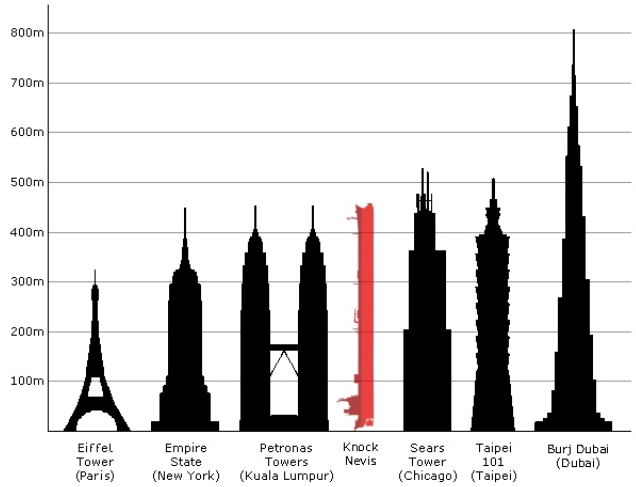
# Managing Casualty Situation
# Salvage & Wreck Removal Workshop

*Daniel Dettor / Matthew Bierwagen*
*Alex Macinnes / Sora Jeon*

Tatham Macinnes

Marine solicitors

# Introduction






Tatham Macinnes

Marine solicitors

# Introduction

- TI Oceania

Tatham Macinnes

Marine solicitors

## Introduction

Tatham Macinnes

Marine solicitors

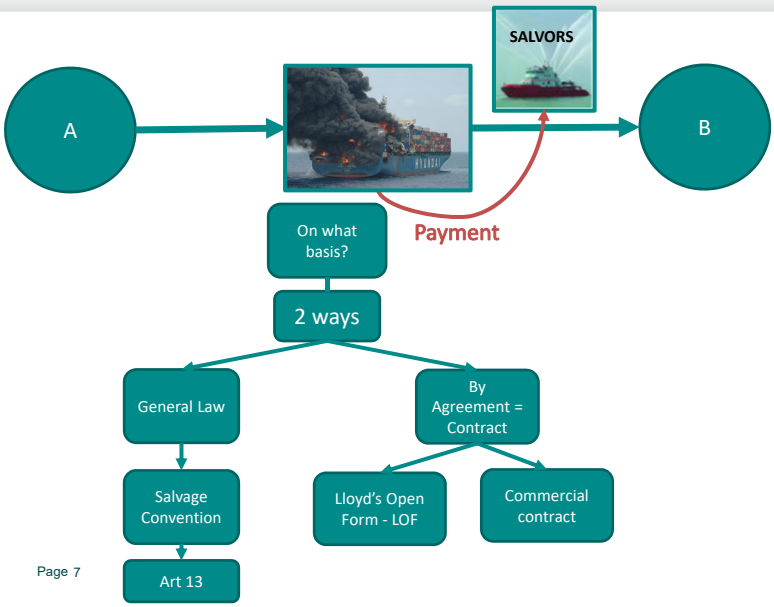


## Introduction

Tatham Macinnes

Marine solicitors

# How salvage works?

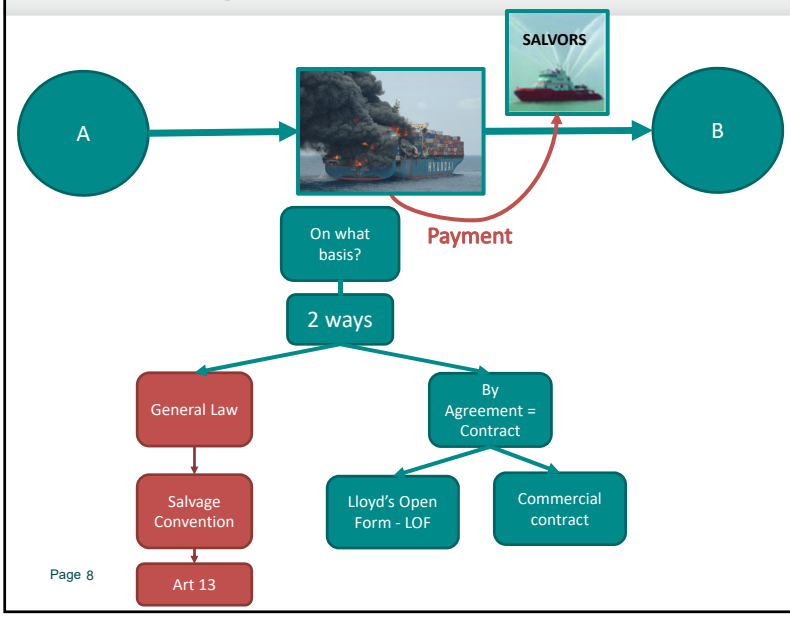



Tatham Macinnes

Marine solicitors



# How salvage works?




Tatham Macinnes

Marine solicitors

## Salvage – The General Law

Tatham Macinnes

Marine solicitors

## Contracts

Article 13

Criteria for fixing the reward

1. The reward shall be **fixed with a view to encouraging salvage operations**, **taking into account the following criteria** without regard to the order in which they are presented below:

