



NWT OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS

Office of the Regulator of Oil and Gas Operations

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John Hawkins
Director Asset Management
Paramount Resources Ltd.
Suite 2800, 421 – 7 AVE SW
CALGARY, AB T2P 4K9

July 12, 2023

Dear John Hawkins:

Inspection: Liard M-25 (WID 1867) Well – ACW-2022-PAR-M-25-WID1867

Inspectors Michael Martin, Chief Safety Officer/Chief Conservation Officer, and Brandon Bradbury, Safety Officer/Conservation Officer inspected the abandonment of the Liard M-25 (WID 1867) well on July 11, 2023.

The inspection was carried out to ensure Paramount Resources Ltd was adhering to the terms of the Well Approval for this operation (ACW-2022-PAR-M-25-WID1867). The Inspectors met with Justin Schneider, Well Site Supervisor/Consultant, on site.

Please see the attached Operations Summary Inspection Report for your reference. This report will be posted to the Office of the Regulator of Oil and Gas Operations' Public Registry at www.oroogo.gov.nt.ca.

If you have any questions, please contact me at (867) 767-9097 or by email at Brandon_Bradbury@gov.nt.ca.

Sincerely,

Brandon Bradbury
Safety Officer
Conservation Officer

Encl. Liard M-25 (WID 1867) Operation Summary Inspection Report – July 11, 2023

cc. Department of Environment and Climate Change, South Slave Region.

OROGO Operations Inspection Summary Report

Well Information

Well name: Liard M-25

4 digit WID: 1867

Operator: Paramount Resources Ltd

Well status: Suspended

OROGO risk level: Level 1

Shallow wellbore plug? Yes No

24-hour operations? Yes No

Program step on arrival: 19: Cut tubing at 3288mKB

Coordinates (*In decimal degrees; verified onsite*)

Datum: NAD 27 NAD 83 Unknown

Lat: 60.42743° N

Long: 123.59429°W

Completed in H₂S zone? Yes

Estimated % of H₂S: [Click or tap here to enter text.](#) or

Measured % of H₂S: 0

Well produces CO₂? Yes

Estimated % of CO₂: [Click or tap here to enter text.](#) or

Measured % of CO₂: 20

Program step on departure: 19: Variation #1 granted by the Regulator as Paramount was unable to pull the tubing after cutting.

Inspection Date and Contact Information

Date of inspection: 2023-07-11

Access method: Vehicle

OROGO Inspector:

Michael Martin – Chief Safety Officer/Chief Conservation Officer

Brandon Bradbury – Safety Officer/Conservation Officer

Activity Inspected

OA#: POA-2620-D-12-9

Nature of activity: Abandonment

ACW#: ACW-2022-PAR-M-25-WID1867

Contractor on site (if applicable):

Name: [Click or tap here to enter text.](#)

Company: Precision Drilling

Rig Number: 830

Phone: (403) 716-4500

Email: [Click or tap here to enter text.](#)

Inspection Results

Rig Safety

Accumulator function test	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non-Compliance	Comments: Function test was conducted during the inspection and no concerns were noted (Photo #1 and 2): <ul style="list-style-type: none"> Starting Pressure: 21 MPa Pipe Ram (Closed): 4 sec / 18.5 MPa Blind Ram (Closed): 5 sec / 16.5 MPa Annular (Closed) : 23 sec / 11.5 MPa Recharge: 2min 44sec / 21MPa
Sufficient N ₂ back-up?	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: N ₂ located in the accumulator building were sufficient to provide a redundant pressure to the accumulator during actuation.
BOP drills and documentation	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Function tests and documentation	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Equipment certifications	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: All certifications were checked on site and matched the equipment in use. NOTE: the certifications for the pressure vessel, while confirmed valid on site, were not provided as part of equipment certifications submitted by Paramount as stipulated in term 12 of the well approval.
BOP certifications	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: The Annular (S/N: MP3374) and Double Gate (S/N: MP3373) had valid certificates and was the equipment in use on site (Photo #3 and 4).
Authorization / Approval available	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Authorizations and approvals were located in the doghouse and consultants trailer
Boiler inspection	<input type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non-Compliance	Comments: No Boiler onsite – Summer operations
Guards and covers on moving equipment	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Adequate lighting	<input type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Daylight operations
Wind indicators visible and functional	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Wind indicators located on the rig, rig tanks and flare.
Fire extinguishers	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: All fire extinguishers inspected were confirmed operable within the last 12 months (Photo # 5)

