

TR15-18-30

4. Clay resources of the Longford and Launceston Basins

V.M. Threader

D. Clements

A map (fig. 5) summarising drill records in portions of the Longford and Launceston Basins has been prepared as an aid to the ceramic industry. The sources of information are:

(1) Two traverse lines of Proline holes were drilled to obtain clay samples for ceramic tests. Holes 1-28 were drilled between Relbia and Nile and Holes 29-46 were drilled between Powranna and Cressy. The maximum depth for these holes was 15 m (48 ft), determined solely by the availability of drill rods. A ceramic report of these samples appears elsewhere in this volume.

(2) Four Proline traverse lines were drilled to obtain regional geological information of the Cainozoic sediments in the Longford Basin. The maximum depth of these holes was 17 m (55 ft), again dictated by the availability of drill rods. In both (1) and (2) above, depths shallower than the indicated maximum are due to the presence of cemented ferruginous layers (hardpan) and do not indicate depths to bedrock.

(3) Deep percussion rig holes have been drilled throughout the area for underground water. Those shown on the map (fig. 5) are designated: W2, 6, 8-16, 21, 22, 23, 29-58, 60, 61, 64-70.

No ceramic testing has been carried out on samples from (2) and (3) above but it is intended to do this during 1971.

Areas depicted as unsuitable for ceramics represent areas on the published 1:63,360 geological map sheets of Longford and Launceston which are unlikely to provide economic quantities of ceramic clays. They include areas of dolerite, basalt, laterite gravel and Permian sediments.

CERAMIC TESTS

This survey has proved a number of deposits of worthwhile clay in the Relbia-Nile and Cressy-Powranna areas (fig. 5). These clays have a wide colour range and some excellent high temperature properties.

The evaluation tests were carried out using a stiff plastic pressing method with a subsequent firing temperature of 1,000°C for bricks and 1,150°C to assess the possible use of the material for pipe manufacture.

The following points should be considered if it is planned to exploit

any of these deposits:

- (1) A considerable variation in sand content occurs throughout the depth of many of the bore holes. The method of winning should aim at the production of a uniform raw material by blending.
- (2) Fired colours will vary somewhat from those obtained in the laboratory and the specimen colour should only be taken as a general guide.
- (3) Fired shrinkage is generally related to added water and in most cases is quite normal, but in one or two cases the presence of a large quantity of fluxing agent has caused abnormally high fired shrinkage.
- (4) Where material has been reported as being 'unsuitable for ceramic use' this may not necessarily be so since by blending with good material or by utilising the greater pressures of production presses compared with the laboratory press a saleable product may be possible.

Materials suitable for ceramic use are listed in Table 1 and those unsuitable for ceramic use in Table 2.

Table 1. MATERIAL SUITABLE FOR CERAMIC USE

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
700285	2	1-3	23	Good	Light pink	-	2.1
700286		3-6	20				
700287		6-9	25				
700288		9-12	34				
700289		12-15	34				
700290	2	15-18	44	Good	Light pink	-	2.2
700291		18-21	49				
700292		21-24	51				
700293		27-30	8				
700294		30-33	34				
700295	2	33-36	30	Good	Light pink	-	2.3
700296		39-42	47				
700297		42-45	33				
700298		45-48	32				
700299	3	1-3	50	Good	Light pink	-	3.1
700300		3-6	9				
700301		6-9	13				
700392		9-12	25				
700303		12-15	28				
700304	15-18	34					
700305	3	18-21	38	Good	Light pink	-	3.2
700306		21-24	45				
700307		34-27	47				
700308		27-30	49				
700309		30-33	29				
700310		33-36	17				

