



brandon
& ASSOCIATES

ENGINEERING CONSULTANTS

personal. professional. practical.

MURWEH SHIRE COUNCIL

DRILLING, CASING, CEMENTING, DEVELOPING AND
TESTING OF A NEW SUB-ARTESIAN BORE
MORVEN

SPECIFICATION

Contract No. MWS1. 20-21

B&A Specification No. 212004

TENDERS CLOSE 2pm Thursday 13th May 2021

www.brandoneng.com

CHINCHILLA 4668 9351 | ROMA 4622 3799 | TOOWOOMBA 4636 4100

The information within this document and associated drawings or internal property is subject to the copyright act and shall remain the property of Brandon & Associates. This document shall not be reproduced in part or full without express written approval from Brandon & Associates.

DOCUMENT ISSUE STATUS	
Origin of Document	Roma
File Reference	212004 - Morven Water Supply Bore

ISSUE	ISSUE DATE	DETAILS	PREPARED BY	AUTHORISATION	
				NAME/POSITION	SIGNATURE
A	06/04/21	Issue for Tender	D. Russell	B. Payne Director	

TABLE OF CONTENTS

CONDITIONS OF TENDERING	IV
AUSTRALIAN STANDARD GENERAL CONDITIONS OF TENDERING AND FORM OF TENDER	VII
TENDER FORM	VIII
SCHEDULE OF PRICES	IX
WORKS PROGRAMME AND METHODOLOGY	XI
LOCAL EXPENDITURE STATEMENT	XII
APPROVED FORM OF UNCONDITIONAL UNDERTAKING	XXVII
1 INFORMATION FOR TENDERERS	1
1.1 PROJECT DESCRIPTION	1
1.2 TENDER DOCUMENTS	1
1.3 TENDER DOCUMENT FEE	1
1.4 CLOSING OF TENDERS	1
1.5 DOCUMENTS TO BE LODGED.....	1
1.6 ASSESSMENT CRITERIA	2
1.7 THE CONTRACT.....	2
1.8 LICENSED BUILDERS.....	2
1.9 TENDER DEPOSIT	2
1.10 SECURITY DEPOSIT	2
1.11 GOODS & SERVICES TAX (GST).....	2
1.12 SUPERANNUATION	2
1.13 CONTRACT PERIOD	3
1.14 LIQUIDATED DAMAGES.....	3
1.15 INSURANCE.....	3
1.16 ADDENDA ACKNOWLEDGEMENT	3
1.17 DISCREPANCIES	3
1.18 INSPECT SITE.....	3
1.19 PORTABLE LONG SERVICE LEVY	3
1.20 WORK HEALTH AND SAFETY ACT	3
1.21 QUALITY ASSURANCE	4
1.22 FEES & APPROVALS	4
1.23 WORKS TO BE EFFECTED BY THE PRINCIPAL	4
1.24 REQUESTS FOR INFORMATION	4
2 CONDITIONS OF CONTRACT	5
2.1 CONTRACT DOCUMENTS	5
3 NATURE OF WORKS	6
4 EXTENT OF CONTRACT	6
5 LOCATION OF WORKS	6
6 NATURE OF STRATA	6
7 TIME FOR COMPLETION	7

8	SUPERVISION.....	7
9	COMMENCEMENT.....	7
10	PREPARATION OF SITE ETC.....	7
11	DIRECTIONS OF SUPERINTENDENT.....	7
12	PLANT AND OPERATORS.....	7
13	BORE CASING OR TUBING.....	8
14	CEMENT AND WATER.....	9
15	DRILLING MUDDS / FLUIDS.....	9
16	CASING CLAMP.....	10
17	STRATA SAMPLES.....	10
18	DRILLING LOGS.....	11
19	WATER SAMPLES.....	11
20	MAXIMUM DEPTH OF BORE.....	12
21	MINIMUM PAYMENT.....	12
22	MECHANICAL BREAKDOWN, LOST TOOLS ETC.....	12
23	ABANDONMENT.....	12
24	FINISHING AT BORE HEAD.....	12
25	STANDBY TIME.....	13
26	DEVELOPING, CLEANING AND TESTING.....	13
27	PUMP TESTS DURING DRILLING OF BORE.....	13
28	DRILLER'S TEST ON COMPLETION OF DRILLING.....	13
29	COMPLETION OF WORKS.....	13
30	PROGRESS PAYMENTS.....	14
31	VARIATIONS.....	14
32	CLEANING UP.....	14
33	DESCRIPTION OF WORK.....	14

CONDITIONS OF TENDERING

1. The Australian Standard Code of Tendering AS 4120 - 1994 shall generally apply.
2. Tenders shall close on the date at the time listed under "Information for Tenderers", at the address listed therein and shall be lodged as detailed.
3. Tenderers are required to acquaint themselves with all conditions relating to the tender and to inspect the site prior to submitting their tender. The Principal will not be liable for any claim on the grounds of insufficient information.

If a Tenderer has any doubt as to the meaning of any portion of the Tender Documents, they shall either:-

- a) ask the Superintendent for clarification, which clarification shall be valid only if issued in writing; or
- b) when submitting their Tender, include a statement of the interpretation upon which they rely and on which their tender has been prepared.

Any clarification given pursuant to this clause may also be issued to all other prospective Tenderers.

4. Tenders shall be submitted on the forms provided, each of which shall be signed by the Tenderer. All information called for on the forms shall be inserted in the respective places provided.

The tender shall be enclosed in a suitably endorsed sealed envelope.

5. Every Tenderer shall state in their tender:-
 - a) In the case of an individual, their full Christian Names, Surname and Address.
 - b) In the case of a business name, the names in full and addresses of all proprietors and the address of the principal place of business.
 - c) In the case of a company, the name of the company and the address of the registered office of the company.
6. The Tender Document Fee as listed shall include the cost of postal charges if applicable and is non-refundable.
7. Tenders may be lodged by post but otherwise shall be lodged at the closing address as listed before the time specified for the closing of Tenders.

Any Tender not received before the specified time will not be considered unless there is evidence satisfactory to the Principal that such Tender was despatched to reach the closing address under normal circumstances before the specified closing time, but was still in course of delivery at the time.

The Principal may reject any Tender delivered after the time of closing of Tenders, no matter what the reason is for late delivery. Franking machine stamps will not be accepted by the Principal as proof of date of posting of a Tender received after the closing time for Tenders.

CONDITIONS OF TENDERING (CONT'D)

8. No Tender received direct by telephonic or telegraphic devices, telegram, telex, facsimile or other electronic means will be considered by the Principal, with the exception that emails may be sent or transmitted direct to the office of the Principal with the prior explicit approval of the Principal. No guarantee as to the confidentiality of information can be given for any quotations sent electronically to the Principal.
9. Each Tenderer shall, as a guarantee of good faith, lodge with their Tender a deposit of an amount as listed under "Information for Tenderers". Such Tender Deposit may be in the form of a cheque, money order or bank guarantee payable to the Principal and refundable to unsuccessful Tenderers within fourteen (14) days after acceptance of a Tender.

The successful Tenderer will be required to submit a Security Deposit as specified in one of the above forms. The Tender Deposit will be considered to form part of the Security Deposit.

Note that the Security Deposit is distinct from and does not form part of Contract Retention Money.

