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APPENDIX 14 – Table of Contents – Incident Specific Emergency Response Plan

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PROCEDURE

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Alberta's TOP 50 EMPLOYERS 2010

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Contents

1.0 Background

1.1 Purpose

The purpose of this document is to provide a detailed look to Fluor and Imperial Oil Resources Ventures Ltd. (IORVL) at the emergency response plans (ERP) for four specific incident scenarios that may be encountered during the transport of modules for the Kearl Oil Sands Project (KOSP) through the State of Montana:

- Jack knifing situation with the transporter
- Load sliding partially off the trailer situation
- Rollover situation into water
- Private vehicle in an emergency situation

This document will provide the necessary guidelines for the heavy haul carrier to follow in the event that an emergency situation of the above mentioned nature may arise during the transport of a module though the States of Montana.

The first priority in any emergency situation is the safety of the general public and the employees, while minimizing any damage and potential hazards to property and the environment.

The overall ERP will be reviewed with the all members of transportation crew (including flaggers, pilot truck escorts, utility escorts, and police, etc.) at the daily tailgate meeting and will also be attached to the job execution analysis (JEA). It should be noted that the following procedure shall serve as guidelines to the transport crew in case of emergencies as there may be different incident circumstances. The carrier must rely on the expertise of the transportation supervisor and crews, and follow the basic steps and outlined in their respective health, safety and environmental (HSE) manuals for emergency situations.

1.2 Historical Context

The oil and gas industry recognizes the need to reduce the effects of accidents and malfunctions on human life and the environment and has developed best practices and standards for addressing these situations through project engineering, construction and operations activities, including the identification of potential situations and the development of effective mitigation strategies.

Industry experience has shown that accident and malfunction assessments are an effective means of modifying industry best practices to suit specific planned project activities and environmental and socio-economic considerations.

1.3 Hazard Assessments

Hazard assessment is the tool commonly used by industry to guide functional and effective decisions in evaluating accidents and malfunctions.

- The proponents' hazard assessment process follows industry proven practice and regulatory expectations and standards.

The proponents' hazard assessment process includes identifying:

- Credible accident or malfunction scenarios.
- Worker and public health and safety.
- Potential environmental effects.
- Emergency response activities.
- Post-response recovery activities.

1.4 Emergency Response Process

The emergency response process involves communication among response team members to enable timely and effective actions, including:

- Initiating the initial response by:
  - Addressing risks to safety
  - Securing the emergency area
  - Controlling and containing the incident
  - Notifying all external agencies and appropriate companies

- Taking subsequent actions to mitigate the effects of the incident, including:
  - Cleaning up
  - Reporting
  - Continuing with project activities

- Conducting recovery activities to address residual impacts, including:
  - Assessing damage to project assets and local environmental and social components
  - Establishing decision criteria related to recovery activities, e.g., environmental remediation
  - Incident investigation to identify the root cause to assist in preventing a reoccurrence.

- Roles and responsibilities for mitigation actions will be developed, agreed upon, documented and implemented.

The emergency response process outlined in this document will be reviewed and revised, as necessary, throughout the project's life.

2.0 Scope of Scenarios

2.1 Scenarios Selected

Four types of incident scenarios will be discussed in this document in order to provide the necessary guidelines that the transport team may reference in the event one of these situations takes place during the transport of a module along the designated route through the State of Montana.

- Scenario 1: Jack-knifing the transporter
- Scenario 2: Load sliding partially off the trailer
- Scenario 3: Overturning the load and transporter into water
- Scenario 4: Private vehicle in an emergency situation

2.2 Scenario Content

Each scenario is based on current project engineering planning information and available environmental and social information, and includes:

- A description of the scenario
- The environmental setting
- The potential effects on environmental and social components
- Mitigations and preventative measures
- Emergency response and recovery

3.0 Jack-Knifing of the Transporter

3.1 Scope

This portion of the document will describe a scenario in which the transporter carrying a module jack knifes on the highway.

3.2 Background

Jack-knifing is the term used when a vehicle that is towing a trailer folds at the pivoting joint, causing the transporter to resemble a pocket knife or a “jack knife”. Several factors may cause a jack knife incident such as slippery or icy road conditions, malfunctioning breaks or equipment, and sudden braking at high speeds. However, due to the design of hydraulic platform trailers, it is nearly unachievable to have a jack knife incident occur. If such incident was to occur, it cannot happen in a typical tractor-trailer scenario where the trailer swings out of the lane into the ditch. This is due to the fact that there are up to 14 axle lines steering and controlling the direction of the trailer, (see Appendix 3 – Equipment Information) whereas a normal tractor-trailer has two or three non steering axles that are located 20 to 30 feet behind the pivot point. Therefore, for a platform trailer jack-knife situation, the likelihood would be for the lead tractor to be forced into the ditch and the trailer remain on the road surface.

Zero amounts of dangerous goods or hazardous materials will be shipped in or with the module. However, small amounts of hydrocarbons are required for the operation of the tractors and hydraulic platform trailers. Each tractor transporting the load can carry up to 350 gallons of diesel fuel and the hydraulic platform trailers use approximately 60 gallons of hydraulic oil. All vehicles in the transport convoy will have a copy of the carriers WHMIS file explaining the hazardous materials on board. In addition, all vehicles will be equipped with spill kits, which will assist to control and recover minor hazardous material spills.

Weather will be continuously monitored. Modules will not travel in adverse weather conditions, as per the permit requirements and based on the expertise of the transport supervisor and the transport team. The transport supervisor will check the forecast and posted road conditions, as well as scout the route prior to moving each day. The transport shall not leave the parking location if there is thought to be a risk to the public and the crew due to the weather. Should adverse weather conditions arise during transport, the transport team will determined the safest course of action and remain parked until it is deemed safe for the for the load to proceed.

3.3 Scenario

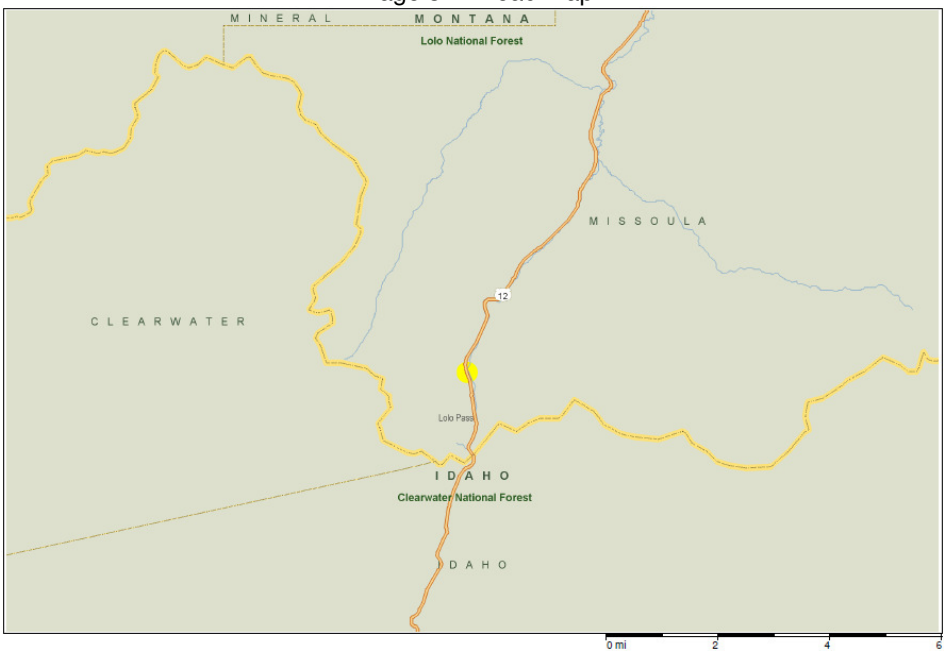
While descending a steep grade, the tractor towing the hydraulic platform trailer loaded with a module, looses control under braking due to icy road conditions and jack knifes the transporter, forcing the pull tractor towards the ditch and the trailer to remain on the road. There is no damage to the tractors, the trailer or the load.