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
700311	3	36-39	19	Good	Whitish pink	-	3.3
700312		39-42	30				
700313		42-45	28				
700314		45-48	28				
700315	4	1- 3	57	Excellent	Light pink	-	4.1
700316		3- 6	31				
700317		6- 9	17				
700318	4	9-12	11	Excellent	Light pink	-	4.2
700319		12-15	25				
700320		15-18	13				
700321		18-21	23				
700322	4	21-24	2	Excellent	Light pink	Excellent	4.3
700323	4	24-27	26	Excellent	Light pink	-	4.4
700324		27-30	6				
700325		30-33	21				
700326		33-36	21				
700327		36-39	14				
700328	4	39-42	53	Excellent	Whitish pink	-	4.5
700329		42-45	59				
700330		45-48	41				
700331	5	1- 3	71	No ceramic tests on this group due to high sand content and presence of excessive amounts of quartz pebbles.			5
700332		3- 6	64				
700333		6- 9	93				
700334		9-12	93				
700335		12-15	87				
700336		15-18	85				
700337		18-21	67				
700338	5	21-24	45	Good	Pinkish white	-	5.1
700339		24-27	58				
700340		27-30	50				
700341		30-33	67				
700342		33-36	46				
700343	5	36-39	45	Good	Off-white	-	5.2
700344		39-42	43				
700345		42-45	39				
700346		45-48	52				
700347	6	1- 3	58	Good	Pink	-	6.1
700348		3- 6	58				
700349		6- 9	55				
700350	6	9-12	87	No ceramic tests			
700351	8	1- 3	79	No ceramic tests			
700352		3- 6	73				

Table 1 - continued

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
700353	8	6-9	40	Good	Reddish-pink	-	8.1
700354		9-12	45				
700355		12-15	59				
700356	9	6-9	87	Not suitable for ceramic use except as a diluent			
700357		9-12	84				
700358		12-15	72				
700359		15-18	60				
700360		18-21	74				
700361		21-24	68				
700362	9	24-27	62	Good	Light red	-	9.2
700363		27-30	46				
700364		30-33	53				
700365		33-36	39				
700585	11	3-6	83	Good	Red	-	11.1
700586		6-9	86				
700587		9-12	64				
700588		12-15	82				
700589		15-18	81				
700590		18-21	96				
700591	21-24	76					
700592	11	24-27	50	Good	Dark red	-	11.2
700593		27-30	49				
700594		30-33	44				
700595		33-36	42				
700596	11	36-39	47	Good	Dark red	-	11.2
700597		39-42	51				
700598		42-45	58				
700599		45-48	56				
700816	14	1-3	46	Not suitable for ceramic use			
700817		3-6	44				
700818	14	6-9	64	Not suitable for ceramic use			
700819		9-12	69				
700820		12-15	64				
700821		18-21	74				
700822		21-24	19				
700823	24-27	14					
700824	14	27-30	18	Good	Light red	-	14.3
700825		30-33	13				
700826		33-36	11				
700827		36-39	49				
700828	14	39-42	72	Not suitable for ceramic use			
700829		42-45	71				

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
700835	22	3-6	26	Good	Light red	-	22.1
700836		6-9	22				
700837		9-12	24				
700838		12-15	38				
700839		15-18	18				
700840	22	18-21	68	Not suitable for ceramic use			
700841	22	24-27	16	Excellent Red	-	22.3	
700842		27-30	17				
700843		30-33	23				
700844		33-36	11				
700845		39-42	10				
700846		42-45	11				
700847		45-48	7				
701005	23	1-3	66				Not suitable for ceramic use
701006		3-6	46				
701007		6-9	71				
701008	23	9-12	17	Good	Pinkish red	-	23.2
701009		12-15	31				
701010		15-18	43				
701011		18-21	30				
701012		21-24	22				
701013		24-27	24				
701014	23	27-30	11	Good	Pinkish red	-	23.3
701015		30-33	8				
701016		33-36	10				
701017		36-39	46				
701018		39-42	29				
701019		42-45	7				
701020	24	3-6	46				
701021		6-9	60				
701022		9-12	72				
701023		12-15	81				
701024		15-18	77				
701025		18-21	78				
701026		21-24	69				
701027		24-27	68				
701028	24	27-30	47	Good	Light red	-	24.2
701029		30-33	47				
701030		33-36	37				
701031		36-39	28				
701032		39-42	30				
701033		42-45	37				
701034		45-48	20				
701035	25	1-3	41				
701036		3-6	42				
701037		6-9	43				