10. The Contract shall be a fixed price contract unless provision is made elsewhere in these documents for rise and fall price variation.
11. In the case of a Schedule of Rates Contract, the Tenderer shall be bound by the rates stated in the Schedule and any extension and addition errors shall be corrected by adjustment of sums for individual items listed in the Schedule.
12. The successful Tenderer shall be notified in writing of the acceptance of the Tender and must thereupon lodge the Security Deposit as required and the Contract Documents shall then be prepared expeditiously for execution by the Contractor and Principal.
13. The successful Tenderer shall retain the documents on which their Tender was based and shall receive two (2) further sets of documents upon signing of the Contract.
14. Tenders shall remain valid for acceptance by the Principal for a period of ninety (90) days from the date of closing of Tenders. A Tenderer may withdraw their Tender at any time after the expiration of this period in the event of no Tender having been accepted.
15. Every notice to be given to a Tenderer may be posted to the Tenderer's address given in the Tender and such posting will be deemed good service of such notice and the time mentioned in the General Conditions of doing any act after notice will be reckoned from time of posting same.
16. Any Tender which does not comply with the requirements of the Tender Documents may be rejected.

Tenderers wishing to submit an alternative Tender must also submit a fully complying Tender. The alternative Tender must include a fully detailed description of the alternative and state clearly the manner in which it differs from Tender document requirements.

CONDITIONS OF TENDERING (CONT'D)

17. The Principal shall not be bound to accept the lowest or any Tender nor will the Principal be responsible for or pay for expenses or losses which may be incurred by any Tenderer in the preparation of their Tender.

These are the Conditions of Tendering referred to in my Tender.

Signed: Tenderer

AS 2125 - 1992

AUSTRALIAN STANDARD GENERAL CONDITIONS OF TENDERING AND FORM OF TENDER

1. The documents, upon which the tenderer is to tender are:

Contract No. MWS1. 20-21

Brandon & Associates Specification No. 212004

Brandon & Associates Drawing Nos. 21200401, 21200402 & 21200403

(They should be listed in each case. No general description suffices.)

2. Tenderers must complete the Tender Form provided and lodge it with any accompanying schedules or information before the time stated in the invitation to tender.
3. The Principal is not bound to accept the lowest or any tender.

TENDER FORM

Name of person, firm or
company tendering
USE BLOCK LETTERS

address

of

hereby tender(s) to perform the work for:

Description of works

Drilling, Casing, Cementing, Developing and Testing of a New Sub-artesian Bore,
Morven

List Documents

in accordance with the following documents

Brandon & Associates Specification No. 212004

Brandon & Associates Drawing Nos. 21200401, 21200402 & 21200403

No general description
suffices

When the tender documents provide that the tender is to a lump sum only, (2) does not apply. When the tender documents provide that the tender is to be a Schedule of Rates only, (1) does not apply.

1. For the lump sum of (\$ _____); and
2. At the rates in the attached Schedule of Rates

If the tenderer is a firm the full names of the individual members of the firm must be stated here.

Insert date

DATED this _____ day of _____ 20 _____

Signature of Tenderer

SCHEDULE OF PRICES

ITEM	DESCRIPTION	UNIT	QUANTITY	RATE (\$)	AMOUNT (\$)
1	Establishment of rig on site				
2	Drilling borehole and inserting casing				
	(a) surface conductor	metre	6		
	(b) 270 mm	metre	184		
	(c) 200 mm	metre	290		
	(d) 150 mm	metre	170		
3	Supply of casing				
	(a) 250 mm I.D.	metre	6		
	(b) 219 mm O.D.	metre	190		
	(c) 168 mm O.D.	metre	300		
	(d)127 mm O.D.	metre	180		
4	Supply / fabricate casing shoe				
	(a) 219 mm casing	Item	rate only		
	(b) 168 mm casing	Item	rate only		
	(c) 127 mm casing	Item	rate only		
5	Developing cleaning & testing	hour	allow 6		
6	Withdrawing tubing & plugging bore (if necessary)	hour	rate only		
7	Hire of plant & labour for work not specified	hour	rate only		
8	Cementing work specified for:				
	(a) 250 mm I.D.	metre	6		
	(b) 219 mm O.D.	metre	190		
	(c) 168 mm O.D.	metre	300		

9	Supply steel casing centralisers				
	(a) 219 mm O.D. casing	Item			
	(b) 168 mm O.D. casing	Item			
10	Supply back-off joints				
	(a) 168 mm O.D. casing	Item			
	(b) 127 mm O.D. casing	Item			
11	Standby time	Item	Rate only		
12	Finish borehead - flanges and bolts, fitting	Item			
SUB TOTAL					
GST					
TOTAL TENDERED AMOUNT					

SIGNATURE OF TENDERER:

FULL POSTAL ADDRESS:

.....

.....

DATE:

.....

SIGNATURE OF WITNESS:

DATE:

.....

			\$
			\$
			\$
			\$
			\$
			\$
			\$

ADDITIONAL RELEVANT INFORMATION:

.....
.....
.....
.....
.....
.....
.....
.....
.....

SIGNATURE OF TENDERER:

FULL POSTAL ADDRESS:

.....

.....

DATE:

SIGNATURE OF WITNESS:

DATE:

AS2127-1992

AUSTRALIAN STANDARD FORM OF FORMAL INSTRUMENT OF AGREEMENT

AGREEMENT made..... day of 20.....

BETWEEN

..... (the Contractor)

AND Murweh Shire Council..... (the Principal)

IT IS AGREED that the annexed documents marked as follows:

TITLE MARK

Tender, dated

.....
Letter of acceptance, dated

.....
AS 2124–1992 General Conditions of Contract and Annexure.

(Agreement signed and all pages initialled by both parties)

Specification:

Brandon & Associates Specification No. 212004

.....
Dwg. Nos.:

Brandon & Associates Drawing Nos. 21200401, 21200402 & 21200403

.....
Other Documents:

.....
(Use extra sheets if necessary to list all documents and drawings)

..... shall together comprise the contract between the parties AND if the Contractor or the Principal is two or more persons then they shall be bound jointly and severally.

Signed by the Contractor

.....
Signed by the Principal

STATUTORY DECLARATION

This Declaration must be submitted by the Contractor before the Superintendent is required to issue any Certificate (including the Certificate of Practical Completion and the Final Certificate).

Contract No.: MWS1. 20-21 Claim No.: _____

Contractor: _____

TO WIT

I,
of
in the State of Queensland, do solemnly and sincerely declare that:

1. I am _____ of _____
(Position) (Organisation)
and am duly authorised by that person / firm / company* to make this Declaration on their / its* behalf.
2. All workers who have at any time been employed on or about the works by the Contractor or worked under this Contract have at the date of this Declaration been paid in full all monies due and payable to them in accordance with the various applicable Industrial Awards in respect of their employment on the work under this Contract and were all duly covered by Worker's Compensation Insurance in accordance with the Worker's Compensation Act during the full period of their employment AND
3. All Subcontractors of the Contractor engaged on or about the works under this Contract and all workers who have been employed by a Subcontractor of the Contractor have at the date of this Declaration been paid in full all monies due and payable to them in respect of their work and their employment on the work under this Contract AND
4. All claims for compensation for timber, gravel, or other material and all claims for any damage or injury to people or property arising out of this Contract have been paid in full up to the date of this Declaration AND
5. All Insurance Policies required pursuant to the General Conditions of Contract are current at the time of this Declaration and remain current for the specified periods and conditions.

AND I MAKE this solemn Declaration conscientiously believing the same to be true and by virtue of the provisions of the Oaths Act 1867, as amended.

SIGNED and DECLARED by)
the above named Declarant)
 on this)
 day of)
 20)

in the presence of:

Justice of the Peace

*Delete as may be applicable

AS 2124 - 1992

**ANNEXURE TO THE AUSTRALIAN STANDARD
GENERAL CONDITIONS OF CONTRACT**

PART A

This Annexure shall be issued as part of the tender documents and is to be attached to the General Conditions of Contract and shall be read as part of the contract.

