

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.Index No. 33675
(For London Office only.)

19 MAY 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having POOP BRIDGE & FORECASTLE

Port of Survey NEWCASTLE

Date of Survey 17th MAY 1932

Name of Surveyor J. Young

Particulars of Classification + 100 A.I.

Ship's Name CLIONA Nationality and Port of Registry BRITISH LONDON Official Number 162646 Gross Tonnage 8375 Date of Build 1931

Moulded Dimensions: Length 455.0 Breadth 61.75 Depth 34.14
Moulded displacement at moulded draught = 85 per cent. of moulded depth 18680 tons
Coefficient of fineness for use with Tables .802

Depth for Freeboard (D) Moulded depth ... 34.14
Stringer plate06
Sheathing on exposed deck ✓
 $T \left(\frac{L-S}{L} \right) =$
Depth for Freeboard (D) = 34.20

Depth correction (a) Where D is greater than Table depth
(D - Table depth) R = $(34.20 - 30.33) \times 3 = +11.61$
(b) Where D is less than Table depth (if allowed)
(Table depth - D) R = ✓
If restricted by superstructures

Round of Beam correction Moulded Breadth (B) 61.75
Standard Round of Beam = $\frac{B \times 12}{50} = \frac{14.82}{50}$
Ship's Round of Beam = 15.2
Difference .68
Restricted to
Correction = $\frac{\text{Diff}^e}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.68}{4} (1 - .4013) = .10$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	106.84	106.84	7'-3"	$\frac{7.25}{7.50}$	103.29
overhang ...					
R.Q.D. enclosed ...					
overhang ...					
Bridge enclosed ...	33.54	33.54	7'-3"	$\frac{7.25}{7.50}$	32.42
overhang aft ...					
overhang forward ...	42.2	42.20	7'-3"	$\frac{7.46}{7.50}$	41.97
Forecastle enclosed ...	43.6				
overhang ...					
Trunk aft ...					
forward ...					
Tonnage opening aft ...					
forward ...					
Total ...	182.58	182.58			177.68

Standard Height of Superstructure 7.50
" " R.Q.D. ✓
Deduction for complete superstructure 42.0
Percentage covered $\frac{S}{L} = 40.13$
" " $\frac{S_1}{L} = 40.13$
" " $\frac{E}{L} = 39.05$
Percentage from Table, Line A.
(corrected for absence of forecastle (if required))
Percentage from Table, Line B. TANKER 30.05
(corrected for absence of forecastle (if required))
Interpolation for bridge less than 2L (if required) ✓
Deduction = $42 \times 30.05 = -12.62$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	55.50	1		55.50	61	61.75	1		61.75
$\frac{1}{2}$ L from A.P. ...	24.70	4		98.80	26	26.47	4		105.88
$\frac{1}{4}$ L " ...	6.10	2		12.20	6	6.62	2		13.24
Amidships ...	-	4		-	0	-	4		-
$\frac{3}{4}$ L from F.P. ...	12.2	2		24.4	15	15.00	2		30.00
$\frac{1}{2}$ L " ...	49.4	4		197.6	56	56.00	4		224.00
F.P. ...	111.0	1		111.0	122	122.75	1		122.75
Total ...				499.50					557.62

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - \frac{S}{2L}}{18} \right) = \frac{58.12}{18} \left(\frac{75 - .2006}{18} \right) = -1.78$

If limited on account of midship superstructure. ✓

Mean actual sheer aft = Excess
Mean standard sheer aft
Mean actual sheer forward = Excess
Mean standard sheer forward

Length of enclosed superstructure forward of amidships = 7 does not
" " aft of " = } apply.

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 34.22
Summer freeboard = 6.71
Moulded draught (d) = 27.51

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.88
Addition for Winter North Atlantic Freeboard (if required) = 4.55

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta = 17800$

Tons per inch immersion at summer load water line

$T = 57.45$

Deduction = $\frac{\Delta}{40T}$ inches = 7.74

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient $\frac{802 + 68}{1.36} \frac{1.487}{1.36}$

Depth Correction ... 11.61
Deduction for superstructures ... 12.62
Sheer correction ... 1.78
Round of Beam correction ... 10
Correction for Thickness of Deck amidships ... 24
Other corrections, scantlings, etc. ...

