



# INFORMATIONAL LETTER IL 91-5

31 May 1991

TO: All Oil and Gas Operators

## GOOD PRODUCTION PRACTICE CONVENTIONAL CRUDE OIL POOLS

From time to time, the Board reviews crude oil pools in the province that are subject to rate controls<sup>1</sup> to identify potential candidates for good production practice (GPP). In this particular assessment the Board focused on those pools or parts of pools undergoing pressure maintenance operations and single well (primary depletion) pools that are incapable of producing their penalized MRL. The pressure maintenance schemes/projects proposed for GPP are listed on Attachment 1 and the single well (primary depletion) pools are listed on Attachment 2. Assigning GPP to these pools will simplify administration and may provide increased production flexibility to some pressure maintenance schemes.

*<sup>1</sup> Rate controls refer primarily to maximum rate limitations (MRLS) and gas-oil ratio penalty schedules. However, voidage replacement requirements in enhanced recovery schemes and special production rates in concurrent production operations or other depletion plans represent special forms of rate controls.*

### Pressure Maintenance Pools

The Board reviewed all pressure maintenance schemes to identify potential GPP candidates. The schemes were reviewed to confirm that the terms and conditions of the pressure maintenance approval are adequately being met, and to confirm that general performance is satisfactory. In particular the Board attempted to ensure that

- scheme voidage is adequately being replaced and reservoir pressure maintained,
- minimum pressure, maximum gas-oil ratio and other special monitoring requirements are being met,
- there are no performance concerns, particularly for newer schemes, that could be aggravated under GPP, and
- gas conservation issues have been addressed and gas conservation implemented where feasible.

The Board proposes to place the 117 schemes listed in Attachment 1 on GPP. The Board expects that each scheme will continue to be operated in a prudent manner, using good engineering principles and in accordance with the Board-approved depletion plan. In cases where a scheme or part of a scheme is not being operated in a satisfactory manner, the Board will take the appropriate action where necessary. For example, non-compliance with voidage replacement requirements on a scheme,

pattern, or regional basis may result in the assignment of an MRL commensurate with the ability to replace voidage. The Board appreciates that it may be necessary to revise operational strategies and when this occurs, operators are advised to ensure that their pressure maintenance approval is amended to reflect any significant operational changes.

The Board emphasizes that both progress report submission and reservoir pressure testing requirements do not change as a result of these schemes being placed on GPP. Further, any outstanding requests from the Board, dealing with scheme operation/depletion, must continue to be addressed.

### **Single Well Pools**

The Board reviewed single well (primary depletion) pools that are incapable of producing their penalized MRL. Those pools for which a rate control is not considered necessary and where there are no outstanding gas conservation issues, have been identified as GPP candidates. As a result of this review, the Board proposes to place the 922 pools listed in Attachment 2 on GPP for administrative reasons.

### **General Considerations**

The Board periodically reviews the appropriateness of GPP and may rescind GPP where conditions change such that oil and gas conservation are compromised. This would include situations where gas flaring and pressure maintenance feasibility become issues. Further, the appropriateness of GPP may also be reconsidered where concurrent depletion of an associated gas cap occurs without an order of the Board. The Board also advises operators within a given pool to monitor overall operations. Any obvious conservation or equity related problems should be resolved as soon as possible or brought to the Board's attention.

Operators are also reminded that normal spacing regulations apply to wells in GPP pools. Should an affected party raise a valid issue related to an off-target well in a GPP pool, the Board may rescind GPP or assign an MRL to the well against which to apply the off-target penalty factor.

Operators may apply, pursuant to Informational Letter IL 90-3, for GPP status or revisions to rate controls for any pool, but must address the matters of conservation and equity.

The Board proposes to place the pools listed in Attachments 1 and 2 on GPP status commencing 1 August 1991. Operators are asked to consider the impact this proposal may have on their operations and advise the Board in writing no later than 5 July 1991 of specific objections or concerns.

Questions regarding this letter can be directed to the Board's Oil Department at 297-8570.

*<signed by>*

N. G. Berndtsson, P.Eng.  
Manager, Oil Department

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# ATTACHMENT 1 TO IL 91-5 ENHANCED RECOVERY PROJECTS TO GPP - 1 AUGUST 1991

<b>Pool</b>	<b>Approval No.</b>	<b>Proj. No.</b>
Alderson Upper Mannville R	4687	1
Bantry Pekisko G	5888	1
Bigoray Cardium B	3283	2
	3685	5
Bigoray Ostracod	4186	1
Bigoray Ellerslie D	3401	1
Bigoray Nisku A	2983	1
Bigoray Nisku B	3077*	1
Bigoray Nisku C	4924	1
Bigoray Nisku D	2828	1
Bigoray Nisku E	4872	2
Bigoray Nisku F	4667*	1
Bigoray Nisku G	3022	1
Bigoray Nisku H	3433	1
Bigoray Nisku I	2996	1
Bigoray Nisku K	6332	1
Boundary Lake S. Triassic H	4678	1
	4285	8
	4526	9
Brazeau River Viking D	5644	1
Brazeau River Nisku A	4239*	1
Brazeau River Nisku B	4255*	1
Brazeau River Nisku D	4240*	1
Brazeau River Nisku E	4241*	1
Caroline Cardium E	4175*	4
	5035	7
Carrot Creek Cardium E	4845	1
Carrot Creek Cardium K	5375	1
Chauvin Sparky A	3481	1
Cherhill Banff A	5514	10
	5515	11
Coutts Moulton A	5358	1
Crystal Viking A	5046	1
	4372	2

