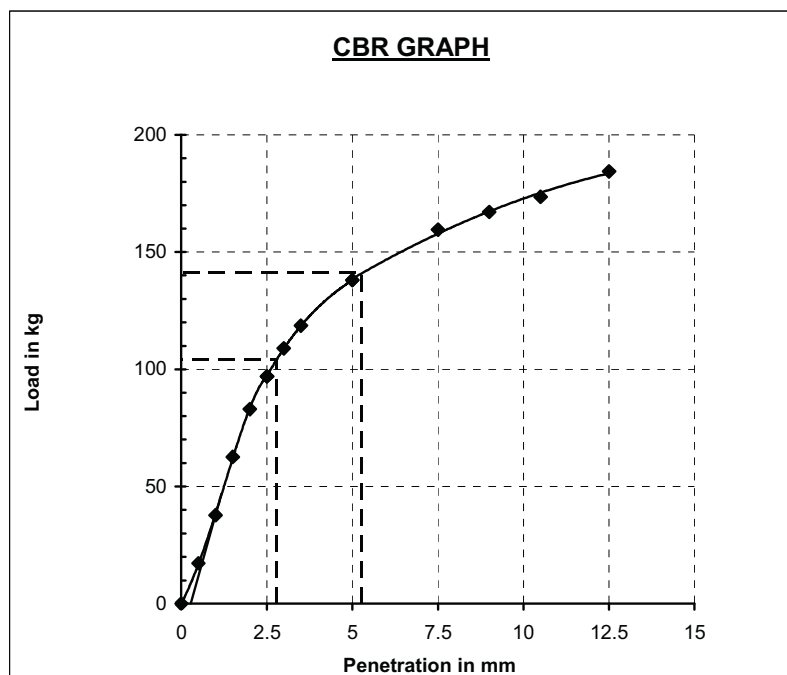
Depth = 1.50m

Maximum Dry Density : 1.584 gm/cc
 Optimum Moisture Content: 14.02 %



TYPE :- SOAKED

Penetration (mm)	CBR (%)
2.5	7.60
5.0	6.87



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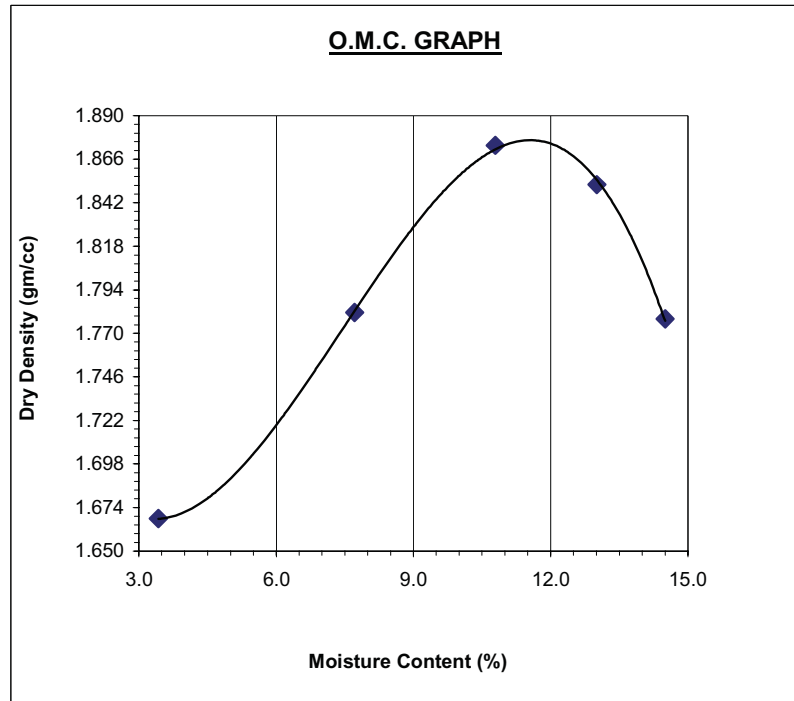
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Job No. : 3421

