520000 525000 530000 535000 540000

5880000 5875000 5870000 5865000 5860000

N

Blackwater Rd
Eaglevalley Rd
Mt Polley Rd
Mt Polley Lake Rd
Mt Polley Lake
Bouchie Lake
Bouchie Creek
Bouchie Creek Rd
Hixon Rd
Pinnacles Rd
Baker Creek Rd
Baker
Creek
Lewis Dr
Logging Rd
Shepherd Ave
St Laurent Ave
Carson Ave
Abbott Rd
Moffat Bridge
Moffat Dr
Fraser Dr
Ashcroft Ave
Plateau Dr
Plateau
Marsh Rd
Two Mile Lake Rd
Two Mile
Lake
Dunrobin Rd
Hwy97 N
Hwy97
Mt Polley Rd
Mt Polley Dr
Gerow Island Rd
Barlow
Creek
Schammerhorn Rd
Hwy97B
Bernard Ave
Dunster
Fraser
River
Kinchant Dr
Nechako Rd
Fraser
Dr
Balsam Ave
Maple Dr
Lusk Rd
Cook Rd
Dragon
Lake
Schammerhorn Rd
W Sales Rd
Ave Bend Rd
W Fraser Rd
Fraser
Dr
Hwy 97 S

Geotechnical Report Key

Feature Number	Feature Name(s)	References
NA	Lanadslide Debris from Regional Surficial Geology Map	Canadian Geological Survey (CGS), http://gsc.nrcan.gc.ca/index_e.php
#3	Quesnel River / Kapetski Landfill Slide	Geotechnical Engineering Report, Kapetski Landfill, Hardy BBT, Schmidt J.A. KX00572, November 1989 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973 Preliminary Report on the Foundation Investigation for the Quesnel River Crossing, Quesnel North-South Interconnector, MoTH File M42-20-02 December 1996 Quesnel North/South Interconnector - Quesnel River Crossing Reports (Box 66/33300-65/NC-RG-22J) Quesnel North/South Interconnector - Plumming Study Reports (Box 64/33300 65/NC RG 23D)
#4	Redbluff Slide	Redbluff Slide, Borregard Rd, Yr 1998 (Box 52/33300-65/NC-SS-62) DL222, Logging Red Bluffs Slide. Yr 2000 (Box 57/33300-65/NC-SS-85) DL 222, Lot 4, Plan 6726 (Box 49/33300-65/NC-SD-02) DL 222, Lot 3, PL 6461 (Box 49/33300-65/NC-SD-03) Quesnel Landslide Delineation. AMEC E&E. KX04033. June 2001 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#6	Westply Slide	The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#7	West Quesnel Slide	The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973 West Quesnel Land Stability Study Vol 1 of 2 Reports and Figures, KX04097, AMEC, May 2007 Total Dewatering West Quesnel Land Stability Study KX04397?, AMEC, May 2008
#8	Quesnel Hill Slide Complex	Quesnel Landslide Delineation. AMEC E&E, KX04033. June 2001 Dragon Lake Hill, Hwy 97, Yr 1997 (Box 55/33300-65/NC-SS-55) The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#9	Moose Heights Slide	DL6182, SE1/4 of SE1/4 & part of lot A, PL13450 (Box 49/33300-65/NC-SD-24) The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973 Proposed Subdivision SE 1/4 of DL 6182 Department of Highways. 1977
#10	Plywood Hill Slide	Plywood Hill Slide, Western Plywood Rd, Yr 1977 (Box 52/33300-65/NC-SS-05) Quesnel Landslide Delineation. AMEC E&E. KX04033. June 2001 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#11	Plateau / Abbot Drive Slides	Gutzmitte Mine- Quesnel. Golder Associates. 04-1430-065 July 2004 Abbot Drive Relocation - West Quesnel. Department of Highways. 1978 Abbott Drive Slides. Department of Highways. 1977 Abbot Drive Slide. Department of Highways. 1977 Abbot Drive Slide. Department of Highways. 1976 Preliminary Geotechnical Evaluation, Proposed Subdivision Area, Quesnel. THURBER ENGINEERING LTD. 19-162-17. May 1999 Abbot Rd (Plateau) Slide, Yr. 1989 (Box 54/33300-65/NC-SS-41) The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#12	West Bank Slide	The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#13	East Bank Slide	The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#14	Garbage Dump Slide	Stability Assessment - Garbage Dump Slide Blackwater Road Quesnel. AMEC E&E KX03981. May 2001 Proposed Subdivision E1/2 DL1121/CD, except lot 1, plan 20424. Department of Highways. 