   (a) …**salved value …**;
   (b) ...preventing or **minimizing damage to the environment**;
   (c) …**success…**;
   (d) …the **danger**;
   (e) the **skill and efforts of the salvors** …;
   (f) …
   (h) ……;
   (i) …**the availability and use of vessels or other equipment**…;
   (j) …**the state of readiness and efficiency of the salvor's equipment** and the value thereof.



Tatham Macinnes

Marine solicitors

## Contracts

**"Article 14 - Special compensation**

If …salvage operations in respect of a vessel… or … cargo **threatened damage to the environment**…entitled to special compensation **from the owner** of that vessel equivalent to his expenses as herein defined.

If…the salvor by his salvage operations has prevented or minimized **damage to the environment**, the special compensation payable … may be increased up to a maximum …100% of the expenses incurred...

Salvor's expenses ..means the out-of-pocket expenses reasonably incurred …and a **fair rate** for equipment and personnel … used…

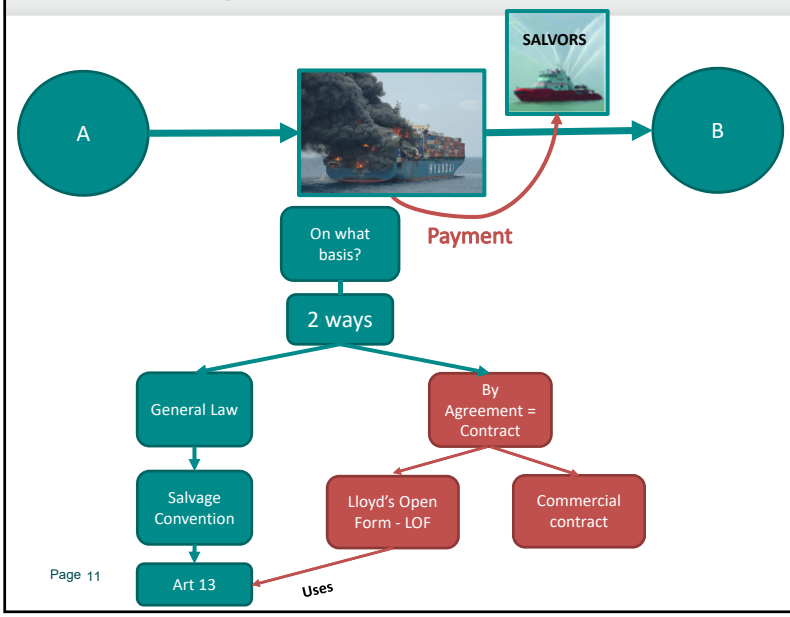
…shall be paid only if and to the extent that such compensation is greater than any reward recoverable by the salvor under article 13."

**Damage to the environment means:** "***substantial*** *physical damage to human health or to marine life or resources* ***in coastal or inland waters or areas adjacent thereto****, caused by pollution, contamination, fire, explosion or similar major incidents."*

Tatham Macinnes

Marine solicitors

## How salvage works?






Tatham Macinnes

Marine solicitors

# Salvage – Lloyd's Open Form (LOF)

1989 Salvage Convention (As enacted in a specific country, if at all)

Can contract out in part

BUT – not from everything:
E.g. Article 6(3) regarding Duty to minimise damage to the environment



Tatham Macinnes

Marine solicitors

# Salvage – Lloyd's Open Form (LOF)

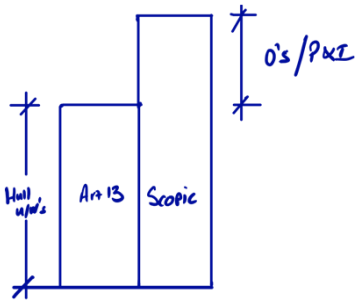
- LOF
  - 2 pg contract
    - Incorporates: LSSA Clauses & Procedural Rules
  - Admits salvage
  - Law and Jurisdiction agreed
  - Article 13 basis of Award
  - SCOPIC
    - Incorporation = replacement of Art 14
    - Needs to be invoked before remuneration bites
    - Security USD 3m / 2 days
    - tariff based + uplift 25%
    - deterrence by penalty of 25%



