

Thermal - These projects apply thermal energy (usually steam) in situ to produce bitumen.

Upgraders -

Upgraders - I

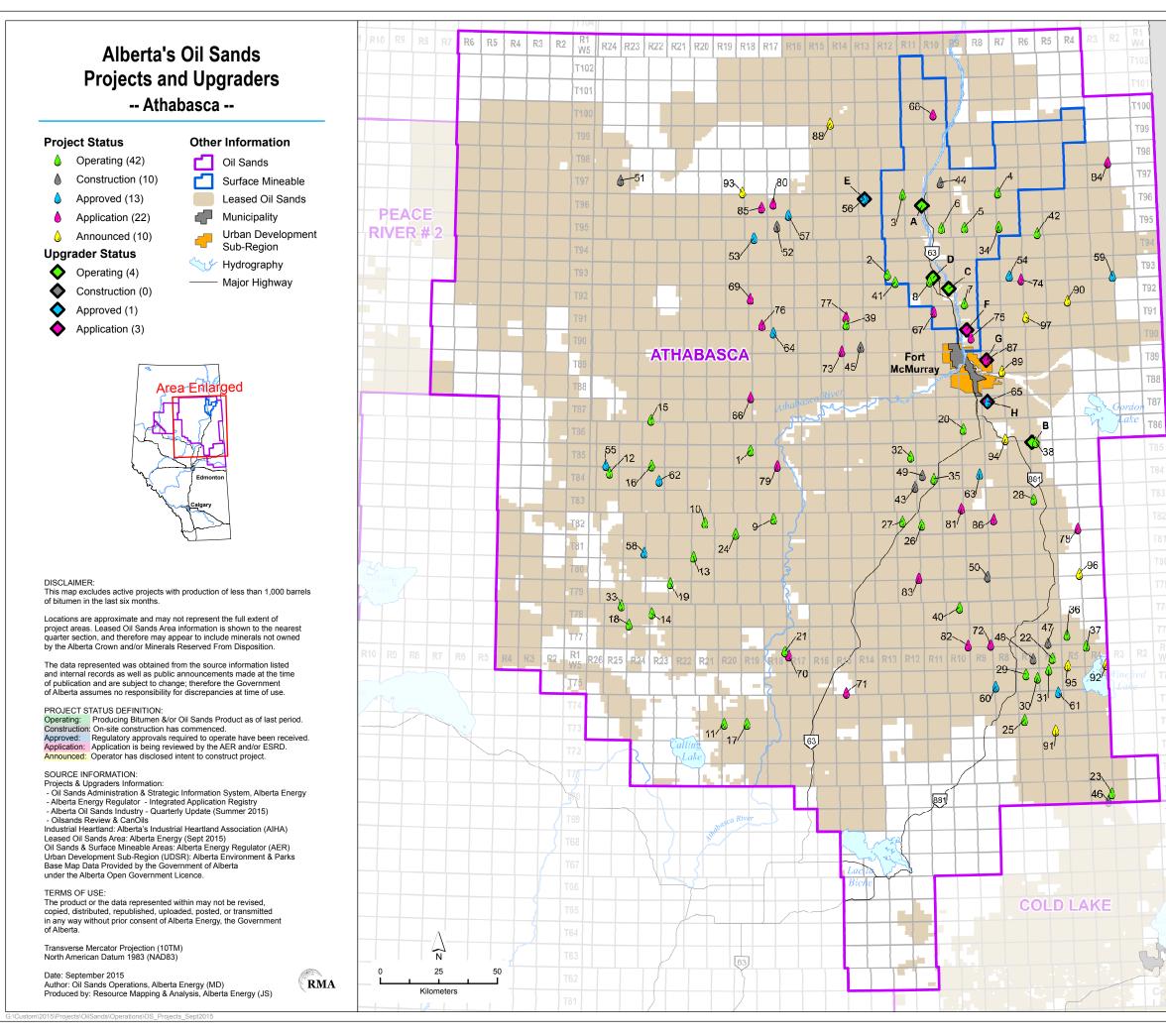
Athaba

ME .	PROJECT TYP	E STAGE	REF. #	OPERATOR - PROJECT NAME	PROJECT TY	
Athabasca	Ula and 1	lo	96	Suncor - Chard	Thermal	Announce
	Upgrader Upgrader	Operating Operating	97	Suncor - Lewis Cold Lake	Thermal	Announce
	Upgrader Upgrader	Operating	98	Baytex - Mann Lake East	Primary	Operating
	Upgrader	Operating	99	Baytex - Reita Lake I	Primary	Operating
	Upgrader	Approved	100	Baytex - Reita Lake III	Primary	Operating
	Upgrader	Application	101	Black Pearl Resources - John Lake	Primary	Operating
	Upgrader Upgrader	Application Application	102 103	CNRL - Ashmont CNRL - Beartrap	Primary Primary	Operating Operating
Heartland	F 3. 300		103	CNRL - Beartrap East	Primary	Operating
	Upgrader	Operating	105	CNRL - Derwent 11574	Primary	Operating
	Upgrader	Construction	106	CNRL - East Fishing Lake	Primary	Operating
isca	Upgrader	Approved	107 108	CNRL - Edward Lake CNRL - Elizabeth	Primary Primary	Operating Operating
1300	Experimental	Operating	109	CNRL - Elk Point	Primary	Operating
	Experimental	Operating	110	CNRL - Elk Point Project	Primary	Operating
	Mining	Operating	111	CNRL - Fire Tower	Primary	Operating
	Mining Mining	Operating Operating	112 113	CNRL - Fishing Lake CNRL - Frog Lake	Primary Primary	Operating Operating
	Mining	Operating	114	CNRL - Ft. Kent	Primary	Operating
	Mining	Operating	115	CNRL - John Lake	Primary	Operating
	Mining	Operating	116	CNRL - John Lake 11428	Primary	Operating
	Primary	Operating	117	CNRL - Lindbergh North	Primary	Operating
	Primary Primary	Operating Operating	118 119	CNRL - Lindbergh Primary CNRL - Marwayne	Primary Primary	Operating Operating
	Primary	Operating	120	CNRL - Moose Hills	Primary	Operating
	Primary	Operating	121	CNRL - North Murphy Lindbergh	Primary	Operating
	Primary	Operating	122	CNRL - Ranger Cold Lake	Primary	Operating
	Primary	Operating	123	CNRL - Reita Lake 11089	Primary	Operating
	Primary Primary	Operating Operating	124 125	CNRL - Reita Lake II CNRL - Seibert Lake	Primary Primary	Operating Operating
	Primary	Operating	125	CNRL - South Lindbergh	Primary	Operating