1977 Quesnel Landslide Delineation. AMEC E&E. KX04033. June 2001 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#16	A&W Slide and Area	Geotechnical Investigation A & W East Slide MoTH File M42-16-66 April 1993 Department of Highways, Quesnel Slide Study (incomplete report) Geotechnical Investigation East Bank Fraser River Slide Complex Hardy Assoc Q1521 July 1978 (Box 53/33300 65/NC-SS-07) A&W East Slide (Geotechnical Investigation Report) Hwy 97, Yr. 1990 (Box 56/33300-65/NC-SS-66) Quesnel Landslide Delineation. AMEC E&E, KX04033, June 2001 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#19	Barkerville Road Slide	Quesnel Landslide Delineation. AMEC E&E, KX04033. June 2001 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#21	Highway Slide	Skyline (Highways) Slide, West Fraser Rd, Yr. 1977 (Box 54/33300-65/NC-SS-38) The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#22	Baker Creek Slide Features	Twan Ave Instability, Quesnel, Yr 1996 (Box 55/33300-65/NC-SS-54 DL1125, Lot 2, PL16386 (Box 49/33300-65/NC SD-11) Geotechnical Stability Assessment, Existing Single Family Dwelling. 1030 Riverpark Road, Lot 1 DL 1123 Plan 32551 Cariboo District Quesnel BC AGRA, KX03634. July 1999 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973 Baker Drive Slide, Yr. 1979 (Box 54/33300-65/NC-SS-45) Landslide Hazard Evaluation. Rem. Block B DL 1123, Cariboo District Quesnel BC. Hardy BBT. KX00845. October 1990
#23	Runic Springs / Subdivision Slide	Runic Springs Slide, West Fraser Road, District Subdivision File (Box 52/33300-65/NC-SS-01F) Quesnel Landslide Delineation. AMEC E&E, KX04033. June 2001 DL606, Lot 1, 1/2 of NW 1/4, PL24648 (Box 49/33300-65/NC-SD-06) Stability Assessment - Runic Springs Area West Fraser Road. AMEC E&E KX02981 March 2001 The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#24	Logging Road Slide	The Landslide Problem in the Quesnel Area. SG Evans, RL Crook BC DoH Sept 1973
#25	Fraser River East Bank Slide complex	Geotechnical Investigation East Bank Fraser River Slide Complex Hardy Assoc Q1521 July 1978 Geotechnical Investigation A & W East Slide MoTH File M42-16-66 April 1993 Landslides In Tertiary Deposits Quesnel BC, D McDougall (Masterts Thesis U of A) 1993
#27	PGE Texaco Slide	Geotechnical Investigation A & W East Slide MoTH File M42-16-66 April 1993
#28	Unnamed relict slides	Subdivision in DL8645, Hardy BBT, KX00369, September 1988 Geotechnical Evaluation of Lot 1 and Lot 2 DL 8645. HBT AGRA Limited. KX01078. May 1993 Geotechnical Hazard Assessment for Proposed Subdivision in DL8645. Aquaterre Consultants Inc. 85106. 1985 Subdivision in DL8645,Hardy Associates (1978) LTD. U2497. May 1981 Deering Subdivision in DL 8645. Hardy Associates (1978) LTD. PX-02497. March 1982 Geotechnical Assessment SE corner DL 904 Cariboo District Quesnel BC. AGRA. KX03633. July 1999 Preliminary Geological Hazard Eval. Northwest of Quesnel, Buchanan R.G. MoTH, 1980
#31	Marsh Road Hill Slide	Quesnel Landslide Delineation. AMEC E&E, KX04033. June 2001
#44	Ten Mile Lake Road Slide	Ten Mile Lake Road, Yr. 1986 (Box 56/33300-65/NC-SS-63)
#45	Garner Road Slide	Garner Rd, Slide. Ministry of Transportation, Yr. 1989 (Box 56/33300-65/NC-SS-64)
#48	Bouchie Creek / Paradise Road Slides	Paradise Road Slide, Yr. 1997 (Box 57/33300-65/NC-SS-80) Proposed Subdivision DL 8633, Part of E 1/2, 1981, Ministry of Transportation and Highways (Box 50/33300-65/NC-SD-49)

