

CHAPTER 4

WATER SUPPLY SYSTEM

FOR

HAMLET OF IGLOOLIK - N.W.T.

TABLE OF COMPONENT FUNCTIONS

South Lake Pump House and fill line - Note the numbers given are referenced to the Flow Diagram in Chapter 4.

NO.	ITEM	LOCATION	FUNCTION PERFORMED	REMARKS
SL-1	Intake screen	South Lake	Removal of floating debris	150 mm standard well screen.
SL-2	Marker Float	South Lake	Locates end of intake to allow removal.	Styrofoam and wood box.
SL-3	168 mm dia. uninsulated intake pipe.	South Lake	Carry water from deeper area of lake to pump.	Sclairpipe laid on bottom of lake with steel weights - Removed after pumping. Length 45 m.
SL-4	150 mm quick coupler.	Intake and discharge lines.	Allows easy connections	Male and female Bayco connectors on Sclairpipe and flexible hose.
SL-5	150 mm flexible intake hose.	Intake line	Allow easy alignment of intake and pump.	Flexible rubber intake pipe has wire core to prevent collapse.
SL-6	Self priming Centrifugal Pump	South Lake Pump House	Pumps water to refill reservoir each fall if required.	1,580 ℓ / m (350 IGPM) @ 568 kPA (190 ft. H_2O) 2,500 RPM
SL-7	Diesel Motor	South Lake Pump House	Drives pump and supplies 12 Volt electricity through battery.	64 hp @ 2,500 rpm
SL-8	150 mm dia. discharge hose.	Reservoir fill line.	Allows easy alignment of fill line and pump.	Flexible rubber
SL-9	168 mm dia. uninsulated discharge.	South Lake to Airport Reservoir	Carries water to Airport reservoir as required to maintain volume.	Sclairpipe must be drained after use at the Creek and South Lake Pump House by disconnecting. Length 2,085 m.

SL-1 Intake Screen

SL-2 Marker Float

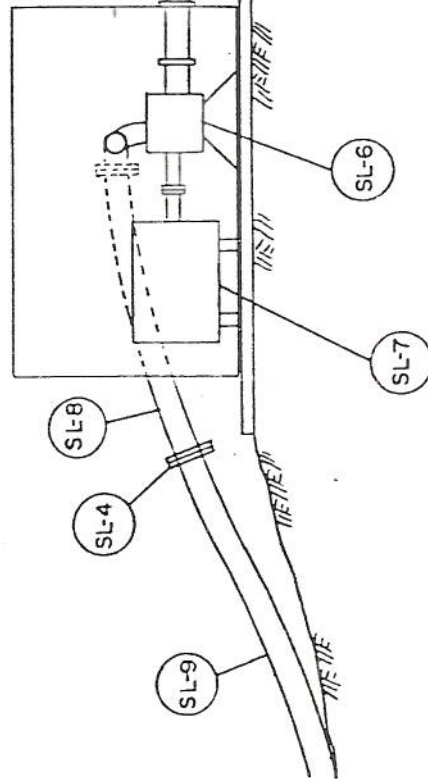
SL-3 168 mm Uninsulated Intake Line

SL-4 150 m Bayco Coupler

SL-5 150 m Flexible Intake Hose

SL-6 Centrifugal Pump

SL-7 Diesel Motor



SL-8 150 m Flexible Discharge Hose

SL-9 168 m Uninsulated Discharge Line

FLOW DIAGRAM - SOUTH LAKE

N. T. S.

CHAPTER 5

COMPONENT DETAILS

I N D E X

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CHAPTER 5
WATER SUPPLY SYSTEM
FOR
HAMLET OF IGLOOLIK - N.W.T.
TABLE OF COMPONENT DETAILS
RESERVOIR PUMP HOUSE

NO.	NAME/MAKE/MODEL	DATA	REMARKS
1	250 mm (10 inch) diameter intake	Capacity 454 litres/min.	
2	Well Pump No. 1 Jacuzzi submersible Model 5S6J4-S2	100 USGPM @ 125 ft. head, 2 stages, 5 HP motor 230 volt single phase.	Jacuzzi of Canada Ltd. 330 Humberline Dr. Rexdale, Ont. M9W 1R5
3	Well Pump #2 As above	As above	As above
4	250 mm dia. inclined shaft.	See attached Purchase Order	
5	89 mm dia. pump discharge pipes.	See attached Purchase Order	Westburne Limited 4590 Henri-Bourassa Blvd. Montreal, Quebec
6	Fire hose connectors		
7	Gate valves - iron body wedge.	3 inch dia. flanged.	Westburne Limited 4590 Henri-Bourassa Blvd. Montreal, Quebec
8	Water Meter - Neptune Trident Style 3	2 inch flanged See attached Purchase Order	Neptune Meters Ltd. 12455 Rue April Pointe-Aux Trembles, Que.
9	Truck fill pipe	Low Pressure Swivel Joint - standard series threaded.	
10	Chemical Mixer Wallace & Tiernan	See attached Purchase Order	
11	Chemical Feed Pump Wallace & Tiernan	See attached Purchase Order	
12	Chemical feed line	See attached Purchase Order	
13	Cold water line	See attached Purchase Order	
14	Hose-bib and sample valve	3/4 inch ballcock	See 7
15	Pressure Gauge Ashcroft Duragage Type 1279	0 to 600 kPa	See 7
16	Temperature Gauge Tel-Tru Manufacturing Co. Type 304	Stainless steel 0 to 120° C	See 7
17	Chemical Solution Wallace & Tiernan	136 litre polyethylene See attached Purchase Order	

ally Refrigeration & Canada Ltd.

