

DEPARTMENT OF MINES  
SOUTH AUSTRALIA

REPORT ON FOUNDATION CONDITIONS  
FOR PROPOSED POWER STATION SITE  
AT WOODS AND FORESTS DEPARTMENT SAWMILL  
SEC. 143, RD. MANDHARRY

by

R. D. Steel

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DEPARTMENT OF MINES  
SOUTH AUSTRALIA

REPORT ON FOUNDATION CONDITIONS  
FOR PROPOSED POWER STATION SITE  
AT WOODS AND FORESTS DEPARTMENT GAMBILL  
SEC. 143, RD. NANGWERRY

1. SUMMARY

Five test boreholes were put down on the site to depths from 30' - 34'. Soft silts and fine sands near surface, overlies coarsely mottled clayey silts to fine sands, essentially well compacted and containing iron cemented lumps irregularly. From approximately 20' in Bore No. 1, to 31' in Bore No. 3, these grade into a discontinuous weathered limestone, consisting of hard limestone lumps with clay filled interstitial spaces and containing numerous fossil fragments. Water occurs in small quantity at depth.

Bearing capacity at the surface is not high, but should increase from about 7' depth. Piling would meet increased resistance with increasing depth, with possible refusal in the limestone horizon. It is suggested that piles if used, be seated a few feet into this limestone layer at depths of maximum stone density, determined from accompanying bore logs.

2. INTRODUCTION

It is proposed to erect a new power station in the N.E. corner of the Woods and Forests Department timber mill yard, on Sec. 143, Rd. Nangwerry. The mill is situated on the western side of the township of Nangwerry, on the main Hersonorte - Mt. Gambier road, approximately 12 miles south of Penola.

The surrounding country is essentially flat lying, with local slight undulations. Dense pine plantation and afforestation has been carried on right to the mill yard boundary on the southern and western sides.

A map showing the area covered by the testing programme and the positions of the five test boreholes, accompanies this report.

### 5. TEST BORING

Five bores were put down to depths ranging from 30' to 34'. The depth at which each was terminated was dependent on the extent of penetration into a weathered limestone horizon encountered at depth. A small supply of underground water was found to be associated with this horizon, which rendered the taking of further suitable open tube samples difficult and unreliable.

Boring was by means of percussion plant P.W. No. 4, using 4" diameter open tube sampling equipment. A record of the number of blows per foot of penetration and state of the fresh sample, was maintained throughout. Bore No. 2 was completed in the presence of the writer, subsequent holes being drilled under the supervision of Mr. A. Dixon, district boring overseer. Every confidence is placed in his supervision and interpretation and the co-operation of the drilling crew.

Samples of water have been collected by Mr. Dixon and forwarded for analysis.

### 6. SOIL PENETRATION RATE

Individual penetration rate figures are themselves not necessarily significant, as the number of blows per foot may show considerable variation in essentially similar material. This is due to a number of factors, chief of which is the non uniformity of moisture content and consolidation in the materials encountered. In areas which are dry and well compacted, the soil may require a considerable number of blows to penetrate each successive foot, whereas the materials in other areas, may be stiff but moist and necessitate fewer blows. Probable bearing capacity in each case is possibly similar, over the full range of seasonal moisture conditions. For example, in bore No. 1, the average number of blows per foot for the first seven feet is 70, whereas in the four remaining bores, this average ranges from 11 to 22 blows.

The mean of the number of blows recorded for each specific horizon, is nevertheless a useful guide to the relative strengths of the various materials. The presence of iron cemented lumps and limestone fragments may also significantly effect individual figures, yet do not necessarily effect the overall average.

## 5. GENERAL GEOLOGY

The surface material is essentially grey to light brown mottled, fine silty sand, generally fairly soft and damp and containing decomposed plant remains. This material grades into buff and yellow-brown silt to fine sand, compact and moist, with hard brownish-yellow iron cemented lumps up to 2" in diameter irregularly abundant.

From 4' in Bore 1, to approximately 7' in Bore 4, silts and fine sands occur. These are generally compact and moist, yellow-brown, offwhite and dark yellow-brown in colour, with orange-brown and pinkish mottling intermittently. They have a tendency to be somewhat clayey in part and contain small isolated pockets of dark yellow-brown silty clay and an irregular abundance of coarse gritty fragments.