Equipment spacing	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: All equipment spacing at the time of the inspection were compliant: <ul style="list-style-type: none"> Well Centre to Flare: 52m Well Centre to Doghouse: 29m Well Centre to Rig Tank: 72m Well Centre to E-Line: 30m Pump to Rig Tank: 7m Flare to Pressure Tank: 37m
Engine kills	<input type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input checked="" type="checkbox"/> Corrected Non- Compliance	Comments: the rig pump Engine kill did not function on the first attempt. This non-compliance was diagnosed to be a blown fuse and was replaced which rectified the problem. All other engine kills worked as designed.
Pump lines and hoses secured, intact and appropriate?	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: All pump lines and hoses were secured and intact at the time of inspection (Photo #6)
Flow lines and choke lines secured	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Flow turns	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: All required flow turns were in place and connected in the proper orientation during the inspection (Photo #7)
General housekeeping	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:

Other Rig Safety notes:

The Inspectors were pleased with the rig safety and attention to detail by on site staff.

Personnel Safety

Valid safety tickets <input checked="" type="checkbox"/> First Aid / CPR <input checked="" type="checkbox"/> H2S <input type="checkbox"/> WHIMS <input type="checkbox"/> TDG <input checked="" type="checkbox"/> BOP <input type="checkbox"/> Other (specify in comments)	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: All safety tickets inspected were valid at the time of inspection.
Safety meetings and documentation	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:

SCBAs and/or supplied air available and visible

Compliant
 Non-Compliant
 Corrected Non- Compliance

Comments: 4 SCBA's were located by the Dog house. The Inspectors had one taken out of service as the testing of the tank could not be verified.

1 SCBA was located at the muster point

Supplied Air was located near the rig tank and consisted of:

- 6 tank supplied air system (Photo #8)
- Primary manifold located with the supplied air unit.
- A remote manifold was located at the rig
- 300' of 3/8" hose
- 650' of 1/4" hose.

First Aid equipment and EMS on site and accessible	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: First aid equipment was located throughout the site and a medic was located on the main road approximately 4km from the well site
Gas detection equipment on site and accessible	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Communication plans available	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Hazard identification and signage	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Hazard identification signage was posted throughout the site (Photo #9).
ERP available upon request	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Safety Plan available upon request	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:

Other Personnel Safety notes:
[Click or tap here to enter text.](#)

Blowout Prevention Equipment

BOP pressure rating	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: a Schaffer 11" BOP was rented to ensure that pressures of the well could be managed.
Kill sheet in dog house	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
Stabbing valves and cross-overs	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:

Other Blowout Prevention Equipment notes:
[Click or tap here to enter text.](#)

Specific to Shallow Wellbore Plug Not Applicable

Snubbing or coiled tubing unit in place	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Shallow tubing plug was removed prior to inspection but a coiled tubing unit was used for its removal. Additionally, the notification requirements of SB-01 were met during its removal.
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Other Shallow Wellbore Plug notes:
 Click or tap here to enter text.

Specific to 24-Hour Operations Not Applicable

Cross-over notes	<input type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
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Other 24-hour operations notes:
 Click or tap here to enter text.

Environment

Rig matting	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Rig matting was placed below the service rig.
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Drip trays	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: Drip trays were present on site. Photo #10
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Fuel handling and materials storage	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
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Spill response equipment on site and accessible	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: A 205l spill kit was in a visible area and made readily available in the event of a spill.
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Tubing laydown area protection	<input checked="" type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments:
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Permafrost protection	<input type="checkbox"/> Compliant <input type="checkbox"/> Non-Compliant <input type="checkbox"/> Corrected Non- Compliance	Comments: N/A
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Other Environment notes:
 Click or tap here to enter text.

Safety Plan

Compliant? Yes No Comments:

Environmental Protection Plan

Compliant? Yes No Comments:

Emergency Response (Contingency) Plan

Compliant? Yes No Comments:

Authorization and Approvals

Following program as approved? Yes No Comments:

Meeting all conditions? Yes No

Comments:

Other Documents Requested / Received During Inspection

Details:

Photographs

Number of photographs attached: 12

Additional Comments / Observations

During the inspection, Paramount was conducting free point tests to determine where the tubing was bound downhole. It was determined that the free point of the tubing was at 2,205 mKB. As this interval ended up being on a tubing collar, Paramount requested the tubing to be cut at 2,203 mKB, set a bridge plug and 30m cement plug be placed just above that interval through an application to vary their well approval. The Regulator approved the variation to the well approval on July 11, 2023.

