

OGC File: 9637479

March 18, 2013

KM LNG Operating Ltd.
1000, 700 – 9th Ave SW
Calgary, Alberta, T2P 3V4

Attention: Surface Land Administrator

Re: Approval for Changes in and About a Stream

This approves you, under Section 9 of the Water Act to make changes in and about a stream as follows:

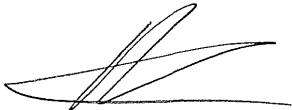
1. The Permit holder is approved to conduct instream works associated with the re-alignment and the installation of a permanent crossing structure of an unnamed creek on Crown land located at: UTM location N. 5983700 E. 519585.
2. This approval does not authorize any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat, as described within the Federal Fisheries Act of Canada.

Additional Conditions:

1. The Permit holder is to ensure a qualified professional is on site for operations within the high water mark of the unnamed creek. This individual must have the authority to issue a stop work order if fish or important fish habitat is determined to be at risk, and will be responsible for developing/implementing mitigation measures to reduce impacts to fish and fish habitat, as required. A post construction report must be prepared by the qualified professional detailing the construction activities that have taken place, the mitigation implemented and its effectiveness in protecting fish and fish habitat within the workspace and downstream. The report must be made available to the Oil and Gas Commission upon request.
2. Work within the wetted area of the unnamed creek is not authorized to take place during seasonal high flow events.
3. No in-stream works on fish bearing streams or works that may adversely impact fish or fish habitat are authorized.
4. Refer to the *Forest Practices Code of British Columbia Act – Forest Road Regulation* at: <http://www.for.gov.bc.ca/tasb/legsregs/ARCHIVE/FPC/FPCAREGS/forroad/froadr.htm#section7-1> for more information regarding temporary and permanent structures.

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5. Stream crossing methods must be selected and constructed in accordance with the *Environmental Protection and Management Guidebook*, including the Best Management Practices outlined therein.

