APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 95
SHEET NO. : 02

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 29A+15, 16B+06
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION :
GROUND ELEVATION : 145.807 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :
COMPLETED :
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	0.50	Ash	~~~~~~ ~~~~~~													Diamond Core Bit			NX	6.00 mtr							Ash dumping upto 0.5 m
0.50	1.50	Silty Clay	******** ********																								SPT 1-2+4=6
1.50	3.00	Silty Clay	******** ********																								15-19+29=48
3.00	4.50	SDR	////////// //////////																								8-50
4.50	6.00	Fractured ferrogenous sand stone rock	>>>> >>>>																								
6.00	7.00		>>>> >>>>			60 40 60	80 100					34%					10%										
7.00	8.00		>>>> >>>>			60	110 120 130					42%					36%										
8.00	9.00		>>>> >>>>			40	140 120 150					45%					41%										
9.00	10.00		>>>> >>>>				120 120 110 110					46%					46%										

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM | BORE HOLE NO. : 95 | SHEET NO. : 02

LOCATION STAGE IV MAIN PLANT AREA | CO - ORDINATES : 29A+15, 16B+06 | FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE | ANGLE WITH HORIZANTAL NIL | TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION : | GROUND ELEVATION : 145.807 mtr | TYPE(S) OF CORE BARREL: NX

STARTED : | COMPLETED : | DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
10.00	11.00	Fractured ferrogenous sand stone rock	>>>> >>>>				110 120 120 120						47%			Diamond Core Bit	47%		NX	6.00 mtr							
11.00	12.00		>>>> >>>>				150 110	160 180						60%			60%										
12.00	13.00		>>>> >>>>				90 100 140 130						46%				37%										
13.00	14.00		>>>> >>>>				150	160 160					47%				47%										
14.00	15.00		>>>> >>>>				150	190 170					51%				51%										
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^				100 130	160 160					55%				55%										
16.00	17.00		^^^^^^^^ ^^^^^^^^				110 120	200 260					69%				69%										
17.00	18.00		^^^^^^^^ ^^^^^^^^				110 140 90	180 240					76%				67%										
18.00	19.00		^^^^^^^^ ^^^^^^^^				90	260 250 160					76%				67%										
19.00	20.00		^^^^^^^^ ^^^^^^^^				90	260 250 170						77%			69%										

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 96
SHEET NO. : 01

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 29A+14, 14B+81
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION :
GROUND ELEVATION : 146.753 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :
COMPLETED :
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	0.50	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr							D/S
0.50	2.00	SDR	//////////// ////////////																								SPT 7-9+11=20
2.00	3.00	Boulders	000000 000000																								Boulders size 10,20,20,10,5
3.00	4.00	Medium grained Fractured ferrogenous sand stone rock	##### #####			60 70 60 50						24%					-	over 15									
4.00	5.00		##### #####		20 20	70 50 70 30 30	90 100 80						56%				10%	over 15									
5.00	6.00		##### #####			30 60 50 70	120 80						41%				12%	over 15									
6.00	7.00		##### #####			40	110 100					25%					21%	over 15									
7.00	8.00		##### #####			60 70 60 70 30 60						35%					-	over 15									
8.00	9.00		##### #####			60	100 120					28%					22%	over 15									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION :
STARTED :

BORE HOLE NO. : 96
CO - ORDINATES : 29A+14, 14B+81
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.753 mtr
COMPLETED :

SHEET NO. : 02
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV. IN M		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>			60 40 40 70 60	100 110 80						47%			Diamond Core Bit	21%	over 15	NX	3.00 mtr							
10.00	11.00		>>>> >>>>		10 10 10 60	50 40 30 30 60 30						33%					-	over 15									
11.00	12.00		>>>> >>>>			60 60	100 80	180					48%				28%	15 to 8									
12.00	13.00		>>>> >>>>			50 60 50 60	100	170					49%				27%	15 to 8									
13.00	14.00		>>>> >>>>			60 40 40 30 60 60	120	160					57%				28%	15 to 8									
14.00	15.00		>>>> >>>>			40 60 40 70 60						27%					-	over 15									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			70 60 40	110 100	160 170						71%			54%	8 to 5									
16.00	17.00		^^^^^^^^ ^^^^^^^^			40 70 50 40	120 130	160						61%			41%	15 to 8									
17.00	18.00		^^^^^^^^ ^^^^^^^^			50 70 60 30	140 120	170						64%			43%	15 to 8									
18.00	19.00		^^^^^^^^ ^^^^^^^^		10 20	60 50 40 30	140 120	270						74%			53%	8 to 5									
19.00	20.00		^^^^^^^^ ^^^^^^^^		10 10	40 40 70 60	110 130	280						75%			52%	8 to 5									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 97
SHEET NO. : 01

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 26A+69, 14B+07
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION :
GROUND ELEVATION : 145.060 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :
COMPLETED :
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr							D/S not obtained
1.00	1.50	SDR	////////// //////////																								-do-
1.50	3.00	SDR	////////// //////////																								SPT N=31
3.00	5.00	Boulders	000000 000000																								Boulders size less than 10 mm
5.00	6.00	Medium grained Fractured ferrogenous sand stone rock	##### #####		20 20 20	30					9%						-	over 15									N>50
6.00	7.00		##### #####			70	100 90 80					34%					10%	over 15									
7.00	8.00		##### #####		20 10 20 10	70 40 30 50	90					34%					-	over 15									
8.00	9.00		##### #####			50 40 70 50	90 80					38%					-	over 15									
9.00	10.00		##### #####			50 40 50 60	120 110						43%				23%	over 15									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM | BORE HOLE NO. : 97 | SHEET NO. : 02

LOCATION STAGE IV MAIN PLANT AREA | CO - ORDINATES : 26A+69, 14B+07 | FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE | ANGLE WITH HORIZANTAL NIL | TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION : | GROUND ELEVATION : 145.060 mtr | TYPE(S) OF CORE BARREL: NX

STARTED : | COMPLETED : | DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
10.00	11.00	Medium grained Fractured ferrogenous sand stone rock	##### #####		10 10	20	100 130					27%				Diamond Core Bit	23%	over 15	NX	3.00 mtr							
11.00	12.00		##### #####		10	30 60 40 40 50 60 70	80						44%				-	over 15									
12.00	13.00		##### #####		20	50 50	100					22%					10%	over 15									
13.00	14.00		##### #####		20	70 50	90 110 90						43%				11%	over 15									
14.00	15.00		##### #####			40 60	140 120 150	180						69%			59%	8 to 5									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			70	130 150 150 120							62%			55%	8 to 5									
16.00	17.00		^^^^^^^^ ^^^^^^^^		60 70	60 70 50 50 30	90 80 110							67%			11%	over 15									
17.00	18.00		^^^^^^^^ ^^^^^^^^			70	100 110 90 90	160						62%			37%	15 to 8									
18.00	19.00		^^^^^^^^ ^^^^^^^^			60 40 40 60	100 80 100 130							61%			33%	15 to 8									
19.00	20.00		^^^^^^^^ ^^^^^^^^			80 70	100 100 100 110 110							67%			52%	over 15									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 98
SHEET NO. : 01

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 27A+92,14B+08
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION :
GROUND ELEVATION : 146.631 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :
COMPLETED :
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Ash	~~~~~~ ~~~~~~													Diamond Core Bit			NX	3.00 mtr							partial water loss upto 2.0 m
1.00	2.00	Ash	~~~~~~ ~~~~~~																								ash dumped upto 2.0 m
2.00	3.00	Boulders	000000 000000																								Size of Boulders 10 mm
3.00	4.00	Medium grained Fractured ferrogenous sand stone rock	##### #####		10 20 10 20 10	30 40	80					22%					-	Over 15									SPT N>50
4.00	5.00		##### #####			70	80 80 90 80					40%					-	Over 15									
5.00	6.00		##### #####				120 100 100	170					49%				49%	8 to 5									
6.00	7.00		##### #####		20	60 70 60	120 100						43%				22%	Over 15									
7.00	8.00		##### #####			60 70		180 160					47%				34%	15 to 8									
8.00	9.00		##### #####				140 140	160					44%				44%	8 to 5									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM | BORE HOLE NO. : 98 | SHEET NO. : 02

LOCATION STAGE IV MAIN PLANT AREA | CO - ORDINATES : 27A+92,14B+08 | FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE | ANGLE WITH HORIZANTAL NIL | TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION : | GROUND ELEVATION : 146.631 mtr | TYPE(S) OF CORE BARREL: NX

STARTED : | COMPLETED : | DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Medium grained Fractured ferrogenous sand stone rock	##### #####				90 120 120 120						45%			Diamond Core Bit	36%	15 to 8	NX	3.00 mtr							
10.00	11.00		##### #####				80 80 90 120 100						47%				22%	Over 15									
11.00	12.00		##### #####			30 50		180 200					46%				38%	15 to 8									
12.00	13.00		##### #####			40	90 150	230					51%				38%	15 to 8									
13.00	14.00		##### #####			50 60	100 130 80						42%				23%	Over 15									
14.00	15.00		##### #####			70 70	110 120 100						47%				33%	15 to 8									
15.00	16.00	Medium grained ferrogenous sand stone rock	&&&&& &&&&&			60 50	100 120 120						45%				34%	15 to 8									
16.00	17.00		&&&&& &&&&&			70 50 70	100 90 80						46%				10%	Over 15									
17.00	18.00		&&&&& &&&&&			60 40 60 70 60	150 80	180						70%			33%	15 to 8									
18.00	19.00		&&&&& &&&&&			50 70	110 100 90 80	230						73%			44%	8 to 5									
19.00	20.00		&&&&& &&&&&				120 130 100	160 170						68%			68%	5 to 1									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 99
SHEET NO. : 01
LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 29A+14,14B+07
FEATURE : Plain area besides the BH small water pool present
BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr
COLLAR ELEVATION :
GROUND ELEVATION : 145.706 mtr
TYPE(S) OF CORE BARREL: NX
STARTED :
COMPLETED :
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr							D/S collected
1.00	2.00	Fractured ferrogenous sand stone rock	>>>> >>>>			40 40 30 40 50 60	80					34%															SPT not done as rock enc. at shallow depth
2.00	3.00		>>>> >>>>			70 70	100	170				41%					27%										
3.00	4.00		>>>> >>>>				150 140 90 90 80					55%					29%										
4.00	5.00		>>>> >>>>		20	50 80	170 110	170				60%					45%										
5.00	6.00		>>>> >>>>				120 90 90 100	170				57%					39%										
6.00	7.00		>>>> >>>>			70	80 80	170				40%					17%										
7.00	8.00		>>>> >>>>				130 110 80					32%					24%										
8.00	9.00		>>>> >>>>				90 110 110 130					44%					35%										

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION :
STARTED :

BORE HOLE NO. : 99
CO - ORDINATES : 29A+14,14B+07
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 145.706 mtr
COMPLETED :

SHEET NO. : 02
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>			60		170 280 170						68%		Diamond Core Bit	62%		NX	3.00 mtr							
10.00	11.00		>>>> >>>>			60 50	80 130 130							45%			26%										
11.00	12.00		>>>> >>>>				110 140 140 120							51%			51%										
12.00	13.00		>>>> >>>>				80 130 110 80							40%			24%										
13.00	14.00		>>>> >>>>				100 90 100 140 100							53%			44%										
14.00	15.00		>>>> >>>>			70 50	100 80 100							40%			20%										
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			40	110 90	190						43%			30%										
16.00	17.00		^^^^^^^^ ^^^^^^^^				120 110	200						43%			43%										
17.00	18.00		^^^^^^^^ ^^^^^^^^			40	90 140 110 100							48%			35%										
18.00	19.00		^^^^^^^^ ^^^^^^^^				140 120	180					44%				44%										
19.00	20.00		^^^^^^^^ ^^^^^^^^				110 140 140 140 90 140						72%				67%										

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM

LOCATION STAGE IV MAIN PLANT AREA

BEARING OF HOLE

COLLAR ELEVATION : 32 cms

STARTED :08-06-2011

BORE HOLE NO. : 100

CO - ORDINATES : 30A+51,14B+07

ANGLE WITH HORIZANTAL NIL

GROUND ELEVATION : 146.763 mtr

COMPLETED : 09-06-2011

SHEET NO. : 01

FEATURE : Plain area besides the BH small water pool present

TOTAL DEPTH : 20.00 mtr

TYPE(S) OF CORE BARREL: NX

DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	5.60 mtr						D/S collected
1.00	2.00	Fractured ferrogenous sand stone rock	>>>> >>>>		20	50 50 40 70 70						30%					-										SPT not done as rock enc. at shallow depth
2.00	3.00		>>>> >>>>			60 70 60	80 100					37%					10%										
3.00	4.00		>>>> >>>>			70 50 60	120 100 80						48%				22%										
4.00	5.00		>>>> >>>>			50	130 80	200					46%				33%										
5.00	6.00		>>>> >>>>			60 70 60 60 60 50 90	90						54%				-										
6.00	7.00		>>>> >>>>			70 60	80 110 80						40%				11%										
7.00	8.00		>>>> >>>>			60 70 60 60	110	160					52%				27%										
8.00	9.00		>>>> >>>>			70 70 70		230					44%				23%										

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION : 32 cms
STARTED :08-06-2011

BORE HOLE NO. : 100
CO - ORDINATES : 30A+51,14B+07
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.763 mtr
COMPLETED : 09-06-2011

SHEET NO. : 02
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>				120 100 130 140						49%			Diamond Core Bit	49%	8 to 5	NX	3.00 mtr						
10.00	11.00		>>>> >>>>				150 100	190					44%				44%	over 15								
11.00	12.00		>>>> >>>>			70 60 70 70 60 60	80						47%				-	over 15								
12.00	13.00		>>>> >>>>			60 60 50 60	80	170					48%				17%	over 15								
13.00	14.00		>>>> >>>>			60 70 70 60 70 70	80						48%				-	over 15								
14.00	15.00		>>>> >>>>			50 60 70 70 70	80 80						48%				-	over 15								
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^					270 170					44%				44%	8 to 5								
16.00	17.00		^^^^^^^^ ^^^^^^^^			70	90 100	210					47%				31%	8 to 5								
17.00	18.00		^^^^^^^^ ^^^^^^^^				120	40					56%				56%	8 to 5								
18.00	19.00		^^^^^^^^ ^^^^^^^^				150	170 200					52%				52%	8 to 5								
19.00	20.00		^^^^^^^^ ^^^^^^^^				140 150 90	200 200							80%		71%	5 to 3								

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION : 37 cms
STARTED :10-06-2011

BORE HOLE NO. : 101
CO - ORDINATES : 30A+51,12B+61
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.514 mtr
COMPLETED : 11-06-2011

SHEET NO. : 01
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	0.50	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	5.60 mtr						D/S collected
0.50	1.50	SDR	////////// //////////																								SPT 16-19+32=51
1.50	3.00	SDR	////////// //////////																								SPT Resusal 2-50
3.00	4.00	Fractured ferrogenous sand stone rock	>>>> >>>>			40 60 50 70						22%					-	over 15									
4.00	5.00		>>>> >>>>			40 40 30	80					19%					-	over 15									
5.00	6.00		>>>> >>>>		20 20	60 50 70 70						29%					-	over 15									
6.00	7.00		>>>> >>>>		20	40 70 40 60 60						29%					-	over 15									
7.00	8.00		>>>> >>>>			50 30 50		170				30%					17%	over 15									
8.00	9.00		>>>> >>>>			40 60 50 40 60	80					33%					-	over 15									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM | BORE HOLE NO. : 101 | SHEET NO. : 02

LOCATION STAGE IV MAIN PLANT AREA | CO - ORDINATES : 30A+51,12B+61 | FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE | ANGLE WITH HORIZANTAL NIL | TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION : 37 cms | GROUND ELEVATION : 146.514 mtr | TYPE(S) OF CORE BARREL: NX

STARTED :10-06-2011 | COMPLETED : 11-06-2011 | DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>			40 70	150					26%				Diamond Core Bit	15%	over 15	NX	3.00 mtr	5.00 mtr						
10.00	11.00		>>>> >>>>			40 60 60	80 80 80					40%					-	over 15									
11.00	12.00		>>>> >>>>		20 20	30 40 30 70 50	80 120						46%				12%	over 15									
12.00	13.00		>>>> >>>>			70	130 110 80 100						49%				34%	15 to 8									
13.00	14.00		>>>> >>>>			70 70 30 50	80 90 80						47%				-	over 15									
14.00	15.00		>>>> >>>>			60	90 80 80 130						44%				13%	over 15									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			70 70 70	80 90 80						48%				-	over 15									
16.00	17.00		^^^^^^^^ ^^^^^^^^			30	150 80	170					43%				32%	over 15									
17.00	18.00		^^^^^^^^ ^^^^^^^^				150	190 320						66%			66%	over 15									
18.00	19.00		^^^^^^^^ ^^^^^^^^					200 400					60%				60%	5 to 3									
19.00	20.00		^^^^^^^^ ^^^^^^^^				120	220 290						63%			63%	5 to 3									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM

LOCATION STAGE IV MAIN PLANT AREA

BEARING OF HOLE

COLLAR ELEVATION : 37 cms

STARTED :13-06-2011

BORE HOLE NO. : 102

CO - ORDINATES : 30A+91,12B+62

ANGLE WITH HORIZANTAL NIL

GROUND ELEVATION : 146.543 mtr

COMPLETED : 14-06-2011

SHEET NO. : 01

FEATURE : Plain area besides the BH small water pool present

TOTAL DEPTH : 20.00 mtr

TYPE(S) OF CORE BARREL: NX

DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	6.70 mtr						D/S
1.00	2.00	Fractured ferrogenous sand stone rock	>>>> >>>>		20 20 10	60 30	20					22%					-	over 15									
2.00	3.00		>>>> >>>>			50 40 70	100					26%					10%	over 15									
3.00	4.00		>>>> >>>>			70	80 90 90					33%					-	over 15									
4.00	5.00		>>>> >>>>			60	80 90					23%					-	over 15									
5.00	6.00		>>>> >>>>			70 70	100 100					34%					20%	over 15									
6.00	7.00		>>>> >>>>			50 50 60	90 110					36%					11%	over 15									
7.00	8.00		>>>> >>>>			70 70 60	90					29%					-	over 15									
8.00	9.00		>>>> >>>>			60 50 60 40 70						28%					-	over 15									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION : 37 cms
STARTED :13-06-2011

BORE HOLE NO. : 102
CO - ORDINATES : 30A+91,12B+62
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.543 mtr
COMPLETED : 14-06-2011

SHEET NO. : 02
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>			40	90 80 80 80 80					37%				Diamond Core Bit	-	over 15	NX	3.00 mtr	6.70 mtr						
10.00	11.00		>>>> >>>>				100 120 120					34%					34%	15 to 8									
11.00	12.00		>>>> >>>>			70 50	150 150					40%					25%	15 to 8									
12.00	13.00		>>>> >>>>				110 120					38%					38%	15 to 8									
13.00	14.00		>>>> >>>>			50 50	110 90						48%				29%	15 to 8									
14.00	15.00		>>>> >>>>			40 30 60 30	100	100					43%				27%	15 to 8									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			50 50	110 90	160				30%					11%	over 15									
16.00	17.00		^^^^^^^^ ^^^^^^^^			50 50	90 90	170					40%				18%	over 15									
17.00	18.00		^^^^^^^^ ^^^^^^^^			70	80 130 110 120 130						50%				49%	15 to 8									
18.00	19.00		^^^^^^^^ ^^^^^^^^				120 140	180						67%			61%	5 to 3									
19.00	20.00		^^^^^^^^ ^^^^^^^^				120 100							72%			66%	5 to 3									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM

LOCATION STAGE IV MAIN PLANT AREA

BEARING OF HOLE

COLLAR ELEVATION : 32 cms

STARTED :10-06-2011

BORE HOLE NO. : 103

CO - ORDINATES : 30A+9,11B+82

ANGLE WITH HORIZANTAL NIL

GROUND ELEVATION : 146.713 mtr

COMPLETED : 11-06-2011

SHEET NO. : 01

FEATURE : Plain area besides the BH small water pool present

TOTAL DEPTH : 20.00 mtr

TYPE(S) OF CORE BARREL: NX

DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	5.30 mtr						
1.00	2.00	SDR	////////// //////////																								
2.00	3.00	Fractured ferrogenous sand stone rock	>>>> >>>>			70 50 70	90					28%					-	over 15									
3.00	4.00		>>>> >>>>			60 60	110	180					41%				29%	15 to 8									
4.00	5.00		>>>> >>>>			50 60 70	130 80					39%					13%	over 15									
5.00	6.00		>>>> >>>>			50	110 140 110 100						51%				46%	8 to 5									
6.00	7.00		>>>> >>>>			60	90 90 80 100						42%				10%	over 15									
7.00	8.00		>>>> >>>>			70 50 60	80 80 90 80						51%				-	over 15									
8.00	9.00		>>>> >>>>			70 50 70	100 90 120						50%				22%	over 15									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION : 32 cms
STARTED :10-06-2011

BORE HOLE NO. : 103
CO - ORDINATES : 30A+9,11B+82
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.713 mtr
COMPLETED : 11-06-2011

SHEET NO. : 02
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>		20	50 50 60 40 70 50 60 50						45%				Diamond Core Bit	-	over 15	NX	3.00 mtr	6.30 mtr						
10.00	11.00		>>>> >>>>			70 40 60	120 120 80 140						63%				38%	15 to 8									
11.00	12.00		>>>> >>>>			50 70	90	20									20%	over 15									
12.00	13.00		>>>> >>>>				110 120 90	160				48%					39%	15 to 8									
13.00	14.00		>>>> >>>>				150 100 120.120 90					46%					37%	15 to 8									
14.00	15.00		>>>> >>>>			30	90 130 90 100					44%					23%	over 15									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			60 70	100 100 130					46%					33%	15 to 8									
16.00	17.00		^^^^^^^^ ^^^^^^^^			40 70	120 140 80 120	160					73%				54%	8 to 5									
17.00	18.00		^^^^^^^^ ^^^^^^^^			70 40	100 100	230				54%					43%	15 to 8									
18.00	19.00		^^^^^^^^ ^^^^^^^^			60	80 80 110 140 90						56%				25%	over 15									
19.00	20.00		^^^^^^^^ ^^^^^^^^			60 30 70	100 100 100	200						66%			50%	8 to 5									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM

LOCATION STAGE IV MAIN PLANT AREA

BEARING OF HOLE

COLLAR ELEVATION : 32 cms

STARTED :

BORE HOLE NO. : 104

CO - ORDINATES : 30A+9,10B+82

ANGLE WITH HORIZANTAL NIL

GROUND ELEVATION : 146.526 mtr

COMPLETED :

SHEET NO. : 01

FEATURE : Plain area besides the BH small water pool present

TOTAL DEPTH : 20.00 mtr

TYPE(S) OF CORE BARREL: NX

DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV. IN M		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.50	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	4.70 mtr						D/S
1.50	3.00	SDR	////////// //////////																								SPT 13-20+30=50
3.00	4.00	Fractured ferrogenous sand stone rock	>>>> >>>>		10 20 20	60 50 30 40 30						26%					-	over 15									
4.00	5.00		>>>> >>>>			50 30 60 50 50						24%					-	over 15									
5.00	6.00		>>>> >>>>			60 70	100 90					32%					10%	15 to 8									
6.00	7.00		>>>> >>>>			60 50	100 90					30%					10%	15 to 8									
7.00	8.00		>>>> >>>>				140 90 80					31%					14%	15 to 8									
8.00	9.00		>>>> >>>>				120 140 90 150						50%				41%	5 to 3									
9.00	10.00		>>>> >>>>			70	100 80 80 80						41%				10%	15 to 8									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION : 32 cms
STARTED :

BORE HOLE NO. : 104
CO - ORDINATES : 30A+9,10B+82
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.526 mtr
COMPLETED :

SHEET NO. : 02
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
10.00	11.00	Fractured ferrogenous sand stone rock	>>>> >>>>			50	120 80 90					34%				Diamond Core Bit	12%	over 15	NX	3.00 mtr	6.30 mtr						
11.00	12.00		>>>> >>>>			70	90 120 80 100						46%				22%	over 15									
12.00	13.00		>>>> >>>>			50	100	180 190					52%				47%	over 15									
13.00	14.00		>>>> >>>>				130 110	180					42%				42%	15 to 8									
14.00	15.00		>>>> >>>>			40 70 60 50	100 90 90						50%				10%	over 15									
15.00	16.00		>>>> >>>>			50 70 50	130 130 90 90							64%			36%	5 to 3									
16.00	17.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			30	110 130 110 130	150						67%			63%	5 to 3									
17.00	18.00		^^^^^^^^ ^^^^^^^^				130 130 90 90	230						61%			49%	5 to 3									
18.00	19.00		^^^^^^^^ ^^^^^^^^				130 110	190 160					59%				59%	5 to 3									
19.00	20.00		^^^^^^^^ ^^^^^^^^					160 180 180 170						69%			69%	5 to 3									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM

