

National Energy
Board



Office national
de l'énergie

DECISION

File OF-Fac-Oil-T260-2013-03 15
2 March 2018

Mr. Shawn Berry
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Dear Mr. and Mrs. Berry, Mr. Stoness, and Mr. Denstedt:

**Trans Mountain Pipeline ULC (Trans Mountain)
Trans Mountain Expansion Project - Certificate OC-064
Decision for Detailed Route Hearing MH-007-2017
Mr. Shawn Berry**

1. Background

On 19 May 2016, the National Energy Board (NEB or Board) issued its Report recommending that Governor in Council approve the Trans Mountain Expansion Project (TMEP), subject to 157 conditions ([A77045](#)).

The TMEP included twinning the existing 1,147 kilometre long Trans Mountain Pipeline (TMPL) system in Alberta (AB) and British Columbia (BC) with approximately 981 kilometres of new buried pipeline; new and modified facilities, such as pump stations; additional tanker loading facilities at the Westridge Marine Terminal in Burnaby; and reactivating 193 kilometres of existing pipeline between Edmonton and Burnaby. Trans Mountain requested approval of a 150 metre wide corridor for the TMEP pipeline's general route.

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On 29 November 2016, Governor in Council directed the Board to issue the Certificate of Public Convenience and Necessity OC-064 (Certificate) ([A80871](#)), the effect of which was to approve the TMEP, including the 150 metre wide corridor.

On 17 and 24 February 2017, Trans Mountain applied to the Board for Segments 1 and 2 of its TMEP detailed route, submitting the Plan, Profile, and Book of Reference (PPBoR). Under section 34 of the *National Energy Board Act* (NEB Act), Trans Mountain made available for public viewing copies of its PPBoR, served notices on owners of lands proposed to be acquired for the proposed detailed route¹, and published notices in newspapers in the vicinity of the proposed detailed route².

In all detailed route hearings, the Board considers the following issues:

1. the best possible detailed route of the pipeline;
2. the most appropriate method of constructing the pipeline; and
3. the most appropriate timing of constructing the pipeline.

In its 31 August 2017 Letter of Decision ([A85762](#)), the Board stated that it would not consider the issue of compensation to be paid to landowners as that matter is not within its jurisdiction.

2. Detailed Route Hearing MH-007-2017

Mr. Shawn Berry is the registered owner of lands located at NE 22-53-16 W5M, in the rural municipality of Yellowhead County, AB. The property is shown on PPBoR: M002-PM03006-056 and in Figure 1³. Trans Mountain identified this land as Tract 524. The Berry lands are proposed to be crossed by the new TMEP pipeline in Segment 2. Mr. Berry and his wife, Mrs. Tini Berry reside on this land and also use the property for recreation.

Mr. Berry filed a statement of opposition ([A82527](#)) on 10 April 2017, which was set down for a hearing by the Board in its Hearing Order ([A85764](#)) dated 31 August 2017. The Hearing Order set a November-December 2017 timeframe for the hearing to occur with details to follow in a procedural update. Mr. Berry did not submit a site visit request form.

The oral hearing for the Berry's lands was held on 24 November 2017, in Edson, AB. Mr. and Mrs. Berry were present. Trans Mountain presented a panel of witnesses for cross-examination, provided an opening statement, asked questions of Mr. and Mrs. Berry and also provided final argument. Mr. Berry asked questions of Trans Mountain's witness panel, and provided an opening statement and final argument.

¹ As required by [paragraph 34\(1\)\(a\)](#) of the NEB Act.

² As required by [paragraph 34\(1\)\(b\)](#) of the NEB Act.

³ The map in Figure 1 was originally filed by Trans Mountain as part of its evidence for detailed route hearing MH-007-2017 ([A86685](#)). It was used and marked during the hearing and subsequently entered as an exhibit on the record ([A87910](#)).