	4528	3
Cyn-Pem Cardium C	5096	1
Cyn-Pem Cardium D	5156	1
Cyn-Pem Cardium L	4498	1
Cyn-Pem Nisku A	4715	1
Duhamel D-3 B	2561	13
Halkirk Upper Mannville I	5309	1
Hayter Sparky A	6023	1
Horsefly Lake Mannville	2746	1
	2774	2
Judy Creek S Beaverhill Lake	5963	1
Kakwa A Cardium A	6175	1
Keho Bow Island G	4838	1
Lathom Upper Mannville C	2091	4
Little Bow Upper Mannville D	6062	1
Little Bow Upper Mannville G	4719	1
Manyberries Sunburst JJ	4977	1
Medicine River Viking D	4655	1
	5350	2
	4815	3
Medicine River Ostracod A/Glauc D	3432	1
Medicine River Pekisko E	1269	2
Parflesh Upper Mannville G	3112	1
Peavey Blairmore	4841	1
	2241	2
Pembina Keystone Belly River L	1869	1
Pembina Keystone Belly River U	4999	20
	2053	21
	4274	22
	5480	23
Pembina Keystone Belly River X	2516	23
Pembina Keystone Belly River FFF, GGG K2K, S2S	5298	1
	5792	2
Pembina Cardium L	5209	1
Pembina Ostracod E	4337	1
Pembina Nisku A	5604*	1
Pembina Nisku B	5904	1
Pembina Nisku C	2864	1
Pembina Nisku D	4702*	1
Pembina Nisku E	3579	1

Pembina Nisku F	5483*	2
Pembina Nisku G	5291*	1
Pembina Nisku H	3709	1
Pembina Nisku I	3847	1
Pembina Nisku J	2988	1
Pembina Nisku K	5292*	1
Pembina Nisku L	4279*	1
Pembina Nisku M	4535*	1
Pembina Nisku N	4484	1
Pembina Nisku O	5293*	1
Pembina Nisku P	5290*	1
Pembina Nisku Q	4304*	1
Pembina Nisku R	3909	1
Pembina Nisku S	3910	1
Pouce Coupe S. Boundary A & Charlie Lake B	2593	1
Rainbow Muskeg C	5403	1
Rainbow Muskeg K	5905	1
Rainow Muskeg S	5421	1
Rainbow Keg River F	5791	10
Rainbow Keg River II	4329*	1
Rainbow Keg River OO	5897	3
Rainbow Keg River PP	4055	1
Rainbow Keg River C2C	1590	1
Rainbow South Keg River B	4323*	1
Ricinus Cardium A	4447	22
Shekilie Keg River III	5431	1
Shekilie Keg River UUU	5509	1
Strathmore Lower Mannville B	6218	1
Turin Upper Mannville H	4863	15
	5390	16
Utikuma Lake Gilwood D	4407	1
Virginia Hills Belloy A	3356	1
Virgo Keg River O	4399	1
Virgo Keg River P	4149	1
Virgo Keg River CCC	4029	1
Virgo Keg River Z2Z	5351	1
Virgo Keg River F4F	5519	1
Virgo Keg River G4G	6238	1
Westpem Nisku A	4242*	3
Westpem Nisku C	4280*	1
Westpem Nisku D	4315*	1

Zama Muskeg Y	2817	3
Zama Keg River TT	5372	1

\* Miscible Flood Scheme

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## ATTACHMENT 2 TO IL 91-5 POOLS TO GPP - 1 AUGUST 1991

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Albright Charlie Lake A  
 Alderson Arcs B  
 Alderson Detrital B  
 Alderson Detrital C  
 Alderson Detrital I  
 Alderson Lower Mannville J  
 Alderson Lower Mannville X  
 Alderson Lower Mannville HH  
 Alderson Lower Mannville JJ  
 Alderson Lower Mannville LL  
 Alderson Lower Mannville MM  
 Alderson Lower Mannville NN  
 Alderson Lower Mannville CCC  
 Alderson Lower Mannville DDD  
 Alderson Lower Mannville HHH  
 Alderson Lower Mannville KKK  
 Alderson Lower Mannville QQQ  
 Alderson Lower Mannville C2C  
 Alderson Lower Mannville D2D  
 Alderson Lower Mannville I2I  
 Alderson Lower Mannville J2J  
 Alderson Lower Mannville L2L  
 Alderson Upper Mannville J  
 Alderson Upper Mannville L  
 Alderson Upper Mannville AA  
 Alderson Upper Mannville DD  
 Alderson Upper Mannville EE  
 Alderson Upper Mannville HH