3.4 Environmental Setting

- Location: US Highway 12, eastbound descending Lolo Pass towards Lolo, MT.
- Road: Two lane paved highway with narrow shoulders. Mountain side with trees to the left and a steep ditch lined with trees to the right.

Image 3-1: Highway View

Image 3-2: Road Map



3.5 Potential Effects

Table 3-1: Potential Effects of a Transporter Jack-Knifing Incident

Environmental Components	Environmental Concern	Potential Effect
Air Quality and Noise	Air quality	No effect expected
	Noise	No effect expected
Water and aquatic environment	Water Quality	No effect expected
	Fish and fish habitat	No effect expected
	Aquatic mammals and habitat	No effect expected
	Water flow	No effect expected
Soils and landforms	Soil quality	No effect expected
	Ground stability	No effect expected
Vegetation	Plant and plant communities	No effect expected
Wildlife	Birds	No effect expected
	Terrestrial mammals	No effect expected
Community resources	Health care services	Local medical and emergency services may be required
	Transportation infrastructure	Traffic may be stopped for longer than authorized by the State (10 min in Montana) as per the transportation plan. Road may be blocked for an extended period of time.
	Other community resources	Towing/recovery services may be required
Community wellness	Community health	No effect expected
	Community safety	No effect expected
Land and resource use	Traditional harvesting and land use	No effect expected
	Heritage resources	No effect expected
	Protected areas	No long term effects expected

3.6 Mitigation and Preventative Measures

- Drive at appropriate speeds for transporting the modules based on the experience and expertise of the driver, the transport supervisor and the transport crew.
- Comply with HSE guidelines, rules, regulations, codes of practice and industry best practice standards.
- Ensure that the transport equipment is properly outfitted for the current weather conditions.
- Make sure the pre-trip inspections are completed ensuring everything is in good working order.
- Perform preventative maintenance to ensure all the equipment is in excellent condition.
- Verify that the road is in acceptable driving condition prior to departing the parking location.
- Communicate between the transport crews.

3.7 Emergency Response

i. The scene will be stopped, stabilized and evaluated. The first priority is to ensure the safety of the public and the employees, and the protection of the environment and property.
ii. Injuries shall be treated accordingly.
iii. Immediate contact shall be established within the transport convoy.
iv. The transport supervisor will contact the Montana Highway Patrol, emergency service agencies, IORVL and Fluor representative, the transport company senior management and any other pre-determined authorities as listed in the JEA, providing a full description of the incident, location, damage (if applicable) and contact information.

3.8 Recovery

i. The transport supervisor, in conjunction with the transport crew, will assess the situation, decide on the safest course of action and mitigate any possible public disruptions. A JEA will be developed on scene detailing the plan and executed on location, describing the steps to be taken, identifying the possible hazards, and how potential hazards will be controlled.

ii. In the event of a jack-knife incident, the jack knifed prime mover (Tractor #1) will be disconnected from the trailer either at the prime mover hitch, or at the drawbar / header connection. The front and rear pilot vehicles and flaggers will direct or control traffic accordingly.

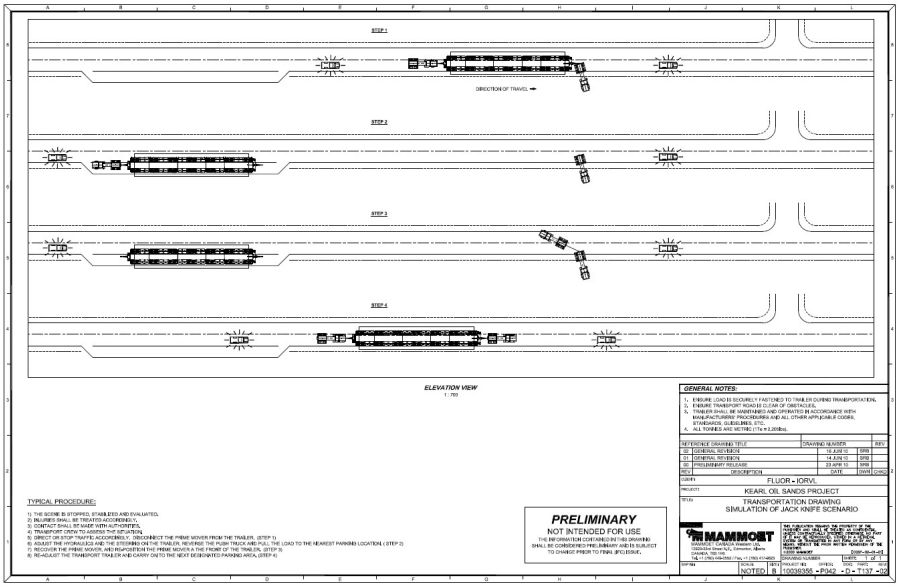
iii. Hydraulic and steering adjustments will be made to the trailer to allow it to be pulled in the opposite direction.

iv. The push tractor (Tractor #2) will be positioned to pull the trailer and load back to the nearest traffic clearing location keeping traffic disruption to a minimum.

v. Once at the parking area, Tractor #2 will disconnect from the trailer and return to assist with the recovery of Tractor #1. All prime movers are equipped with appropriately sized tow ropes. Should additional recovery services be required, contact would be made for an immediate dispatch (towing & recovery contact numbers are to be documented at the daily toolbox talk)

vi. Once the transporter and the load have been inspected and deemed safe, the load will be transported to the next traffic clearing location.

Image 3-3: Transportation Drawing (See Appendix 1)



4.0 Load Sliding Partially Off the Trailer

4.1 Scope

This portion of the document will describe a scenario in which the transporter's load slides of the deck off the trailer.

4.2 Background

A load sliding off the trailer could have consequences for the public, the environment, the client and the heavy haul carrier. All necessary steps will be taken to help prevent such an incident from happening as everyone involved in the project will be committed to achieving a high level of safety by complying with HSE guidelines, rules, regulations, codes of practice and industry best practice standards. Transport team members from the heavy haul carrier shall be familiar with the basic understanding of heavy transport, trailer stability and lashing.

Zero amounts of dangerous goods or hazardous materials will be shipped in or with the module. However, small amounts of hydrocarbons are required for the operation of the tractors and hydraulic platform trailers. Each tractor transporting the load can carry up to 350 gallons of diesel fuel and the hydraulic platform trailers use approximately 60 gallons of hydraulic oil. All vehicles in the transport convoy will have a copy of the carriers WHMIS file explaining the hazardous materials on board. In addition, all vehicles will be equipped with spill kits, which will assist to control and recover minor hazardous material spills.

Weather will be continuously monitored. Modules will not travel in adverse weather conditions, as per the permit requirements and based on the expertise of the transport supervisor and the transport team. The transport supervisor will check the forecast and posted road conditions, as well as scout the route prior to moving each day. The transport shall not leave the parking location if there is thought to be a risk to the public and the crew due to the weather. Should adverse weather conditions arise during transport, the transport team will determined the safest course of action and remain parked until it is deemed safe for the for the load to proceed.