+	-
11.61	-
-	12.62
-	1.78
-	10
-	24
-	-
11.85	14.50

Summer Freeboard = 80.62

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck

Tropical Fresh Water Line above Centre of Disc ... 14.2
Fresh Water Line " " ... 7.4
Tropical Line " " ... 6.4
Winter Line below " " ... 7
Winter North Atlantic Line " " ... 11.2

Tropical Fresh Water Freeboard ... 6'-8 1/2"
Fresh Water " " ... 5'-6 1/2"
Tropical " " ... 6'-0 3/4"
Winter " " ... 6'-1 1/2"
Winter North Atlantic " " ... 7'-3 1/2"

20 MAY 1932

WORKING FORM

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

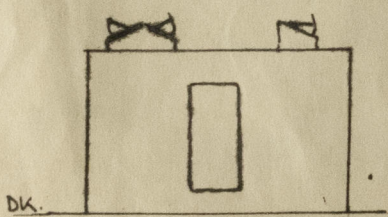
HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway			CARGO HOLD.	OIL HATCHES	BALLAST PUMP ROOM	OIL FUEL HATCH 2 off	ON. FOCLE To FORE PEAK	ON. POOP To STORE	ON. POOP To U.D. SPACE
Dimensions of Hatchway			9'-0" x 12'-0"	5'-11" x 2'-11"	2'-10" x 3'-0"	1'-11" x 2'-2"	3'-0" x 3'-0"	2'-6" x 2'-6"	3'-6" x 3'-6"
CO. MINGS	Height above Deck	...	2'-6"	2'-6"	2'-6"	1'-7"	6"	6"	6"
	Thickness	Sides	.44	.44	.40	.40			
	Thickness	Ends	.44						
	Stiffeners	...	✓				Same below		
Brackets, Stays			✓				ON. U.D.	2 OFF.	
HATCH BEAMS	Number	...	3 STIFFS						
	Spacing	...	ON W.T. COVER	FORE WELL					
	Scantling and Sketch	...	6 x 3 x .40 SPACED 36"	9 OFF					
	Bearing Surface	...		APR WELL 12 OFF					
FORE AND AFTERS	Number	...							
	Spacing	...							
	Unsupported Lengths	...							
	Scantling* and Sketch	...							
Bearing Surface			HINGED	HINGED	HINGED STEEL	HINGED STEEL	HINGED STEEL		
HATCH COVERS	Material	...	STEEL	STEEL W.T.	W.T. COVER	W.T. COVER	W.T. COVER	← 20. ←	← 20
	Thickness	...	W.T. .50	COVER .44	.35	.35	.35		
	How fitted	...	TURNBUCKLES						
	Bearing Surface	...	18" APART	16 T.Bs.	8 T.Bs.	6 T.Bs.	7 T.Bs.		
Spacing of Cleats									
Number of Tarpaulins									

- *Are wood fore and afters steel shod at all bearing surfaces?
- Are battens and wedges efficient and in good condition?
- Are tarpaulins in good condition and in accordance with rule requirements?
- Are lashings provided in accordance with rule requirements?

Particulars of fiddley, funnel and ventilator coamings:—
 Fiddley Gratings to Donkey Boiler Space protected by hinged steel covers.
 Funnel & Vents in efficient condition.
 E.R. Skylight of Steel strongly constructed.

Particulars of Flush Bunker Scuttles:—
 None

Particulars of Companionways:—



Pump Room Entrance
 7'-0" x 19'-6" x 7'-0" high
 Stiffs 4" x 2 1/2" B.A. Spaced 2'-0" x 2'-10"
 Door 2'-9" x 4'-6" with 1'-6" Sill
 of Steel. W.T. 10 Wedge Clips.
 Skylight Flaps Steel W.T. 3'-10" x 2'-1"
 Deadlights 8 1/2" diam.

