2006

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CONTAINERSHIP SALVAGE ISSUES

By
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TECHNOLOGICAL ISSUES

- EQUIPMENT AVAILABILITY
- SALVAGE METHODOLOGY

FINANCIAL ISSUES

- FINANCIAL CAPACITY OF THE SALVOR
- CHARTER RATES FOR SCARCE EQUIPMENT
- SECURITY FROM **MANY** CARGO OWNERS
- LEGAL COSTS
- INVESTMENT IN THE SALVAGE INDUSTRY

LOGISTICS

- LOCAL RESOURCES - AVAILABILITY
- LOCAL AUTHORITY – ATTITUDE
- LOCAL CARGO/BUNKER STORAGE CAPACITY
- CABOTAGE ISSUES
- LOCAL CUSTOMS ISSUES

ANTI-POLLUTION MEASURES

- OIL SPILL CONTAINMENT
- BUNKER OIL TRANSPORT
- BUNKER STORAGE
- BUNKER DISPOSAL

LEGAL ISSUES

- CRIMINALIZATION FOR POLLUTION
- CARGO ARREST
- COST

APL PANAMA – WINTER 2006

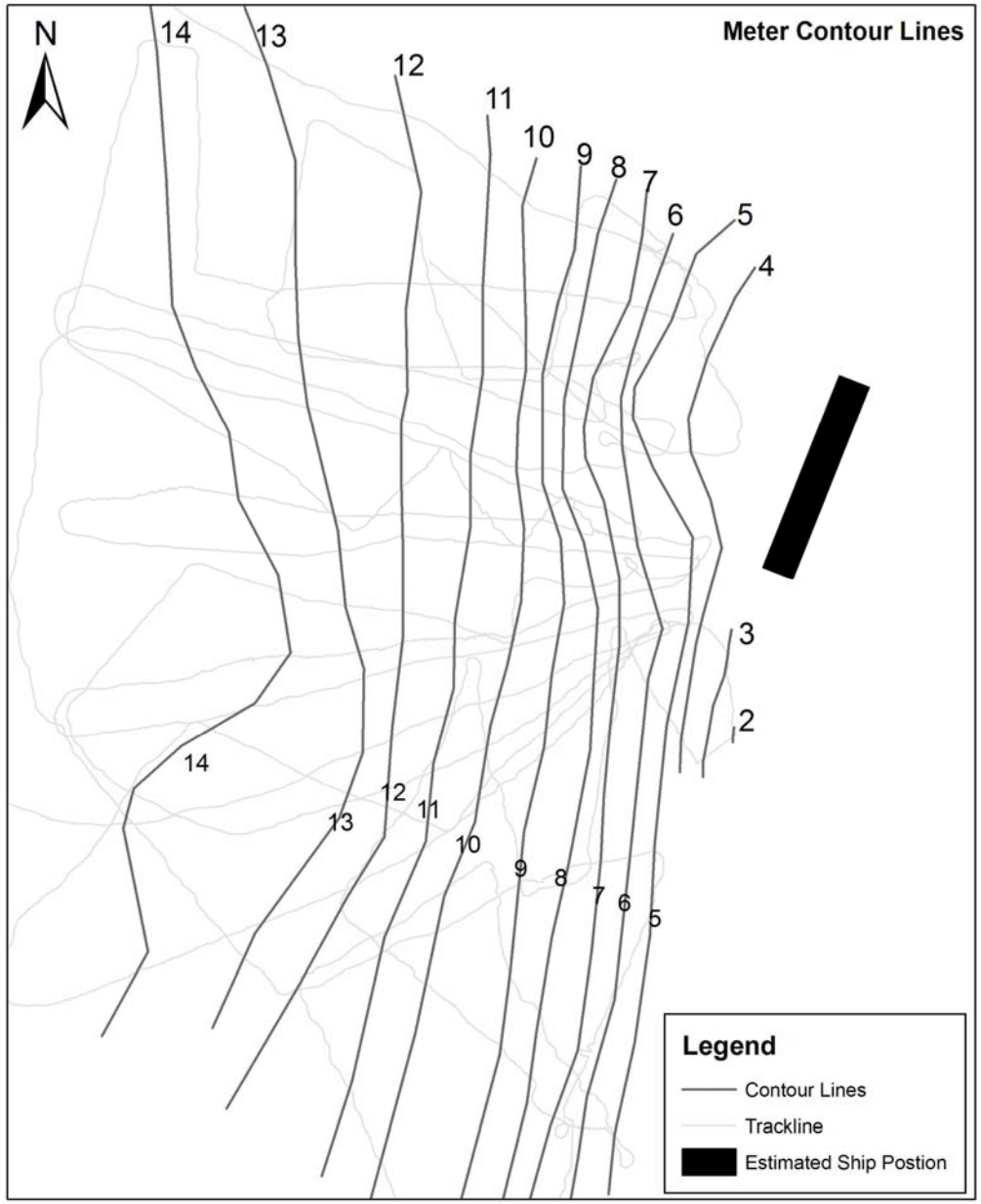
APL PANAMA

- 52,250 DWT
- 4,038 TEU
- LOA 261 meters
- BREADTH 32.25 meters (13 CONTAINERS ACROSS)
- DRAUGHT 12.52 meters

COMPARISONS

	APL PANAMA	EMMA MAERSK
• DWT	52,250	157,000
