



LEVELS ALONG PROPOSED LINE  
FOR PIPE FROM LARGE FUEL TANKS  
TO GOVERNMENT JETTY.

(Sgd) J.P.D. Cotton.

December, 1963.

(Assume Level of 200.00 Feet at 'Tanks' Pin for Convenience. Other Levels are Referred to This Datum).

Back Sight	Intermediate Sight	Fore Sight	Collimation Level	Reduced Level (of Ground)	Top Stadia	Bottom Stadia	Difference	Length of Sight (feet)	Instrument Position	Sighting To:
1.90		11.24	201.90	200.00	2.26	1.54	.72	72	in the line "Tanks" to "Top Corner"	"Tanks" Pin
				190.66	11.69	10.80	.89	<u>89</u>	" " " " " " " " "	"Top Corner" Pin change point
								<u>161</u>		
0.71		9.96	191.37	190.66	0.80	0.61	.19	19	in the line "Top Corner" to "Stile"	"Top Corner" Pin " "
		11.70	184.17	181.41	10.18	9.74	.44	44	" " " " " " " " "	change point
2.76		11.70	174.18	172.47	2.83	2.69	.14	14	" " " " " " " " "	" " "
1.71		6.85		167.33	7.09	6.61	.48	48	" " " " " " " " "	change point
								<u>249</u>		
0.84		11.00	168.17	167.33	1.11	0.57	.54	54	in the line "Stile" to "Goalpost"	"Stile" Pin, " "
				159.23	9.20	8.68	.52	52	" " " " " " " " "	lowest point reached on stream bank.
				159.34	9.25	8.42	.83	83	" " " " " " " " "	stream bank further N. on the line.
1.71		10.22	158.88	157.17	1.81	1.61	.20	20	" " " " " " " " "	change point
		7.34		148.66						
		7.44		151.54						
		10.46		151.44						
		10.46		148.42	10.73	10.20	.53	53	" " " " " " " " "	stream bed below culvert (C.P.)
1.42		10.84	149.84	148.42	1.76	1.08	.68	68	" " " " " " " " "	" " " " " " " " " change pt.
		10.84		139.00	11.19	10.49	.70	<u>70</u>	" " " " " " " " "	"Goalpost" Pin. change point
								<u>369</u>		
1.56		9.16	140.56	139.00	1.85	1.27	.58	58	in the line "Goalpost" to "Water Main"	"Goalpost" Pin, " "
		132.20	131.40	9.37	8.95	.42	42	" " " " " " " " "	change point	
0.80		5.95		131.40	0.98	0.62	.36	36	" " " " " " " " "	" " "
				126.25	6.06	5.83	.23	<u>23</u>		
								<u>159</u>		
0.88		12.04	127.13	126.25	1.02	0.74	.28	28	in the line "Water Main" to "Gorse"	"Water Main" Pin. " "
				115.09	12.51	11.56	.95	95	" " " " " " " " "	change point
1.04		3.50	116.13	115.09	1.42	0.66	.76	76	" " " " " " " " "	" " "
		10.98		112.63						
				105.15	11.55	10.39	1.16	<u>116</u>		
								<u>315</u>		