MH-007-2017 A 87910

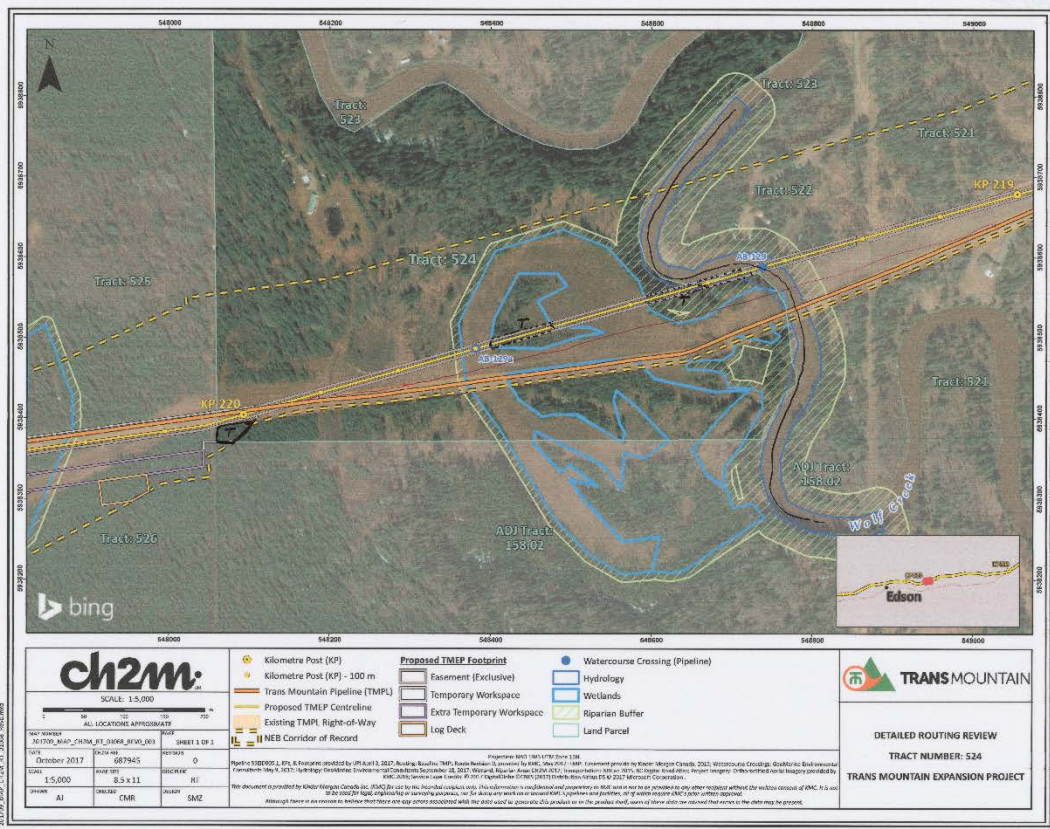


Figure 1 Map of Shawn and Tini Berry's property

2.1 Proposed Detailed Route, Methods and Timing of Construction

2.1.1 Trans Mountain's Routing Criteria

In selecting its 150 metre wide corridor and detailed route for the new TMEP pipeline, Trans Mountain submitted in its written evidence and opening statement at the detailed route hearing that it had established a hierarchy of routing principles. In descending order of preference, these were:

1. where practicable, co-locate the new TMEP pipeline on or adjacent to the existing TMPL easement;
2. where co-location was not practicable, minimizing the creation of new linear corridors by installing the new TMEP pipeline adjacent to existing easements or rights-of-way for other linear facilities including other pipelines, power lines, highways, roads, railways, fibre optic cables and other utilities;
3. if co-location with any existing linear facility was not feasible, install the new pipeline in a new easement selected to balance safety, engineering, construction, environmental, cultural and socio-economic factors; and
4. in the event a new easement was necessary, minimize the length of the new easement before returning to a contiguous right-of-way.

Trans Mountain submitted that it had been engaging landowners in its routing discussions since 2012 and used this feedback to optimize the location of its 150 metre wide corridor. Trans Mountain stated that the width of the corridor provided flexibility for minor route adjustments including those informed by landowner input.

2.1.2 Proposed Detailed Route on Berry Lands

The proposed detailed route for the new TMEP pipeline on the Berry lands, located on the west side of Wolf Creek, includes a horizontal directional drill to the north of the existing TMPL alignment (referred to at times during the hearing as the 'straight alignment'). As shown in Figure 1, the proposed detailed route crosses through the southern portion of Mr. and Mrs. Berry's property.

Approximately 686.4 metres of new pipeline and a corresponding permanent easement area of 0.686 hectares (1.69 acres) would be situated on the property. The width of the permanent right-of-way on the property is 10 metres. Approximately 900 square metres of temporary workspace is required in the southwest corner of the property for the exit location of the proposed horizontal directional drill.

The proposed route on the Berry lands includes a horizontal directional drill crossing of Wolf Creek that coincides with the Palk and Bailer Palk lands, located on the east side of Wolf Creek (proceeding MH-018-2017).