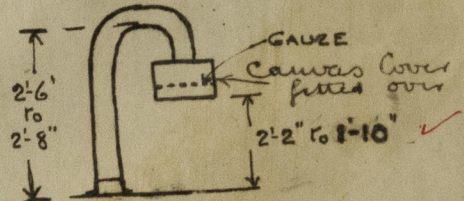
Entrance to Main Deck Space
 in Forecastle Bulkhead.
 2'-0" x 4'-9" with 2 1/2" Sill
 Solid teak 1 3/4"

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

On Fore. Deck. 6", 8" & 10" diam to Crew Space. 2'-4" high above Wood DK.
 3 @ 12" diam 3'-0" high.
 Poop Vents 12" diam. 2'-7 1/2" high.
 8" " 2'-1" high.
 Pump. Rm. Vents 24" diam. 3'-1" high .40 thick.
 S.N.V. & Wash Place. 7 1/2" x 4" x 2'-6 1/2" high to mouth.
 Vents are all constructed according to Rule Requirements and are provided with plugs and covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Air Pipes throughout ship as per sketch.
 Ullage Pipes 5" diam. 2'-0" high.



Particulars of Gangway Cargo and Coaling Ports:—

None



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Particulars of Scuppers and Sanitary Discharge Pipes

Scuppers on Upper Dk. 9" dia. thru gunwale bar ✓
1" dia. " " deck & shell. ✓

all sanitary discharges and waste pipes are of iron pipe and fitted with brass storm valves. ✓

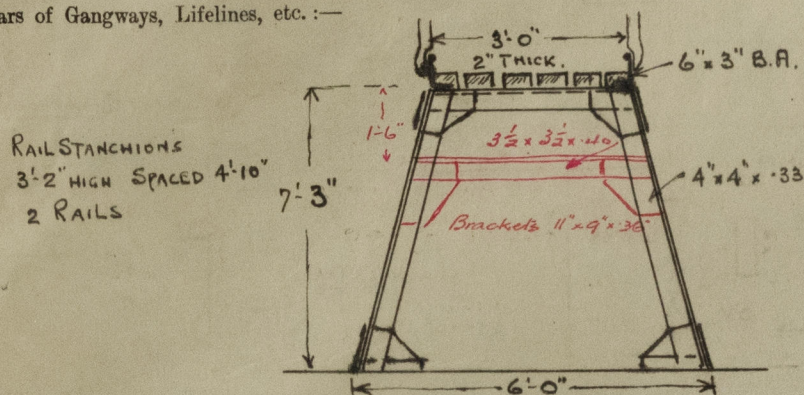
Particulars of Side Scuttles:

In Crew Space forward and also in Poop. 10" diam. and fitted with hinged deadlights. ✓

Particulars of Guard Rails:—

on Tackle 3'-9½" high Stans. 5'-0" apart 3 Rails ✓
on Upper Dk 3'-6" " 4'-6" " 3 Rails ✓
on Poop Dk 3'-9" " 4'-6" " 3 " ✓
Upper Dk Bulwarks 3'-6" high Stays 7" B.P. 5'-6" apart ✓
Rail Bar 7" x 3" B.A. ✓

Particulars of Gangways, Lifelines, etc.:—



Particulars of Freeing Arrangements.

	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well ...	See sketch	50% open rails				
Forward Well ...		50% open rails				

State position of each freeing port ... After Well:—
(F. and A. position and height above deck edge) Forward Well:—

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—

Additional area where sheer is less than standard.

Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead ...	.44 ✓	.44 ✓	9" x 2 3/4" x 50 B.A. ✓	2'-4" ✓	LUGS ✓	2'-6" x 5'-0" ✓	18" ✓	7'-3" ✓
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	.30 ✓	.30 ✓	3 1/2" x 2 1/2" x 30 ✓	2'-7" ✓	NONE ✓	3'-2" x 5'-3" ✓	18" ✓	7'-3" ✓
Bridge, Forward Bulkhead ...	.44 ✓	.40 ✓	9" x 3" B.A. ✓	2'-6" to 2'-9" ✓	LUGS ✓	2'-6" x 5'-0" ✓ 2'-0" x 4'-9" ✓	18" ✓ 16 1/2" ✓	7'-3" ✓ 7'-3" ✓
Forecastle Bulkhead ...	.25 ✓	.25 ✓	3" x 3" x 25 ✓	2'-3" to 2'-5" ✓	NONE ✓	2'-0" x 5'-0" ✓	15 1/2" ✓	7'-3" ✓
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	.40 ✓	.30 ✓	3 1/2" x 2 1/2" x 40 ✓	2'-5" ✓	IN WAY OF BEAMS 2 RIVETS ✓	LARGE OPENING ACCESS TO WORKSHOP ✓	18" ✓	7'-3" ✓
Exposed Machinery Casings on Superstructure Decks ...	.40 ✓	.30 ✓	3 1/2" x 2 1/2" x 40 ✓	2'-5" ✓	2 RIVETS ✓	2'-0" x 4'-9" ✓	16" ✓	7'-3" ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...								
Deckhouses on Flush Deck Ships ...								