LOCATION STAGE IV MAIN PLANT AREA

BEARING OF HOLE

COLLAR ELEVATION : 32 cms

STARTED :20-06-2011

BORE HOLE NO. : 106

CO - ORDINATES : 31A+41,12B+65

ANGLE WITH HORIZANTAL NIL

GROUND ELEVATION : 146.467 mtr

COMPLETED : 21-06-2011

SHEET NO. : 01

FEATURE : Plain area besides the BH small water pool present

TOTAL DEPTH : 20.00 mtr

TYPE(S) OF CORE BARREL: NX

DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	0.50	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	6.00 mtr						D/S
0.50	1.50		******** ********																								SPT 14-19+29=48
1.50	3.00	SDR	////////// //////////																								SPT 18-29+36=65
3.00	4.00		////////// //////////																								SPT Refusal 100
4.00	5.00	Fractured ferrogenous sand stone rock	>>>> >>>>	10	20 50 50	50 30 40 30 30						31%					-	over 15									
5.00	6.00		>>>> >>>>			50	80 90 80 80					38%					-	over 15									
6.00	7.00		>>>> >>>>			40 50 50 40	90 100					37%					10%	over 15									
7.00	8.00		>>>> >>>>			40	100	150 160					45%				41%	15 to 8									
8.00	9.00		>>>> >>>>				80	160 150				39%					31%	15 to 8									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 106
SHEET NO. : 02

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 31A+41,12B+65
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION : 32 cms
GROUND ELEVATION : 146.467 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :20-06-2011
COMPLETED : 21-06-2011
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV. IN M		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>				110 120	220					45%			Diamond Core Bit	45%	15 to 8	NX	3.00 mtr	6.00 mtr						
10.00	11.00		>>>> >>>>			60	150	170				38%					32%	15 to 8									
11.00	12.00		>>>> >>>>					160 220				38%					38%	15 to 8									
12.00	13.00		>>>> >>>>			50	100 120 120					39%					34%	15 to 8									
13.00	14.00		>>>> >>>>				120 90	190				40%					31%	15 to 8									
14.00	15.00		>>>> >>>>				100 150	170					42%				42%	15 to 8									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			40 60	100	200				40%					30%	15 to 8									
16.00	17.00		^^^^^^^^ ^^^^^^^^			30 70 40	120 90 100						45%				22%	over 15									
17.00	18.00		^^^^^^^^ ^^^^^^^^			70 50 50 50 40 50		160							76%		16%	over 15									
18.00	19.00		^^^^^^^^ ^^^^^^^^		20			170 160 160					51%				49%	8 to 5									
19.00	20.00		^^^^^^^^ ^^^^^^^^					630						63%			63%	8 to 5									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
LOCATION STAGE IV MAIN PLANT AREA
BEARING OF HOLE
COLLAR ELEVATION :
STARTED :

BORE HOLE NO. : 107
CO - ORDINATES : 31A+41,12B+27
ANGLE WITH HORIZANTAL NIL
GROUND ELEVATION : 146.487 mtr
COMPLETED :

SHEET NO. : 01
FEATURE : Plain area besides the BH small water pool present
TOTAL DEPTH : 20.00 mtr
TYPE(S) OF CORE BARREL: NX
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV. IN M		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	0.50	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr	7.00 mtr						D/S
0.50	1.50	SDR	******** ********																								SPT 14-17+27=34
1.50	3.00		////////// //////////																								SPT 18-26+34=60
3.00	4.00		////////// //////////																								SPT Refusal 3-50
4.00	5.00	Fractured ferrogenous sand stone rock	>>>> >>>>		20 20 20 20	30 30 40 30 30						24%					-	over 15									
5.00	6.00		>>>> >>>>			30 30 40 50 70	90					31%					-	over 15									
6.00	7.00		>>>> >>>>			60 60 40 50	80 80					37%					-	over 15									
7.00	8.00		>>>> >>>>			50 70	100 90 90					40%					10%	over 15									
8.00	9.00		>>>> >>>>			70	90 100 90 100						45%				20%	over 15									

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 107
SHEET NO. : 01

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 31A+41,12B+27
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 20.00 mtr

COLLAR ELEVATION :
GROUND ELEVATION : 146.487 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :
COMPLETED :
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
9.00	10.00	Fractured ferrogenous sand stone rock	>>>> >>>>			50 60	120	190					42%			Diamond Core Bit	31%	15 to 8	NX	3.00 mtr	7.00 mtr						
10.00	11.00		>>>> >>>>			50 60	130 90 80						41%				13%	over 15									
11.00	12.00		>>>> >>>>			70 70	110 90 90						43%				11%	over 15									
12.00	13.00		>>>> >>>>			70 60 40	130	160					46%				29%	15 to 8									
13.00	14.00		>>>> >>>>			60 70 60 70	100					36%					10%	over 15									
14.00	15.00		>>>> >>>>			30 60 60 50 40	90 80						41%				-	over 15									
15.00	16.00	Ferrogenous sand stone rock	^^^^^^^^ ^^^^^^^^			70	100 110 90 120						49%				33%	15 to 8									
16.00	17.00		^^^^^^^^ ^^^^^^^^			50 50 50 30 60	120 130						49%				25%	over 15									
17.00	18.00		^^^^^^^^ ^^^^^^^^				100 120	170 220						61%			61%	8 to 5									
18.00	19.00		^^^^^^^^ ^^^^^^^^			40 50	80	160 230					56%				39%	8 to 5									
19.00	20.00		^^^^^^^^ ^^^^^^^^			30		170 180 280						66%			63%	8 to 5									

Total Depth of Bore Hole : 20.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM
BORE HOLE NO. : 108
SHEET NO. : 01

LOCATION STAGE IV MAIN PLANT AREA
CO - ORDINATES : 23A+39,12B+4
FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE
ANGLE WITH HORIZANTAL NIL
TOTAL DEPTH : 10.00 mtr

COLLAR ELEVATION :
GROUND ELEVATION : 155.553 mtr
TYPE(S) OF CORE BARREL: NX

STARTED :02-08-2011
COMPLETED : 02-08-2011
DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV.		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
IN M		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	3.00 mtr							
1.00	2.00	Boulders	******** ********																								size of boulders <20 mm
2.00	3.00	SDR	////////// //////////																								
3.00	4.00		////////// //////////																								
4.00	5.00	calcarous sand stone rock	?????? ??????		20 20 20	40 40 40	80					26%															
5.00	6.00		?????? ??????			70 30 40 60	100					30%					10%	over 15									
6.00	7.00		?????? ??????			40 40 30 30 40 30	100					31%					10%	over 15									
7.00	8.00		?????? ??????			40 50 40 60 30 50 30 70	80 110		Laminated calcareous bands visible	---------- ---------- -------			56%				11%	over 15									Thin calcareous bands <10 mm width visible
8.00	9.00		?????? ??????		20 20	60 30 50 40 40 50 50	80 130						57%				13%	over 15									
9.00	10.00		?????? ??????		20 20	40 70 50 30 40 30 40	110	210				57%					32%	15 to 8									Thin calcareous bands <10 mm width visible

Total Depth of Bore Hole : 10.00 m

APPENDIX C

CLAUSES 3.1 AND 3.4

PROFORMA FOR PRESENTING DRILLING INFORMATION AS PER IS4464:1985

PROJECT : NTPC RAMAGUNDAM | BORE HOLE NO. : 109 | SHEET NO. : 01

LOCATION STAGE IV MAIN PLANT AREA | CO - ORDINATES : 23A+37,11B+14 | FEATURE : Plain area besides the BH small water pool present

BEARING OF HOLE | ANGLE WITH HORIZANTAL NIL | TOTAL DEPTH : 10.00 mtr

COLLAR ELEVATION : | GROUND ELEVATION : 152.786 mtr | TYPE(S) OF CORE BARREL: NX

STARTED :02-08-2011 | COMPLETED : 02-08-2011 | DRILLING AGENCY M/S GEO TECHNICAL SERVICES

ELEV. IN M		LITHOLOGY		SIZE OF CORE PIECES					STRUCTURAL CONDITIONS		% CORE RECOVERY					TYPE OF BIT	R.Q.D	FRACT FREQ/M	SIZE OF HOLE	CASING	WATER LEVEL	WATER LOSS		PERMEABILITY		PENETRATION RATE MM/MIN	SPECIAL OBSVS
		DESCRIPTION	LOG	<10MM	10 - 25 MM	25 - 75 MM	75 - 150 MM	>150 MM	DESCRIPTION	LOG	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100							PARTIAL	COMPLETE	TEST SECTION	MM/S OR LUGEON		
0.00	1.00	Silty Clay	******** ********													Diamond Core Bit			NX	2.00 mtr							
1.00	2.00	Boulders	000000 000000																								
2.00	3.00	Fractured Ferrogenous rock	////////// //////////		10 20 20	30 40 50	80 80		calcareous bands present	---------- --------		33%														calcareous bands 30 mm visible
3.00	4.00		////////// //////////			40 50 70	80 80 60		calcareous bands visible	---------- --------		38%														calcareous bands <10 mm visible
4.00	5.00	calcarous sand stone rock	?????? ??????			50	80 100 80 80					39%					10%										
5.00	6.00		?????? ??????			60 60	80 100 80					38%					10%	over 15									
6.00	7.00		?????? ??????			60 60	80 80 80		calcareous bands	---------- --------		36%														
7.00	8.00	Medium grained ferrrgenous sandstoe rock	&&&&& &&&&&			70 60 50 60	90 90		calcareous bands present	---------- --------			42%														calcareous bands 20 mm width present
8.00	9.00		&&&&& &&&&&			60 70 70	110 100 90 90	160	Thin calcareous bands 50 mm	---------- --------				75%			37%	15 to 8								Thick calcareous bands >30 mm present
9.00	10.00		&&&&& &&&&&			40 40 40 40	80 60	110	Thin calcareous bands 50 mm				41%				11%	over 15								Thick calcareous bands seen up to 50 mm

Total Depth of Bore Hole : 10.00 m

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

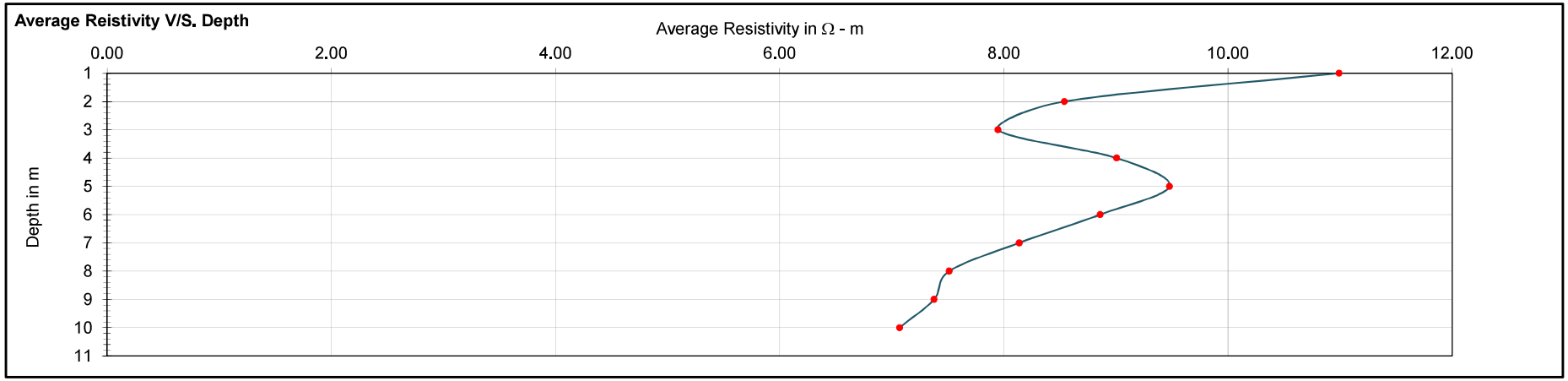
ERT No. : 2
Name of Project : TELANGANA STPPST-II
Co-Ordinates : N 1626 , E 3278
Date : 01-04-2024

Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where
ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	1.88	11.81	1.83	11.50	1.81	11.37	1.79	11.25	1.85	11.62	1.84	11.56	1.89	11.88	1.86	11.69	**10.99**
2	0.74	9.30	0.74	9.30	0.71	8.92	0.70	8.80	0.73	9.17	0.72	9.05	0.70	8.80	0.69	8.67	**8.54**
3					0.41	7.73	0.40	7.54	0.45	8.48	0.44	8.29	0.42	7.92	0.41	7.73	**7.95**
4					0.31	7.79	0.30	7.54	0.41	10.30	0.40	10.05	0.37	9.30	0.36	9.05	**9.01**
5					0.26	8.17	0.25	7.85	0.35	11.00	0.34	10.68	0.31	9.74	0.30	9.42	**9.48**
6					0.21	7.92	0.20	7.54	0.25	9.42	0.24	9.05	0.26	9.80	0.25	9.42	**8.86**
7					0.17	7.48	0.16	7.04	0.19	8.36	0.18	7.92	0.21	9.24	0.20	8.80	**8.14**
8	0.17	8.55	0.16	8.04	0.15	7.54	0.14	7.04	0.15	7.54	0.14	7.04	0.18	9.05	0.17	8.55	**7.51**
9	0.15	8.48	0.15	8.48	0.13	7.35	0.12	6.79	0.13	7.35	0.13	7.35	0.15	8.48	0.14	7.92	**7.38**
10	0.14	8.80	0.13	8.17	0.12	7.54	0.11	6.91	0.10	6.28	0.10	6.28	0.13	8.17	0.12	7.54	**7.07**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.As observations could not be taken in 8 directions due to site constraints, average resistivity was calculated by arithmetic mean in those cases.



KCT Consultancy Services, Ahmedabad

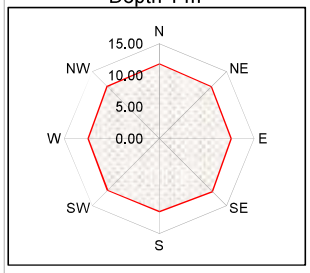
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

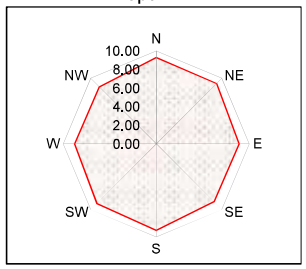
ERT No. : 2 Date : 01-04-2024 Test Location : N 1626 , E 3278

Name of Project : TELANGANA STPPST-II

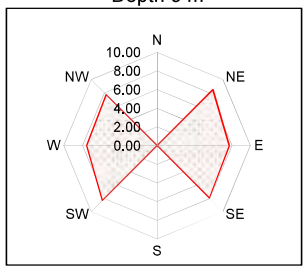
Depth 1 m



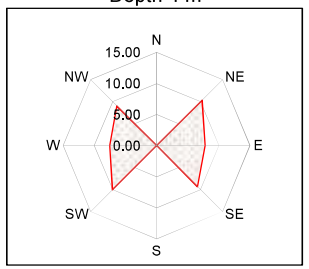
Depth 2 m



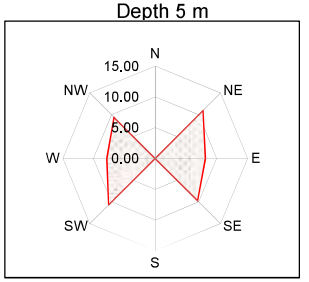
Depth 3 m



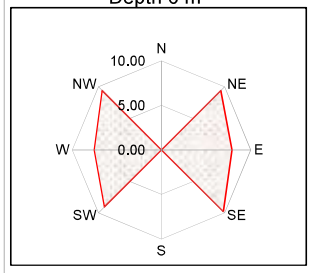
Depth 4 m



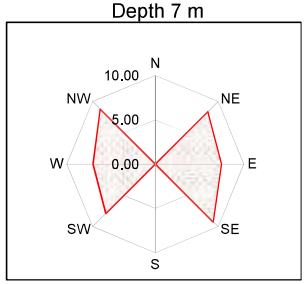
Depth 5 m



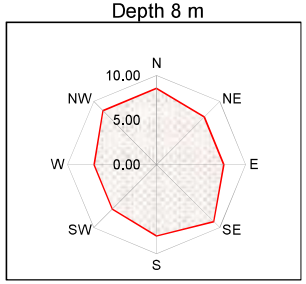
Depth 6 m



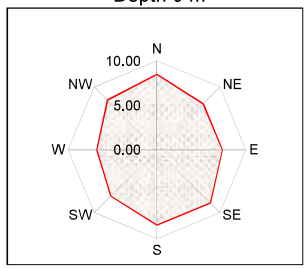
Depth 7 m



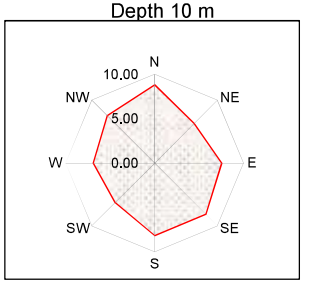
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2					8	9	10
Area of the polar diagram	379.50	229.09					177.29	171.03	157.00
Radius of the circle having same area as polar diagram	10.99	8.54					7.51	7.38	7.07

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

2) Observations could not be taken in all 8 directions due to site constraints and therefore full polar diagrams are not plotted for all that depths and not tabulated above.

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 4
Name of Project : TELANGANA STPPST-II
Co-Ordinates : N 1454 , E 3234
Date : 02-04-2024

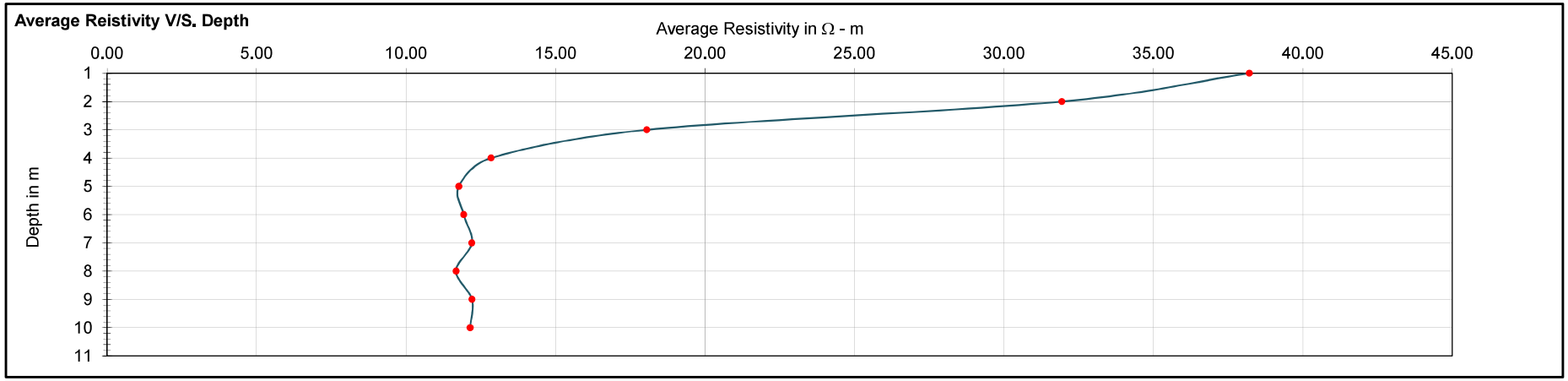
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	5.81	36.51	5.80	36.44	8.10	50.89	8.11	50.96	5.91	37.13	5.84	36.69	5.95	37.38	5.93	37.26	**38.21**
2	2.20	27.65	2.19	27.52	4.57	57.43	4.55	57.18	2.11	26.52	2.10	26.39	2.15	27.02	2.14	26.89	**31.94**
3	0.95	17.91	0.94	17.72	1.14	21.49	1.13	21.30	0.98	18.47	0.97	18.28	0.99	18.66	0.98	18.47	**18.06**
4	0.49	12.32	0.48	12.06	0.60	15.08	0.60	15.08	0.51	12.82	0.50	12.57	0.57	14.33	0.56	14.07	**12.85**
5	0.33	10.37	0.33	10.37	0.44	13.82	0.43	13.51	0.39	12.25	0.39	12.25	0.43	13.51	0.42	13.19	**11.77**
6	0.31	11.69	0.30	11.31	0.39	14.70	0.38	14.33	0.30	11.31	0.29	10.93	0.35	13.19	0.35	13.19	**11.93**
7	0.29	12.75	0.28	12.32	0.31	13.63	0.30	13.19	0.28	12.32	0.27	11.88	0.31	13.63	0.30	13.19	**12.21**
8	0.25	12.57	0.24	12.06	0.27	13.57	0.26	13.07	0.24	12.06	0.23	11.56	0.27	13.57	0.20	10.05	**11.68**
9	0.23	13.01	0.22	12.44	0.23	13.01	0.22	12.44	0.21	11.88	0.20	11.31	0.26	14.70	0.25	14.14	**12.21**
10	0.20	12.57	0.19	11.94	0.21	13.19	0.20	12.57	0.19	11.94	0.19	11.94	0.23	14.45	0.22	13.82	**12.14**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

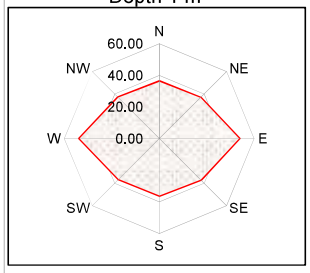
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

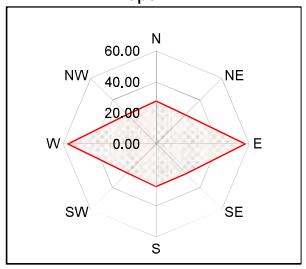
ERT No. : 4 Date : 02-04-2024 Test Location : N 1454 , E 3234

Name of Project : TELANGANA STPPST-II

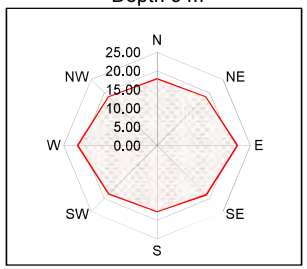
Depth 1 m



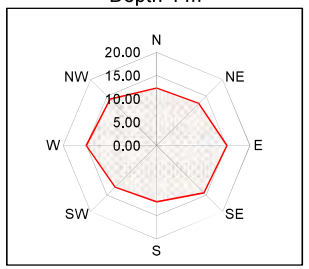
Depth 2 m



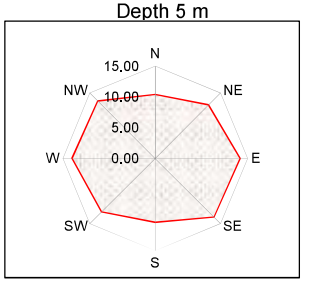
Depth 3 m



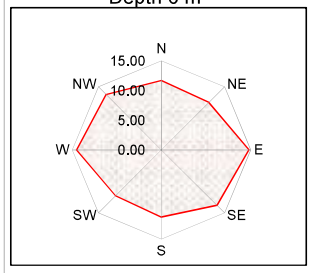
Depth 4 m



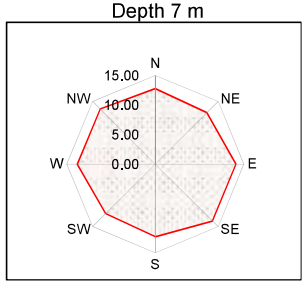
Depth 5 m



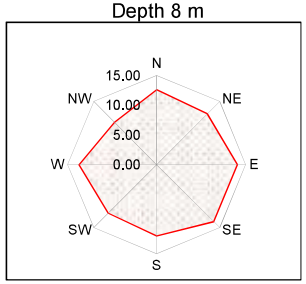
Depth 6 m



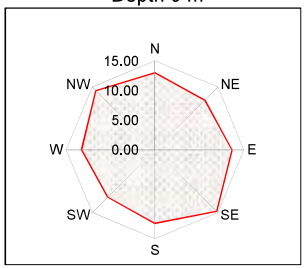
Depth 7 m



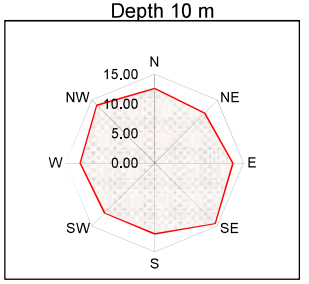
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	4587.12	3205.20	1024.11	518.46	435.07	447.24	468.08	428.27	468.10	463.33
Radius of the circle having same area as polar diagram	38.21	31.94	18.06	12.85	11.77	11.93	12.21	11.68	12.21	12.14