Alderson Upper Mannville TT  
Alderson Upper Mannville AAA  
Alderson Upper Mannville GGG  
Alderson Upper Mannville HHH  
Alderson Upper Mannville PPP  
Alexander Wabamun C  
Alexander Wabamun E  
Amber Keg River R  
Amber Keg River CC  
Amber Muskeg C  
Amigo Keg River B  
Ante Creek Nordegg A  
Armada Upper Mannville A  
Armada Upper Mannville F  
Astotin Viking H  
Atlee-Buffalo Glauconitic E  
Bantry Detrital C  
Bantry Mannville O  
Bantry Mannville Z  
Bantry Mannville GG  
Bantry Mannville KK  
Bantry Pekisko C  
Bantry Pekisko J  
Bantry Pekisko K  
Bantry Sunburst A  
Belloy Belloy B  
Belloy D-1 A  
Belloy D-1 G  
Belloy D-1 P  
Bellshill Lake Blairmore G  
Bellshill Lake Blairmore I  
Bellshill Lake Ellershe D  
Bigoray Ellershe A  
Bigoray Ellershe E  
Bigstone Cardium B  
Bigstone Cardium C  
Black Keg River C  
Bolloque Upper Mannville G  
Bow Island Lower Mannville E  
Brazeau River Belly River D  
Brazeau River Belly River U

Brazeau River Belly River CC & DD  
Brazeau River Belly River JJ  
Brazeau River Belly River KK  
Brazeau River Belly River MM  
Brazeau River Belly River NN  
Brazeau River Belly River PP  
Brazeau River Cardium I  
Brazeau River Lower Mannville D  
Brazeau River Nisku H  
Campbell -Namao Blairmore O  
Campbell-Namao Blairmore S  
Campbell-Namao Blairmore U  
Cardiff Ellerslie B  
Caroline Basal Mannville O3O  
Caroline Rundle C  
Caroline Viking O  
Caroline Viking U  
Caroline Viking BB  
Carrot Creek Cardium DD  
Carrot Creek Cardium FF  
Carrot Creek Cardium HH  
Carrot Creek Lower Mannville V  
Carrot Creek Lower Mannville BB  
Carstairs Cardium A  
Cessford Basal Quartz F  
Cessford Basal Quartz I  
Cessford Detrital D  
Cessford Glauconitic T & Mannville HH  
Cessford Mannville RRR  
Cessford Mannville L2L  
Cessford Mannville O2O  
Cessford Mannville V2V  
Cessford Mannville Y2Y  
Chain Banff D  
Chain Banff F  
Chain Banff G  
Chauvin Colony A  
Chauvin South Lloydminster F  
Chauvin South Lloydminster J  
Chauvin South Sparky M  
Chauvin South Sparky CC



Chauvin South Sparky DD  
Chedderville Viking B  
Cherhill Banff V  
Cherhill Detrital A  
Cherhill Viking C  
Chigwell Mannville H  
Chin Coulee Glauconitic A  
Chip Lake Rock Creek A  
Claresholm Glauconitic C  
Claresholm Rundle B  
Conrad Sawtooth B  
Conrad Sawtooth C  
Cornwall Gilwood A  
Countess Lower Mannville F  
Countess Lower Mannville G  
Countess Lower Mannville T  
Countess Upper Mannville L  
Countess Upper Mannville MM  
Coutts Cutbank C  
Craigmyle Banff B  
Craigmyle Banff F  
Craigmyle Banff K  
Crossfield East Cardium B  
Crossfield East Cardium F  
Crossfield Rundle J  
Crossfield Rundle M  
Crossfield Viking C  
Crossfield Viking E  
Crystal Belly River A  
Culp Granite Wash A  
Cygnet Ellerslie C  
Cygnet Ellerslie M  
Cygnet Glauconitic E  
Cygnet Viking H  
Cygnet Viking Q  
Cyn-Pem Belly River A  
Cyn-Pem Cardium N  
Davey Belly River G  
Dawson Beaverhill Lake A  
Dawson Granite Wash B  
Dawson Slave Point I