Box 696

Rockville, Ontario

Box 5V1

ATTN: MR. PAUL WARREN

N1001-9-3697

RENDER SEPARATE INVOICE
EACH ORDER AND SEND 4 COPIES
INCLUDING ORIGINAL
AFTER SHIPMENT

THE FOLLOWING MATERIALS AS SPECIFIED HEREIN AND CHARGE TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES

INVOICE TO

GOVERNMENT OF THE NORTHWEST TERRITORIES
SUPPLY SERVICE
D.P.W. GOVT. OF N.W.T., IGLOOLIK N.W.T.

GOVERNMENT OF THE NORTHWEST TERRITORIES
SUPPLY SERVICES
BOX 70
YELLOWKNIFE, N.W.T.

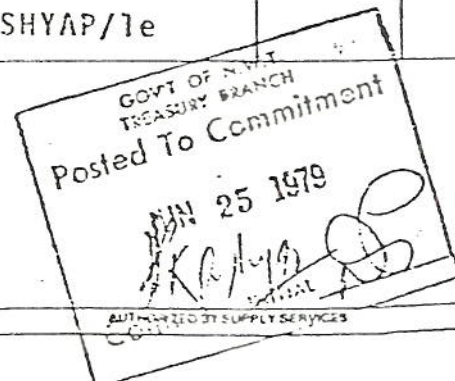
SEE BELOW

F.O.B.		TENDER	DELIVERY REQUIRED BY	
LA PRAIRIE, QUEBEC			6 JULY 1979	
QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT	
1	lea. Your Means to Eastern Canada Shipping La Prairie, 1405 Blvd. Industrial. La Prairie Quebec For Furtherance to Govt. of N.W.T. DEPT OF PUBLIC WORKS, IGLOOLIK, N.W.T. Self-framing pre-engineered building as per attached specification and general information sheets (Ensure roof is sectionally prefabricated for outdoor use) NOTE: CRATING SHOULD BE SUITABLE FOR OCEAN SHIPMENT. PER OUR TELEPHONE QUOTE AND YOUR RESPONSE BY TELEX OF 11 JUNE 1979. f.s.t.. exempt DO NOT DUPLICATE- CONFIRMING ORDER, CONFIRMING TELECON MR. PAUL WARREN AND A. KASHYAP OF 8 JUNE 1979. Purchase Order Number N1001-9-3697 must be shown clearly on each invoice, packing slip, express receipt, bill of lading and on each package, crate or carton as well as on all relevant correspondence.	4833.50	4838.50	

REFER ENQUIRIES TO BUYER

KASHYAP/le

ORDERING	AMOUNT
2-1609-203226-001-855	4838.50
-1609-203226-001-313	3000.00
D.P.W. GOVT. OF N.W.T., IGLOOLIK, N.W.T.	



THIS ORDER IS SUBJECT TO THE TERMS AND CONDITIONS ON BOTH SIDES HEREOF.

24 (REV. 5/73)

ount al .b. ively .S IIT LATIVE

PURCHASE ORDER

Du Pont Canada Incorporated (Pipe Division),
P.O. Box 660,
MONTREAL, Quebec.
H3C 2V1

ATTN: PE DEWITT

PLEASE FURNISH THE FOLLOWING MATERIALS AS SPECIFIED HEREIN AND CHARGE TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES.

SHIP TO

INVOICE TO

GOVERNMENT OF THE NORTHWEST TERRITORIES

DEPARTMENT OF PUBLIC WORKS,
IGLOOLIK, N.W.T.

GOVERNMENT OF THE NORTHWEST TERRITORIES
SUPPLY SERVICES
BOX 70,
YELLOWKNIFE, N.W.T.

SEE BELOW

SHIP VIA

DATE		F.O.B.	TENDER	DELIVERY INSTRUCTIONS	
11 June 1979		La Prairie, Quebec		SEE BELOW	
ITEM NO.	QUANTITY	DESCRIPTION		UNIT PRICE	
		SHIP VIA: YOUR MEANS to Eastern Canada Shipping, 1405 Blvd. Industrial, LA PRAIRIE, Quebec. for furtherance to Government of the Northwest Territories, Department of Public Works, IGLOOLIK, N.W.T.			
		DELIVERY REQUIRED BY: On or before 7 July 1979. at Dock Site.			
1	2200 m	163 NPS Series 125, Poly ethylene Pipe, uninsulated as per attached Specifications		13.14/L	28,908 00
2	48 m	250 NPS Series 80, Polyethylene Pipe, insulated, as per attached Specifications		67.71/L	3,257 00
3	48 m	89 NPS Series 100, Polyethylene Pipe, uninsulated, as per attached Specifications		3.51/L	167 40
4	48 m	22 NPS Series 160, Polyethylene Pipe, uninsulated, as per attached Specifications		.33/L	15 84
5	3	22 NPS, Polyethylene Pipe End Caps		15.00/ea	45 00
6		Flanged Fittings for Polyethylene Pipe:			
		a) Flange Assemblies:			
	26	i) 163 NPS		46.73/ea	1,214 98
	12	ii) 250 NPS		93.66/ea	1,123 92
	2	b) 160 NPS Elbows 90 degrees		199.20/ea	398 40

REFER ENQUIRIES TO BUYER

KASTVAP/

CODING

2-1609-203226-001-355

AMOUNT

42,449.30

2-1609-203226-001-313

6,000.00

DEPARTMENT OF PUBLIC WORKS,
PROJECT 73-116,
IGLOOLIK, N.W.T.