Tatham Macinnes

Marine solicitors

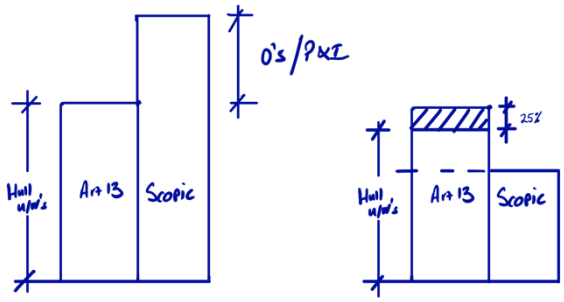
## Special Compensation P&I Club Clause (SCOPIC)






Tatham Macinnes
Marine solicitors

## Special Compensation P&I Club Clause (SCOPIC)






Tatham Macinnes
Marine solicitors

## BIMCO Forms

BIMCO

Tatham Macinnes

BIMCO FORMS

| | |
|---|---|
| Towcon | lumpsum |
| Towhire | daily rate |
| Wreckhire | daily rate |
| Wreckstage | stage payment |
| Wreckfixed | lumpsum |



Marine solicitors

## Fire Case Considerations

- Type of Vessel
  - Tanker
  - Containership
  - Bulk Carrier
  - Cruise Ship
- Type of Cargo / Fire
  - Oil based
  - Carbon / Typical Material
  - Chemical
- Vessel Stability

RESOLVE MARINE GROUP

## Fire Case Considerations

- Equipment
  - Fi-fi Bunker gear
  - SCBA's
  - Victor Lances
  - Support Tugs
  - Fire Pumps
  - Foam
- Personnel
  - Marine Fire Fighting team
  - Marine Chemist
  - Salvage Master / Naval Architect / Salvage Engineers

RESOLVE MARINE GROUP

## Scenario – Salvage

M/V Trader



Tatham Macinnes

Marine solicitors

## Vessel / Cargo Information

- **Bulk Carrier**
  - **Length: 190m**
  - **Deadweight: 56,600t**
- **Flag: Isle of Man**
- **Class: Lloyd's Register**
- **Cargo: <u>Ammonium Nitrate 'based' NPK (Nitrogen Phosphorus Potassium) Fertilizer</u>**
  - **A common and typically not a hazardous cargo.**
  - **when exposed to a heat source, and if it reaches 120-150 C, it can trigger self sustained decomposition.**
  - **chemical reaction - emits fatal toxic gas, temperatures peak at over 200 C.**

## Incident Timeline

- 6th August 2017 : Vessel began voyage from Norway to Thailand.
- 7th - 8th August: All appears normal
- 9th August: During his routine checks of the holds the C/O opened the cargo hatch cover drains and noticed a faint odor and small amount of water from Cargo Hold #4 (thought to be 'ship's sweat')

## Incident Timeline

- 10th August: Small quantities of water continue to collect cargo hatch drains. Foul smell intensifies.
  - Master issues Notice of Protest to cargo interests

## Incident Timeline

- 11th August: Visible fumes now accompanying the foul smell. Temperatures now seen rising in Cargo Hold #4 and #5. Master told to get in touch with cargo owners for direction.

## Scenario A - Salvage

West African Coast



Tatham Macinnes

Marine solicitors

## Scenario A - Salvage

- Now please consider:
  - Do you think the Owners need any salvage assistance at this stage?
  - If so, what contract?



Tatham Macinnes

Marine solicitors

## Incident Timeline

- 12th August: Cargo in Holds 4 / 5 continues to heat up. Toxic fumes increase.
  - Ship crew directed to open hatches / ladder ways to relieve pressure in the holds.
  - Cargo surveyor dispatched to assist
  - Crew instructed to manufacture victor lances for direct cooling.
  - Hatch cover opened on Hold 4 and water sprayed onto the cargo, reducing the temperature 10C.
  - Hatch cover once again closed for passage to Las Palmas

## Incident Timeline

- 13th August: Now evident initial cooling attempts failed.
  - Vessel now located in a holding area outside Las Palmas.
  - Wind has now dropped making it difficult to keep the accommodation out of the fumes
  - Particulate also now having an effect on propulsion as it's being sucked into the intake.
  - Cargo surveyor boarded vessel in the evening. Immediately advised re-opening hatch covers. However hydraulic controls enveloped in toxic fumes and inaccessible