It was noted during the inspection there were surface oil and gas installations on the site (Photos #11 & #12). As per section 6E of the *Well suspension and Abandonment Guidelines and Interpretation Notes*, all installations must be removed within 12 months of the cutting and capping operations.

Overall, the Inspectors were pleased with the attention to detail and support provided during the inspection.

This inspection was conducted under the *Oil and Gas Operations Act* and associated regulations.

Name: Michael Martin

Designation: Chief Safety Officer

ID number: S-004

Date: July 12, 2023

Signature:



Name: Brandon Bradbury

Designation: Safety Officer

ID number: Click or tap here to enter text.

Date: July 12, 2023

Signature:





Photo #1: Accumulator

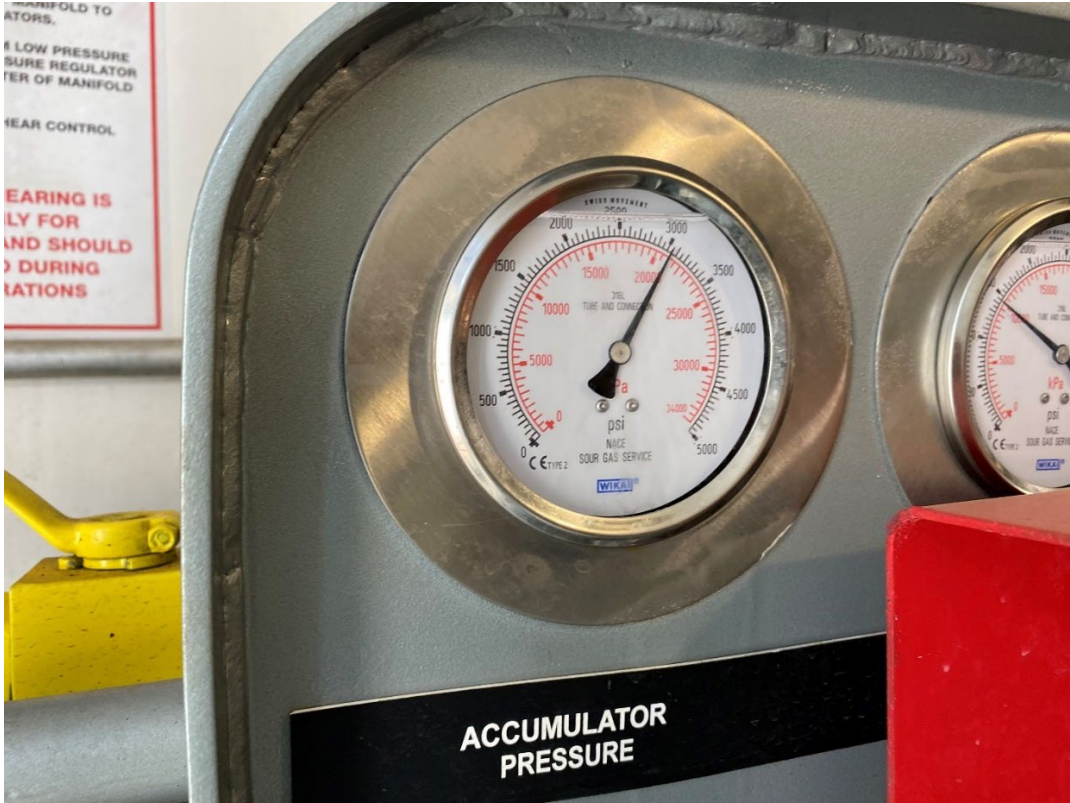


Photo # 2: Accumulator initial pressure at 21 MPa



Photo #3: Double Gate in use on site



Photo #4: Double Gate serial number MP3374



Photo #5: Fire extinguisher last inspected May 2023



Photo #6: Flow lines secured



Photo #7: Flow turns were present and installed correctly.



Photo #8: Supplied Air 6 tank system



Photo #9: High Pressure Lines sign posted



Photo #10: Drip trays in place under equipment



Photo #11: Installations on site



Photo #12: Another view of Installations on site that must be removed within 12 months of an abandonment of a well.