The law applicable is that of the State or Territory of: (Clause 1)	Queensland
Payments under the Contract shall be made at: (Clause 1)	Charleville, Queensland
The Principal: (Clause 2)	Murweh Shire Council
The address of the Principal:	Floor 7 313 Adelaide Street GPO Box 1549 Brisbane City Qld 4000
The Superintendent: (Clause 2)	Brandon & Associates Pty Ltd
The address of the Superintendent:	24 Quintin Street, ROMA PO Box 543 ROMA Qld 4455
Limits of accuracy applying to quantities for which the Principal accepted a rate or rates: (Clause 3.3(b))	N/A
Bill of Quantities – the alternative applying: (Clause 4.1)	Alternative 2
The time for lodgement of the priced copy of the Bill of Quantities: (Clause 4.2)	N/A
# Contractor shall provide security in the amount of: (Clause 5.2)	\$3000 plus 1% of the amount by which the Contract Sum (excluding GST) exceeds \$100000

Where there are Separable Portions, these items shall be deleted

# Principal shall provide security in the amount of: (Clause 5.2)	NIL
# The period of notice required of a party's intention to have recourse to retention moneys and/or to convert security: (Clause 5.5)	Fourteen (14) Calendar Days
The percentage to which the entitlement to security and retention moneys is reduced: (Clause 5.7)	100%
Interest on retention moneys and security—the alternative applying: (Clause 5.9)	Alternative 2
The number of copies to be supplied by the Principal: (Clause 8.3)	Two (2) Copies
The number of copies to be supplied by the Contractor: (Clause 8.4)	Two (2) Copies
The time within which the Superintendent must give a direction as to the suitability and return the Contractor's copies: (Clause 8.4)	Fourteen (14) Calendar Days
Work which cannot be subcontracted without approval: (Clause 9.2)	NIL
The percentage for profit and attendance: (Clause 11(b))	Ten (10%) Percent
The amount or percentage for profit and attendance: (Clause 11 (c))	Ten (10%) Percent
Insurance of the Works—the alternative applying: (Clause 18)	Alternative 1
The assessment for insurance purposes of the costs of demolition and removal of debris: (Clause 18(ii))	Amount equal to 10% of the Contract Sum
The assessment for insurance purposes of consultants' fees: (Clause 18(iii))	Maximum 9% of contract price

Where there are Separable Portions, these items shall be deleted

AS 2124 - 1992

The value of materials to be supplied by the Principal: (Clause 18 (iv))	NIL
The additional amount or percentage: (Clause 18(v))	Five (5%) Percent
Public Liability Insurance—the alternative applying: (Clause 19)	Alternative 1
The amount of Public Liability Insurance shall be not less than: (Clause 19)	\$20,000,000
The time for giving possession of the Site: (Clause 27.1)	Within seven (7) days of: a) Date of issue of letter of acceptance b) Receipt by Principal of documentary evidence that the Contractor has taken out all insurances required by the Contractor whichever is the later
# The Date for Practical Completion: (Cause 35.2)	Nominal eight (8) weeks from the date of issue of letter of acceptance, subject to negotiation at tender stage
# Liquidated Damages per day: (Clause 35.6)	\$1000
# Limit of Liquidated Damages: (Clause 35.7)	Contract plus 10%
# Bonus per day for early Practical Completion: (Clause 35.8)	NIL
# Limit of bonus: (Clause 35.8)	N/A
# Extra costs for Delay or Disruption: (Clause 36)	N/A
# The Defects Liability Period: (Clause 37)	Six (6) Months
The Charge for overheads, profit, etc. for Daywork: (Clause 41 (f))	Ten (10%) percent

Where there are Separable Portions, these items shall be deleted

Times for Payment Claims: (Clause 42.1)	Monthly
Unfixed Plant and Materials for which payment claims may be made notwithstanding that they are not incorporated in the Works: (Clause 42.1 (ii))	NIL
Retention Moneys on: (Clause 42.3)	(a) work incorporated in the Works and any work or items for which a different amount of retention is not provided, <u>10</u> % of the value until <u>5</u> % of the Contract Sum is held; (b) items on Site but not yet incorporated in the Works, <u>N/A</u> %; (c) items off Site but in Australia <u>N/A</u> %; (d) items not in Australia <u>N/A</u> % (e) disbursements incurred by the Contractor for customs duties, freight, marine insurance, primage, landing and transport in respect of the work under the Contract <u>N/A</u> %.
Unfixed Plant or Materials—the alternative applying: (Clause 42.4)	Alternative 3
The rate of interest on overdue payments: (Clause 42.9)	Ten (10%) percent per annum
The delay in giving possession of the Site which shall be a substantial breach: (Clause 44.7)	Two (2) Months
The alternative required in proceeding with dispute resolution: (Clause 47.2.)	Alternative 2
The person to nominate an arbitrator: (Clause 47.3)	Superintendent
Location of arbitration: (Clause 47.3)	Queensland

AS 2124 - 1992

Separable Portions

1. Separable Portion: NIL

2. Contractor shall provide security in the amount of:
(Clause 5.2) _____

Principal shall provide security in the amount of:
(Clause 5.2) _____

The period of notice required of a party's intention to
have recourse to retention moneys and/or to convert
security:
(Clause 5.5) _____

3. The Date for Practical completion:
(Clause 35.2) _____

4. Liquidated Damages:
(Clause 35.6) _____

5. Limit of Liquidated Damages:
(Cause 35.7) _____

6. Bonus per day for early Practical Completion:
(Clause 35.8) _____

7. Limit of bonus:
(Clause 35.8) _____

8. Extra costs for Delay or Disruption:
(Clause 36) _____

9. Defects Liability Period:
(Clause 37) _____

Event

Use this part of the Annexure where there are Separable Portions and ensure that the description of the Separable Portions covers all the work under the Contract. Make a separate column for each Separable Portion.

**ANNEXURE TO THE AUSTRALIAN STANDARD
GENERAL CONDITIONS OF CONTRACT**

PART B

NOTE: This table is intended for easy reference to clause that may have been deleted, amended or added to Australian Standard 2124 - 1992

-
1. The following clauses have been deleted from the General conditions in AS 2124–1992:

AS PER ATTACHMENT

2. The following Clauses have been amended and differ from the corresponding Clauses in AS 2124–1992:

AS PER ATTACHMENT

3. The following Clauses have been added to those of AS 2124–1992:

AS PER ATTACHMENT

STANDARDS AUSTRALIA GENERAL CONDITIONS OF CONTRACT AS 2124 - 1992

The General Conditions of Contract shall be the "AUSTRALIAN STANDARD GENERAL CONDITIONS OF CONTRACT" AS2124, subject to the additions, deletions, substitutions and amendments set out hereafter.

Clauses to be amended are:

Clause 3 Delete lines 38, 39 and 40

Add:

If a schedule of rates omits an item which should reasonably have been anticipated by an experienced and competent Contractor, at the time of Tender, to be necessary for the satisfactory completion and performance of the works, the Contractor shall in the Tender insert such omitted item in the schedule with a price or rate for such item. In the event of the failure of the Contractor to do so, the cost of such item will be deemed to be included within other items of the schedule.

Clause 9 Amend line 44 to:

advise the Contractor of approval or rejection.

Clause 12 Amend lines 33 to 35:

excluding weather conditions, which differ materially and substantially from those physical conditions which should reasonably have been anticipated by an experienced and competent Contractor at the time of the Contractor's Tender etc.