AUTHORIZED BY SUPPLY SERVICES

Q.	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
4		c) 160 NPS Elbows 22-1/2 degrees	143.50/ea	574 00
4		d) 160 NPS Elbows 11-1/4 degrees	143.50/ea	574 00
4		e) 250 NPS Elbows 22-1/2 degrees	336.65/ea	1,225 60
				57,599 30
		Freight to Montreal		2,400 00
		Crating		2,450 00
				42,449 30
		Per Specification attached. - Per our enquiry on phone and your response by telex of May 31, 1979. NOTE: Crating should be suitable for ocean shipment. F.S.T. EXEMPT Purchase Order Number M1001-9-3696 must be shown clearly on each invoice, packing slip, express receipt, bill of lading and on each package, crate or carton as well as on all relevant correspondence. Attach copy of Bill of Lading or proof of delivery to Common Carrier to invoice for prompt payment. DO NOT DUPLICATE - CONFIRMING ORDER, CONFIRMING TELECON MR. A. WILSON AND A. KASBYAP OF 8 JUNE 1979.		

PURCHASE ORDER

AGES INVOICES, ETC

Kopper International Canada Ltd.
1535 Chomedey,
Chomedey, Montreal, Quebec

N1001-9-3729

PLEASE FURNISH THE FOLLOWING MATERIALS AS SPECIFIED HEREIN AND CHARGE TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES.

SHIP TO

INVOICE TO

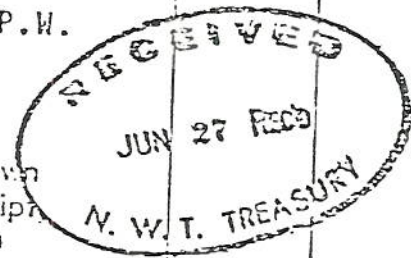
GOVERNMENT OF THE NORTHWEST TERRITORIES
D.P.W. GOVT. OF N.W.T.
IGLOOLIK, N.W.T.

GOVERNMENT OF THE NORTHWEST TERRITORIES
SUPPLY SERVICES
BOX 70
YELLOWKNIFE, N.W.T.

RENDER SEPARATE INVOICE FOR
EACH ORDER AND SEND 4
COPIES INCLUDING ORIGINAL
AFTER SHIPMENT

SHIP VIA SEE BELOW

DATE	F.O.B.	TENDER	DELIVERY REQUIRED BY	
26 JUNE 1979	LA PRARIE		ON OR BEFORE 30/	
ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	6 lengths	Corrugated metal culverts, galvanized 600 mm dia, 1.6 mm thickness, in 7 meter lengths	20.98/ meter	881.16
2	6	Couplers suitable for above	6.60/ea	39.60
		F.S.T. EXEMPT		920.76
DO NOT DUPLICATE-CONFIRMING ORDER, CONFIRMING TELECON MR. MARK PAYETTE AND A. KASHYAP OF 26 JUNE 1979.				
NOTE: SHIP VIA: YOUR MEANS TO EASTERN CANADA SHIPPING, LA PRARIE, QUEBEC FOR FURTHERANCE TO GOVT OF N.W.T. D.P.W. IGLOOLIK, N.W.T. PROJECT 78-118				
Purchase Order Number N1001-9-3729 must be shown clearly on each invoice, packing slip, express receipt bill of lading and on each package, crate or carton as well as on all relevant correspondence.				
Attach copy of Bill of Lading or proof of delivery to Common Carrier to invoice for prompt payment.				
KASHYAP/1e				
REFER ENQUIRIES TO BUYER				



DDING

2-1609-203226-001-855

AMOUNT
920.76

D.P.W. GOVT. OF N.W.T.
IGLOOLIK, N.W.T.

AUTHORIZED BY SUPPLY SERVICES

S ORDER IS SUBJECT TO THE TERMS AND CONDITIONS ON BOTH SIDES HERE OF

PURCHASE ORDER

AGES, INVOICES, ETC

N1001-9-3695

Wallace & Tierman Div.,
25 Warden Ave.,
Scarborough, Ontario

RENDER SEPARATE INVOICE FOR
EACH ORDER AND SEND 4
COPIES INCLUDING ORIGINAL
AFTER SHIPMENT.

PLEASE FURNISH THE FOLLOWING MATERIALS AS SPECIFIED HEREIN AND CHARGE TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES.

SHIP TO

INVOICE TO

GOVERNMENT OF THE NORTHWEST TERRITORIES

D.P.W., G.N.W.T.,
IGLOOLIK, N.W.T.

GOVERNMENT OF THE NORTHWEST TERRITORIES
SUPPLY SERVICES
BOX 70

YELLOWKNIFE, N.W.T.