Back Sight	Intermediate Sight	Fore Sight	Collimation Level	Reduced Level (of Ground)	Top Stadia	Bottom Stadia	Difference	Length of Sight (feet)	Instrument Position	Sighting To:
1.51			106.66	105.15	1.81	1.21	.60	60	in the line "Watermain" to "Gorse"	change point
	8.68			97.98	8.98	8.37	.61	61	" " " " " "	"Gorse" Pin
	12.06			94.60				315		
		10.79		95.87				436		
6.10			101.97	95.87					At "Culvert" Satellite	culvert bottom at its bend near "Gorse"
	3.99			97.98	4.49	3.50	.99	99	" " " "	invert level of old pipe half way between Gorse and Culvert (C.P.)
	9.41			92.56					" " " "	change point as above
	7.68			94.29					" " " "	
	10.48			91.49					" " " "	top of old pipe near "Culvert"
	9.31			92.66					" " " "	" " " " just below Ross Road.
	12.56			89.41	13.00	12.12	.88	88	" " " "	on top of W.bank to culvert by "Tide"
8.70			98.11	89.41	8.95	8.45	.50	50	At "Tide" Satellite	culvert bottom at "Tide" Station
	6.05			92.06					" " " "	"Tide" Station
	5.55			92.56	5.96	5.13	.83	83	" " " "	on top of E.bank to culvert by "Tide"
	4.16			93.95	5.02	3.30	1.72	172	" " " "	culvert bottom at "Culvert"
4.91			98.86	93.95	5.78	4.05	1.73	173	in the "Tide" Sat. to "Lamp Post"	change point in line from "Tide" Sat. to "Lamp Post".
	4.22			94.64					" " " "	" " " "
	3.62			95.24	4.02	3.22	.80	80	" " " "	a point on concrete path in line "Tide" to "Lamp Post"
								425		"Lamp Post" Pin, change point
3.88			99.12	95.24	4.55	3.37	1.18	118	in the line "Lamp Post" to "Paddock"	"Lamp Post" Pin, change point
	5.17			93.95					" " " " " "	"Concrete Path" Station of Edwards levels (red paint)
	4.73			94.39					" " " " " "	"Pipe Below Secretariat" of cox's levels (red pin near "Lamp Post")
	5.73			93.39					" " " " " "	"Back Garden" of Cox's levels (red pin close to "Paddock")
	5.59			93.53	5.80	5.38	.42	42	" " " " " "	"Paddock" Pin, change point
								160		
4.88			98.41	93.53	5.27	4.49	.78	78	in the line "Paddock" to "Tussock"	"Paddock" Pin, change point
	6.70			91.71					" " " " " "	N. edge of low paved area by P.W.I. House
	2.78			95.63					" " " " " "	top of wall over previous point
	4.70			93.71					" " " " " "	ground level near "Tussock"
	5.81			92.60	6.26	5.36	.90	90	" " " " " "	"Tussock" Pin, change point
								168		

Back Sight	Intermediate Sight	Fore Sight	Collimation Level	Reduced Level (of ground)	Top Stadia	Bottom Stadia	Difference	Length of Sight (feet)	Instrument Position	Sighting To:
5.62			98.22	92.60	5.71	5.53	.18	18	At "Tussock" Satellite Station	"Tussock" Pin, change point
	4.68			93.54	5.46	3.91	1.55	155	" " " "	"Paddock" Pin
	3.93			94.29					" " " "	Sea wall towards "Tip" Station
3.87		2.93	99.16	95.29	3.42	2.45	.97	97	" " " "	collar on old pipe close to "Tip" Station, change point
	6.55			95.29	3.95	3.80	.15	15	At "Tip" Satellite Station	change point as above
	6.38			92.61	7.00	6.09	.91	91	" " " "	"Tussock" Pin
5.67		4.91	99.92	92.78	6.63	6.13	.50	50	" " " "	sea wall towards "Hut" Station
	4.66			94.25	5.44	4.39	1.05	105	" " " "	"Hut" Station, change point
	5.15			94.77	5.61	4.70	.91	91	At "Hut" Satellite Station	"Hut" Station, change point
									" " " "	"Tip" Station
									" " " "	deck level at "Jetty" Station

$$\begin{array}{r}
 - \Sigma \text{ (Back Sight)} + \Sigma \text{ (Fore Sight)} = 165.70 - 60.47 \\
 = 105.23 \\
 \hline
 1st \text{ Reduced Level} - \text{Last Reduced Level} = 200.00 - 94.77 \\
 = 105.23
 \end{array}$$

SUMMARY OF PIPE BENDS.

(Measured clockwise Back Station to Forward Station)

Station.	Angle.
"Top Corner"	$96^{\circ}15'$
"Stile"	$168^{\circ}10'$
"Goelpost"	$185^{\circ}53'$
"Water Main"	$203^{\circ}40'$
"Gorse"	$220^{\circ}37'$
"Culvert"	$76^{\circ}27'$
"Tide"	$270^{\circ}46'$
"Lamp Post"	$169^{\circ}01'$
"Paddock"	$154^{\circ}48'$
"Tussock"	$226^{\circ}21'$
"Tip"	$132^{\circ}04'$
"Hut"	$136^{\circ}16'$

NOTE

Junction for Route to Public Jetty is at "Lamp Post" Station

Clockwise Total Angle at "Lamp post" from Back Station "Tide" to Forward Station "P.W.D." is  $189^{\circ}35'$

(Proposed line assumed to be close enough to a straight line from "Lamp Post" to road end of Public Jetty for made-up Pipe Bends to be unnecessary).