4.3 Scenario

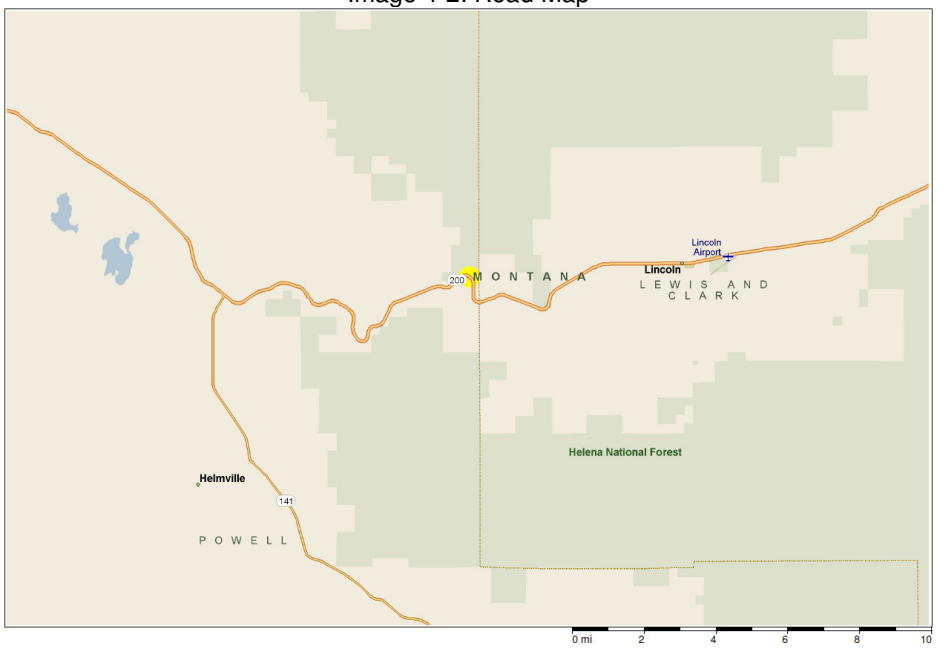
While manoeuvring the curves along the highway, the outside tires of the hydraulic platform trailer exited the road surface moving the load centre of gravity outside of the stability angle and caused the load to partially slide off the trailer where one side of the module is resting on the trailer and the other is resting on the ground. The tractors, the trailer and the load remained upright; however the entire width of the road is blocked. There are no hazardous material spills as a result of the incident.

4.4 Environmental Setting

- Location: US Highway 200, eastbound approaching Lincoln, MT.
- Road: Two lane paved highway with narrow shoulders, shallow and wide drainage ditches on either side lined with trees.

Image 4-1: Highway View

Image 4-2: Road Map



4.5 Potential Effects

Table 4-1: Potential Effects of a Module Overturning Incident

Environmental Components	Environmental Concern	Potential Effect
Air Quality and Noise	Air quality	No effect expected
	Noise	No effect expected
Water and aquatic environment	Water Quality	No effect expected
	Fish and fish habitat	No effect expected
	Aquatic mammals and habitat	No effect expected
	Water flow	No effect expected
Soils and landforms	Soil quality	No long term effects expected
	Ground stability	No effect expected
Vegetation	Plant and plant communities	Plants in incident area may get affected
Wildlife	Birds	No effect expected
	Terrestrial mammals	No effect expected
Community resources	Health care services	Local medical and emergency services may be required
	Transportation infrastructure	Traffic may be stopped for longer than authorized by the State (10 min in Montana) as per the transportation plan. Road may be blocked for an extended period of time. (Approximately 2-3 days)
	Other community resources	Towing/recovery services may be required
Community wellness	Community health	Emergency vehicles may have to detour the incident
	Community safety	Emergency vehicles may have to detour the incident
Land and resource use	Traditional harvesting and land use	No effect expected
	Heritage resources	No effect expected
	Protected areas	No long term effects expected

4.6 Mitigation and Preventative Measures

- Drive at appropriate speeds for transporting the modules based on the experience and expertise of the driver, the transport supervisor and the transport crew.
- Make certain that the pilot vehicles and spotters carefully observe the load as it is travelling along the highway.
- Ensure that all communication devices (2-way radios) are properly functioning for the spotter to inform the driver of the trailer position on the highway.
- Comply with HSE guidelines, rules, regulations, codes of practice and industry best practice standards.
- Ensure the load is properly lashed and secured to the transporter.
- Verify that the lashing and securing equipment is in excellent working condition.
- Ensure pre-trip inspections are completed ensuring everything is in good working order.
- Verify that the road is in acceptable driving condition prior to departing the parking location.

4.7 Emergency Response

i. The scene will be stopped, stabilized and evaluated. The first priority is to ensure the safety of the public and the employees, and the protection of the environment and property.
ii. Injuries shall be treated accordingly.
iii. Immediate contact shall be established within the transport convoy.
iv. The transport supervisor will contact the Montana Highway Patrol, emergency service agencies, IORVL and Fluor representatives, the transport company senior management and any other pre-determined authorities as listed in the JEA, providing a full description of the incident, location, damage and contact information.

4.8 Recovery

i. The transport supervisor, in conjunction with the transport crew, will assess the situation, decide on the safest course of action and mitigate any possible public and environmental disruptions. Prior to any new activities, a JEA will be developed on scene detailing the plan and executed on location, describing the steps to be taken, identifying the possible hazards, and how potential hazards will be controlled.

ii. Traffic coordination around the incident will be controlled by the flaggers and pilot trucks as to disrupt traffic as little as possible. Flagging crews shall detour traffic around the incident via alternate routes until the highway can be re-opened or until it is deemed safe for vehicles to pass without interfering with the recovery efforts.

iii. Contact information for local specialty towing, recovery and crane companies will be listed in transport JEA. Preliminary analysis shows that mobile cranes with up to approximately 500 ton capacities may be required to assist with the recovery should an incident occur. Appendix 4 lists numerous crane companies, within Montana, the north-west United States and Alberta, that have suitable cranes within their fleets. Crane companies shall be contacted immediately so they may dispatch the appropriate equipment. Equipment required for the recovery efforts will need to be reviewed on a case by case basis and will be specified depending on various factors such as exact incident details, size, weight, access area, module lift lug locations, etc. Pre-transport contact will be made to the crane companies to verify that suitable cranes are available for emergency call-out if required.

vii. Once the incident has been dealt with, it will be reviewed and analyzed. The transport equipment will be checked and verified to ensure it is safe to proceed prior to continuing transport.

5.0 Overturning of the Load and Transporter in Water

5.1 Scope

This portion of the document will describe a scenario in which the transporter carrying a module overturns in water.

5.2 Background

Overturning a highway transporter and the load could have consequences for the public, the environment, the client and the heavy haul carrier. All necessary steps will be taken to help prevent such an incident from happening as everyone involved in the project will be committed to achieving a high level of safety by complying with HSE guidelines, rules, regulations, codes of practice and industry best practice standards. Transport team members from the heavy haul carrier shall be familiar with the basic understanding of heavy transport, trailer stability and lashing.

Zero amounts of dangerous goods or hazardous materials will be shipped in or with the module. However, small amounts of hydrocarbons are required for the operation of the tractors and hydraulic platform trailers. Each tractor transporting the load can carry up to 350 gallons of diesel fuel and the hydraulic platform trailers use approximately 60 gallons of hydraulic oil. All vehicles in the transport convoy will have a copy of the carriers WHMIS file explaining the hazardous materials on board. In addition, all vehicles will be equipped with spill kits, which will assist to control and recover minor hazardous material spills.

Weather will be continuously monitored. Modules will not travel in adverse weather conditions, as per the permit requirements and based on the expertise of the transport supervisor and the transport team. The transport supervisor will check the forecast and posted road conditions, as well as scout the route prior to moving each day. The transport shall not leave the parking location if there is thought to be a risk to the public and the crew due to the weather. Should adverse weather conditions arise during transport, the transport team will determined the safest course of action and remain parked until it is deemed safe for the for the load to proceed.

5.3 Scenario

While manoeuvring a curve along the highway, the hydraulic platform trailer made contact with the barrier. As a result, the trailer and the prime mover exited the road surface and overturned into the river. Small amounts of hydrocarbons leaked from the prime mover and the hydraulic platform trailer as a result of the incident.

5.4 Environmental Setting

- Location: US Highway 200, eastbound past Missoula, MT.
- Road: Two lane paved highway with narrow shoulders, a drainage ditch to the left and a river to the right.
- Water: The Blackfoot River runs along US Highway 200 in this area.