From a minimum depth of 17'2" in Bore No. 5, to 26'0" in Bore No. 4, lime pockets and small limestone nodules occur in stiff, damp off-white, yellow-brown and dark yellow-brown mottled clayey silt to fine sand. These limestone lumps become increasingly abundant with depth, where they form a broken limestone horizon. This consists essentially of hard, light grey to light brown fragments, up to 5" diameter, intermixed with pockets of stiff clayey and limey silt, or offwhite to pinkish sandy clay and clayey sand. Small to large shell fragments occur with irregular abundance throughout. This particular horizon is virtually missing in Bore No. 3, suggesting that it is not continuous.

Water was struck in this material at the following depths, Bore 1 (32'), Bore 2 (27'), Bore 3 (31'), Bore 4 (30') and Bore 5 (27'4"). This has resulted in marked softening of the clay fraction, giving rise to soft wet samples of gray, brown and yellow-brown mottled, limy and sandy clay, with some hard limestone lumps, shell and lime grit fragments. Bores were terminated in this water bearing horizon, due to the increased difficulties encountered.

F.G. Shepherd in his report on hydrological investigations in this area. (Report No. 44/98, C.S. 714) has shown that the maximum thickness of this bed in the Kangwarry area is about 20'. Sands and clayey sands occur beneath the limestone and are normally dry. They have a variable thickness and are discontinuous over the area.

Underlying these sands is the Gambier Bryozoa limestone, with a maximum thickness of approximately 80'. This is the principal aquifer of the district. The Gambier limestone is apt to be cavernous and might also contain clay filled solution cavities.

Below the Bryozoa limestone, occurs the Knight formation, a sandy clay horizon grading to sand and gravel near its base and overlying a thick succession of lignitic sands and clays with some gravel. The sands of this formation carry large quantities of water under considerable pressure.

## 6. CONCLUSIONS AND RECOMMENDATIONS

The surface materials to a depth of 7' are generally fairly soft and moist, hence they would probably not possess a very high bearing capacity. It is understood that bearing pressure tests have been carried out on and near the surface in this area, hence as this figure is available, no definite safe bearing capacity limit is proposed. However it must be noted that the bearing capacity of the surface material is probably subject to some degree of variation, as evidenced by the variable number of blows required to penetrate each successive foot in successive bores.

The essentially silty to sandy material below about 7', required on the average a considerably larger number of blows to penetrate similar footages. These are lithologically coarser grained, more compact and drier, but again, small local variations are frequent. The maximum safe bearing capacity of this material would consequently be higher, and based on previous experience, a figure of the order of 5000 lbs. per square foot is quoted. The zone of ferruginous cementation may add more stability at that depth, but it is doubtful whether sufficient of this material is present to be of any significance.

The rate of penetration into the lower limestone horizon is also subject to widespread variation. The limestone appears to be well weathered, consisting of broken lumps, with clay filling the interstitial spaces. Where stoney, high penetration resistance is met, but where dominantly clayey, penetration is generally rapid.

In conclusion it is pointed out that if heavy loadings are to be supported on piles, some pertinent facts may be noted. From 7', resistance to penetration should increase considerably, if not specifically through increased bearing capacity, then by external friction forces. Piles should be driven at least a couple of feet into the stoniest part of the limestone horizon, but not far enough to seat them on the water bearing horizon.

Piles should be stable to overturning moments and long range settlement processes.

For specific details regarding depths and types of materials penetrated, the bore logs attached as an appendix to this report should be consulted.

**R. D. Steel**  
**For Senior Geologist**  
**SOIL GEOLOGY SECTION**

8/10/58  
RDS:AOX

PERCUSSION TEST BOREHOLE NO. 1

7022 - 1371

Locality: Proposed F.T.S.A. Power Station,  
HANGWARRY sawmill.Purpose: Test of Foundation ConditionsDriller: A. GanePlant: No. 4Date Commenced: 16/9/58Date Completed: 17/9/58

