

June 5, 2002

National Energy Board
444 Seventh Ave. SW
Calgary, Alberta
T2P 0X8

Attention: Ms. Mieke Vander Valk
Environmental Inspector

**Mackenzie Valley Land
& Water Board**

File

JUN 10 2002

Application # MV2000P0055
Copied To KLIPULLEPB/Reg

Dear Madame;

**Re: Cameron Hills Gas Pipeline and Gathering System approved under National Energy Board
Orders XO-P097-02-2002 and EPO-01-2002, respectively**

The following is a summary of the inspection of the Cameron Hills Pipeline and Gathering System right-of-ways (ROW) that was conducted by Darren Unrau and Brian Anderson of Paramount Resources Ltd ("Paramount") on May 28 and 29, 2002. Also provided is information on the location of the issues, a description of the issue, and the proposed corrective measures that will be pursued by Paramount.

Area A

Issue – Area A is located at 60° 05' 22"N and 117° 30' 09"W, approximately 1.5 km south of the Cameron River bridge. The muskeg to the east of the ROW is naturally draining, and water is entering the ROW. This water is flowing down the ditch line, then across the ROW and back again. There is minor erosion and scouring of the trench ditch at this location.

Action Taken - No work has been completed on this site to date.

Additional Mitigation Required - The water needs to be diverted back into the muskeg and allowed to flow downhill into a natural drainage channel that flows away from the ROW. A permanent diversion berm constructed at this location would be expected to correct this issue.

Area B

Issue – Area B is located at 60° 05' 26"N and 117° 30' 09"W, approximately 200 m north of Area A. Water that flows naturally along the east side of the ROW has turned to the west at this location to enter the ROW and flows down the ditch line for approximately 200 metres. At this point the waterflow exits the ditchline and flows to the west, out of the ROW and into a muskeg area. The water has caused erosion and removed much of the roach material, exposing the pipe in a few places. The eroded silt has been deposited at the edge of the ROW.

Action Taken - On June 1, 2002, a work crew with hand tools attended this location. The location where the water was entering the ROW and subsequently flowing into the trench was the focus of the remedial work. A barrier (i.e., silt fence), supported by available soil, was constructed to block the water from entering the trench and resulted in the water being diverted across the ROW. The water then flows down the ROW for approximately 30 metres before exiting to the west into the natural channel.

Additional Mitigation Required - To address this issue, the construction of a permanent ditch block, a permanent diversion berm directly below the ditch block, and backfilling the exposed trench would be required.

Area C

Issue - Area C is located between Area B and the Cameron River vehicle bridge where there are several locations where surface water enters the ROW and flows down the trench. This water flows onto the ROW from the east from an old seismic line and from the muskeg which borders the pipeline ROW.

Action Taken - No mitigative work has been carried out to date.

Additional Mitigation Required - These small flows will need to be diverted back into the muskeg on the east side of the ROW, or allowed to cross the ditch line by installing permanent ditch blocks and permanent diversion berms at the pipeline crossing point.

Area D

Issue - This issue is located at 60° 06' 19"N and 117° 30' 03"W, where the pipeline exits the trench before going up and onto the vehicle bridge on the south side of the Cameron River. Water is flowing out of the pipeline trench, with the sources being the issue locations noted above. In addition, a small amount of water is flowing from the temporary workspace area east of the ROW and joins the water from the pipeline trench where they both flow approximately 30 metres and into the Cameron River. This has resulted in an erosion channel being cut into the riverbank.

Action Taken - On June 1, 2002, a crew with hand tools worked on this site. A barrier fence was installed to divert the water that was flowing from the temporary workspace area. The water was diverted to an adjacent area with undisturbed brush where sediments would be filtered out naturally before entering the Cameron River. Three silt fences were erected where the water was flowing out of the pipeline trench. This resulted in the water being slowed down and pooling before it entered the river. It is anticipated that the additional work that was completed uphill of this location will limit the amount of water that will flow down the pipe. Frozen ground conditions at the time of the remedial action prevented a diversion ditch from being dug to divert the flow off the ROW before entering the river.