Image 5-1: Highway View

Image 5-2: Road Map

5.5 Potential Effects

Table 5-1: Potential Effects of a Module Overturning Incident

Environmental Components	Environmental Concern	Potential Effect
Air Quality and Noise	Air quality	No effect expected
	Noise	No effect expected
Water and aquatic environment	Water Quality	Short term effects expected
	Fish and fish habitat	Possible mortality
	Aquatic mammals and habitat	Mammals may be affected
	Water flow	Minimal disruption of water flow expected
Soils and landforms	Soil quality	Soil contamination expected
	Ground stability	No effect expected
Vegetation	Plant and plant communities	Plants in incident area may get affected
Wildlife	Birds	Birds may be affected
	Terrestrial mammals	Mammals may be affected
Community resources	Health care services	Local medical and emergency services may be required
	Transportation infrastructure	Traffic may be stopped for longer than authorized by the State (10 min in Montana) as per the transportation plan. Road may be blocked for an extended period of time. (Approximately 1 day during the recovery)
	Other community resources	Towing/recovery services will be required
Community wellness	Community health	Emergency vehicles may have to detour the incident
	Community safety	Emergency vehicles may have to detour the incident
Land and resource use	Traditional harvesting and land use	Fishing or rafting activities may be affected
	Heritage resources	No effect expected
	Protected areas	No long term effects expected

5.6 Mitigation and Preventative Measures

- Drive at appropriate speeds for transporting the modules based on the experience and expertise of the driver, the transport supervisor and the transport crew.
- Make certain that the pilot vehicles and spotters carefully observe the load as it is travelling along the highway.
- Ensure that all communication devices (2-way radios) are properly functioning as to inform the driver of the trailer position along the highway.
- Comply with HSE guidelines, rules, regulations, codes of practice and industry best practice standards.
- Ensure the load is properly lashed and secured to the transporter.
- Verify that the lashing and securing equipment is in excellent working condition.
- Ensure pre-trip inspections are completed ensuring everything is in good working order.
- Verify that the road is in acceptable driving condition prior to departing the parking location.

5.7 Emergency Response

i. The scene will be stopped, stabilized and evaluated. The first priority is to ensure the safety of the public and the employees, and the protection of the environment and property.
ii. Injuries shall be treated accordingly.
iii. Immediate contact shall be established within the transport convoy.
iv. The transport supervisor will contact the Montana Highway Patrol, emergency service agencies, IORVL and Fluor representatives, the transport company senior management and any other pre-determined authorities as listed in the JEA, providing a full description of the incident, location, damage and contact information.

5.8 Recovery

i. The transport supervisor, in conjunction with the transport crew, will assess the situation, decide on the safest course of action and mitigate any possible public and environmental disruptions. Prior to any new activities, a JEA will be developed on scene detailing the plan and executed on location, describing the steps to be taken, identifying the possible hazards, and how potential hazards will be controlled.

ii. Traffic coordination around the incident will be controlled by the flaggers and pilot trucks as to disrupt traffic as little as possible. Flagging crews shall control traffic around the incident.

iii. The hazardous material spill area will be analyzed and a plan will be developed to secure or remove any remaining diesel / hydraulic fluid. The area will be flagged and the proper authorities contacted immediately as to keep the disturbances to the environment as minimal as possible. Local hazard material authority contact information may be found in the transport JEA. From a safe location, the transport supervisor, or other, shall supply the following minimum information to the hazardous materials authorities:

1. Name and contact information
2. A brief description of the incident including substances and approximate quantity leaked
3. The immediate effects on people, animals and the environment
4. Current weather conditions

iv. Contact information for local specialty towing, recovery and crane companies will be listed in transport JEA. Preliminary analysis shows that mobile cranes with up to approximately 500 ton capacities may be required to assist with the recovery should an incident occur. Appendix 4 lists numerous cranes companies, within Montana, the north-west United States and Alberta, that have suitable cranes within their fleets. Crane companies shall be contacted immediately so they may dispatch the appropriate equipment. Equipment required for recovery efforts will need to be reviewed on a case by case basis and will be specified depending on various factors such as exact incident details, size, weight, access area, lift lug locations, etc. Pre-transport contact will be made to the crane companies to verify that suitable cranes are available for emergency call-out if required.

v. Once the incident has been dealt with, it will be investigated and analyzed. The transport equipment will be checked and repaired (if possible) as to ensure it is safe to return to the fleet. Results of the investigation will be communicated to IORVL, Fluor, the heavy haul carrier and all members of the transport crews.

6.0 Private Vehicle in an Emergency Situation

6.1 Scope

This portion of the document will describe a scenario in which the transporter carrying a module encounters a private vehicle in an emergency situation, or an unannounced emergency vehicle along the route.

6.2 Background

The ERP contained within the Montana Transportation Plan describes briefly the procedure when marked and announced emergency vehicles are approaching the transport convoy. Albeit the emergency vehicle scenario has been dealt with, there exists the possibility that a private vehicle in an emergency situation or an unannounced emergency vehicle must pass the load immediately and continue on to receive medical assistance.

6.3 Scenario

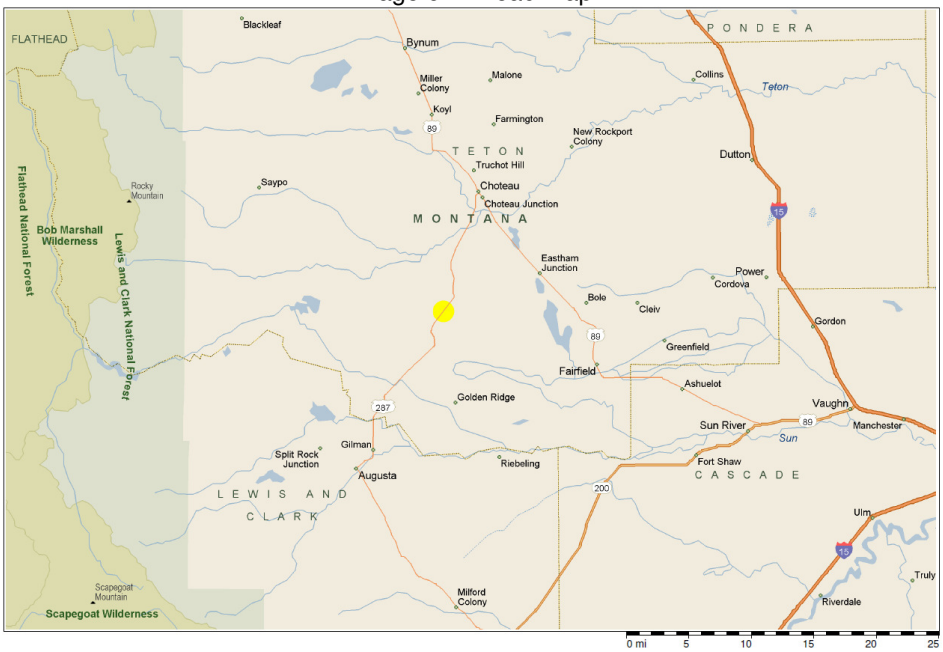
While transporting a module along the designated route, the transport convoy encounters a private vehicle in an emergency situation.

6.4 Environmental Setting

- Location: US Highway 287, northbound approaching Choteau, MT.
- Road: Two lane paved highway with narrow shoulders and steep drainage ditches on either side.

Image 6-1: Highway View

Image 6-2: Road Map



6.5 Potential Effects

Table 6-1: Potential Effects of Encountering Private Vehicle in an Emergency Situation

Environmental Components	Environmental Concern	Potential Effect
Air Quality and Noise	Air quality	No effect expected
	Noise	No effect expected
Water and aquatic environment	Water Quality	No effect expected
	Fish and fish habitat	No effect expected
	Aquatic mammals and habitat	No effect expected
	Water flow	No effect expected
Soils and landforms	Soil quality	No effect expected
	Ground stability	No effect expected
Vegetation	Plant and plant communities	No effect expected
Wildlife	Birds	No effect expected
	Terrestrial mammals	No effect expected
Community resources	Health care services	Private vehicle in an emergency situation may be impacted
	Transportation infrastructure	Minor traffic delays may happen
	Other community resources	No effect expected
Community wellness	Community health	Private vehicle in an emergency situation may be impacted
	Community safety	No effect expected
Land and resource use	Traditional harvesting and land use	No effect expected
	Heritage resources	No effect expected
	Protected areas	No effect expected

6.6 Mitigation and Preventative Measure

- Rely on the experience and the expertise of the transport supervisor, the transport crew and the local police officers for dealing with this type of situation.
- Make certain that all members of the transport crew and all vehicles are highly visible to oncoming and following traffic.
- Ensure that there is sufficient warning (signs, lights, message boards, etc) for oncoming or following unannounced emergency vehicles advising them of the over-dimensional transport ahead.
- Ensure that all communication devices (2-way radios) are properly functioning as to inform the entire transport crew including police escorts of the load position along the highway.
- Comply with HSE guidelines, rules, regulations, codes of practice and industry best practice standards.
- The transport supervisor, along with the drivers, will review the upcoming segment prior to departing the turnout to identify the opportunities for clearing oncoming private vehicles in need of immediate medical aid, such as driveways, approaches and intersections.