• TEU	4,038	12,500
• LOA	261 meters	398 meters
• BREADTH	32.25 meters	56.4 meters
• TEU ACROSS	13	22
• DRAUGHT	12.52 meters	15.5 meters

APL PANAMA
APL
APL



20 January Bathymetry Survey
APL Panama

0 100 200 300 Meters

INITIAL PLAN

LIGHTEN THE SHIP
REMOVE SOME CARGO BY HELICOPTER
REMOVE 3500 TONS OF BUNKERS
HOPE THAT HIGH ENERGY SURF WOULD ASSIST
SEVERAL TUGS TO PULL HER OFF

PA

LARGEST HELICOPTER AVAILABLE IN NORTH AMERICA IS THE 10 TON SKY CRANE, HALF THE CAPACITY NEEDED FOR THE HEAVIEST CONTAINERS

EVERGREEN
CAPITAL
CAPITAL
APL
LINEA MEXICANA
APL
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CAST
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NOL

APL
CAST
LINEA MEXICANA

STRANDED SHIP STILL NEEDS TO BE SUPPLIED WITH WATER, STORES AND OFTEN FUEL, IN THIS CASE FROM THE BEACH

SOME PROGRESS

START OF THE “CIRCLE ROAD” ON THE BEACH FOR HEAVY TRUCK MOVEMENTS ONTO AND OFF OF THE BEACH, INITIALLY TO REMOVE BUNKERS BUT LATER TO REMOVE CARGO