Additional Mitigation Required - Additional mitigative measures would be required and include installing additional silt fences, along with fiber matting, to prevent continued erosion at the riverbank. This will be completed at the earliest opportunity. A permanent ditch block and diversion berm may be required at the point where the water is flowing out of the trench line, in conjunction with the diversion of the small waterflows that are currently entering the pipeline trench up the hill (i.e., Areas B and C). Disturbed areas will be seeded with the approved mixture once the area has been stabilized. There were four foam ditch blocks put into the trench during the initial pipeline construction along this slope, but they failed to arrest the erosion.

Area E

Issue - This area is located at 60° 06' 19"N and 117° 30' 03"W, approximately 500 metres north of the Cameron River bridge. Water is entering the ROW from the muskeg to the west, flows down the ROW to the base of the hill. At this point the hill water joins water flows that are originating from a muskeg area to the east, and crosses the ROW. The water then flows to the west approximately 50 metres before entering the Cameron River.

Action Taken - The work crew installed a diversion fence that directed the majority of this water back into the muskeg area which drains naturally into the Cameron River, approximately 200 metres to the west. Two silt fences were erected to slow and pool the water before entering the river. Additional silt fences should be installed at this location as required.

Additional Mitigation Required - Additional measures should include the construction of a permanent diversion berm to divert any future water from flowing down the trench at this location. The construction of permanent diversion berms to prevent water from entering the Cameron River is also required. The disturbed areas will be seeded with the approved mixture once the area is stabilized.

Area F

Issue - At 60° 05' 41"N and 117° 30' 10"W, approximately 1 kilometre north of the Cameron River, a small water flow crosses the ROW. This drainage has two distinct channels as it enters the ROW. The main channel flows across the ROW in its natural channel. The second channel flows on the ROW and has eroded a channel into the trench and then down the trench towards the Cameron River bridge.

Action Taken - On June 1, 2002, a crew with hand tools diverted the one channel to prevent water from entering the trench. The trench, from this point down towards the Cameron River bridge for approximately 300 metres, has eroded in places, with exposed pipe at a couple locations. Water is also entering the trench from seismic lines and the muskeg on the east side of the ROW.

Additional Mitigation Required - Additional mitigative measures required would include construction of a permanent ditch block directly below the drainage to prevent future water from flowing down the trench. The exposed pipe and the scoured trench line will need to be backfilled. The small waterflows entering the trench along this area will also have to be addressed by diverting them from entering the ROW or by constructing crossings across the ROW which prevents water flow from travelling down the trench. Disturbed areas will be seeded with the approved mixture once the area is stabilized.

Area G

Issue - At 60° 07' 08"N and 117° 30' 06"W, at the very top of the hill where the pipeline turns west towards well B-08, the trench exhibits subsidence for approximately 50 metres, where the pipeline crossed the winter road.

Action Taken - No actions have been taken to date.

Additional Mitigation Required - Backfilling would be required at this location to correct this issue. Disturbed areas will be seeded with the approved mixture once the area is stabilized.

Area H

Issue - At creek crossing GSC 20, located at 60° 09' 22"N and 117° 37' 00"W, water is flowing out of a muskeg to the east and enters the ROW above the creek. This water is then flowing down the pipeline and into the creek. During the initial pipeline construction, a spring was noted at the base of the hill when the trench was being excavated. A foam ditch block was constructed, and a diversion berm was installed to divert the water from the trench. Neither of these has arrested the erosion.

Action Taken - No initial mitigative measures were taken as the water entering the creek was clean, with no silt.

Additional Mitigation Required - Permanent mitigative measures include diversion of the small drainages over the trench and installing a permanent ditch block and diversion berm to prevent water from flowing down the trench line. Disturbed areas will be seeded with the approved mixture once the area is stabilized.