Dawson Slave Point J  
Dawson Slave Point K  
Dawson Slave Point N  
Dawson Slave Point O  
Driftpile Gilwood A  
Driftpile Slave Point A  
Drumheller Lower Mannville M  
Drumheller Upper Mannville C  
Eaglesham North D-1 E  
Eaglesham North D-1 N  
Eaglesham North D-1 O  
Eaglesham North D-1 P  
Eaglesham North D-1 Q  
Edgerton Lloydminster F  
Edgerton Lloydminster G  
Edgerton Lloydminster H  
Edgerton Sparky A  
Edson Cardium II  
Edson Cardium SS  
Edson Cardium TT  
Edson Cardium UU  
Edson Cardium VV  
Edson Second White Specks A  
Elmworth Doe Creek A  
Elnora Upper Mannville E  
Enchant Arcs O  
Enchant Livingstone C  
Enchant Lower Mannville F  
Enchant Sunburst B  
Enchant Upper Mannville I  
Erskine Blairmore G  
Erskine Blairmore X  
Esther Banff G  
Evi Gilwood G  
Evi Gilwood H  
Evi Gilwood K  
Evi Gilwood P  
Evi Gilwood W  
Evi Granite Wash G  
Evi Granite Wash H  
Evi Granite Wash I

Evi Granite Wash L  
Evi Slave Point D  
Evi Slave Point M  
Evi Slave Point Q  
Evi Slave Point S  
Ewing Lake D-2 F  
Ewing Lake D-3 B  
Farrow Basal Quartz E  
Farrow Basal Quartz G  
Farrow Bow Island A  
Farrow Glauconitic A  
Farrow Ostracod A  
Fenn West D-2 D  
Fenn West D-3 A  
Fenn West D-3 B  
Fenn West D-3 C  
Fenn West D-3 F  
Fenn-Big Valley D-3 C  
Fenn-Big Valley Upper Mannville A  
Ferrier Belly River I  
Ferrier Cardium LL  
Ferrier Viking D  
Ferrybank Banff C  
Ferrybank Banff D  
Ferrybank Belly River I  
Fir Cardium A  
Fir Cardium B  
Fir Cardium D  
Fire Keg River D  
Fire Keg River E  
Fire Keg River F  
Fire Keg River G  
Fire Keg River H  
Galahad Ellerslie E  
Garrington Cardium I  
Garrington Cardium O  
Garrington Cardium P  
Garrington Cardium T  
Garrington Cardium U  
Garrington Lower Mannville T  
Garrington Lower Mannville JJJ

Garrington Nisku A  
Garrington Second White Specks B  
Garrington Second White Specks E  
Garrington Second White Specks F  
Garrington Second White Specks G  
Garrington Second White Specks H  
Garrington Viking J  
Garrington Viking L  
Ghost Pine Pekisko P  
Ghost Pine Upper Mannville LL  
Ghost Pine Upper Mannville QQQ  
Ghost Pine Upper Mannville E2E  
Gift Gilwood D  
Gift Gilwood G  
Gift Slave Point E  
Gift Slave Point J  
Gift Slave Point K  
Gilby Basal Mannville AA  
Gilwood Gilwood B  
Gilwood Gilwood C  
Gilwood Gilwood G  
Girouxville East Gilwood A  
Girouxville East Granite Wash A  
Glacier Doe Creek A  
Gold Creek Doig A  
Golden Slave Point B  
Golden Spike Upper Mannville D  
Gordondale Halfway F  
Grand Forks Lower Mannville RR  
Grand Forks Sawtooth E  
Grand Forks Sawtooth F  
Grand Forks Sawtooth G  
Grand Forks Sawtooth X  
Grand Forks Sawtooth AA  
Grand Forks Sawtooth MM  
Grand Forks Sawtooth AAA  
Grand Forks Sawtooth BBB  
Grand Forks Sawtooth NNN  
Grand Forks Upper Mannville E  
Grand Forks Upper Mannville F  
Grande Prairie Charlie Lake B

Grouard Gilwood A  
Halkirk East Glauconitic D  
Halkirk Lower Mannville G  
Halkirk Lower Mannville L  
Halkirk Lower Mannville M  
Hamelin Creek Triassic B  
Harmattan East Cardium C  
Harmattan East Cardium D  
Harmattan East Cardium E  
Hays Arcs F  
Hays Arcs H  
Hays Arcs L  
Hays Lower Mannville G  
Hays Lower Mannville I  
Hays Sawtooth I  
Hays Sawtooth K  
Hayter Colony C  
Hayter Cummings A  
Hayter General Petroleum A  
Hayter Sparky C  
Hayter Sparky G  
Hayter Sparky T  
Hayter Sparky V  
Hayter Sparky W  
Heathdale Glauconitic B  
Hercules Wabamun A  
High Prairie Gilwood C  
High Prairie Gilwood E  
High Prairie Gilwood H  
High Prairie Gilwood K  
High Prairie Gilwood M  
High Prairie Gilwood N  
High Prairie Gilwood O  
Highvale Banff B  
Highvale Banff M  
Highvale Banff T  
Highvale Lower Mannville D  
Hooker Jurassic A  
Hooker Jurassic B  
Hussar Basal Quartz B  
Hussar Glauconitic BB