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
701038	25	9-12	20	Good	Light pink	-	25.2
701039		12-15	32				
701040		15-18	16				
701041		18-21	19				
701042		21-24	20				
701043		24-27	22				
701044		27-30	17				
701045	30-33	26					
701046	25	33-36	35	Not suitable for ceramic use			
701047		36-39	53				
701048		39-42	43				
701049		42-45	40				
701050		45-48	39				
701223	26	1- 3	22	Not suitable for ceramic use			
701224		3- 6	43				
701225		6- 9	43				
701226		9-12	37				
701227	26	12-15	26	Good	Salmon pink	-	26.2
701228		15-18	17				
701229		18-21	18				
701230		21-24	22				
701231		24-27	22				
701232		27-30	44				
701233		30-33	18				
701234	26	33-36	47	Good	Light pink	-	26.3
701235		36-39	38				
701236		39-42	39				
701237		42-45	39				
701238		45-48	35				
701239	27	1- 3	70	Not suitable for ceramic use			
701240		3- 6	57				
701241	27	6- 9	22	Excellent	Light pink	-	27.2
701242		9-12	17				
701243		12-15	29				
701244		15-18	18				
701245		18-21	17				
701246	21-24	19					
701247	27	24-27	42	Good	Pink	-	27.3
701248		27-30	23				
701249		30-33	33				
701250		33-36	21				
701251	27	36-39	38	Good	Pink	-	27.4
701252		39-42	39				
701253		42-45	35				
701254		45-48	48				

Table 1 - continued

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
701956	35	3-6	52	Good	Light pink	-	35.1
701957	35	6-9	31	Excellent Cream	Good	Excellent	35.2
701958		9-12	35				
701959		12-15	32				
701960		15-18	47				
701961	35	18-21	28	Excellent Cream		Excellent	35.3
701962		21-24	24				
701963	35	27-27	40	Excellent Pink	Good	Excellent	35.4
701964		27-30	21				
701965		30-33	21				
701966		33-36	21				
701967		36-39	32				
701968		39-42	26				
701969	36	1-3	48	Not suitable for ceramic use			
701970		3-6	54				
701971	36	6-9	31	Excellent Pink	Good	Excellent	36.2
701972		9-12	27				
701973		12-15	27				
701974		15-18	29				
701975		18-21	35				
701976		21-24	28				
701977	36	24-27	36	Excellent Pink	Good	Excellent	36.3
701978		27-30	44				
701979		30-33	38				
701980		33-36	29				
701981		36-39	30				
701982		39-42	45				
701983	37	1-3	22	Excellent Pink	Good	Excellent	37.1
701984		3-6	20				
701985		6-9	24				
701986		9-12	25				
701987		12-15	24				
701988		15-18	27				
701989		18-21	25				
701990	37	21-24	34	Excellent Pink	Good	Excellent	37.2
701991		24-27	37				
701992		27-30	32				
701993		30-33	31				
701994		33-36	30				
701995		36-39	21				
701996		39-42	24				
702288	38	1-3	43				
702289		3-6	28				
702290		6-9	22				

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
702291	38	9-12	14	Excellent	Pink	Good	Excellent
702292		12-15	17				
702293		15-18	16				
702294		18-21	13				
702295		21-24	17				
702296		24-27	18				
702297		27-30	19				
702298	38	30-33	31	Good	Light red	Good	38.3
702299		33-36	29				
702300		36-39	30				
702301		39-42	33				
702302	39	1- 3	59	Not suitable for ceramic use	Light pink	Good	
702303		3- 6	39				
702304		6- 9	31				
702305		9-12	35				
702306	39	12-15	20	Excellent	Light pink	Good	39.2
702307		15-18	15				
702308		18-21	12				
702309		21-24	21				
702310		24-27	19				
702311		27-30	13				
702312	39	30-33	30	Good	Pink	Good	39.3
702313		36-39	19				
702314		39-42	25				
702315	40	1- 3	97	No tests were made on this group			
702316		3- 6	86				
702317		6- 9	82				
702318		9-12	72				
702319		12-15	74				
702320	40	15-18	49	Not suitable for ceramic use			
702321		18-21	50				
702322		21-24	51				
702323		24-27	51				
702324	40	27-30	35	Good	Pink	Good	40.2
702325		30-33	34				
702326		33-36	26				
702327		36-39	25				
702328		39-42	39				
702329	41	1- 3	64	Not suitable for ceramic use			
702330		3- 6	29				
702331		6- 9	19				
702332	41	9-12	56	Good	Pink	Good	41.2
702333		12-15	53				
702334		15-18	53				
702335		18-21	35				
702336		21-24	40				