Depth	Description	Depth	No. of Blows
0 - 10"	Grey and light grey, moist sandy silt, with decomposed wood fragments.	0 - 1'	80
10" - 1'2"	Light grey and light brown, damp but very stiff, fine sandy silt. Odd wood fragments.	1' - 2'	139
1'2" - 3'0"	Pale buff, stiff, damp silt and fine sand. Numerous yellow-brown iron cemented lumps, up to 2" diameter.	2' - 3'	92
3'0" - 4'0"	Coarsely mottled, creamy white to brownish-yellow, moist and very firm silt to fine sand. Numerous yellow-brown iron cemented lumps.	3' - 4'	60
4'0" - 6'0"	Brown and creamy white mottled, firm, moist silt to fine sand, becoming slightly clayey in part.	4' - 5'	40
		5' - 6'	46
6'0" - 10'0"	Creamy white, firm, moist silt to fine sand, with some brownish-yellow mottling. Becoming somewhat clayey in part.	6' - 7'	59
		7' - 8'	60
		8' - 9'	42
		9' - 10'	43
10'0" - 11'6"	Light yellow-brown to offwhite, moist and moderately firm clayey silt to fine sand. Some slight reddish mottling.	10' - 11'	52
		11' - 12'	34
11'6" - 15'4"	Offwhite, moist and moderately firm, somewhat clayey silt, with light brownish-yellow and pink mottling increasing.	12' - 13'	26
		13' - 14'	31
		14' - 15'	49
		15' - 16'	117?
15'4" - 16'0"	Offwhite and yellow-brown, stiff, moist, silt to fine sand, slightly clayey in part, with pinkish mottling. Small hard iron cemented lumps.		
16'0" - 17'4"	Offwhite, pink and yellow-brown mottled, stiff, damp, silt and sand, becoming somewhat gritty in part.	16' - 17'	49
17'4" - 18'0"	Pale brownish-yellow, stiff, moist, clayey silt to fine sand. Slight yellow-brown and pinkish mottling.	17' - 18'	54

PERCUSSION TEST BOREHOLE NO. 1 (Contd.)  
 HANOWARRY

Depth	Description	Depth	No. of Blows
18'0" - 21'2"	Coarsely mottled, offwhite, yellow-brown and dark yellow-brown, very stiff, damp, clayey silt to fine sand. Somewhat gritty in part, with few small limey pockets increasing.	18'-19' 19'-20' 20'-21'	26 27 21
21'2" - 22'0"	Brown and yellow-brown, very stiff, moist, clayey silt to fine sand, with some offwhite and dark red-brown iron staining. Small lignitic fragments, lime pockets and lime cemented lumps increasing.	21'-22'	22
22'0" - 23'8"	Brown to yellow-brown, very stiff, damp, clayey and limey silt, with patches of offwhite sandy clay. Scattered lignite and shell fragments and hard limestone nodules.	22'-23'	30
23'8" - 24'6"	Yellow-brown, firm, moist, silty to finely sandy clay. Somewhat limey in part, with large lumps of very hard, light brownish limestone and few shell fragments.	23'-24' 24'-25'	32 48
24'6" - 26'6"	Offwhite and brownish-yellow, firm to soft and very moist, silty to finely sandy and limey clay, with scattered hard limestone lumps.	25'-26'	66
26'6" - 28'6"	Offwhite and brownish-yellow, firm but very moist, silty and limey clay, with few small pockets of pinkish clayey sand. Hard lumps of light-brown limestone and lignite fragments irregularly abundant.	26'-27'6" 27'6"-28' 28'-28'6"	61 60 60
28'6" - 29'0"	Mainly yellow-brown, firm but very moist silty clay, with pockets of light grey clay. Scattered small limey pockets and hard limestone lumps.	28'6"-29'	17
29'0" - 30'6"	Greenish-grey and yellow-brown mottled, stiff and moist, slightly silty clay, with pockets of pink and yellow-brown fine silty sand. Slightly limey in part, with small lime pockets and occasional hard limestone lumps.	29'-29'6" 29'6"-30'	20 18
30'6" - 31'0"	Light grey, firm but damp limey clay, with very abundant lumps of hard offwhite to light brown limestone. Numerous shell fragments.	30'-31'	64
31'0" - 33'0"	Grey and yellow-brown mottled, firm but very moist, silty and limey clay. Scattered limestone lumps and numerous shell fragments.	31'-32' 32'-33'	52 39
33'0" - 35'0"	Grey and yellow-brown mottled soft and very wet silty and limey clay, with scattered limestone lumps and numerous shell fragments.	33'-34' 34'-35'	50 37

Water struck at 34'

End of Bore at 35'.