BUNKER HOSE CONNECTION FROM SHIP
TO BEACH

Service

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CAPITAL
CAST
APL
LINEA MEXICANA
APL
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LINEA MEXICANA
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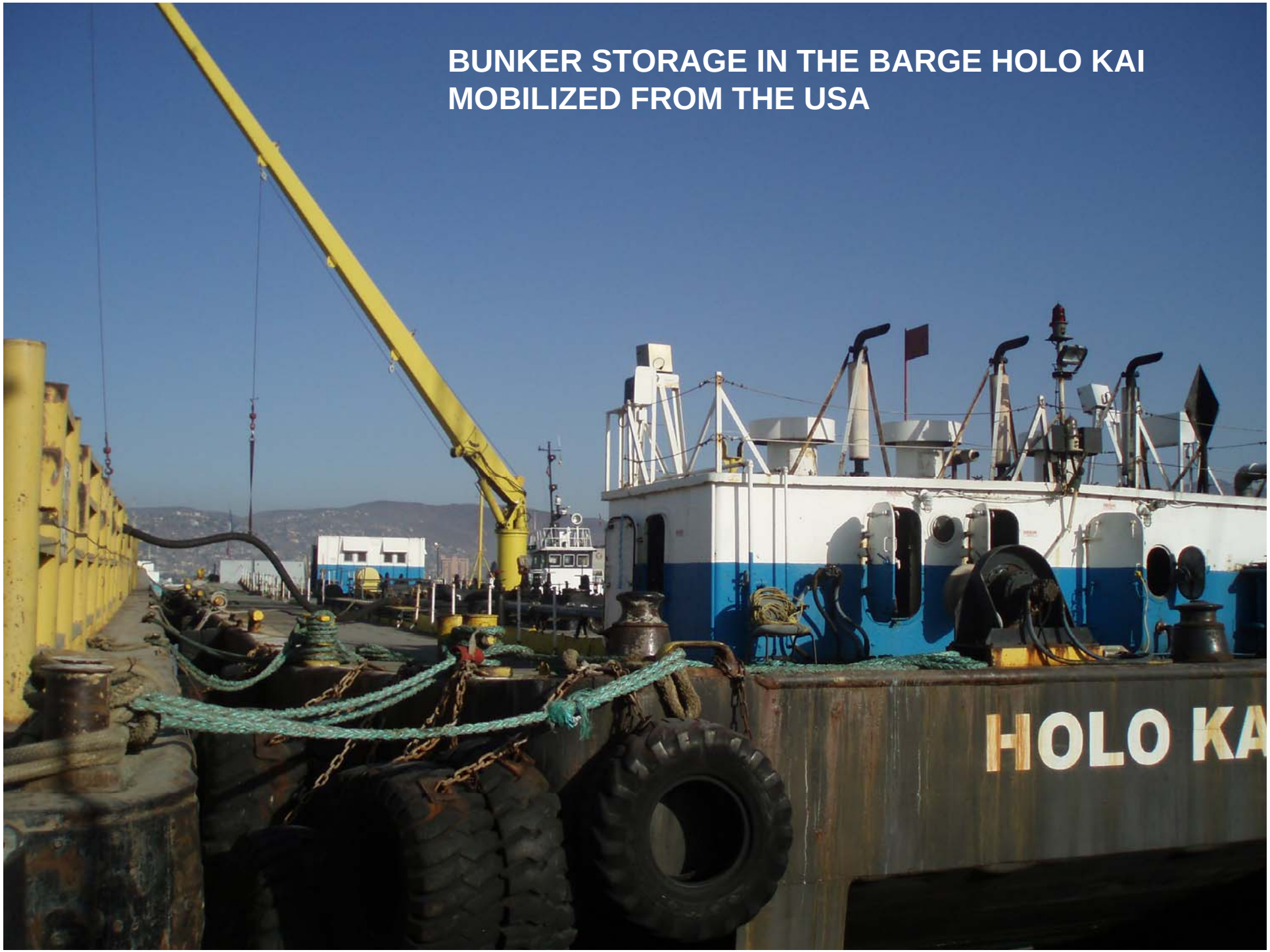
“CIRCLE ROAD” IN USE

IN ORDER TO USE THE ROADS IN ENSENADA FOR MOVEMENT OF TRUCKS CONTAINING BUNKERS WE HAD TO POST BONDS FOR ROAD DAMAGE AND PAY FOR A POLICE ESCORT, STANDBY FIRE SERVICES, ETC.