Hussar Glauconitic TTT  
Hussar Glauconitic H2H  
Hussar Ostracod FF  
Hythe Halfway F  
Innisfail Belly River C  
Jenner Pekisko C  
Jenner Upper Mannville HH  
Joan Granite Wash A  
Judy Creek Beaverhill Lake C  
Judy Creek Beaverhill Lake D  
Judy Creek South Beaverhill Lake E  
Jumpbush Upper Mannville E  
Jumpbush Upper Mannville K  
Jumpbush Upper Mannville M  
Kakwa C Cardium C  
Karr Dunvegan C  
Kaybob Triassic A  
Kidney Keg River D  
Kidney Keg River K  
Kidney Keg River L  
Kidney Keg River O  
Kidney Keg River R  
Kidney Keg River S  
Kidney Keg River T  
Kidney Keg River U  
Kidney Keg River X  
Kidney Keg River AA  
Kidney Keg River FF  
Kidney Keg River HH  
Kidney Keg River JJ  
Kidney Keg River MM  
Kidney Keg River QQ  
Kidney Keg River WW  
Kidney Keg River XX  
Kidney Keg River YY  
Kidney Keg River AAA  
Kidney Keg River DDD  
Kidney Keg River EEE  
Kidney Keg River GGG  
Kitty Granite Wash B  
Kitty Slave Point D

Kitty Slave Point G  
Knappen Lower Mannville H  
Knopcik Charlie Lake C  
Lacombe Nisku D  
Lacombe Nisku G  
Lanaway Cardium C  
Lanaway Cardium D  
Lanaway D-2 A  
Lanaway Mannville G  
Larne Keg River CC  
Larne Keg River D  
Larne Keg River G  
Larne Keg River S  
Larne Keg River Z  
Larne Keg River DD  
Larne Keg River EE  
Larne Keg River FF  
Larne Keg River GG  
Larne Keg River HH  
Larne Keg River KK  
Larne Keg River NN  
Lathom Upper Mannville D  
Leahurst Mannville M  
Leckie Upper Mannville B  
Leduc-Woodbend Blairmore NN  
Leduc-Woodbend D-3 J  
Leduc-Woodbend Glauconitic A  
Leo Upper Mannville D  
Leo Upper Mannville F  
Leo Upper Mannville J  
Lloydminster Colony O  
Lloydminster Cummings G  
Lloydminster General Petroleum R  
Lloydminster McLaren D  
Lloydminster Rex A  
Lloydminster Sparky M  
Lloydminster Sparky BBB  
Lloydminster Sparky GGG  
Lloydminster Sparky JJJ  
Lloydminster Sparky OOO  
Lloydminster Sparky QQQ

Lloydminster Sparky SSS  
Lloydminster Sparky UUU  
Lloydminster Sparky A2A  
Lloydminster Sparky F2F  
Lochend Cardium D  
Lochend Cardium E  
Lochend Cardium F  
Lochend Cardium G  
Lochend Cardium H  
Lochend Cardium I  
Lochend Cardium K  
Lochend Cardium L  
Long Coulee Glauconitic A  
Long Coulee Glauconitic G  
Long Coulee Glauconitic U  
Long Coulee Glauconitic DD  
Long Coulee Sunburst F  
Loon Granite Wash K  
Loon Granite Wash L  
Loon Granite Wash M  
Loon Slave Point D  
Loon Slave Point E  
Loon Slave Point I  
Lubicon Granite Wash C  
Lubicon Granite Wash D  
Majeau Lower Mannville D  
Majorville Upper Mannville G  
Manola Lower Mantiville H  
Manyberries Sunburst RR  
Manyberries Sunburst SS  
Manyberries Sunburst WW  
Manyberries Sunburst ZZ  
Manyberries Sunburst AAA  
Matziwin Lower Mannville E  
Matziwin Lower Mannville F  
McLeans Creek Gilwood D  
McLeans Creek Gilwood G  
McLeans Creek Gilwood H  
McLeod Gething J  
Medicine River Basal Quartz HH  
Medicine River Cardium A



Medicine River Cardium B  
Medicine River D-3 C  
Medicine River Pekisko V  
Meekwap D-2 B  
Meekwap D-2 E  
Michichi Banff C  
Michichi Banff E  
Michichi Banff F  
Michichi Banff I  
Michichi Banff L  
Michichi Banff M  
Michichi Banff T  
Michichi Banff W  
Mikwan D-2 D  
Mikwan D-2 F  
Mikwan Upper Mannville F  
Mikwan Upper Mannville G  
Minnehik-Buck Lake Ostracod E and F  
Minnehik-Buck Lake Viking D  
Minnehik-Buck Lake Viking E  
Minnehik-Buck Lake Viking F  
Minnehik-Buck Lake Viking I  
Minnehik-Buck Lake Viking J  
Minnehik-Buck Lake Belly River A  
Minnehik-Buck Lake Belly River C  
Minnehik-Buck Lake Belly River E  
Minnehik-Buck Lake Belly River G  
Mirage Doe Creek A  
Morgan Lloydminster D  
Morgan Sparky B  
Morgan Wainwright A  
Morinville D-3 D  
Morinville D-3 G  
Nevis D-3 G  
Nipisi Gilwood E  
Nipisi Gilwood G  
Nipisi Gilwood I  
Nipisi Gilwood J  
Nipisi Keg River Sandstone H  
Nipisi Keg River Sandstone L  
Nipisi Keg River Sandstone M