2.1.3 Alignment of the Horizontal Directional Drill

Views of Mr. and Mrs. Berry

In his submissions, Mr. Berry, stated that he would like the new pipeline to be located along the existing TMPL right-of-way to limit the removal of trees, and prevent a new easement which could fragment the property, preventing it from future development.

Three alternate routes were proposed by Mr. and Mrs. Berry. These were:

Option 1: Consisting of following the existing TMPL alignment, with a curve, just north of the existing TMPL. This Option is depicted by a hand drawn red line on the CH2M map which was entered as exhibit [A87910](#) (Figure 1);

Option 2: Consisting of moving the route of the TMEP 30 metres south of the existing TMPL. This option is depicted by a hand drawn black line on the PPBoR map which was entered as exhibit [A87911](#); and

Option 3: Consisting of moving the route 40 to 60 metres south of the existing TMPL. It is a curved route which would follow the southern boundary of the existing TMPL. The Berrys stated that Option 3 was their preferred option. Option 3 is shown on a figure attached to their evidence as exhibit [A87265-2](#), and depicted by a hand drawn green line on the PPBoR map which was entered as exhibit [A87911](#).

None of the alternate routes in Options 2 and 3 were technically explored at the oral portion of the hearing.

However, Mr. and Mrs. Berry expressed their view at the hearing that the proposed curved alignment in Option 1 was technically feasible based on their discussions with Trans Mountain's contractors, which occurred during a dispute resolution process. Other than stating that the contractors had said a curved alignment was possible, Mr. and Mrs. Berry did not provide independent technical evidence showing the feasibility of this curved Option 1.

Mr. and Mrs. Berry stated that the curved route in Option 1 more closely follows the existing TMPL right-of-way and is preferable to the proposed TMEP route because it crosses the creek at a right angle and misses the large trees located along the creek, which they stated would be impacted by the straight alignment. Mr. and Mrs. Berry acknowledged the difficulty and the challenge of doing a curved drill path, but stated they believe it can be done and was in their best interests.

Views of Trans Mountain

Trans Mountain stated that the TMPL was originally built using an open cut crossing and that the existing TMPL has a bend on the west side of Wolf Creek. Trans Mountain stated that construction of the TMEP directly along the existing TMPL alignment would require open cut construction because of the bend in the existing TMPL, which would have a greater environmental impact than the proposed horizontal directional drill alignment. It stated that the proposed horizontal directional drill method is superior to cutting the watercourse along the TMPL easement using an open cut method. Trans Mountain stated that if the horizontal directional drilling method, which is its preferred crossing design, failed, it would resort to its contingency method of isolated in-stream crossing method. Trans Mountain further stated that using an open cut method along the existing TMPL alignment would require additional tree clearing to accommodate construction, an easement of 18 metres, and an application to Fisheries and Oceans Canada⁴.

Trans Mountain stated that the new TMEP pipeline will not have an impact on future development since most ground disturbance and development activities would be permitted in the prescribed area, given the approximate 40 metre depth of cover for the pipeline with a horizontal directional drill.

Trans Mountain stated that the curved horizontal directional drill alignment being discussed during the hearing (Option 1) resulted from dispute resolution discussions and that the curved alignment was conceptual and that it has not had the required studies completed to determine its feasibility. Trans Mountain submitted that it would need to do more geotechnical analysis, reassess the stress analysis on the pipe to determine pipe wall thickness, and renegotiate with the landowner on Tract 521, whose residence would then be closer or approximately 30 metres from the route proposed by Mr. Berry.

⁴ Additional information on Fisheries and Oceans Canada applications and the role the Board plays in those applications can be found here: <https://www.neb-one.gc.ca/bts/ctrg/mmrndm/2013fshrcnsnd-eng.html>

Trans Mountain stated that the proposed 1,300 metre long straight alignment is already long by horizontal drilling standards and is already a significant undertaking and that although a curved horizontal directional drill alignment is possible, it would add length and complexity, increasing the installation risk and cost. Trans Mountain also stated that horizontal directional drilling is an inherently risky construction methodology and that it sought to minimize the risk by limiting complexity to increase the chances of success for the crossing of Wolf Creek. Trans Mountain further stated that a curved alignment would be more complex and difficult if an intercept were required to complete the drill from the other side of Wolf Creek.

