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1 BEACH T/38-P SPIKEY BEACH-1 EXPLORATION WELL SUMMARY

1.1 Project Specific Overview

This drilling Emergency Response Plan (ERP) addendum is written specifically for Beach Petroleum's Spikey Beach – 1 exploration drilling program in the Bass Basin Tasmanian T/38-P permit area.

The T/38-P permit area is approximately 83 nautical miles SSW of Wilson's Promontory, the southernmost mainland location and approximately 34 nautical miles North of Burnie Tasmania and approximately 85 nautical miles east of King Island. Table 1 summarise the details of the Beach, Spikey Beach-1 well drilling program.

Table 1: Summary of Spikey Beach Tas/T38-P Exploration Well Drilling Program

Location Specific Details	
Designated Authority for Drilling Area	Department of Infrastructure, Energy and Resources (DIER) Tasmania (Director of Mines)
Met Forecaster	Bureau of Meteorology
Operations Base	Toll Logistics in Geelong Port
Permit Area(s)	T/38-P
Name of Well	Spikey Beach - 1
Total Depth of Well (m)	2100
Type of Well	Exploration
Water Depth (m)	73.7
Longitude	145° 52'23.552E
Latitude	40° 28'55.326"S
Rig Heading	135 ⁰
Northing	5518130m N
Easting	404496m E
Spheroid and Datum	GR80 GDA94
Projection	UTM (South)

Rig Specifications	
Rig Name	Ocean Patriot
Rig Type	Semi Submersible
Rig Contractor Name	Diamond Offshore General Company
Personnel onboard Rig (No.)	100 (maximum)

Offshore Support Vessel Specifications (Vessel 1)	
Vessel Name	Lewek Emerald
IMO Number	9277125
Contractor Name	EMAS Offshore
Fuel / Gas Oil Storage Capacities	1000.00 m ³
Personnel onboard Vessel (No.)	20 passenger max (14 Crew)

Offshore Support Vessel Specifications (Vessel 2)	
Vessel Name	Lewek Swift
IMO Number	9315094
Contractor Name	EMAS Offshore
Fuel / Gas Oil Storage Capacities	960.00 m ³
Personnel onboard Vessel (No.)	22 passenger max (14 Crew)

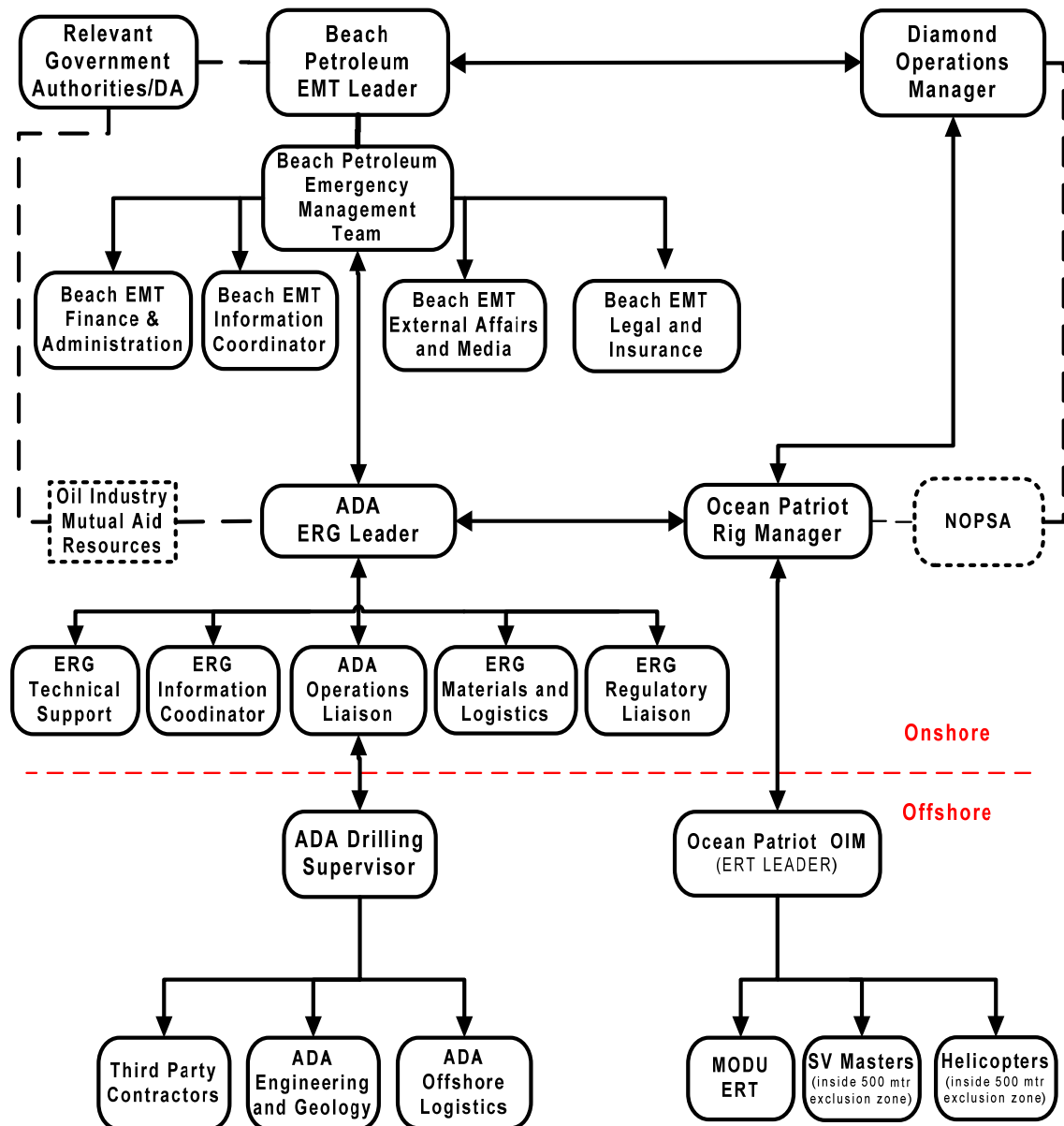
Emergency Preparedness		
Tasmania Waters (Rig Location)	Initial Authority for Oil Spills	Tasmanian Department of Environment, Parks, Heritage and the Arts (DEPHA)
	Applicable local Govt Oil Spill Plan	Tasplan
	Oil Spill Equipment Provider	AMOSC
Victoria Waters (Offshore Support Vessel movement from / to rig)	Initial Authority for Oil Spills	Marine Safe Victoria
	Applicable local Govt Oil Spill Plan	Vicplan
	Oil Spill Equipment Provider	AMOSC

Aviation	
Aviation base location	Essendon Airport
Helicopter Contractor	Bristow Helicopters
Type of Helicopter	AS332L (Super Puma)
Helicopter Flight Time to Spikey Beach-1	Approximately 90 min ^{+/-} One leg. (No allowance for head winds)
Alternate evacuation location	West Sale, East Sale (RAAF), Latrobe Valley, Longford (ESSO) Bairnsdale, Burnie (Tasmania)

Marine	
Marine Base location	Toll Logistics Shore Base, Geelong Port
Alternate marine base location	Geelong Port
Offshore Support Vessel Contractor	EMAS Offshore
Steaming time to Rig	Approximately 12 hours

Figure 1 below illustrates the emergency organisational interface between ADA, Beach and Diamond.

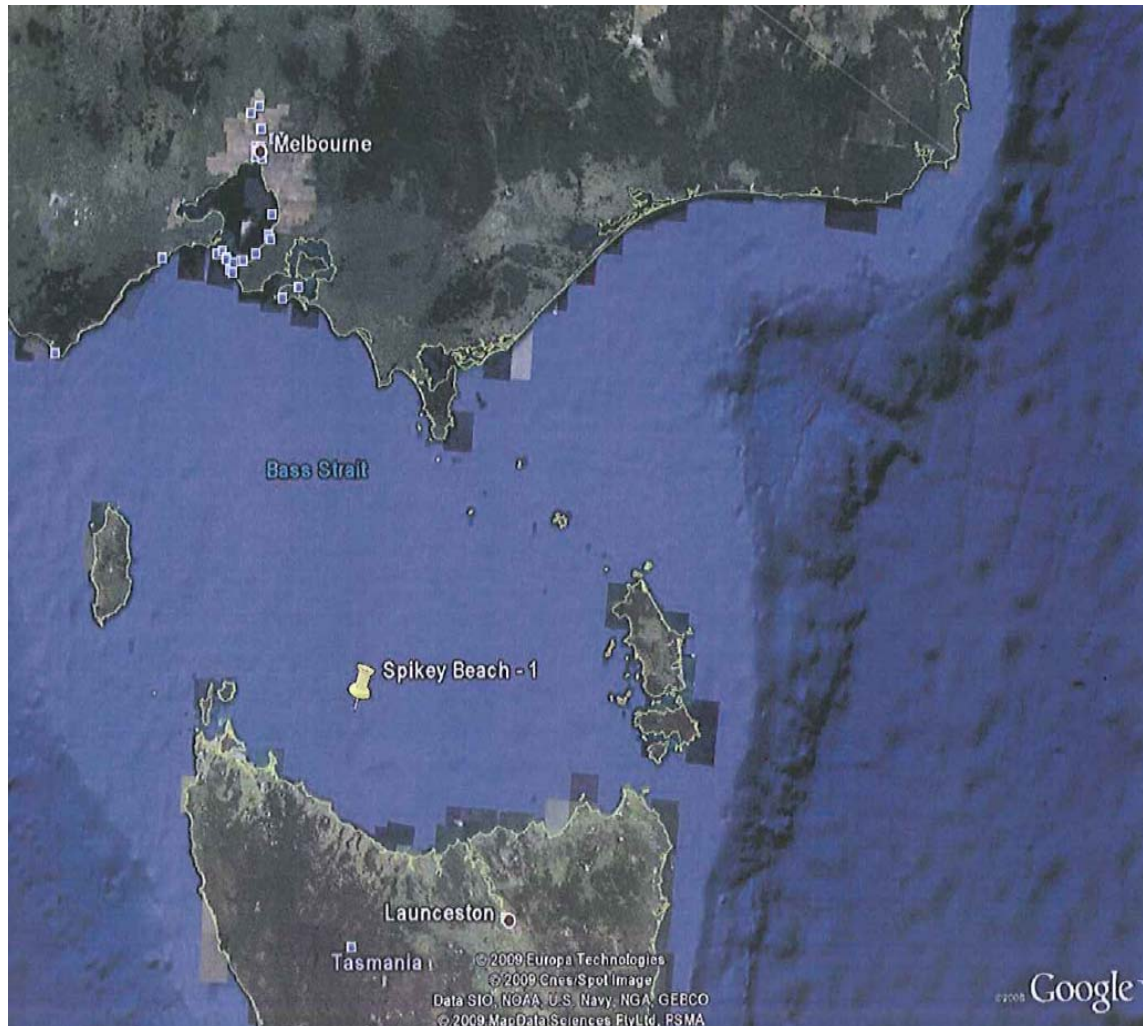
Figure 1: ADA/Beach/Diamond Emergency Organisation Structure



1.2 Location Map

The Well location for Spikey Beach-1 is shown in reference to the Tasmanian and Mainland Coastline (Figure 2).