6.7 Emergency Response

i. The private vehicle with an emergency situation required to immediately pass the transport convoy will inform the nearest pilot vehicle operator, police officer or flagger of the emergency.

ii. The pilot truck operator, police officer or flagger will radio the transport supervisor of the situation.

6.8 Recovery

Emergency vehicle travelling in the opposite direction of the module:

i. The transport supervisor will radio the crew advising them of the situation and order the nearest pilot truck to escort the unannounced emergency vehicle towards the module.

ii. a) If is determined that there are there is a location prior to the next turnout that is wide enough to have the emergency vehicle pass the transporter, the transport supervisor will direct the transport crew to pull over and stop. The pilot truck will escort the vehicle around the load.

b) If there are no wide spots that may allow the emergency vehicle to safely pass the transporter, the transporter will stop just in advance of the next available turnout, approach, driveway or pullout of any kind while the remaining pilot trucks and flaggers stop both oncoming and following traffic. After the vehicle is clear of the roadway, the pilot truck escorting the vehicle will radio the transport supervisor, who will in turn direct the transporter to safely pass the vehicle parked off to the side.

iii. Once the transporter and the private vehicle have passed each other, the pilot truck will escort the unannounced emergency vehicle through the remainder of the transport activity zone.

iv. The transport supervisor will call 9-1-1 (or equivalent – emergency numbers to be located in the JEA) so the emergency can be dealt with appropriately.

v. Once the private vehicle situation has passed the transporter, the transport of the module will resume. Should the transport convoy have lost a member of the Montana Highway Patrol due to the fact they are escorting the private vehicle, the transport convoy will remain parked at the next turnout until they return or can be replaced.

Emergency vehicle travelling in the same direction as the module:

i. The transport supervisor will radio the crew advising of the situation and order the nearest pilot truck operator to escort the unannounced emergency vehicle directly behind the module, while the remaining pilot trucks and flaggers stop oncoming and following traffic.

ii. a) If it is determined that there is a location prior to the next turnout that is wide enough to have the emergency vehicle pass the transporter, the transport supervisor will direct the transport crew to pull over and stop. The pilot truck will then escort the vehicle around the load.

b) If there are no wide spots that may allow the emergency vehicle to safely pass the transporter, the transporter will proceed without delay to the nearest turnout and immediately pull over to allow the pilot truck to escort the emergency vehicle around the load.

iii. The transport supervisor will also call 9-1-1 (or equivalent – emergency numbers to be located in the JEA) so the emergency can be dealt with appropriately.

iv. Once the unannounced emergency vehicle situation has passed the transporter, the transport will resume. Should the transport convoy have lost a member of the Montana Highway Patrol due to the fact they are escorting the private vehicle, the transport convoy will remain parked at the next turnout until they return or can be replaced.

***Unannounced emergency vehicle emergency recovery plan based in part by information provided by Western Traffic Control.

Appendices

- Appendix 1 – Transportation Drawing
- Appendix 2 – Job Execution Analysis (JEA) Sample
- Appendix 3 – Equipment Information
- Appendix 4 – Mobile Crane locations and Capacities

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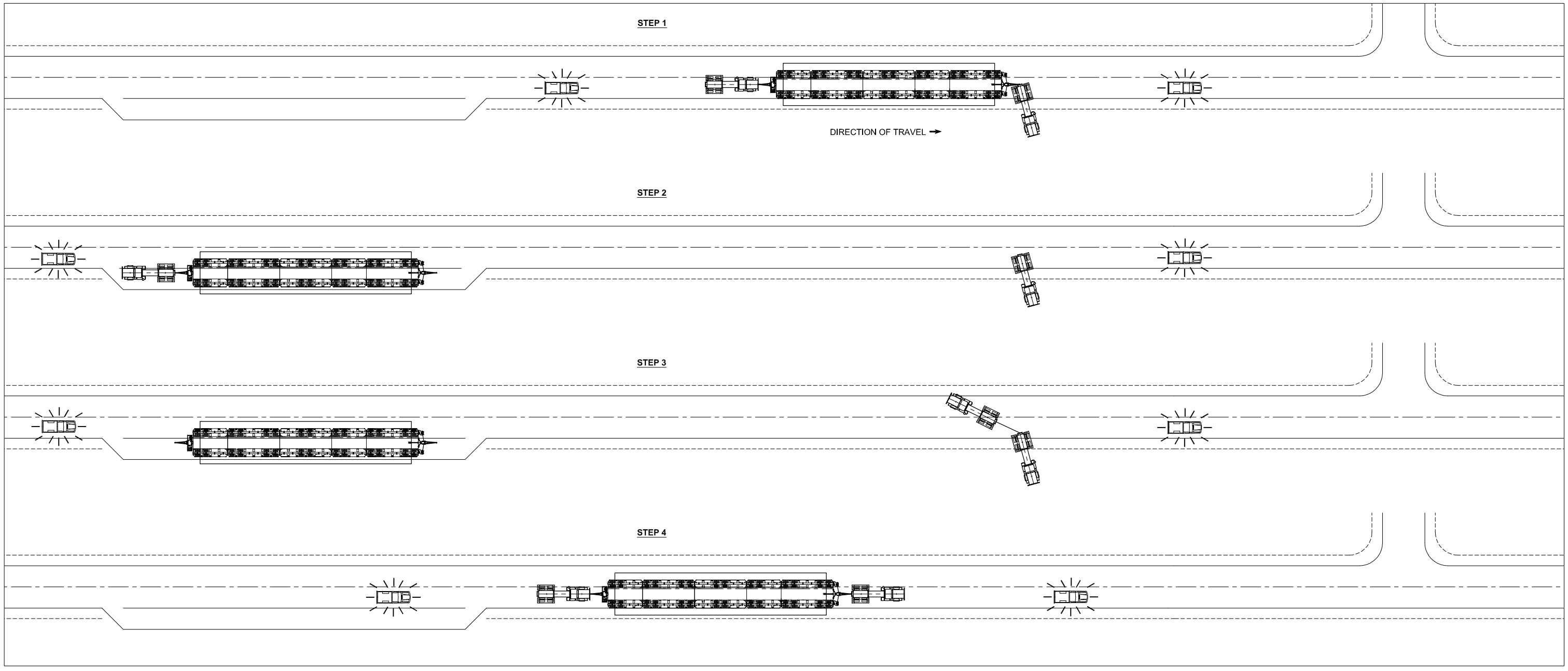
APPENDIX 1 – Table of Contents – Transportation Drawing



ELEVATION VIEW
1 : 700

TYPICAL PROCEDURE:

1) THE SCENE IS STOPPED, STABILIZED AND EVALUATED.
2) INJURIES SHALL BE TREATED ACCORDINGLY.
3) CONTACT SHALL BE MADE WITH AUTHORITIES.
4) TRANSPORT CREW TO ASSESS THE SITUATION.
5) DIRECT OR STOP TRAFFIC ACCORDINGLY. DISCONNECT THE PRIME MOVER FROM THE TRAILER. (STEP 1)
6) ADJUST THE HYDRAULICS AND THE STEERING ON THE TRAILER, REVERSE THE PUSH TRUCK AND PULL THE LOAD TO THE NEAREST PARKING LOCATION. (STEP 2)
7) RECOVER THE PRIME MOVER, AND RE-POSITION THE PRIME MOVER A THE FRONT OF THE TRAILER. (STEP 3)
8) RE-ADJUST THE TRANSPORT TRAILER AND CARRY ON TO THE NEXT DESIGNATED PARKING AREA. (STEP 4)

PRELIMINARY
NOT INTENDED FOR USE
THE INFORMATION CONTAINED IN THIS DRAWING SHALL BE CONSIDERED PRELIMINARY AND IS SUBJECT TO CHANGE PRIOR TO FINAL (IFC) ISSUE.