KENWORTH



BUNKER STORAGE IN THE BARGE HOLO KAI MOBILIZED FROM THE USA

THE MANDATORY OIL BOOM, REQUIRED BY THE AUTHORITIES BUT NOT MUCH USE IN THE SURF ZONE

SOME PROGRESS MADE MOVING THE SHIP WITH TUGS DURING HELICOPTER OPERATIONS AND BUNKER REMOVAL BUT VERY SLOWLY

THE PULLING BARGE CAPABLE OF SUSTAINED 500 TON STATIC PULL FORCE

RES
RES
PULL BARGE ANCHORS

HYDRAULIC PULLER

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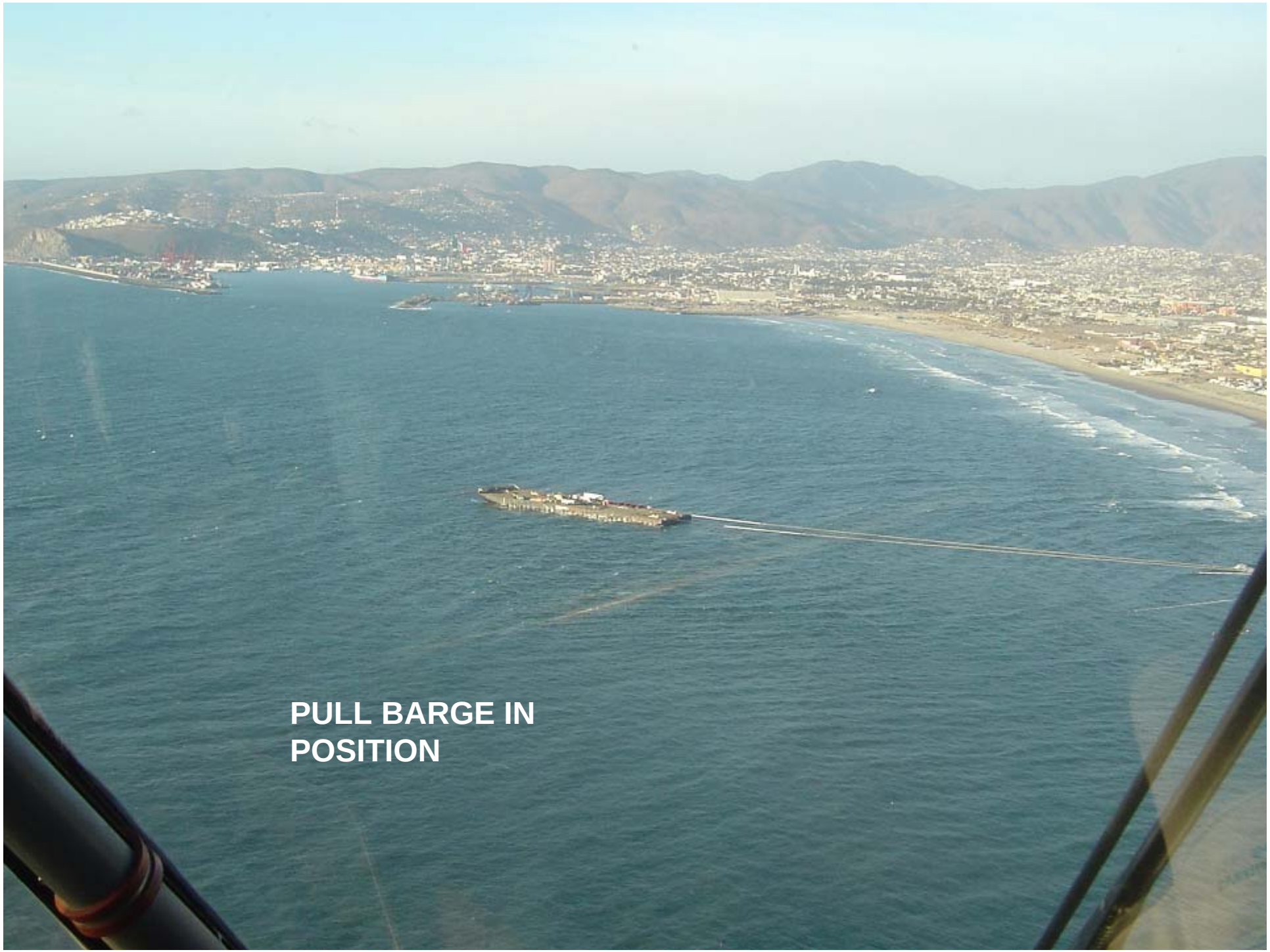
PULL BARGE IN
POSITION