Figure 2: Spikey Beach-1 in reference to the Tasmanian and Mainland Coastline

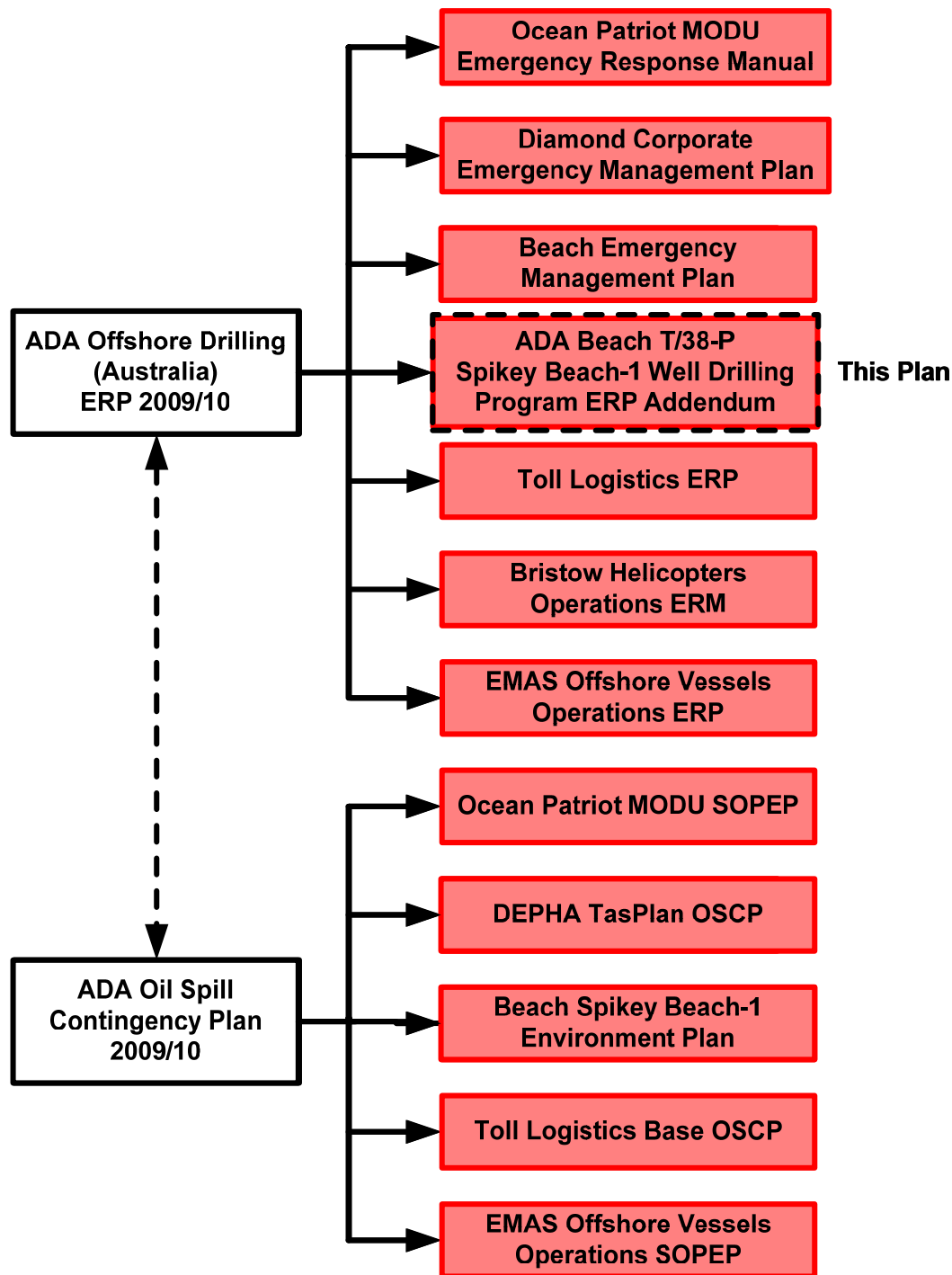


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1.3 Associated Documents

The Beach T/38-P Spikey Beach-1 Well Drilling Program ERP Addendum interfaces with multiple documents which are identified in Figure 4.

Figure 4: Emergency Document Road Map



2. EMERGENCY RESPONSE

2.1 Ocean Patriot Offshore Response

Incidents that occur on the MODU or on associated vessels within the 500 m exclusion zone shall be managed in accordance with the Ocean Patriot Emergency Response Manual (ERM).

2.2 ADA/Beach Onshore Response

ADA onshore responses to defined events are documented in the 02-02 ADA Offshore Drilling Australia ERP with the following sections detailing the onshore support provided by ADA, Diamond and Beach to such incidents. Full details of the Beach/ADA/Diamond Offshore emergency response methodologies and interfaces are provided in Figure 4 Emergency Document Road Map. Table 2 outlines the roles and responsibilities for respective emergency response groups.

Table 2: Roles and Responsibilities

Emergency Group	Role Definition	Leader	Governing Document
MODU ERT	<ul style="list-style-type: none"> Manage immediate response to incidents onboard the rig or associated to standby vessel with the 500 m exclusion zone. Respond in accordance with the actions identified within the Ocean Patriot ERM. Ensure the ADA ERG Leader is notified of an incident as soon as possible (via the onboard ADA Drilling Supervisor). 	Ocean Patriot OIM	Diamond Offshore EHS-ERM-01 Emergency Response Manual Rev 4
ADA ERG	<ul style="list-style-type: none"> Provide shore based tactical response to a MODU or Support Vessel incident. Respond in accordance with the actions identified within the ADA Offshore Drilling ERP and the Beach T/38-P Spikey Beach-1 Drilling ERP Addendum. Ensure appropriate emergency response support resources are available. Manage and minimise the effects of the emergency. Provide support to the MODU/vessel(s) to ensure response teams are fully resourced, including technical/engineering and planning assistance. Provide initial notification and regular updates to the Regulator and other external agencies as required. Notification to the Beach EMT leader of the incident. 	ADA Drilling Manager, Drilling Superintendent or Operations Liaison	02-02 ADA Offshore Drilling Australia ERP and ADA/Beach T/38-P Spikey Beach-1 Drilling ERP Addendum (this document)

Emergency Group	Role Definition	Leader	Governing Document
Beach EMT	<ul style="list-style-type: none"> Manage overall strategic events. Respond in accordance with the actions identified within the Beach EMP and the Beach T/38-P Spikey Beach-1 Drilling ERP Addendum. External focus including media, joint venture partners, high level government, stock exchange and shareholder relations. 	Beach EMT Leader	Beach EMT Plan and ADA/Beach T/38-P Spikey Beach-1 Drilling ERP Addendum (this document)

2.3 Management of Emergencies

The MODU will, under all circumstances and at all times, be under the direct control of the “Person in Charge” (PIC) or Offshore Installation Manager (OIM) appointed by Ocean Patriot.

The OIM is the MODU Emergency Response Team (ERT) Leader; the role of the ERT Leader is to:

- Respond to incidents in accordance with Ocean Patriot MODU ERM and Operating Manuals;
- Manage the immediate response to MODU incidents or within the 500 m exclusion zone;
- Notify the Diamond Ocean Patriot Rig Manager; and
- Notify the ADA Drilling Supervisor (DSV) onboard as soon as possible, or to ensure the ADA ERG Leader is notified in the event the DSV is incapacitated or unavailable.

2.3.1 Helicopter Resources

Reference: ADA Offshore Drilling Australia ERP- Section 3.6 Helicopter Operations and Section 5.0 Emergency Response Guidelines.

Reference: Ocean Patriot / ADA / Beach Vessel Safety Case Revision Document

Essendon is the aviation base for helicopter and fixed wing services. West Sale, East Sale (RAAF), Latrobe Valley, Longford (ESSO) Bairnsdale and Burnie (Tasmania) are the alternate landing points. The aviation support base located in Essendon Airport is operated by Bristow Helicopters and includes a dedicated AS332L helicopter with one dedicated flight crew and access to a relief/night crew as required.

Table 3 details the Ocean Patriot aviation support features and Table 4 provides ADA/Beach aviation support information.

Table 3: Ocean Patriot Aviation Support Features

MODU	Aviation Support Features
Ocean Patriot	<ul style="list-style-type: none"> Helideck is certified under CAP 437, Offshore Helicopter Landing area UK. Bristow operational base in Essendon has been independently inspected by HART Aviation.
Specific helideck details are provided in the Ocean Patriot Vessel Safety Case – Facility Description Section 3.3.4 Helicopter facilities	

Table 4: ADA/Beach Aviation Support Summary

Helicopter	Speed, Range and Payload	Maximum Helideck Movement	Maximum Wind Speed
Bristow Helicopters AS332L (Additional support based at West Sale, East Sale (RAAF Base), Latrobe Valley (Traralgon) and Longford (ESSO).	Reference is made to Section 6	3° pitch / role. Note 1	Reference is made to Section 6. Note 1
Specific details on HEMS Victoria are provided in Section 6.2 of this document. Note1: Wind speed and pitch and roll limitations may be exceeded at the Captain's discretion for emergency flights.			

Helicopter	Flight Crew
<ol style="list-style-type: none"> AS332L Bristow Helicopters dedicated to ADA/Beach and Ocean Patriot operations Helicopter is IFR-capable (i.e. capable of night flying and while in cloud) Helicopter performs <ul style="list-style-type: none"> Standard crew changes Medical evacuation Search and Rescue (SAR) duties Oil Spill observation duties Night standby duties (mobilization within 60 minutes) 18 passenger seat layout Capacity to fit 2 stretchers as required No rescue winch capability 	<ul style="list-style-type: none"> One flight crew dedicated to Bristow Helicopters. Standby/Night crew available on an approval/ad hoc basis. IFR trained flight crews Maximum crew duty hour restrictions: <ul style="list-style-type: none"> 8 flying hours per day 30 hours over seven consecutive days

2.3.2 Support Vessel Resources

Reference: 02-02 ADA Offshore Drilling Australia ERP - Section 3.7 Marine Operations and Section 5.0 Emergency Response Guidelines.

Reference: Diamond/ADA/Beach Vessel Safety Case Revision Document

During an emergency associated to T/38-P drilling activities, the support vessel emergency duties include:

- Emergency supply operations;
- Fire fighting support, shielding in a fire emergency, emergency response and rescue;
- Support to Ocean Patriot during emergency evacuations and/or rescue operations;
- Assist with ship monitoring, separation from shipping, collision watch duties and liaison with the local fishing and recreational boating industry;
- Standby duties during helicopter operations; and
- Maintain vessel emergency and first aid equipment in a state of readiness.

Table 5: Support Vessel Specific Details

Vessel	Accommodation	Maximum Speed	Emergency Response Features
EMAS Offshore – Lewek Emerald	14 crew 20 passenger (38 berths) 1 hospital berth	10 knots (Economical Speed)	<ul style="list-style-type: none"> Inflatable Life Rafts – 4x20 persons & 2x6 persons; Rescue Boat – Maritime Partner MP741 FRC, 200HP Water Jet, 32 knots; Fire Fighting Equipment FiFi 1 Class with Water Spray – 170 meter throw remote controlled FiFi and self drenching system.
EMAS Offshore – Lewek Swift	14 crew 22 passenger (36 berths) 1 hospital berth	10 knots (Economical Speed)	<ul style="list-style-type: none"> Inflatable Life Rafts – 6x20 persons; Rescue Boat Maritime Partner Weed0 17 FRC, 9 men, 20 knots Fire Fighting Equipment FiFi 1 Class with Water Spray – 170 meter throw remote controlled FiFi and self drenching system

2.3.3 Onshore Support

Reference: 02-02 ADA Offshore Drilling Australia ERP – Section 3.0 ADA/Client/MODU Organisational Structure and Response Priorities

Reference: Beach Emergency Management Plan (EMP)

2.3.4 ADA

During an emergency associated to T/38-P drilling activities, ADA will provide onshore emergency response assistance to the Ocean Patriot MODU ERT. The support will be coordinated by the ADA ERG Leader (ADA Drilling Superintendent). Specifically ADA will:

- Provide logistics, maritime, helicopter, security and environmental support;
- Coordinate ADA employee's relative's response; and
- Coordinate shore-based evacuation and reception for MedEvacs and for general MODU evacuations.

Diamond will provide direct support to the MODU OIM to assist with managing the incident, including the coordination of onshore responses relating to matters concerning Diamond employees and contractors, in particular relating to relatives response, government authority and services response.

2.3.5 Diamond Offshore

Diamond Offshore will provide direct support to the MODU OIM to assist with managing the incident, including the coordination of onshore responses relating to matters concerning Diamond employees and contractors, in particular relating to relatives response, government authority and services response.

2.3.6 Beach

Beach has a Emergency Management Team (EMT) in place at Beach's Head Office in Adelaide, which will be directed by the Beach EMT Leader (EMTL). The EMT will provide strategic management support to the ADA ERG in Melbourne during any incidents in the T/38-P permit area, associated with the Spikey Beach-1 well drilling program. The Beach EMT is responsible for:

- Coordinating relatives response associated with Beach and/or 3rd Party Contractors on the Rig and for liaison support to Diamond with their relatives response; and
- Managing any strategic planning or external affairs liaison (i.e. media, high level Government interface, stock exchange, etc.) required by the ERG or MODU.