GENERAL NOTES:

1. ENSURE LOAD IS SECURELY FASTENED TO TRAILER DURING TRANSPORTATION.
2. ENSURE TRANSPORT ROAD IS CLEAR OF OBSTACLES.
3. TRAILER SHALL BE MAINTAINED AND OPERATED IN ACCORDANCE WITH MANUFACTURERS' PROCEDURES AND ALL OTHER APPLICABLE CODES, STANDARDS, GUIDELINES, ETC.
4. ALL TONNES ARE METRIC (1Te = 2,205lbs).

REFERENCE DRAWING TITLE		DRAWING NUMBER		REV
02	GENERAL REVISION	16 JUN 10	SRB	
01	GENERAL REVISION	14 JUN 10	SRB	
00	PRELIMINARY RELEASE	23 APR 10	SRB	
REV	DESCRIPTION	DATE	DWN	CHKD

CLIENT: FLUOR - IORVL

PROJECT: KEARL OIL SANDS PROJECT

TITLE: TRANSPORTATION DRAWING
SIMULATION OF JACK KNIFE SCENARIO

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SAP No:	SCALE:	SIZE:	DRAWING NUMBER	SHEET: 1 of 1
	NOTED	B	PROJECT NO: 10039355 - OFFICE: P042 - DOC: D - PART: T137 - REV: 02	

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APPENDIX 2 – Table of Contents – Job Execution Analysis (JEA) Sample

VAN SELUWEREN GROUP — worldwide specialists in heavy lifting and transport

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HEALTH, SAFETY & ENVIRONMENTAL

JOB EXECUTION ANALYSIS

DATE	JOB/TASK DESCRIPTION	PAGES SUBMITTED
	GENERAL- OPERATORS LOADING WITH TRAILERS WHILE UNDER MODS	Page of

MC PROJECT NUMBER	CRAFT(S) PERFORMING JOB	SUPERVISORS INVOLVED	MAMMOET CANADA ADDITIONAL PERSONNEL INVOLVED
N/A	TEAMSTERS		H.S.E / SENIOR MANAGEMENT

CLIENT NAME	PROJECT NAME	CLIENT PROJECT NUMBER
MAMMOET	N/A	N/A

REVIEWED BY (PRINT NAME)	POSITION	DATE
DELLY MCEWAN	MCW TRANSPORT SUPERVISOR	

TOOLS AND EQUIPMENT REQUIRED	MATERIALS REQUIRED	PROTECTIVE EQUIPMENT	DOCUMENTATION REQUIRED
SCHEUERLE TRAILERS	PRE-USE CHECK	HARD HAT SAFETY GLASSES STEEL TOE BOOTS HAND PROTECTION	MAINTANCE LOG PRE-USE CHECK LIST

SEQUENCE OF BASIC JOB STEPS/TASKS	HAZARDS/POTENTIAL HAZARDS	RECOMMENDED HAZARD CONTROLS/SAFE JOB PROCEDURES
PRE TRIP INSPECTION	DEFECTIVE EQUIPMENT ON TRAILER	PRE-USE INSPECTION

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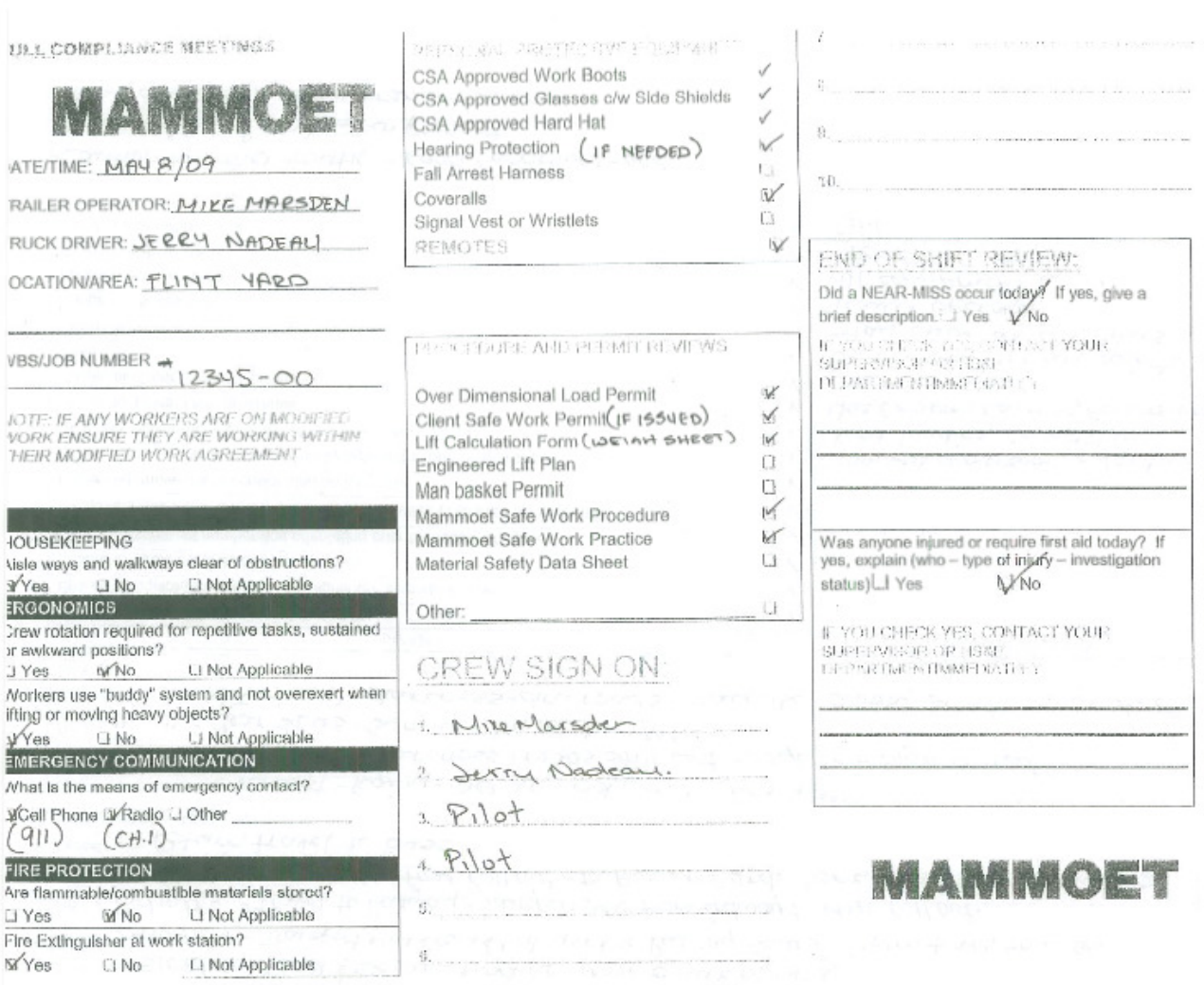
JOB EXECUTION ANALYSIS

DEVELOPMENT RECORD

NAME	TITLE / POSITION	SIGNATURE

PRE-JOB REVIEW RECORD

NAME	TITLE / POSITION	SIGNATURE	DATE



...L COMPLIANCE MEETINGS

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...ATE/TIME: MAY 8/09

...RAILER OPERATOR: MIKE MARSDEN

...RUCK DRIVER: JERRY NADEAU

...OCATION/AREA: FLINT YARD

...VBS/JOB NUMBER → 12345-00

...OTE: IF ANY WORKERS ARE ON MODIFIED ...ORK ENSURE THEY ARE WORKING WITHIN ...HEIR MODIFIED WORK AGREEMENT

...HOUSEKEEPING

...isle ways and walkways clear of obstructions?
☑ Yes ☐ No ☐ Not Applicable

...ERGONOMICS

...Crew rotation required for repetitive tasks, sustained ...r awkward positions?
☐ Yes ☑ No ☐ Not Applicable