Nipisi Keg River Sandstone O  
Nipisi Slave Point C  
Nipisi Slave Point D  
Norris Lower Viking B  
Otter Granite Wash D  
Otter Granite Wash J  
Otter Granite Wash K  
Otter Granite Wash O  
Otter Granite Wash T  
Panny Keg River B  
Panny Keg River F  
Panny Keg River G  
Panny Keg River I  
Panny Keg River J  
Panny Keg River K  
Panny Keg River M  
Panny Keg River Q  
Panny Keg River R  
Panny Keg River S  
Panny Keg River U  
Panny Keg River V  
Panny Keg River W  
Parflesh Upper Mannville D  
Pembina Belly River ZZZ  
Pembina Belly River B2B & C2C  
Pembina Belly River U2U  
Pembina Belly River X2X  
Pembina Belly River Z2Z  
Pembina Belly River B3B  
Pembina Belly River G3G  
Pembina Belly River P3P  
Pembina Blueridge D  
Pembina Cardium J  
Pembina Cardium K  
Pembina Cardium N  
Pembina Cardium S  
Pembina Ellerslie I  
Pembina Glauconitic Y  
Pembina Glauconitic BB  
Pembina Glauconitic CC  
Pembina Glauconitic EE

Pembina Jurassic T  
Pembina Jurassic CC  
Pembina Nisku T  
Pembina Nisku U  
Pembina Ostracod K  
Pembina Second White Specks A  
Pembina Viking F  
Pembina Viking I  
Penhold Lower Mannville F  
Penhold Upper Mannville A  
Penhold Viking G  
Peoria D-1 A  
Peoria D-1 B  
Pine Creek Cardium L  
Pine Creek Cardium N  
Pouce Coupe South Boundary C  
Pouce Coupe South Boundary E  
Pouce Coupe South Boundary F  
Prevo Lower Mannville D  
Prevo Lower Mannville E  
Prevo Pekisko A  
Prevo Viking D  
Princess Basal Mannville I  
Princess Basal Mannville V  
Progress Charlie Lake B  
Progress Charlie Lake I  
Progress Charlie Lake K  
Progress Doig A  
Progress Halfway H  
Progress Halfway I  
Provost Colony G  
Provost Cummings G  
Provost Cummings J  
Provost Cummings P  
Provost Cummings T  
Provost Cummings CC  
Provost Cummings GG  
Provost Cummings NN  
Provost Cummings OO  
Provost Cummings RR  
Provost Cummings SS

Provost Cummings TT  
Provost Cummings VV  
Provost Cummings XX  
Provost Cummings YY  
Provost Ellerslie F  
Provost Ellerslie J  
Provost Ellerslie M  
Provost Lloydminster M  
Provost Lloydminster P  
Provost Lloydminster S  
Provost Lloydminster V  
Provost Lloydminster CC  
Provost Lloydminster FF  
Provost Lloydminster GG  
Provost Lloydminster HH  
Provost Lower Mannville C  
Provost Lower Mannville E  
Provost Mannville T  
Provost Sparky A  
Provost Sparky C  
Provost Sparky D  
Provost Upper Mannville E  
Provost Upper Mannville III  
Provost Upper Mannville KKK  
Provost Upper Mannville UUU  
Provost Upper Mannville B3B  
Provost Upper Mannville F3F  
Provost Upper Mannville W3W  
Provost Upper Mannville X3X  
Provost Upper Mannville A4A  
Provost Upper Mannville L4L  
Provost Viking V  
Puskwaskau D-3 A  
Racosta Upper Mannville A  
Rainbow Keg River ZZ  
Rainbow Keg River CCC  
Rainbow Keg River III  
Rainbow Keg River JJJ  
Rainbow Keg River SSS  
Rainbow Keg River UUU  
Rainbow Keg River VVV

Rainbow Keg River YYY  
Rainbow Keg River S2S  
Rainbow Keg River U2U  
Rainbow Keg River C3C  
Rainbow Keg River G3G  
Rainbow Keg River H3H  
Rainbow Muskeg P  
Rainbow Muskeg EE  
Rainbow South Keg River J  
Rainbow Sulphur Point R  
Randell Slave Point A  
Red Coulee Cutbank C  
Red Earth Granite Wash K  
Red Earth Granite Wash NN  
Red Earth Granite Wash VV  
Red Earth Granite Wash AAA  
Red Earth Granite Wash HHH  
Red Earth Granite Wash SSS  
Red Earth Granite Wash VVV  
Red Earth Granite Wash WWW  
Red Earth Granite Wash XXX  
Red Earth Granite Wash YYY  
Red Earth Granite Wash B2B  
Red Earth Granite Wash C2C  
Red Earth Granite Wash D2D  
Red Earth Granite Wash E2E  
Red Earth Granite Wash F2F  
Red Earth Granite Wash H2H  
Red Earth Granite Wash J2J  
Red Earth Granite Wash K2K  
Red Earth Granite Wash L2L  
Red Earth Granite Wash M2M  
Red Earth Granite Wash N2N  
Red Earth Granite Wash P2P  
Red Earth Slave Point U  
Red Willow Camrose C  
Red Willow Camrose E  
Red Willow Lower Mannville L  
Retlaw Mannville NNN  
Retlaw Mannville OOO  
Retlaw Mannville G2G