2.3.7 Media and Crisis Management

Media response procedures are laid down in the Beach EMP with the appropriate interfaces with the Corporate Crisis Management Plan (CMP) which is a Beach Corporate document; a copy of the EMP is available to the ADA ERG Leader and is provided in the ADA ERR.

Within the Beach EMT, Communications and Government Relations role liaises with the EMT Leader for initial and ongoing media strategy development and implementation. Beach has pre-prepared Media statements which are contained within the EMP and all Media statements will be prepared, reviewed and approved by the EMT Leader prior to release.

2.3.8 Relative Response

The Beach EMP has detailed procedures to guide EMT members in their support of ADA/Beach employees, employees' relatives and friends and to support contractor organizations with their relatives' response activities.

Relative Response Training as identified in the Beach EMP shall be undertaken by the core EMT members and associated support personnel.

2.3.9 Communication Systems

The communications network supporting the MODU provides for voice, fax and data communications between the MODU, supply vessels, ADA's Melbourne office and other third parties. This is achieved using satellite phone, INMARSAT, HF and VHF radio systems and the Public Switched Telephone Network (PSTN). Specific details, resources, frequencies and contact numbers are provided in this ADA Beach T/38-P Spikey Beach-1 Exploration Well Drilling ERP Addendum Appendix 1 – Contact Directory.

2.3.10 Incident Reporting

It is a statutory requirement to report accidents/incidents and near misses to NOPSA, DIER, Australian Maritime Safety Authority (AMSA) and other relevant government departments/agencies. Regulatory notifications shall be in accordance ADA Beach T/38-P Spikey Beach-1 Drilling Program ERP Addendum Appendix 1 – Contact Directory. It is important when contacting the regulatory authority (or any other body as required) that only factual data are provided.

For an oil spill, refer to the ADA Bass Basin Oil Spill Contingency Plan (OSCP) for incident reporting parameters. Table 2 of the OSCP provides details of the type of incident and details required to be recorded. Appendix 1 identifies a notification matrix, identifying incident reporting to external authorities.

2.3.11 AMSA Reporting

The Ocean Patriot OIM or Support Vessel Masters are responsible for ensuring notification to the AMSA as soon as practical for the following incidents:

- Support Vessel has sustained/caused an accident occasioning loss of life or serious injury;

- Where MODU/vessel has sustained damage affecting its seaworthiness; or
- There is serious danger to navigation (i.e. if sizeable equipment likely to float was lost during a storm or other event); or
- There has been an event causing an oil spill > 3 nm from shore.

2.3.12 NOPSA Reporting

The reporting of incidents to NOPSA is the responsibility of the nominated operator of the MODU, as such the Ocean Patriot Rig Manager is responsible for ensuring notification to NOPSA of any incident onboard as soon as practicable under the Offshore Petroleum and Greenhouse Gas Storage Act 2006, Cth. (OPGGSA) Schedule 3.

ADA will confirm this activity has been carried out and that Beach has been advised accordingly. Refer to 02-02 ADA Offshore Drilling Australia ERP on 1) Figure 5: NOPSA Notification Flowchart, 2) Table 1: Notification Triggers and Details Required and 3) Appendix 2 – Support Data / Proformas.

2.3.13 Designated Authority

The Department of Infrastructure, Energy and Resources (DIER) in Tasmania is the Designated Authority for Tasmanian and adjacent commonwealth waters and shall be notified as soon as practical of all offshore emergencies or incidents that occur outside of the ADA Bass Basin Well Program Environment Plan.

Discretion is permitted in delaying the reporting of smaller environmental incidents to the DIER if the incident occurs outside of office hours. Refer to 02-02 ADA Offshore Drilling Australia ERP Appendix 2 – Support Data / Proformas and Figure 5 for Designated Authority (Australia) Notification Flowchart.

2.3.14 Police Reporting

Tasmanian Police shall be contacted / notified as soon as practical if any of the following incidents occur:

- Any fatality;
- Aircraft or vessel in distress emergencies; or
- Any unauthorised acts or other criminal activity.

2.3.15 Australian Search and Rescue (AusSAR)

For maritime or aviation search and rescue (SAR) operations, coordination may, after consultation, be transferred from ADA to AusSAR or the Police, whereby the arrangements detailed in the National SAR Manual and the state marine SAR management scheme (if applicable) shall apply.

2.3.16 ADA/Beach Corporate Reporting

All emergencies relating to the ADA/Beach T/38-P Spikey Beach-1 drilling program shall be internally investigated and reported as per 02-02 ADA Incident Reporting and Investigation Procedure and Forms. Reporting will also be in compliance with the 02-02 ADA Incident Management Procedure.

The incident classification shall be determined by referencing the ADA Incident Classifications in the ADA Offshore Drilling Australia ERP. The DSV shall be responsible for completing the ADA Incident Report and Investigation Form and for forwarding the completed report to ADA's ERG Leader who shall review and forward to the ADA HSE Manager and Beach EMT Leader.

2.4 HSE Training and Induction

All ADA ERG and Beach EMT members, Drilling Supervisors and Logistics Coordinators shall undertake the appropriate level of HSE and emergency training to enable them to carry out their emergency role during the Beach T/38-P Spikey Beach-1 drilling program.

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All personnel onboard the Ocean Patriot will undertake a range of rig HSE inductions, orientations, emergency drills and weekly exercises. ADA/Beach personnel and Third Party Contractors onboard the Ocean Patriot shall be made familiar with the EHS-ERM-01 Emergency Response Manual Rev 4, Ocean Patriot Station Bill and their role in an emergency.

2.4.1 Exercises and Drills

The agreed rig emergency response drill schedule is described in the ADA Beach Spikey Beach – 1 HSE Management Plan 2009. In addition to these regular drills, a scenario based exercise, which will include the rig emergency response teams and the activation of Diamond and ADA/Beach emergency teams, will be carried out during the drilling program.

The OIM will ensure emergency drill exercises (escape/muster/evacuation and fire) are carried out at least once every week.

3. EMERGENCY RESPONSE PROCEDURES AND REFERENCES

3.1 Offshore Security

Reference: 02-02 ADA Offshore Drilling Australia ERP – Section 5.3.10 Illegal Boarding / Distress Rescue

Reference: 02-02 ADA Offshore Drilling Australia ERP – Section 5.4.2 Unknown Vessel Approach

Reference: Geelong Port Logistics Base and Support Vessel's MTOFSA Security Plans

The MODU OIM will be responsible for responding to any security incidents onboard the Rig; the response will be as detailed in the Rig ERM and appropriate to protect the safety of personnel on board and for the security of the Rig.

In the event that a security incident or threat occurs from a vessel approach, the OIM and DSV will liaise and agree with an appropriate action and advise the ADA Drilling Superintendent while the support vessel(s) will be mobilised to assist as appropriate.

The Geelong Port has Maritime Security Plans accepted by DOTARS. The EMAS Offshore Lewek Emerald and Lewek Swift support vessels are certified under the ISPS Code and have approved Ship Security Plans.

The Plans have been audited by third party auditors on behalf of their Flag States and have been issued with International Ship Security Certificates (ISSCs).

3.2 MODU Under Tow

Reference: Support Vessel Contractor Vessel Emergency Plan

Reference: Diamond Offshore Ocean Patriot HS-ERM-01 Emergency Response Manual Rev 4

Reference: Diamond GEMS Operations

Towing operations are under the control of the Ocean Patriot OIM although the overall tow is under the control of the master of the towing vessel. Evacuation decisions, signals, and procedures on the MODU shall be as detailed in the Rig ERM, training, and drills matrix.

The OIM is in charge of the emergency response and safety of all personnel on board the MODU and has the authority to call on assistance from vessels and aircraft that are able to assist. The DSV will assist the OIM by coordinating the provision of assistance by vessels and helicopters contracted to ADA via communications with the ADA Drilling Superintendent.

3.3 Emergency Medical Support

Reference: 02-02 ADA Offshore Drilling Australia ERP – Section 5.2.7 Medical Evacuation (MedEvac)

Reference: ADA Beach T/38-P Spikey Beach-1 Exploration Well Drilling ERP Addendum Figure 5 MEDEVAC Mobilisation Pathway

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Reference: *Ocean Patriot Vessel Safety Case – Facility Description Section 6.7 Medical Facilities and First Aid Equipment*

The MODU is equipped with a five bed hospital and a full time and trained medical personnel with first aid & CPR training & licensed EMT to manage injuries and/or illnesses. Serious injury/illness is defined as one requiring medical practitioner assistance or action. In the event that medical assistance and/or a medical evacuation (MedEvac) is required, the rig medic will, in the first instance, seek advice from the Ocean Contracted Medical Provider.

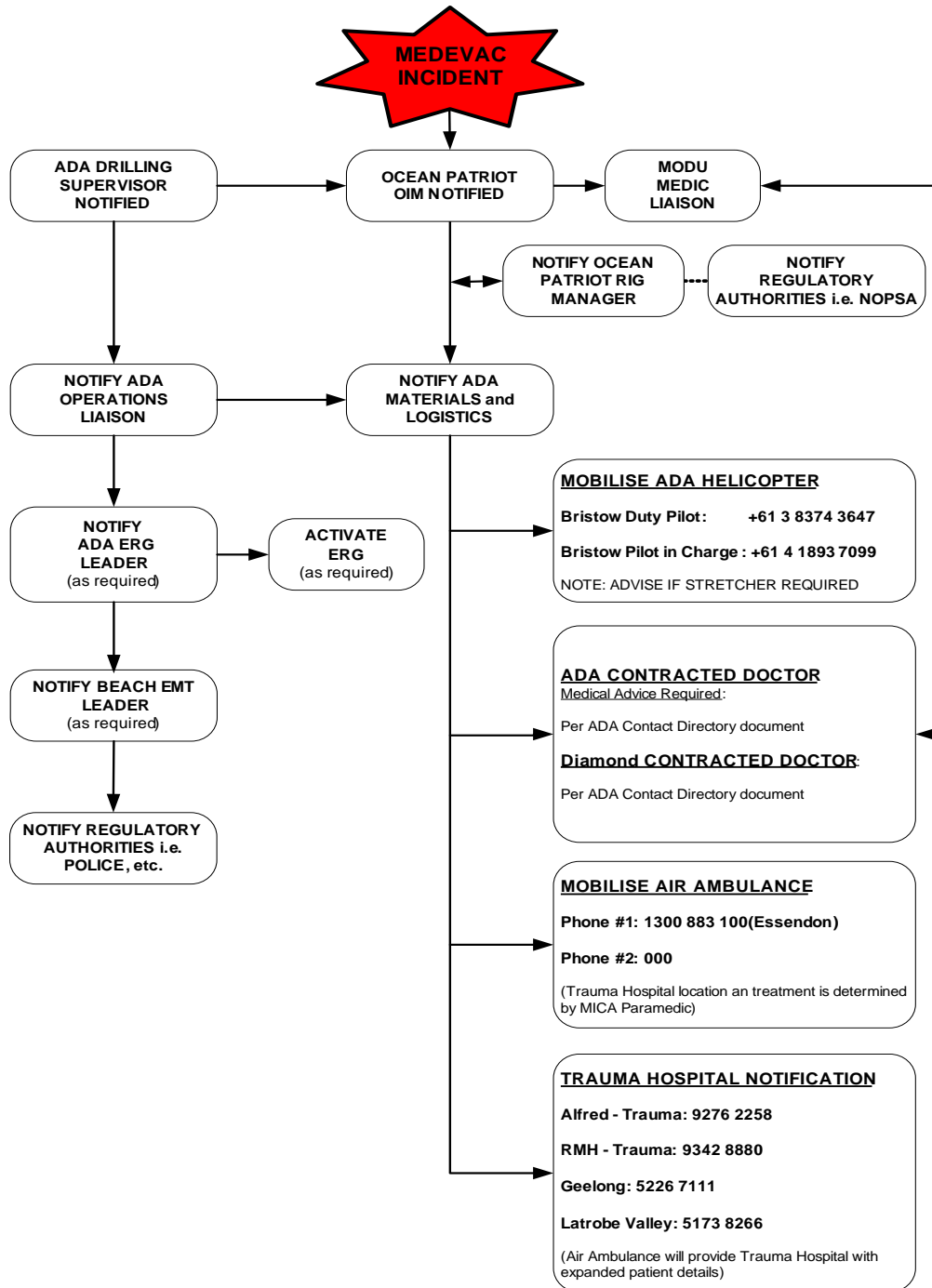
The OIM, in consultation with the Medic and ADA Drilling Supervisor have the onboard authority to request a MedEvac, alternatively the Rig Manager, Regional Manager and/or ADA Drilling Superintendent have the on-shore authority to initiate a MedEvac.