	Primary	Operating	127	CNRL - West Marwayne	Primary	Operating
1-4	Thermal	Operating	128	Devon - East Tulabi John Lake	Primary	Operating
lot	Thermal Thermal	Operating	129 130	Devon - Iron River Devon - Manatokan	Primary Primary	Operating Operating
	Thermal	Operating Operating	130	Devon - Manatokan Devon - Manatokan 10310	Primary	Operating
	Thermal	Operating	132	Devon - Mann North	Primary	Operating
	Thermal	Operating	133	Devon - Tulabi/John Lake	Primary	Operating
	Thermal	Operating	134	Gear Energy - Lindbergh Louis	Primary	Operating
	Thermal Thermal	Operating Operating	135 136	Gear Energy - Passage Elk Gear Energy - Swimming	Primary Primary	Operating Operating
	Thermal	Operating	130	Harvest Operations - Frog Lake Oil Sands Project	Primary	Operating
	Thermal	Operating	138	Harvest Operations - Lindbergh South	Primary	Operating
	Thermal	Operating	139	Husky - Lindbergh 10259	Primary	Operating
1	Thermal Thermal	Operating Operating	140 141	Husky - Lindbergh 10619 Husky - Lindbergh 10812	Primary Primary	Operating Operating
•	Thermal	Operating	141	Husky - Lindbergh 10812 Husky - Lindbergh 11041	Primary	Operating
	Thermal	Operating	143	Husky - Lindbergh 11205	Primary	Operating
	Thermal	Operating	144	Husky - Lindbergh 9873,11822,11541	Primary	Operating
ect Phase 3 SE	Thermal	Operating	145	Husky - Marwayne 10597	Primary	Operating
	Thermal Thermal	Operating Operating	146 147	Husky - Marwayne 11287 Husky - Marwayne 7990	Primary Primary	Operating Operating
	Thermal	Operating	147	Husky - Marwayne 8655	Primary	Operating
	Thermal	Operating	149	Husky - Tucker Lake 9835	Primary	Operating
lot	Thermal	Operating	150	Long Run Exploration - Lindbergh 10631	Primary	Operating
lot	Experimental Mining	Construction Construction	151 152	Solara - Lindbergh 11429 Twin Butte Energy - Frog Lake	Primary Primary	Operating Operating
	Thermal	Construction	153	Twin Butte Energy - Frog Lake 11256	Primary	Operating
	Thermal	Construction	154	Twin Butte Energy - Swimming 11191	Primary	Operating
	Thermal	Construction	155	Baytex - Gemini Pilot	Thermal	Operating
	Thermal Thermal	Construction Construction	156 157	CNRL - Bumt Lake CNRL - Elk Point CA	Thermal Thermal	Operating Operating
	Thermal	Construction	157	CNRL - EIK POINT CA CNRL - Lindbergh CA	Thermal	Operating