Area I

Issue - This area is located at 60° 09' 23"N and 117° 37' 56"W, which is east of the Cameron River quad bridge near C-50. To the east of this location, water is draining from the muskeg on the south side of the ROW and enters the ROW. The water then crosses the trench and flows to the southwest along the north side of the ROW before entering the ditch at the top of the hill that leads down to the river. The water then flows along the trench, which has resulted in erosion of portions of the hill. At the base of the hill the water enters a natural drainage which parallels the river for approximately 50 metres before entering the Cameron River. Eroded material has been deposited in this drainage area prior to reaching the Cameron River.

Action Taken - Initial mitigative measure conducted, included the construction of two temporary berms along the ROW to divert the water into the adjacent timber. Also, two silt fences were established in the drainage at the base of the hill to slow and pool water before entering the river.

Additional Mitigation Required - Additional measures required would be the construction of a permanent ditch block at the location where the water enters the ROW and a permanent diversion berm to direct the water down the natural channel. Also, the hill will need to be re-contoured to a stable condition, and seeded with the approved mixture.

Area J

Issue - This area is located at creek crossing GSC 24 (A-73 quad bridge) at 60° 11' 42"N and 117° 42' 52"W. On the north hill (i.e., south-facing slope) before the bridge there is water entering the ROW from the east. This water then flows along the trench for approximately 100 metres before exiting and flowing off the ROW to the west. Limited erosion has resulted at this location.

Action Taken - No initial mitigative work has been conducted to date.

Additional Mitigation Required - Additional work required would be to establish a permanent diversion berm to direct this water across the ROW and into the vegetated, stable areas adjacent to the ROW. Once stabilized the area would be seeded with the approved mixture.

The majority of the waterflows contributing to the above noted issues along the pipeline result from spring runoff which is expected to dissipate in the near future. Paramount recognizes the issues, and although

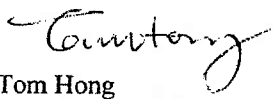
temporary measures have been taken to address immediate concerns, it understands that permanent mitigative measures will be required. To aid in implementing some of the permanent measures, Paramount is evaluating the use of a heli-portable excavating machine. Unfortunately the helicopters in the area have been dedicated to fighting forest fires in northeastern Alberta and Paramount is currently searching for other helicopters that can be used.

Area D would have the highest priority to address the erosion at the bank of the Cameron River. The work that has been done already in this location and other areas will be monitored to ensure that the measures are working correctly. The remaining work will be dependent on the successful use of the heli-portable hoe otherwise the additional work may have to be done manually or completed during the next winter season when heavier equipment may be used.

If you have any questions on the above matter, then please contact the undersigned at (403) 290-3693.

Yours truly,

PARAMOUNT RESOURCES LTD.


Tom Hong
Project Manager

cc. Rick Fisher, NEB
Gary Woo, NEB
Andrew Forbes, DIAND
Peter Lennie-Misgeld, MVLWB
Gord Ferguson, Paramount
Brian Anderson, Paramount
File Cameron Hills G 3.2