Table 1 - continued

Reg. No.	Hole No.	Depth (ft)	Sand %	Bond	Fired Colour	Fired @ 1,150°C	Specimen No.
702337	41	24-27	34	Good	Pink	-	41.3
702338		27-30	29				
702339		30-33	28				
702340		33-36	15				
702341		36-39	15				
702342		39-42	12				
702343	42	1- 3	86	No ceramic test was made			
702344	42	3- 6	45	Not suitable for ceramic use			
702345		6- 9	35				
702346	42	9-12	19	Good	Light pink	Good	42.2
702347		12-15	12				
702348		15-18	21				
702349		18-21	15				
702350	42	21-24	12	Good	Light red	Good	42.3
702351		24-27	10				
702352		27-30	9				
702353		30-33	6				
702354		33-36	9				
702355		36-39	7				
702356	39-42	10					
702442	43	1- 3	54	Not suitable for ceramic use			
702443		3- 6	55				
702444		6- 9	50				
702445		9-12	54				
702446		12-15	40				
702447		15-18	68				
702448		18-21	63				
702449		21-24	54				
702450		24-27	43				
702451	27-30	28					
702452	43	30-33	25	Good	Off-white	-	43.2
702453		33-36	44				
702454		36-39	22				
702464	45	1- 3	48	Good	Pink	-	45.1
702465		6- 9	34				
702466	45	9-12	24	Excellent	Pinkish white	-	45.2
702467		12-15	21				
702468		15-18	16				
702469		18-21	13				
702470		21-24	19				
702471		45	24-27				
702472	27-30		63				
702473	30-33		49				
702474	33-36		60				
702475	36-39		70				
702476	39-42		61				

Table 2. MATERIALS UNSUITABLE FOR CERAMIC USE

Reg. No.	Hole No.	Depth (ft)	% Sand	Comment
700271	1	3- 6	84	Could be a useful source of sandy material
700272		6- 9	91	
700273		9-12	72	
700274		12-15	66	
700275		15-18	84	
700276		18-21	79	
700277		21-24	77	
700278		24-27	69	
700279		27-30	77	
700280		30-33	75	
700281		33-36	72	
700282		36-39	73	
700283		39-42	76	
700284	42-45	72		
700575	10	1- 3	74	Could be a useful source of sandy material
700576		3- 6	47	
700577		6- 9	59	
700578		9-12	63	
700579		12-15	74	
700580		15-18	70	
700581		21-24	72	
700582		24-27	74	
700583	27-30	76		
700584	30-33	76		
700600	12	3- 6	37	Contains quartz pebbles
700601		6- 9	61	
700602		9-12	26	
700603		12-15	41	
700604		15-18	33	
700605		18-21	59	
700606		21-24	50	
700607		24-27	49	
700608		27-30	55	
700609		30-33	56	
700610		33-36	59	
700611		36-39	59	
700612		39-42	55	
700613		42-45	60	
700614	45-48	63		
700615	13	3- 6	37	Contains quartz pebbles
700616		6- 9	66	
700830	15	1- 3	28	Contains quartz pebbles
700831		3- 6	35	
700832		6- 9	62	
700833		9-12	67	
700834		12-15	81	

Table 2 - continued

Reg. No.	Hole No.	Depth (ft)	% Sand	Comment
701255	28	1- 3	79	I
701256		3- 6	86	
701257		6- 9	66	
701258		9-12	63	
701259		12-15	68	
701260		15-18	68	
701261		18-21	75	
701262		21-24	66	
701264		24-27	79	
701265		27-30	78	
701266		30-33	71	
701267		33-36	77	
701268	36-39	74		
701269	45-48	73		
701522	29	3- 6	68	10
701523		6- 9	65	
701524		9-12	75	
701525A		12-15	91	
701525		15-18	85	
701526		18-21	83	
701527		21-24	87	
701528		24-27	85	
701529		27-30	83	
701530		30-33	90	
701531		33-36	94	
701532		36-39	81	
701533	39-42	80		
701534	42-45	75		
701535	45-48	66		
701536	30	1- 3	59	13
701537		3- 6	87	
701538		6- 9	62	
701539		9-12	89	
701540		12-15	89	
701541		15-18	84	
701542		18-21	88	
701543		21-24	89	
701544		24-27	90	
701545		27-30	90	
701546		30-33	81	
701547		33-36	82	
701548	36-39	85		
701549	39-42	86		
701550	42-45	85		
701551	45-48	57		