SUMMARY OF LEVELS AT POSITIONS OF PIPE BENDS IN PROPOSED LINE:

(For full information see separate sheets).

LEVELS ARE REFERRED TO AN ASSUMED LEVEL OF 200.00 FEET AT "TANKS" PIN FOR CONVENIENCE.

	Level.	Distance Between Stations. (feet)
'Tanks' Pin	200.00	161
'Top Corner' Pin	190.66	249
'Stile' Pin	167.33	369
'Goalpost' Pin	139.00	159
'Water Main' Pin	126.25	436
'Gorse' Pin	97.98	72
'Culvert' Station	92.56	82
'Tide' Station	89.41	474
'Lamp Post' Pin	95.24	160
'Paddock' Pin	93.53	168
'Tussock' Pin	92.60	79
'Tip' Station	95.29	120
'Hut' Station	94.25	109
'Jetty' Station	94.77	

(Note: The above are PLAN distances, not the actual pipe lengths required).

CONNECTION WITH COX'S LEVELS  
 SEAWARD END OF PUBLIC JETTY.)

(REFERRED TO ZERO AT

Station	Cox's Levels.	Levels on 'Tanks' Pin = 200.00 System.
"Concrete path" (red paint)	- 0.76	93.95
"Pipe below Secretariat"		
(red pin)	- 0.32	94.39
"Back Garden" (red pin)	- 1.32	93.59
"Sea Wall W." (red paint)	- 0.39	94.32
"Sea Wall Centre" (red paint)	+ 0.16	94.87
"Sea Wall E." (red paint)	+ 1.48	96.19
"Jetty" (red paint)	+ 0.13	94.84

CONNECTION WITH EDWARDS' LEVELS.

Station.	Edwards' Levels.	Levels on 'Tank' Pin = 200.00 System.
"Jetty end" (red paint)	0.00	94.71
"Road/Jetty" ( " " )	0.06	94.77
"A in gutter" ( " " )	0.33	95.04
"B F.I.C. fence" (red paint)	3.16	97.87
"C far end of fence"	3.75	98.46
"D open stretch not marked"	6.05	100.76
"E" " " " "	8.22	102.93
"telegraph pole - exchange"	12.30	107.01
"track by P.O."	11.39	106.10
"fence by P.W.D."	8.64	103.35
"fence end by aux. Station"	1.93	95.64
"concrete path" (red paint)"	- 0.76	93.95

~~272~~

H.C.S.

I have had a long telephone conversation with Gutteridge about the pipe-line from the new Oil Tanks to the Government Jetty. Thorsen, the tank erector, will be up from South Georgia towards the end of this month, and his advice on the line may be useful. Lieutenant-Commander J.B. Dixon, R.N. will be returning to Stanley in the R.R.S. "John Biscoe" and I am sure he would undertake a survey for us of the line the new pipe is to follow.

2. The question arises whether indeed we need this new and expensive pipe-line. It would be a simple matter to connect the existing 3 inch pipe-line to the new tanks. The argument for a new pipe-line is that the present rate of discharge from the barge through the 3 inch line is 18 tons an hour. The discharge of 500 tons, therefore, takes approximately 28 hours. We can now anticipate that a Tanker will be coming to Stanley annually for the next few years to discharge FFO for HMS "Protector". She usually stays not far short of a week. I do not anticipate that both the new tanks will be filled to capacity in the first instance, and next year, to provide all Colony, BAS and South Georgia requirements we are unlikely to require more than 1500 tons. This is only three barge loads, and since the Admiralty barge can be discharged into our tanks before the arrival of the Admiralty Tanker, we would only require two complete barge loads from the Tanker for our tanks. These two barge loads would be discharged in 56 hours, so I think there would be no question of any delay to the Tanker.

3. With this in mind, it does not seem that we are justified at this stage in going to all the expense of ordering a 6 inch pipe-line merely to improve the rate of discharge. But we should get all the information that is necessary, in case at some later date we have to do so.

4. S.P.& E. will be discussing this with S.P.W.

March 18, 1963.

~~273~~ 2  
note  
for Biscoe arrival - be b.v. Friday.

5 18/3/63.