Geotechnical Report Key

Feature Number	Feature Name	Description
#54	Bouchie Lake Slides	Small rotational slide (8 m X 12 m) noted along skid trail near top of bluff west of Bouchie Lake. Material appeared to originate primarily from roadside fill. Some overturned trees, likely occurred as a result of poor water management along skid trail. Active slide along drainage feeding Bouchie Lake however shallow and small in size.
#55	Barlow Creek Slides	Recent planar slide along western valley sidewall of Barlow Creek. Trees destroyed along run out track (8 m X 50 m) however slide debris did not reach roadside. Some slumping also noted along Drummond Road in areas where roadway had cut into existing bank.
#56	Bouchie Creek / Quesnel Golf Course	Evidence of ancient slides. Sharp break along slope crests, crescent shaped profile with mature forest cover over slide area. Slope ~40 m high at 35-38°.
#57	Yargeau Road Slide	Recent slide on downslope side of Yargeau Road, approximately 5 m X 12 m. Slide likely occurred due to loading from fill materials. Some damaged/overturned trees etc.
#58	Quesnel Hixon Farm / Couldwell Road	Series of small surficial slides at base of terrace, telephone pole proximate to house at risk of being undermined. No evidence for deep seated terrain instability.
#59	Track Road	Recent and likely rapid rotational slide along an outside bend of the Fraser River. Downdropped block (40 m X 40 m) with 10 m vertical displacement.
#60	Baker Creek Pinnacles Road Slide	Tension cracks observed in asphalt near pinnacles road May 2008. Road surface re-paired by September 2008. Landform to the east of distressed pavement appears as downdropped block from ancient slide.
#61	South Baker Creek Slides	Series of large areas of terrain instability evident in airphoto interpretation, no development currently in area.
#62	Dragon Creek Valley Slides	Multiple planar and rotational slides noted on both North and South side of Dragon Creek Valley. Areas of instability widespread throughout valley. With the exception of Dragon Hill Road Slide (#63) slides are surficial and relatively small in size.
#63	Dragon Hill Road Slide	Large rotational slide approximately 60 m across backscarp and downdropped ~20 m. Scrapped automobiles and other debris documted over side. Nearby resident indicated slide occurred in 2006. Shrubs and grasses have recolonized, no tension cracks were observed. Scarp boundaries: 10 U 536713 5870014, 10 U 536774 5870018
#64	Loloff Cres Slide	Ancient planar slide (4 m X 15 m). Tension crack and bulging slide toe visible. Mature forest cover over slide area.
#65	Gamache Road Slide	Small (8 m X 3 m) slump originating directly above Paradise Road.
#66	West Fraser Plywood Rail Slide	Small (20 m X 5 m) slide/rockfall originating from cut slope above rail tracks with a talus cone is located at the base. Appears that debris is periodically required to be removed from tracks (pile located adjacent to slide area).
#67	Fraser River Slides	Erosion and undercutting along outer bends of the Fraser River leading to oversteepend slopes and possible landsliding.
#68	Runic/Plateau Slide Extension	Airphoto identified scallop shaped slope crest between Runic and Plateau slides. Evidence of disturbed vegetation along scarp.
#69	Bouchie Creek Slump and Failures	100 m zone of subsidence / slumping along south bank of Bouchie Creek. Smaller rotational and planar slides also observed originating from active slope crest (undermining trees and fence).
#70	Bouchie Relict Slide Extension	Area of instability that may extend from the backscarp of garbage dump slide to unamed relict slides. Abrupt slope break and somewhat hummocky terrain are observed in airphotos.
#71	Scott Road	Based on airphoto review, instability along the East Bank slide appears to extend north towards Scott Road.
#72	Lower Marsh Hill Road	Anecdotal information indicates that the area has experienced past instability.

Legend

- ★4 Previous Studies

Areas of Active Instability
- Backscarp / Crest of Active Slide Feature
- Toe of Active Slide Feature

Other Unstable Areas of Terrain Activity Unknown
- Backscarp / Crest of Unknown Level Activity
- Toe of Unknown Level Activity
- High Hazard Area

- City of Quesnel Municipal Boundary
- Quesnel Fringe OCP Boundary
- Indian Reserve

Explanatory Note

This map shows the locations of landslide features and/or terrain instability identified in both previous engineering reports (Figure 3) and additional areas of terrain instability identified as part of the airphoto interpretation and field work/ground truthing process. Additional areas of instability have only been included if clear evidence of active landsliding was evident in the airphotos and/or observed in the field. Steep slopes that may be prone to instability should conditions change (i.e. development) have not been shown.

This Figure to be used in conjunction with Figure 8 and AMEC report, "Geotechnical Hazard Mapping Quesnel Fringe Area Cariboo Regional District".

*It should also be noted that the outlines of features 9, 11, 28, 45 and 48 (identified from previous reports) have been modified to reflect the apparent slide boundaries observed in recent stereo airphoto coverage.

1 0.5 0 1 2
Kilometres

Scale: 1:30,000

Reference

Base mapping provided by Cariboo Regional District (CRD)

CLIENT: Cariboo Regional District

PROJECT: Quesnel Fringe OCP Terrain Hazard Study

Areas of Unstable Terrain - High Risk

DATE:	ANALYST:	Figure 7
January 28, 2009	EO	
JOB No: KX13163	QA/QC: CD	PDF FILE: Fig7_unstable_terrain.pdf
GIS FILE: Fig7_unstable_terrain.mxd		
PROJECTION: UTM Zone 10	DATUM: NAD83	amec

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