Contains ironstone and quartz pebbles

Contains excessive amounts of quartz pebbles

Contains excessive amounts of quartz pebbles

Table 2 - continued

Table 2 - continued

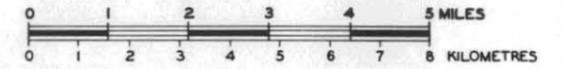
Reg. No.	Hole No.	Depth (ft)	% Sand	Comment
701552	31	3- 6	76	Contains excessive amounts of quartz pebbles
701553		6- 9	77	
701554		9-12	85	
701555		12-15	85	
701556		15-18	78	
701557		18-21	78	
701558		27-30	80	
701559		30-33	81	
701560		33-36	69	
701561		36-39	54	
701562		39-42	68	
701563		42-45	63	
701564		45-48	69	
701565		32	1- 3	
701566	3- 6		64	
701567	6- 9		38	
701568	9-12		14	
701569	12-15		52	
701570	15-18		24	
701571	18-21		31	
701572	21-24		18	
701573	24-27		56	
701574	27-30		69	
701575	30-33		75	
701576	33-36		78	
701577	36-39		85	
701578	39-42		76	
701579	42-45	85		
701580	45-48	82		
701935	33	3- 6	35	48
701936		6- 9	48	
701937		9-12	49	
701938		12-15	75	
701939		15-18	69	
701940		18-21	70	
701941		21-24	72	
701942	24-27	73		
701943	34	3- 6	56	48
701944		6- 9	36	
701945		9-12	43	
701946		12-15	48	
701947		15-18	78	
701948		18-21	78	
701949		21-24	80	
701950		24-27	82	
701951		27-30	77	
701952		30-33	84	
701953		33-36	43	
701954		36-39	30	
701955		39-42	36	

Table 2 - continued

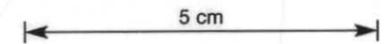
Reg. No.	Hole No.	Depth (ft)	% Sand	Comment
702456	44	1- 3	81	
702457		3- 6	58	
702458		6- 9	70	
702459		9-12	75	
702460		12-15	45	Contains quartz pebbles
702461		15-18	88	
702462		18-21	84	
702463	21-24	87		
702477	46	1- 3	64	
702478		3- 6	72	
702479		6- 9	60	
702480		9-12	80	
702481		12-15	74	
702482		15-18	68	
702483		18-21	58	Contains excessive amounts of quartz pebbles
702484		21-24	55	
702485		30-33	51	
702486		33-36	51	
702487	36-39	49		
702488	39-42	50		
702489	47	1- 3	61	
702490		3- 6	75	
702491		6- 9	90	
702492		9-12	75	
702493		12-15	60	
702494		15-18	54	
702495		18-21	54	Contains quartz pebbles
702496		21-24	59	
702497		24-27	56	
702498		27-30	58	
702499		30-33	52	
702500	33-36	59		
702501	36-39	55		
702502	39-42	49		
702503	48	1- 3	41	
702504		3- 6	48	
702505		6- 9	34	
702506		9-12	67	Contains quartz pebbles
702507		12-15	75	
702508		15-18	78	
702509		18-21	78	
702510	49	1- 3	52	
702511		3- 6	37	
702512		6- 9	42	
702513		9-12	63	
702514		12-15	60	
702515		15-18	41	
702516		18-21	37	
702517		21-24	71	Contains excessive amounts of quartz pebbles
702518		24-27	62	
702519		27-30	63	
702520		30-33	65	
702521		33-36	66	
702522		36-39	64	
702523	39-42	63		