	Thermal	Construction	159	CNRL - Primrose	Thermal	Operating
	Thermal	Construction	160	CNRL - Wolf Lake CA	Thermal	Operating
ites (Leduc)	Experimental	Approved	161	Husky - Tucker	Thermal	Operating
	Experimental Experimental	Approved Approved	162 163	Imperial Oil - Cold Lake OSUM - Orion	Thermal Thermal	Operating Operating
	Thermal	Approved	164	Pengrowth - Lindbergh SAGD Pilot	Thermal	Operating
	Thermal	Approved	165	Rife Resources - Upper Mannville	Primary	Approved
	Thermal	Approved	166	Husky - Caribou Lake	Thermal	Approved
	Thermal Thermal	Approved Approved	167 168	OSUM - Taiga Birchwood Resources - Sage Thermal Pilot	Thermal Thermal	Approved Applicatio
	Thermal	Approved	169	Devon - Walleye	Thermal	Applicatio
	Thermal	Approved	170	Imperial Oil - Midzaghe	Thermal	Announce
	Thermal	Approved	471	Peace River	mal	0
	Thermal	Approved	171	Penn West Petroleum - Seal Harmon Valley South The Pilot	mai Experimental	Operating
	Thermal	Approved	172	Baytex - Cadotte Heavy Oil	Primary	Operating
	Experimental	Application	173	Baytex - Dawson 11327	Primary	Operating
	Mining	Application	174	Baytex - Harmon Valley Bluesky	Primary	Operating
Clastics	Mining Thermal	Application Application	175 176	Baytex - Reno Baytex - Tangent 11437	Primary	Operating Operating
clastics	Thermal	Application	176	Baytex - Valrus	Primary Primary	Operating
	Thermal	Application	178	Koch - Seal South	Primary	Operating
	Thermal	Application	179	Murphy Oil - Cliffdale	Primary	Operating
	Thermal	Application	180	Murphy Oil - Murphy Seal	Primary	Operating
	Thermal Thermal	Application Application	181 182	Murphy Oil - Peace River Murphy Oil - Seal I	Primary Primary	Operating Operating
	Thermal	Application	183	Murphy Oil - Seal Cadotte	Primary	Operating
	Thermal	Application	184	Murphy Oil - Seal-Northern Cadotte Block	Primary	Operating
	Thermal	Application	185	Murphy Oil - Seal-Northern Cadotte Block II	Primary	Operating
	Thermal	Application	186	One Earth Oil & Gas - Chipmunk One Earth Oil & Gas - Chipmunk II	Primary	Operating
angingstone	Thermal Thermal	Application Application	187 188	Penn West Petroleum - Harmon Valley	Primary Primary	Operating Operating