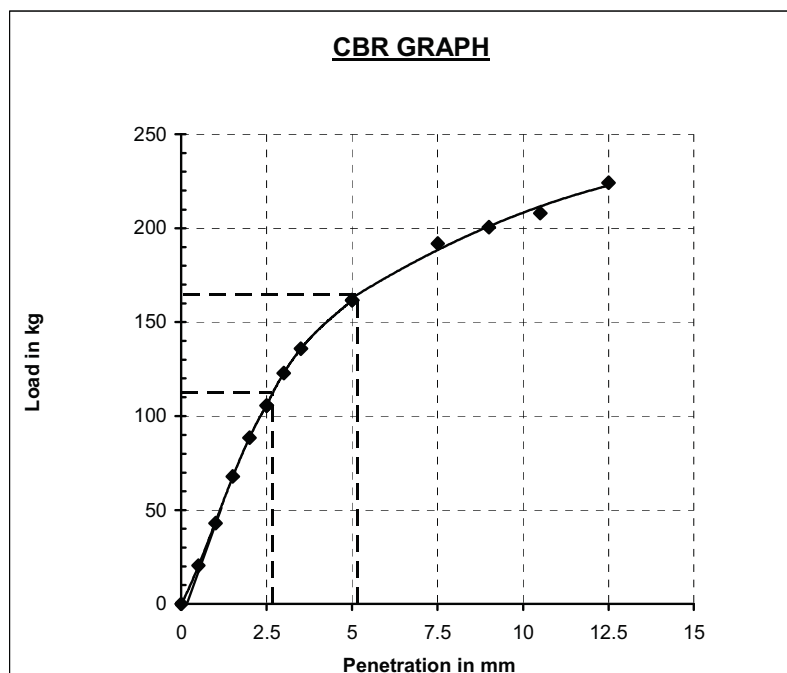
Sheet No.

C.B.R. & PROCTOR TEST RESULTS.**PLT03 / DS01****Depth = 1.00m**

Maximum Dry Density : 1.877 gm/cc
 Optimum Moisture Content: 11.65 %

**TYPE :- SOAKED**

Penetration (mm)	CBR (%)
2.5	8.22
5.0	8.02



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CETEST

Job No. : 3421

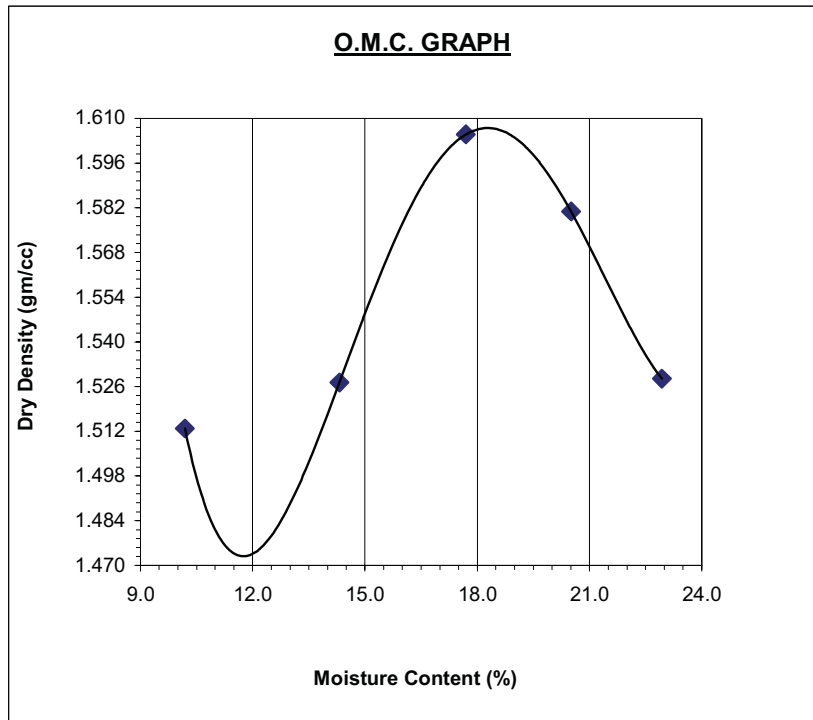
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C.B.R. & PROCTOR TEST RESULTS.