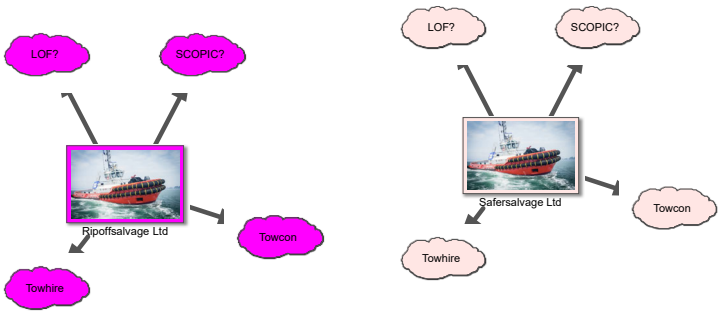
## Incident Timeline

- 14th August (morning): Explosion from cargo hold 4 due to pressurized gas.
  - Master sends distress signal to Spanish Coast Guard
  - Crew is evacuated
  - Vessel is now a dead ship and adrift

RESOLVE MARINE GROUP

## Scenario B - Salvage

Available Tugs:



M/V Trader



Tatham Macinnes

Marine solicitors

## Scenario B – Salvage

Now please consider:

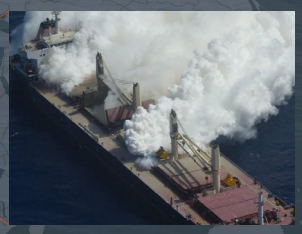
1. Do you think the Owners need any salvage assistance at this stage?
   - If so, what contract?
2. If LOF, which salvor?
   - Consider Salvage Convention: Art 8.1(d); Art 18; and Art19
3. Who are the main stakeholders / other interested parties?
4. Consider what potential claims might arise – do you want to do anything at this stage in this regard?



Tatham Macinnes

Marine solicitors

## First contact with Salvor



**Situation: On August 14th RESOLVE's Singapore office received a call from the vessel manager alerting us to an incident with one of their ships. The vessel is reportedly 'on fire', the crew has been evacuated, and she's drifting 120nm SW of the Canary Islands.**

## Salvor's First Steps?

1. Gather Information
   - Vessel Information
     - Current Condition (grounded, flooded, fire, drifting, crew condition, oil spill, etc.)
     - Drawings
     - Cargo Type
     - Vessel Interests: Owner / Hull and Machinery / P&I / Local Authority
   - Location
     - Weather conditions / forecast
     - Logistics / Permits / Visas
   - Solutions!
2. Organize Personnel / Assets
   - Salvage Team (Salvage Master, Naval Architect, Fire Fighters, Marine Chemists, Engineers, etc.)
   - Equipment: FiFi, gas monitoring, breathing apparatus, PPE, vessel boarding, towing gear.
   - Assist tugs
3. Sign Contract!

## Mobilization

- Contract Signed – Lloyd's Open Form agreed and Scopic Invoked. Puts salvor in the driver seat of the operation.
- Mobilize Personnel / Equipment / Vessels
  - 2x Tugs Chartered
  - Super Puma helicopter mobilized to aid in vessel boarding
  - Personnel mobilized from Gibraltar to liaise with personnel and vessel interests
  - Salvage / Fire Fighting Team mobilized from Rotterdam.

## Salvage Objectives

- Bring the vessel under control
- Stop chemical reaction

- Board Vessel
  - Fabricate grappling hooks
  - Get salvage team to the casualty site
  - Secure a towline / stop drift

- Cargo Cooling:
  - Boundary cooling from tugs
  - Victor lance fabrication locally

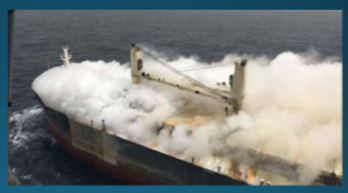
## Obstacles

- **Casualty is continuing to drift further out to sea.**
- **Authorities unwilling to assist**
- **Weather deteriorating**
- **Holds #2,3,4,5 now reacting**
- **Probability of halting chemical reaction is very low.**
- **Large toxic cloud, endangering boarding personnel**