Amend line 49:

a) The latent condition encountered and in what respect it differs materially and substantially.

Amend line 7:

which an experienced and competent Contractor could not reasonably have anticipated, etc.

Clause 17 Delete lines 44 and 45

Amend lines 49 and 50 to:

The Principal shall indemnify the Contractor in respect of claims referred to in Clause 17.1(v).

Clause 29 Add new clause 29.2 (a):

CONSTRUCTION PLANT OWNED BY OTHERS

The Contractor shall, upon request by the Superintendent, notify the Superintendent in

writing of the name and address of the owner of any construction plant used on the work under the contract at the site and held by the Contractor under an agreement with the owner. The Principal may, in order to avoid seizure by the owner of such construction plant, pay to the owner the amount of any overdue instalment or other sums payable under the agreement. In the event of doing so they may recover the amount as a debt due from the Contractor.

Add new Clause 29.4:

WARRANTIES

The Contractor shall ensure that all warranty entitlements arising from the works include the Principal and the Contractor as named beneficiaries. Such warranties shall be in a form approved by the Superintendent and shall be submitted to the Superintendent prior to the issue of the final payment certificate.

Clause 30 After line 21 (page 25 Clause 30.6), add new paragraph:

The Contractor shall not be entitled to rely upon any inspections or test carried out for their own purposes by the Principal or Superintendent.

Clause 35 Amend line 41 of 35.5:

described in the next paragraph and within 14 days after the delay occurs the Contractor

Clause 35.5 Amend line 49 (page 28):

inclement weather conditions which differ from the conditions stated in the Contract or in the absence of such statement which differ materially and substantially from those conditions which should reasonably have been anticipated by an experienced and competent Contractor.

Between lines 38 and 39 (page 29) add new paragraph:

The Contractor shall not be entitled to any payment arising from the gaining of an extension of time over and above any payment to which they are entitled under the contract for the event that has caused such extension of time.

Amend line 42 of 35.5 page 29:

for any reason there shall be no payment to the Contractor because of the granting of such extension of time.

Amend "28 days" in lines 33, 35 and 44 to "14 days".

Clause 36 Amend by adding between lines 22 and 23, a new paragraph:

Under no circumstances shall payment for such delays or disruption exceed the rate

agreed upon elsewhere in the Contract.

Clause 41 Line 44 amend:

in determining the value of Day Work where the Contract does not include rate(s) for Day Work regard shall be had to

Line 7, page 44, amend:

except where noted otherwise in the Contract the amounts payable for Day Work, etc.

Clause 42 Amend line 27:

Clause 44.6, amounts paid under the Contract and amounts in the opinion of the Superintendent otherwise due from the

Clause 43 Delete clause and insert:

- 43.1 Upon entry into a subcontract for any part of the work under the contract, the Contractor shall, in respect of that subcontract, establish the payment recording system for that Subcontractor as set out in clause 43.2.
- 43.2 All payments to Subcontractors shall be recorded by the Contractor on an approved Record of Payments form. The Contractor shall ensure that, as to any payment to any Subcontractor, such form is fully completed, executed by the Subcontractor concerned, and kept by the Contractor as proof of compliance with this clause.
- 43.3 At the time of making a progress claim under clause 42.1 the Contractor shall deliver to the Superintendent a statement naming any Subcontractor who has failed or refused to execute a Record of Payment form or to whom no payment has yet to been made and hereby acknowledges that the Superintendent may thereupon notify any such Subcontractor that after the expiration of 10 days from the date of the progress claim the Superintendent proposes to issue a payment certificate to the Principal including such amounts as may be claimed by the Contractor in respect of such Subcontractor.
- 43.4 The Record of Payment forms shall be:
- (a) kept by the Contractor until issue of the Final Certificate by the Superintendent;
 - (b) provided to the Superintendent for inspection and copying upon reasonable notice in writing.
- 43.5 At the request of the Contractor and out of moneys payable to the Contractor the Principal may on behalf of the Contractor make payment directly to a worker or Subcontractor.

- 43.6 Before the payment of any money to the Contractor by the Principal, the Superintendent may require the Contractor:
- (a) to deliver to the Superintendent a statutory declaration in the form attached to these conditions by the Contractor, or where the Contractor is a corporation, by a representative of the Contractor who is in a position to know the facts attested to, that all Subcontractors of the Contractor have been paid all that is due and payable to such Subcontractors up to the date of submission by the Contractor of a progress claim in respect of the work under the contract and that all its workers who at any time have been engaged on work under the contract by the Contractor have been paid all moneys due and payable to them up to the date of submission by the Contractor of a progress claim, in respect of their employment on the work under the contract and, if requested in writing, provide reasonable supporting documentary evidence thereof;
 - (b) to deliver to the Superintendent a Statutory Declaration in the form attached to these conditions by any Subcontractor, or where the Subcontractor is a corporation, by a representative of the Subcontractor who is in a position to know the facts attested to, that all workers who have been engaged by a Subcontractor of the Contractor have been paid all moneys due and payable to them up to date of submission by the Contractor of a progress claim in respect of their employment on the work under the contract and that all Subcontractors of the Subcontractor have been paid all that is due and payable to such Subcontractors up to date of submission by the Contractor of a progress claim in respect of the work under the contract and, if requested in writing, provide reasonable supporting documentary evidence thereof.
- 43.7 If within 3 days after the request is made by the Superintendent, the Contractor fails to provide a statutory declaration in the form attached to these conditions or the documentary evidence requested in a form satisfactory to the Principal (as the case may be) the Principal may, notwithstanding the provisions of Clause 42.1 and 44, suspend payments to the Contractor until such statutory declaration is provided.
- 43.8 The Contractor acknowledges that the Principal may release to a Subcontractor details of payments in percentage terms made by the Principal to the Contractor in respect of the works or any part thereof unless the Contractor shows reasonable grounds why such details should not be released or satisfies the Principal that all payments due to the Subcontractor by the Contractor have been paid.
- 43.9 If a worker or Subcontractor obtains a court order in respect of monies referred to in Clause 43.6 and produces to the Principal the court order and a statutory declaration that it remains unpaid, the Principal may pay the amount of the order and costs included in the order to the worker or Subcontractor and the amount paid shall be a debt due from the Contractor to the Principal.
- 43.10 After the making of a sequestration order or a winding up order in respect of the Contractor, the Principal shall not make any payment to a worker or Subcontractor without the concurrence of the official receiver or trustee of the estate of the

bankrupt or the liquidator as the case may be.

Clause 46 Amend lines 40 and 41 to:

Unless within 42 days after the direction or approval is given to the Contractor, the Contractor has given to be....

AS 2124-1992

APPROVED FORM OF UNCONDITIONAL UNDERTAKING

(Clause 5.3)

At the request of ('the Contractor') and in consideration of Murweh Shire Council ('the Principal') accepting this undertaking in respect of the Contract for Drilling, Casing, Cementing, Developing and Testing of a New Sub-artesian Bore, Morven

..... ('the Financial Institution') unconditionally undertakes to pay on demand any sum or sums which may from time to time be demanded by the Principal to a maximum aggregate sum of \$
(.....)

The undertaking is to continue until notification has been received from the Principal that the sum is no longer required by the Principal or until this undertaking is returned to the Financial Institution or until payment to the Principal by the Financial Institution of the whole of the sum or such part as the Principal may require.