BUF

Hon. C.S.

With reference to the problem of filling the new oil storage tanks I made an enquiry regarding the discharge rate, from lighter to shore tanks, of Admiralty furnace oil, the last consignment was 14 lighter loads each of five hundred tons at an average of 4 hours per lighter, i.e. 125 tons per hour. Government rate of discharge is 28 hours per lighter, 18 tons per hour. Please see following calculations.

Diesel oil to  
Government tanks.

Assume first consignment to consist;

Power Station.	400.
British Antarctic Survey.	525.
Schools, K.E.M.H. etc.	275.
South Georgia.	300.
<u>Total</u>	<u>1,500. tons.</u>

1,500 tons is three lighter loads.

Actual pumping time lighter to shore tanks;

$$= \frac{1,500}{18}$$

$$= \underline{84 \text{ hours.}}$$

Furnace oil  
last consignment 7,000 tons

7,000 tons is 14 lighter loads. Actual time of pumping lighter to Admiralty shore tanks;

$$= \frac{7,000}{125}$$

$$= \underline{56 \text{ hours.}}$$

Now assume both lighters are fueled from Tanker at maximum rate, ie. 125 tons per hour, then;

Diesel oil, total time for unloading Tanker to Lighter, Lighter to shore tanks;

$$= \frac{\text{unloading hrs.}}{(3 \times 4)} \quad \text{plus} \quad \frac{\text{discharge hrs.}}{(3 \times 28)}$$

$$= \underline{96 \text{ hours.}}$$

Furnace Oil

$$= \frac{\text{unloading hrs.}}{(14 \times 4)} \quad \text{plus} \quad \frac{\text{discharge hrs.}}{(14 \times 4)}$$

$$= \underline{108 \text{ hours.}}$$

Added to both times will be hours in travelling time, Tanker to shore, shore to tanker of lighter. This factor will be less in the case of diesel as the number of journeys will be three as opposed to 14 with furnace oil.

It would appear from the above that if the Admiralty requirements/

2.

requirements remain in the region of 7,000 tons per year and Government annual requirements are 1,500 tons, we are about equal as far as the unloading time factor matters. I can see no reason why we should not continue to use the existing 3 inch pipeline as suggested by H.E. However factors other than those known to us in the actual method of discharge may have an important bearing on whether we can receive the oil at the slower rate. I suggest the matter is put to the Admiralty fueling Agents (F.I.C.) for their opinion as it would not be wise to order a large quantity and then find that we were unable to receive it.

Supt. Power & Electrical  
Department.

20th March 1963.

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275

8. 2. SPD Note to me about  
this. He suggests that it would be safer to  
consult w/ Contractors at no stage  
8/4/3/63

Bu 23/3/63

277 6

HCS

Yes. I suggest SPE sees the Co. A further

thing to be remembered is that we should be  
able to take 500 tons ex barge before the  
Tugger arrives.

9/4/ 22. 3. 63

7

SPD

~~277~~

277 8

SPD is going to see H.C.S. Letter to Colonial Manager, a/c over  
for your approval and despatch please. Copy  
BN 1.4.63. BN 26/3/63.

~~284~~  
9

27th March

63.

Sir,

Oil fuel, Delivery arrangements.

I am directed to make the following enquiry regarding diesel oil supply and delivery to the new Government oil storage tanks now in the course of erection.

It is estimated that the Government's consignment of diesel oil from the next R.F.A. Tanker (1964) will be in the region of 1,500 tons. The present method of fueling is by pumping from the Lighter tied at the Government Jetty to the existing storage tanks through a 3.inch pipeline at a rate of 18.tons per hour. The total time to discharge one Lighter load, 500 tons, being 28.hours. To discharge 1,500. tons, Lighter to shore, would therefore be 84.hours. Added to which would be towage and filling time at the Tanker.

From my paragraph 2. above you will see that the estimated time of discharge Lighter to shore for diesel oil is 84.hours. It is thought that an average consignment of F.F.O. of 7,000 tons would be discharged Lighter to shore in approximately 56. hours. Assuming both oils are loaded Tanker to Lighter at the same rate. i.e. 125.tons per hour, then comparable times neglecting towage, of offloading Tanker to shore tanks would be, diesel oil three loads (1,500 tons) 96 hours. F.F.O. 7,000 tons, fourteen Lighter loads, 108.hours. Theoretically it appears that the existing 3.inch pipeline should be capable of handling the quantities envisaged provided that both Lighters are being operated. It is also possible that one load could, as in previous years be taken from the Lighter before the Tanker's arrival thereby reducing the time by one third.