PLT05 / DS01

Depth = 1.00m

Maximum Dry Density : 1.607 gm/cc
Optimum Moisture Content: 18.31 %



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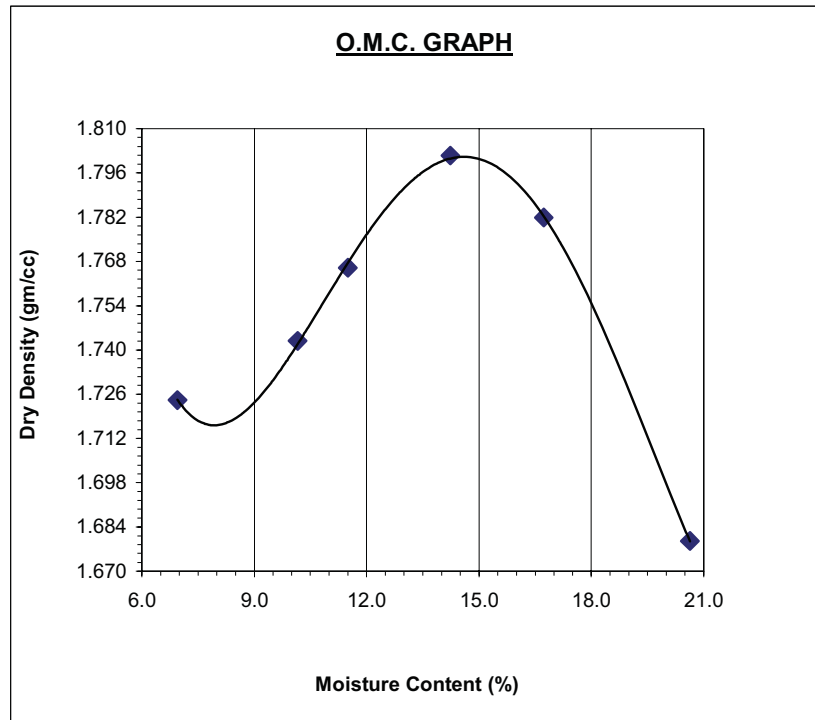
CETEST

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C.B.R. & PROCTOR TEST RESULTS.**CPLT02 / DS02****Depth = 2.00m**

Maximum Dry Density : 1.801 gm/cc
 Optimum Moisture Content: 14.70 %

**TYPE :- SOAKED**

Penetration (mm)	CBR (%)
2.5	18.64
5.0	19.85

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.

CETEST

Job No. : 3421

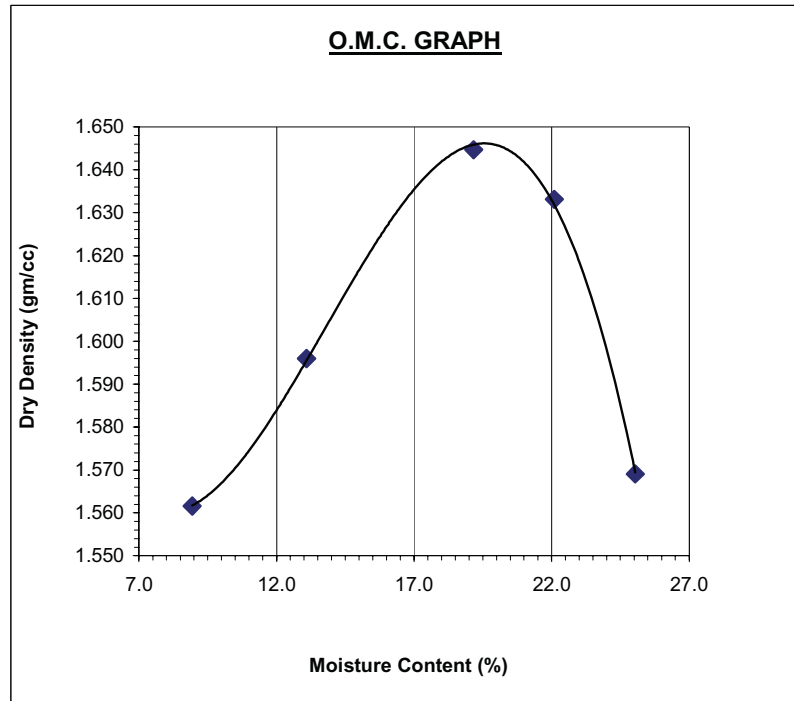
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C.B.R. & PROCTOR TEST RESULTS.