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

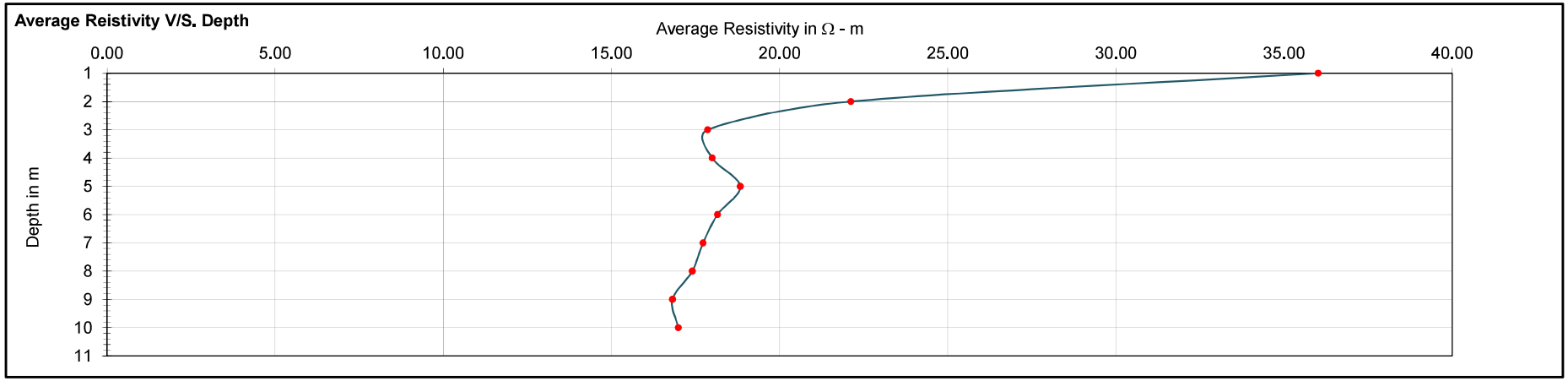
ERT No. : 5
Name of Project : TELANGANA STPPST-II
Co-Ordinates : N 1432 , E 3357
Date : 02-04-2024

Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where
ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	7.11	44.67	7.09	44.55	4.98	31.29	5.00	31.42	5.11	32.11	5.10	32.04	6.98	43.86	6.96	43.73	**36.01**
2	1.82	22.87	1.81	22.75	1.93	24.25	1.92	24.13	1.89	23.75	1.88	23.62	1.80	22.62	1.79	22.49	**22.12**
3	0.95	17.91	0.94	17.72	1.10	20.73	1.09	20.55	1.01	19.04	0.99	18.66	0.96	18.10	0.95	17.91	**17.86**
4	0.75	18.85	0.74	18.60	0.81	20.36	0.80	20.11	0.71	17.84	0.70	17.59	0.77	19.35	0.76	19.10	**18.00**
5	0.66	20.73	0.65	20.42	0.68	21.36	0.67	21.05	0.61	19.16	0.60	18.85	0.59	18.54	0.60	18.85	**18.83**
6	0.51	19.23	0.50	18.85	0.53	19.98	0.52	19.60	0.49	18.47	0.48	18.10	0.52	19.60	0.51	19.23	**18.15**
7	0.43	18.91	0.42	18.47	0.46	20.23	0.45	19.79	0.40	17.59	0.39	17.15	0.43	18.91	0.42	18.47	**17.72**
8	0.39	19.60	0.38	19.10	0.41	20.61	0.41	20.61	0.31	15.58	0.30	15.08	0.37	18.60	0.36	18.10	**17.40**
9	0.31	17.53	0.30	16.96	0.36	20.36	0.35	19.79	0.28	15.83	0.27	15.27	0.32	18.10	0.32	18.10	**16.81**
10	0.28	17.59	0.27	16.96	0.31	19.48	0.30	18.85	0.27	16.96	0.27	16.96	0.29	18.22	0.29	18.22	**16.99**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

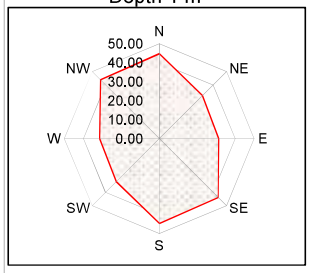
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

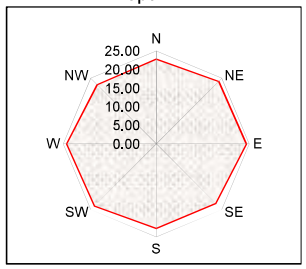
ERT No. : 5 Date : 02-04-2024 Test Location : N 1432 , E 3357

Name of Project : TELANGANA STPPST-II

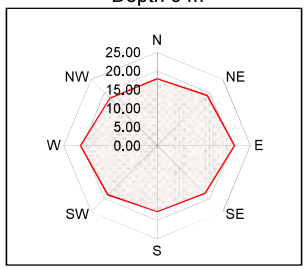
Depth 1 m



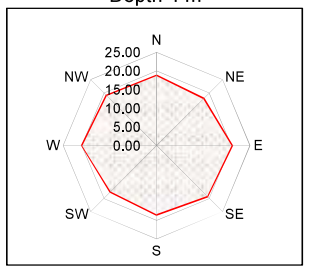
Depth 2 m



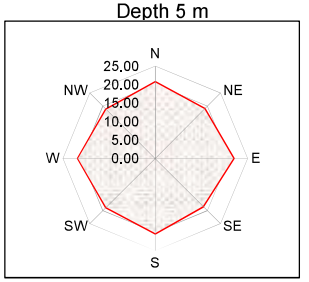
Depth 3 m



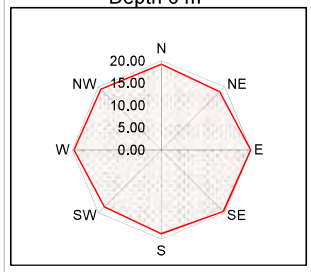
Depth 4 m



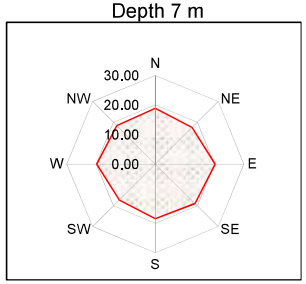
Depth 5 m



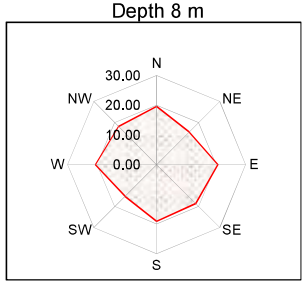
Depth 6 m



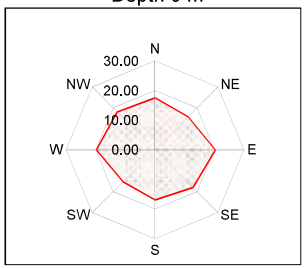
Depth 7 m



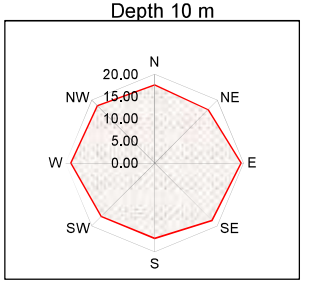
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	4074.67	1536.60	1001.87	1017.55	1113.69	1035.00	986.97	951.48	887.93	906.56
Radius of the circle having same area as polar diagram	36.01	22.12	17.86	18.00	18.83	18.15	17.72	17.40	16.81	16.99

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 7
Name of Project : TELANGANA STPP ST-II
Co-ordinates N 1257, E 3325
Date : 11-04-2024

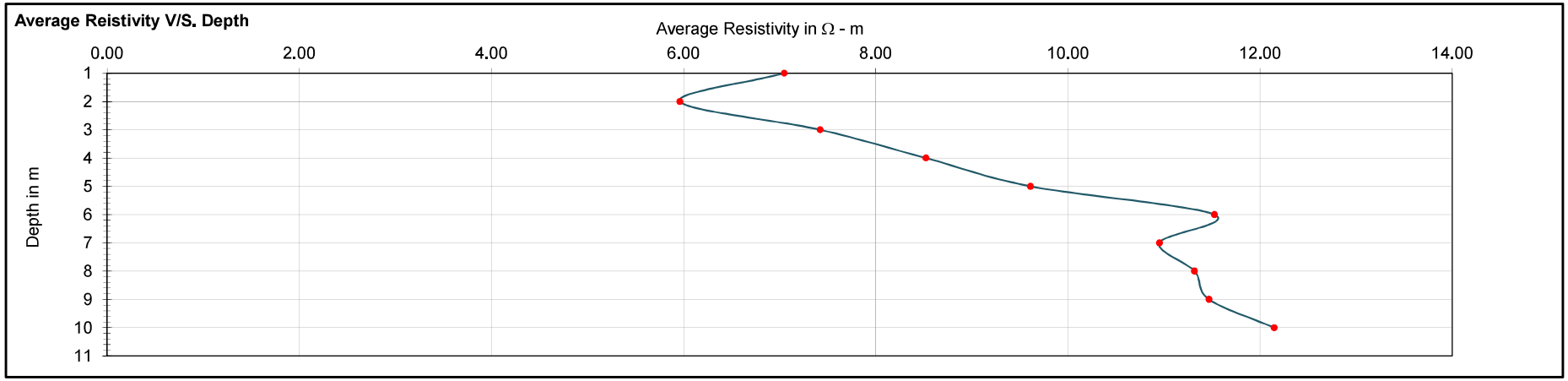
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	1.15	7.23	1.12	7.04	1.29	8.11	1.27	7.98	1.13	7.10	1.10	6.91	1.22	7.67	1.18	7.41	**7.05**
2	0.52	6.53	0.51	6.41	0.50	6.28	0.49	6.16	0.45	5.65	0.44	5.53	0.55	6.91	0.54	6.79	**5.96**
3	0.41	7.73	0.40	7.54	0.43	8.11	0.42	7.92	0.39	7.35	0.39	7.35	0.44	8.29	0.44	8.29	**7.42**
4	0.35	8.80	0.35	8.80	0.36	9.05	0.34	8.55	0.33	8.29	0.32	8.04	0.41	10.30	0.40	10.05	**8.52**
5	0.33	10.37	0.32	10.05	0.33	10.37	0.33	10.37	0.27	8.48	0.27	8.48	0.37	11.62	0.36	11.31	**9.61**
6	0.32	12.06	0.31	11.69	0.29	10.93	0.28	10.56	0.50	18.85	0.24	9.05	0.33	12.44	0.31	11.69	**11.53**
7	0.29	12.75	0.27	11.88	0.26	11.44	0.25	11.00	0.24	10.56	0.23	10.12	0.29	12.75	0.27	11.88	**10.95**
8	0.27	13.57	0.25	12.57	0.24	12.06	0.23	11.56	0.22	11.06	0.21	10.56	0.24	12.06	0.24	12.06	**11.32**
9	0.23	13.01	0.23	13.01	0.21	11.88	0.20	11.31	0.21	11.88	0.20	11.31	0.22	12.44	0.21	11.88	**11.47**
10	0.21	13.19	0.20	12.57	0.19	11.94	0.18	11.31					0.19	11.94	0.19	11.94	**12.15**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.As observations could not be taken in 8 directions due to site constraints, average resistivity was calculated by arithmetic mean in those cases.



KCT Consultancy Services, Ahmedabad

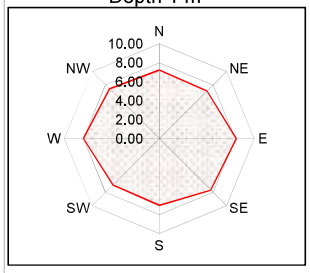
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

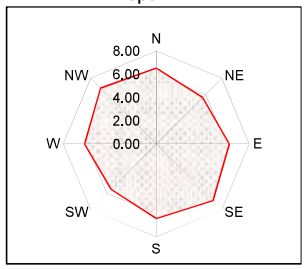
ERT No. : 7 Date : 11-04-2024 Test Location : N 1257, E 3325

Name of Project : TELANGANA STPP ST-II

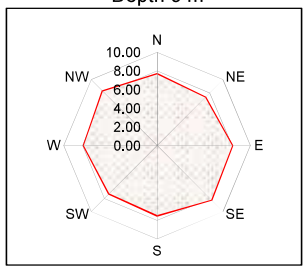
Depth 1 m



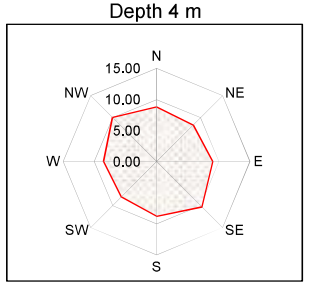
Depth 2 m



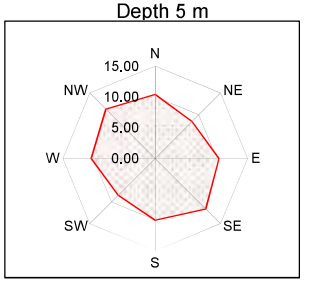
Depth 3 m



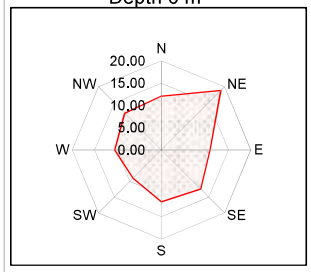
Depth 4 m



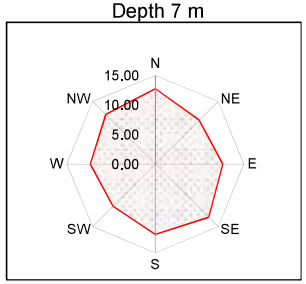
Depth 5 m



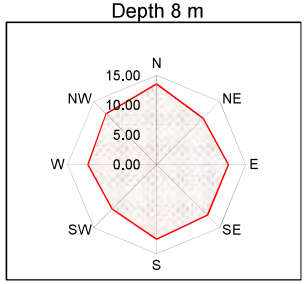
Depth 6 m



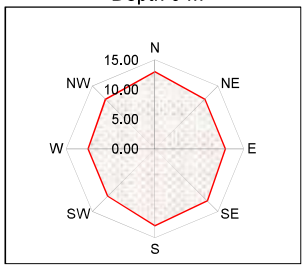
Depth 7 m



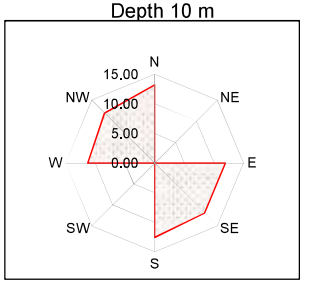
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9
Area of the polar diagram	156.05	111.64	173.05	228.25	290.21	417.30	376.86	402.46	413.16
Radius of the circle having same area as polar diagram	7.05	5.96	7.42	8.52	9.61	11.53	10.95	11.32	11.47

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

2) Observations could not be taken in all 8 directions due to site constraints and therefore full polar diagrams are not plotted for all that depths and not tabulated above.

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 8
Name of Project : TELANGANA STPPST-II
Co-Ordinates : N 1263 , E 3521
Date : 02-04-2024

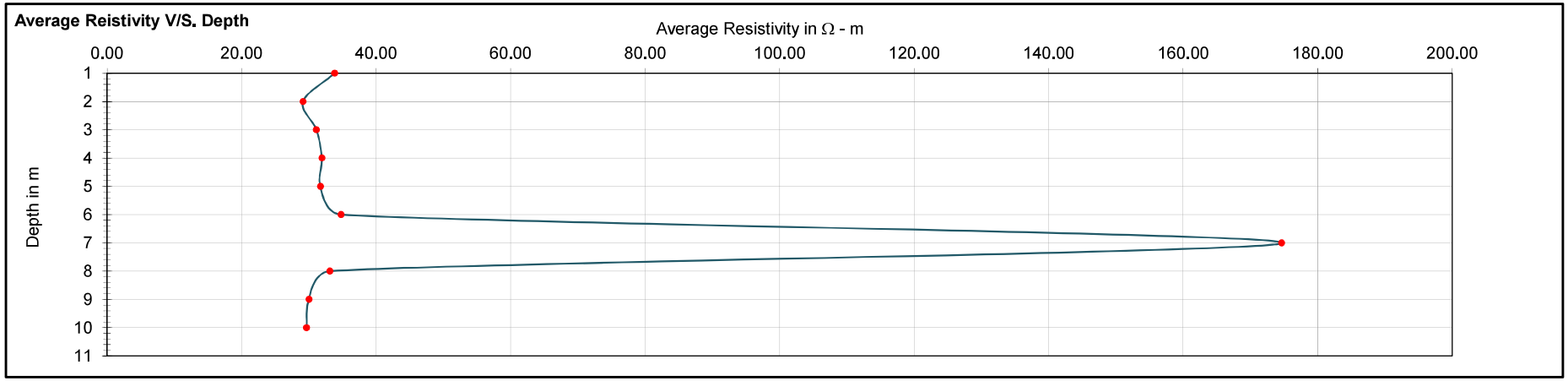
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	5.05	31.73	5.02	31.54	6.71	42.16	6.67	41.91	5.81	36.51	5.78	36.32	5.21	32.74	5.20	32.67	**33.85**
2	2.37	29.78	2.36	29.66	2.79	35.06	2.78	34.93	2.31	29.03	2.30	28.90	2.34	29.41	2.33	29.28	**29.14**
3	1.71	32.23	1.70	32.04	1.91	36.00	1.90	35.81	1.68	31.67	1.67	31.48	1.68	31.67	1.68	31.67	**31.12**
4	1.35	33.93	1.34	33.68	1.39	34.93	1.38	34.68	1.31	32.92	1.30	32.67	1.33	33.43	1.32	33.18	**31.95**
5	1.09	34.24	1.08	33.93	1.03	32.36	1.02	32.04	1.06	33.30	1.05	32.99	1.10	34.56	1.09	34.24	**31.74**
6	1.01	38.08	1.00	37.70	0.93	35.06	0.92	34.68	0.95	35.81	0.94	35.44	1.02	38.45	1.01	38.08	**34.78**
7	0.93	40.90	0.92	40.46	0.81	35.63	0.80	35.19	78.00	3430.62	0.79	34.75	0.89	39.14	0.88	38.70	**174.65**
8	0.80	40.21	0.79	39.71	0.63	31.67	0.62	31.16	0.59	29.66	0.58	29.15	0.78	39.21	0.77	38.70	**33.14**
9	0.61	34.49	0.60	33.93	0.55	31.10	0.54	30.54	0.51	28.84	0.50	28.27	0.59	33.36	0.58	32.80	**30.04**
10	0.51	32.04	0.50	31.42	0.49	30.79	0.48	30.16	0.47	29.53	0.46	28.90	0.54	33.93	0.53	33.30	**29.66**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

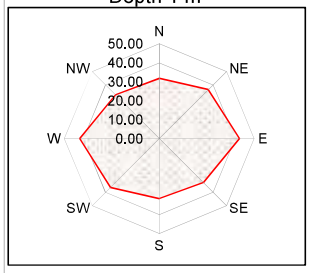
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

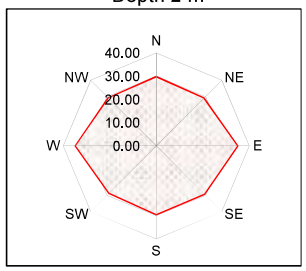
ERT No. : 8 Date : 02-04-2024 Test Location : N 1263 , E 3521

Name of Project : TELANGANA STPPST-II

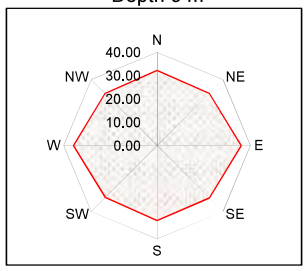
Depth 1 m



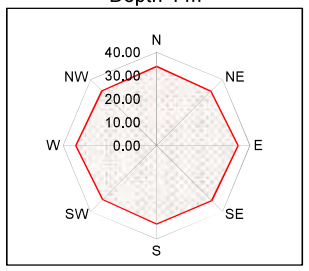
Depth 2 m



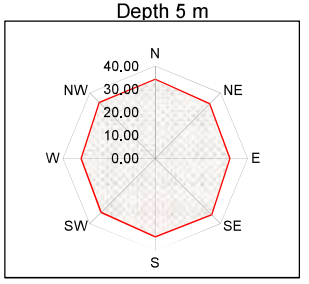
Depth 3 m



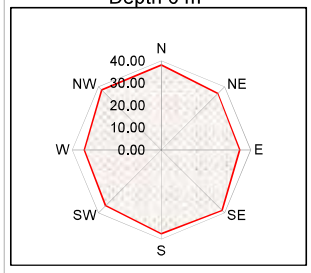
Depth 4 m



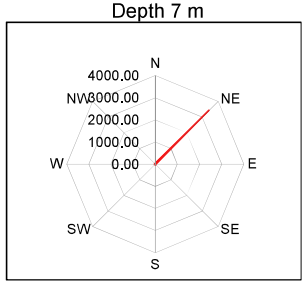
Depth 5 m



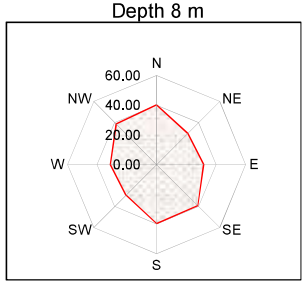
Depth 6 m



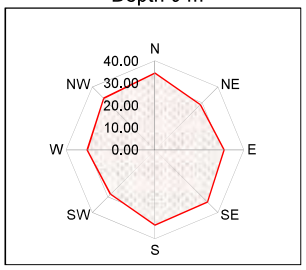
Depth 7 m



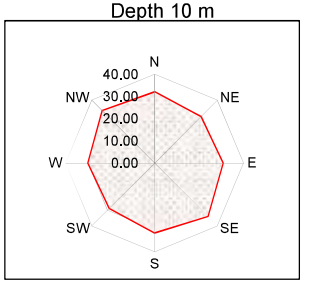
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	3599.87	2667.87	3042.45	3206.42	3165.52	3801.03	95831.91	3449.83	2834.04	2763.35
Radius of the circle having same area as polar diagram	33.85	29.14	31.12	31.95	31.74	34.78	174.65	33.14	30.04	29.66

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 9
Name of Project : TELANGANA STPP ST-II
Co-ordinates N 1200, E 3134
Date : 11-04-2024

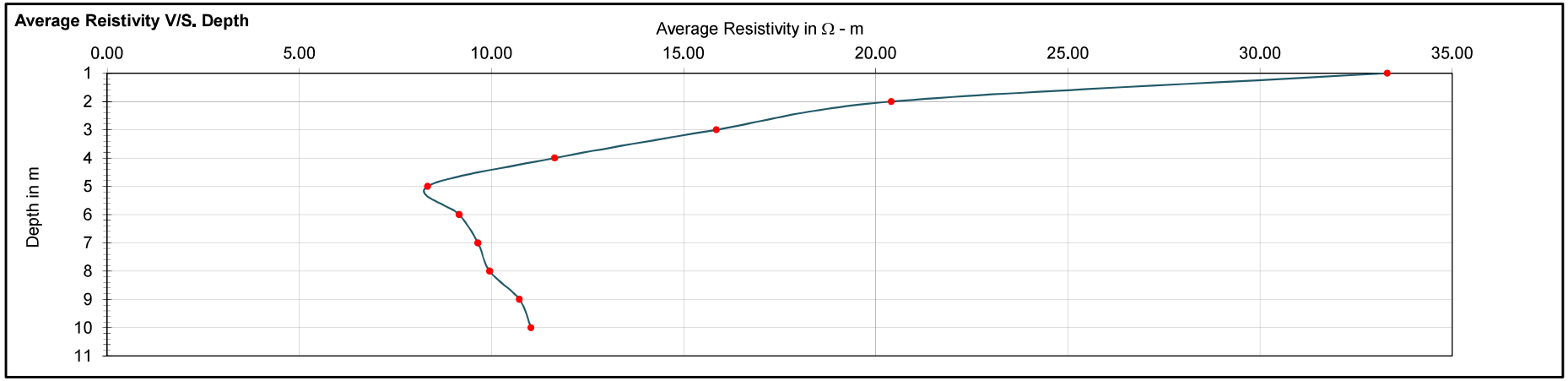
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	5.42	34.05	5.41	33.99	5.68	35.69	5.65	35.50	5.73	36.00	5.71	35.88	5.56	34.93	5.54	34.81	**33.31**
2	1.68	21.11	1.66	20.86	1.71	21.49	1.70	21.36	1.79	22.49	1.77	22.24	1.69	21.24	1.69	21.24	**20.40**
3	0.89	16.78	0.88	16.59	0.89	16.78	0.89	16.78	0.91	17.15	0.90	16.96	0.87	16.40	0.86	16.21	**15.85**
4	0.46	11.56	0.45	11.31	0.49	12.32	0.48	12.06	0.51	12.82	0.50	12.57	0.51	12.82	0.51	12.82	**11.65**
5	0.25	7.85	0.25	7.85	0.29	9.11	0.28	8.80	0.31	9.74	0.30	9.42	0.28	8.80	0.28	8.80	**8.34**
6	0.25	9.42	0.24	9.05	0.26	9.80	0.25	9.42	0.27	10.18	0.27	10.18	0.26	9.80	0.25	9.42	**9.16**
7	0.23	10.12	0.23	10.12	0.24	10.56	0.24	10.56	0.25	11.00	0.24	10.56	0.21	9.24	0.21	9.24	**9.65**
8	0.22	11.06	0.22	11.06	0.21	10.56	0.20	10.05	0.22	11.06	0.21	10.56	0.20	10.05	0.19	9.55	**9.96**
9	0.20	11.31	0.20	11.31	0.20	11.31	0.19	10.74	0.21	11.88	0.21	11.88	0.20	11.31	0.19	10.74	**10.73**
10	0.18	11.31	0.17	10.68	0.20	12.57	0.19	11.94	0.19	11.94	0.18	11.31	0.19	11.94	0.18	11.31	**11.03**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