SHIP VIA NORDAIR TO NANASIVIK, FOR FURTHERANCE TO IGLOOLIK, BY 1ST AIR

DATE		F.O.B.	TENDER	DELIVERY REQUIRED BY	
18 JULY 1979		MONTREAL		15 AUGUST 1979	
ITEM NO.	QUANTITY	DESCRIPTION		UNIT PRICE	AMOUNT
1	1	Wallace & Tierman series A-745 hypochlorinator unit c/w spare pump as per attached specification (1/20 HP, 110 Volts Mixer is acceptable)			2245.00
		F.S.T. EXEMPT			
		PER OUR INVITATION TO TENDER N1001-9-3695-3696 AND YOUR RESPONSE OF JULY 5, 1979.			
		Purchase Order Number N1001-9-3695 must be shown clearly on each invoice, packing slip, express receipt, bill of lading and on each package, crate or carton as well as on all relevant correspondence.			
		Attach copy of Bill of Lading or proof of delivery to Common Carrier to invoice for prompt payment.			
			REFER ENQUIRIES TO BUYER	KASEYAP/le	

DING

2-1609-203226-001-855

AMOUNT
2245.00

2-1609-203226-001-310

500.00

D.P.W., G.N.W.T.
IGLOOLIK, N.W.T.

AUTHORIZED BY SUPPLY SERVICES

PURCHASE ORDER

N1061-0-3455

Neptune Meters Ltd.
3526 Lake Shore Blvd W.
Toronto, Ontario
M8W 1N7

RENDER SEPARATE INVOICE FOR
EACH ORDER AND SEND 4 COPIES
INCLUDING ORIGINAL
AFTER SHIPMENT.

PLEASE FURNISH THE FOLLOWING MATERIALS AS SPECIFIED HEREIN AND CHARGE TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES.

SHIP TO

INVOICE TO

GOVERNMENT OF THE NORTHWEST TERRITORIES

GOVERNMENT OF THE NORTHWEST TERRITORIES

SUPPLY SERVICES
YELLOWKNIFE, N.W.T.

SUPPLY SERVICES

BOX 1320

Yellowknife, N.W.T.

SHIP VIA

DATE

09-06-80

F.O.B.

TORONTO, ONTARIO

TENDER

DELIVERY REQUIRED BY

JUNE 30, 1980

ITEM NO.

QUANTITY

DESCRIPTION

UNIT PRICE

AMOUNT

1

1

Neptune Trident 8 styles 3-50 mm
Water meter as per attached specifications
Complete with the following:
2 sets of companion flanges; Neptune TCC
switch type totalizing head (head to totalize
in cubic meters and be so geared to give one
pulse for every .1 cubic meter. Hecon
GO-414-489-1 resettable totalizing counter
to be compatible with the TCC head.

\$649.00

F.S.T. NHT

(Operating Voltage - 115 V ac)
(Counts per second - 10)
(Number of Digits - 4)

Six sets of operating and maintenance manuals.

2116-858-41211

DO NOT DUPLICATE & CONFIRMING ORDER,
CONFIRMING TELECOM FRED GRIFFON AND T. TAYLOR
OF JUNE 13th, 1980.

REFER ENQUIRIES TO BUYER TOM TAYLOR/ses

CODING

AMOUNT

101454 210 241460 970 1130

649.00

NORTHWEST TERRITORIES DIVISION,

YELLOWKNIFE, N.W.T.

ALTAIR 2000 SUPPLY SERVICES

THIS ORDER IS SUBJECT TO THE TERMS AND CONDITIONS ON BOTH SIDES HEREOF

Schlumberger Industries

Wellbore Services Group

Measurement Division

FAX COMMUNICATIONS
COVER SHEET

COMPANY: _____

DATE: DEC. 11, 1991FAX NUMBER: 1-819-934-8743# PAGES: ONEATTENTION: KEN BAMBERREFERENCE: T-8 STY. 3, 2"

MESSAGE:

LISTED BELOW, ARE THE AUTHORIZED
SERVICE DEPOTS YOU MAY CALL REGARDING
THE REPAIR OF YOUR METER.

ACCU-FLO METER SERVICE (ALBERTA)

↳ CALGARY 1-403-243-1425

↳ EDMONTON 1-403-452-6047

P.D. McLAREN - BURNABY B.C. 1-604-437-0616

IF YOU HAVE ANY OTHER QUESTIONS, PLEASE
DO NOT HESITATE TO CALL ME

REGARDS,

George Fritz

The following transmission is being conducted utilizing a Canon Fax 520.
If you do NOT receive ALL pages, please notify.

FAX: 416-858-0428

PHONE: 416-858-4211

PURCHASE ORDER

AGES, INVOICES, ETC

117001-0-3456

Jacuzzi Canada Ltd.
330 Humberline Drive
Rexdale, Ontario M9W 1R5

RENDER SEPARATE INVOICE FOR
EACH ORDER AND SEND
COPIES INCLUDING ORIGINAL
AFTER SHIPMENT.

PLEASE FURNISH THE FOLLOWING MATERIALS AS SPECIFIED HEREIN AND CHARGE TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES.

SHIP TO

GOVERNMENT OF THE NORTHWEST TERRITORIES

INVOICE TO

GOVERNMENT OF THE NORTHWEST TERRITORIES

SUPPLY SERVICES
YELLOWKNIFE, N.W.T.

SUPPLY SERVICES

BOX 1320

Yellowknife, N.W.T.

SHIP VIA TRUCK

DATE

08-05-80

F.O.B.

YELLOWKNIFE, N.W.T.