10-68



# RECESSION TEST BOREHOLE NO. 2

Locality: Proposed E.T.S.A. Power Station  
NANOWARRY SOMMILL

— ( 370

Purpose: Test of Foundation Conditions

Driller: A. Gove

Plant: No. 4

Date Commenced: 18/9/58

Date Completed: 19/9/58

Depth	Description	Depth	No. of Blows
0'0" - 2'0"	Grey and light brown fine silty sand. Loose and damp, with fairly abundant small root fragments.	0'-1' 1'-2'	12 12
2'0" - 3'6"	Buff coloured, soft, finely silty sand, with odd small iron cemented lumps.	2'-3'6"	17
3'6" - 5'9"	Offwhite and yellow-brown, soft and damp, fine silty sand. Small pockets of yellow-brown and reddish-brown silty clay. Odd small iron cemented lumps.	3'6"-4'6" 4'6"-5'6" 5'6"-6'0"	13 11 7
5'9" - 8'0"	Mainly light yellow-brown fine silty sand, with some offwhite and dark yellow-brown mottling.	6'-7' 7'-8'	10 7
8'0" - 10'3"	Mainly offwhite fine silty sand, soft and damp, with some yellow-brown and light yellow-brown mottling.	8'-9' 9'-10'	14 18
10'3" - 12'6"	Offwhite and light yellow-brown mottled, soft and damp, fine silty sand, with pockets of brown and dark yellow-brown silty clay.	10'-11' 11'-12' 12'-13'	12 18 18
12'6" - 14'0"	Light yellow-brown fine silty sand, with slight grey mottling. Somewhat gritty in part, with odd small iron cemented lumps.	13'-14'	15
14'0" - 15'6"	Offwhite and light yellow-brown fine grained sand, with numerous grit fragments.	14'-15' 15'-16'	28 28
15'6" - 20'0"	Mainly light brown and yellow-brown, fine grained sand, with abundant coarse gritty fragments. Semiconsolidated but dry and friable.	16'-17' 17'-18' 18'-19' 19'-20'	36 30 44 36
20'0" - 24'9"	Pale brown and offwhite, loose dry, fine grained sand, with numerous coarse grit fragments.	20'-21' 21'-22' 22'-23' 23'-24'6"	28 21 23 31
24'9" - 27'0"	Grey, brown and yellow-brown, firm moist silty to finely sandy clay. Coarse lumps of hard light brown limestone.	24'6"-25' 25'-26' 26'-27'	13 19 8

PERCUSSION TEST BOREHOLE NO. 2 (Contd.)  
 NAFOWARRY

Depth	Description	Depth	No. of Blows
27'0" - 30'0"	Brown and yellow-brown, soft wet silty clay, with light grey mottling in part. Somewhat sandy irregularly, with coarse lumps of hard light brown sandy limestone abundant. Lime grit and small shell fragments.	27'-28'	12
		28'-29'	13
		29'-30'	16

End of Bore.

9.14

Water out at 28'.

PERCUSSION TEST BOREHOLE NO. 3

Locality: Proposed E.T.S.A. Power Station,  
RANGAERU Baymill.