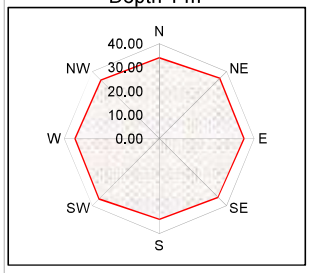
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

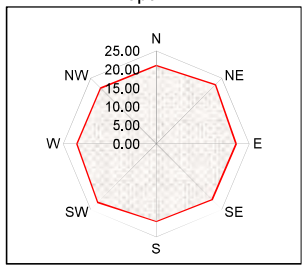
ERT No. : 9 Date : 11-04-2024 Test Location : N 1200, E 3134

Name of Project : TELANGANA STPP ST-II

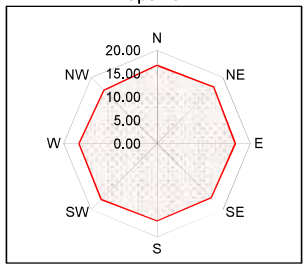
Depth 1 m



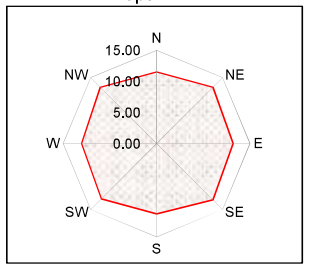
Depth 2 m



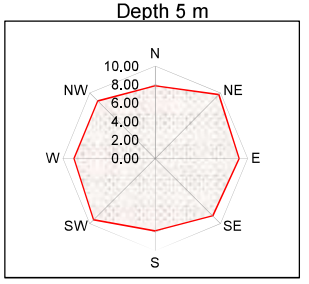
Depth 3 m



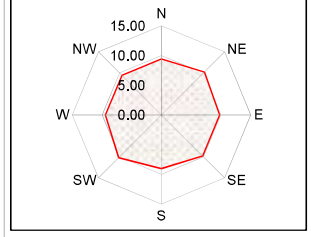
Depth 4 m



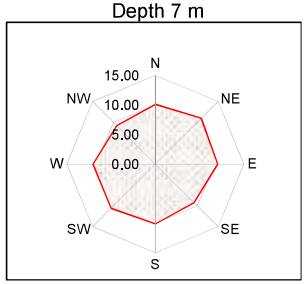
Depth 5 m



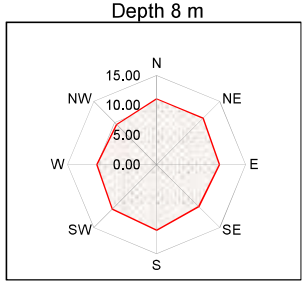
Depth 6 m



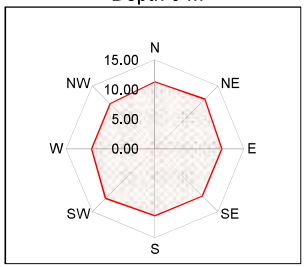
Depth 7 m



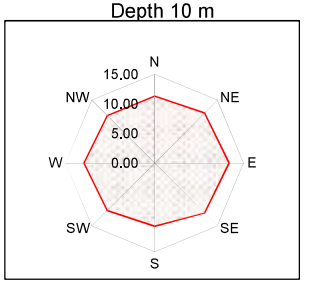
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	3485.33	1307.52	789.21	426.10	218.41	263.76	292.47	311.36	361.73	382.24
Radius of the circle having same area as polar diagram	33.31	20.40	15.85	11.65	8.34	9.16	9.65	9.96	10.73	11.03

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 10
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1209 , E 3023
Date : 17-02-2024

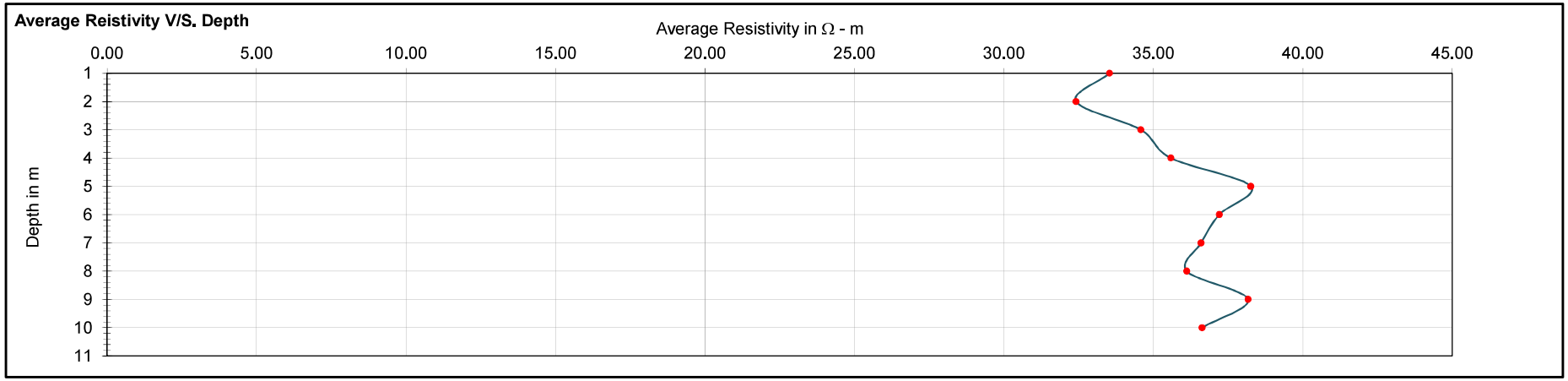
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	6.45	40.53	6.46	40.59	5.05	31.73	5.06	31.79	6.06	38.08	6.05	38.01	4.95	31.10	4.94	31.04	**33.54**
2	2.52	31.67	2.52	31.67	2.56	32.17	2.56	32.17	2.93	36.82	2.92	36.69	2.90	36.44	2.89	36.32	**32.41**
3	1.75	32.99	1.76	33.18	1.92	36.19	1.91	36.00	2.04	38.45	2.05	38.64	2.03	38.26	2.03	38.26	**34.58**
4	1.35	33.93	1.35	33.93	1.67	41.97	1.66	41.72	1.42	35.69	1.42	35.69	1.54	38.70	1.53	38.45	**35.59**
5	1.24	38.96	1.23	38.64	1.46	45.87	1.45	45.55	1.24	38.96	1.23	38.64	1.22	38.33	1.21	38.01	**38.26**
6	1.01	38.08	1.00	37.70	1.17	44.11	1.17	44.11	0.98	36.95	0.99	37.32	1.01	38.08	1.00	37.70	**37.21**
7	0.86	37.82	0.85	37.38	0.96	42.22	0.95	41.78	0.84	36.95	0.85	37.38	0.86	37.82	0.85	37.38	**36.60**
8	0.79	39.71	0.78	39.21	0.76	38.20	0.75	37.70	0.73	36.69	0.73	36.69	0.76	38.20	0.76	38.20	**36.12**
9	0.73	41.28	0.72	40.72					0.64	36.19	0.65	36.76	0.66	37.32	0.65	36.76	**38.17**
10	0.68	42.73	0.68	42.73	0.65	40.84	0.64	40.21	0.57	35.81	0.56	35.19	0.58	36.44	0.57	35.81	**36.63**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.As observations could not be taken in 8 directions due to site constraints, average resistivity was calculated by arithmetic mean in those cases.



KCT Consultancy Services, Ahmedabad

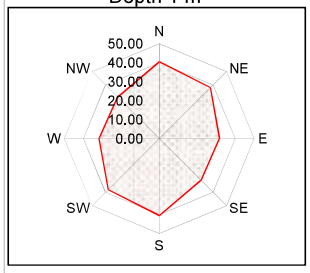
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

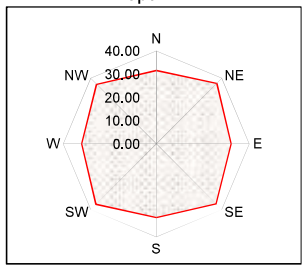
ERT No. : 10 Date : 17-02-2024 Test Location : N 1209 , E 3023

Name of Project : TELANGANA STPP ST-II

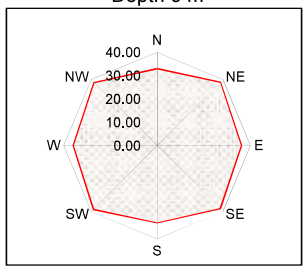
Depth 1 m



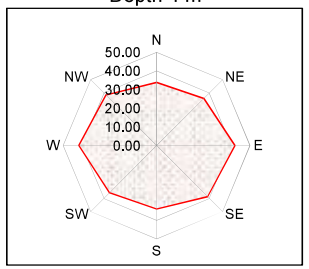
Depth 2 m



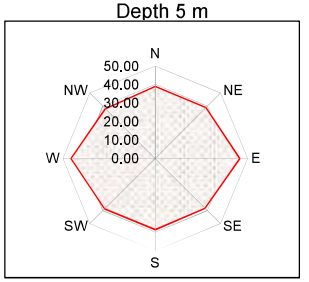
Depth 3 m



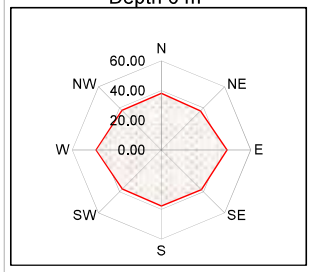
Depth 4 m



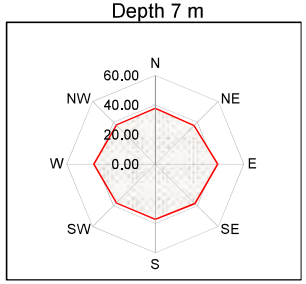
Depth 5 m



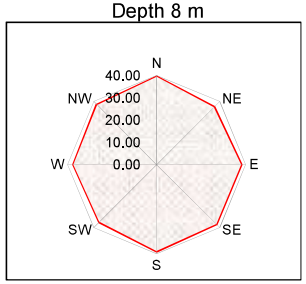
Depth 6 m



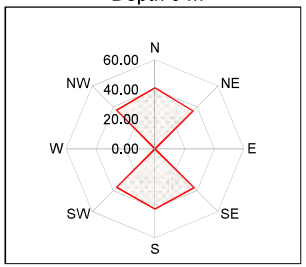
Depth 7 m



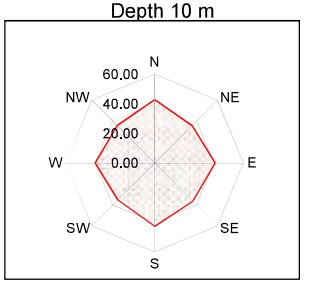
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8		10
Area of the polar diagram	3533.84	3300.85	3756.78	3978.74	4598.76	4349.00	4208.19	4098.89		4216.13
Radius of the circle having same area as polar diagram	33.54	32.41	34.58	35.59	38.26	37.21	36.60	36.12		36.63

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

2) Observations could not be taken in all 8 directions due to site constraints and therefore full polar diagrams are not plotted for all that depths and not tabulated above.

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

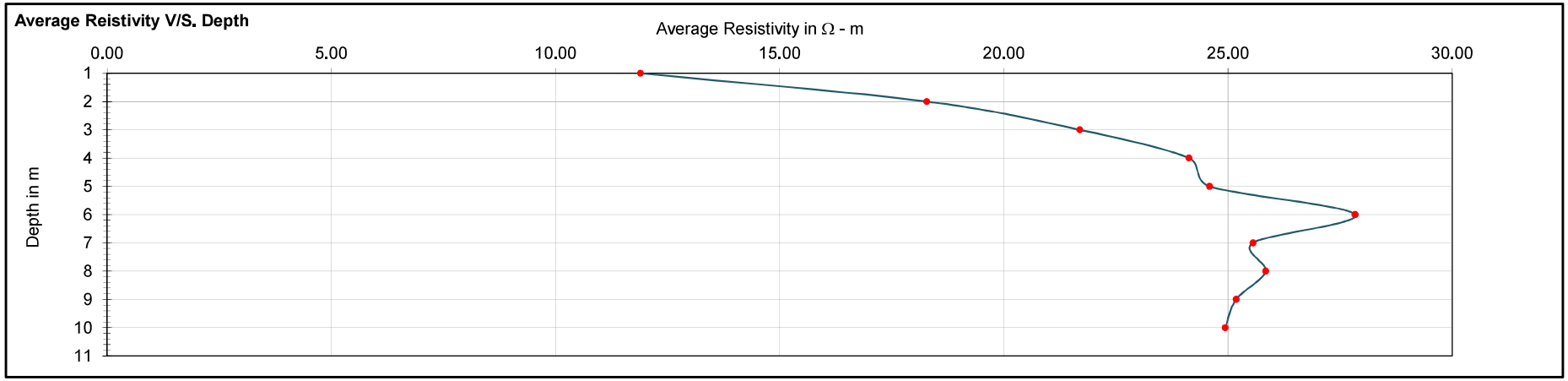
ERT No. : 11
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1130 , E 3029
Date : 17-02-2024

Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where
ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	1.83	11.50	1.84	11.56	1.92	12.06	1.92	12.06	2.14	13.45	2.13	13.38	2.10	13.19	2.11	13.26	**11.89**
2	1.61	20.23	1.61	20.23	1.38	17.34	1.37	17.22	1.46	18.35	1.46	18.35	1.69	21.24	1.69	21.24	**18.28**
3	1.22	23.00	1.21	22.81	1.13	21.30	1.13	21.30	1.20	22.62	1.21	22.81	1.31	24.69	1.30	24.50	**21.69**
4	1.14	28.65	1.13	28.40	0.97	24.38	0.96	24.13	0.95	23.88	0.94	23.62	1.01	25.38	1.00	25.13	**24.13**
5	0.83	26.08	0.83	26.08	0.80	25.13	0.79	24.82	0.83	26.08	0.82	25.76	0.85	26.70	0.85	26.70	**24.59**
6	0.73	27.52	0.73	27.52					0.69	26.01	0.68	25.64	0.80	30.16	0.80	30.16	**27.83**
7	0.64	28.15	0.63	27.71	0.61	26.83	0.60	26.39	0.61	26.83	0.61	26.83	0.60	26.39	0.60	26.39	**25.56**
8	0.58	29.15	0.58	29.15	0.56	28.15	0.56	28.15	0.53	26.64	0.52	26.14	0.50	25.13	0.51	25.64	**25.84**
9	0.51	28.84	0.50	28.27	0.49	27.71	0.48	27.14	0.45	25.45	0.44	24.88	0.45	25.45	0.44	24.88	**25.18**
10	0.45	28.27	0.44	27.65	0.43	27.02	0.43	27.02	0.39	24.50	0.38	23.88	0.42	26.39	0.41	25.76	**24.94**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.As observations could not be taken in 8 directions due to site constraints, average resistivity was calculated by arithmetic mean in those cases.



KCT Consultancy Services, Ahmedabad

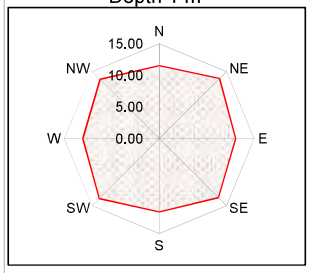
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

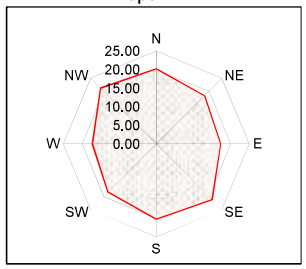
ERT No. : 11 Date : 17-02-2024 Test Location : N 1130 , E 3029

Name of Project : TELANGANA STPP ST-II

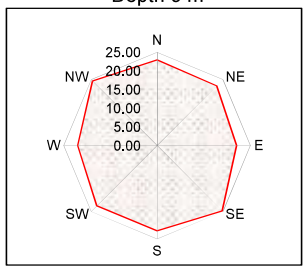
Depth 1 m



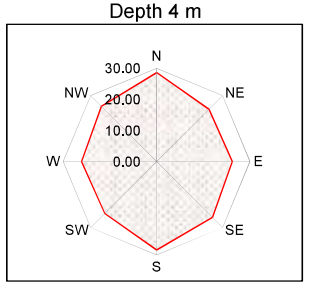
Depth 2 m



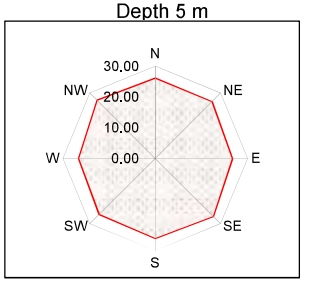
Depth 3 m



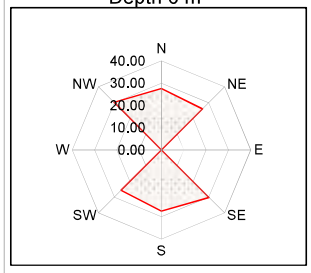
Depth 4 m



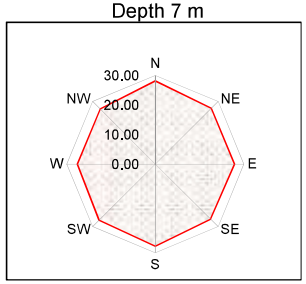
Depth 5 m



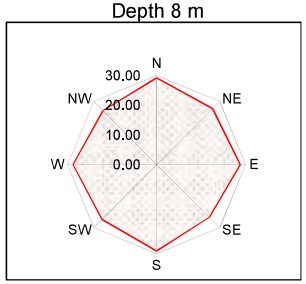
Depth 6 m



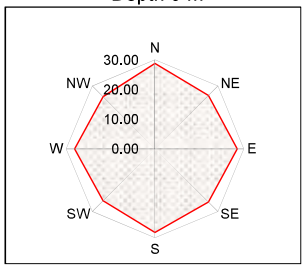
Depth 7 m



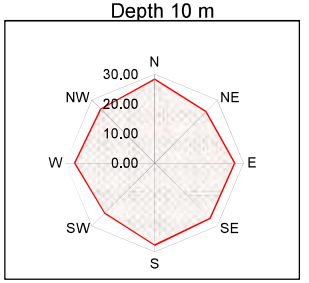
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	7	8	9	10
Area of the polar diagram	444.38	1049.77	1478.54	1828.77	1899.29	2052.02	2097.50	1992.11	1953.79
Radius of the circle having same area as polar diagram	11.89	18.28	21.69	24.13	24.59	25.56	25.84	25.18	24.94

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

2) Observations could not be taken in all 8 directions due to site constraints and therefore full polar diagrams are not plotted for all that depths and not tabulated above.

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 12
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1526 , E 2980
Date : 28-03-2024

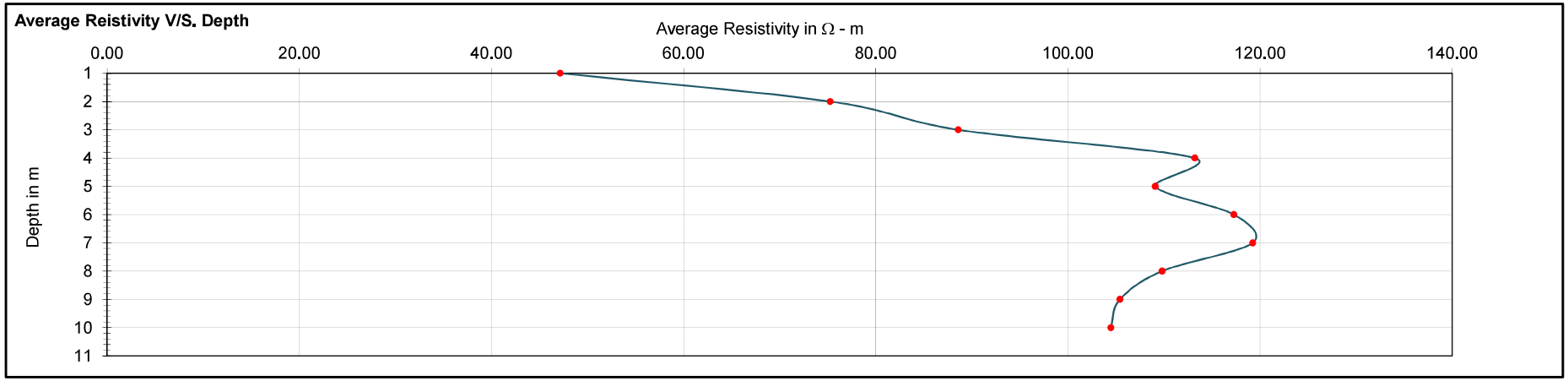
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	7.93	49.83	7.90	49.64	8.09	50.83	8.07	50.71	7.81	49.07	7.80	49.01	7.87	49.45	7.83	49.20	**47.17**
2	6.21	78.04	6.20	77.91	6.31	79.29	6.30	79.17	6.41	80.55	6.40	80.42	6.34	79.67	6.33	79.55	**75.26**
3	5.01	94.44	5.00	94.25	4.99	94.06	4.97	93.68	4.91	92.55	4.90	92.36	4.93	92.93	4.92	92.74	**88.59**
4	4.71	118.38	4.70	118.12	4.79	120.39	4.78	120.13	4.75	119.38	4.74	119.13	4.76	119.63	4.75	119.38	**113.21**
5	3.63	114.04	3.62	113.73	3.66	114.98	3.65	114.67	3.68	115.61	3.67	115.30	3.69	115.92	3.68	115.61	**109.09**
6	3.31	124.78	3.30	124.41	3.25	122.52	3.24	122.15	3.27	123.28	3.28	123.65	3.29	124.03	3.29	124.03	**117.27**
7	2.90	127.55	2.89	127.11	2.86	125.79	2.85	125.35	2.89	127.11	2.86	125.79	2.81	123.59	2.80	123.15	**119.24**
8	2.29	115.11	2.28	114.61	2.31	116.11	2.31	116.11	2.30	115.61	2.30	115.61	2.32	116.62	2.31	116.11	**109.81**
9	2.01	113.66	2.00	113.10	1.98	111.97	1.97	111.40	1.93	109.14	1.92	108.57	1.96	110.84	1.95	110.27	**105.42**
10	1.80	113.10	1.79	112.47	1.71	107.44	1.70	106.81	1.75	109.96	1.74	109.33	1.77	111.21	1.76	110.58	**104.47**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

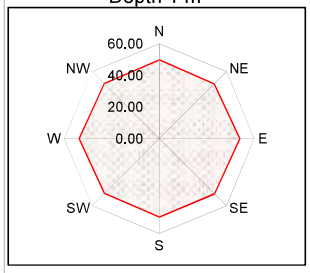
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

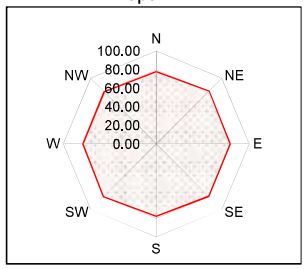
ERT No. : 12 Date : 28-03-2024 Test Location : N 1526 , E 2980