Trans Mountain submitted in final argument that the routing on this land was driven largely by environmental and technical considerations of the Wolf Creek crossing, with the goal of minimizing the length of deviation from the existing TMPL pipeline. Trans Mountain submitted that it had demonstrated the proposed route is the best route as it is the most efficient, practical and environmentally sound choice which will minimize impacts overall.

2.1.4 Tree and Timber Removal

In his statement of opposition and at the hearing, Mr. Berry expressed concerns about tree removal.

Trans Mountain committed that it would not remove the trees above the proposed horizontal directional drill alignment, given the depth of the drill is approximately 40 metres.

During the hearing, Mr. Berry questioned how the timber was going to be removed from the temporary workspace located in the southwestern corner of his property. Mr. and Mrs. Berry stated that they did not want the trees left on their land nor any burning to take place on their property.

Trans Mountain stated that the trees would be removed and taken to the log deck located west of Mr. and Mrs. Berry's property to be processed and also committed to no burning on Mr. and Mrs. Berry's property. Trans Mountain stated that, depending on the preference of the landowners, any trees that were removed would be replaced or compensated for and that Mr. and Mrs. Berry could keep the timber that they wanted.

Mr. and Mrs. Berry stated that the commitments made by Trans Mountain during the hearing process helped alleviate their concerns regarding tree and timber removal.

2.1.5 Reclamation

Mr. Berry stated that with respect to the reclamation of the property, they would like the original topsoil to be reused, and the grasses to be taken back to native grasses or, what Mr. Berry referred to as a pipeline mix. Mr. and Mrs. Berry also raised concerns with weed control on the new right-of-way, stating that there are weeds present along the existing TMPL right-of-way. Mr. and Mrs. Berry stated that they would be willing to monitor weeds and let Trans Mountain know when weed management would need to be done.

Trans Mountain stated that it developed the TMEP Environmental Protection Plan, as well as a supplemental Reclamation Plan and detailed Weed and Vegetation Management Plan⁵ which address topsoil handling, reclamation (including reseeding and replanting of trees), and the management of weeds. Trans Mountain further stated it had conducted initial weed surveys for the area and would be completed after construction as part of the Post-Construction Environmental Monitoring Program⁶ with the goal that post-construction conditions would be the same, if not better than pre-construction conditions.

Trans Mountain committed to reseeding cleared areas with native grasses. Trans Mountain also committed to meeting with Mr. and Mrs. Berry and providing them with the various plans, including the TMEP Environmental Protection Plan and relevant management plans.

2.1.6 Access

Mr. and Mrs. Berry stated that during and after construction, the right-of-way will be open to possible trespassers. They further stated that they would like to see temporary fencing put up during construction, and after construction they would like a permanent barbed wire fence installed around the work area and across the TMEP pipeline corridor.

Trans Mountain stated that the amount of construction along the drill path would be minimal and added that there would be a steering cable located along the right-of-way, which will be identified, marked and safe to cross.

Trans Mountain submitted that it had developed a detailed Access Management Plan as part of NEB Condition 47 of Certificate OC-064 for TMEP. Trans Mountain stated that this plan addresses access to protect the right-of-way during reclamation or for public safety, among other things, and that fencing is one of the options. Trans Mountain also stated that it would be willing to follow up with Mr. and Mrs. Berry and develop a plan that would meet their needs.

Mr. and Mrs. Berry also questioned if they would be restricted access to their property during construction as they have trails around the property which they use daily, and would like to ensure they will have access to their trail system during construction. Regarding access to the trail system on the property, Trans Mountain committed to maintaining access for Mr. and Mrs. Berry's local use.

2.1.7 Noise

Mr. and Mrs. Berry raised concerns regarding the length of time the drilling will be taking place, and the noise associated with the drilling. In response, Trans Mountain stated that it is required to develop and file Noise Management Plans, for Condition 74 of Certificate OC-064 for TMEP, for every horizontal directional drill on TMEP. Trans Mountain explained the purpose of the plans and stated that Trans Mountain has also adopted the Alberta Energy Regulator criteria,

⁵ Developed for Condition 45 in Certificate OC-064.

⁶ Post-Construction Environmental Monitoring reports are to be submitted to the Board on the first, third and fifth year after construction, as required by Condition 151 in Certificate OC-064.

which set noise limitations for both daytime and nighttime operations. Trans Mountain also stated that it will be monitoring the noise levels as the drilling operations take place.