...Workers use "buddy" system and not overexert when ...ifting or moving heavy objects?
☑ Yes ☐ No ☐ Not Applicable

...EMERGENCY COMMUNICATION

...What is the means of emergency contact?
☑ Cell Phone ☑ Radio ☐ Other _____
(911) (CH.1)

...FIRE PROTECTION

...Are flammable/combustible materials stored?
☐ Yes ☑ No ☐ Not Applicable

...Fire Extinguisher at work station?
☑ Yes ☐ No ☐ Not Applicable

...PERSONAL PROTECTIVE EQUIPMENT

CSA Approved Work Boots	✓
CSA Approved Glasses c/w Side Shields	✓
CSA Approved Hard Hat	✓
Hearing Protection (IF NEEDED)	✓
Fall Arrest Harness	☐
Coveralls	☑
Signal Vest or Wristlets	☐
REMOTES	✓

...PROCEDURE AND PERMIT REVIEWS

Over Dimensional Load Permit	☑
Client Safe Work Permit (IF ISSUED)	☑
Lift Calculation Form (WEIGH SHEET)	☑
Engineered Lift Plan	☐
Man basket Permit	☐
Mammoet Safe Work Procedure	☑
Mammoet Safe Work Practice	☑
Material Safety Data Sheet	☐
Other: _____	☐

CREW SIGN ON

1. Mike Marsden
2. Jerry Nadeau.
3. Pilot
4. Pilot
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

END OF SHIFT REVIEW:

Did a NEAR-MISS occur today? If yes, give a brief description. ☐ Yes ☑ No

IF YOU CHECK YES, CONTACT YOUR SUPERVISOR OR HSE DEPARTMENT IMMEDIATELY

Was anyone injured or require first aid today? If yes, explain (who – type of injury – investigation status) ☐ Yes ☑ No

IF YOU CHECK YES, CONTACT YOUR SUPERVISOR OR HSE DEPARTMENT IMMEDIATELY

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HYDRAULIC TRAILER POST-TRIP INSPECTION

Must be completed and retuned to Maintenance Department IMMEDIATELY after trip.

Dispatch Number:	Operated by:	Date:

CHECK	OK	NEEDS REPAIR
Physical Damage to Trailer		
Air Leaks (Hoses, Brake Pots, Valves Fittings)		
Front Air/Electrical Connection		
Light Operation		
Alignment		
Tire Condition (Wear/Flats)		
Wheel Nuts/Studs		
Axle Seals		
Brake Operation		
Motor Mount/Tank Mount/Platform Mount Condition		
Hydraulic Oil Level		
Hydraulic Leaks		
Hydraulic Cylinders		
Hydraulic Valves		
Hitch/Header (Play/Straightness/Damage/Springs)		
Tie Rod Condition (play/straightness/proper bolt & nut/tightness)		
Reflective Tape/Unit Numbers		
Corner Flags/Chevrons		

Inspection Comments/Completed Repairs:

Mechanic:	Supervisor:	Date:

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APPENDIX 3 – Table of Contents – Equipment Information

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Equipment Information

General Trailer Information

The hydraulic platform trailers were specifically designed to manoeuvre heavy pieces of equipment over public roads. The key feature of the hydraulic platform trailers is their lightweight and excellent load carrying ability. The platform vehicle frame and the cross beams of the trailer are electronically welded structural steel works in a box structure. The result of this design is an especially rigid frame with excellent torsion capacities at a weight significantly less than conventional modular trailers.

Certain axles are provided with hydraulic motors supplied with metered fluid from a power pack pinned to the end of the deck. By driving loaded wheels in the direction they are pointing, excellent traction is ensured within a very compact arrangement. The axles may be rotated in plan to a degree determined by a central computer to allow a variety of movements not possible with conventional trailers making the arrangement extremely manoeuvrable. The deck of the trailers may be raised and lowered using the hydraulic suspension to accept and release the loads. Using the hydraulic suspension, the deck of the trailers can be maintained level.

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Construction

The cross beams are welded between the main beam and the swivel bogie beams with end parts. The swivel bogie beams serve for the reception of the running gears. The running gears are swivel mounted to the steering pivots by means of roller bearings.

Axles

Two axles on each line support the structure. Each axle has four tyres i.e. 8 tyres on a line. Between the axles and the structure, a ball rotation track and hydraulic lift cylinder is mounted. Each axle configuration has the possibility to rotate 45 degrees. Ground undulations, cross-falls etc. can be equalized by the reciprocating movements of the axle and the hydraulic lifting cylinders.

The suspension's hydraulic rams guarantee equality of load sharing within an inter-connected group of suspension rams, and the ability to keep the trailer deck horizontal (independent of what wheels are doing) within the stroke of the rams. The suspension rams can be hydraulically connected to form a 3 or 4 point suspension arrangement of separate hydraulic "areas". The proportion of load carried by each "area" is dependent on the location of the centre of gravity on the trailer.

Brakes

Each axle is connected to a pressurized hydraulic spring / service brake system. In case of a loss of "hold off" hydraulic pressure, the internal spring automatically closes the brakes until such time as pressure can be restored. If a unit is at fault, the spring can be mechanically wound off until repair can be mechanically wound off until repair can be affected allowing normal service braking.

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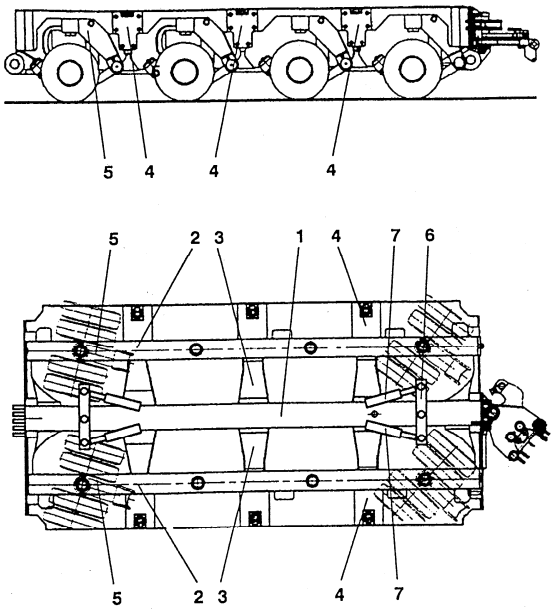
Steering

The steering forces are transferred mechanically by means of the steering plates hydraulically by means of the cylinders according to the displacer principle. With the platform vehicles, steering arms, steering linkages and track rods that are connected with the running gears perform the steering transfer of the steering forces.



Frame Components

1. Main Beam with Coupling
2. Swivel Bogie Beams
3. Cross Beams
4. Side End Parts
5. Running Gears
6. Steering Plates
7. Steering Cylinders

Running Gear

The running gear is a swing arm construction with an oscillating axle that turns around the steering pivot, which is mounted to the platform.

The steering head of the bogie runs on the roller bearings of the steering head bearing, which are lubricated via a grease nipple. The swing arm is mounted to the bogie and can turn around the swing arm bearing. The lubrication is carried out by means of two grease nipples provided at the swing arm bearing. The axle runs on bearings on the swing arm in an oscillating and maintenance free way via the steel rubber bush. In such a way, uneven ground conditions will be compensated. The swing arm is supported against the bogie with the help of the support cylinder. The support cylinder is at its upper end mounted to the bogie by means of pivoting bearings and at its lower end cardanic mounted to the swing arm by means of a ball and socket joint, and in such a way as to protect against lateral forces.

Stability

The objects to transport often are heavy and large and it is important to create optimum stability. To create such stability technical measurements are taken.

The theory behind stability is the following: Always try to create a three-point support. (A chair with three legs has more stability than a chair with four legs). A three-point support can be realised by dividing all wheel bogies into three groups. In each group all wheel bogies are connected hydraulically. The oil can flow unlimited from one wheel bogie to another. Calculations are made to decide how to divide all wheel bogies.