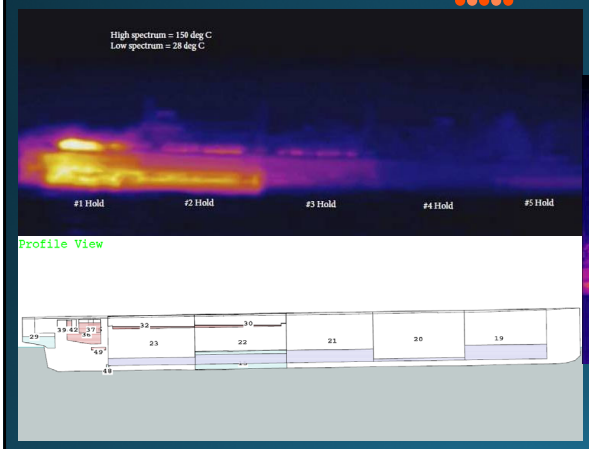
## Tow Connection Made

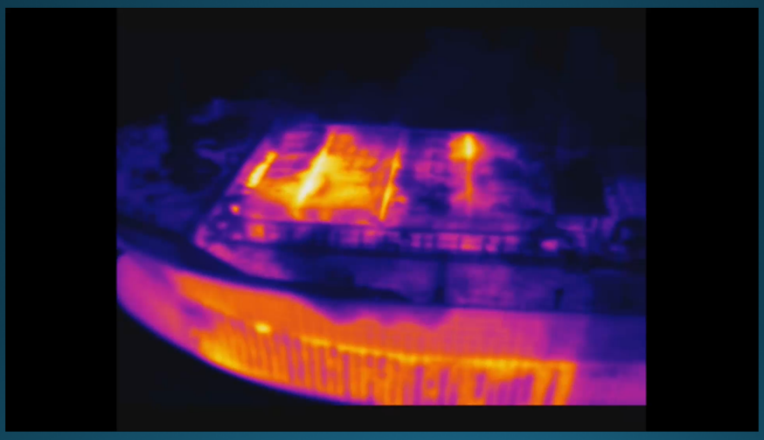
- 22 August, personnel able to board vessel via grappling hooks and secure tow connection.
- Vessel now 180 miles from shore
- Cargo Hold 1 begins reacting the next day.
- Authorities will not allow ship within 50 miles of land

## Full Decomposition Event



# Monitoring the Decomposition





# Destination?

Vessel is under tow. Where do we take her?

Options
- Las Palmas
- Mainland Spain
- Gibraltar
- African West Coast
- Turkey

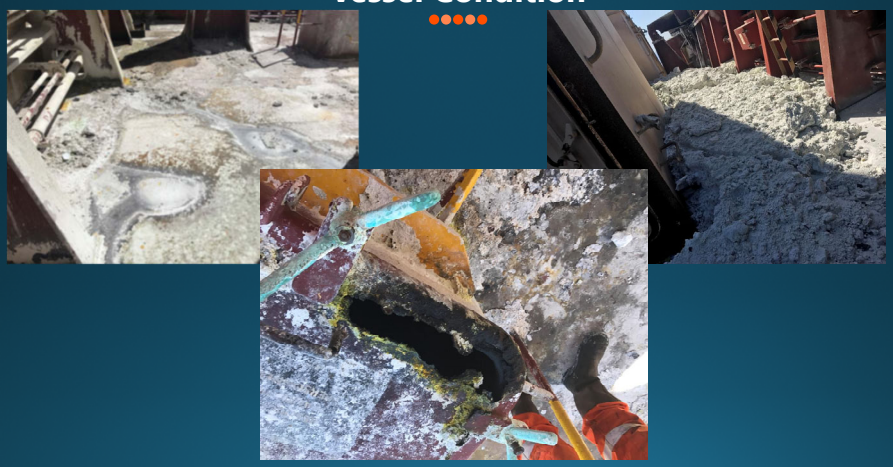
Questions:
- Port of Refuge: who's going to let us in?
- Cargo
  - Condition?
  - Port facilities?
  - Storage?
- Vessel condition: Repairable or Total Loss?

RESOLVE MARINE GROUP

# Time to Board

RESOLVE MARINE GROUP

## Vessel Condition



## Cargo Status

- Complete decomposition
- Mass reduced by over 50%

## Towing Destination Agreed

- Port of Refuge: it was decided to tow the vessel to Puerto Motril
  - Port agreeable to cargo discharge operations
  - Cargo Owners facility nearby to take cargo
- Contract shift planned upon arrival from LOF to BIMCO Wrekchire.

## Cargo Discharge / Caretaking

- Activities once in port
  - Inspections, inspections, inspections
  - Hatch cover mechanism repair
  - Crane repairs
  - Cargo Discharge Plan authority approval
  - Wait for cargo to cool down
  - Fuel removal