Retlaw Maxinville P2P  
Retlaw Mannville T2T  
Ribstone General Petroleum A  
Ribstone Lloydminster A  
Ribstone Nisku E  
Rich Winnipegosis A  
Richdale Upper Mannville S  
Ricinus Cardium LL & RR  
Ricinus Cardium VV  
Ricinus Cardium XX  
Ricinus Cardium HHH  
Riviere Wabamun A  
Rockyford Lower Mannville F  
Rockyford Lower Mannville G  
Ronaldane Sawtooth A  
Ronaldane Sawtooth T  
Rumsey Glauconitic H  
Saddle Hills Charlie Lake E  
Saddle Hills Halfway A  
Salt Creek Slave Point A  
Sawn Lake Slave Point L  
Sawn Lake Slave Point M  
Seal Slave Point F  
Senex Keg River D  
Senex Keg River H  
Senex Keg River K  
Senex Keg River L  
Senex Keg River T  
Senex Keg River V  
Senex Keg River W  
Senex Keg River X  
Senex Keg River Y  
Senex Keg River Z  
Senex Slave Point B & Keg River N  
Shadow Gilwood G  
Shadow Gilwood I  
Shadow Gilwood J  
Shadow Gilwood L  
Shadow Gilwood N  
Shadow Gilwood O  
Shadow Gilwood P

Shadow Gilwood S  
Shadow Gilwood T  
Shadow Granite Wash A  
Shekilie Keg River Y  
Shekilie Keg River Z  
Shekilie Keg River CC  
Shekilie Keg River LL  
Shekilie Keg River NN  
Shekilie Keg River RR  
Shekilie Keg River TT  
Shekilie Keg River GGG  
Shekilie Keg River QQQ  
Shekilie Keg River E2E  
Shekilie Muskeg H  
Shoal Granite Wash A  
Shouldice Ellerslie G  
Sibbald Nisku A  
Simonette Bluesky A  
Simonette D-3 B  
Sinclair Doe Creek C  
Sinclair Doe Creek H  
Slave Granite Wash B  
Slave Granite Wash D  
Slave Granite Wash E  
Slave Slave Point Q  
Slave Slave Point X  
Slave Slave Point CC  
Snipe Lake Beaverhill Lake  
Snipe Lake Gilwood A  
Sousa Keg River C  
Sousa Keg River N  
Sousa Keg River P  
Sousa Keg River Q  
Spirit River Doe Creek A  
Spirit River Doe Creek E  
Spirit River Doe Creek F  
St. Albert-Big Lake D-1 E  
St. Anne Nordegg A  
Steele Grand Rapids S  
Stettler D-3 D  
Stettler D-3 E

Stettler D-3 F  
Stettler D-3 G  
Sturgeon Lake D-3 B  
Sturgeon Lake South D-3 D  
Suffield Upper Mannville D  
Suffield Upper Mannville HH  
Suffield Upper Mannville II  
Sullivan Lake Banff A  
Sullivan Lake Banff C  
Swalwell Pekisko E  
Swan Hills Beaverhill Lake F  
Sylvan Lake Glauconitic H  
Sylvan Lake Jurassic N  
Sylvan Lake Jurassic FF  
Taber Glauconitic A  
Taber Mannville P  
Taber Mannville R  
Taber North Glauconitic H  
Taber North Glauconitic J  
Taber North Glauconitic K  
Taber North Taber U  
Taber North Taber V  
Taber North Taber W  
Taber South Glauconitic B  
Taber South Mannville L  
Taber South Turner Valley A  
Taber Southeast Mannville E  
Taber Southeast Mannville F  
Tangent D-1 A  
Tangent D-1 H  
Tangent D-1 M  
Tangent D-1 AA  
Tangent D-1 GG  
Tangent D-1 NN  
Three Hills Creek D-2 A  
Tindastoll Belly River B  
Tindastoll Belly River F  
Tomahawk Banff E  
Trochu Basal Quartz B  
Trout Keg River C  
Trout Keg River E