Should the Financial Institution be notified in writing, purporting to be signed by

..... for and on behalf of the Principal that the Principal desires payment to be made of the whole or any part or parts of the sum, it is unconditionally agreed that the Financial Institution will make the payment or payments to the Principal forthwith without reference to the Contractor and notwithstanding any notice given by the Contractor not to pay same. Provided always that the Financial Institution may at any time without being required so to do pay to the Principal the sum of \$

(.....)

less any amount or amount it may previously have paid under this undertaking or such lesser sum as may be required and specified by the Principal and thereupon the liability of the Financial institution hereunder shall immediately cease.

DATED at this day of 20.....

1. INFORMATION FOR TENDERERS

1.1 Project Description

DRILLING, CASING, CEMENTING, DEVELOPING AND TESTING OF A NEW SUB-ARTESIAN BORE, MORVEN

The whole of the work shall be in accordance with the following specification and accompanying drawings and such further details and instruction as may be issued and completed to the satisfaction of the Superintendent.

1.2 Tender Documents

Tender documents comprise:

Conditions of Tendering

General Conditions of Tender – AS2125

Tender Form

Schedule of Prices

Works Programme & Methodology Statement

Local Expenditure Statement

Form of Formal Instrument of Agreement – AS2127

Statutory Declaration

Annexures to General Conditions of Contract

Approved Form of Unconditional Undertaking

Brandon & Associates Specification No. 212004

Brandon & Associates Drawing Nos. 21200401, 21200402 & 21200403

1.3 Tender Document Fee

No tender document fee is applicable.

1.4 Closing of Tenders

Tenders close at the office of Murweh Shire Council, 95-101 Alfred Street, Charleville, at 2pm Thursday 13th May 2021.

Tenders shall be lodged in a sealed envelope. Envelopes shall be endorsed: -

TENDER:

WATER SUPPLY BORE, MORVEN

Tenders not delivered by hand shall be posted to:

The Chief Executive Officer

Murweh Shire Council

PO Box 63

Charleville Qld 4470

1.5 Documents to be Lodged

Documents required to be lodged shall include the tender form, the fully completed schedule of

prices, work methodology statement, local expenditure statement, a signed copy of the conditions of tendering and the tender deposit (if applicable).

1.6 Assessment Criteria

The following assessment criteria and relevant weighting will be applied to analysis of tenders received prior to selection of the successful tenderer.

Notwithstanding such analysis, the Principal reserves the right to select the submission that in view of all the circumstances appears to be the most advantageous.

Criteria	Weighting
Price	50%
Use of local suppliers and Subcontractors	20%
Previous experience in similar projects in far western Queensland	10%
Contract commencement date / contract period	20%

1.7 The Contract

The Contract shall be a FIXED PRICE LUMP SUM CONTRACT. The Contract shall NOT be subject to variation on account of Rise and fall of wage rates or materials prices.

1.8 Licensed Builders

The attention of Tenderers is drawn to the contents of the Queensland Building and Construction Commission Act.

Where required by the Act, Tenderers must tender in the name of the licensed builder(s) under the Act. The signature of the Tenderer must be that of the licensed builder(s) or authorised agent in which case a copy of the authority should be enclosed with the tender.

1.9 Tender Deposit

No tender deposit is required.

1.10 Security Deposit

The Security Deposit for the works shall be calculated as \$3000 plus 1% of the amount by which the Contract Sum exceeds \$100,000.

1.11 Goods & Services Tax (GST)

Tenders are to be inclusive of GST. The GST amount shall be shown separately in the Schedule of Prices.

1.12 Superannuation

Tenders shall be deemed to have included all costs arising from superannuation schemes

which may be incurred by the Contractor to the date of the Final Certificate. No Contract Sum adjustments shall be made for reasons arising from any such costs, including increases in such costs which may occur after the date of Tender.

1.13 Contract Period

Nominal **eight (8)** weeks from issue of letter of acceptance – subject to negotiation at tender stage.

1.14 Liquidated Damages

Failure to complete the works within the specified time shall incur Liquidated Damages of One Thousand Dollars (\$1000.00) per day or part thereof.

1.15 Insurance

Insurance of the works shall be effected by the Contractor in accordance with the General Conditions of Contract.

1.16 Addenda Acknowledgement

Tenderers shall acknowledge in their submitted tenders the receipt of the numbered and dated Specification Addenda and any drawings issued during the tender period and the inclusion of their contents in the tender.

1.17 Discrepancies

Should a tenderer find discrepancies or omissions from the Drawings and/or Specification, or be in doubt as to their meaning, they shall at once notify the Superintendent and obtain a ruling on the matter. Anything contained on the Drawings and not mentioned in the Specification or vice versa shall be considered as being included and the whole of the work shall be executed to the true intent of the Drawings and Specification. Figure dimensions will in all cases take precedence over scaling of the Drawings.

1.18 Inspect Site

Tenderers shall inspect the site prior to submission of their tender and shall satisfy themselves as to site conditions and the full extent of work necessary to complete the contract to the full intent of the Specification.

1.19 Portable Long Service Levy

The initial completion of and lodgement of forms and payment of fees shall be the responsibility of the Principal.

1.20 Work Health and Safety Act

The Contractor will be appointed the Principal Contractor in respect of the work which is the subject of this contract, in accordance with the provision of the Act.

Where the work “Owner” appears in the Act, “Owner” shall be defined as the Principal referred to in the General Conditions of Contract.

The initial completion and lodgement of forms and payment of fees shall be the responsibility of the Principal. The Contractor shall be responsible for all other requirements under the Act, including completion and lodgement of other forms, notices and work plans, use of appropriately trained and qualified staff and payment of other fees.

1.21 Quality Assurance

Tenderers shall advise the status of their quality system, if any, including certification details.

1.22 Fees & Approvals

The following fees and applications shall be the responsibility of the Principal:

- a) QLeave Levy;
- b) Plumbing approval; and
- c) Power connection.

All other necessary fees, permits, approvals etc., are to be obtained by and paid for by the Contractor.

1.23 Works To Be Effected By The Principal

1.23.1 Site Works

Fencing, landscaping, site treatment, site grading, surface treatment and application of surface finishes together with surface drainage is to be effected by the Principal.

All signage is to be installed by the Principal.

1.23.2 Water Supply

The Principal will provide pumping equipment and delivery / discharge pipework, valves & fittings except as nominated and scheduled in this specification.

1.24 Requests for Information

Queries regarding the specification and drawings shall be directed to:

Bryan Payne
Brandon & Associates
Roma Qld
Ph. (07) 4622 3799
Fax (07) 4622 2041
Email roma@brandoneng.com

and shall preferably be in writing for clarity.

2 CONDITIONS OF CONTRACT

2.1 Contract Documents

The Contract documents include:

The General Conditions of Contract AS2124 subject to the additions, deletions, substitutions and amendments set out in the Annexures thereto.

A copy of the General Conditions of Contract shall be available for perusal at the office of the Consulting Engineers:-

Brandon & Associates Pty Ltd
24 Quintin Street
ROMA Q. 4455

3 NATURE OF WORKS

- 3.1** Works to be carried out under this Contract comprise the drilling, casing, cementing, developing and testing of one sub artesian production bore using rotary drilling plant for Murweh Shire Council, within the locality of the township of Morven, south-west Queensland. The depth of the completed bore is expected to be 650 metres and have a sub-surface standing water level around 75 metres below ground surface. A pumping supply of around 15-20 l/s could result, however until the bore is completed the pumping supply is not known.