Name of Project : TELANGANA STPP ST-II

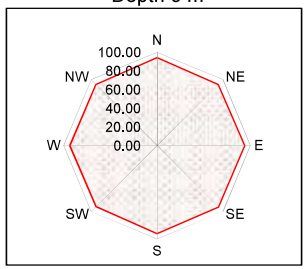
Depth 1 m



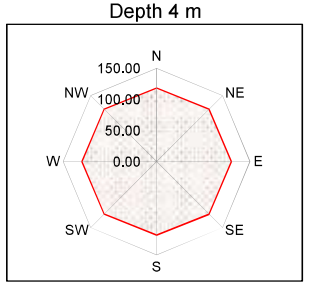
Depth 2 m



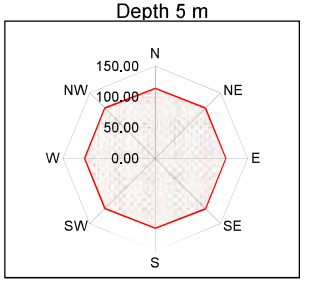
Depth 3 m



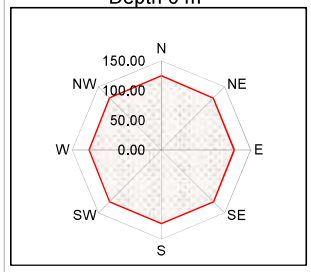
Depth 4 m



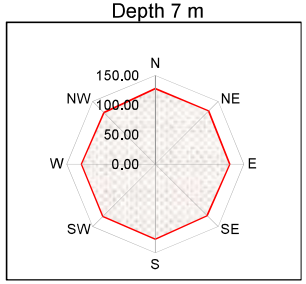
Depth 5 m



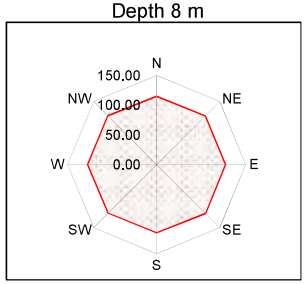
Depth 6 m



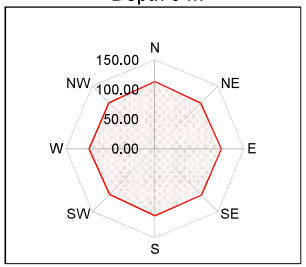
Depth 7 m



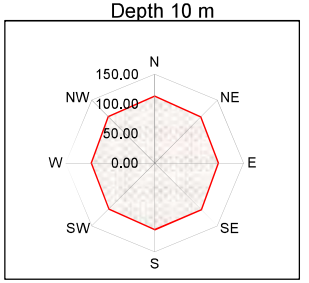
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	6989.02	17793.69	24656.06	40261.43	37387.70	43207.30	44667.68	37880.51	34912.45	34289.10
Radius of the circle having same area as polar diagram	47.17	75.26	88.59	113.21	109.09	117.27	119.24	109.81	105.42	104.47

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 14
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1506 , E 2908
Date : 26-03-2024

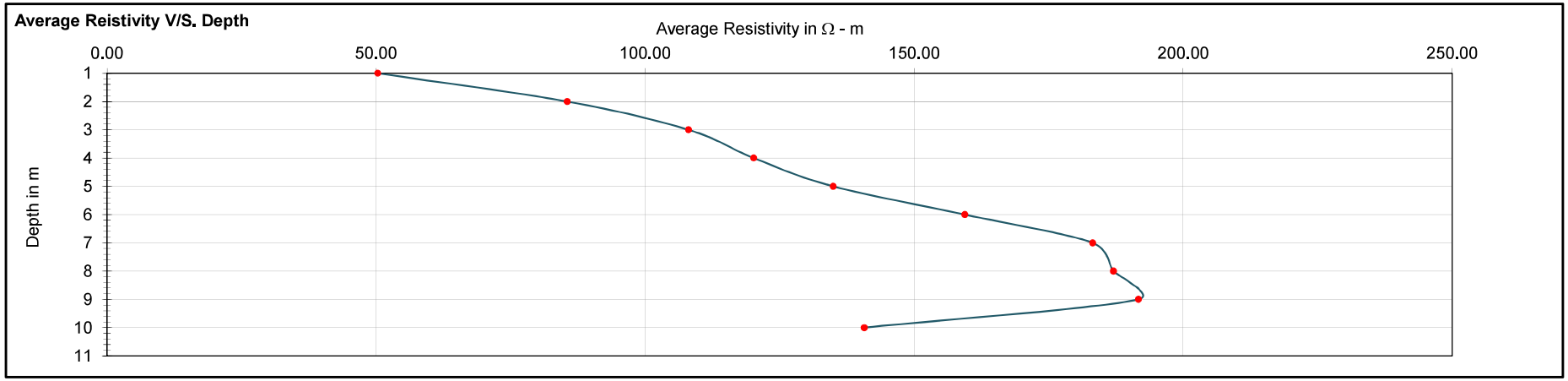
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	8.83	55.48	8.63	54.22	8.57	53.85	8.55	53.72	7.98	50.14	8.01	50.33	8.47	53.22	8.49	53.34	**50.31**
2	7.25	91.11	7.25	91.11	7.15	89.85	7.14	89.72	7.20	90.48	7.19	90.35	7.11	89.35	7.10	89.22	**85.53**
3	6.09	114.79	6.08	114.61	6.07	114.42	6.08	114.61	6.01	113.29	6.00	113.10	6.01	113.29	6.00	113.10	**108.06**
4	5.12	128.68	5.11	128.43	5.05	126.92	5.04	126.67	5.01	125.92	4.99	125.41	5.01	125.92	4.99	125.41	**120.18**
5	4.63	145.46	4.62	145.14	4.50	141.37	4.49	141.06	4.58	143.88	4.57	143.57	4.42	138.86	4.41	138.54	**134.95**
6	4.58	172.66	4.57	172.28	4.42	166.63	4.41	166.25	4.50	169.65	4.49	169.27	4.35	163.99	4.34	163.61	**159.43**
7	4.49	197.48	4.48	197.04	4.39	193.08	4.38	192.64	4.40	193.52	4.39	193.08	4.30	189.12	4.29	188.68	**183.18**
8	4.16	209.10	4.15	208.60	3.84	193.02	3.83	192.52	4.10	206.09	4.09	205.59	3.61	181.46	3.60	180.96	**187.04**
9	3.74	211.49	3.73	210.93	3.68	208.10	3.67	207.53	3.41	192.83	3.40	192.27	3.49	197.35	3.48	196.79	**191.68**
10	2.88	180.96	2.87	180.33	2.14	134.46	2.13	133.83	2.19	137.60	2.18	136.97	2.27	142.63	2.26	142.00	**140.74**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

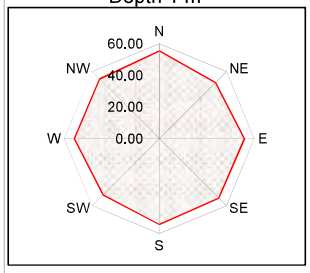
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

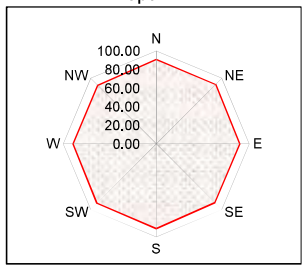
ERT No. : 14 Date : 26-03-2024 Test Location : N 1506 , E 2908

Name of Project : TELANGANA STPP ST-II

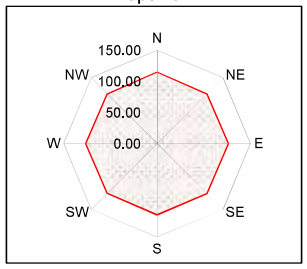
Depth 1 m



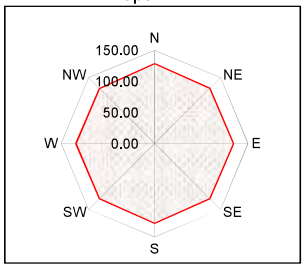
Depth 2 m



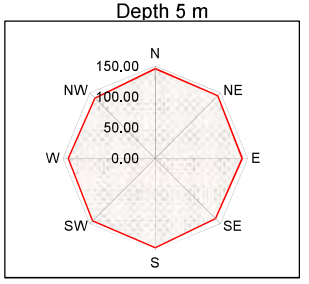
Depth 3 m



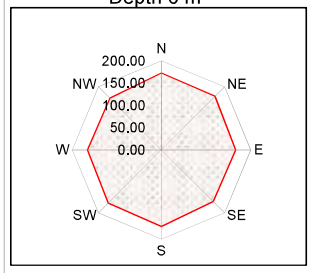
Depth 4 m



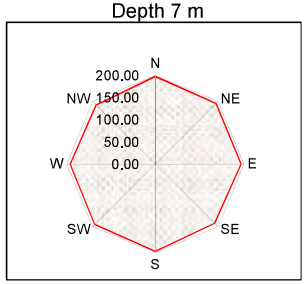
Depth 5 m



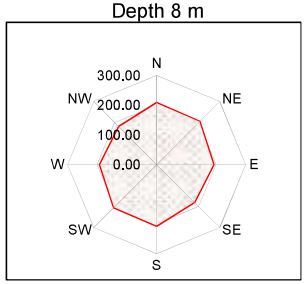
Depth 6 m



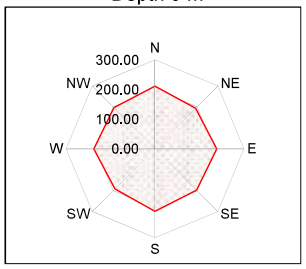
Depth 7 m



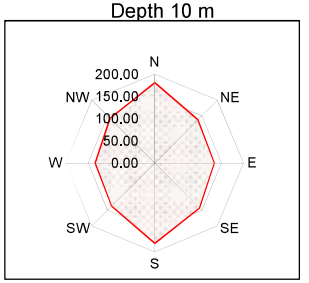
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	7950.57	22981.95	36685.81	45372.56	57210.26	79853.49	105419.00	109899.82	115425.57	62226.86
Radius of the circle having same area as polar diagram	50.31	85.53	108.06	120.18	134.95	159.43	183.18	187.04	191.68	140.74

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

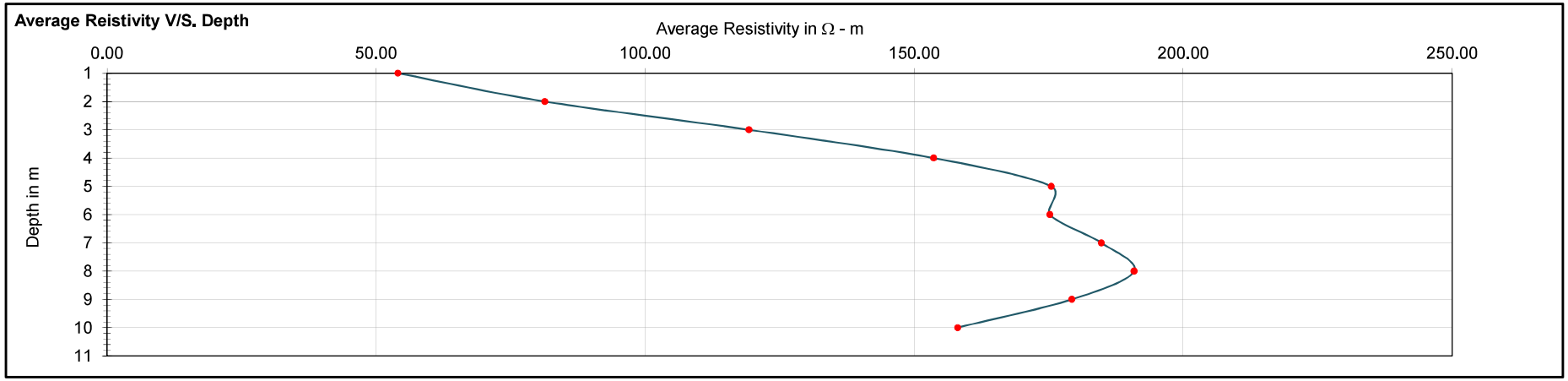
ERT No. : 15
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1506 , E 2852
Date : 27-03-2024

Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where
ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	8.39	52.72	8.41	52.84	10.03	63.02	10.01	62.89	7.64	48.00	7.68	48.25	10.18	63.96	10.20	64.09	**54.05**
2	6.19	77.79	6.18	77.66	7.86	98.77	7.85	98.65	5.59	70.25	5.60	70.37	7.68	96.51	7.67	96.38	**81.37**
3	6.09	114.79	6.10	114.98	7.71	145.33	7.70	145.14	5.43	102.35	5.42	102.16	7.48	140.99	7.47	140.81	**119.31**
4	5.99	150.55	5.98	150.29	7.64	192.01	7.63	191.76	4.89	122.90	4.88	122.65	7.31	183.72	7.30	183.47	**153.63**
5	5.31	166.82	5.30	166.50	6.57	206.40	6.56	206.09	5.21	163.68	5.20	163.36	6.48	203.58	6.47	203.26	**175.48**
6	4.81	181.33	4.80	180.96	5.06	190.76	5.06	190.76	4.73	178.32	4.72	177.94	5.01	188.87	5.00	188.50	**175.21**
7	4.32	190.00	4.32	190.00	4.68	205.84	4.67	205.40	4.22	185.61	4.21	185.17	4.51	198.36	4.50	197.92	**184.79**
8	3.87	194.53	3.86	194.02	4.15	208.60	4.14	208.10	3.78	190.00	3.77	189.50	4.23	212.62	4.22	212.12	**190.88**
9	3.37	190.57	3.36	190.00	3.44	194.53	3.43	193.96	3.27	184.91	3.26	184.35	3.31	187.18	3.30	186.61	**179.31**
10	2.68	168.39	2.67	167.76	2.90	182.21	2.89	181.58	2.55	160.22	2.54	159.59	2.51	157.71	2.50	157.08	**158.08**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

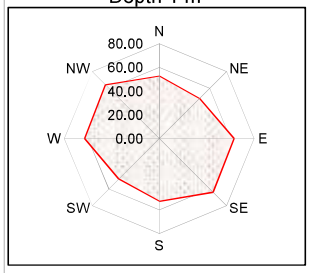
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

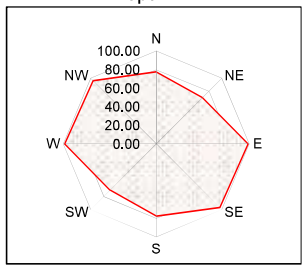
ERT No. : 15 Date : 27-03-2024 Test Location : N 1506 , E 2852

Name of Project : TELANGANA STPP ST-II

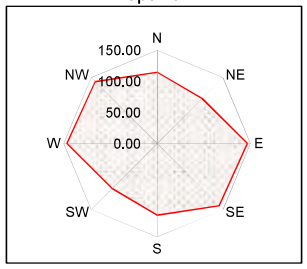
Depth 1 m



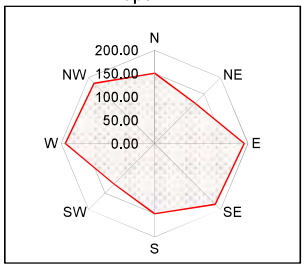
Depth 2 m



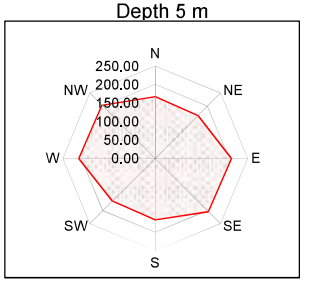
Depth 3 m



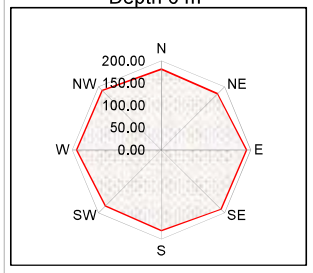
Depth 4 m



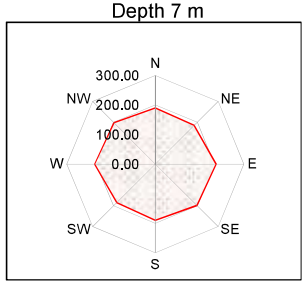
Depth 5 m



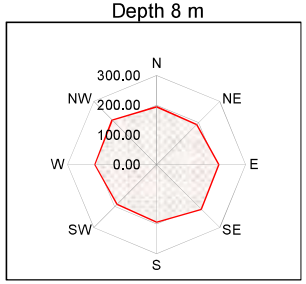
Depth 6 m



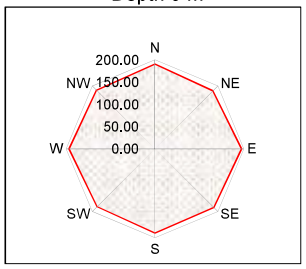
Depth 7 m



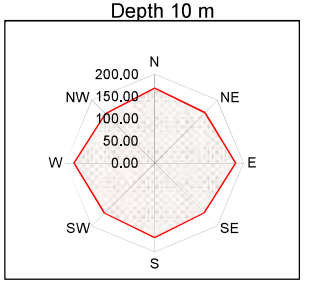
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	9177.13	20800.66	44718.85	74144.69	96741.51	96447.63	107273.68	114467.44	101004.08	78510.27
Radius of the circle having same area as polar diagram	54.05	81.37	119.31	153.63	175.48	175.21	184.79	190.88	179.31	158.08

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 16
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1441 , E 2902
Date : 18-02-2024

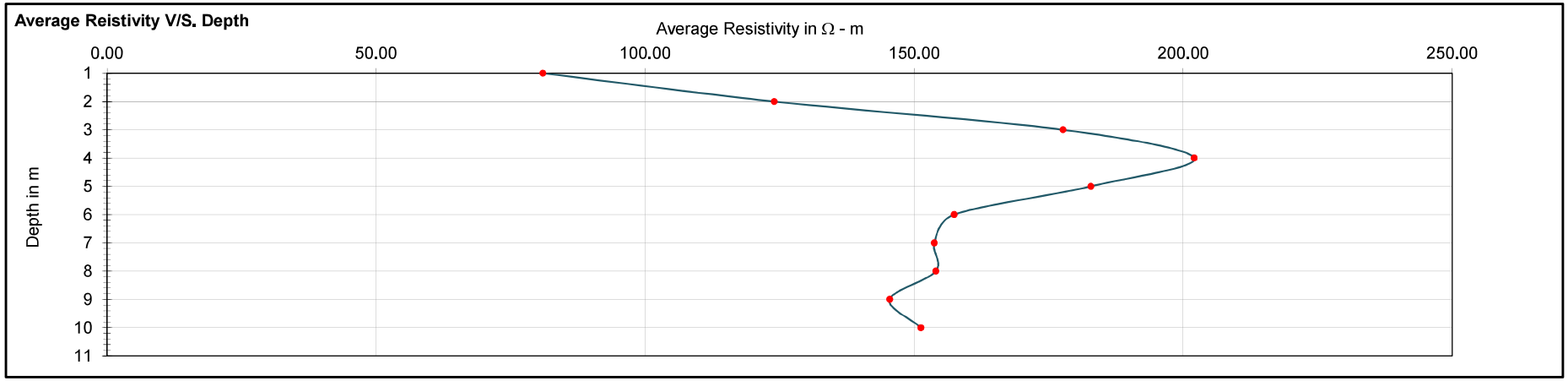
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	12.69	79.73	12.71	79.86	12.71	79.86	12.70	79.80	17.09	107.38	17.11	107.51	11.98	75.27	11.96	75.15	**81.00**
2	9.79	123.02	9.78	122.90	9.88	124.16	9.89	124.28	12.29	154.44	12.29	154.44	9.71	122.02	9.70	121.89	**124.00**
3	9.04	170.40	9.03	170.21	9.81	184.91	9.80	184.73	11.45	215.83	11.44	215.64	9.51	179.26	9.51	179.26	**177.67**
4	8.79	220.92	8.78	220.67	9.06	227.70	9.05	227.45	9.08	228.21	9.07	227.95	7.02	176.43	7.03	176.68	**202.06**
5	5.78	181.58	5.78	181.58	7.17	225.25	7.18	225.57	7.11	223.37	7.10	223.05	4.52	142.00	4.51	141.69	**182.85**
6	4.27	160.98	4.27	160.98	4.71	177.56	4.71	177.56	4.82	181.71	4.83	182.09	3.80	143.26	3.81	143.63	**157.44**
7	3.53	155.26	3.52	154.82	3.98	175.05	3.97	174.61	4.01	176.37	4.00	175.93	3.24	142.50	3.23	142.06	**153.75**
8	3.16	158.84	3.15	158.34	3.30	165.88	3.31	166.38	3.45	173.42	3.45	173.42	3.01	151.30	3.01	151.30	**154.04**
9	2.74	154.94	2.74	154.94	2.61	147.59	2.61	147.59	2.95	166.82	2.95	166.82	2.55	144.20	2.54	143.63	**145.45**
10	2.55	160.22	2.55	160.22	2.51	157.71	2.51	157.71	2.62	164.62	2.61	163.99	2.48	155.82	2.47	155.19	**151.27**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

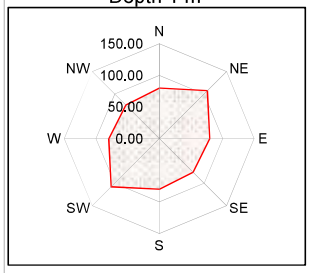
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

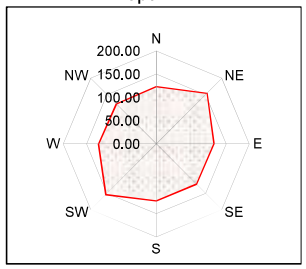
ERT No. : 16 Date : 18-02-2024 Test Location : N 1441 , E 2902

Name of Project : TELANGANA STPP ST-II

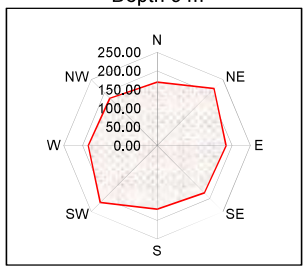
Depth 1 m



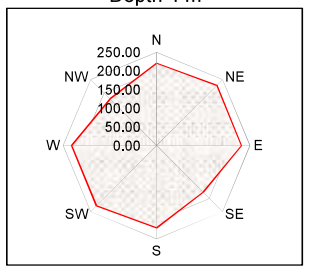
Depth 2 m



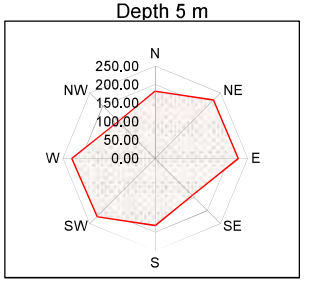
Depth 3 m



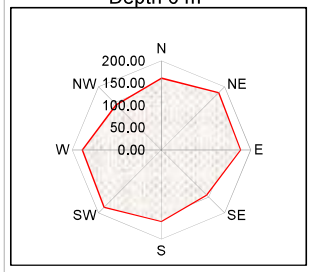
Depth 4 m



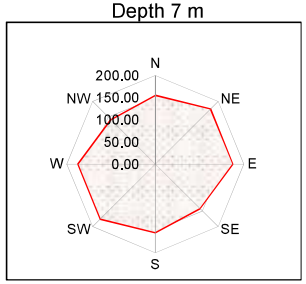
Depth 5 m



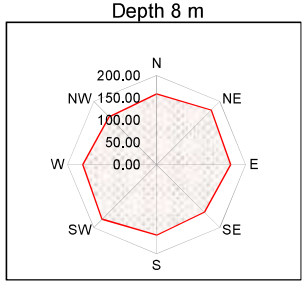
Depth 6 m



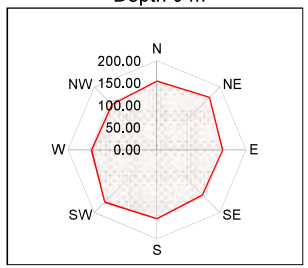
Depth 7 m



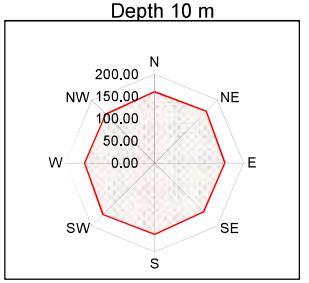
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	20613.11	48302.26	99172.28	128268.48	105041.90	77869.75	74263.51	74545.97	66463.87	71886.52
Radius of the circle having same area as polar diagram	81.00	124.00	177.67	202.06	182.85	157.44	153.75	154.04	145.45	151.27