In the event a MedEvac is required, the patient will be transferred by helicopter to hospital. The Medic in liaison with the onshore Doctor and/or shore based MedEvac Mica Para-Medic will determine the hospital to MedEvac the patient to depending on the type and severity of the injury, availability of hospital resources and availability of an appropriate helicopter.

The ADA Contracted Medical Provider can also be contacted in the event that the injured party is either an ADA employee or Contractor, this will be coordinated by the Drilling Supervisor.

The Medic will then determine the appropriate level of medical assistance required for the MedEvac flight, in consultation with Doctors as described above. (Refer to 6.2) Helicopter Emergency Medical Services (HEMS) Victoria)

Figure 5: MedEvac Mobilisation Pathway





3.4 Environmental Spills

Reference: Refer Revised Environment Plan for Spikey Beach-1

The Revised Environment Plan for Spikey Beach-1 covers activities associated to oil spills in more detail. All hydrocarbon spills to the ocean are to be reported to the ADA DSV who will report to the ADA Drilling Superintendent.

In the event a hydrocarbon spill occurs, the ADA ERP will be activated supported by the MODU and Support Vessel's SOPEP's as appropriate. Figure 6 provides details of the Spill response procedure to be followed.

3.5 Well Control Incident

Reference: Diamond Offshore EHS-WCM-01 Ocean Patriot Well Control Manual Rev 4

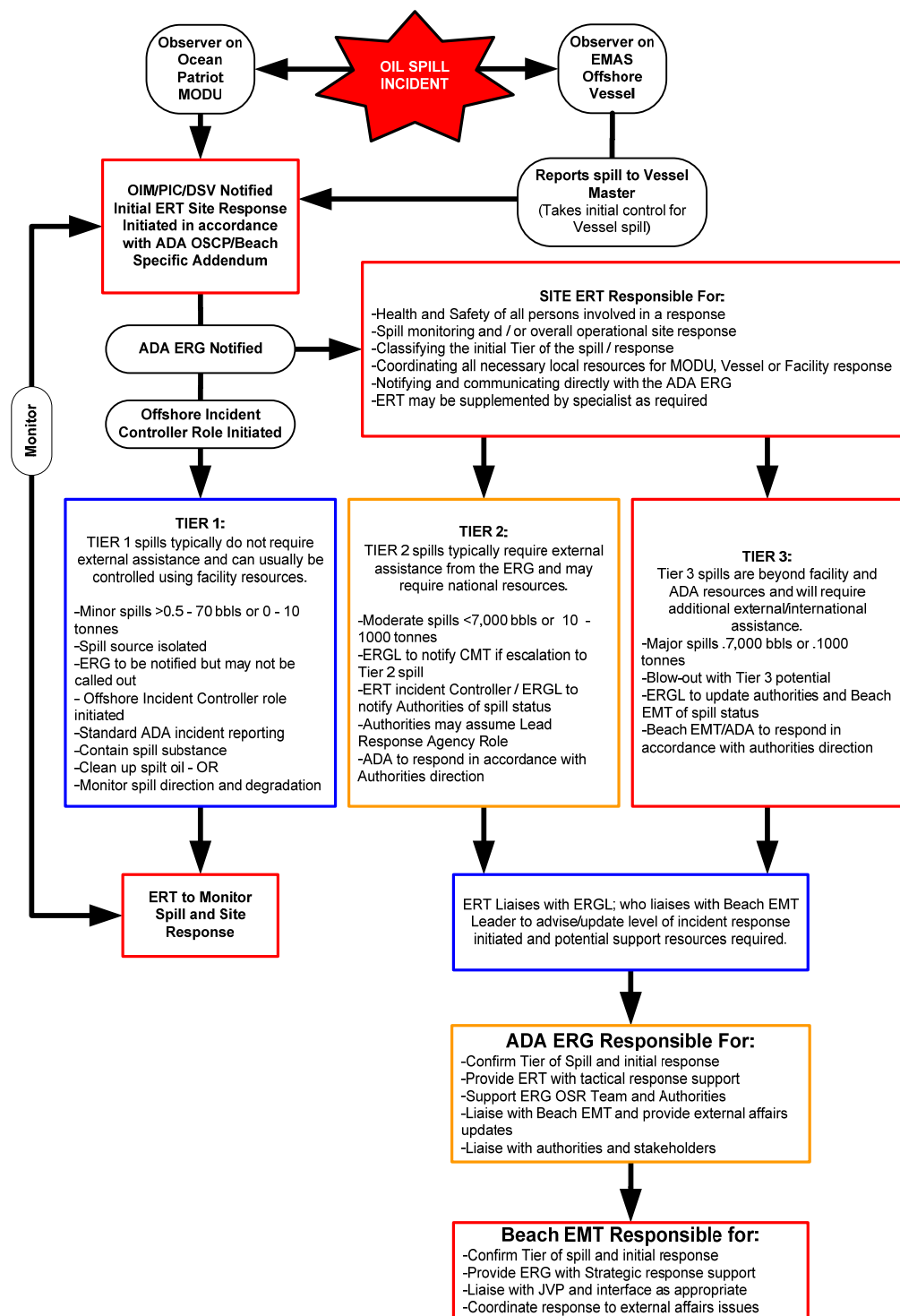
Reference: Diamond Offshore EHS-ERM-01 Ocean Patriot MODU ERM Rev 4

Reference: Ocean Patriot Vessel Safety Case – Facility Description Section 5.5 Well Control

All Well Control incidents will be managed using the Ocean Patriot Well Control procedures. A copy of the Ocean Patriot Well Control Manual shall be held on the Ocean Patriot and a copy issued to ADA and held in the ADA office in Melbourne.

The OIM will have copies of the Well Control Manual available. The OIM, Tool Pusher and other personnel as defined in the Ocean Patriot Training Matrix will hold a current well control certificate commensurate with their level of responsibility. In addition any person filling the position of DSV or Night DSV shall hold a current Well Control Certificate to Supervisors Level.

Figure 6: Spill Response Flow Chart.



3.6 Helicopter Emergency

Reference: *Diamond Offshore EHS-ERM-01 Ocean Patriot MODU ERM Rev 4*

Reference: *Helicopter Contractor Emergency Plan and Flight Operations Manual*

The Ocean Patriot ERM documents procedures for managing helicopter emergencies both on the MODU and within the 500m exclusion zone. Helicopter incidents outside of the rig's 500 m zone will be coordinated by the helicopter contractor, with assistance provided by ADA as required.

Air Traffic Control, the OIM or the helicopter base is typically the first to be aware of a helicopter emergency. The OIM will inform the DSV who will in-turn notify the ADA ERG Leader to activate the ERG resources to support a helicopter SAR emergency. The OIM shall inform other facilities in the vicinity and provide each party with the following information:

- Facility/location identification;
- Detail of the Mayday call; and
- Request SAR assistance.

If the pilot subsequently cancels the Mayday call, all parties already contacted shall be informed as soon as possible.

3.6.1 Overdue Helicopter

Reference: *Helicopter Contractor Emergency Plan and Flight Operations Manual*

Flight following procedures are in place and will be monitored from the helicopter base at Essendon airport and the MODU. In an emergency, the actions identified in the Bristow Helicopters Emergency Response Manual and the 02-02 ADA Offshore Drilling Australia ERP will be initiated.

3.7 Overdue Support Vessel

Reference: *Helicopter Contractor Emergency Plan and Flight Operations Manual*

Vessel following procedures are in place and will be monitored from the Geelong Logistics Base and the MODU. In an emergency, the actions identified in the EMAS Offshore Support Vessel Contractors ERP and the 02-02 ADA Offshore Drilling Australia ERP will be initiated.

3.7.1 Search and Rescue Requirement

In the event that SAR is required, the actions identified in the Bristow Helicopters Emergency Response Manual and/or EMAS Offshore Support Vessel Contractors ERP's and the 02-02 ADA Offshore Drilling Australia ERP Section 5.5.1 SAR Aircraft/Vessel in Distress will be initiated.

3.8 Ship Collision

Reference: *Diamond Offshore EHS-ERM-01 Ocean Patriot MODU ERM Rev 4*

Reference: *EMAS Offshore Emergency Plan and Marine Operations Manual*

The Spikey Beach-1 well location and the transit routes to and from the well potentially expose the operations to commercial and fishing shipping traffic. For general shipping a Notice to Mariners will request a 500 m clearance zone around the Rig. A risk of collision shall be deemed to exist when an approaching vessel is indicated as a radar target Closest Point of Approach (CPA) of 20 nm or less.

The Ocean Patriot has Ship Collision Avoidance procedures in their ERM and these will be used to maintain continuity and familiarity of passing traffic requirements. The MODU management is also responsible (as operator) to monitor for vessels overdue, "May Day" calls or unplanned events with Supply Vessels.

Two primary EMAS Offshore Supply Vessels will be utilised during the Spikey Beach-1 well drilling program (see specifications in Sections 2.3.3 and 5. of this document). While the Supply Vessels will operate under their own maritime ERPs, any "May Day" call or vessel overdue advices received will automatically be forwarded to AMSA.

There will be one Support Vessel on station in the vicinity of the MODU at all times during the program. The Support Vessels will be equipped with an Automatic Identification System (AIS) designed to lower the risk of collision.

3.9 Heavy/Severe Weather Emergency

Reference: *Diamond Offshore EHS-ERM-01 Ocean Patriot MODU ERM Rev 4*

Reference: *EMAS Offshore Support Vessel Contractor Emergency Response Plan and Marine Operations Manual*

This procedure provides general guidelines to assist the decision making personnel in executing well/MODU securing operations and a subsequent personnel evacuation associated to the approach of heavy weather or severe storm.

In the time period when drilling operations are conducted, storms and severe weather frequently cross Bass Strait. Heavy weather has caused severe damage to offshore facilities and in particular to MODUs. This Heavy Weather Evacuation Procedure has been developed as a guide for actions to protect personnel and the MODU should a severe weather event approach the permit areas.

Evacuation procedures are influenced by many factors such as manning level, direction of storm and time of day. The decision to evacuate and the procedures to be applied rests with the OIM, key rig personnel in cooperation with the shore based ADA Drilling management.

The OIM has absolute authority and responsibility for the safety of crew and the MODU. The ADA Drilling Supervisor (DSV) and the OIM will jointly assume responsibility for developing and executing a plan for securing the MODU, the well and for the safe evacuation of all personnel.

This site specific Heavy Weather procedure includes a Critical Distance Checklist (CDC) that is to be prepared and sent to the ADA Drilling Superintendent at the start of a Severe Weather alert. The CDC (i.e. time to secure a well and evacuate personnel) shall be calculated as the storm progresses, preliminary details to be filled out on this checklist prior to starting the wells.

Definitions

Definition	Description
Depression	Maximum sustained wind of less than 33 kts, at this stage the centre is often not clearly defined and cannot always be defined precisely
Storm	Maximum sustained winds in the range 34 - 47kn
Severe Storm	Maximum sustained winds in the range 48 – 63 kts
Critical Path Duration	The minimum time required to undertake all activities needed to ensure the safety of the MODU during periods of Storm activity
Storm Separation Buffer	A minimum buffer of twelve hours between the Storm and the MODU
Gale Force Winds	Winds in excess of 34 kts, depending on the severity of the storm, these can be expected when the centre of the Heavy Weather is between 100 and 200 n miles from the MODU
Lee Side/Shore	Side of the MODU or shore to which the wind is blowing

Definition	Description
Nautical Mile / nm	International nautical mile (n mile) is 1852 metres by international agreement

3.9.1 Weather Forecasts

The Bureau of Meteorology (BoM) broadcasts marine weather forecasts for high seas and Australian coastal areas, the VMC call sign (Australia Weather East) broadcasts for the areas associated to the Bass Basin as follows:

Coastal Waters between Cape Don in the NT and Eucla in WA, including all QLD and NSW, VIC, TAS and SA zones.

High Seas from the NT, North and South Eastern high seas area and the TAS coastal waters.