-1375

Purpose: Test of Foundation Conditions

Driller: A. Gano

Plant: No. 4

Date Commenced: 19/9/58

Date Completed: 22/9/58

Depth	Description	Depth	No. of Blows
0 - 1'0"	Grey and light grey, fine silty sand, with abundant decomposed plant remains.	0-1'	12
1'0" - 2'0"	Light grey and offwhite, soft moist fine silty sand, with small decomposed plant remains.	1'-2'	10
2'0" - 3'0"	Pale brown, soft moist fine silty sand, with slight grey and offwhite mottling. Few small plant remains.	2'-3'	11
3'0" - 6'10"	Light-brown and yellow-brown, soft, moist fine silty to clayey sand. Small yellow-brown iron cemented lumps irregularly abundant.	3'-4'	9
		4'-5'	19
		5'-6'	16
		6'-7'	39
6'10" - 8'0"	Coarsely mottled light grey-brown and yellow-brown, stiff damp clayey to finely sandy silt.	7'-8'	36
8'0" - 11'10"	Mainly light grey, stiff damp clayey silt, with brown and yellow-brown mottling. Few small gritty fragments.	8'-9'	24
		9'-10'	29
		10'-11'	25
11'10" - 20'6"	Mainly light grey, stiff moist clayey silt, with coarse light yellow-brown pinkish and orange-brown mottling.	11'-12'	32
		12'-13'	7
		13'-14'	21
		14'-15'	39
20'6" - 24'0"	Mainly light grey, very firm, moist clayey silt to fine sand, with some yellow-brown and pink mottling. Somewhat gritty in part.	15'-16'	40
		16'-17'	36
		17'-18'	36
		18'-19'	52
		19'-20'	46
		20'-21'	52
24'0" - 27'2"	Mainly light grey, stiff clayey silt to fine sand, with coarse brown, yellow brown and pinkish mottling irregularly. Somewhat gritty in part.	21'-22'	83
		22'-23'	43
		23'-24'	33
		24'-25'	30
		25'-26'	27
		26'-27'	17
27'2" - 30'0"	Grey to light grey, stiff moist clayey silt to clayey sand. Some brown and light brown mottling. Scattered grit fragments.	27'-28'	19
		28'-29'	15
		29'-29'6"	8
		29'6"-30'	11

Depth	Description	Depth	No. of Blows
30'0" - 31'0"	Brown, dark yellow-brown and light grey mottled, firm to stiff clayey silt to clayey sand. Orange mottling in part.	30'-31'	11
31'0" - 34'0"	Brown, yellow-brown and light grey mottled, soft and wet, silty to sandy clay. Numerous small hard limestone lumps, shell fragments and lime grit.	31'-32' 12 32'-33' 15 33'-34' -	

End of bore. 10.36

Water cut at 5' and 31'.

PERCUSSION TEST BOREHOLE NO. 4

Locality: Proposed E.T.A.A. Power Station,  
HANGWARRY Sawmill

Purpose: Test of Foundation Conditions

Driller: A. Gabe

Plant: No. 3

Date Commenced: 17/9/58

Date Completed: 18/9/58

-1872

Depth	Description	Depth	No. of Blows
0 - 1'0"	Grey and light grey, moist sandy silt, with decomposed wood fragments.	0-1'	24
1'0" - 1'10"	Mainly light brown, fine sandy silt with slight grey mottling and odd wood fragments.	1'-2'	21
1'10" - 4'0"	Pale buff to yellow-brown, very soft and moist, silt to fine sand. Yellow-brown iron cemented lumps irregularly abundant	2'-3'	15
		3'-4'	21
4'0" - 5'0"	Yellow-brown and light brown, soft, wet silt and fine sand, with hard brownish-yellow iron cemented lumps.	4'-5'	26
5'0" - 6'0"	Brown and creamy-white mottled, soft moist silt and fine sand, with some dark yellow-brown staining.	5'-6'	36
6'0" - 7'0"	Light grey-brown, soft and very wet, fine silty sand, with numerous small iron cemented lumps.	6'-7'	12
7'0" - 9'0"	Orange-brown and yellow-brown mottled, firm and moist, silt to fine sand, but slightly clayey in part.	7'-8'	114?
		8'-9'	52
9'0" - 10'0"	Light grey-brown and light yellow-brown, stiff, damp clayey silt to fine sand. Some light reddish mottling.	9'-10'	40
10'0" - 14'0"	Light yellow-brown, offwhite and reddish mottled, stiff and moist, silt to fine sand, becoming somewhat clayey in part.	10'-11'	42
		11'-12'	42
		12'-13'	33
		13'-14'	64
14'0" - 17'8"	Light grey, stiff clayey silt, with light yellow-brown and dark orange-brown mottling. Becoming finely sandy in part	14'-15'	60
		15'-16'	33
		16'-17'	50
17'8" - 20'4"	Light grey, yellow-brown and orange brown, stiff damp silt and sand, with tendency to gritty in part.	17'-18'	46
		18'-19'	71
		19'-20'	79
20'4" - 23'0"	Light grey very stiff clayey silt to fine sand, with some gritty fragments. Some coarse brown and yellow-brown mottling.	20'-21'	38
		22'-23'	130
		23'-24'	20
		24'-25'	14