outh Leismer	Thermal	Application	189	Penn West Petroleum - Seal Cadotte	Primary	Operating
hombury	Thermal	Application	190	Penn West Petroleum - Seal Harmon Valley South	Primary	Operating
	Thermal	Application	191	Penn West Petroleum - Seal North	Primary	Operating
	Thermal	Application	192	Shell - Galloway Shell - Cliffdale	Primary	Operating
	Thermal Thermal	Application Application	193 194	Andora - Sawn Lake	Primary Thermal	Operating Operating
	Thermal	Announced	194	Baytex - Cliffdale	Thermal	Operating
	Thermal	Announced	196	Baytex - Harmon Valley - Pilot	Thermal	Operating
				Penn West Petroleum - Dawson Seal	The same of	
	Thermal	Announced	197		Thermal	Operating
	Thermal Thermal	Announced	198	Shell - Carmon Creek	Thermal	Operating
	Thermal					

Primary/EOR - These projects utilize the natural energy available in the reservoirs (in some cases supplemented by non-thermal EOR processes) to produce bitumen

Mining -These projects utilize open pit mining methods to remove bituminous ore, which is subsequently processed to recover bitumen Experimental - These projects operate on a (non-commercial) pilot scale and use innovative methods to recover bitumen.



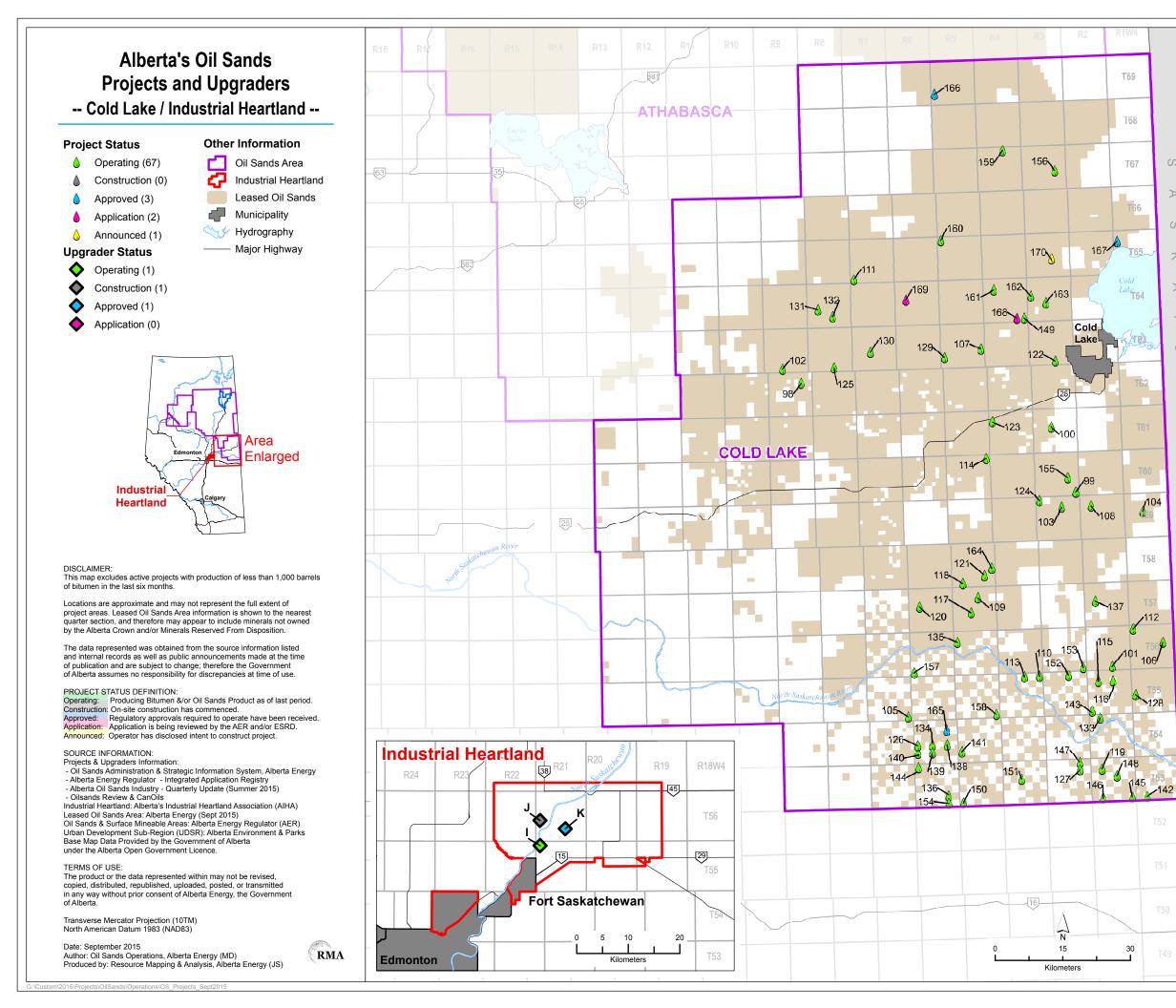


REF. #	OPERATOR - PROJECT NAME	PROJECT TYPE	STAGE
A	Upgraders - Athabasca		UTAGE
	CNRL - Horizon	Upgrader	Operating
B	Nexen - Long Lake	Upgrader	Operating
C D	Suncor - Base and Millennium Syncrude - Mildred Lake	Upgrader	Operating Operating
E	Value Creation - Terre de Grace Pilot	Upgrader Upgrader	Approved
F	Ivanhoe Energy - Tamarack	Upgrader	Application
G	Value Creation - Advanced TriStar	Upgrader	Application
Н	Value Creation - Tristar Pilot	Upgrader	Application
1	Athabasca	Experimental	Operating
2	Laricina Energy - Saleski SAGD Pilot Suncor - Dover Demonstration	Experimental Experimental	Operating Operating
3	CNRL - Horizon	Mining	Operating
4	Imperial Oil - Kearl	Mining	Operating
5	Shell - Jackpine Mine	Mining	Operating
6	Shell - Muskeg River Mine	Mining	Operating
7	Suncor - Suncor Oil Sands	Mining	Operating
8	Syncrude - Syncrude Mine Cenovus - Pelican Lake III	Mining Primary	Operating Operating
10	CNRL - Brintnell	Primary	Operating
11	CNRL - Cherpeta	Primary	Operating
12	CNRL - Goodlow	Primary	Operating