TENDER

DELIVERY REQUIRED BY

JUNE 16, 1980

ITEM NO.	QUANTITY	DESCRIPTION	UNIT PRICE	AMOUNT
1	2 each	Jacuzzi submersible pump Model 5S6J4-52, 6" Turbine 4 stage. \$1,678.89 each		\$3,357.78
2	2 each	Cable spring loaded, Check value 3"	\$208.58	417.16
3	2 each	Submersible Cable #10-3T WUZ	47.43	94.86
4	2 each	Lightening Arrester #SLA-1	15.43	30.86
	6 set	Operating Manuals		N/C
All as per your tender quote number 522 dated April 25, 1980.			TOTAL:	3908.10
ADD FREIGHT ALLOWANCES:				259.49
TOTAL F.O.B. YELLOWKNIFE,				4167.59
F.S.T. EXEMPT				

REFER ENQUIRIES TO BUYER T. TAYLOR/ses

CODING

AMOUNT

210-241463-9781180

4167.59

IC WORKS, ENG. DIC. GOVT. OF THE N.W.T.

YELLOWKNIFE, N.W.T.

AUTHORIZED BY SUPPLY SERVICES

THIS ORDER IS SUBJECT TO THE TERMS AND CONDITIONS ON BOTH SIDES HEREOF

IGLOOLIK WATER SUPPLY
SPECIFICATION
SUBMERSIBLE PUMPS

Pumps shall be suitable for continuous operation with the motor sized so as not to be overloaded at any point on the performance curve.

The pumps shall be as manufactured by Jacuzzi Canada Ltd., catalogue No. 5S6J4-S2 or equal and have the following characteristics:

Q =	455 L/Min.	(100 IGPM)
Head	179 KPA	(50 ft. H ₂ O)
T.D.H.	812 KPA	(272 ft. H ₂ O)
H.P.	5	
Volts	230 AC	
Phase	Single	

Each pump shall have the following:

Stainless steel shaft.

Bronze Inlet screen.

Long bronze sleeve bearings.

Bronze Impellers.

Be capable of operating in a horizontal position.

100 ft. of submersible cable (3-10# AWG),

2 - Cable splice kits (1 for spare).

Control box c/w capacitors, starting switch and overload protector.

Provide ~~5~~ sets of operating and maintenance manuals.

6
A.S.

201/5/4/80.

→ 78-118

EMISSION DE DESSINS — ISSUE OF DRAWINGS

A TO: GOVT. NORTHWEST TERRITORY RE: GOVT. NWT # N-1001-9-3694
YELLOWKNIFE, NORTHWEST TERR. CANREP # C-0543-5-SK011
XIA 2L9 JOHNSON # HI-9136-0

ATTENTION: MR. DAVID BARRY CONTRAT NO: — DATE: 8/31/79
CONTRACT

CI-JOINT LES DESSINS SUIVANTS — ENCLOSED ARE THE FOLLOWING DRAWINGS.

NO. DU DESSIN DRAWING NO.	NO. REV.	QUANTITE QUANTITY	NOM DU DESSIN TITLE OF DRAWING	CODE
AP-79138	Ø	2	INTAKE SCREEN (DETAILS)	C

REMARQUES: RETURN ONE (1) COPY BEARING YOUR APPROVAL TO KEE.
ALL PARTIES' FILES UP TO DATE. PRODUCTION NOT HELD PENDING

CODE

SIGNEZ 1 COPIE ET RETOURNEZ

SIGN 1 COPY AND RETURN

- A — APPROUVE APPROVED
- B — APPROUVE AVEC REMARQUES APPROVED EXCEPT AS NOTED
- C — VOIR REMARQUES SEE COMMENTS

PAR:
VED BY:

ATE:

PAR:
BY:

DEPT.:

MICHEL FUGÈRE

CANREP INC / MONTREAL

OPERATING PROCEDURES

TAG AND KEY DIRECTORY

Tag No. 1: Gate Valves Exterior Line Shut-Off
2: Gate Valves Interior 2-1/2" Ø
Hose Outlet Shut-Off
3: Hose Bib and Sample Line Tap Valve
4. Cold Water Supply Valve