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 17
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1407 , E 2861
Date : 18-02-2024

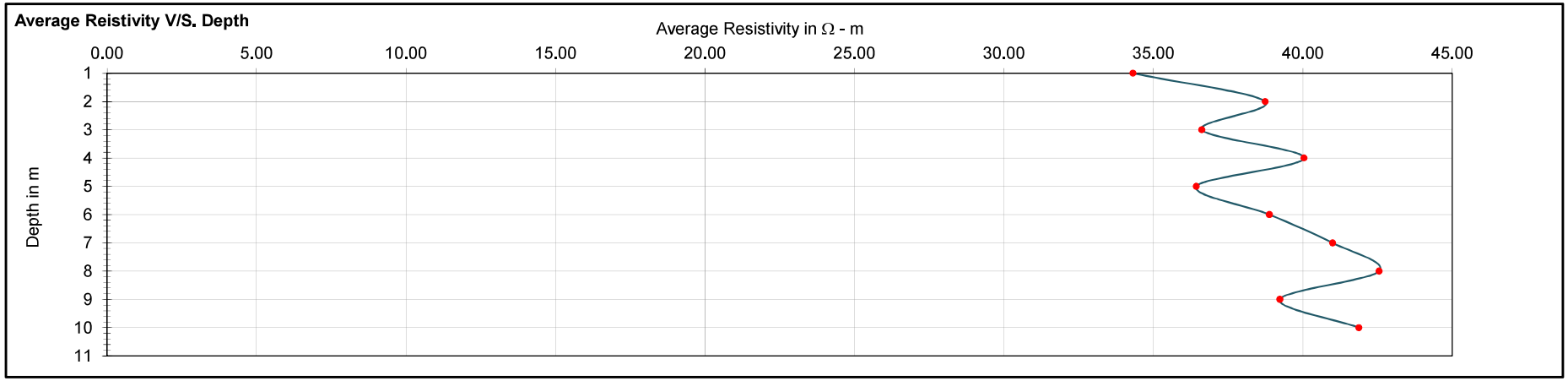
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	5.90	37.07	5.90	37.07	5.79	36.38	5.80	36.44	5.72	35.94	5.73	36.00	5.62	35.31	5.60	35.19	**34.32**
2	3.38	42.47	3.37	42.35	3.32	41.72	3.33	41.85	3.13	39.33	3.13	39.33	3.17	39.84	3.18	39.96	**38.75**
3	2.08	39.21	2.07	39.02	2.35	44.30	2.34	44.11	1.89	35.63	1.88	35.44	1.91	36.00	1.91	36.00	**36.62**
4	1.83	45.99	1.84	46.24	1.74	43.73	1.74	43.73	1.59	39.96	1.59	39.96	1.56	39.21	1.57	39.46	**40.04**
5	1.15	36.13	1.15	36.13	1.30	40.84	1.29	40.53	1.24	38.96	1.24	38.96	1.20	37.70	1.21	38.01	**36.44**
6	1.02	38.45	1.01	38.08	1.10	41.47	1.10	41.47	1.15	43.35	1.14	42.98	1.09	41.09	1.09	41.09	**38.88**
7	0.90	39.58	0.90	39.58	1.04	45.74	1.04	45.74	1.01	44.42	1.02	44.86	0.98	43.10	0.97	42.66	**41.00**
8	0.86	43.23	0.85	42.73	0.90	45.24	0.89	44.74	0.93	46.75	0.92	46.24	0.89	44.74	0.90	45.24	**42.56**
9	0.73	41.28	0.72	40.72	0.74	41.85	0.73	41.28	0.70	39.58	0.71	40.15	0.76	42.98	0.76	42.98	**39.23**
10	0.70	43.98	0.70	43.98	0.71	44.61	0.70	43.98	0.68	42.73	0.68	42.73	0.73	45.87	0.72	45.24	**41.88**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

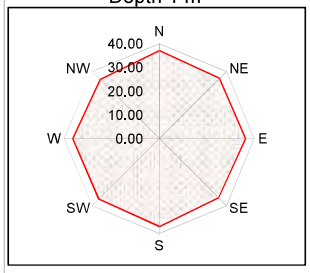
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

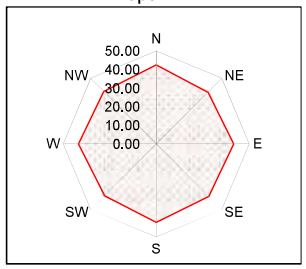
ERT No. : 17 Date : 18-02-2024 Test Location : N 1407 , E 2861

Name of Project : TELANGANA STPP ST-II

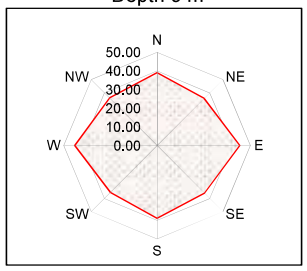
Depth 1 m



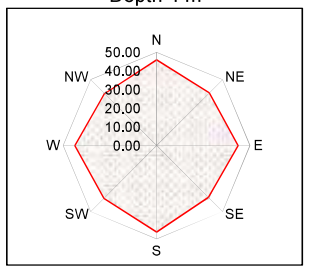
Depth 2 m



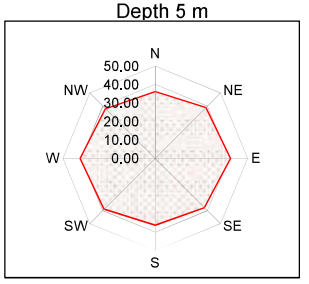
Depth 3 m



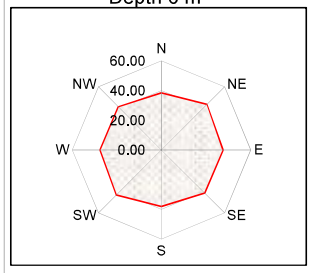
Depth 4 m



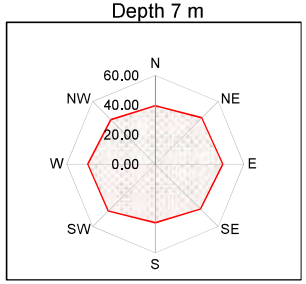
Depth 5 m



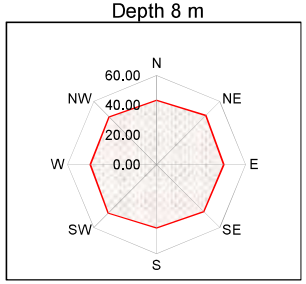
Depth 6 m



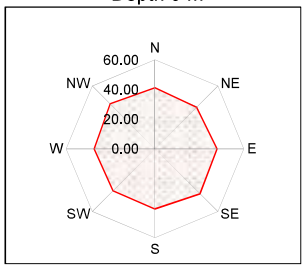
Depth 7 m



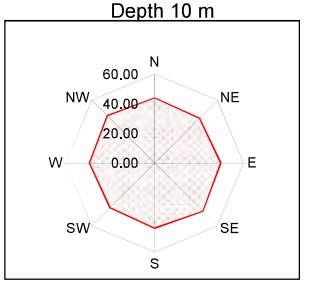
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	3699.99	4716.28	4213.64	5037.02	4171.34	4749.76	5279.95	5689.52	4835.53	5509.82
Radius of the circle having same area as polar diagram	34.32	38.75	36.62	40.04	36.44	38.88	41.00	42.56	39.23	41.88

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 18
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1346 , E 2848
Date : 17-02-2024

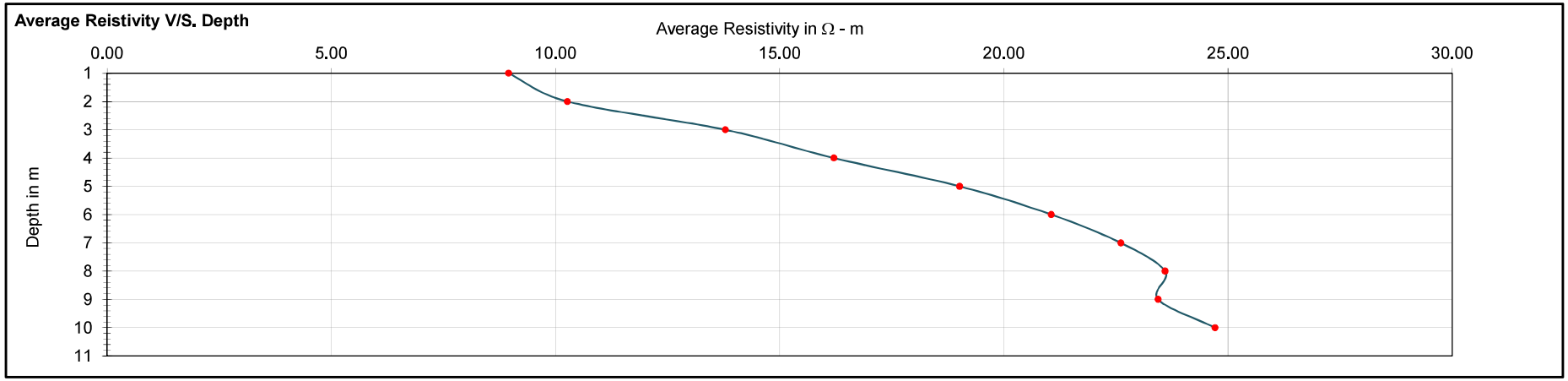
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	1.16	7.29	1.17	7.35	1.92	12.06	1.90	11.94	1.40	8.80	1.41	8.86	1.52	9.55	1.54	9.68	**8.95**
2	0.92	11.56	0.91	11.44	0.84	10.56	0.84	10.56	0.84	10.56	0.83	10.43	0.86	10.81	0.85	10.68	**10.27**
3	0.81	15.27	0.80	15.08	0.71	13.38	0.70	13.19	0.78	14.70	0.78	14.70	0.80	15.08	0.79	14.89	**13.79**
4	0.78	19.60	0.78	19.60	0.60	15.08	0.61	15.33	0.65	16.34	0.64	16.08	0.69	17.34	0.69	17.34	**16.21**
5	0.76	23.88	0.75	23.56	0.58	18.22	0.59	18.54	0.57	17.91	0.57	17.91	0.65	20.42	0.64	20.11	**19.02**
6	0.69	26.01	0.68	25.64	0.57	21.49	0.57	21.49	0.52	19.60	0.53	19.98	0.58	21.87	0.58	21.87	**21.06**
7	0.68	29.91	0.67	29.47	0.51	22.43	0.50	21.99	0.49	21.55	0.49	21.55	0.51	22.43	0.50	21.99	**22.61**
8	0.62	31.16	0.62	31.16	0.45	22.62	0.45	22.62	0.44	22.12	0.43	21.61	0.48	24.13	0.48	24.13	**23.59**
9	0.52	29.41	0.51	28.84	0.41	23.18	0.40	22.62	0.39	22.05	0.38	21.49	0.45	25.45	0.44	24.88	**23.44**
10	0.48	30.16	0.48	30.16	0.39	24.50	0.39	24.50	0.37	23.25	0.36	22.62	0.43	27.02	0.42	26.39	**24.71**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

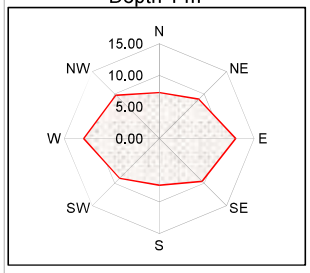
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

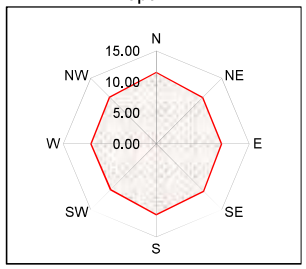
ERT No. : 18 Date : 17-02-2024 Test Location : N 1346 , E 2848

Name of Project : TELANGANA STPP ST-II

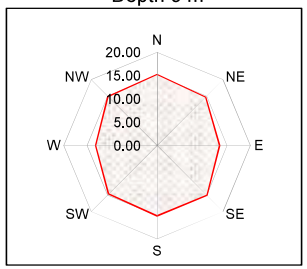
Depth 1 m



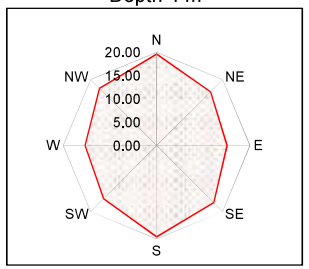
Depth 2 m



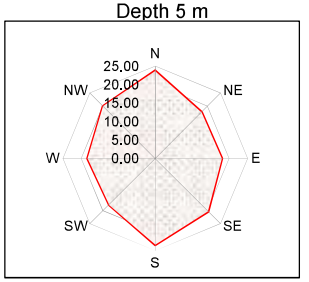
Depth 3 m



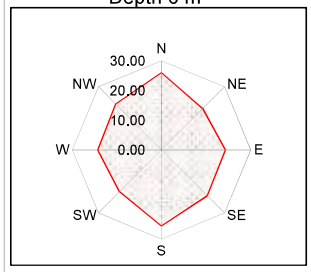
Depth 4 m



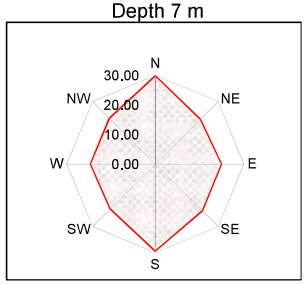
Depth 5 m



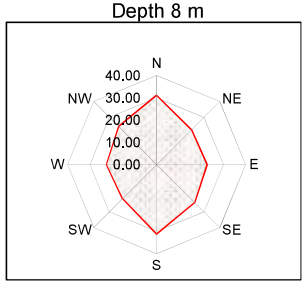
Depth 6 m



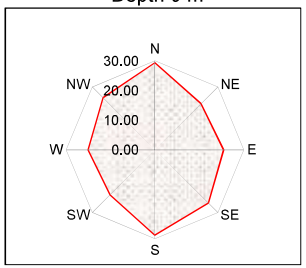
Depth 7 m



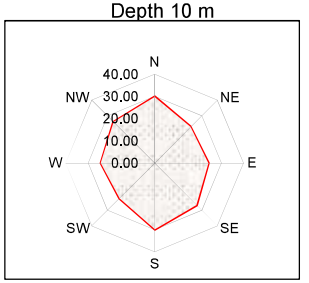
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	251.90	331.13	597.42	825.70	1136.02	1393.41	1605.76	1748.90	1726.47	1918.34
Radius of the circle having same area as polar diagram	8.95	10.27	13.79	16.21	19.02	21.06	22.61	23.59	23.44	24.71

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 19
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1344 , E 2908
Date : 15-02-2024

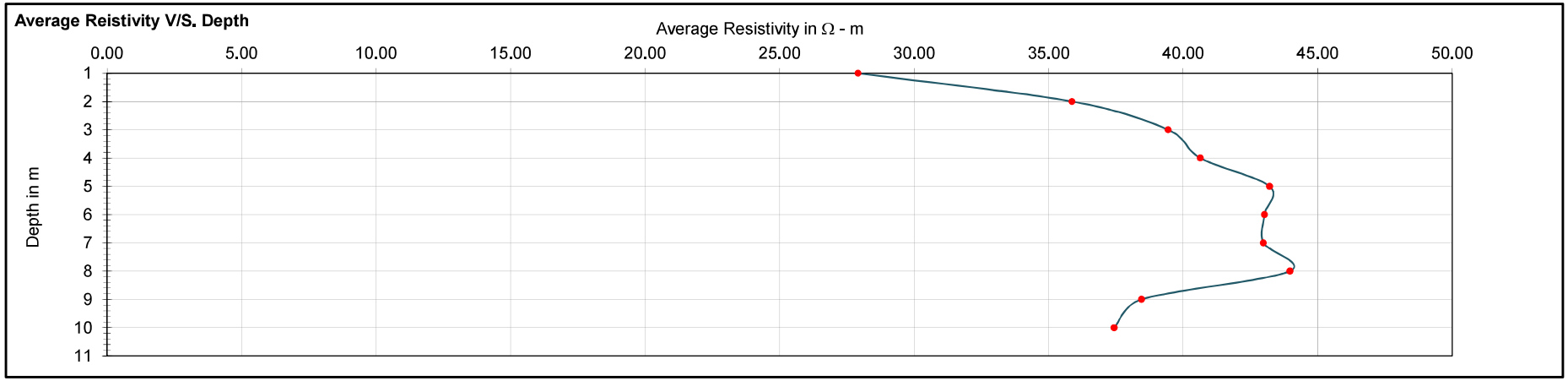
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	6.73	42.29	6.71	42.16	3.82	24.00	3.81	23.94	4.35	27.33	4.36	27.39	3.98	25.01	3.96	24.88	**27.91**
2	3.60	45.24	3.61	45.36	2.78	34.93	2.78	34.93	2.87	36.07	2.88	36.19	2.80	35.19	2.79	35.06	**35.87**
3	2.65	49.95	2.64	49.76	2.26	42.60	2.25	42.41	2.00	37.70	2.01	37.89	1.97	37.13	1.96	36.95	**39.44**
4	1.92	48.25	1.92	48.25	1.87	47.00	1.87	47.00	1.54	38.70	1.54	38.70	1.52	38.20	1.53	38.45	**40.64**
5	1.62	50.89	1.61	50.58	1.55	48.69	1.54	48.38	1.32	41.47	1.31	41.15	1.35	42.41	1.34	42.10	**43.21**
6	1.24	46.75	1.25	47.12	1.31	49.39	1.31	49.39	1.15	43.35	1.14	42.98	1.12	42.22	1.12	42.22	**43.02**
7	1.00	43.98	0.99	43.54	1.05	46.18	1.04	45.74	1.07	47.06	1.06	46.62	1.01	44.42	1.02	44.86	**42.98**
8	0.95	47.75	0.94	47.25	0.97	48.76	0.96	48.25	0.90	45.24	0.91	45.74	0.88	44.23	0.87	43.73	**43.97**
9	0.82	46.37	0.81	45.80	0.79	44.67	0.79	44.67	0.65	36.76	0.65	36.76	0.63	35.63	0.63	35.63	**38.45**
10	0.70	43.98	0.69	43.35	0.62	38.96	0.63	39.58	0.61	38.33	0.60	37.70	0.59	37.07	0.59	37.07	**37.44**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

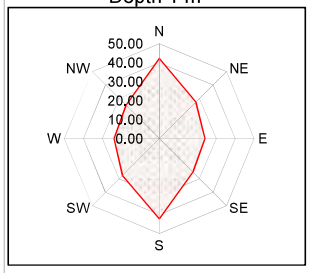
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

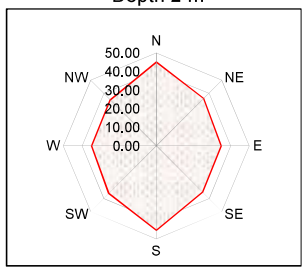
ERT No. : 19 Date : 15-02-2024 Test Location : N 1344 , E 2908

Name of Project : TELANGANA STPP ST-II

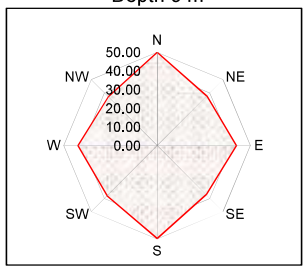
Depth 1 m



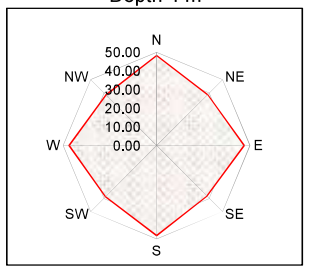
Depth 2 m



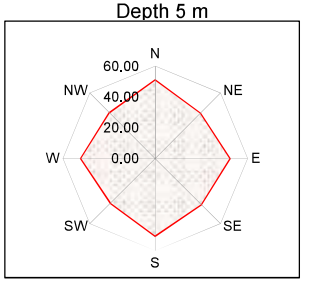
Depth 3 m



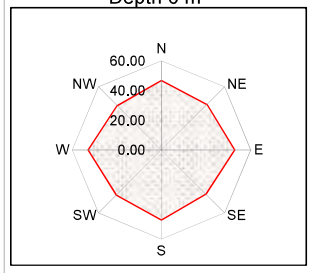
Depth 4 m



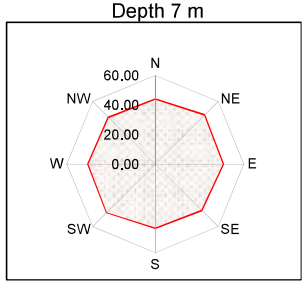
Depth 5 m



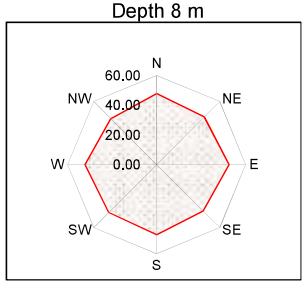
Depth 6 m



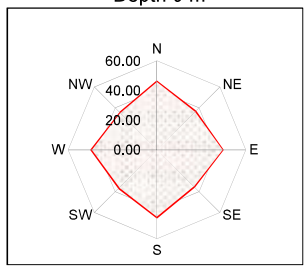
Depth 7 m



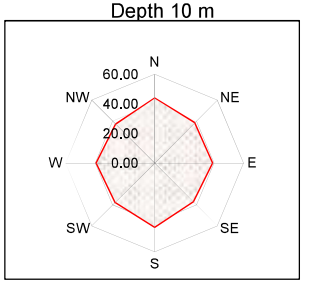
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	2447.92	4041.88	4886.60	5187.63	5865.30	5814.85	5803.28	6073.04	4644.61	4402.72
Radius of the circle having same area as polar diagram	27.91	35.87	39.44	40.64	43.21	43.02	42.98	43.97	38.45	37.44

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

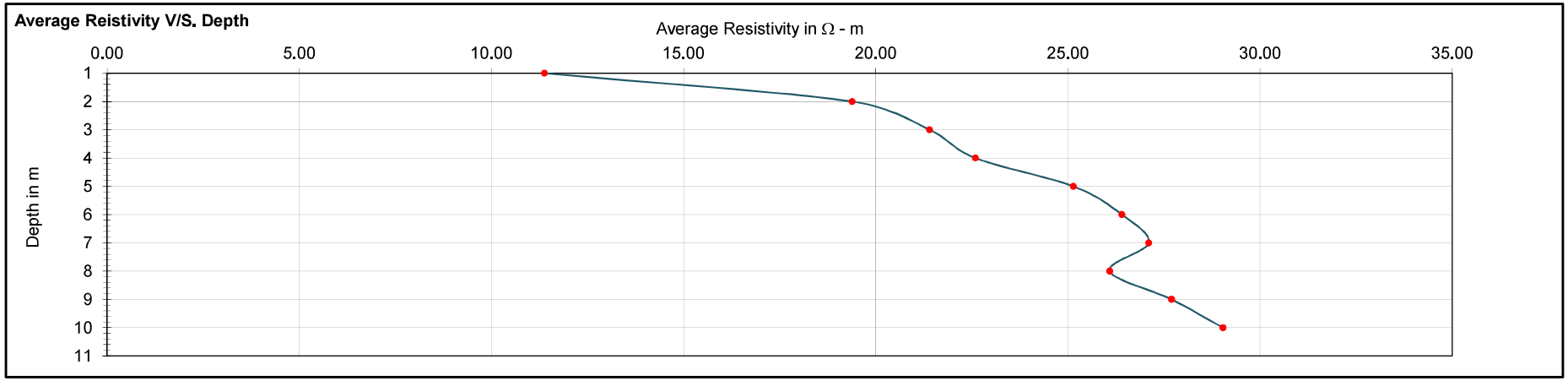
ERT No. : 20
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1283 , E 2834
Date : 11-02-2024

Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where
ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	2.27	14.26	2.28	14.33	1.68	10.56	1.66	10.43	1.96	12.32	1.98	12.44	1.72	10.81	1.73	10.87	**11.38**
2	2.11	26.52	2.12	26.64	1.28	16.08	1.27	15.96	1.55	19.48	1.56	19.60	1.56	19.60	1.57	19.73	**19.39**
3	1.49	28.09	1.50	28.27	1.05	19.79	1.05	19.79	1.32	24.88	1.31	24.69	0.94	17.72	0.93	17.53	**21.40**
4	1.25	31.42	1.26	31.67	0.96	24.13	0.95	23.88	1.02	25.64	1.01	25.38	0.61	15.33	0.61	15.33	**22.59**
5	1.15	36.13	1.15	36.13	0.84	26.39	0.84	26.39	0.91	28.59	0.92	28.90	0.52	16.34	0.51	16.02	**25.14**
6	1.00	37.70	1.01	38.08	0.72	27.14	0.73	27.52	0.79	29.78	0.80	30.16	0.47	17.72	0.46	17.34	**26.40**
7	0.89	39.14	0.90	39.58	0.61	26.83	0.60	26.39	0.71	31.23	0.71	31.23	0.41	18.03	0.42	18.47	**27.10**
8	0.77	38.70	0.77	38.70	0.49	24.63	0.49	24.63	0.58	29.15	0.57	28.65	0.37	18.60	0.38	19.10	**26.09**
9	0.72	40.72	0.71	40.15	0.45	25.45	0.45	25.45	0.55	31.10	0.55	31.10	0.36	20.36	0.37	20.92	**27.70**
10	0.68	42.73	0.67	42.10	0.44	27.65	0.43	27.02	0.52	32.67	0.51	32.04	0.34	21.36	0.34	21.36	**29.04**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



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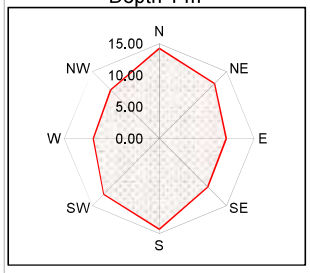
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

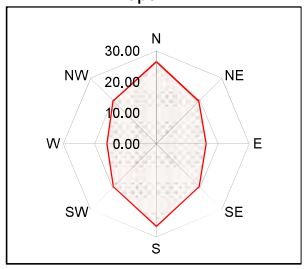
ERT No. : 20 Date : 11-02-2024 Test Location : N 1283 , E 2834

Name of Project : TELANGANA STPP ST-II

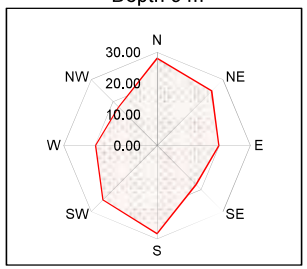
Depth 1 m



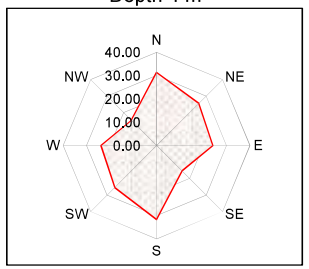
Depth 2 m



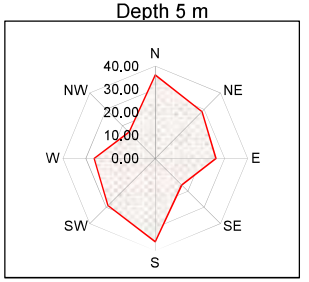
Depth 3 m



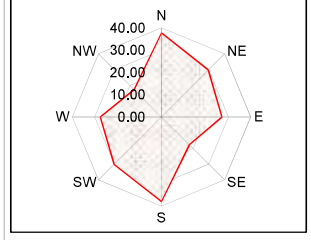
Depth 4 m



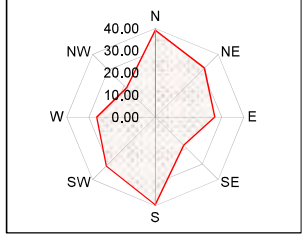
Depth 5 m



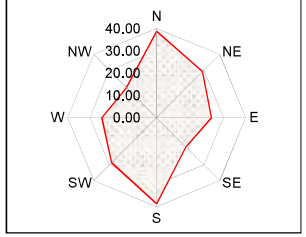
Depth 6 m



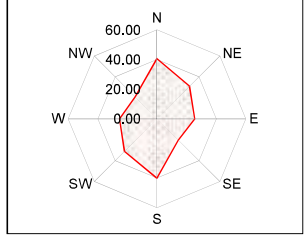
Depth 7 m



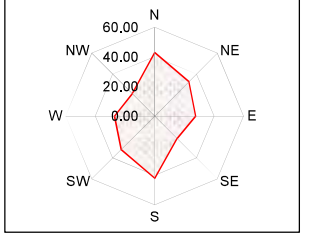
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	406.85	1180.84	1438.44	1603.78	1985.68	2190.32	2307.84	2138.22	2410.02	2649.06
Radius of the circle having same area as polar diagram	11.38	19.39	21.40	22.59	25.14	26.40	27.10	26.09	27.70	29.04

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 21
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1277 , E 2902
Date : 11-02-2024

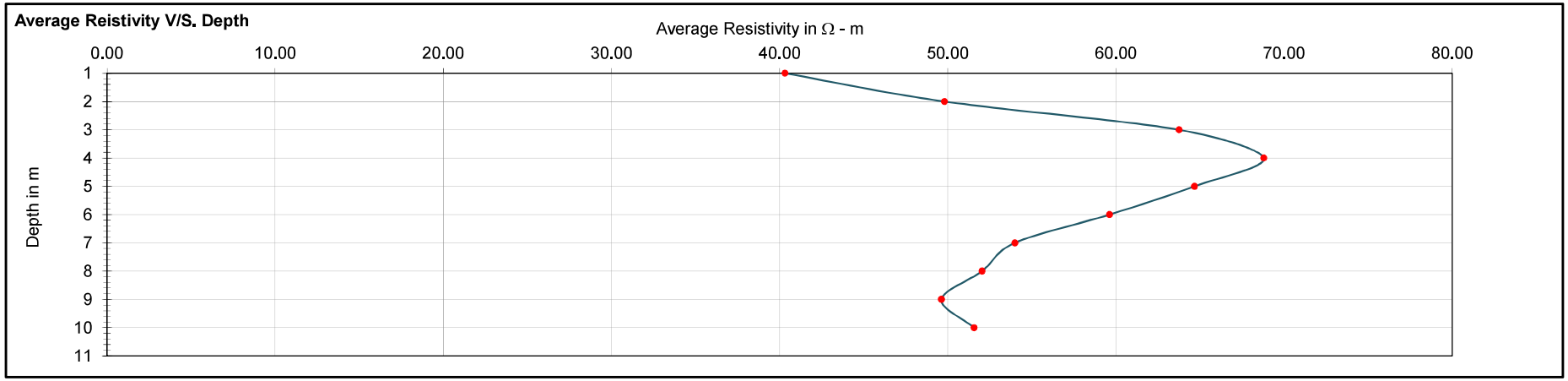
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	6.86	43.10	6.88	43.23	6.64	41.72	6.65	41.78	6.71	42.16	6.73	42.29	6.80	42.73	6.83	42.91	**40.31**
2	3.68	46.24	3.67	46.12	4.70	59.06	4.71	59.19	3.60	45.24	3.59	45.11	4.73	59.44	4.74	59.56	**49.81**
3	3.22	60.70	3.21	60.51	3.96	74.64	3.97	74.83	3.15	59.38	3.14	59.19	3.93	74.08	3.94	74.27	**63.76**
4	2.74	68.86	2.74	68.86	3.08	77.41	3.08	77.41	2.71	68.11	2.70	67.86	3.02	75.90	3.01	75.65	**68.79**
5	2.31	72.57	2.32	72.88	2.07	65.03	2.06	64.72	2.29	71.94	2.30	72.26	2.01	63.15	2.00	62.83	**64.68**
6	1.88	70.87	1.89	71.25	1.54	58.06	1.54	58.06	1.75	65.97	1.76	66.35	1.49	56.17	1.49	56.17	**59.62**
7	1.45	63.77	1.45	63.77	1.15	50.58	1.14	50.14	1.43	62.89	1.42	62.45	1.16	51.02	1.15	50.58	**53.99**
8	1.23	61.83	1.22	61.32	0.95	47.75	0.95	47.75	1.22	61.32	1.21	60.82	0.97	48.76	0.98	49.26	**52.04**
9	1.09	61.64	1.10	62.20	0.78	44.11	0.79	44.67	1.08	61.07	1.08	61.07	0.74	41.85	0.74	41.85	**49.62**
10	0.99	62.20	1.00	62.83	0.74	46.50	0.74	46.50	1.01	63.46	1.01	63.46	0.71	44.61	0.72	45.24	**51.57**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

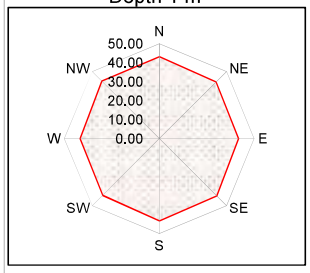
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

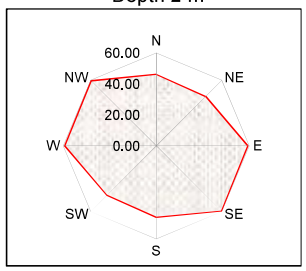
ERT No. : 21 Date : 11-02-2024 Test Location : N 1277 , E 2902

Name of Project : TELANGANA STPP ST-II

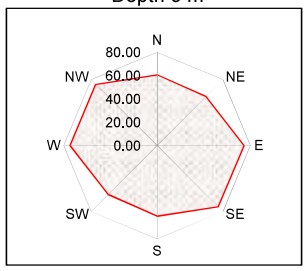
Depth 1 m



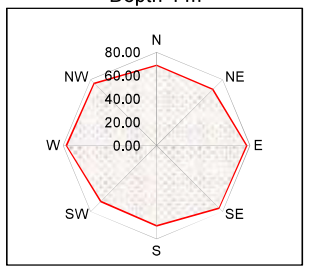
Depth 2 m



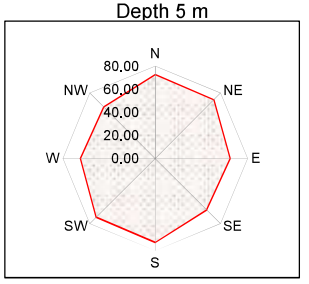
Depth 3 m



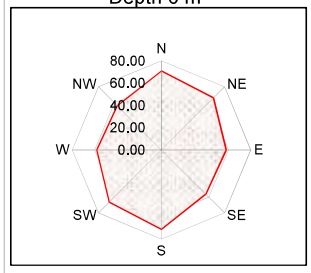
Depth 4 m



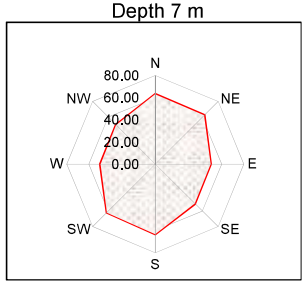
Depth 5 m



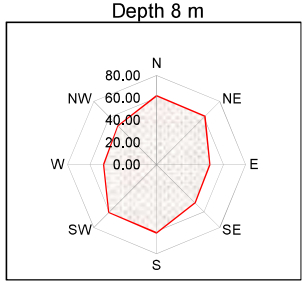
Depth 6 m



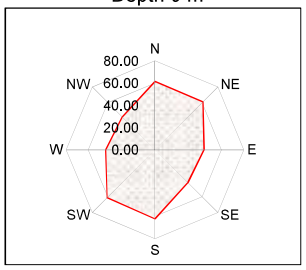
Depth 7 m



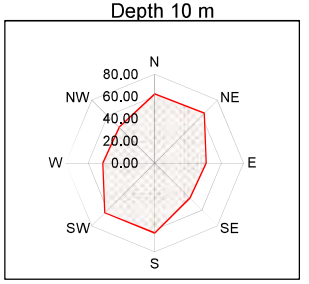
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	5105.68	7793.43	12769.67	14866.82	13142.04	11167.55	9156.63	8508.78	7735.59	8353.42
Radius of the circle having same area as polar diagram	40.31	49.81	63.76	68.79	64.68	59.62	53.99	52.04	49.62	51.57

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 22
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1244 , E 2781
Date : 15-02-2024

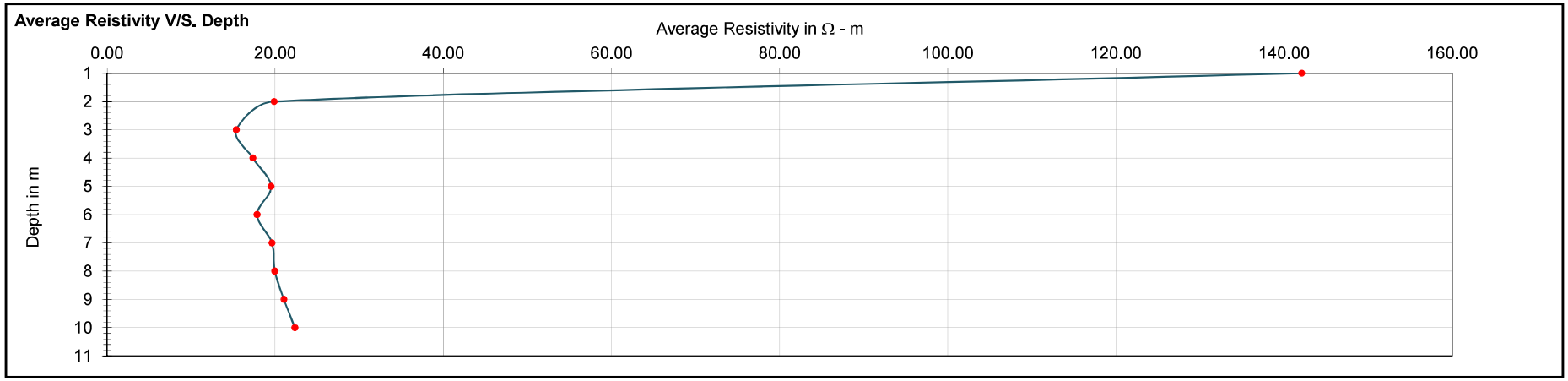
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	30.98	194.65	30.91	194.21	21.25	133.52	21.24	133.45	21.71	136.41	21.59	135.65	21.91	137.66	21.90	137.60	**142.11**
2	3.12	39.21	3.11	39.08	1.35	16.96	1.35	16.96	1.24	15.58	1.23	15.46	1.25	15.71	1.26	15.83	**19.88**
3	0.95	17.91	0.94	17.72	0.71	13.38	0.70	13.19	0.89	16.78	0.88	16.59	0.90	16.96	0.91	17.15	**15.37**
4	0.73	18.35	0.72	18.10	0.70	17.59	0.69	17.34	0.78	19.60	0.77	19.35	0.72	18.10	0.71	17.84	**17.34**
5	0.61	19.16	0.60	18.85	0.59	18.54	0.58	18.22	0.75	23.56	0.74	23.25	0.70	21.99	0.69	21.68	**19.51**
6	0.50	18.85	0.50	18.85	0.51	19.23	0.51	19.23	0.49	18.47	0.48	18.10	0.50	18.85	0.50	18.85	**17.84**
7	0.46	20.23	0.46	20.23	0.49	21.55	0.48	21.11	0.46	20.23	0.46	20.23	0.48	21.11	0.47	20.67	**19.61**
8	0.45	22.62	0.44	22.12	0.42	21.11	0.41	20.61	0.41	20.61	0.42	21.11	0.40	20.11	0.40	20.11	**19.96**
9	0.41	23.18	0.41	23.18	0.41	23.18	0.41	23.18	0.39	22.05	0.38	21.49	0.37	20.92	0.36	20.36	**21.04**
10	0.38	23.88	0.37	23.25	0.39	24.50	0.40	25.13	0.37	23.25	0.37	23.25	0.36	22.62	0.36	22.62	**22.35**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

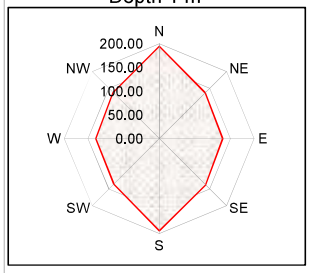
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

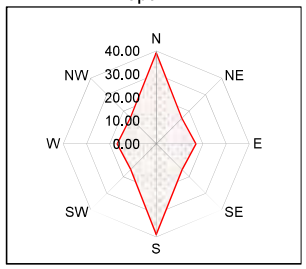
ERT No. : 22 Date : 15-02-2024 Test Location : N 1244 , E 2781

Name of Project : TELANGANA STPP ST-II

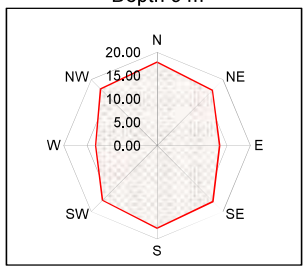
Depth 1 m



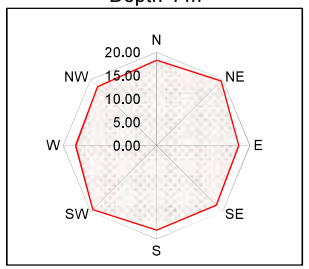
Depth 2 m



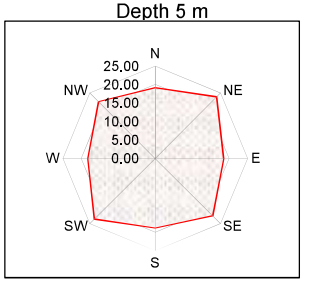
Depth 3 m



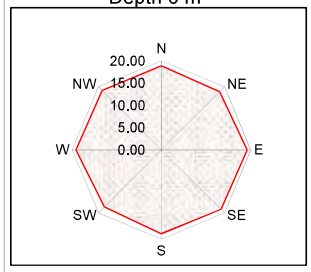
Depth 4 m



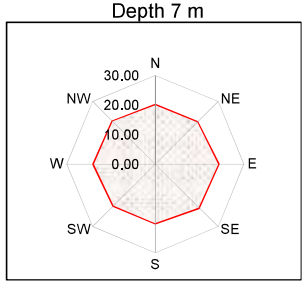
Depth 5 m



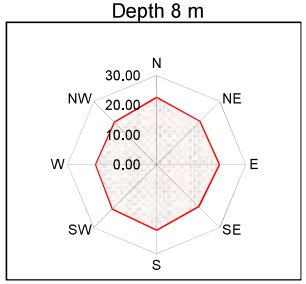
Depth 6 m



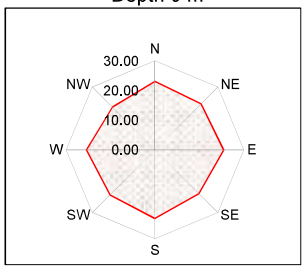
Depth 7 m



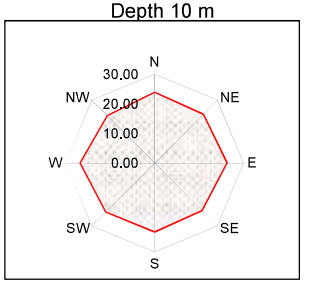
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	63446.09	1241.26	741.94	944.90	1195.75	999.63	1208.46	1251.94	1390.40	1568.89
Radius of the circle having same area as polar diagram	142.11	19.88	15.37	17.34	19.51	17.84	19.61	19.96	21.04	22.35

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 23
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1203 , E 2865
Date : 15-02-2024

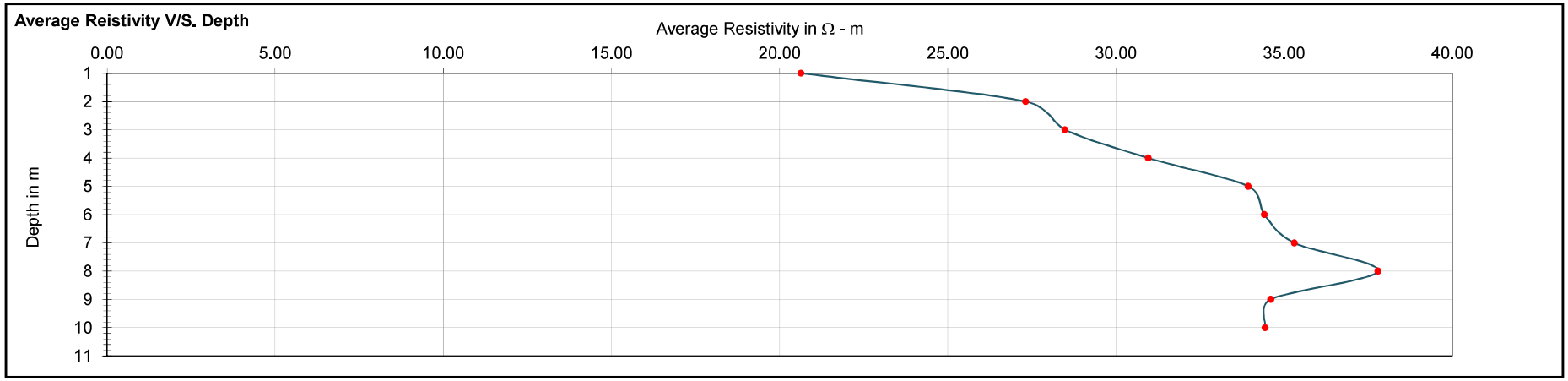
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	4.12	25.89	4.14	26.01	2.74	17.22	2.72	17.09	3.16	19.85	3.18	19.98	3.82	24.00	3.81	23.94	**20.63**
2	2.68	33.68	2.68	33.68	1.98	24.88	1.97	24.76	2.11	26.52	2.10	26.39	2.01	25.26	2.80	35.19	**27.31**
3	2.02	38.08	2.01	37.89	1.52	28.65	1.52	28.65	1.50	28.27	1.49	28.09	1.38	26.01	1.37	25.82	**28.48**
4	1.42	35.69	1.41	35.44	1.35	33.93	1.36	34.18	1.20	30.16	1.20	30.16	1.23	30.91	1.24	31.16	**30.96**
5	1.20	37.70	1.19	37.38	1.21	38.01	1.20	37.70	1.07	33.62	1.06	33.30	1.10	34.56	1.09	34.24	**33.93**
6	1.01	38.08	1.00	37.70	0.98	36.95	0.97	36.57	0.95	35.81	0.95	35.81	0.92	34.68	0.92	34.68	**34.41**
7	0.84	36.95	0.83	36.51	0.82	36.07	0.82	36.07	0.89	39.14	0.89	39.14	0.84	36.95	0.84	36.95	**35.30**
8	0.76	38.20	0.76	38.20	0.80	40.21	0.80	40.21	0.82	41.22	0.81	40.72	0.80	40.21	0.79	39.71	**37.79**
9	0.68	38.45	0.67	37.89	0.64	36.19	0.63	35.63	0.66	37.32	0.65	36.76	0.62	35.06	0.61	34.49	**34.60**
10	0.62	38.96	0.62	38.96	0.61	38.33	0.61	38.33	0.60	37.70	0.59	37.07	0.49	30.79	0.49	30.79	**34.43**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

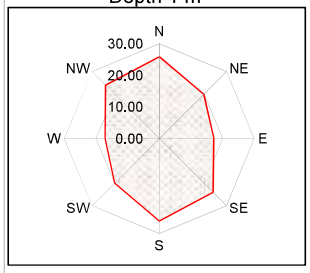
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

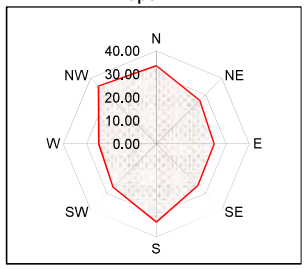
ERT No. : 23 Date : 15-02-2024 Test Location : N 1203 , E 2865

Name of Project : TELANGANA STPP ST-II

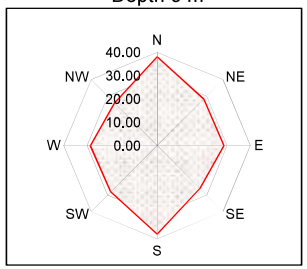
Depth 1 m



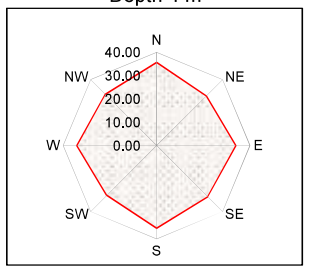
Depth 2 m



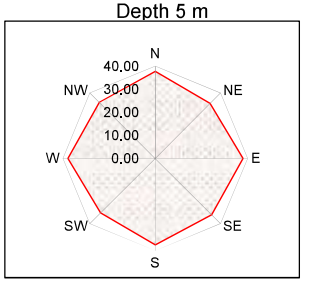
Depth 3 m



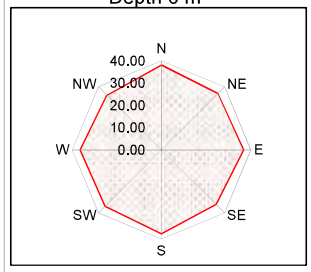
Depth 4 m



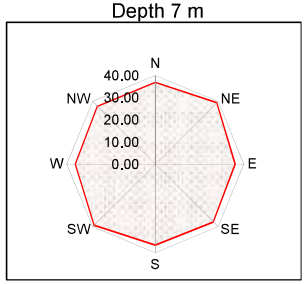
Depth 5 m



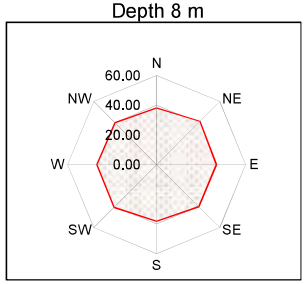
Depth 6 m



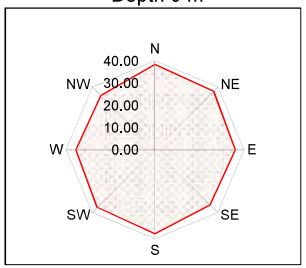
Depth 7 m



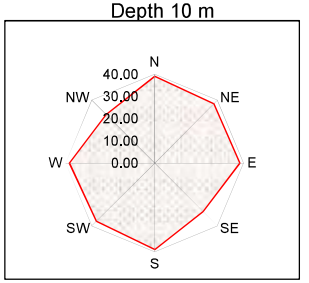
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	1337.43	2343.66	2548.55	3012.18	3617.33	3720.39	3915.79	4486.52	3761.42	3724.89
Radius of the circle having same area as polar diagram	20.63	27.31	28.48	30.96	33.93	34.41	35.30	37.79	34.60	34.43