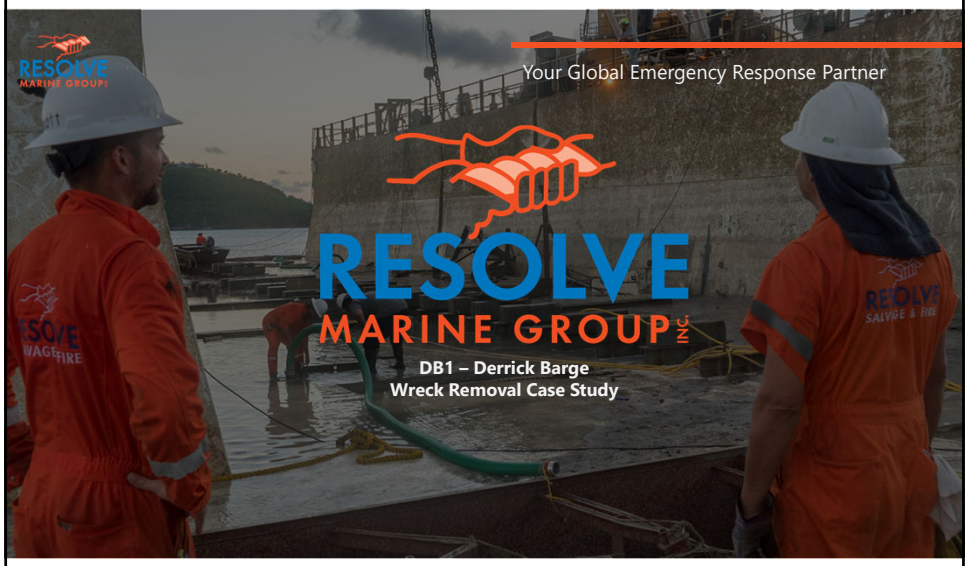
## Cargo Discharge

## Conclusion

- Final surveys conducted following cargo removal.
- Vessel declared a total loss
- New tow bridle and emergency tow wire installed.
- Towed to Turkey for dismantling

## Any questions?

RESOLVE
MARINE GROUP



## Scenario - Wreck Removal

Derrick Barge TOPS DB1

Photo: Resolve Marine



Tatham Macinnes

Marine solicitors

## Negotiation of Wreck Removal Contracts

- Wreckhire
- Wreckstage
- Wreckfixed
- Variation: cap with profit sharing



Tatham Macinnes

Marine solicitors

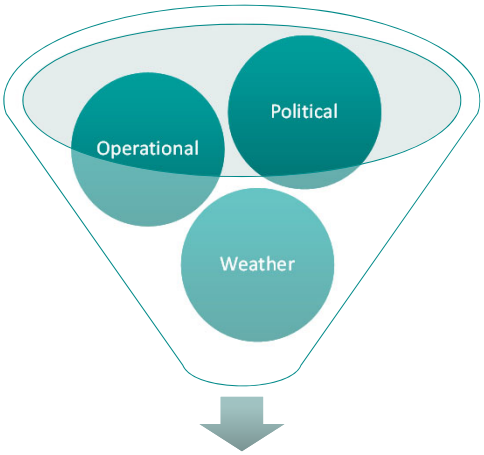
## Wreck Removal Contracts

| | Wreckhire | Wreckstage | Wreckfixed |
|---|---|---|---|
| "No cure no pay" | X | X | ✓ |
| Fixed Lump sum | X | ? | ✓ |
| Built-in bonus (Cl.11) | ✓ | X | X |
| "Extra Costs" (Cl 10, Cl 13) | ✓ | ✓ | ✓ |



Tatham Macinnes
Marine solicitors

## Negotiation of Wreck Removal Contracts




Who takes the risks?



Tatham Macinnes
Marine solicitors

## Negotiation of Wreck Removal Contracts

| Months | $30k per day | $60k per day | $100k per day |
|---|---|---|---|
| 1 | 900,000 | 1,800,000 | 3,000,000 |
| 2 | 1,800,000 | 3,600,000 | 6,000,000 |
| 3 | 2,700,000 | 5,400,000 | 9,000,000 |
| 4 | 3,600,000 | 7,200,000 | 12,000,000 |
| 5 | 4,500,000 | 9,000,000 | 15,000,000 |
| 6 | 5,400,000 | 10,800,000 | 18,000,000 |
| 7 | 6,300,000 | 12,600,000 | 21,000,000 |
| 8 | 7,200,000 | 14,400,000 | 24,000,000 |
| 9 | 8,100,000 | 16,200,000 | 27,000,000 |
| 10 | 9,000,000 | 18,000,000 | 30,000,000 |
| 11 | 9,900,000 | 19,800,000 | 33,000,000 |
| 12 | 10,800,000 | 21,600,000 | 36,000,000 |

Tatham Macinnes

Marine solicitors

RESOLVE MARINE GROUP

## Wreck Removal Options

- Refloat
  - Pumps
  - Air
  - Lift bags
  - Pontoons
  - External assistance
- Cut-Up
  - Guillotine
  - Diamond Wire Saw
  - Chain Cutting
  - Heavy Lift Assets
  - Torch
  - Hydraulic Shears

## Disposal Options

- Scuttle
  - Clean
  - Remove floating debris
- Recycle / Scrap
  - Depending on facility will depend on size for delivery

## Casualty Information

"TOPS DB-1" Derrick Barge

- LOA – 350ft (106.68m)
- Breadth – 100ft (30.48m)
- Depth – 25ft (7.62m)
- Lightweight – 6500mt
- Crane Capacity – 558mt