CPLT04 / DS01

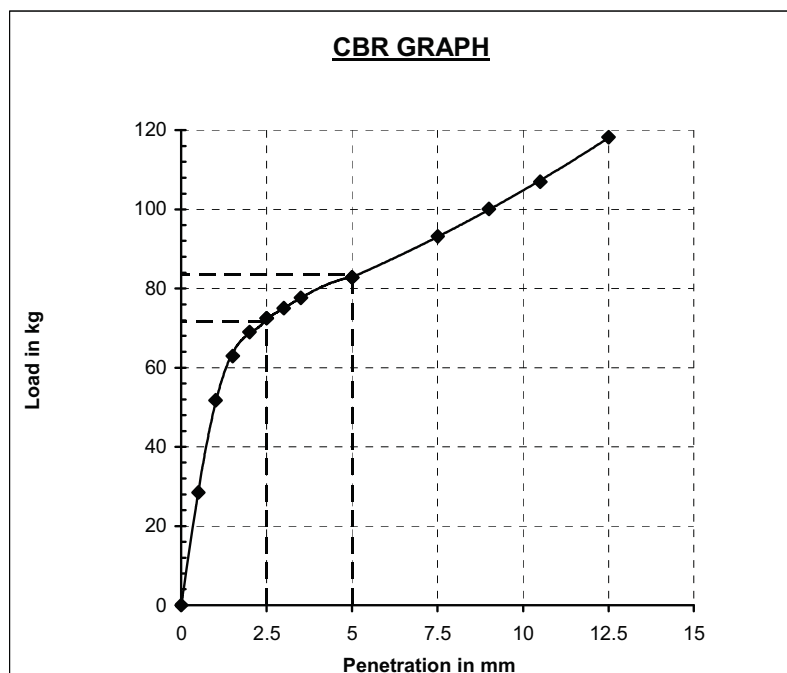
Depth = 1.00m

Maximum Dry Density : 1.646 gm/cc
 Optimum Moisture Content: 19.70 %



TYPE :- SOAKED

Penetration (mm)	CBR (%)
2.5	5.23
5.0	4.07



Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana

Job No. : 3421**Sheet No.**

PART IV: SAMPLE CALCULATION

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



Job No. : 3421

Sheet No.

Foundation around Power House Area, Depth of foundation = 5.50m below FGL (FGL=99.00M)

The suggested founding level falls inside weathered rock layer. This is a weathered rock layer with low to moderate CR value and nil RQD. Now from literature we know that the c and ϕ values of a rock specimen is in the range of $c = 35$ to 175 kg/sqcm and Φ is seldom less than 40 degree [Bowles, J. E., Foundation Analysis and Design, pp-278, 5th Edition]. Neglecting the cohesion value, use $\Phi = 35^\circ$ for bearing capacity calculation.

The Net Ultimate Bearing Capacity is given as:

$$q_{nu} = C.N_c.S_c.D_c + q.N_q.S_q.D_q + 0.5\gamma.B.N_\gamma.S_\gamma.D_\gamma - q$$

Where,

N_c , N_q and N_γ are bearing capacity factors,

S_c , S_q and S_γ are shape factors,

D_c , D_q and D_γ are depth factors,

And

C = Cohesion

q = Overburden pressure,

B = Width of foundation,

γ = Effective density below foundation.

For 4m x 6m

Cohesion, $C = 0.00$ t/sqm

Using $\phi = 35$ degree, the bearing capacity factors are:

$$N_c = 46.12$$

$$N_q = 33.30$$

$$N_\gamma = 48.03$$

Use,

Depth of Foundation = $D_f = 5.5$ M below FGL

Width of Foundation = $B = 4$ M

Length of Foundation = $L = 6$ M

Overburden Pressure = $q = 5.500$ (Depth) $\times$ 0.90 (Submerged density) = 4.95 t/sqm (assuming water table is flushing with the ground)