2.2 Summary of Commitments

During the hearing, Trans Mountain committed to:

- Limiting tree removal over the drill path to under brushing, and only removing trees which are hindering the alignment of the steering cable;
- Option of reclamation with native grass seed for cleared areas and/or shrub or tree planting;
- Fencing to limit access, planned in discussion with the landowner and to be captured on the line list;
- No burning of timber on the property;
- Maintaining access for the Berry's local use in discussions with them;
- Continuing to engage with Mr. and Mrs. Berry;
- Providing Mr. and Mrs. Berry with the Environmental Protection Plan and relevant and applicable management plans, and meeting with them to discuss these; and
- Implementing its Environmental Protection Plan including mitigations for:
 - Topsoil salvage and reclamation;
 - Weed control; and
 - Noise.

3. Board Decision for Detailed Route Hearing MH-007-2017

The Board appreciates the time spent by Mr. and Mrs. Berry and Trans Mountain in discussing their concerns at the detailed route hearing.

The Board notes that a key concern of Mr. and Mrs. Berry relating to routing was the removal of trees. However, as noted by Trans Mountain, given the pipeline will be installed at significant depth via horizontal directional drill, the straight alignment will result in minimal tree removal. The Board notes that many issues raised by Mr. and Mrs. Berry were addressed through commitments made by Trans Mountain in its written submissions, at the hearing, and through the implementation of various plans under the TMEP Conditions. The Board is therefore satisfied that issues concerning the removal of trees, disposal of timber, grasses, topsoil handling, reclamation, weeds, fencing, access, and noise, have been adequately addressed.

The Board also notes that Trans Mountain has committed to meeting with Mr. and Mrs. Berry to provide more information and continue engagement. The Board is of the view this should provide a means for issues to be raised and addressed.

The Board notes the concerns expressed by Mr. and Mrs. Berry about the impacts that the proposed alignment of the trenchless crossing methodology for Wolf Creek will have on their lands. The Board also recognizes that the trenchless crossing, if successful, will substantially reduce a number of adverse effects in comparison to the open cut contingency crossing methodology, including reducing tree removal and avoiding environmental effects on Wolf Creek.

The Board notes that no detailed technical evidence was presented to quantify the complexity and risk of the horizontal directional drill curved alignments proposed by either Mr. and Mrs. Berry or Trans Mountain. While Trans Mountain explained that it would need to conduct further studies and geotechnical analysis to assess the feasibility of a curved alignment, Trans Mountain did generally explain that horizontal directional drilling is already an inherently risky construction methodology and that a curved alignment would be more complex and difficult. The Board agrees with Trans Mountain that there would be an increase in complexity and risk during a horizontal directional drill installation for a curved alignment over a straight alignment, and that in this case, where a 1,300 meter horizontal directional drill will be attempted, additional increase in risk should be avoided.

Therefore, in order to minimize the risk of a failed horizontal directional drill that may require the application of an open cut method, the Board is of the view that the detailed route selected should be the one with the greatest likelihood of success, that being the horizontal directional drill along a straight alignment as proposed by Trans Mountain.

With respect to the contingency crossing methodology, if the contingency crossing is required there may be additional impacts that would require Board review and approval. Trans Mountain will be required to make an application and the Board could undertake a process that would include an opportunity for impacted landowners, if any, to express their views. The Board is not approving the contingency crossing at this time.

The Board has carefully considered the impacts that any decision on the Wolf Creek crossing would have on both the Berry lands and the Palk and Bailer Palk lands located on the east side of Wolf Creek (proceeding MH-018-2017). Having considered all of the evidence filed on the record by Mr. and Mrs. Berry and Trans Mountain, the representations made at the oral portion of the detailed route hearing, and the matters described above, the Board finds that Trans Mountain's proposed route is the best possible detailed route for the TMEP on the Berry lands. The Board also finds that the methods and timing of constructing the new TMEP pipeline are the most appropriate, subject to the commitments made by Trans Mountain.

Any approval by the Board of the PPBoR for Mr. and Mrs. Berry's lands will include a condition requiring Trans Mountain to list and fulfill the commitments it made in the course of this detailed route hearing, and update its alignment sheets. Mr. and Mrs. Berry are entitled to seek remedy from the Board if the commitments are not being fulfilled.

Trans Mountain is reminded that the relevant conditions of approval in Certificate OC-064 also apply to the construction and operation of the TMEP on Mr. and Mrs. Berry's lands.