Depth	Description	Depth	No. of Blows
23'0" - 24'6"	Brown and yellow-brown firm to stiff and damp clayey silt to fine sand, with patches of light grey mottling. Few lignite and shell fragments.	24'-25'	14
24'6" - 26'0"	Brown, dark yellow-brown and light grey mottled, firm, moist, silty to finely sandy clay. Small-medium lumps of hard limestone irregularly and some small shell fragments.	25'-26'	24
26'0" - 27'6"	Brown and yellow-brown firm damp silty to sandy and somewhat limey clay, with some light grey mottling. Lumps of hard light grey limestone and shell fragments abundant.	26'-27' 27'-28'	28 15
27'6" - 30'0"	Yellow-brown and light grey mottled, firm damp silty to finely sandy clay. Small hard limestone lumps and shell fragments irregularly abundant.	28'-29' 29'-30'	10 14
30'0" - 32'0"	Light brown and light green-brown, soft wet sandy to silty clay, with scattered small hard limestone lumps, shell fragments and lime grit fragments.	30'-31' 31'-32'	25 30
32'0" - 34'0"	Light brown to light greenish-brown mottled soft wet, silty to finely sandy clay, with abundant small limestone lumps, shell fragments and lime grit.	32'-33' 33'-34'	16 24

End of Bore.

10.36

PERCUSSION TEST BOREHOLE NO. 5

Locality: Proposed K.T.S.A. Power Station,  
WANGHAREY Sammill.

-1369

Purpose: Test of foundation Conditions

Driller: A. Gave

Plant: No. 4

Date Commenced: 23/9/58

Date Completed: 23/9/58

Depth	Description	Depth	No. of Blows
0'0" - 1'0"	Grey and dark grey mottled, fine silty sand, with few decomposed wood fragments.	0-1'	14
1'0" - 2'6"	Pale brown fine silty sand, with light grey mottling. Few decomposed root remains.	1'-2' 2'-3'	14 21
2'6" - 4'4"	Brown, dark yellow-brown and reddish mottled, firm, moist clayey silt to fine sand. Somewhat gritty in part, with few decomposed root remains.	3'-4'	23
4'4" - 5'0"	Offwhite, brown and reddish mottled, stiff damp, silty to finely sandy clay.	4'-5'	20
5'0" - 7'6"	Offwhite, light yellow-brown and orange-brown stiff damp clayey silt to fine sand.	5'-6' 6'-7'	21 32
7'6" - 10'0"	Buff, light yellow-brown and pinkish mottled, very stiff, damp, silt to fine sand, with odd grit fragments.	7'-8' 8'-9' 9'-10'	46 62 67
10'0" - 12'0"	Buff, brown and yellow-brown mottled, very stiff, damp, silt to fine sand.	10'-11' 11'-12'	46 36
12'0" - 15'0"	Light yellow-brown and orange-brown mottled, very stiff damp, fine silty sand, becoming somewhat gritty in part.	12'-13' 13'-14' 14'-15'	64 53 94
15'0" - 17'2"	Coarsely mottled light grey, brown and yellow-brown very stiff, damp, fine sandy silt. Very sandy in part, with abundant grit fragments.	15'-16' 16'-17'	67 31
17'2" - 17'10"	Light grey and yellow-brown, firm, damp, silty to clayey sand. Small lime pockets and lignite fragments fairly abundant.	17'-18'	30
17'10" - 19'9"	Pale green-grey, yellow-brown and light brown mottled, stiff, damp, silty and very limy clay. Small hard limestone and shell fragments.	18'-19' 19'-20'	31 23
19'9" - 21'6"	Brown, yellow-brown and offwhite mottled, stiff, damp, silty and limy clay, with pockets of soft brown clay. Hard light-brown limestone and shell fragments irregularly abundant. Some small pockets of lignite.	20'-21' 21'-22'	36 72