4 EXTENT OF CONTRACT

- 4.1** The bore shall be drilled to an anticipated depth of 650 metres. From surface to 6 metres shall be cased with either PVC or steel tubing with an internal diameter no less than 250mm. This conductor pipe shall be cemented in place. From surface to 190 metres it shall be cased with 219mm O.D. casing. From 180 metres to 480 metres it shall be cased with 168mm O.D. casing. A final string of 127mm O.D. slotted casing shall extend from 470 metres to bottom. The 219mm and 168mm strings of casings shall be pressure cemented as described below.
- 4.2** Cementing of the 219mm and 168mm casing shall be carried out as specified herein or as directed. On completion the bore shall be developed and air tested and the bore cap shall be finished as indicated in Brandon & Associates Drawing No. 21200403.
- 4.3** All work performed under this contract shall meet the current minimum construction requirements for water bores in Australia and minimum standards for the construction and reconditioning of water bores that intersect sediments of artesian basins in Queensland. It should be noted that although this bore will not free flow water to surface, it will penetrate artesian basin sediments. See construction plan below for Brandon & Associates Drawing No. 21200403.

5 LOCATION OF WORKS

- 5.1** The location of the proposed bore is as indicated on Brandon & Associates Drawing Nos. 21200401 and 21200402. The site is located at the eastern extremity of the town of Morven, within the precinct of the new Morven Freight Hub, and the exact location will be marked by the Superintendent on site.
- 5.2** A minimum clear site area measuring approximately 60 metres x 60 metres with clear and reasonable access for trucks and trailers will be made available to the Contractor.
- 5.3** The Contractor shall confine all operations and plant to the area approved by the Principal.

6 NATURE OF STRATA

- 6.1** The bore will penetrate sedimentary shales, siltstones, mudstones and consolidated sandstones which form part of the Great Artesian Basin. The layered geological formations to be drilled are known as Doncaster Formation, Cadna-owie Formation, Hooray Sandstone, Westbourne Formation, Adori Sandstone, Eurombah Formation and Hutton Sandstone. Aquifers within the Hutton Sandstone will be the target water bearing zone/s. All other geology units mentioned here must be isolated from the bore by pressure cementing.

7 TIME FOR COMPLETION

- 7.1** The Contractor shall state on the Memorandum an estimate of commencement date and the time required to complete the work, such times to be calculated from the date of notification of the acceptance of tender. A nominal completion time of **eight (8)** weeks has been allowed, subject to negotiation at tender stage.

8 SUPERVISION

- 8.1** The Superintendent shall be a representative of Consulting Engineers, Brandon & Associates, however the work under this contract may also be inspected by an Officer appointed by the Department of Natural Resources and Mines.

9 COMMENCEMENT

- 9.1** The Contractor shall give the Principal at least fourteen (14) days notice of intention to commence work, to enable arrangements to be made for supervision, access etc.
- 9.2** If this is not done, the Contractor shall have no claim against the Principal for any delay pending the arrival at the site of the materials and/or Superintendent.

10 PREPARATION OF SITE ETC.

- 10.1** Access to the drilling site shall be provided at no cost to the Contractor.
- 10.2** The Contractor shall provide their own mud pits, if required. Cost of mud pit construction, and levelling and rehabilitation of pit/s site shall be deemed to be included in the Schedule of Quantities and Rates, hereinafter called the Schedule.
- 10.3** The Contractor shall provide details in tender of the extent of required working area.

11 DIRECTIONS OF SUPERINTENDENT

- 11.1** Wherever words such as "ordered", "approved", "directed" or words of like import appear on any documents in the contract, they shall mean ordered, approved or directed in writing by the Superintendent unless some other meaning is plainly intended.

12 PLANT AND OPERATORS

- 12.1** All work under this contract shall be carried out by a responsible and experienced driller with a current Class 3 Driller's Licence issued by the Queensland Department of Natural Resources and endorsed for the construction method to be used. The driller shall be accompanied at all times by at least one experienced assistant. It is essential for the driller in charge to have had extensive experience in the construction of water bores and in the pressure cementing of bores.
- 12.2** The Contactor shall supply with the Tender in the Memorandum the name of the Driller who would be employed on the job should the Contractor's tender be accepted.

- 12.3** Drilling equipment shall meet any DNR inspection and certification requirements.
- 12.4** Drillers should not contract for or attempt works which could be reasonably expected to exceed the depth, diameter or casing load rating of the drill plant to be used.
- 12.5** The driller shall ensure that drilling tools are cleaned / disinfected before working on the site. Equipment should be chlorine washed or steam cleaned after being used in an area where iron bacteria is known or suspected to occur.

13 BORE CASING OR TUBING

- 13.1** In this contract the term “casing” shall be deemed to refer also to tubing. Unless otherwise approved, the Contractor shall use steel bevel ended welded tubing and shall supply all such tubing required to the site of works. The tubing shall only be welded by a competent welder having previous proven experience with welding of casing strings to 500 metres or greater, unless approved otherwise.
- 13.2** Payment for the casing required shall be at the unit rates tendered in the schedule. The Contractor must confirm on the Memorandum whether it is proposed to use casing or tubing.
- 13.3** The casing shall be in accordance with Australian Standards AS 1396 C350, 1579 and 1836 and shall be of the following minimum sizes:
- surface to 6 metres - 250mm I.D. with minimum wall thickness of 6.35mm (may be of inert or steel material);
 - surface to 190 metres - 219 mm O.D. with minimum wall thickness of 6.3mm;
 - from 180 metres to 480 metres - 168 mm with minimum wall thickness 6.3 mm;
 - from 470 metres to total depth - 127mm O.D. with minimum wall thickness of 4.7mm.
- 13.4** All casing shall be supplied with bevelled ends suitable for butt welding except for 6 metres surface conductor tube as described above.
- 13.5** Second grade or reject steel pipe or tube shall not be used as bore casing.
- 13.6** Care should be taken with welded joints to ensure a round, straight, secure and leak-proof joint is obtained. Holes should not be cut into casing for the purpose of raising or lowering a string of casing in a bore. Collared joints may be used for any or all strings of casing in lieu of flush butt welding. Any weld-on lifting lugs shall be removed from the casing before it is inserted below ground level.
- 13.7** The first length of each diameter casing inserted in the bore may be fitted with a steel casing shoe or an approved self manufactured reinforced collar provided by the Contractor.
- 13.8** The Contractor shall keep, in an approved bound notebook, an up to date record of the lengths of casing inserted in the bore.
- 13.9** The Contractor shall maintain the top of the casing at a level which enables all operations to be carried out to the complete satisfaction of the Superintendent.

- 13.10** Steel centralisers shall be attached to the outside of the 219mm casing at 12 metre intervals from surface to 190 metres and the 168mm casing from 180 metres to 480 metres to ensure a full uniform coverage of grout is achieved around both casing strings.

Centralisers may be purchased commercially or manufactured by the Contractor. If manufactured, three lengths of 12mm solid rod each 300mm in length and welded at equal distances around the circumference of the 168mm casing at each 12m location will be acceptable. The supply and fitting of the centralising devices shall be included in the metre rate for inserting casing in the schedule.

14 CEMENT AND WATER

- 14.1** The Contractor shall supply all cement, water and additives required in the execution of this Contract, including all of same required in the cementing operations.
- 14.2** Cement used for grouting shall be to Australian Standard AS3972 for Portland and Blended Cement.
- 14.3** Water shall be free from contaminants harmful to cement and steel bore casing.
- 14.4** The conductivity and pH values of all make-up waters shall be measured and adjusted if need be to a neutral or slightly higher level.
- 14.5** The Contractor shall have on hand manufacturer's guidelines and safety data sheets for all additives and materials used. These should list instructions for handling, mixtures, use, any potential hazard and any disposal requirements for the product or container.
- 14.6** The Driller shall use fresh cement free from lumps in the proportion of one bag (40kg) of cement to not more than 35 litres of fresh water and 0.8kg of bentonite or such other grout mixes as may be directed.