L. Mercier
Presiding Member



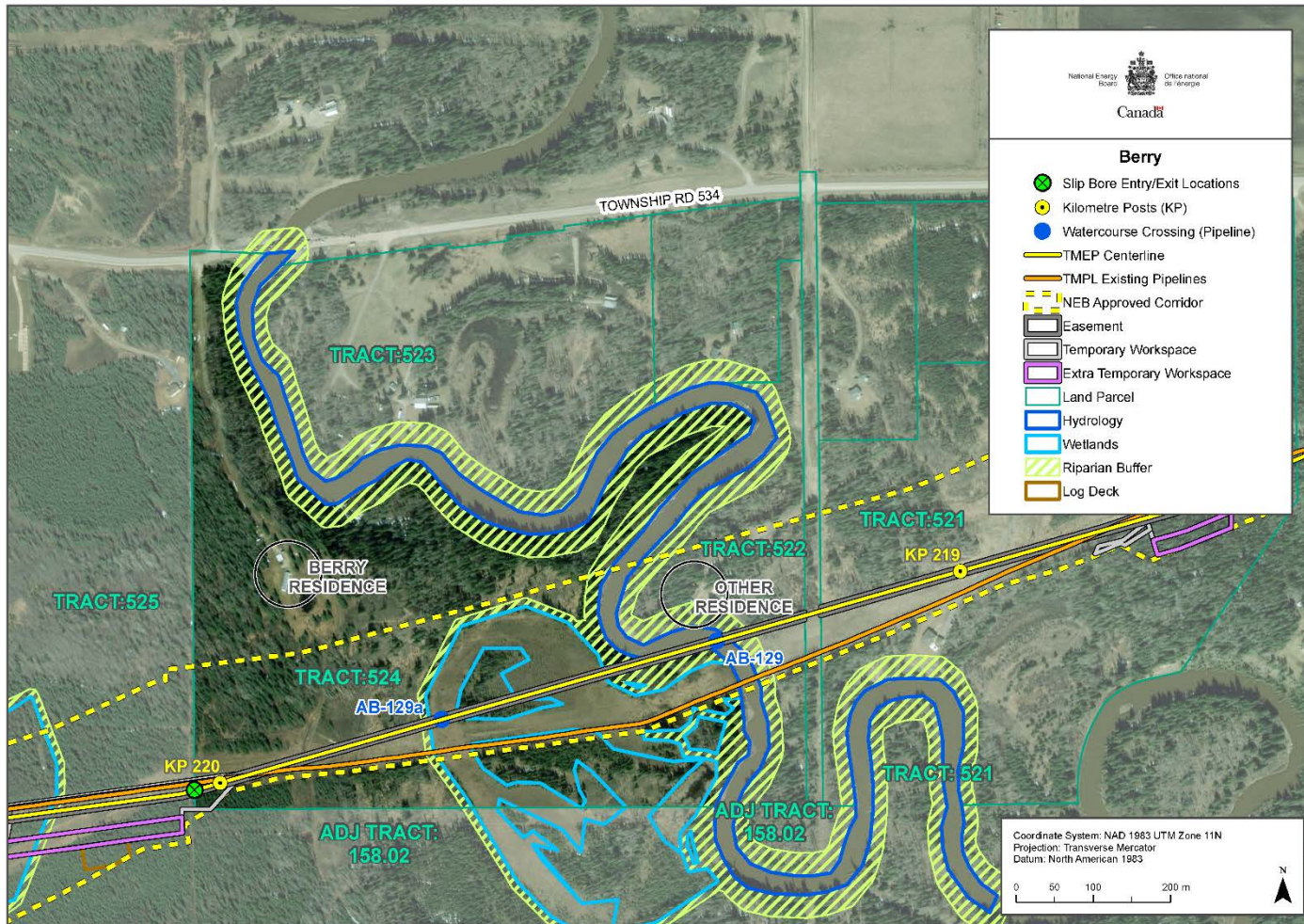
S. Parrish
Member



J. Ballem
Member

Appendix I – Map of Mr. and Mrs. Berry’s property

This map was created by the NEB for illustrative purposes only.



MAP PRODUCED BY THE NEB, FEBRUARY 2018. THIS MAP HAS BEEN GENERATED BY THE NEB FOR ILLUSTRATIVE PURPOSES ONLY. THE NEB DISCLAIMS ALL RESPONSIBILITY FOR ANY ERRORS, OMISSIONS AND INACCURACIES. READERS WISHING TO CONSULT THE ACTUAL MAPS AS THEY WERE FILED SHOULD REFER TO THE OFFICIAL RECORD.