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& Water Board**

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ATTACHMENTS – PHOTOGRAPHS

Area A



Facing North

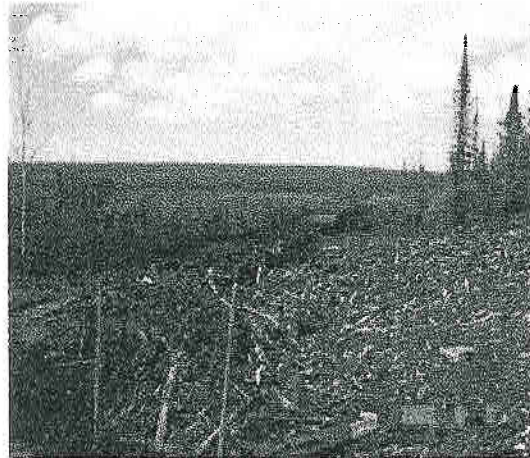


Facing South

Area B



Facing South

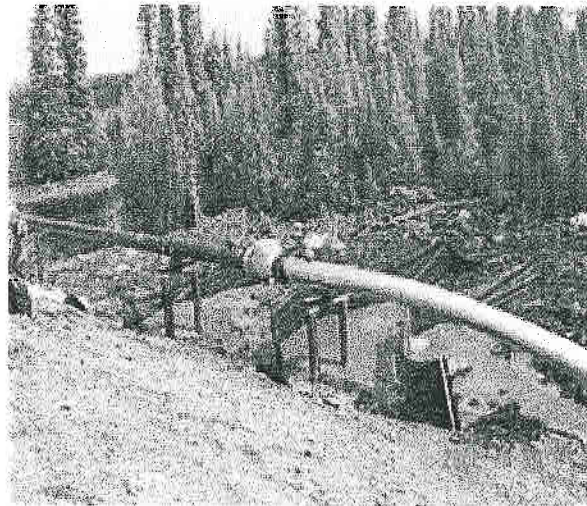
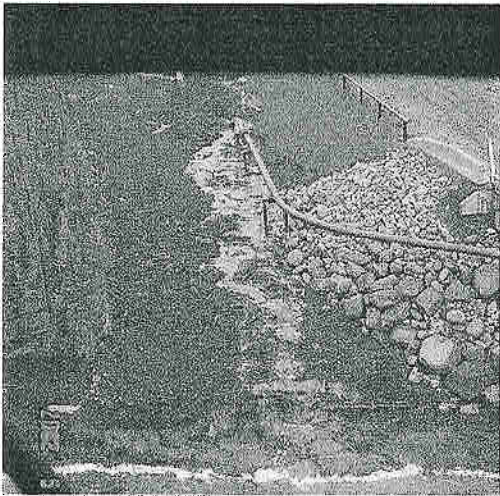


Facing North

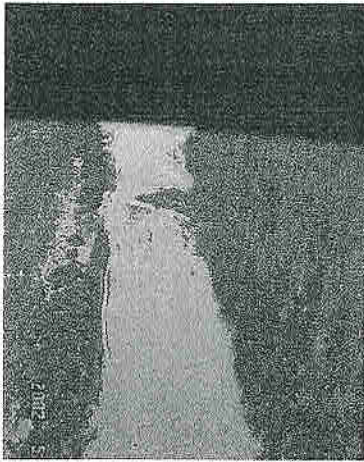


Diverting water from entering the trench.

Area D



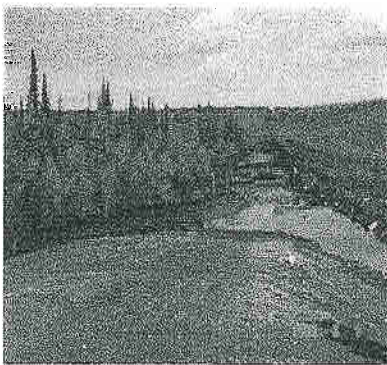
Area E



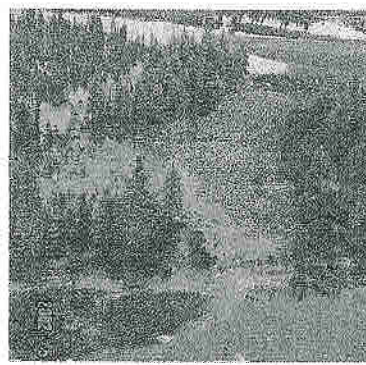
Facing south



Facing north



Facing north from the vehicle bridge



Water entering the Cameron River



Installed silt fences



Facing west

Area F



Facing southeast

Area G



Facing southeast

Area H



Facing north

Area I



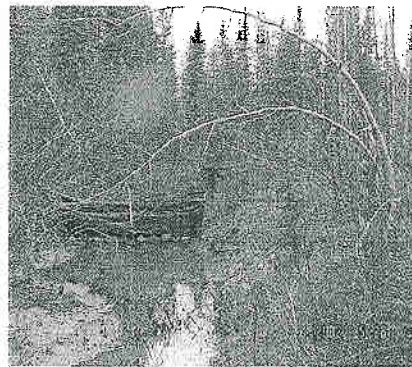
Facing northeast



Facing southwest



Water flowing towards Cameron River



Silt fences installed below hill

Area J



Facing south