I would be pleased to receive your confirmation that the above proposal for receiving this larger quantity of oil is practical from your Company's point of view, or I will call upon you to discuss any objections you may find with it.

10

~~284~~

Reply at 12.

afford.

Signer (Supt. Power)

3 SPT (12. 8)

6/28/3/6/4

Issued  
28.3.63

(Supt) E.C. GUTTERIDGE

The Hon. A.G.Barton. C.B.E., J.P.,  
Colonial Manager,  
Falkland Islands Trading CO., LTD.,  
STANLEY.

Supt. Power & Electrical  
Department.

BU 4/4/63

See pl

Hon. C.S.

It would appear, (contrary to what Mr Cahill informed me verbally), that a consignment of 1,500 tons of fuel oil could be received without fear of delaying the Tanker by using the existing 3 inch pipe, at least that is how I interpret his letter. With regard to his para. 4. obviously it is confusing to the F.I.C. as fueling Agents to have to deal with two separate Departments for what to them is one consignment. I suggest that either B.A.S. or the Colonial Government take care of all fueling arrangements. Any enquiry to be made to the Agents being made by the Department so appointed. Mr Picton may wish to comment on this. I assume the Colonial Treasurer will be dealing with the financial matters, Funds for purchase of oil, costing, proportionate sharing of costs, method to be adopted for issues and receipts etc.

H.E. did mention that a Naval Surveyor would be available for a few days when the Biscoe arrives, Mr Picton will no doubt wish to take advantage of his services to survey the pipe line and have the result on hand should a larger pipe be necessary.



13-4-63.

o.

Buf

#5  
12

# The Falkland Islands Company, Limited.

(INCORPORATED BY ROYAL CHARTER 1851.)

REGISTERED 1902.

AGENTS FOR LLOYD'S.

TELEGRAMS "FLEETWING PORTSTANLEY" VIA RADIO.

WORKS DEPARTMENT.  
*Stanley,*

10th. April 1963

Superintendent, Power & Electrical, Dept.  
STANLEY.

Dear Sir,

OIL FUEL - DELIVERY ARRANGEMENTS.

With reference to your letter of 27th. March 1963 to the Colonial Manager on the above subject. The Manager has requested me to reply and I have the following comments to offer:-

1. I think in the initial stage we should not confuse the unloading of Admiralty Furnace Fuel Oil with the unloading of the gas oil for the Colonial Government. The figures you quote for F.F.O. are by no means constant.
2. Dealing now with the discharge of gas oil, the present rate is:-

Lighter to Port William	1 Hr.
Pumping from Tanker	5 Hrs.
Lighter to Govt. Jetty	1 Hr.
Pump up to Tanks 18 Tons/Hr.	28 Hrs.
Total	<u>35 Hrs.</u>

Total for 1500 Tons, 105 Hrs.

The C852 can pump at the rate of 100 Tons per hour through a 6" pipe and if Government were to fit a 6" pipe in lieu of the present 3" pipe the rate would be :-

Lighter out	1 Hr.
Oil from Tanker	5 Hrs.
Lighter back	1 Hr.
Pumping up	5 Hrs. i.e. 500 Tons per Hr.
Total	<u>12 Hrs.</u>

Total for 1500 tons 36 Hrs.

3. Allowing for unforeseen holdups such as weather, draining tanks etc. it would appear that if 5 days were allowed for the task of delivering 1500 tons to Colonial Government there would be no holdup, as the normal time for a Tanker to discharge Admiralty Fuel Oil is approximately 7 days.
4. B.A.S. office have also been in touch with me on this subject and to save confusion it might be better if the two Government departments got together and made one representation to us as Admiralty Agents.

Yours faithfully,

*J. A. Galvin*  
Works Manager.

~~305~~ 286 13

2. E.

Mr. Gablik mentioned his matter over  
a drink recently.

I think his position is that we can  
manage with 4.3" fire and that we  
need not fear that we will be unable to  
go take in our supply, when we need tankers  
comes, through absence of a 6" fire.