Note: the above are not exposed when W.T. Doors in Poop front & House front are closed (see sketch)

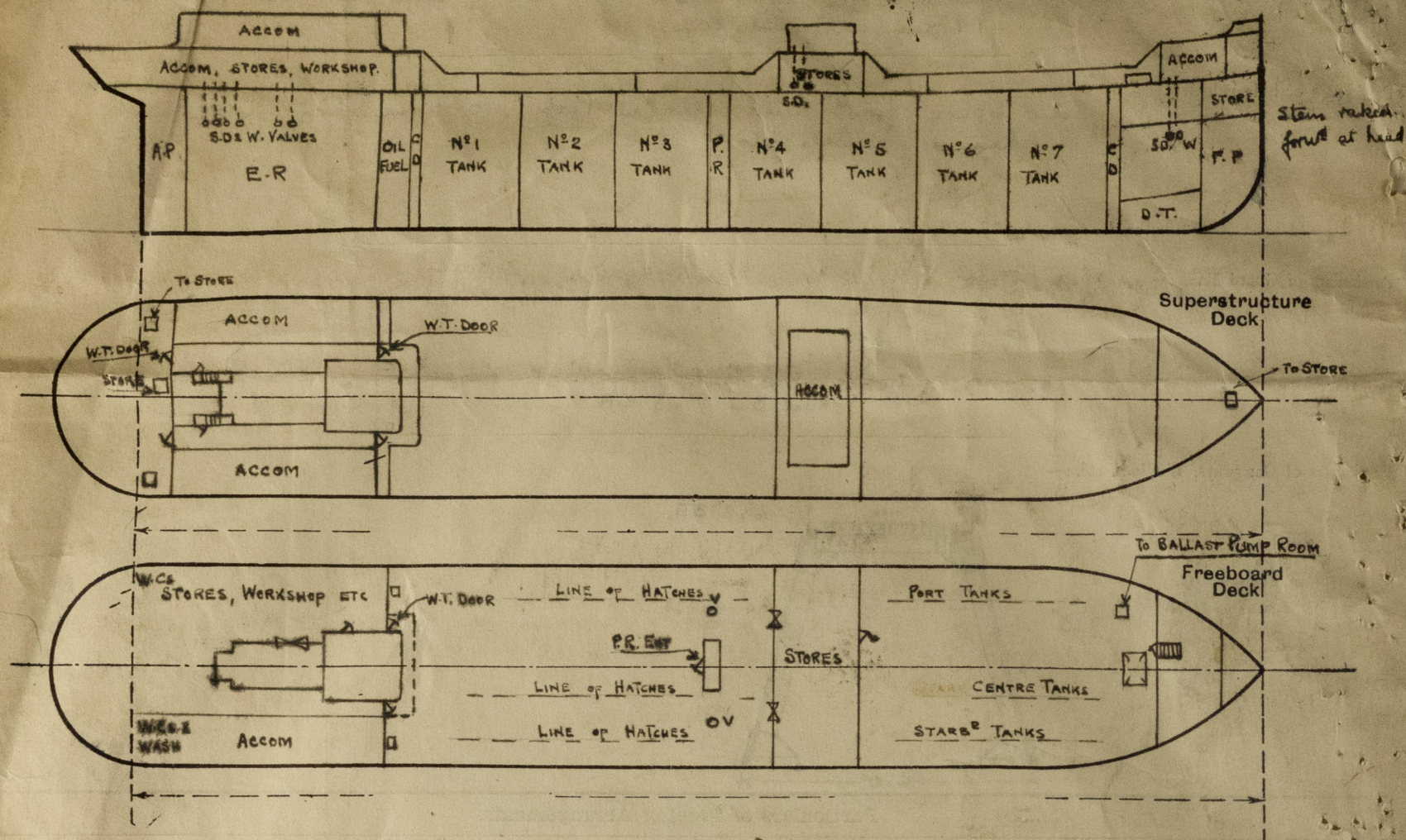
Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead ...	2 Hinged Steel W.T. Doors 2'-6" x 5'-0" fastened by 6 Wedge Clips operated both sides ✓
Raised Quarter Deck Bulkhead ...	
Bridge, After Bulkhead ...	Openings closed by steel plate fastened by hook bolts. no holes in bulkhead. ✓
Bridge, Forward Bulkhead ...	Hinged Steel W.T. Door 2'-6" x 5'-0" fastened by 6 Wedge Clips operated both sides ✓
Forecastle Bulkhead ...	6 Teak Doors to Crew Spaces 1 3/4" Solid Teak. 1 Steel Door all with locks & knops operated both sides ✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...	(also 1 hinged steel door to Main Dk see Companionways) ✓
Exposed Machinery Casings on Superstructure Decks ...	1 3/4" Solid Teak doors operated both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	
Deckhouses on Flush Deck Ships ...	