Trout Keg River S  
Turin Fish Scale B  
Turin Lower Mannville O  
Turin Lower Mannville JJ  
Turin Lower Mannville LL  
Turin Lower Mannville PP  
Turin Lower Mannville QQ  
Turin Lower Mannville RR  
Turin Lower Mannville AAA  
Turin Lower Mannville KKK  
Turin Lower Mannville LLL  
Turin Lower Mannville OOO  
Turin Upper Mannville L  
Turner Valley Cardium A  
Twining Lower Mannville P  
Twining Rundle E  
Utikuma Lake Keg River P  
Utikuma Lake Keg River S  
Utikuma Lake Keg River W  
Utikuma Lake Keg River Y  
Utikuma Lake Keg River Z  
Utikuma Lake Keg River AA  
Utikuma Lake Keg River BB  
Utikuma Lake Keg River CC  
Utikuma Lake Keg River H  
Utikuma Lake Keg River KK  
Utikuma Lake Keg River Sandstone V  
Utikuma Lake Slave Point A  
Utikuma Lake Slave Point D  
Utikuma Lake Slave Point E  
Utikuma Lake Slave Point H  
Utikuma Lake Slave Point I  
Valhalla Boundary K  
Valhalla Boundary L  
Valhalla Charlie Lake D  
Valhalla Charlie Lake I  
Valhalla Charlie Lake J  
Valhalla Charlie Lake K  
Valhalla Charlie Lake M  
Valhalla Charlie Lake O  
Valhalla Doe Creek N

Verger Mannville F  
Verger Upper Mannville F  
Viking-Kinsella D-2 H  
Viking-Kinsella D-2 J  
Virginia Hills Beaverhill Lake C  
Virginia Hills Beaverhill Lake D  
Virgo Keg River C  
Virgo Keg River F  
Virgo Keg River N  
Virgo Keg River Y  
Virgo Keg River VV  
Virgo Keg River ZZZ  
Virgo Keg River I2I  
Virgo Keg River Y2Y  
Virgo Keg River MA  
Virgo Keg River U3U  
Virgo Keg River X3X  
Virgo Keg River Y3Y  
Virgo Keg River C4C  
Virgo Keg River H4H  
Virgo Keg River J4J  
Virgo Keg River K4K  
Virgo Keg River N4N  
Virgo Keg River Q4Q  
Virgo Keg River R4R  
Virgo Muskeg A  
Virgo Muskeg B  
Wainwright Nisku E  
Wainwright Rex B  
Wainwright Sparky F  
Wainwright Sparky Y  
Wainwright Sparky Z  
Watts Banff A  
Watts Banff J  
Watts Banff L  
Watts Banff N  
Watts Banff Q  
Watts Banff W  
Watts Lower Mannville A  
Watts Lower Mannville B  
Watts Lower Mannville E

Watts Lower Mannville I  
Wayne-Rosedale Basal Quartz OO  
Wayne-Rosedale Basal Quartz PP  
Wayne-Rosedale Basal Quartz QQ  
Wayne-Rosedale Basal Quartz RR  
Wembley Charlie Lake A  
Wembley Charlie Lake B  
Wembley Charlie Lake C  
Wembley Charlie Lake F  
Wembley Doig F  
Wembley Halfway U  
Westerose Belly River A  
Westpem Ostracod A  
Westpem Ostracod E  
Westpem Second White Specks A  
Whitecourt Jurassic K  
Wildmere Lloydminster W  
Willesden Green Belly River H  
Willesden Green Belly River DD  
Willesden Green Belly River JJ  
Willesden Green Belly River NN  
Willesden Green Belly River QQ  
Willesden Green Belly River UU  
Willesden Green Belly River WW  
Willesden Green Cardium H  
Willesden Green Cardium J  
Willesden Green Rock Creek F  
Willesden Green Second White Specks H  
Willesden Green Viking W  
Willesden Green Viking AA  
Willesden Green Viking BB  
Willesden Green Viking DD  
Willesden Green Viking EE  
Wilson Creek Belly River F  
Windfall Bluesky A  
Woking Charlie Lake A  
Woking Halfway B  
Wrentham Glauconitic A  
Youngstown Arcs B  
Zama Keg River J  
Zama Keg River JJJ

Zama Keg River QQQ  
Zama Keg River WWW  
Zama Keg River YYY  
Zama Keg River 72T  
Zama Keg River U2U  
Zama Keg River Z2Z  
Zama Keg River J3J  
Zama Keg River O4O  
Zama Keg River X4X  
Zama Keg River D5D  
Zama Keg River L5L  
Zama Keg River N5N  
Zama Keg River O5O  
Zama Keg River P5P  
Zama Keg River U5U  
Zama Keg River X5X  
Zama Keg River Z5Z  
Zama Keg River A6A  
Zama Keg River F6F  
Zama Keg River G6G  
Zama Keg River I6I  
Zama Keg River L6L  
Zama Keg River O6O  
Zama Keg River T6T  
Zama Keg River U6U  
Zama Keg River W6W  
Zama Keg River B7B  
Zama Keg River C7C  
Zama Muskeg J  
Zama Muskeg U  
Zama Muskeg UU  
Zama Muskeg ZZ