PROGRESS BUT NOT ENOUGH

WE HAD TO LIGHTEN THE SHIP EVEN MORE, THE SWELLS WERE NOT HELPING US, WE COULD NOT WORK A CRANE FROM A BARGE IN THE SURF SO THE ONLY SOLUTION WAS A CRANE ON THE BEACH

IT WAS VERY DIFFICULT TO GET PERMISSION FROM THE AUTHORITIES TO BUILD A ROCK JETTY ON THEIR BEACH BUT ONCE IT BECAME OBVIOUS THAT IT WAS NECESSARY TO MAKE FURTHER PROGRESS AND SUFFICIENT GUARANTEES WERE IN PLACE, PERMITS WERE GRANTED

(IT HELPED WHEN CAR MANUFACTURER NISSAN CLAIMED TO BE LAYING OFF 5,000 EMPLOYEES WITHOUT THE REQUIRED PARTS FOR THEIR AUTO MANUFACTURING PLANTS)

THE JETTY

THE JETTY WITH
CRANE NUMBER 1,
300 TON MACHINE
WITH 240 FOOT
BOOM

APL PANAMA
ST. JOHN'S

APPROXIMATELY 1300
CONTAINERS WERE
REMOVED FROM THE
SHIP

NOTE CRANE 2 ON THE
FORE DECK AND CRANE 3
AFT

CONTAINERS MOVED FROM THE BEACH TO THE PORT IN CONVOYS OF 4-8 TRUCKS, ESCORTED BY CUSTOMS POLICE.

THE PORT COULD NOT HOLD ALL THE CONTAINERS (APPROXIMATELY 400 MAXIMUM). THE PORT COULD NOT STACK THEM MORE THAN 3 HIGH, SO GREAT EFFORT WAS PUT INTO GETTING CONTAINERS RELEASED AS SOON AS SECURITY WAS POSTED.

APPROXIMATELY 1300 CONTAINERS WERE REMOVED FROM THE SHIP AND TRANSPORTED TO THE PORT

NOL
NOL

HATCH COVERS PROTECTED BY TIMBER ALLOW THE CRANE TO MOVE ALONG THE DECK DISCHARGING CONTAINERS FROM FORWARD

REMOVING CONTAINERS ALLOWED THE SHIP TO FLOAT IN LESS WATER BUT THERE WAS STILL NOT ENOUGH WATER.

FORTUNATELY, THE FRANCESCO DI GIORGIO WAS FINISHING A PROJECT WITHIN A WEEK’S SAILING FROM ENSENADA. SHE WAS MOBILIZED AND WAS ABLE TO DREDGE A CHANNEL TO THE SHIP THAT WAS SUFFICIENTLY DEEP TO FLOAT THE MUCH LIGHTER SHIP.