However I think we should still try to  
install 6" fire eventually if it is reasonably  
practicable.

cc

Should I write to Lieutenant Commander  
Dixon to meet him on arrival and ask  
him to assist S PW?

Can discuss with him <sup>4/2</sup> 16/4/63

H.C.S.

I agree that we can manage with the 3" pipe for the time being, but we should have the line for a 6" pipe surveyed and I am sure Lieutenant Commander Dixon would help with this.

2. I understand that Mr. Gutteridge and Mr. Clapp will be meeting on para. 4 of ~~285~~<sup>12</sup> and I think it would be easier if Mr. Gutteridge is the channel of communication with the F.I.C.

3. There are one or two points which need to be thought of. The first is that with B.A.S. ships and the "Darwin" taking oil from the Government jetty there will be more risk of damage to this jetty. What is its condition and should any measures be taken to strengthen it? I understand that in the course of conversation with Mr. Gutteridge, Captain White has said that he has no objection to going alongside the Government jetty provided there is sufficient water, and that the S.P.W. soundings have shown that there is more water alongside than at the public jetty. There is a sandbank on the approach to the Government jetty, but I understand that this can be avoided without too much difficulty.

4. It would, of course, be more convenient for everyone if we could re-fuel ships at the public jetty, but the S.P.W. was unhappy about taking a 6" pipe along the main road or adjacent to it. There is really no need to have as large a pipe as this, and I should think that a 2" or a 3" one would be adequate. I would like to know whether a reduction in the size of pipe would make it easier to run one from the Government jetty to the public jetty, and I should be grateful if you would go into this with the S.P.W. I appreciate that there may be obstacles in the way which would affect a small pipe as well as a large one, but these may not be insuperable. Lieutenant Commander Dixon might also be able to help us with the line that this pipe should take.

5. I have to see Lieutenant Commander Dixon when he arrives and I shall be discussing both the line for the 6" pipe and this problem with him.

April 16, 1963.

14A

S.P.W.

~~288~~ 15

Pl. see ~~284~~ ~~285~~ with Mr. Gutteridge's minute above.

May I have yr. observations on paras.  
3 & 4 above p.e?

J. J. frcs.  
234.63

~~287~~ 16

Hon. Col. Sec.

(3). The Government Jetty has in the past taken alongside all the B.A.S. vessels and the Darwin.

The main structure is quite sound and if the decision is made to use Government Jetty, minor repairs could be carried out and a row of fender piles driven at no great cost. (Labour & Materials £1,000 ).

(4). The objections to running a pipe line to the Public Jetty is, approximately 30% friction loss given by the extra length of pipe, excavating 950 yds along Ross Rd, renewing 200 yds of concrete paving, possible snagging of Telephone & Electrical cables which are on the same run and depth as the pipe line would take.

The smallest pipe you could use would be 3", the smaller the pipe the greater the friction loss. If it were necessary to step up the refueling and discharge I should think another 3" pipe run in parallel with the existing one at Government Jetty would be sufficient, at a cost of approximately £900.

Estimated cost to Public Jetty would be £2,500.

*D. P. Weston.*  
Supt. of Works.  
25th April, 1963.

260 17

• TELEPHONE & B'CAST CABLES CROSSING.  
Ross Rd. - From SECRETARIAT CORNER  
To PUBLIC JETTY

1 Secretario Borne.  
1 Barrack St Borne (east).  
1 Opposite South entrance  
of Town Hall.  
4 Opposite S.E. corner of  
Town Hall

} Unducted  
Bases

6 East end Police Yard  
1 Ship Stores Borne (west) } In Porcelain  
- West Stone Borne (east) - Ducting only  
1 Public Jetty — In iron pipe

All lead covered cable with from  
20 - 100 pairs in each - EASILY  
DAMAGED - from 1' - 1' 6" under pavement

SPW  
Pear wood furniture

Bo 6<sup>5</sup>/8 in

18" - 2 ft.

X

Spoken to Lt. Commander ~~Dickson~~ yesterday evening who says.

1. He has not done a survey of the proposed pipe line from the Public Jetty to the Government Jetty. He says that the construction of such a pipe line would appear to present no technical difficulties but would involve breaking up the road and so would be very expensive. He does not think that there would be any justification for incurring such expenditure.
2. He has taken soundings of the water approach~~es~~ to the Government Jetty and will provide a chart. There are no strange sand banks near the approach~~es~~.
3. He is still working with S/PW over the track for the pipe line from the Government Jetty to the tank. He points out that he is not really an expert on this subject which requires a Civil Enginner.