During the Beach drilling program ADA and the MODU will receive direct weather forecasts via email each day from the special services unit of the Bureau of Meteorology (BoM).

The following Table lists the frequencies (kHz) and times of transmissions. BoM recommends that users test which frequencies best suit their specific location and listening requirements for the season, day and month of activities.

Table 6: BoM Weather Frequencies

VOICE		
VMC (Eastern Standard Time)	Frequency (kHz)	Frequency (kHz)
Day time 7 am - 6 pm	4426	16546
Night time 6 pm - 7am	2056	6230
Anytime	8176	12365
FAX		
VMC (Eastern Standard Time)	Frequency (kHz)	Frequency (kHz)
Day time 5 am - 7 pm	20464	-
Night time 7 pm - 5am	2628	-
Anytime	5100	11030,13920

Table 7: BoM Weather Reports

Fax Reports and Forecasts	
Number	Report / Forecast
1902 935 203	Satellite picture Vic - updated hourly (+/- 3 minutes to receive)
1902 935 742	High Seas Forecast with Text
1902 935 230	Tropical cyclone advice, warning and threat map.
1900 926 113	Vic Coastal Forecast – forecasts, charts and latest weather available 0500, 1200 and 1600 (+/- 4 minutes receive time)
1902 935 475	Surface Winds (for Oil Map)
1902 935 266	Swell Heights
1902 935 001	National Weather Summary
BoM Weather Website: http://www.bom.gov.au/weather	

Note: For other contact details specifically related to weather and/or cyclone monitoring refer to the Contact Directory in Appendix 1 of the ADA Offshore Drilling Australia ERP.

3.9.2 Evacuation Objectives

1. Safety of Crew;
2. Protection of the environment; and
3. Minimization of storm damage to the MODU, well, drilling equipment and associated vessels.

3.9.3 Evacuation Plan Outline

Table 8: Pending Storm Actions Required

Phase	Severe Storm Position	Action
Severe Weather Season Preparation	Nil – preparation for Storm or Severe weather	<ul style="list-style-type: none"> Conduct drill of this plan Equipment, systems inspection as detailed below Confirm all third party support agencies are aware of their role in the support of an evacuation Brief all aviation support assets on their roles and responsibilities in the support of an evacuation
Storm Alert Preparation Zone 3 (Blue)	<ul style="list-style-type: none"> Storm or severe weather event enters within 750 nm of the rig location, take measures to monitor its progress and make preliminary plans to secure the well and personnel evacuation Gale force winds in advance of approaching storm are more than T+48 hours from location 	<ul style="list-style-type: none"> ADA and Rig Manager advised Prepare timetable and finalise plans for: <ul style="list-style-type: none"> Down Manning and evacuation Securing Well
Storm Alert Planned Evacuation Zone 2 (Yellow)	<ul style="list-style-type: none"> Storm enters within 450 nm of rig location, measures to be taken to secure the well Consider evacuating all personnel deemed to be non-essential from the rig Gale force winds in advance of approaching Storm are estimated to be T+36 hours from location 	<ul style="list-style-type: none"> Evacuate non-essential personnel Commence securing well in preparation for evacuation
Storm Alert Final Evacuation Zone 1 (Red)	<ul style="list-style-type: none"> Storm enters within 200 nm of rig location, steps to be taken to securing/moving rig and evacuating remaining personnel Gale force winds are estimated to be within 24 hrs from location 	<ul style="list-style-type: none"> Evacuate remaining personnel Support vessels are released by ADA
T = Time in hours to secure the well and stand down personnel		
Reoccupation	Storm centre moves away and is downgraded to a weak depression	If rig evacuated, inspection team to go to rig and assess its condition and provide damage estimate

3.9.4 Evacuation Preparation

Item	Description
Repairs and Modifications	Any needed repair or modifications to the MODU to be made to ensure wind and wave resistance is minimized
Surplus Material	All excess or surplus material to be removed from rig (empty drums, oxygen, boxes, cut pieces of tubing, casing, etc.)
Seldom Used Equipment	Material that is needed but seldom used to be secured (extra hoses, other equipment on deck, etc.)
Offloading Personnel	Determine maximum sea condition in which rig personnel can be offloaded for each supply vessel (back-up to helicopter only).
Communication	Review and discuss the Evacuation Plan with operator, workboat Masters, helicopter pilots, fixed wing assets, third party personnel and all relevant others involved in the evacuation
Variable Deck Load	Keep variable deck load as low as possible to ensure proper stability and securing drilling equipment
Daily Personnel List Update	<p>Daily transmission of personnel on board (POB) list including company, name and position to be filed. When there is severe weather disturbance within 700 nm of the drilling location the POB list is to be reissued every time the POB changes.</p> <p>NOTE 1: Once a storm approaches to within Zone 3 alert, weather forecasts are to be sent directly to the rig as well as to the shore base office.</p> <p>NOTE 2: The shore-base management teams of both ADA and Diamond management/OIM shall work together to monitor and plot storm position and intensity.</p>
Transportation	Transportation equipment is to be in a state of readiness for an evacuation as required, no maintenance programs to be commenced during a Heavy Weather Alert
Support Vessels	1. Adequate life saving and safety equipment to be on board to transport personnel from MODU
	2. Ensure evacuation is completed in sufficient time for Support Vessels to escape storm impact
	3. Normally accepted wind strength limit for personnel basket transfer is maximum 28 knots this may be increased at the discretion of the OIM if support vessels are in MODU's lee
	4. Maximum sea conditions in which personnel can be offloaded to the SV using the crane/personnel basket must be pre-determined, taking into account SV motion
Helicopters	1. Helicopter is the primary mode of transportation to and from the MODU, however the Helicopter pilot will have



Item	Description
	the final decision regarding the operational safety of the Helicopter, and if flights can be made
	2. Confer with Helicopter Chief Pilot regarding the evacuation strategy to ensure helicopter resources can meet desired down manning schedule
	3. Maximum limits for deck stability and wind conditions on the MODU for safe Helicopter operations exist, depending on Helicopter type, pilot experience and operator, these limits are expressed as maximum allowable wind velocity, refer to the Project Specific Section of this Plan "Helicopter Specifications"
Helicopter Wind Criteria	Normal operations for the helicopter to cease when sustained wind speed exceeds 55 kts. Whilst helicopter can continue to operate at speeds in excess of the above, passenger handling becomes extremely hazardous
Land Transportation	1. To be on standby for arrival of evacuees
	2. To be adequate to move the personnel to a safe area
	3. Consideration to be given to onward transportation to a safe area in situations where accommodation is not available at the initial evacuation destination

3.9.5 Communications

1. ADA ERG will establish the onshore ERR when a storm evacuation is likely;
2. Both ADA ERG and Rig Management to continually track and plot the location of the storm;
3. Weather forecast to be updated every three hours depending on the location of the storm;
4. ADA ERG will issue all communications concerning evacuation plans as follows:
 - ADA ERG to ensure weather forecasts are promptly relayed to rig and Heli-base;
 - All bases to be notified by the fastest possible means as each phase is entered
 - Evacuation decision to be made ASAP to allow maximum time to evacuate
5. Specific guidelines to follow in advance of Heavy Weather season and when a storm or low-pressure system exists that could affect the drilling operations are described below.

3.9.6 Phase I - Storm Alert (Blue)

Guidelines:	Severe weather event identified within 750 nm of drilling location
OIM	
1. Respond in accordance with Ocean Patriot ERM and ADA Severe Weather SOP.	
2. Liaise with ADA DSV and ADA ERGL before making evacuation decision.	
3. ADA DSV, OIM and Rig Superintendent to prepare a Time Schedule (T Plan) for securing the well and drilling equipment.	
4. T Plan to contain a time schedule and may identify the Phase II and Phase III triggers	

Guidelines: Severe weather event identified within 750 nm of drilling location

be accomplished sooner.

ADA Drilling Supervisor

5. Keep ADA ERGL informed of T Plan progress and ensure transportation and accommodation are ready for evacuees.
6. Maintain POB Manifest of all personnel onboard with necessary contact information, ensure this information is transmitted to the ERG and shore base daily or whenever changes occur.
7. Ensure plot map is updated every 4 hours or as new forecasts come available.
8. Arrangements to be made for the sole services of the Support Vessels.
9. Arrange for accurate weather reporting and monitor televised weather reports, if available and commence plotting the storm location on the Plot Chart.
10. Prepare a Muster List of non-essential personnel to be evacuated before the weather sets in.
11. Determine maximum sea conditions for safe evacuation by workboat (consult workboat captains).
12. Ensure the following minimum equipment is onboard:
 - Cement for plugs
 - Cement retainers (minimum of 2) for size of casing in use plus equipment to set the retainers by both drill pipe and wire line
 - Safety valves, IBOP, lower kelly valves, and hang-off tool for size of drill pipe in use
 - Sufficient weight material to maintain well control without riser or to kill well if necessary
 - Sufficient chains, binders, ropes, shackles, etc, to tie down and secure material
 - 3rd Party Contractor Cementer
 - Check all watertight door and vent latches function and seals are in place
13. Determine preferred evacuation location and submit plan to ADA ERG for review and comment.
14. Liaise with ADA Materials and Logistics.

3.9.7 Phase II - Storm Alert (Yellow)

Guidelines: Severe weather event identified within 450 NM from drilling location

OIM

1. Respond in accordance with Ocean Patriot ERM and ADA Severe Weather SOP.
2. Liaise with ADA DSV and ADA ERGL before making evacuation decision.

ADA Drilling Supervisor

1. Keep ADA ERGL informed of T Plan progress and ensure transportation and accommodation are ready for evacuees.
2. Maintain POB Manifest of all personnel onboard with necessary contact information, ensure this information is transmitted to the ERG and shore base daily or whenever changes occur.
3. Ensure plot map is updated every 4 hours or as new forecasts come available.

Guidelines: Severe weather event identified within 450 NM from drilling location

ADA Materials and Logistics

1. Prepare evacuation flights, transportation and accommodation arrangements for personnel.
2. Do not evacuate more personnel to beach head than can be moved to the final evacuation point.

3.9.8 Phase III - Storm Alert (Red)

Guidelines: Severe weather event within 200 NM from Rig, impact is imminent

OIM

1. Respond in accordance with Ocean Patriot ERM and ADA Severe Weather Procedure.
2. Liaise with ADA DSV and ADA ERGL before making evacuation decision.

ADA Drilling Supervisor

1. Keep ADA ERGL informed of T Plan progress and ensure transportation and accommodation are ready for evacuees.

ADA Materials and Logistics Coordinator

1. Ensure that evacuation flight arrivals are met and documentation, transportation and accommodation arrangements are made.
2. Arrange for evacuees to be met and provided with:
 - immediate transportation to hospital (if required) or to arranged accommodation
 - change of clothes and basic toiletries (if required)
 - clear instructions/briefing regarding arrangements made on their behalf.
3. Ensure names of arriving evacuees are reconciled against POB Manifest ASAP.
4. Keep ADA DSV informed of evacuation status.

ADA ERG Leader

1. Advise ADA ERG of change in operational status.
2. Ensure ERG assigns ADA/Drilling Contractor representatives to meet flight arrivals and:
 - Confirms arrival of personnel in timely fashion and accounts for personnel.
 - Advises applicable regulatory authority that MODU is on **Critical Distance Alert** status and maintains liaison regarding evacuation activities.

NOTE: The decision to either ride out the storm, or evacuate the MODU can only be made when the size, intensity and direction of storm is known.

3.9.9 Decision and Notification to Reoccupy Rig

Policy For Reoccupation Of Offshore Drilling Units

1. For MODU's that have been totally evacuated, reoccupation to inspect and start up the rig can occur only after the storm centre moves away from the MODU.
2. Only daylight hour boarding will be undertaken, with full consideration given to residual wind and sea states that may affect safe transportation to the rig.
3. A fly-around is to be made prior to landing to identify any possible damage to the rig that would inhibit safe landing operations, if there is any doubt as to rig integrity, no landing will be made.
4. Initial personnel arriving on the rig will make a quick inspection for any conditions that may prohibit further reoccupation of the rig.
5. Decision to reoccupy the rig will be made by the Rig Manager, in consultation with the



Regional Operations Manager and ADA.

6. Reoccupation of the rig and initial start-up in an organized and efficient manner is essential to the safety of all personnel.
7. Accidents and damage of equipment must be avoided by planning and inspecting prior to the start-up.