The Shape factors are [IS:6403 - 1981]

$$S_c = 1.13 \quad S_q = 1.13 \quad S_\gamma = 0.73$$

The Depth factors are [IS:6403 - 1981]

$$D_c = 1.53 \quad D_q = 1.26 \quad D_\gamma = 1.26$$

Computed Net Ultimate Bearing Capacity = 311.32 t/sqm

Using a factor of safety of 2.5, Net Safe Bearing Capacity = 124.53 t/sqm

For 10m x 15m

Computed Net Ultimate Bearing Capacity = 376.82 t/sqm

Using a factor of safety of 2.5, Net Safe Bearing Capacity = 150.73 t/sqm

The above bearing capacity should be checked against settlement criteria. This is shown below.

Deformation parameters

Use young's modulus for layer VI & VII = 1000 kg/sqcm & 2000 kg/sqcm respectively.

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



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Sheet No.

SETTLEMENT CALCULATION**Settlement Analysis for 4m x 6m foundation****A) General Data:**

Width of foundation =	4.0	m
Length of foundation =	6.0	m
Depth of foundation =	5.5	m
Net Base Pressure =	4.5	kg/sqcm

B) Subsoil Properties:**Layer - VI**

Young's Modulus =	1000	kg/sqcm
Poisson Ratio, μ =	0.25	
Top of Stratum =	5.50	m
End of Stratum =	8.48	m
Geological factor, G =	1.00	
m_{vc} =	0.0000	sqcm/kg

Layer - VII

Young's Modulus =	2000	kg/sqcm
Poisson Ratio, μ =	0.25	
Top of Stratum =	8.48	m
End of Stratum =	13.50	m
Geological factor, G =	1.00	
m_{vc} =	0.0000	sqcm/kg

C) Calculation of Immediate Settlement:*Settlement at center*

$M = L' / B' =$	1.500	
$N = H / B' =$	1.488	
$I_1 =$	0.218	
$I_2 =$	0.096	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.282	
Immediate settlement $S_i =$	0.953	cm
$[q_o \times B' \times (1-\mu^2) \times m \times I_s] / E_s$		

Settlement at corner

$M = L' / B' =$	1.50	
$N = H / B' =$	0.744	
$I_1 =$	0.084184	
$I_2 =$	0.094957	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.147	
Immediate settlement $S_i =$	0.249	cm

Settlement at center

$M = L' / B' =$	1.287	
$N = H / B' =$	1.441	
$I_1 =$	0.213	
$I_2 =$	0.089	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.273	
Immediate settlement $S_i =$	0.308	cm
$[q_o \times B' \times (1-\mu^2) \times m \times I_s] / E_s$		

Settlement at corner

$M = L' / B' =$	1.29	
$N = H / B' =$	0.720	
$I_1 =$	0.083	
$I_2 =$	0.090	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.143	
Immediate settlement $S_i =$	0.081	cm

Average S_i for Stratum VI = 6.01 mm
 Total immediate settlement = 7.95 mm

Average S_i for Stratum VII = 1.94 mm
 (for both the layer)

So, total settlement = 7.95mm
 Foxe's Depth correction Factor = 0.70
 Corrected Total Settlement = 5.57 mm < 12mm

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



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Sheet No.

Settlement Analysis for 10m x 15m foundation**A) General Data:**

Width of foundation =	10.0	m
Length of foundation =	15.0	m
Depth of foundation =	5.5	m
Net Base Pressure =	4.5	kg/sqcm

B) Subsoil Properties:**Layer - VI**

Young's Modulus =	1000	kg/sqcm
Poisson Ratio, μ =	0.25	
Top of Stratum =	5.50	m
End of Stratum =	8.48	m
Geological factor, G =	1.00	
m_{vc} =	0.0000	sqcm/kg

Layer - VII

Young's Modulus =	2000	kg/sqcm
Poisson Ratio, μ =	0.25	
Top of Stratum =	8.48	m
End of Stratum =	25.50	m
Geological factor, G =	1.00	
m_{vc} =	0.0000	sqcm/kg

C) Calculation of Immediate Settlement:*Settlement at center*

$M = L' / B' =$	1.500	
$N = H / B' =$	0.595	
$I_1 =$	0.058	
$I_2 =$	0.088	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.116	
Immediate settlement $S_i =$	0.982	cm
$[q_o \times B' \times (1 - \mu^2) \times m \times I_s] / E_s$		