S/PW for further observations please.

S.

RHDM/LH

2.5.63

~~26~~

19

Hon. Col. Sec.

X

Lt. Commander ~~Dickson~~ did give me a survey sketch map of proposed route of proposed pipe line.

I agree the construction of such a pipe line would present no technical difficulties but, with his knowledge in the use of the Theodolite I would have thought it would be a relativly simple matter to plot the line and angles on the horizontal and vertical plane which is all we need.

I pointed out that our greatest difficutly was in plotting the line on gradient and obtaining the correct degrees of bend.

One difficulty which does present itself, is the run behind Admiralty Cottage, through Government House driveway and the culvert under Ross Rd. The existing line is bent at will to follow this twisting course which would not be possible with a larger pipe line.

It would probably mean breaking up Government House driveway, Ross Rd and re-aligning the culvert which I would not advise.

If S.P.E.D.s figures are correct we may not need to increase the size of the line, but could if need be as I suggested before, run a 3" line in parallel and double the capacity.

*Platon.*

Supt. of Works.

7th May, 1963.

~~207~~

21

H.E.

Please see ~~262~~ 275 in 1905/2.

I suggest.

- ✓ 1. No further action to instal an extra pipe for the present.
- ✓ 2. After the first visit of the tanker we can see how things go and decide whether
  - (a) to leave things as they are.
  - (b) to instal another 3" pipe and
  - (c) to instal a 6" pipe.

A 6" pipe is of a more satisfactory job and gives twice as much flow as two 3" (area being  $\pi r^2$ ) but in view of the difficulties mentioned at 262 and in view of the fact that we already have one 3" pipe one would imagine that a second 3" pipe would be the answer. This would cut down the time of unloading from 105 hours to 105 - 42~~63~~ hours.

I suppose though that we cannot entirely forget the 6" pipe yet. Unfortunately Lt. Commander Dixon has for some reason not supplied SFW with the information he really wanted - a profile of the country through which the pipe would have to pass and as this matter is no longer urgent perhaps a BAS surveyor could produce it next year?

~~262~~ 22

HCT suggests we buy 4 barrels  
or 9 barrels

REHM/LH  
15th May, 1963.

8 15/5/63.

GB

23.5.63-

23<sup>rd</sup>

occ BAC cover a BAS survey  
please be found to do his next year 2  
31/5/63

H.C.S.

Please see signal to London

E. E. H.  
5.6.63

GOVERNMENT TELEGRAPH SERVICE  
 FALKLAND ISLANDS  
 SENT

WT P2809 5/61

24

Number	Office of Origin	Words	Handed in at	Date
	SEALEY			5.6.63.
To	BTM : POLANSKY LONDON S.W. 1		ACCOUNT D.A.S.	

4.11.63. SAWYER ON RECENTED FUEL TANK PIPELINES AND POSSIBILITY HAS  
 SURVEYOR BY SHACKLETON SHAY SEALEY THEM ONTO BISCUIT PLATE

ANTARCTIC

(COPY ON RECENTED FILE 1905/3)	Gen	BW 7.7.63
Time	ACV	Bo after mail
	8 <sup>2</sup>	(was in 8 <sup>2</sup> )
		8/7/63.
	R. 11.31.7.63	

0% BAS.

25

Have you received a reply to 24, please.

H.A.C.S.

26.

L.G.S.

2.8.63

Yes. a messenger will come on the  
Birrroe during November and then  
connect with Kitter during January.

27

E.G.H.

S.P.W. to see, please.

L.G.S.  
12.8.63

Bill 1/11/63  
to see

Bett ~~11/11/63~~

H.C.S.

28

Noted Thank you.

St. John, S.P.N.  
15/8/63.

L.G.S.

29

Shw.

Did Cotton make a written report  
to you pl? If so, a copy can be made  
for this file.

30

8.1.64

A. C. S.

Information required, <sup>B/C</sup> originals filed P&D.

Ploton. SPW. 11/1/64.

By 30 3-64  
~~28.2.64~~

Noted. S: 2.4.64

~~28.3.64~~ for