## Casualty Information

22nd October 2017: During adverse weather the DB1's hull was damaged, she foundered 30 nm offshore the Louisiana coast, and sank in 60ft (18m)

## Invitation to Tender (ITT)

- P&I appointed Consultant issued an ITT to selected Salvors
- Tender was issued 15 January, due 9 February
- Contract type requested: 2010 BIMCO WRECKFIX or WRECKSTAGE
  - Lumpsum, all risk to be taken by Salvor (delays, change of condition, etc.)
- Contractual Performance defined:

  *The complete removal of the Casualty, defined for these purposes as "TOPS DB-1, including any debris emanating from the wreck, any remaining fuels or contaminants still contained within the wreck, anything in or on her or equipment remaining on the decks at the time of the sinking which may remain on the decks or have been dislodged from the decks at the time of the casualty from its present location; and dispose of at a place to be agreed upon, all to the entire satisfaction of the competent authorities.*

## Scenario A – Wreck Removal

- See delegates' scenario pack for further information.
- Now please consider:
  - 1. Using the table provided, please discuss the three different risks groups and identify for each group the main issues.
  - 2. Considering the above, will you be willing to accept Wreckstage and Wreckfixed as per the tender?

Tatham Macinnes

Marine solicitors



RESOLVE MARINE GROUP

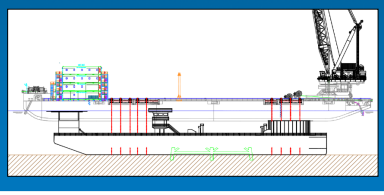
## Tender Process

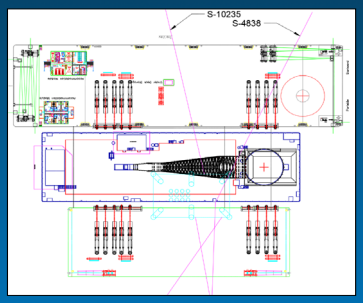
- Review information / Clarification Requests
- Options?
  - Cut – Up
  - Refloat
  - Assisted Refloat
- Considerations
  - Casualty Condition / Level of Damage
  - Assets / Equipment Needs? Location?
  - Timeline (Mobilization / Operation Schedule)
  - Certainty / Operational Risks
  - Environmental Sensitivity
  - End game? Transport(Dry vs Wet)? Disposal?
  - Contract Type / Cash Flow / Stage Payments

## Assisted Refloat Proposed

Methodology: Use 20x chain pullers outfitted on two barges, combined with pumps / compressed air to refloat the casualty.

- Single piece, less debris / clean up
- Environmentally cleaner option
- 80% Assets owned / controlled by Resolve
- Not enough confidence in a pure refloat due to unknown level of damage to the hull





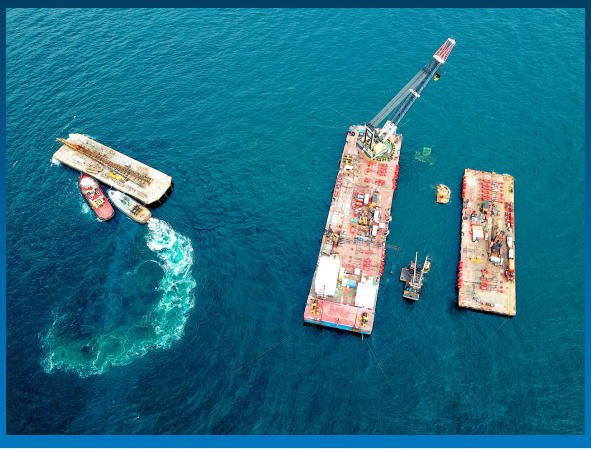

## Contract Negotiations

- 2010 BIMCO WRECKSTAGE
- Stage Payments
  1. Contract Signing
  2. Commencement of Dive Operations
  3. Upon Arrival of Salvage Barges
  4. Vessel Successfully Refloated OR Once Landed Onboard Barge
  5. Upon Completion of Debris Removal
  6. Upon Delivery of the Vessel to the Scrap Facility
- Risk Transfer
  - Clause 4 and 7 struck from Contract

## Mobilization

- Conquest MB1 Preparing at DB1 Site
- 1400 ton capacity crane
- 60 pax accommodations