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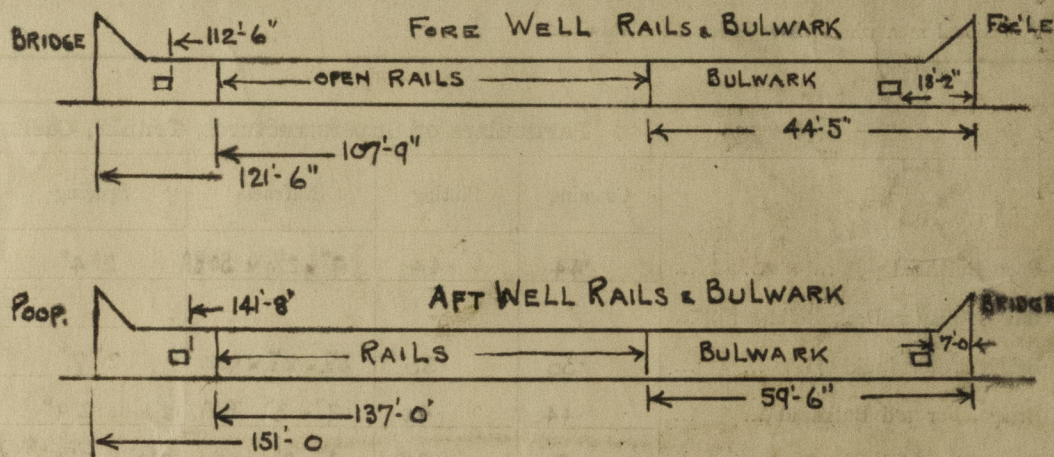
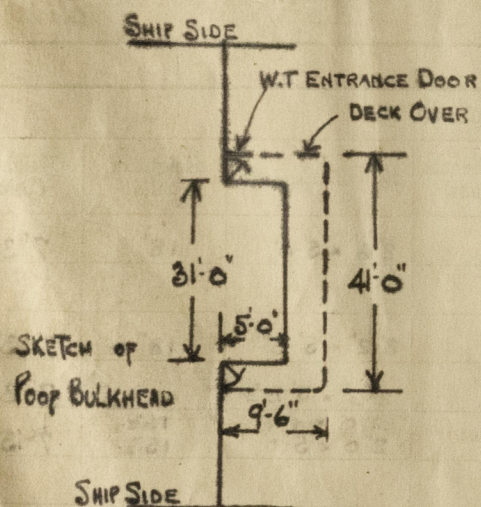
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Superstructure bulkheads, trunks, deckhouses, casings, cargo and coaling hatchways, extent and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., which would affect the seaworthiness of the ship are to be shown on the following sketches:—



State any special features in the construction of the ship:—

The vessel has 2 longitudinal W.T. Bulkheads in way of Cargo Oil Tanks making 3 tanks abreast to the U.D.



Builder's name and yard number

MESSRS HARLAND & WOLFF LTD GLASGOW

FROM D.W. SCALE

Names of sister ships

CONCH

Owners

ANGLO SAXON PETROLEUM CO LTD

DRAFT Δ T.P.L.

27'-0"	17360	57.30
26'-5 1/2"	17000	57.15
26'-0"	16680	57.0
25'-0"	15990	56.8

Fee £ 16 : 3 : 0

Received by me



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