15 DRILLING MUDS / FLUIDS

- 15.1** The Contractor shall supply all necessary drilling muds/fluids and additives and the cost of such muds shall be included in the rate stated in the Schedule for the drilling of the bore.
- 15.2** All drilling fluids or additives shall be of a non-chloride nature.
- 15.3** Location(s) of mud pit(s) shall be subject to the approval of the Superintendent.
- 15.4** The following types of drilling fluids shall be considered acceptable:
- (a) free water-based drilling fluids;
 - (b) natural drilling fluids; and
 - (c) air-based drilling fluids.
- 15.5** Additives to drilling fluids that are acceptable are classified as follows:
- (i) Dissolved additives:
 - (a) mud-thinning agents. The use of mud thinner based on phosphates is not recommended.

- (b) surfactants, drilling detergents and foaming agents;
- (ii) Non-dissolved additives:
 - (a) native solids (clays and sand);
 - (b) bentonite;
 - (c) polymers (liquid, powder);
 - (d) density-increasing materials; and
 - (e) loss-circulating materials (not recommended for the production zone).

15.6 Use of drilling fluid additives shall be in accordance with manufacturer's recommendations. Safety notes and manufacturer's recommendations for any additives used or proposed to be used by the driller shall be available for perusal at the bore site during construction as detailed in this specification.

15.7 During drilling operations, when additives to water are used, drilling-fluid properties shall be maintained within the limits that will allow their complete removal from the bore, if necessary and shall not affect the potential capacity, efficiency, or quality of the bore. Drilling-fluid properties may be requested to be maintained during normal drilling operations within the specified limits using test procedures conforming to API RP 13B:

- (a) Weight (fluid density) - test equipment: mud balance (API);
- (b) Viscosity - test equipment: Marsh funnel (API);
- (c) Filtration (wall cake and filtration loss) - test equipment: filter press (API); and
- (d) Sand content (solids larger than 200 mesh) - test equipment: sand-content set (API).

15.8 The driller shall ensure that the composition and properties of the drilling fluid are maintained to protect the water-bearing formations penetrated and to allow the collection of good representative samples of the formation materials during drilling.

15.9 Chemicals or other substances which could leave a residual toxicity shall not be added to the fluid.

15.10 Drilling fluid properties shall be tested regularly as a normal part of the drilling programme or as determined by the drilling conditions.

15.11 The drilling fluid must be removed from the hole to allow any subsequent development of the bore to proceed.

16 CASING CLAMP

16.1 A casing clamp is not required for this job.

17 STRATA SAMPLES

17.1 Strata samples shall be taken at 6 metre intervals generally and at each change of strata for the full depth of the bore. Samples of water beds are to be taken at 3 metre intervals.

Samples shall be obtained using approved tools and techniques and shall be collected free from grass and topsoil contamination. The samples shall be dried, bagged and labelled unless otherwise directed. The label shall indicate the bore from which the sample was extracted, the date of collection and the depth from which the sample was obtained.

- 17.2 Each sample shall be from 1 to 2 kilogram mass and will be sealed in sample bags provided for the purpose by the Superintendent. The samples shall be handed to the Superintendent on request.
- 17.3 Samples, whether required for collection or not, shall be laid out on regular lines so that both the Driller and Superintendent can see the formation changes.
- 17.4 The Driller shall be responsible for the safe storage of formation samples until such time as they are accepted by the Superintendent and shall submit strata samples to the licensing authority as soon as practicable after collection.
- 17.5 The cost of obtaining, containing and labelling samples shall be included in the rates tendered in the Schedule for the drilling of the bore.

18 DRILLING LOGS

- 18.1 The Contractor shall compile and keep up to date drilling logs in duplicate on approved forms, copies of which shall be supplied to the Superintendent.
- 18.2 The logs shall set out a description of strata penetrated, the depths at which changes in strata occur, the depths at which water is encountered and the level to which any such water rose when intersected. Other details to be provided shall include a record, including lengths, of all casing inserted and a full record of all works carried out.

19 WATER SAMPLES

- 19.1 When directed, the Contractor shall obtain and retain on the site samples representative of the Hutton Sandstone supply of water. The cost of obtaining and containing samples is to be included under the items in the Schedule for the drilling and testing of the bore.
- 19.2 Each sample shall be of a volume not less than 1 litre and shall be contained in a clean plastic or glass container with a secure stopper, labelled to indicate the bore from where it came, the depth and stratum from which it originated and the date the sample was taken.
- 19.3 Prior to taking a sample from a particular formation, the bore shall be pumped out or airlifted not less than three times the volume of the bore to remove material which may contaminate the sample. The method used to collect the sample shall not cause contamination of the bore or the sample. Such sampling will only be required from the completed bore or portion thereof.
- 19.4 One sample shall be taken half an hour after commencement of the preliminary air testing of the bore and one sample half an hour before completion of the preliminary air testing of the bore.
- 19.5 Measurements of electrical conductivity (Ec) and pH shall be taken using portable meters or other methods.

20 MAXIMUM DEPTH OF BORE

- 20.1** It is intended that the bore to be constructed under this Contract shall not exceed the full depth of the Hutton Sandstone, or as directed by the Superintendent. This may entail drilling and casing to below the scheduled depth of 650 metres, to provide a suitable sump below the aquifer.
- 20.2** It should be noted that the completed bore is not expected to flow and the standing water level from the Hutton Sandstone is expected to be around 75 metres below ground level.

21 MINIMUM PAYMENT

- 21.1** The Principal reserves the right to stop drilling operations at any depth and, provided that the work has been done to the Principal's satisfaction, the Contractor will be paid for the depth drilled and cased, with a minimum payment for 200 metres for the bore.

22 MECHANICAL BREAKDOWN, LOST TOOLS ETC.

- 22.1** The cost of repairs to plant and the recovery of tools or equipment lost in a bore shall be borne by the Contractor at no cost to the Principal.

23 ABANDONMENT

- 23.1** If it is decided by the Superintendent that the supply from the bore is unsuitable in quantity, quality or for any other reason, the bore may be abandoned. Any casing which has not been cemented shall be removed and stacked neatly, and the hole plugged as directed. Any work involved in the abandonment other than that caused by defective workmanship will be paid for at the rate tendered in the Schedule for withdrawing of casing and plugging of the bore.
- 23.2** In the case of abandonment of the bore (other than due to defective workmanship) the surface conductor tubing to 6 metres, the 219mm O.D. casing to a maximum depth of 190 metres, the 168mm O.D. casing from 180 metres to 480 metres and the 127mm casing shall be paid for by the Principal. However, if directed, the Contractor may be required to attempt to remove the 127mm casing from the hole. Such additional work will be paid for under the relevant item of the Schedule and if successful no payment will then be made for any materials retrieved.

24 FINISHING AT BORE HEAD

- 24.1** The bore shall be finished at surface as shown on accompanying Brandon & Associates Drawing No. 21200403, unless otherwise specified in writing by the Superintendent. It should include a high quality eight bolt flange welded to the 219mm casing and a blind flange of similar size bolted and spot welded in place. The 219mm casing and flange should extend 600mm above average ground level or higher if directed.
- 24.2** The cost of finishing the bore in this manner and fitting bolted flanges as described shall be included in the scheduled rate for "Finishing at Bore Head", under the relevant item of the schedule.