## Clearing items off the deck



RESOLVE MARINE GROUP

## DB1 Wreck Removal

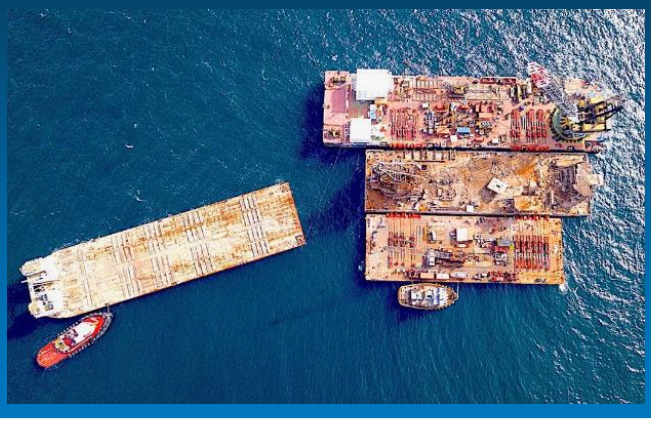
- Preparing for lift
- Patented 350 Ton Chain Pullers

RESOLVE MARINE GROUP

## DB1 Wreck Removal

Lifting Operations

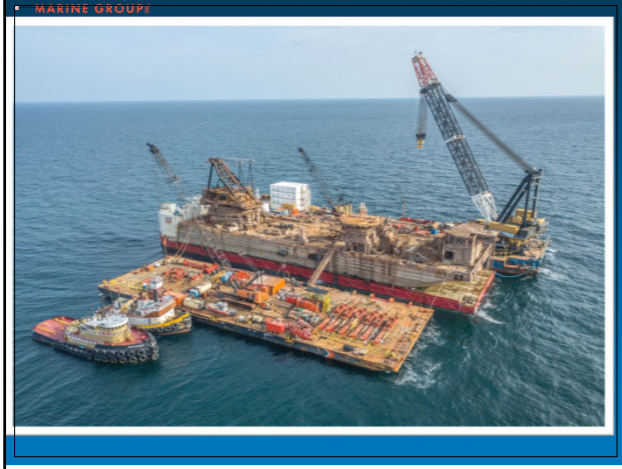
## Positioning for float over



## DB1 Wreck Removal

- Tight Parameters
- Lifting on Semisubmersible Barge

## DB1 Wreck Removal



Float over complete

## DB1 Wreck Removal

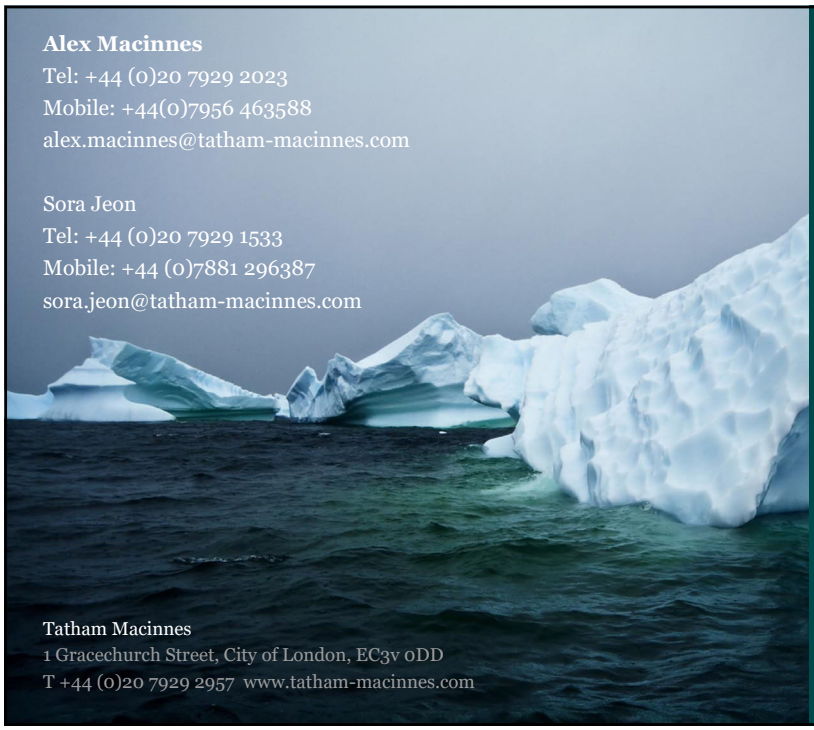
Preparing for departure

## Clearing the site and towing to scrapyard

RESOLVE MARINE GROUP INC.

## Arrival, Brownsville, TX

## Any questions?



**Alex Macinnes**
Tel: +44 (0)20 7929 2023
Mobile: +44(0)7956 463588
alex.macinnes@tatham-macinnes.com

Sora Jeon
Tel: +44 (0)20 7929 1533
Mobile: +44 (0)7881 296387
sora.jeon@tatham-macinnes.com

Tatham Macinnes
1 Gracechurch Street, City of London, EC3v 0DD
T +44 (0)20 7929 2957 www.tatham-macinnes.com