PROLINE DRILLING : PORTION OF LAUNCESTON AND LONGFORD BASINS

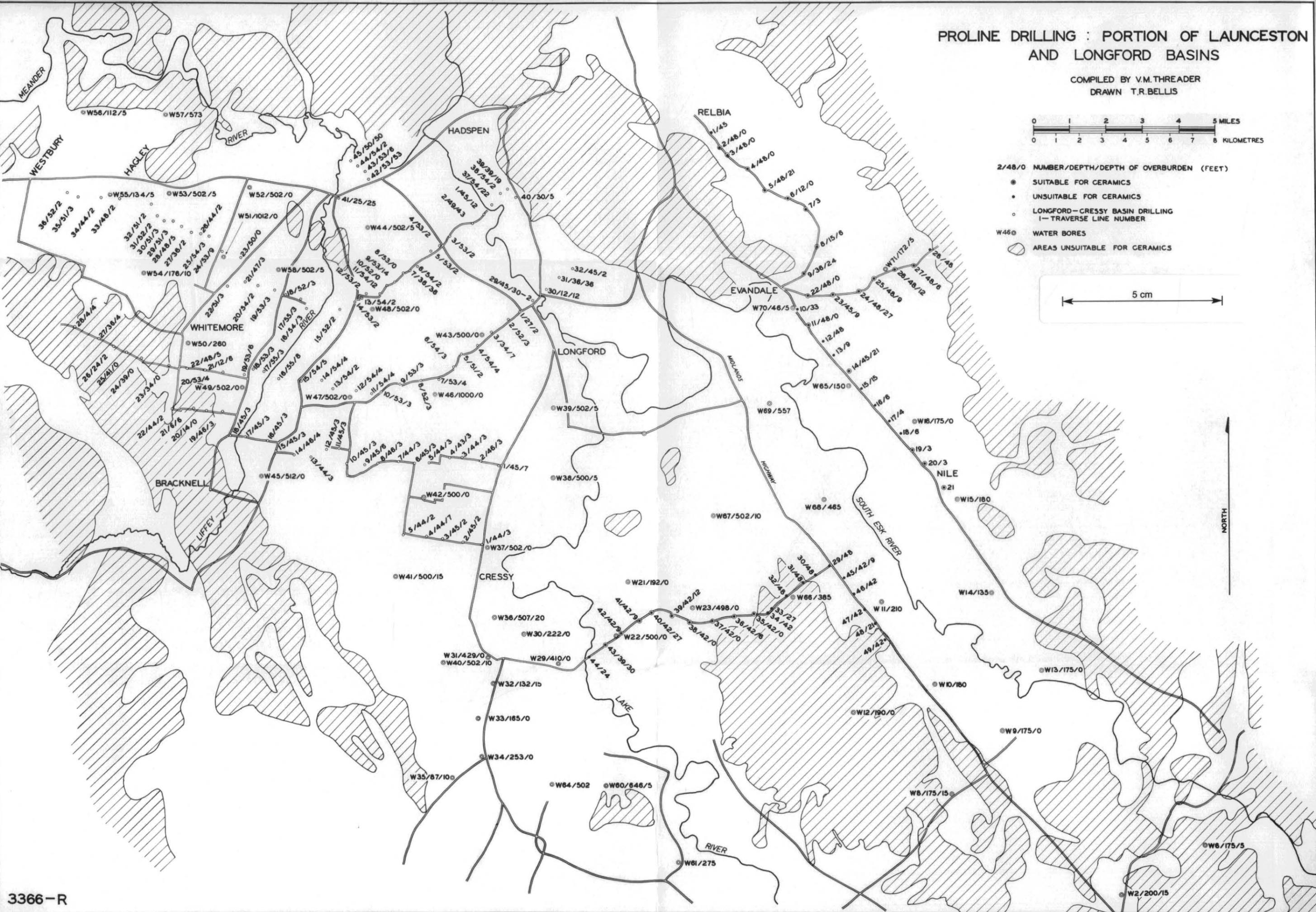
COMPILED BY V.M.THREADER
DRAWN T.R.BELLIS



- 2/48/0 NUMBER/DEPTH/DEPTH OF OVERBURDEN (FEET)
- SUITABLE FOR CERAMICS
- UNSUITABLE FOR CERAMICS
- LONGFORD-CRESSY BASIN DRILLING
- TRAVERSE LINE NUMBER
- W460 WATER BORES
- ◊ AREAS UNSUITABLE FOR CERAMICS



NORTH



3366-R

Figure 5.