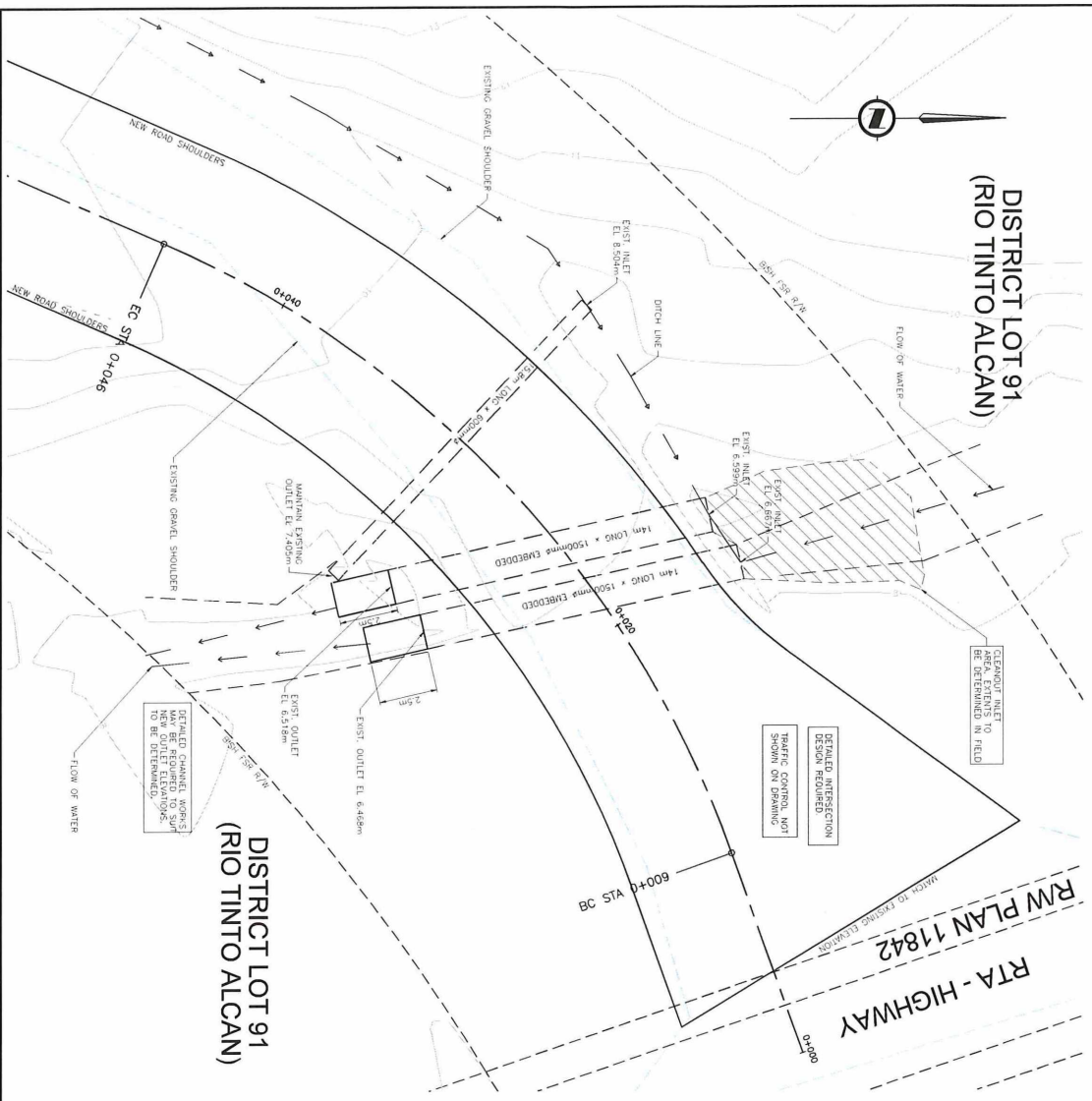


Ryan Stark
Natural Resource Officer

pc: OGC File: 9637479
pc: Haisla Nation

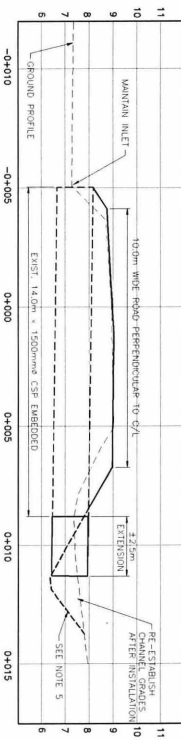
9637479

DISTRICT LOT 91
(RIO TINTO ALCAN)

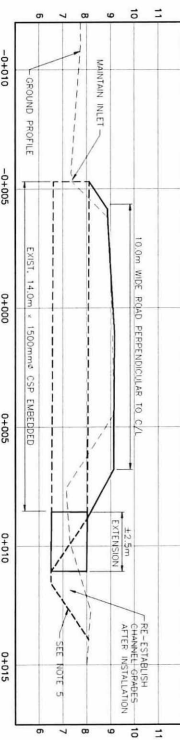


RTA-HIGHWAY

PROFILE - CULVERT @ Sta 0+031



PROFILE - CULVERT @ Sta 0+034



SURVEY NOTES

1. SURVEYED BY MCHILHANNY IN MAY 2012
2. IN IMMEDIATE VICINITY OF CULVERTS, ADJACENT
3. STREAM CLASSIFICATION: S4
4. CROSSING LOCATION: NORTH = 519731.864

DESIGN NOTES/SPECIFICATIONS

1. DESIGN IN GENERAL ACCORDANCE WITH CAN/CSA S4-2006 DESIGN SPECIFICATIONS MODIFIED
2. TO BPS L100 (CULVERT 100/80) V9, (CAN) THE MANUFACTURER'S SPECIFICATIONS.
3. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
4. ALL DIMENSIONS IN mm UNLESS NOTED OTHERWISE.
5. ASSUMED ALLOWABLE BEDDING PRESSURE 150 KPa MINIMUM
6. EXISTING CHANNEL TO BE EXCAVATED TO SUIT NEW CULVERT EXTENSIONS AND TO
7. REQUIRED FOR CONSTRUCTION

QUANTITY ESTIMATE

ITEM	UNIT	TOTAL EST.
1. 1400mm STEEL PIPE EXHIBITION	m	83.0
2. 1400mm STEEL PIPE EXHIBITION	m	83.0
3. 1400mm STEEL PIPE EXHIBITION	m	83.0
4. 1400mm STEEL PIPE EXHIBITION	m	83.0
5. 1400mm STEEL PIPE EXHIBITION	m	83.0
6. 1400mm STEEL PIPE EXHIBITION	m	83.0
7. 1400mm STEEL PIPE EXHIBITION	m	83.0
8. 1400mm STEEL PIPE EXHIBITION	m	83.0
9. 1400mm STEEL PIPE EXHIBITION	m	83.0
10. 1400mm STEEL PIPE EXHIBITION	m	83.0
11. 1400mm STEEL PIPE EXHIBITION	m	83.0

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10. 1400mm STEEL PIPE EXHIBITION	83.0
11. 1400mm STEEL PIPE EXHIBITION	83.0

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McElhannan Consulting Services Ltd.
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SCALE: 1:1100
Horizontal: 1" = 1100'
Vertical: 1" = 1100'

KM LNG-BISH COVE LNG PROJECT
BISH FSR IMPROVEMENTS
D1 STREAM CROSSING
GENERAL ARRANGEMENT

DATE: 01/07/2015
DRAWN BY: [Name]
CHECKED BY: [Name]
APPROVED BY: [Name]