25 STANDBY TIME

- 25.1** Standby time shall be paid at the scheduled rate only for normal working hours of normal working days, which for the purpose of payment shall be taken to be 8 hours, to be worked as agreed upon from Monday to Friday inclusive but excluding statutory holidays and shall be paid only when all work by both plant and labour is stopped at the direction of the Superintendent.
- 25.2** Standby time will not be paid unless the plant operator and assistant are available during the standby period to proceed with the works of the contract and further provided that they are not engaged in other employment during the waiting period.

26 DEVELOPING, CLEANING AND TESTING

- 26.1** Developing will not be required for this bore. Cleaning and testing requirements are detailed elsewhere.

27 PUMP TESTS DURING DRILLING OF BORE

- 27.1** Any pump testing shall be the responsibility of the Principal.

28 DRILLER'S TEST ON COMPLETION OF DRILLING

- 28.1** On completion of the bore the Contractor shall conduct a drill stem air test of sufficient duration or a minimum of four (4) hours to remove all drill fluid and sand from the hole. The air lift depth will be varied to gain a better indication of available supply. All testing will be as directed on completion of the bore.
- 28.2** The Contractor will supply an air compressor of sufficient size and volume to lift at least 20 litres/second from 140 metres. A 350 psi x 900 cfm compressor is recommended.
- 28.3** The Contractor shall supply and install a weir board measuring device of sufficient size to measure the air lifted supply.
- 28.4** Payment for this work shall be made at the rate tendered under the relevant item of the schedule.
- 28.5** Driller is to record standing water level, drill stem testing depths, volumes discharged and durations of tests.

29 COMPLETION OF WORKS

- 29.1** On completion of driller's testing to the Superintendent's satisfaction, the bore shall be left free of tools, sand, silt and gravel or other obstructions and shall have a clear and straight hole for the full depth and diameter specified; failing which the Contractor shall recover all casing/tubing and shall plug the bore as may be directed by the Superintendent and the Contractor shall not be entitled to payment for any work done in connection with such bore. The Contractor may be required to then sink and case another bore in accordance with this Specification in such position as shall be indicated by the Superintendent.

- 29.2 Any materials not recovered from a defective bore shall be replaced by the Contractor at no cost to the Principal.

30 PROGRESS PAYMENTS

- 30.1 The Contractor shall not be entitled to any progress payment on the bore with respect to this contract until the depth drilled exceeds 190 metres.

31 VARIATIONS

- 31.1 Prices for hire of plant and labour are to be given in the Schedule. These are to be rates only and shall cover any work in connection with the bore, not specified elsewhere, which the Superintendent may consider necessary, provided the Contractor can carry out such work with the labour and plant normally employed on the Contract.
- 31.2 It will be noted that any time spent in waiting for cement to set as a result of any extra cementing of casing shall be included in the rate tendered in the Schedule for such work. Time spent in waiting for cement poured as required under this specification to set shall be included in the schedule rate for cementing of bore casing.

32 CLEANING UP

- 32.1 Before leaving the site, the Contractor shall remove all debris from construction materials, fluids and camp waste, fill in and compact as directed any mud pits and leave the site clean and tidy. Repair all damage to gates, fencing and the like. Final payment will not be made until this has been done to the satisfaction of the Superintendent.
- 32.2 All empty chemical, cement or drilling additive drums, containers or bags shall be disposed of in such a way as to cause minimum impact on the environment and in accordance with the requirements of the appropriate authority and in accordance with the relevant manufacturer's directions/specifications. Any well development chemicals shall be neutralised or otherwise disposed of in a safe manner.

33 DESCRIPTION OF WORK

- 33.1 Any surface hole casing required (conductor pipe surface to 6 metres) to stabilise the top of the bore shall be supplied and installed by the Contractor as part of the scheduled item for drilling and casing.
- 33.2 The bore is to be drilled straight and vertical and cased with 219mm O.D. casing to a depth of 190 metres from the surface. The diameter of the hole is to be a minimum of 270mm so there will be ample room for the circulation of liquid cement grout in the annulus outside the casing. The 219mm casing string shall incorporate centralisers spaced at 12 metre intervals as described above.
- 33.3 The hole from surface to 190 metres should be drilled in a straight and vertical manner, or as near as possible whilst considering the need for the successful installation of a deep well bore pump without it binding or suffering damage by misaligned drive shafting operating in a bent hole. Before cementing of the 219mm O.D. casing takes place, an alignment test to national minimum standard may be carried out by the Principal if there are any concerns regarding the hole's alignment. In

such an event the Contractor shall condition the fluid in the casing as directed and assist in taking all measures necessary to ensure the alignment meets industry standards. Payment for down time as a result of the alignment testing shall be paid for under the relevant item of the Schedule.

- 33.4** The annulus outside the 219mm O.D. casing shall then be pressure cemented from shoe to surface and the cement allowed 24 hours to set before drilling is recommenced.
- 33.5** The bore is then to be drilled straight and vertical from 190 metres to 480 metres from surface and cased with 168mm O.D. casing from 180 metres to 480 metres, or such depth as may be required by the Superintendent. The diameter of the hole is to be a minimum of 200mm so there will be ample room for circulation of liquid cement grout in the annulus outside the casing. This 168mm casing string is to be lowered to depth using drill stems and a left hand threaded back-off joint. The internal diameter of the back-off joint is to be the same as the 168 mm casing. Payment for the back-off collar to be made under the relevant item of the schedule. Steel centralisers shall be attached to the 168mm casing as described above. Payment for centralisers shall be made under the relevant item of the schedule.
- 33.6** The annulus outside the 168mm O.D. casing shall then be pressure cemented from shoe to 180 metres and the cement allowed 24 hours to set before drilling is recommenced.
- 33.7** The bore is then to be drilled to a depth of 650 metres from the surface, or such depth as may be required by the Superintendent. The diameter of the hole is to be a minimum of 150mm to permit the insertion of the 127mm O.D. casing.
- 33.8** When the bore has been drilled to full depth, the Superintendent may acquire the services of an electrical logging consultant, to more precisely locate the permeable horizons.
- Should this occur, the Superintendent will determine the location of the perforated tubing or slotted tubing on completion of the logging.
- 33.9** The 127mm O.D. casing shall be slotted to maintain as much strength in the casing as possible. Numerous short narrow slots (6-9mm in width) in a regular pattern with short sections left unslotted between are required rather than long, wide randomly placed slots.
- 33.10** The total open area of the slots should be at least twice the cross-sectional open area of the casing to limit water entrance velocity through the slots.
- 33.11** The slots shall allow water to enter over the full circumference of the bore.
- 33.12** To reduce the risk of silting, slotted casing shall not be placed against any non aquifer material and generally the slotted interval should finish within the top one metre of the aquifer.
- 33.13** The 127mm O.D. casing shall be inserted in the bore to a depth determined by the Superintendent. The top of the casing string will be located 10 metres above the bottom of the 168mm O.D. casing. A threaded back-off piece shall be welded to the 127mm O.D. to lower the casing on drill stems. The internal diameter of the joint shall be the same as the 127mm casing and the upper end "belled" outwards. Payment for the screwed back-off collar shall be made under the relevant item of the schedule.

- 33.14** All mud then will be removed from the bore by circulation of clean water and/or air lifting. The bore will be cleaned thoroughly until all traces of mud and cuttings have been removed and the water from the bore is clear and free of sand. The supply then shall be air tested if required.

On completion of the bore, a "Table E" eight bolt flange will be welded to the 219 mm casing. A blind flange shall be bolted to the welded flange and both flanges spot welded in together. See Brandon & Associates Drawing No. 21200403.