Key No. 1: Pump Fill Station Entrance Door
2: Exterior S/S Pumps Control

6" SUBMERSIBLE TURBINE PUMPS

PERFORMANCE

3 to 30 hp

Capacity Range: 50 to 350 US gpm

Basic Pump Model	HP rating of motor	TOTAL DYNAMIC HEAD in feet																		TDH at 0 gph
		20	40	60	80	100	125	150	175	200	225	250	275	300	325	350	375	400		
		CAPACITY in U.S. gallons per hour																		
75S6H2-	7½		274	252	226	194	140			Series S6H							Curve 6S-69			158 ft
10S6H3-	10			264	250	234	212	186	148	94							Curve 6S-70			230 ft
15S6H4-	15					274	262	247	230	210	187	158	118	54			Curve 6S-71			320 ft
20S6H5-	20	Curve 6S-72							262	250	236	222	206	186	163	128	78			410 ft
5S6X1-S2	5 (1-ph)	395	300	150						Series S6X							Curve 6S-73			73 ft
5S6X1-T	5 (3-ph)	407	315	175													Curve 6S-74			76 ft
75S6X2-	7½		365	315	255	175											Curve 6S-75			132 ft
10S6X2-	10		425	385	337	285	175										Curve 6S-76			158 ft
15S6X3-	15	Curve 6S-77			400	370	330	285	220	148										245 ft
20S6X4-	20	Curve 6S-78			427	407	382	353	321	282	240	183	132	87						328 ft
25S6X6-	25	Curve 906 113					400	385	367	346	325	302	277	246	217	182	150	112		470 ft
30S6X7-	30	Curve 906 112						400	387	370	353	335	315	293	273	248	222	193		545 ft
Basic Pump Model	HP rating of motor	TOTAL DYNAMIC HEAD in feet																		TDH at 0 gph
		40	60	80	100	125	150	175	200	250	300	400	500	600	700	800	900	1000		
		CAPACITY in U.S. gallons per minute																		
3S6J3-	3	124	113	103	91	75	53			Series S6J							Curve 6S-105			186 ft
5S6J4-S2	5 (1-ph)		127	120	113	103	92	80	66								Curve 6S-106			272 ft
5S6J4-T	5 (3-ph)		129	122	115	106	97	86	73	32							Curve 6S-107			288 ft
75S6J5-	7½			126	120	114	107	101	93	77	56						Curve 6S-108			394 ft
10S6J8-	10				131	126	122	117	113	103	92	68					Curve 6S-109			550 ft
15S6J11XP-	15	Curve 6S-110				136	133	130	126	120	113	99	84	65	33					805 ft
20S6J15XP-	20	Curve 6S-111							134	129	125	116	106	95	83	68	48	17		1075 ft
25S6J17XP-	25	Curve 906 168											107	99	91	81	70	56		1325 ft
5S6M2-S2	5 (1-ph)	210	188	165	136	74				Series S6M							Curve 6S-99			146 ft
5S6M2-T	5 (3-ph)	222	200	176	150	99											Curve 6S-100			153 ft
75S6M3-	7½		226	210	195	175	152	118	60								Curve 6S-101			226 ft
10S6M4-	10		235	222	210	195	180	164	145	74							Curve 6S-102			288 ft
15S6M6-	15			238	230	221	211	202	193	172	147	54					Curve 6S-103			444 ft
20S6M8-	20					230	223	216	203	188	156	103					Curve 6S-104			600 ft
25S6M10XP-25		Curve 906 169									201	177	148	108						760 ft
30S6M12XP-30		Curve 906 170									214	194	172	147	116	59				910 ft

These pumps are suitable for wells of 6 inches inside diameter and larger. Check the inside diameter and the straightness of the well before installing the pump to ensure that adequate clearances exist. Note that the maximum diameter of some 6-inch models exceed the nominal size.

Capacities at intermediate total dynamic heads may be interpolated from the tables or obtained from the characteristic curves. Copies of the characteristic curves are available on request, and show the BHP ABSORBED and the EFFICIENCY in addition to the HEAD/CAPACITY relationship. The reference number of the curve for each model is given in the performance tables.

Refer to pages C301 and C302 for details of construction and instructions for ordering.

Note that NO allowance has been made in the performance tables for friction losses in the riser pipe. These losses vary with the flow rate and the size, type, and length of pipe, and should be deducted from the difference between the total dynamic head and the lift in order to determine the discharge pressure at the wellhead.

CHECK VALVES. Note that a check valve is not built into a submersible turbine pump unit, so that one should always be installed at the first pipe joint above the pump if the setting exceeds 100 feet. Use an additional check valve at the surface if the pump is part of a pressure system, or if the pressure head exceeds 500 feet. If the setting is between 500 and 600 feet, install a third check valve (non-slam) in the riser pipe at two-thirds of the setting above the pump. If the

(continued on next page)

6" AND 8" SUBMERSIBLE TURBINE PUMPS

GENERAL DESCRIPTION

3 to 30 hp

Capacity Range: 50 to 700 US gpm

A submersible turbine deep well pump is suspended from the top of the well by its discharge (or riser) pipe. It consists of a small-diameter, vertical centrifugal pump close-coupled to an underwater motor of similar dimensions. The nominal pump size, 6 inches or 8 inches, corresponds to the inside diameter of the smallest well in which the pump unit can be installed. Power reaches the motor through a waterproof cable.

The well water is drawn into the pump just above the motor. This arrangement keeps the motor submerged at all times, but the necessary cooling effect is achieved by setting the pump above the well screen or casing perforations to obtain a flow of water past the motor.

The table below shows the duties covered by 6-inch and 8-inch Submersible Turbine Pumps and provides a guide to the performance tables on the pages that follow.