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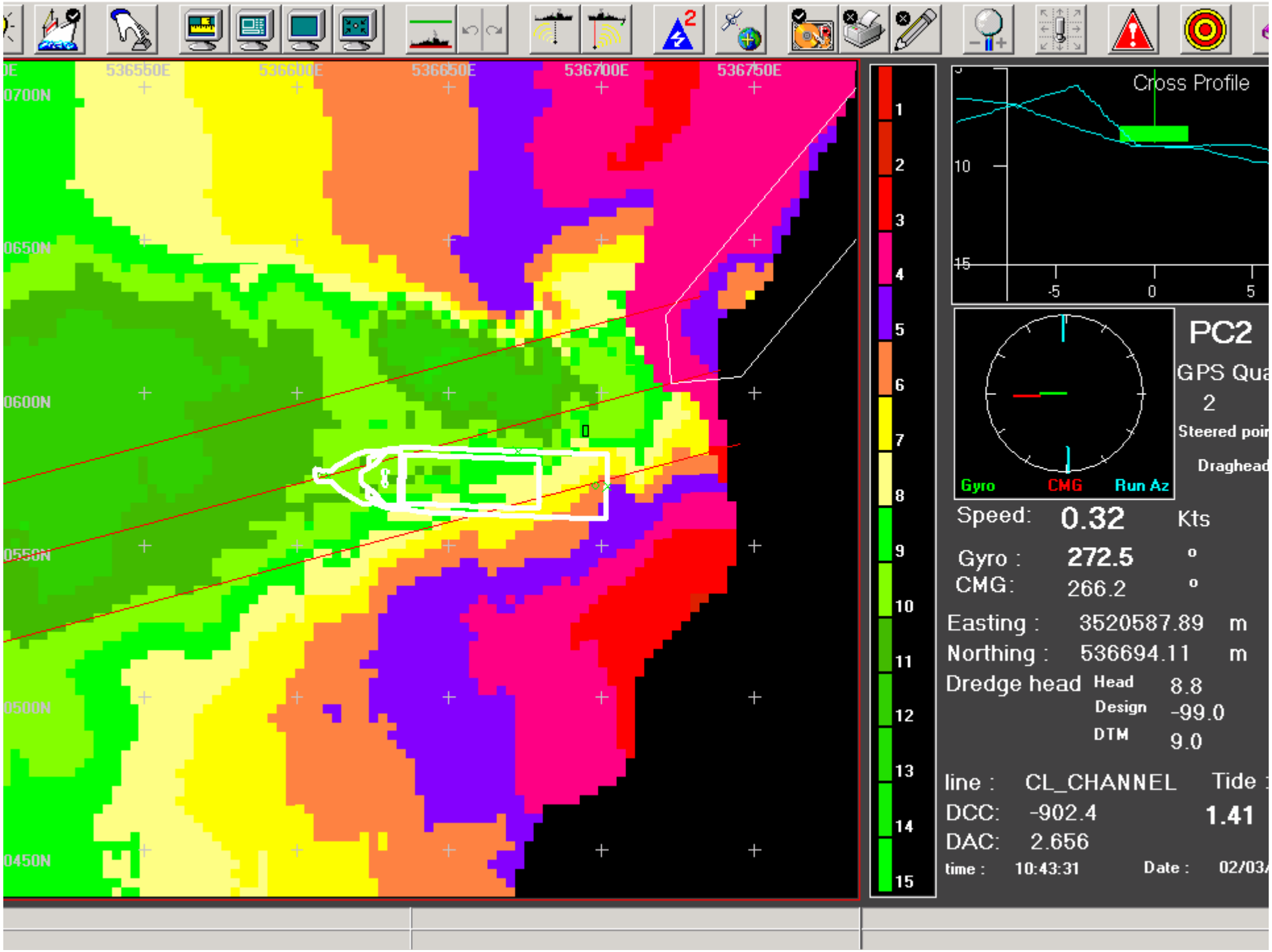
APL
CAPITAL
APL
BOLLORE
APL
tex
FRANCESCO DI GIORGIO

FRANCESCO DI GIORGIO
SANTA CRUZ DE TENERIFE
EL PANAMA

FRANCESCO DI GIORGIO
SANTA CRUZ DE TENERIFE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CMG: 266.2 o
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APL PANAMA
ST. JOHN'S

APL PANAMA
ST. JOHN'S

TITAN

TECHNOLOGICAL ISSUES

- EQUIPMENT AVAILABILITY

PULLING FORCES

LIFTING FORCES

LIFTING FORCES

DREDGING

TECHNOLOGICAL ISSUES

- SALVAGE METHODOLOGY

EXPERIMENTAL BUBBLER SYSTEM
DREDGING FORWARD STARBOARD SIDE
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HYDRAULIC PULLER

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