The dangers of overturning can be recognised when the axle load of a running gear group of a loaded vehicle drops below 50 bars. That means that the relevant running gear group is no longer participating in the support. The static support pressure may not exceed 280 bars in any support group. In an ideal case, all the support groups would show the same pressure, where the load centre of gravity is located in the payload centre of the trailers.

The load centre of gravity should always coincide with the payload centre of the trailers. The load centre of gravity can move away from the trailer centre by exterior influences such as dynamic axle load displacement at ascending or descending gradients, in curves or through wind power. If the load centre of gravity moves out of the area formed by the tilt characteristics, the load and trailers will turn over.

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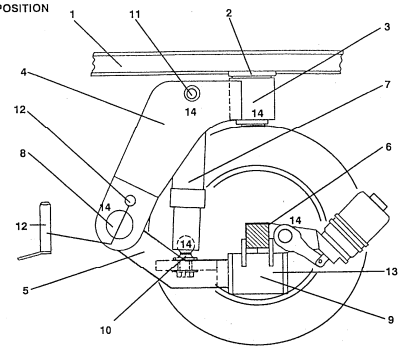
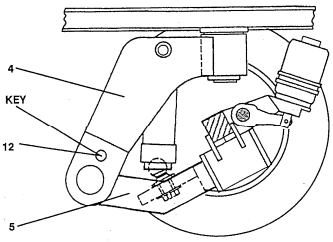
-- DRIVING POSITION



-- LOW--POSITION



Running Gear Components

(1) Swivel Bogie Beams
(2) Steering Pivot
(3) Steering Head
(4) Bogie
(5) Swing Arm
(6) Swivel Axle
(7) Support Cylinder
(8) Swing Arm Bearing
(9) Swivel Bearing
(10) Ball And Socket Joint
(11) Pivoting Bearing
(12) Key With Boring
(13) Steel-Rubber Bush
(14) Lubricating Points

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Support Types

3-Point Support

In normal driving operation, three-point support should be selected. A three-point support system means that all support cylinders of the running gears within a platform vehicle or combination are divided into three groups.

4-Point Support

In special driving situations (high centre of gravity, coupled bridge etc), a four-point support should be selected. A four-point support system means that all support cylinders of the running gears within a platform vehicle or combination are divided into four groups. In this case of axle distribution, the single groups are statically undetermined and very high frame distortions and axle load displacements may occur.

Windspeed

If an object is large the influence of wind speed on the trailers and object has to be calculated. Wind speed causes extra pressure on certain wheel bogies. A calculation guarantees a safe transport.

Slope

If a road has a slope the stability of the trailers and object changes. With axle compensation it is possible to decrease this slope. If a slope can't be eliminated completely by axle compensation, the new stability point has to be taken into account.

Driving Height

The loaded vehicle may only be operated at a driving height of 1290mm. This is imperative due to the otherwise lacking axle compensation. A lifting range of +325mm (platform height 1595mm) and a lowering height of –325mm (platform height 945mm) will result from the driving height.

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Comparison Between Normal Highway Tractor and Prime mover

Typical Highway Tractor	Mammoet Prime Mover
Chassis: Kenworth, Peterbilt, Wester Star, etc	**Chassis:** Kenworth C-500 or T-800, Western Star 4900
Frame: Single Frame Rail Construction	**Frame:** Double Frame Rail Construction
Engine: 475 – 500hp various makes	**Engine:** 500hp or 550hp Caterpillar
Transmission: 18 speed	**Main Transmission:** 18 speed or Caterpillar Automatic
EPA Standards: Noise and emissions system are unmodified stock factory systems	**EPA** Standards: Noise and emissions system are unmodified stock factory systems
Auxiliary Transmission: N/A	**Auxiliary Transmission:** 2 or 4 speed Auxiliary
Front Axle: 13,000lbs	**Front Axle:** 20,000lb
Front Tire Size: 11R x 24.5	**Front Tire Size:** 425 x R22.5
Rear Ends: 46,000lbs, 4:30 or 4:11 ratio	**Rear Axle:** 70,000lb Planetary Drive, 6:36 or 7:11 ratio
Tare Weight: 25,000lbs	**Tare Weight:** 32,500lbs (no counterweight)

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APPENDIX 4 – Table of Contents – Mobile Crane Locations and Capacities

Mobile Crane Locations and Capacities

Company	Mobile (All Terrain / Truck) Crane Fleet Capacities	Location(s)	To US 12 ID/MT Border		To Sweet Grass, MT		To Missoula, MT	
			Approximate Distance	Approximate Mobilization Time	Approximate Distance	Approximate Mobilization Time	Approximate Distance	Approximate Mobilization Time
Mammoet	100 Ton to 650 Ton	Edmonton, AB	590 mi	22 Hours	380 mi	15 hours	550 mi	21 hours
		Calgary, AB	410 mi	16 Hours	200 mi	9 hours	370 mi	15 hours
		Pincher Creek, AB	300 mi	12 hours	130 mi	7 hours	260 mi	11 hours
Mullen Cranes	Up to 350 Ton	Soda Springs, ID	430 mi	17 Hours	580 mi	22 hours	420 mi	16 hours
Strongs Crane Service	40 Ton to 250 Ton	Billings, MT	390 mi	15 Hours	340 mi	14 hours	350 mi	14 hours
D & G Crane Service	Up to 110 Ton	Missoula, MT	50 mi	4 Hours	260 mi	11 hours	0 mi	2 Hours
Montana Crane Service	Up to 140 Ton	Bozeman, MT	250 mi	11 Hours	300 mi	12 hours	200 mi	9 hours
Sterling Crane	100 Ton to 800 Ton	Edmonton, AB	590 mi	22 Hours	380 mi	15 hours	550 mi	21 hours
		Red Deer, AB	500 mi	19 Hours	290 mi	12 hours	460 mi	18 hours
		Calgary, AB	410 mi	16 Hours	200 mi	9 hours	370 mi	15 hours
		Grand Junction, CO	820 mi	30 Hours	920 mi	33 hours	810 mi	29 hours
		Elko, NV	570 mi	21 hours	800 mi	29 hours	550 mi	21 hours
Myshak Crane & Rigging	100 Ton to 500 Ton	Edmonton, AB	590 mi	22 Hours	380 mi	15 hours	550 mi	21 hours
		Red Deer, AB	500 mi	19 Hours	290 mi	12 hours	460 mi	18 hours
Northern Crane	45 Ton to 1200 Ton	Edmonton, AB	590 mi	22 Hours	380 mi	15 hours	550 mi	21 hours
Stampeded Crane and Rigging	65 Ton to 300 Ton	Calgary, AB	410 mi	16 Hours	200 mi	9 hours	370 mi	15 hours
Ness Cranes	50 Ton to 550 Ton	Seattle, WA	520 mi	20 Hours	740 mi	27 hours	480 mi	18 hours
		Tacoma, WA	530 mi	20 Hours	750 mi	27 hours	490 mi	18 hours
Campbell Crane & Rigging Service	22 Ton to 500 Ton	Portland, OR	510 mi	19 Hours	810 mi	29 hours	550 mi	21 hours
		Longview, WA	550 mi	21 Hours	830 mi	30 hours	560 mi	21 hours
Wagstaff Crane Service	Up to 550 Ton	Salt Lake City, UT	530 mi	20 Hours	690 mi	25 hours	530 mi	20 hours
Mountain Crane Service	80 Ton to 500 Ton	Riverton, UT	550 mi	21 Hours	710 mi	26 hours	550 mi	21 hours
RMS Cranes	120 Ton to 300 Ton	Denver, CO	940 mi	34 Hours	900 mi	32 hours	900 mi	32 hours
Hite Crane & Rigging	Up to 440 Ton	Spokane, WA	240 mi	10 Hours	460 mi	18 Hours	200 mi	9 Hours
Rhodes Crane & Rigging	75 Ton to 175 Ton	Spokane, WA	240 mi	10 Hours	460 mi	18 Hours	200 mi	9 Hours

***Approximate mobilization time calculated based on:
- Average travel speed of 30 mph
- 2 hours for preparing crane, pre-trip inspection, FLRA, etc.