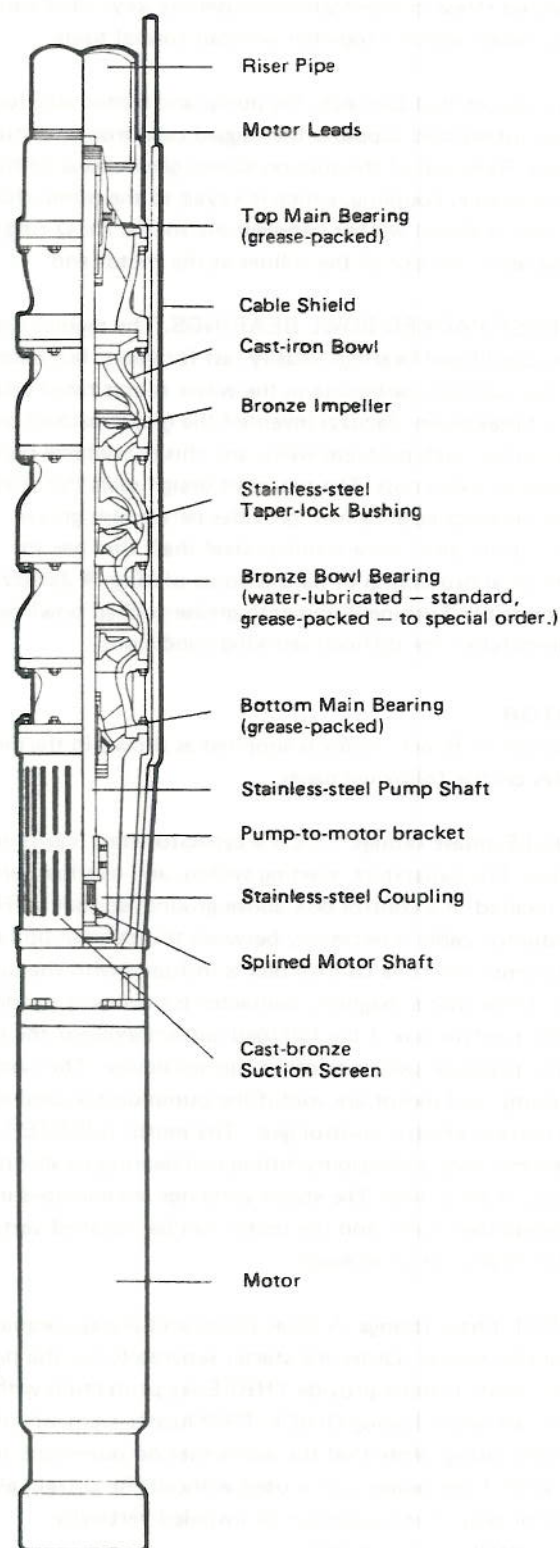
Series	HP Range	Capacity Range — US gpm	Useful Max TDH feet (approx)	Refer to pages
S6J	3 to 25	50 to 135	1000	C311-C312
S6M	5 to 30	75 to 235	700	C311-C312
S6H	7½ to 20	100 to 275	300	C311-C312
S6X	5 to 30	125 to 425	350	C311-C312
S8J	20 to 30	80 to 275	500	C321-C322
S8L	20 to 30	100 to 400	300	C321-C322
S8K	20 to 30	150 to 500	250	C321-C322
S8M	25 and 30	200 to 700	200	C-321-C322