13	CNRL - South Brintnell	Primary	Operating
14 15	CNRL - South Wabasca CNRL - Woodenhouse	Primary	Operating
15	CNRL - Woodenhouse CNRL - Wabasca North	Primary Primary	Operating Operating
17	Husky - Amadou	Primary	Operating
18	Husky - McMullen Primary Heavy Oil	Primary	Operating
19	Legacy O&G - Brintnell 9774	Primary	Operating
20	Athabasca Oil Sands - Hangingstone	Thermal	Operating
21	Black Pearl Resources - Blackrod SAGD Pilot	Thermal	Operating
22	Cenows - Christina Lake Thermal	Thermal	Operating
23 24	Cenovus - Foster Creek Cenovus - Pelican Lake Grand Rapids	Thermal Thermal	Operating Operating
24	CNRL - Kirby Commercial Project	Thermal	Operating
26	Connacher - Algar	Thermal	Operating
27	Connacher - Great Divide	Thermal	Operating
28	Conoco Phillips - Surmont	Thermal	Operating
29	Devon - Jackfish 2 SAGD Thermal Project	Thermal	Operating
30 31	Devon - Jackfish 3 SAGD Project Devon - Jackfish SAGD Thermal Project	Thermal Thermal	Operating
31	Grizzly Oil Sands - Algar Lake	Thermal	Operating Operating
33	Husky - McMullen Thermal Conduction Pilot	Thermal	Operating
34	Husky - Sunrise Thermal	Thermal	Operating
35	JACOS - Hangingstone	Thermal	Operating
36	MEG Energy - Christina Lake Regional	Thermal	Operating
37	MEG Energy - Christina Lake Regional Project Phase 3 SE	Thermal	Operating
38 39	Nexen - Long Lake Southern Pacific - STP McKay SAGD	Thermal Thermal	Operating Operating
40	Statoil - Leismer Demonstration Project	Thermal	Operating
41	Suncor - MacKay River	Thermal	Operating
42	Suncor - Firebag	Thermal	Operating
43	N-Solv Corporation - Suncor Dover Lease Pilot	Experimental	Construction
44	Suncor - Fort Hills Oil Sands Project	Mining	Construction
45 46	Brion Energy - MacKay River	Thermal	Construction
40	Cenovus - Clearwater Thermal Project Cenovus - Narrows Lake	Thermal Thermal	Construction Construction
48	Harvest Operations - BlackGold	Thermal	Construction
49	JACOS - Hangingstone Expansion Project	Thermal	Construction
50	Statoil - Corner	Thermal	Construction
51	Sunshine Oilsands - Harper	Thermal	Construction
52 53	Sunshine Oilsands - West Ells Athabasca Oil Sands - Dover West Carbonates (Leduc)	Thermal	Construction
53	Oak Point Energy - Lewis SAGD Pilot	Experimental Experimental	Approved Approved