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 24
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1189 , E 2916
Date : 16-02-2024

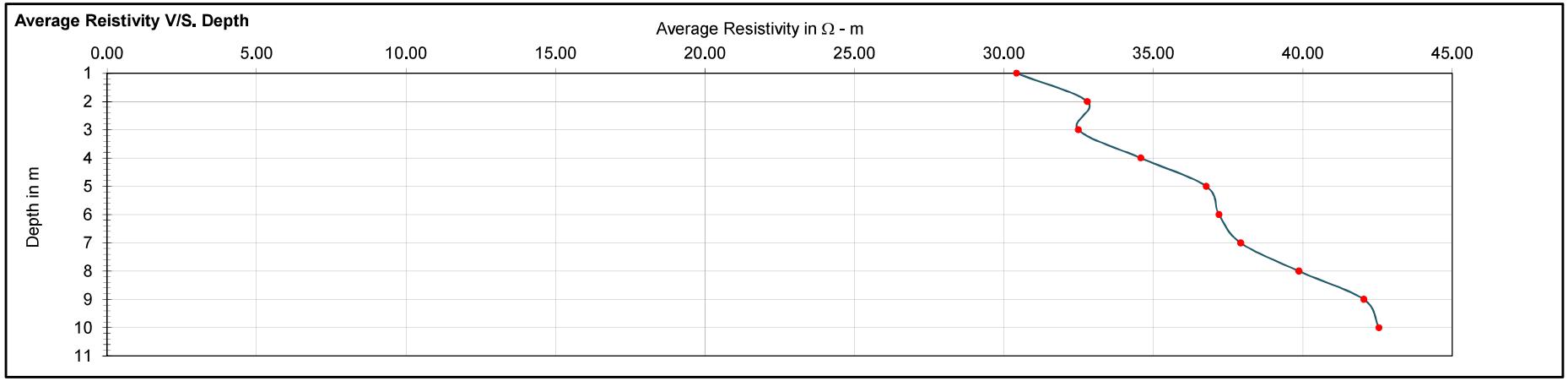
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	4.88	30.66	4.88	30.66	5.19	32.61	5.20	32.67	5.34	33.55	5.34	33.55	4.99	31.35	5.01	31.48	**30.42**
2	2.77	34.81	2.77	34.81	2.60	32.67	2.59	32.55	2.84	35.69	2.83	35.56	2.81	35.31	2.80	35.19	**32.79**
3	1.84	34.68	1.84	34.68	1.69	31.86	1.69	31.86	2.05	38.64	2.04	38.45	1.69	31.86	1.70	32.04	**32.49**
4	1.41	35.44	1.41	35.44	1.38	34.68	1.39	34.93	1.58	39.71	1.58	39.71	1.43	35.94	1.43	35.94	**34.58**
5	1.19	37.38	1.20	37.70	1.25	39.27	1.25	39.27	1.24	38.96	1.25	39.27	1.25	39.27	1.24	38.96	**36.77**
6	0.99	37.32	0.99	37.32	1.12	42.22	1.11	41.85	1.08	40.72	1.08	40.72	0.97	36.57	0.98	36.95	**37.20**
7	0.85	37.38	0.85	37.38	0.98	43.10	0.97	42.66	0.99	43.54	0.98	43.10	0.82	36.07	0.83	36.51	**37.92**
8	0.76	38.20	0.76	38.20	0.96	48.25	0.95	47.75	0.92	46.24	0.91	45.74	0.72	36.19	0.71	35.69	**39.87**
9	0.70	39.58	0.69	39.02	0.90	50.89	0.90	50.89	0.87	49.20	0.86	48.63	0.68	38.45	0.67	37.89	**42.04**
10	0.64	40.21	0.63	39.58	0.80	50.27	0.79	49.64	0.81	50.89	0.82	51.52	0.61	38.33	0.61	38.33	**42.55**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

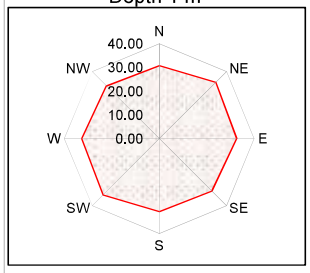
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

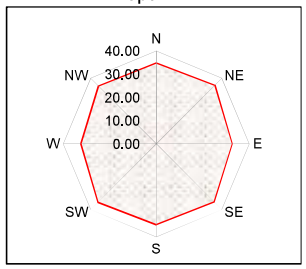
ERT No. : 24 Date : 16-02-2024 Test Location : N 1189 , E 2916

Name of Project : TELANGANA STPP ST-II

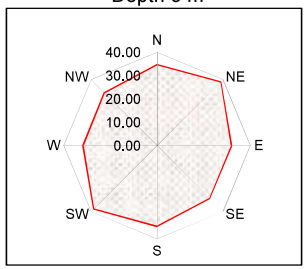
Depth 1 m



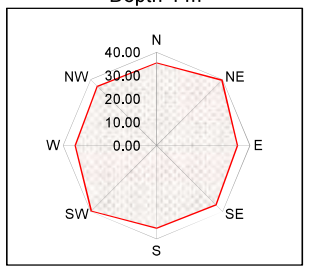
Depth 2 m



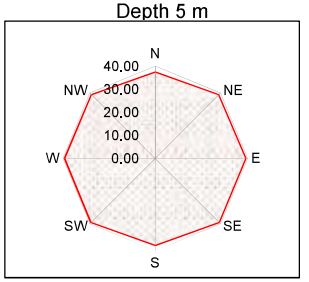
Depth 3 m



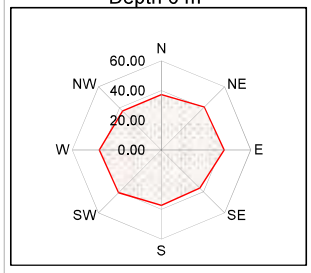
Depth 4 m



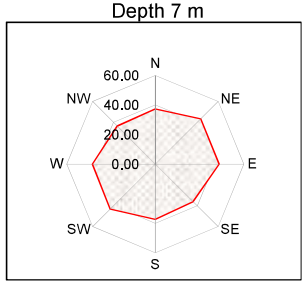
Depth 5 m



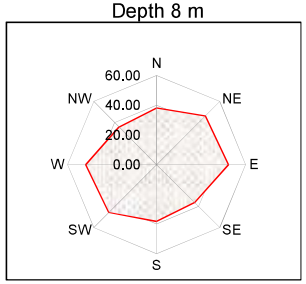
Depth 6 m



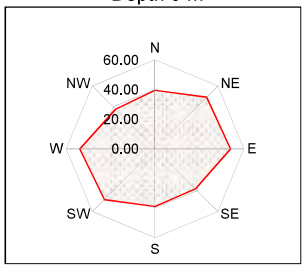
Depth 7 m



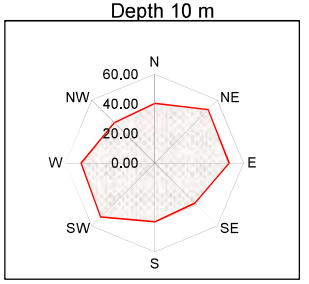
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	2907.67	3378.23	3316.41	3757.05	4248.16	4346.53	4517.69	4993.66	5553.23	5687.47
Radius of the circle having same area as polar diagram	30.42	32.79	32.49	34.58	36.77	37.20	37.92	39.87	42.04	42.55

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 26
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1562 , E 2772
Date : 31-03-2024

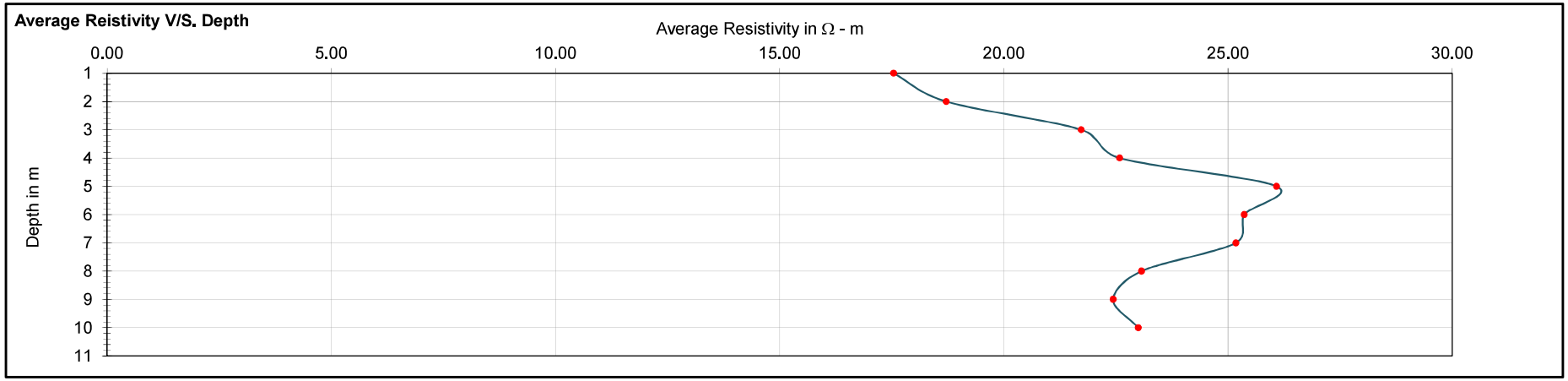
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	2.84	17.84	2.86	17.97	3.05	19.16	3.03	19.04	2.98	18.72	2.96	18.60	2.90	18.22	2.92	18.35	**17.54**
2	1.59	19.98	1.58	19.85	1.61	20.23	1.60	20.11	1.57	19.73	1.56	19.60	1.52	19.10	1.53	19.23	**18.72**
3	1.27	23.94	1.26	23.75	1.21	22.81	1.20	22.62	1.23	23.18	1.22	23.00	1.17	22.05	1.16	21.87	**21.73**
4	1.04	26.14	1.03	25.89	0.98	24.63	0.97	24.38	0.91	22.87	0.90	22.62	0.89	22.37	0.87	21.87	**22.58**
5	0.95	29.85	0.94	29.53	0.90	28.27	0.90	28.27	0.88	27.65	0.87	27.33	0.79	24.82	0.78	24.50	**26.08**
6	0.79	29.78	0.79	29.78	0.75	28.27	0.74	27.90	0.69	26.01	0.68	25.64	0.63	23.75	0.62	23.37	**25.36**
7	0.68	29.91	0.67	29.47	0.63	27.71	0.62	27.27	0.61	26.83	0.61	26.83	0.51	22.43	0.51	22.43	**25.18**
8	0.53	26.64	0.52	26.14	0.52	26.14	0.51	25.64	0.48	24.13	0.47	23.62	0.43	21.61	0.42	21.11	**23.07**
9	0.46	26.01	0.45	25.45	0.43	24.32	0.42	23.75	0.42	23.75	0.41	23.18	0.38	21.49	0.38	21.49	**22.44**
10	0.41	25.76	0.40	25.13	0.41	25.76	0.40	25.13	0.39	24.50	0.38	23.88	0.36	22.62	0.34	21.36	**23.00**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

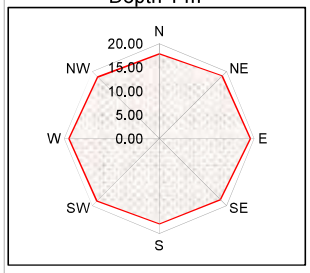
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

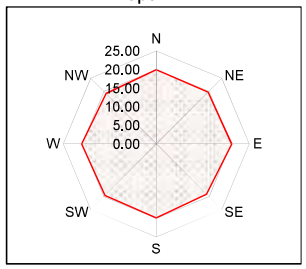
ERT No. : 26 Date : 31-03-2024 Test Location : N 1562 , E 2772

Name of Project : TELANGANA STPP ST-II

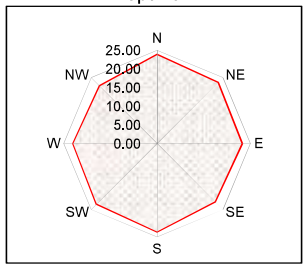
Depth 1 m



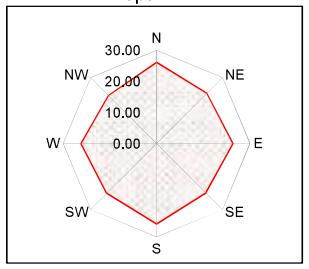
Depth 2 m



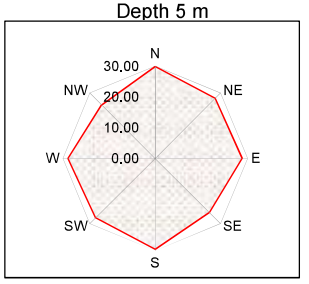
Depth 3 m



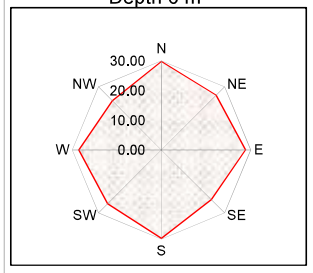
Depth 4 m



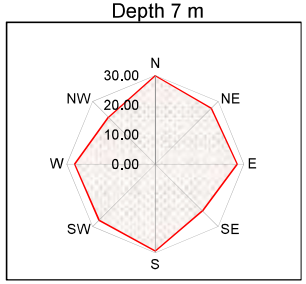
Depth 5 m



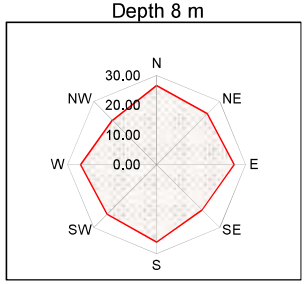
Depth 6 m



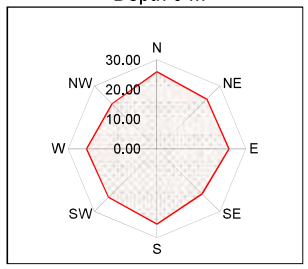
Depth 7 m



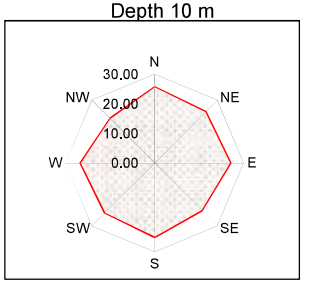
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	966.65	1100.50	1482.93	1602.28	2137.09	2020.56	1991.30	1672.08	1581.78	1661.84
Radius of the circle having same area as polar diagram	17.54	18.72	21.73	22.58	26.08	25.36	25.18	23.07	22.44	23.00

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).

KCT Consultancy Services, Ahmedabad

RESULTS OF ELECTRICAL RESISTIVITY TEST

(IS : 3043, 1987)

ERT No. : 27
Name of Project : TELANGANA STPP ST-II
Co-Ordinates : N 1451 , E 2741
Date : 26-03-2024

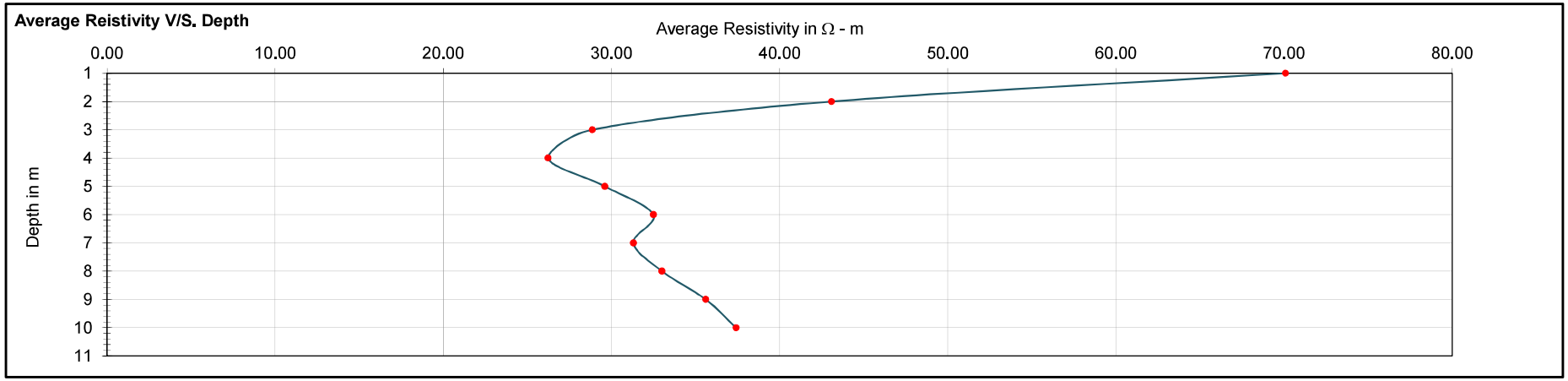
Battery Condition : Good
Climatic Condition : hot and Dry

Resistivity at given depth $\rho = 2 \pi S R$
Where

ρ = Resistivity in ohm - m (Ω m)
π = Value of pi - 22 / 7
S = Electrode Spacing (equal to the depth at which resistivity is determined) in m
R = V / / in ohm (Ω)
V = Voltage Drop between inner electrodes in Volt
/ = Current applied in outer electrodes in Amp.

Spacing of Electrode in (m)	Direction																Average Resistivity (Ω - m)
	N - S				E - W				N E - S W				S E - N W				
	Direct		Reverse		Direct		Reverse		Direct		Reverse		Direct		Reverse		
	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	Resistence Observed in Ω	Resistivity ρ in Ω m	
1	10.28	64.59	10.20	64.09	14.50	91.11	14.60	91.73	10.32	64.84	10.34	64.97	11.98	75.27	11.96	75.15	**70.08**
2	3.57	44.86	3.55	44.61	3.66	45.99	3.65	45.87	3.55	44.61	3.54	44.48	3.69	46.37	3.70	46.50	**43.09**
3	1.66	31.29	1.65	31.10	1.60	30.16	1.59	29.97	1.60	30.16	1.60	30.16	1.61	30.35	1.60	30.16	**28.86**
4	0.91	22.87	0.90	22.62	1.55	38.96	1.54	38.70	0.97	24.38	0.98	24.63	0.99	24.88	1.01	25.38	**26.23**
5	0.84	26.39	0.83	26.08	1.42	44.61	1.42	44.61	0.85	26.70	0.84	26.39	0.91	28.59	0.90	28.27	**29.61**
6	0.72	27.14	0.72	27.14	1.31	49.39	1.30	49.01	0.82	30.91	0.81	30.54	0.82	30.91	0.81	30.54	**32.49**
7	0.63	27.71	0.61	26.83	1.13	49.70	1.12	49.26	0.60	26.39	0.59	25.95	0.70	30.79	0.69	30.35	**31.30**
8	0.61	30.66	0.60	30.16	0.97	48.76	0.96	48.25	0.58	29.15	0.57	28.65	0.65	32.67	0.64	32.17	**33.00**
9	0.60	33.93	0.59	33.36	0.95	53.72	0.95	53.72	0.53	29.97	0.52	29.41	0.61	34.49	0.62	35.06	**35.60**
10	0.55	34.56	0.55	34.56	0.92	57.81	0.91	57.18	0.51	32.04	0.51	32.04	0.57	35.81	0.56	35.19	**37.41**

Note : Average resistivity is calculated as per clause 36.6 of IS : 3043.



KCT Consultancy Services, Ahmedabad

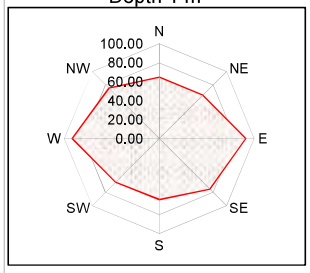
POLAR DIAGRAMS OF ELECTRICAL RESISTIVITY TEST RESULTS

(IS : 3043, 1987)

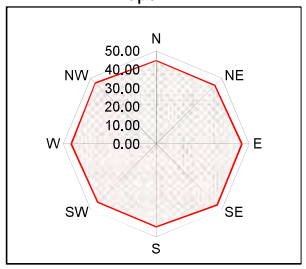
ERT No. : 27 Date : 26-03-2024 Test Location : N 1451 , E 2741

Name of Project : TELANGANA STPP ST-II

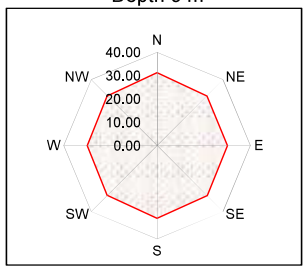
Depth 1 m



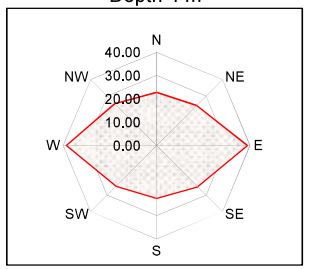
Depth 2 m



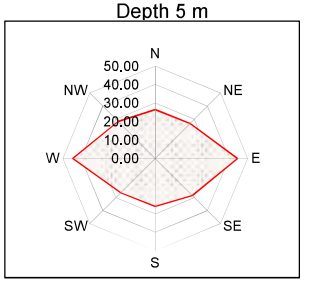
Depth 3 m



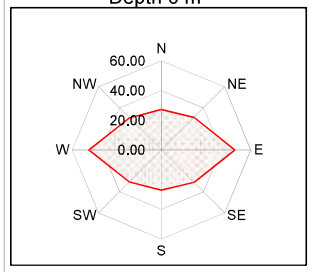
Depth 4 m



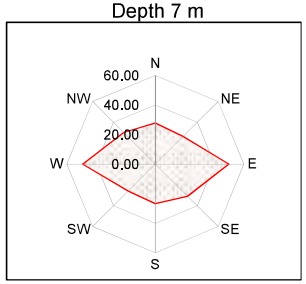
Depth 5 m



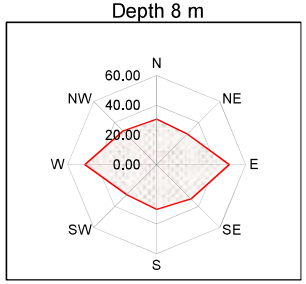
Depth 6 m



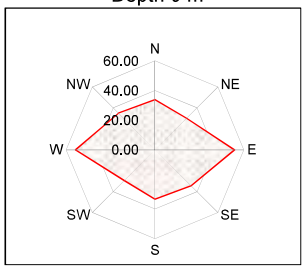
Depth 7 m



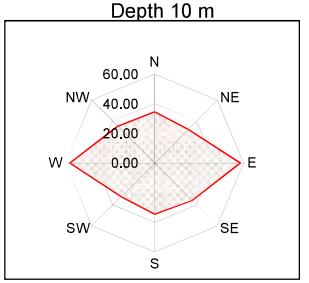
Depth 8 m



Depth 9 m



Depth 10 m



Depth of resistivity in m	1	2	3	4	5	6	7	8	9	10
Area of the polar diagram	15429.79	5831.96	2616.57	2160.87	2753.62	3316.66	3078.72	3421.61	3982.08	4395.74
Radius of the circle having same area as polar diagram	70.08	43.09	28.86	26.23	29.61	32.49	31.30	33.00	35.60	37.41

1) Average Resistivity at a given depth shall be equal to the radius of equivalent area circle having same area as that of polar diagram at that level. (Ref: Clause 36.6 of IS: 3043).