3.9.10 Wind Scales and Sea Descriptions (From Bureau of Meteorology, Australia)

Beaufort Wind Scale

Beaufort scale number	Descriptive term	Units in km/h	Units in knots	Description on Land	Description at Sea
0	Calm	0	0	Smoke rises vertically	Sea like a mirror.
1-3	Light winds	19 km/h or less	10 knots or less	Wind felt on face; leaves rustle; ordinary vanes moved by wind.	Small wavelets, ripples formed but do not break: A glassy appearance maintained.
4	Moderate winds	20 - 29 km/h	11-16 knots	Raises dust and loose paper; small branches are moved.	Small waves - becoming longer; fairly frequent white horses.
5	Fresh winds	30 - 39 km/h	17-21 knots	Small trees in leaf begin to sway; crested wavelets form on inland waters	Moderate waves, taking a more pronounced long form; many white horses are formed - a chance of some spray
6	Strong winds	40 - 50 km/h	22-27 knots	Large branches in motion; whistling heard in telephone wires; umbrellas used with difficulty.	Large waves begin to form; the white foam crests are more extensive with probably some spray
7	Near gale	51 - 62 km/h	28-33 knots	Whole trees in motion; inconvenience felt when walking against wind.	Sea heaps up and white foam from breaking waves begins to be blown in streaks along direction of wind.
8	Gale	63 - 75 km/h	34-40 knots	Twigs break off trees; progress generally impeded.	Moderately high waves of greater length; edges of crests begin to break into spindrift; foam is blown in well-marked streaks along the direction of the wind.
9	Strong gale	76 - 87 km/h	41-47 knots	Slight structural damage occurs -roofing dislodged; larger branches break off.	High waves; dense streaks of foam; crests of waves begin to topple, tumble and roll over; spray may affect visibility.
10	Storm	88 - 102 km/h	48-55 knots	Seldom experienced inland; trees uprooted; considerable structural damage.	Very high waves with long overhanging crests; the resulting foam in great patches is blown in dense white streaks; the surface of the sea takes on a white appearance; the tumbling of the sea becomes heavy with visibility affected.
11	Violent storm	103 - 117 km/h	56-63 knots	Very rarely experienced - widespread damage	Exceptionally high waves; small and medium sized ships occasionally lost from view behind waves; the sea is completely covered with long white patches of foam; the edges of wave crests are blown into froth.
12+	Hurricane	118 km/h or more	64 knots or more		The air is filled with foam and spray. Sea completely white with driving spray; visibility very seriously affected

4. OCEAN PATRIOT MODU SPECIFICATION



Rig Type	Semisubmersible
Rig Location	Australia
Rig Design	Trosvik, Bingo 3000
Year Built	1983
Yard Built	CNIM, Seyne Sur La Mer, France
Class	ABS AI Column Stabilized Drilling Unit
Registry	Marshall Islands
Water Depth - Ft	1,500
Drilling Depth - Ft	30,000
Quarters	100 + 2-bed hospital
Dimensions	335' x 236' x 118'
Helideck	82' x 89' for Chinook 234
Drilling Draft	77'
Variable Deckload - Operating	2,560 MT
Variable Deckload - Transit	1,865 MT
Number of Columns	6
Diameter of Columns	30'
Max Combined Structure Load	1,278 kips
Moonpool Dimensions	20.5' x 72'
Operating Displacement	25,675 MT
Bulk Mud & Cement	475 cu mt
Liquid Mud	2,250 bbls
Fuel Oil	2,070 MT
Drill Water	1,067 MT
Potable Water	458 MT
Sack Storage	270 MT
Drawworks	Oilwell E3000 w/1-1/2" drill line
Derrick	UIE 185' x 40' x 40', 1,250 kips

**ADA/Beach T/38-P
Spikey Beach-1 Exploration Well
Drilling Program ERP Addendum**



Top Drive	Varco TDS 4S
Pipe Handling System	Maritime Hydraulics MH1086, Varco AR3200CM Iron Roughneck
Rotary	Oilwell A-495 49-1/2"
Top of Rotary Table to Bottom of Barge	148 Ft.
Mud Pumps	(1) Oilwell A-1700, (2) National 12-P-160
Main Engines	(4) EMD L12 645 E9FB
Annular BOP	(2) 18-3/4" Cameron D 10K
Ram BOP	(2) Cameron 18-3/4" Type U-II (doubles) 15K
Diverter	Regan KFDS-3 20"
Riser	Regan FCH8 21"
Riser Tensioning	(12) 80 kip NL Shaffer - 960 kips
Solids Control	(4) Thule VSM-100
Cranes	(2) Liebherr Bos 1500/50 w/142' booms
Mooring System	(8) 3.25" x 5,249' ORQ+30 chains, (3) Vrijhof 12 ton Stevpris, (3) Bruce 12 ton Twin Shank, (2) Bruce 12 ton flat fluke Twin Shank

5. EMAS OFFSHORE SUPPORT VESSEL SPECIFICATIONS

5.1 LEWEK EMERALD



M.V. LEWEK EMERALD

GENERAL

ANCHOR HANDLING TUG/ SUPPLY FIRE FIGHTING VESSEL. VESSEL BUILT FOR WORLDWIDE OPERATIONS TO SERVICE AND TOW DRILLING UNITS AND SUPPORT PRODUCTION PLATFORMS. SPECIAL EQUIPMENT FOR FIRE-FIGHTING, SAFETY STANDBY AND EMERGENCY EVACUATIONS.

CLASS

CLASSIFICATION SOCIETY LLOYDS REGISTER
CLASS NOTATION LR + 100A1 OFFSHORE SUPPLY SHIP + FIRE FIGHTING
(2400M³/HR) WITH WATER SPRAY + LMC + DP (AM)
BUILDER PAN-UNITED SHIPYARD, SINGAPORE
YEAR BUILT 2003

TONNAGE

DEADWEIGHT 1847
GRT 2104
NRT 631

MEASUREMENT

LENGTH OVERALL 65.60M
LENGTH BP 58.20M
BREADTH MOULDED 15.00M
DEPTH MOULDED 6.80M
MAX DRAUGHT 5.80M

LIQUIDS STORAGE

CAPACITIES

FUEL/ GAS OIL 1000.00M³
POTABLE WATER 250.00M³
DRILL/ BALLAST WATER 450.00M³
LUBRICATING OIL 40.00M³
MUD TANKS/ BRINE 400.00M³
BARITE/ CEMENT TANK IN 4 TANKS 7200FT³
RIG CHAIN LOCKER/ DRILL WATER 200.00M³
HYDRAULIC OIL 5.6M³
DISPERSANT 10.00M³

CARGO DISCHARGE CAPACITIES

FUEL/ GAS OIL 120M³/HR AT 80M HEAD
POTABLE WATER 120M³/HR AT 80M HEAD
DRILL WATER 120M³/HR AT 80M HEAD
BALLAST WATER 60M³/HR AT 60M HEAD
MUD 100M³/HR AT 75M HEAD
DISPERSANT 50M³/HR AT 75M HEAD
BULK 100M³/HR AT 50M HEAD

CARGO DECK

CARGO DECK AREA 410.00M²
DECK CARGO CAPACITY 800 TONNES
DECK STRENGTH (FWD / AFT) 5.4 TONNES / M²

TYPE AND GRADE OF FUEL USED MGO

PROPULSION AND MACHINERY

MAIN ENGINES 2 x MAK 5500 BHP AT 600RPM
PROPELLERS 2 x ULSTEIN CPP, 4-BLADE
BOW THRUSTER ROLLS ROYCE 150TV, 1 x 790 BHP AT 1800RPM, 8TONS THRUST
STERN THRUSTER ROLLS ROYCE 150TV, 1 x 790 BHP AT 1800RPM, 8TONS THRUST
RETRACTABLE AZIMUTH THRUSTER HRP 511-51 RT THRUSTER, 1 x 1400 BHP AT 1800RPM, 12TONS THRUST (CONT. RATING)
TOTAL BHP 12000
BOLLARD PULL 150TONNES CONTINUOUS 100% MCR

ELECTRIC POWER GENERATION

AUXILIARY ENGINES 2 x 620 kW AT 1800RPM, CATERPILLAR 3412
ALTERNATOR 2 x 725 kVA AT 1800RPM, LEROY SOMER LSAM49.1M6
SHAFT GENERATOR 2 x 1250 kVA AT 1800RPM
450V 60Hz 1604A
AEM TYPE SE 450 M4

*THIS VESSEL SPECIFICATIONS IS GIVEN IN GOOD FAITH & ASSUMED TO BE CORRECT.
DETAILS GIVEN ARE WITHOUT GUARANTEE
OWNERS RESERVED THE RIGHT TO AMEND THE SPECIFICATIONS WITHOUT NOTIFICATION.

ADA/Beach T/38-P Spikey Beach-1 Exploration Well Drilling Program ERP Addendum



DECK EQUIPMENT

MOORING EQUIPMENT	ROLLS ROYCE 2 x 10 TONNES AT 19M/MIN
CAPSTAN W/WIRE DRUM	ROLLS ROYCE 2 x 10 TONNES AT 13M/MIN
TUGGER WINCHES	ROLLS ROYCE 1 x 11 TON AT 0 – 12M/MIN FOR 36MM CHAIN
ANCHOR WINDLASS	

SPEED

ECONOMICAL SPEED	APPROX 10 KNOTS
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FUEL CONSUMPTION

2 x MAIN ENGINES AT 80% MCR	1360LTR/HR
2 x MAIN ENGINES AT 100% MCR	1540LTR/HR
2 x DIESEL GENERATOR AT 100%	60LTR/HR

CRANES

DECK CRANE	HYDRAMARINE HMC 1400 LT (SWL) 7.5 TONNES AT 7.5M RADIUS (SWL) 5 TONNES AT 15M RADIUS
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DYNAMIC POSITIONING SYSTEM

VESSEL IS CLASSED UNDER LLOYDS DP (AM)	TYPE – NAUTRONIX JSDP 5000 c/w
CLASS 1 SYSTEM	DP CAPABILITIES AND REDUNDANT MANUAL BACKUP DP2 ENABLED

CONSISTS OF:

-2 x SIGNAL PROCESSOR UNITS	MAIN OPERATION MODES:
-1 x MANUAL TRANSFER PANEL	-STAND BY MO
-1 x SERIAL DATA DISTRIBUTION BOX	-MANUAL MODE
-1 x FERRO-UPS POWER	-AUTO TRACK MODE
-AUTO POSITION MODE	

FIRE FIGHTING EQUIPMENT

FiFi 1 CLASS WITH WATER SPRAY

170MTR THROW REMOTE CONTROLLED FI-FI AND SELF DRENCHING SYSTEM	
PUMPS	HAMWORTHY KSE – C42BB, 1 x 3200m ³ /HR
MONITORS	HAMWORTHY KSE – FM200HJE, 2 x 1200m ³ /HR EACH FOR WATER OR 2 x 300m ³ /HR EACH FOR FOAM

SAFETY EQUIPMENT

LIFE RAFTS	4 x 20 PERSONS, INFLATABLE; 2 x 6 PERSONS, INFLATABLE
RESCUE BOAT	MARITIME PARTNER MP741 FRC, 200HP WATERJET, 32 KNOTS

NAVIGATIONAL AND COMMS EQUIPMENT RADIO AND NAVIGATION EQUIPMENT

GMDSS Program 4000 (FOR AREA A3)

VHF DSC	2 x SAILOR RT 4822	PORTABLE	3 x SAILOR SP-3110
MF/ HF DSC	1 x SAILOR SERIES 4000	GMDSS VHF	
MF/ HF NBDP	1 x SAILOR SERIES 4000	ECHO SOUNDER	1 x ELAC LAZ5000
SATCOM-C	1 x SAILOR H2095C	SPEEDLOG	1 x ANTHEA 12E BEN
GYROCOMPASS	2 x C-PLATH	ANEMOMETER	2 x YOUNG 06206
	NAVIGATE x MK 1	AIS	1 x FURUNO FA-100
BEARING REPEATER	2 x C-PLATH	SART	2 x MCMURDO/ RT9
COMPASS STAND	9.2GHz - 9.5GHz		
AUTO PILOT	1 x C-PLATH	EPIRB	1 x SAILOR/
	MAGNETIC NAVIPILOT		SATALITE EPIRB
	AD-11	MARINE TRANSCEIVER	1 x HMC GSP 3000M
MAGNETIC COMPASS	1 x RAYTHEON	PORTABLE VHF	1 x MOTOROLA GP 328
DGPS	2 x LEICA Mk 12	MH/ HF	1 x TRANSCEIVER
NAVTEX RECEIVER	1 x SAILOR Nav 5		SAILOR HT 4520
	X-BAND RADAR		
		2 x STN ATLAS RADAR 1000	