Settlement at corner

$M = L' / B' =$	1.50	
$N = H / B' =$	0.298	
$I_1 =$	0.016231	
$I_2 =$	0.057913	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.055	
Immediate settlement $S_i =$	0.231	cm

Average S_i for Stratum VI =	6.07	mm
Total immediate settlement =	15.42	mm

Settlement at center

$M = L' / B' =$	1.385	
$N = H / B' =$	2.624	
$I_1 =$	0.358	
$I_2 =$	0.070	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.404	
Immediate settlement $S_i =$	1.424	cm
$[q_o \times B' \times (1 - \mu^2) \times m \times I_s] / E_s$		

Settlement at corner

$M = L' / B' =$	1.39	
$N = H / B' =$	1.312	
$I_1 =$	0.191	
$I_2 =$	0.095	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.254	
Immediate settlement $S_i =$	0.447	cm

Average S_i for Stratum VII =	9.36	mm
(for both the layer)		

So, Total Settlement =	15.42	mm
Foxe's Depth correction Factor =	0.87	
Applying Rigidity correction Factor :	0.80	
Corrected total settlement =	10.71	mm
	<12	mm

So, use a net allowable bearing capacity of 45t/sqm for depth of foundation of 5.50m below FGL for both the cases.

Project: Geotech. Inv. Work for 1x800MW KTPS at Khammam Dist. Telangana.



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Sheet No.

Foundation around ESP Area, Depth of foundation = 5.00m below FGL (FGL=99.00M)

The founding level falls inside very dense sand layer i.e layer V.

Design corrected N = 74

Use C = 0 kg/sqcm & $\Phi = 34^\circ$

Assume size of foundation = 4m x 6m

Computed Net Ultimate Bearing Capacity = 247.89 t/sqm

Using a factor of safety of 2.5, Net Safe Bearing Capacity = 99.15 t/sqm

The above bearing capacity should be checked against settlement criteria. This is shown below.

Deformation Parameters**Layer V**

Design corrected N = 74

Treating the sand to be over consolidated sand, $E_s = 400 + 10.5N = 1177$ kg/sqcmHowever, let us restrict the E_s value to 750 kg/sqcm**Layer VI**

Use Young's modulus for layer VI = 1000 kg/sqcm.

SETTLEMENT CALCULATION**Settlement Analysis for 4m x 6m foundation****A) General Data:**

Width of foundation =	4.0	m
Length of foundation =	6.0	m
Depth of foundation =	5.0	m
Net Base Pressure =	4.0	kg/sqcm

B) Subsoil Properties:**Layer - V**

Young's Modulus =	750	kg/sqcm
Poisson Ratio, μ =	0.25	
Top of Stratum =	5.00	m
End of Stratum =	5.19	m
Geological factor, G =	1.00	
m_{vc} =	0.0000	sqcm/kg

Layer - VI

Young's Modulus =	1000	kg/sqcm
Poisson Ratio, μ =	0.25	
Top of Stratum =	5.19	m
End of Stratum =	13.00	m
Geological factor, G =	1.00	
m_{vc} =	0.0000	sqcm/kg

C) Calculation of Immediate Settlement:*Settlement at center*

$M = L' / B' =$	1.500	
$N = H / B' =$	0.094	
$I_1 =$	0.002	
$I_2 =$	0.022	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.016	
Immediate settlement $S_i =$	0.065	cm
$[q_o \times B \times (1-\mu^2) \times m \times I_s] / E_s$		

Settlement at center

$M = L' / B' =$	1.478	
$N = H / B' =$	3.731	
$I_1 =$	0.439	
$I_2 =$	0.057	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.477	
Immediate settlement $S_i =$	1.388	cm
$[q_o \times B \times (1-\mu^2) \times m \times I_s] / E_s$		

Settlement at corner

$M = L' / B' =$	1.50	
$N = H / B' =$	0.047	
$I_1 =$	0.000422	
$I_2 =$	0.011328	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.008	
Immediate settlement $S_i =$	0.016	cm