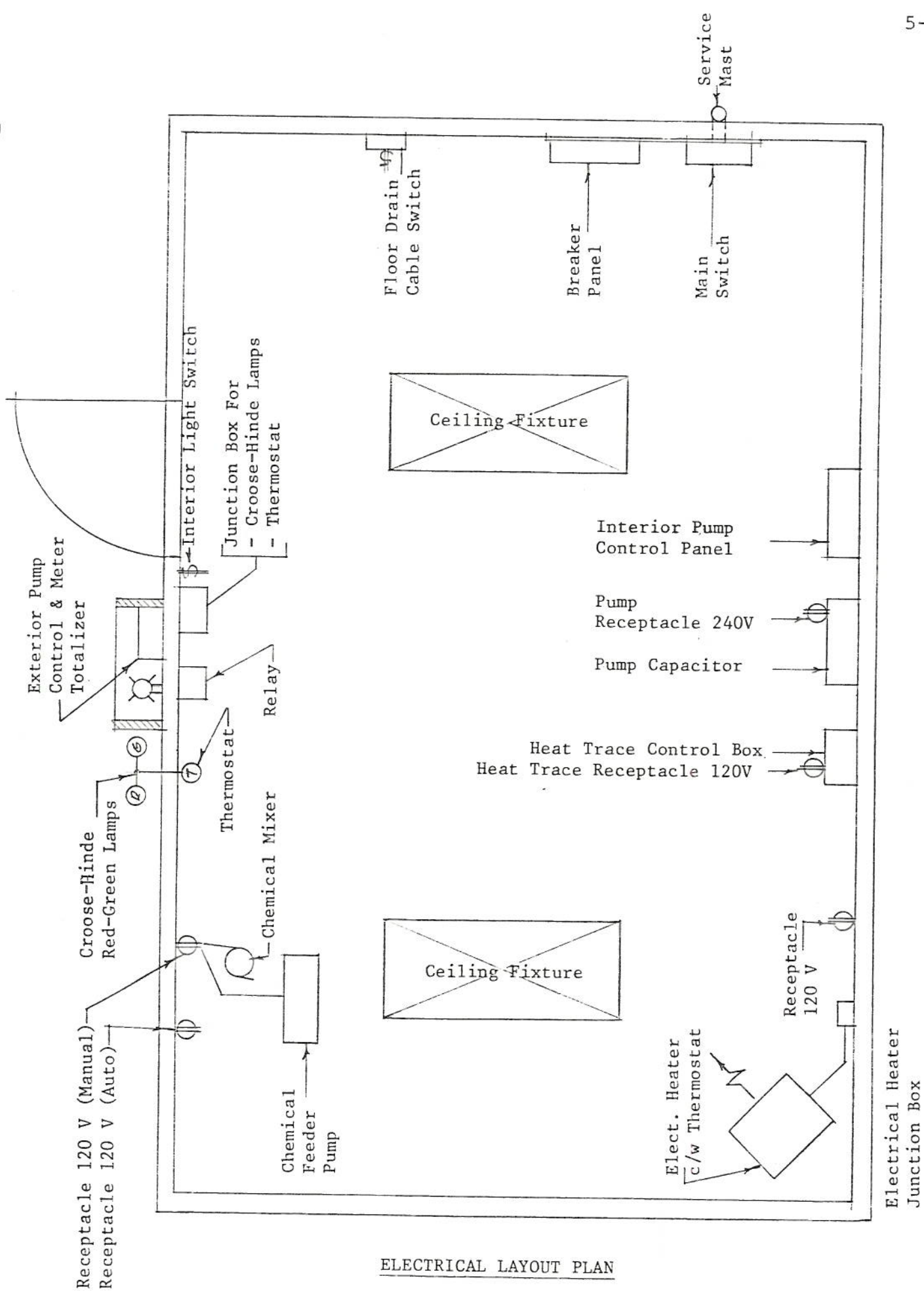
PUMP END

The small diameter of the pump restricts the pressure that can be generated by a single stage, so that a complete pump may have as many as seventeen stages. The stages are of mixed-flow design to meet the capacity requirements, and have closed bronze impellers and iron bowls. Each stage is self-contained with its own bronze bearing, and registers with its neighbors to give exact alignment of the completed assembly. The bowls are fastened together with stainless-steel cap screws. In addition to the water-lubricated bowl bearings, there are grease-packed top and bottom main bearings. These have extra long bronze bushings, and are sealed to keep abrasives out.

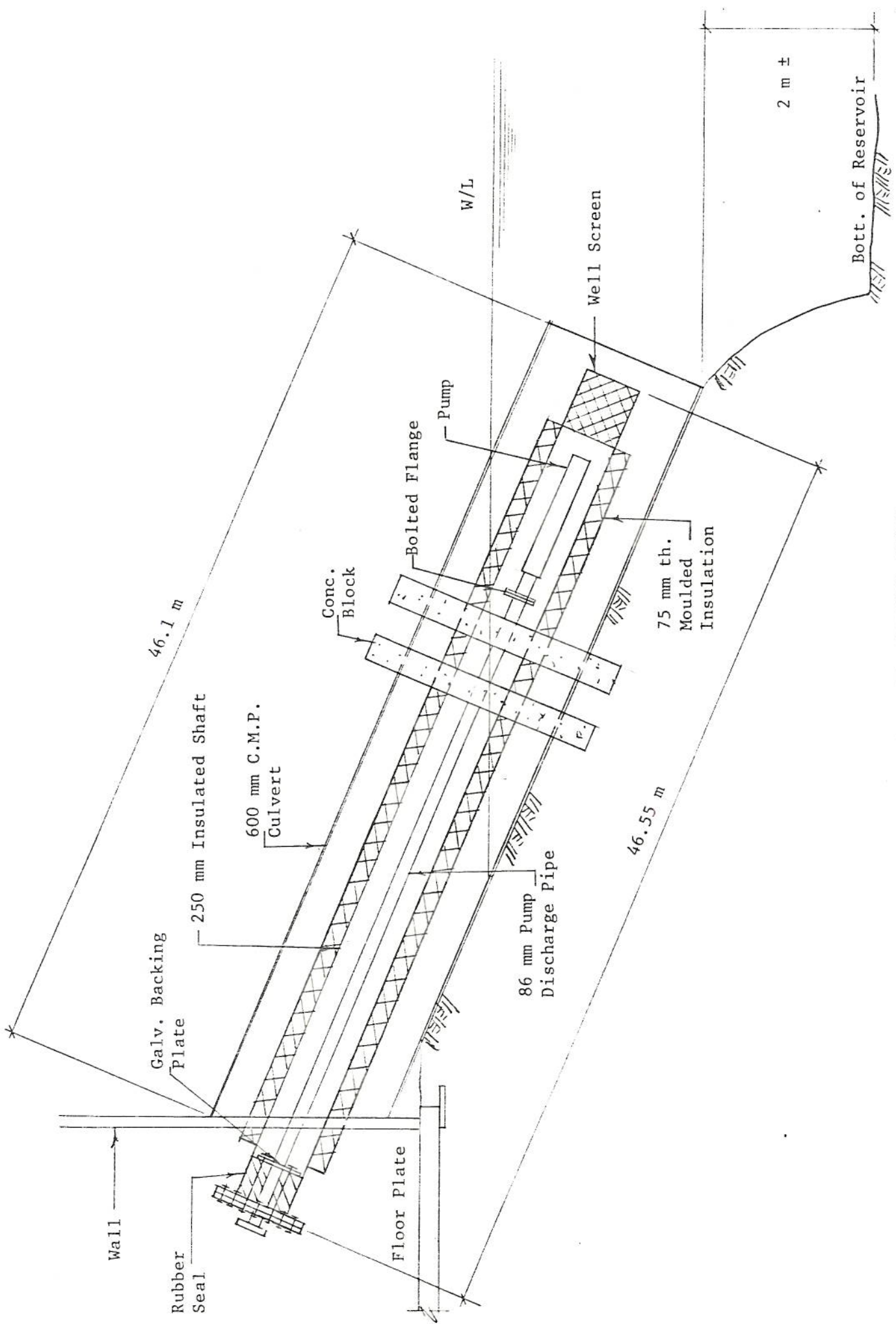
Each impeller is secured to the pump shaft by means of a taper-lock bushing. The shaft and bushings are of stainless steel. The result is a single rotating member, without the

(continued on next page)





ELECTRICAL LAYOUT PLAN



SCHEMATIC OF INCLINED SHAFT