TOWING AND ANCHOR HANDLING EQUIPMENT HANDLING EQUIPMENT

STERN ROLLER	5.0M x DIA. 2.0M (SWL 400 TONNES)
AH/ TOWING WINCH	450 TONNES BRAKE / 300 TONNES PULL, BRATTVAAG HYDRAULIC DRIVEN, DOUBLE DRUM, WATERFALL TYPE; CHAIN GYPES FOR 76MM CHAIN SIZE OF AH DRUM AND TOWING DRUM; DIA. 900MM / 2500MM x 2100MM WIRE CAPACITY: 1500M x DIA. 76MM 2 KARM FORK; SWL 500 TONNES SHARK JAWS 2 TOW PIN; SWL 500 TONNES TOWING PIN SIZE OF DRUM: DIA. 900MM / 2500MM x 2100MM WORKING DRUM WIRE CAPACITY: 1500M x DIA. 76MM SIZE OF DRUM: DIA. 800MM / 2600MM x 2000MM STORAGE WINCH WIRE CAPACITY: 1500MM x DIA. 76MM 2 SHIP SET, HYDRAULIC, 6 TONS PULL

SPOOLING DEVICE FOR ANCHOR HANDLING DRUM, FULLY RETRACTABLE

LOAD / DISCHARGE

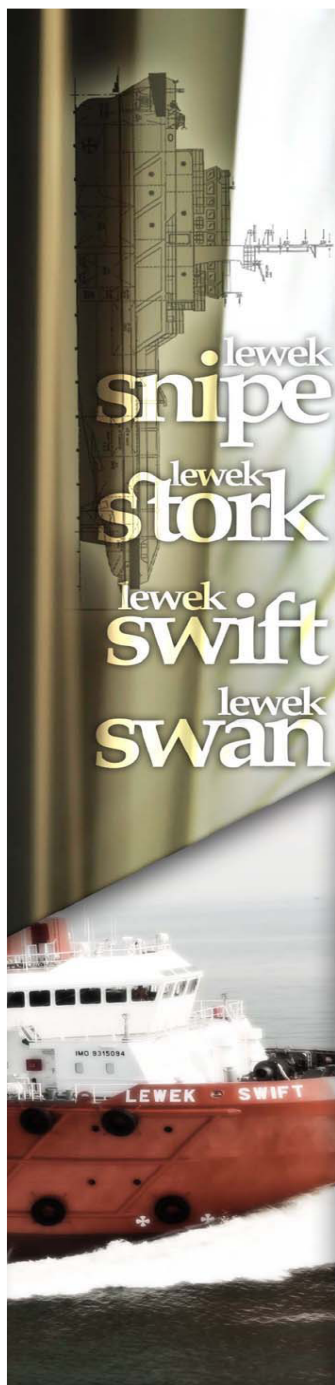
CONNECTIONS	
FUEL OIL	4" CAMLOCK FEMALE
POTABLE WATER	4" CAMLOCK FEMALE
MUD	3" CAMLOCK FEMALE
DRILL WATER	5" CAMLOCK FEMALE
CEMENT	5" CAMLOCK FEMALE

ACCOMMODATION

CREW	14
PASSENGER	20
BERTHS	10 x 1 BERTH CABIN 1 x 4 BERTH CABIN 5 x 2 BERTH CABIN 1 x 8 BERTH CABIN 2 x 3 BERTH CABIN

*THIS VESSEL SPECIFICATIONS IS GIVEN IN GOOD FAITH & ASSUMED TO BE CORRECT.
DETAILS GIVEN ARE WITHOUT GUARANTEE
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5.2 LEWEK SWIFT



M.V LEWEK SWIFT/ M.V LEWEK SWAN/ M.V LEWEK SNIPE & M.V LEWEK STORK

GENERAL

MULTIFUNCTIONAL ANCHOR HANDLING TUG/ SUPPLY VESSEL WITH FIRE FIGHTING VESSEL BUILT FOR WORLDWIDE OPERATIONS TO TOW DRILLING UNITS, SERVICE AND SUPPORT PRODUCTION PLATFORMS. SPECIAL EQUIPMENT FOR FIRE-FIGHTING, SAFETY STANDBY, EMERGENCY EVACUATIONS AND SEISMIC SERVICE.

CLASS
CLASSIFICATION SOCIETY LLOYDS REGISTER
CLASS NOTATION LR + 100A1 OFFSHORE SUPPLY SHIP + FIRE FIGHTING 1 (2400M³/HR) WITH WATER SPRAY + LMC + DP (AM) "ANCHOR HANDLING"
BUILDER PAN-UNITED SHIPYARD, SINGAPORE
YEAR BUILT 2005

TONNAGE
DEADWEIGHT 2,464
GRT 2,569
NRT 770

MEASUREMENT
LENGTH OVERALL 70.70M
LENGTH BP 63.00M
BREADTH MOULDED 16.00M
DEPTH MOULDED 7.20M
MAX DRAUGHT 6.20M

LIQUIDS STORAGE CAPACITIES
FUEL/ GAS OIL 960.00M³
POTABLE WATER 680.00M³
DRILL/ BALLAST WATER 668.00M³
LUBRICATING OIL 47.10M³
MUD TANKS/ BRINE 511.70M³
CEMENT TANK 10,000FT³
RIG CHAIN LOCKER/ DRILL WATER 220.00M³
HYDRAULIC OIL 5.5M³
DISPERSANT 12.20M³

CARGO DISCHARGE CAPACITIES
FUEL/ GAS OIL 120M³/HR AT 80M HEAD
POTABLE WATER 120M³/HR AT 80M HEAD
DRILL WATER 120M³/HR AT 80M HEAD
BALLAST WATER 120M³/HR AT 80M HEAD
MUD 100M³/HR AT 80M HEAD
DISPERSANT 50M³/HR AT 75M HEAD
BULK 100M³/HR AT 80M HEAD

CARGO DECK
CARGO DECK AREA 500.00M²
DECK CARGO CAPACITY 800 TONNES
DECK STRENGTH (FWD / AFT) 5.5 TONNES / M²

TYPE AND GRADE OF FUEL USED MGO

PROPULSION AND MACHINERY
MAIN ENGINES 2 x MAK 9M32C 6120BHP AT 600RPM
PROPELLERS 2 x ULSTEIN CPP, 4-BLADE
BOW THRUSTER ROLLS ROYCE, 1 x 790 BHP AT 1800RPM, 9.4 TONS THRUST
STERN THRUSTER ROLLS ROYCE, 1 x 790 BHP AT 1800RPM, 9.4 TONS THRUST
RETRACTABLE AZIMUTH THRUSTER 1 x 1,100 BHP AT 1800RPM, 15.0 TONS THRUST (CONTRATING)
TOTAL BHP 12,240 BHP
BOLLARD PULL 180 TONNES CONTINUOUS 100% MCR

ELECTRIC POWER GENERATION
AUXILIARY ENGINES 2 x 580 kW AT 1800RPM, CATERPILLAR 3412
ALTERNATOR 2 x 725 kVA AT 1800RPM, LEROY SOMER LSAM49.1M6
SHAFT GENERATOR 2 x 2250 kVA AT 1800RPM 440V 60Hz 3Ph
FREQUENCY CONVERTER 50kVA 60/50Hz, 4x 32A 220VAC 1 PH 50Hz & 2 x 32A 415VAC 3 PH 50Hz REEFER

*THIS VESSEL SPECIFICATIONS IS GIVEN IN GOOD FAITH & ASSUMED TO BE CORRECT.
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ADA/Beach T/38-P Spikey Beach-1 Exploration Well Drilling Program ERP Addendum



DECK EQUIPMENT MOORING EQUIPMENT CAPSTAN W/WIRE DRUM TUGGER WINCHES ANCHOR WINDLASS ANCHOR ANCHOR CHAIN

ROLLS ROYCE, 2 x 10 TONNES AT 19M/MIN
ROLLS ROYCE, 2 x 25 TONNES AT 17M/MIN
ROLLS ROYCE, BRATTVAAG, 1 x 18 TON AT 0 - 10 M/MIN FOR 42MM CHAIN
3 x 2280KG STOCKLESS BOWER ANCHORS
2 x 440 M x 42 MM DIA., GRADE U2

SPEED ECONOMICAL SPEED

APPROX. 10.0 KNOTS

CRANES DECK CRANE AT (SWL) 10 TONNES AT 5M RADIUS; 5 TONNES AT 15M RADIUS

DYNAMIC POSITIONING SYSTEM VESSEL IS EQUIPPED WITH LLOYDS DP (AA) - ALSTOM ADP 02 SYSTEM

TOWING AND ANCHOR HANDLING EQUIPMENT

HANDLING EQUIPMENT STERN ROLLER AH DRUM

5.0M x DIA 2.5M (SWL 500 TONNES)
450 TONNES BRAKE / 350 TONNES PULL, BRATTVAAG HYDRAULIC DRIVEN, DOUBLE DRUM
WATERFALL TYPE, CHAIN GYPES FOR 76/84 MM CHAIN, SIZE OF DRUM: DIA. 900MM /
2650 MM x 3200 MM, WIRE CAPACITY: 3500 M x DIA. 76 MM

TOWING DRUM

450 TONNES BRAKE / 350 TONNES PULL, BRATTVAAG HYDRAULIC DRIVEN, DOUBLE DRUM
WATERFALL TYPE, CHAIN GYPES FOR 76/84 MM CHAIN, SIZE OF DRUM: DIA. 900MM /
2650 MM x 3200 MM, WIRE CAPACITY: 3500 M x DIA. 76 MM
2 SETS OF TOW PIN; SWL 650 TONNES, 2 X KARM FORK, SWL: 650 TONNES
SIZE OF DRUM: DIA. 1800MM / 3250 MM x 2700 MM
WIRE CAPACITY: 3500 M x DIA 76MM

TOWING PINS STORAGE WINCH/ SECONDARY WINCH (LEWEK SWAN/ SWIFT)

SIZE OF DRUM: DIA. 1800MM / 3500 MM x 2100 MM
WIRE CAPACITY: 3500 M x DIA. 76 MM

STORAGE WINCH/ STORAGE REEL (LEWEK STORK/ SNIPE)

SPOOLING DEVICE FOR ANCHOR HANDLING DRUM, FULLY RETRACTABLE FOR ANCHOR HANDLING AND TOWING DRUM FULLY RETRACTABLE.