Settlement at corner

$M = L' / B' =$	1.48	
$N = H / B' =$	1.865	
$I_1 =$	0.275	
$I_2 =$	0.088	
$I_s = I_1 + \{(1-2\mu) / (1-\mu)\} I_2 =$	0.334	
Immediate settlement $S_i =$	0.485	cm

Average S_i for Stratum III= 0.40 mm

Total immediate settlement = 9.77 mm

Average S_i for Stratum V= 9.37 mm

(for both the layer)

So, total settlement = 9.77mm

Foxe's Depth correction Factor = 0.72

Corrected Total Settlement = 7.03 mm < 25mm

So, use a net allowable bearing capacity of 40t/sqm for depth of foundation of 5.0m below FGL.

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PART V: PHOTOGRAPHS

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Borehole



Borehole

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Rock Core



Rock Core

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CBR



DCPT

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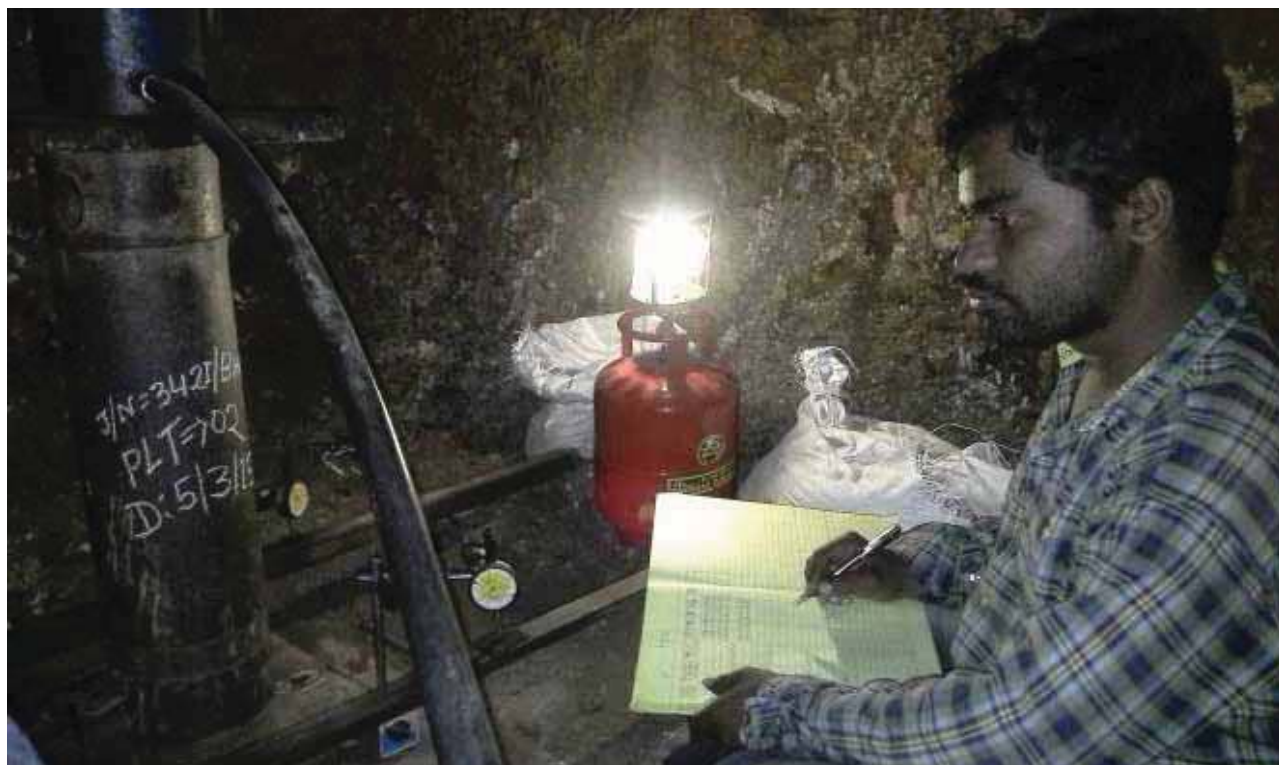
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Sheet No.



SCPT



PLT

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CPLT



Load Test

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ERT



CST

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PMT