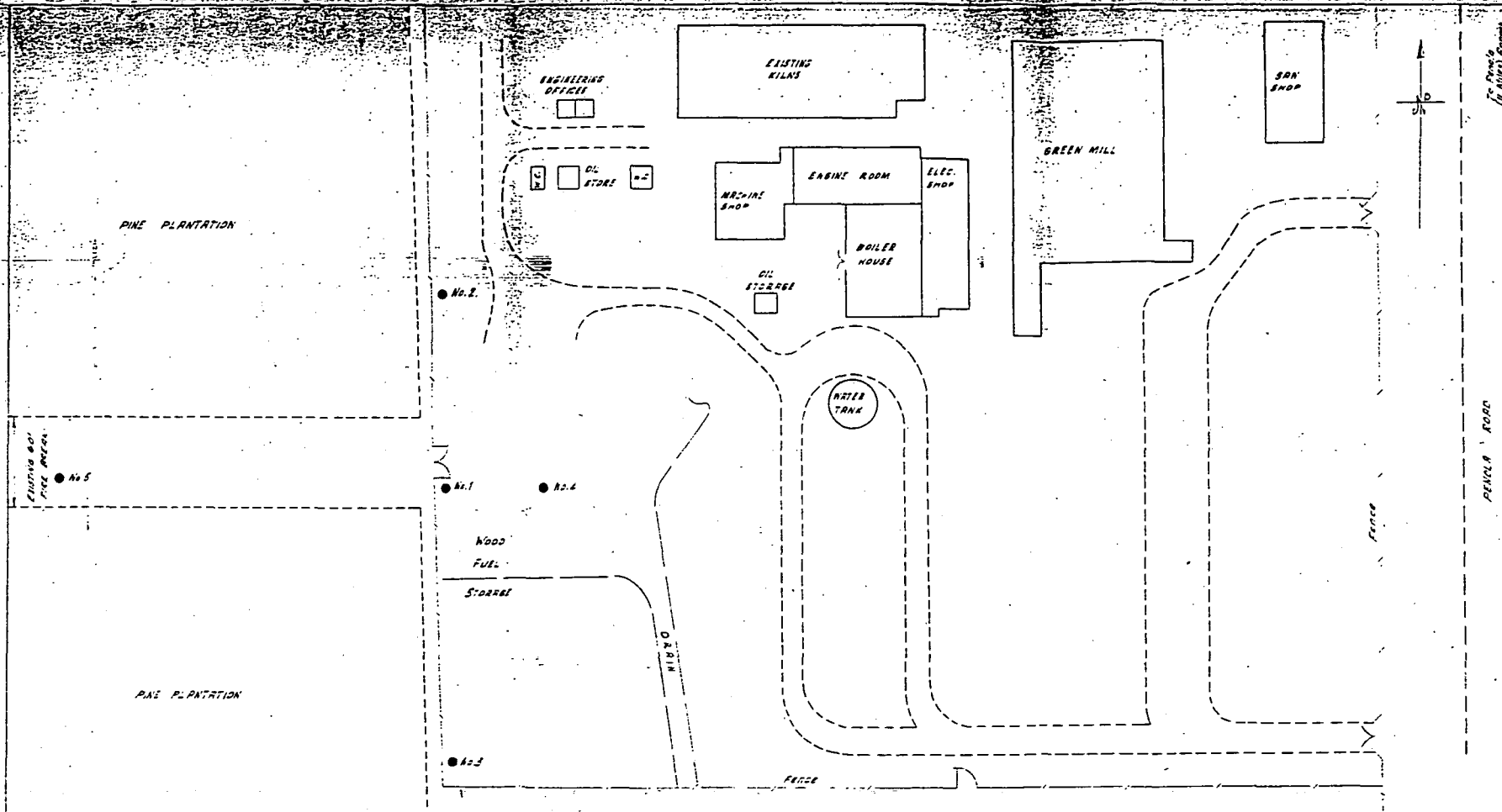
Depth	Description	Depth	No. of Blows
21'6" - 27'4"	Offwhite, brown and yellow-brown mottled, friable, moist, silty and limey clay, with very abundant lumps of hard off-white limestone, up to 5" diameter. Numerous large shell fragments.	22'-23'	118
		23'-24'	42
		24'-25'	60
		25'-26'	39
		26'-27'	27
27'4" - 30'0"	Brown to yellow-brown and green-brown mottled, soft, wet silty clay, with abundant lime grit fragments, scattered small limestone lumps and shell fragments.	27'-28'	20
		28'-29'	22
		29'-30'	19

End of Bore

Water cut 27' - 28'.

9.14





LAYOUT OF FOUNDATION TEST BOREHOLES  
 PROPOSED E.T.S.A. POWER STATION  
 NANGWARRY SAWMILL YARD  
 SEC 143. Hd. NANGWARRY

Test Borehole Locations.....● No. 2

SCALE - 50 FEET TO 1 INCH