LOAD / DISCHARGE CONNECTIONS

FUEL OIL 4" CAMLOCK FEMALE
POTABLE WATER 4" CAMLOCK FEMALE
MUD 3" CAMLOCK FEMALE
DRILL WATER 5" CAMLOCK FEMALE
CEMENT 5" CAMLOCK FEMALE

FIRE FIGHTING EQUIPMENT FI-FI 1 CLASS WITH WATER SPRAY

170MTR THROW REMOTE CONTROLLED FI-FI AND SELF DRENCHING SYSTEM
PUMPS 1 x 3,200 M³/HR x 150M HEAD,
MONITORS 2 x 1200 M³/HR EACH FOR WATER OR 2 x 300 M³/HR EACH FOR FOAM

SAFETY EQUIPMENT

LIFE RAFTS 6 x 20 PERSONS, INFLATABLE
RESCUE BOAT MARITIME PARTNER WEEDO 17 FRC, 9-MEN, 20 KNOTS
DAVIT NDM PRHE35, SWL: 3.5 TONS

NAVIGATIONAL AND COMMS EQUIPMENT

RADIO AND NAVIGATION EQUIPMENT	INTERCOMMS AND PA SYSTEM
GMDSS PROGRAM 4000 (FOR AREA A3)	
VHF DSC	2 BATTERYLESS TELEPHONE
MF / HF DSC	1 AUTOMATIC TELEPHONE
MF/HF SSB	1 TALKBACK & PA SYSTEM
SATCOM-C	1
GYROCOMPASS	2 x C - PLATH NAVIGATE x HSC MOD 1
BEARING REPEATER COMPASS STAND	2 x C - PLATH
AUTO PILOT	1 x C - PLATH MAGNETIC NAVIPILOT AD-II
MAGNETIC COMPASS	1 x C - PLATH
DGPS	2 x LEICA Mk 12
NAVTEX RECEIVER	1
PORTABLE GMDSS VHF	3
ECHO SOUNDER	1
SPEEDLOG	1
ANEMOMETER	2
AIS	1 x FURUNO FA-100
SART	2 x McMurdo RT9; 9.2-9.5GHz
EPIRB	1
MARINE TRANSCEIVER	1
PORTABLE VHF	3
MH / HF	1 x TRANSCEIVER
X-BAND RADAR (IMO APPROVED)	2
INMARSAT - M	1

ACCOMMODATION

CREW 14	PASSENGER 22	BERTHS	6 x 1 BERTH CABIN
			9 x 2 BERTH CABIN
			3 x 4 BERTH CABIN

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6. HELICOPTER SPECIFICATIONS

6.1 Helicopter Emergency Medical Services (HEMS) Victoria for MEDEVAC

HELICOPTER EMERGENCY MEDICAL SERVICES (HEMS)

Non Emergency: 1300 883 200

Emergency: 1300 883 100

Air Ambulance Victoria operates three helicopters. These are based at Essendon, Bendigo and the Latrobe Valley. They are known as the Helicopter Emergency Medical Service (HEMS). Funding has been provided for an additional emergency helicopter in Warrnambool and a retrieval helicopter based in Essendon.

The ambulance helicopters are used as an emergency response to critical emergencies. They can provide an advanced level of care, quick attendance and fast transport of an injured patient to a major hospital. They are also involved in search and rescue, winch operations and sea rescue.

The Essendon helicopter (HEMS 1) is used for both ambulance and police cases. It is staffed by a police pilot, observer and a MICA flight paramedic. It is a Dauphin twin engine helicopter capable of carrying two stretcher patients. It operates primarily within 175km of Melbourne.



Both the Latrobe Valley (HEMS 2) and Bendigo (HEMS 3) helicopters are used only as emergency ambulance vehicles and are branded accordingly. They are Bell 412 helicopters and both are also fitted for bucket capability to be used in aerial firefighting.

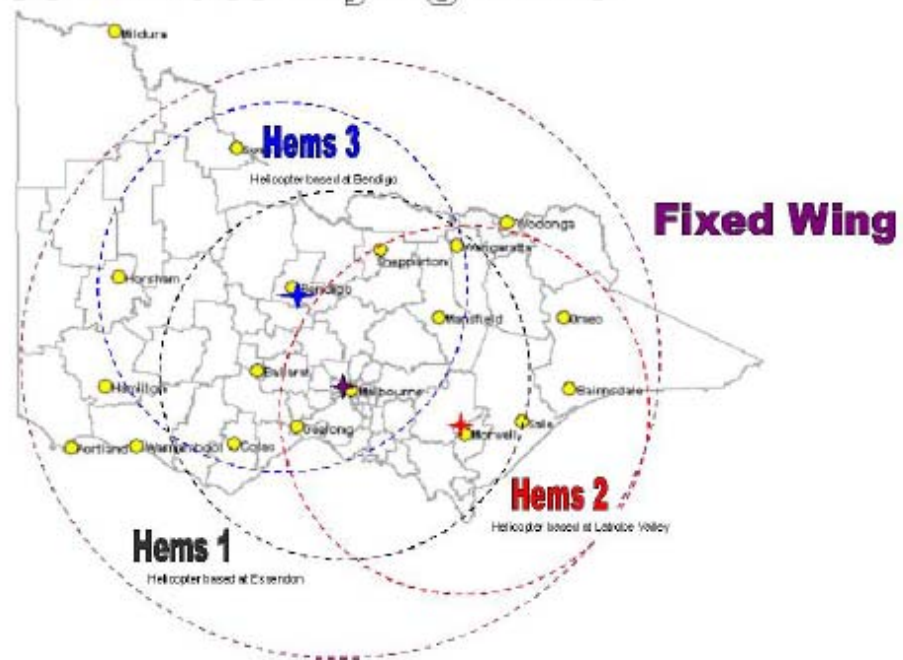


All helicopters having a winching capacity of 272kg and can winch a height of 76 metres.

Air Ambulance Coverage

Through the air ambulance helicopters and aeroplanes, the Metropolitan Ambulance Service Air Wing can reach most of the state within one hour.

60 Minute Flying Time



6.2 Technical Specifications for AS332L Super Puma Bristow Helicopters

AS332L BRISTOW TIGER SUPER PUMA

BRISTOW HELICOPTER - AS332L BACKGROUND & OPERATING EXPERIENCE



EUROCOPTER AS332L "BRISTOW TIGER" - EQUIPMENT STANDARD

A. GENERAL EQUIPMENT

- Pilot and Co-Pilot Seats with Four Point Retractable Harness
- 18 Airline Type Passenger Seats (maximum) comprising:
 - 3 Man Aft Bench Seat and Cushions (with underseat egress guidance bar)
 - 5 Double Seats ('Sicma') : 5 single Seats ('Sicma')
 - All Seats 'High-back' type with Head Restraints and fitted with Four Point Retractable Harness
- Special Soundproofing and (Airline-Type) Cabin Trim
- Cabin (and Cockpit) Ventilation and Heating System
- Passenger Service Units (Including individual lights and air vents)
- Cabin Protective Floorboards
- Floor Rails and Tie-Down Rings
- Large Cabin Windows ('Push-out' type, each acting as an Emergency Exit and including "Enlarged" Aft Windows and all incorporating Passenger Fresh Air Vents)
- Flush Fitting Cabin Doors (Sliding, plug-type with jettison facility from the cockpit and with single action release mechanism)
- Rear Baggage Holds: (Approximately 72 cubic feet total capacity, externally accessible, incorporating: lighting, smoke and fire detectors and warning systems, MIC/TEL socket for intercom)
- Dual Pilot Controls
- Dual Pilot IFR Instrumentation (incorporating 2 x HSI, 2 x ADI and Standby Artificial Horizon)
- Autopilot (Sfim 155 - Duplex)
- 2nd Gyro Compass (Sfim CG130)
- Standby Magnetic Compass
- IFR Electrical System
- 2 20 KVA 115/200 V 40 Hz Alternators
- 43 Amp/Hr. Nickel Cadmium Battery
- Standby Battery
- 2 150 Amp Transformer Rectifiers
- 2 26V 400 Hz Transformers
- 3 Position Lights
- High Intensity 'Strobe' Anti-collision Light
- Instrument Storm Lighting
- Pilot and Co-Pilot Windshield Wipers and Washers
- Windshield Demisting
- Engine Air Intakes Screens
- Rotor Brake
- Main Gear Box Emergency Oil System
- Provisions for Cargo Hook
- Provisions for Rescue Hoist
- Bristow Helicopters Modifications
- Flight Library and Ancillary Equipment (Including tie-downs etc)

B. RADIO NAVIGATION AND COMMUNICATION EQUIPMENT

- Area Long-Range Navigation System (Trimble 2101 I/O GPS Dual GPS Receiver)
- Weather and Mapping Radar (RCA Primus 500A)
- (Digital, Colour) (King KNR 634)
- 2 VOR/ILS/MB Receivers (King KDF 806)
- 1 Automatic Direction Finder Receiver (King KDM 706A)
- Distance Measuring Equipment (King KXP 756 and Aeromech)
- Transponder and Encoding Altimeter (King KRA 405)
- Radio Altimeter with Dual Indicator and Voice Advisory Surface
- Proximity Warning System (Bristow Racal)
- 1 HF/SSB Radio (King KHF 950)
- 2 VHF/AM Radios (King KTR 908)
- VHF/FM Marine Radio (Flexcom RT 138)
- Pilot and Passenger 'Intercom System (Team TB 31) with 4 control boxes
- Passenger Public Address System (Collins)
- Passenger PA
- Crew Headsets

C. RECORDING/MONITORING EQUIPMENT ENHANCEMENTS

- Combined Flight Data/Cockpit Voice Recorders
- Health and Usage Monitoring System (IHUMS specifications are detailed later in this section)

D. SAFETY AND SURVIVAL EQUIPMENT

- Emergency Flotation Gear (Incorporating Lifelines on Flotation Bags) Faired into Undercarriage Sponsons - with Bristow Automatic Float Development System (AFDS)
- 2 x 14 Man Liferafts (Helirafts) (Overload Capacity 21 Persons) each with Incorporated Marine Survival Pack, First Aid Equipment and Emergency Position Indicating Reporting Beacon (406 MHz),
- Emergency Survival Pack
- Cabin located Emergency Position Indicating Reporting Beacon (406 MHz) and meeting TSO C-126
- Sonar Underwater Locator Beacon (Dukane) (Fitted to the FDR/CVR)

D. SAFETY AND SURVIVAL EQUIPMENT CONT/D

- Passenger Life jackets fitted with Spray Hoods (Beaufort Mk 28)
- Crew Lifejackets (with Spray Hoods) with incorporated SARBE VHF/UHF 5/6 Radio Beacons (with Voice Transceiver Capability), Pains-Wessex Mini Flares, Day/Night Pyrotechnics, Whistle and Heliograph
- BHA First Aid Kit
- 2 Fire Extinguishers
- Emergency Exit Lighting
- Emergency Exit Aperture Illumination ('EXiS' Lighting') ('EXiS' is detailed later in this section)
- Passenger Safety Instructional Leaflets and Placards

EUROCOPTER AS332L "BRISTOW TIGER" - SPECIFICATIONS

ENGINES

2 x Turbomeca Makila 1A Turbines rated at (15°C, Sea Level):

One Engine Inoperative - Max Contingency	:	1756 shp
One Engine Inoperative - 'Intermediate' Contingency	:	1662 shp
Twin Engine - Take-off	:	1662 shp
Twin Engine - Max Continuous	:	1515 shp

PERFORMANCE CHARACTERISTICS

Normal Cruise Speed (ISA + 15/20°C conditions)	:	125 to 135 KTAS
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MGTOW (18,960 lb/8,600 kg) valid for temperatures at sea level pressure altitude at take-off for compliance with SDA's stipulated one-engine-inoperative performance standards to:

a) For aircraft not incorporating sponson tanks:

Day VFR	:	42°C (ISA + 27°C)
Night and IFR	:	34.5°C(ISA+ 19.5°C)

Twin engine 'out-of-ground effect' hover performance at MGTOW (18,960 lb/8,600 kg) valid for temperatures at S.L. to	:	50°C
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Gross Weight for Deliberate Single Engine Offshore Landing Weight (for 'offshore alternate'), notionally for 28°C, 12 kts wind (factored)	:	16,500 lb
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FUEL CAPACITY (Useable)

a) For aircraft <u>not</u> incorporating sponson tanks	:	4137 lbs (1877kg)
b) For aircraft incorporating sponson tanks	:	5337 lbs (2426kg)

EUROCOPTER AS332L "BRISTOW TIGER" - SPECIFICATIONS

LIMITATIONS

Maximum Gross Take-off Weight (MGTOW):

Internal Loads	:	18,960 lb (8,600kg)
External Loads	:	20,610 lb (9,350kg)

VNE (Never Exceed Speed) S.L. ISA at MGTOW
(18,960 lb/8,600 kg)

: 150 KTAS

VNO (Normal Operating Speed) S.L. ISA at MGTOW
(18,960 lb/8,600 kg)

: 140 KTAS

Altitude Limits:

Take-off and Landing at MGTOW	:	4,000 ft (D. Alt)
En-route at MGTOW	:	9,500 ft (P. Alt)

Temperature Limits: -30°C up to ISA +35°C to maximum 50°C at S.L.

Maximum Cross Wind Component for Take-off and Landing	:	35 kts }
Maximum Gusting Wind speed for Rotor Engagement	:	55 kts } Note 1
Maximum Constant Wind speed for Departure	:	75 kts }

Pitch and Roll Limits (moving decks, half amplitude)	:	3° pitch/roll Note 1
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NOTE:

1. These wind speed and pitch and roll limitations may be exceeded at the Captain's discretion for emergency flights.