55	Renergy Petroleum - Muskwa Pilot	Experimental	Approved
56	BP P.L.C Terre de Grace	Thermal	Approved
57	Brion Energy - Dover Commercial Project	Thermal	Approved
58	Cavalier Energy Inc - Hoole	Thermal	Approved
59 60	Cenovus - Telephone Lake Borealis CNRL - Kirby Expansion (North)	Thermal	Approved
60	Devon - Pike	Thermal Thermal	Approved Approved
	Koch - Muskwa	Thermal	
62			Approved
62 63	Suncor - Meadow Creek	Thermal	Approved Approved
63 64	Sunshine Oilsands - Thickwood	Thermal Thermal	Approved Approved
63 64 65	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot	Thermal Thermal Thermal	Approved Approved Approved
63 64 65 66	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot	Thermal Thermal Thermal Experimental	Approved Approved Approved Application
63 64 65 66 67	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot	Thermal Thermal Thermal Experimental Mining	Approved Approved Approved Application Application
63 64 65 66	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South	Thermal Thermal Thermal Experimental	Approved Approved Approved Application
63 64 65 66 67 68 69 70	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial	Thermal Thermal Experimental Mining Mining Thermal Thermal	Approved Approved Approved Application Application Application Application
63 64 65 66 67 68 69 70 71	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse	Thermal Thermal Experimental Mining Mining Thermal Thermal	Approved Approved Approved Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Althabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River	Thermal Thermal Thermal Experimental Mining Mining Thermal Thermal Thermal	Approved Approved Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood	Thermal Thermal Experimental Mining Mining Thermal Thermal Thermal Thermal Thermal	Approved Approved Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73 74	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen	Thermal Thermal Thermal Experimental Mining Thermal Thermal Thermal Thermal Thermal Thermal	Approved Approved Application Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood	Thermal Thermal Experimental Mining Mining Thermal Thermal Thermal Thermal Thermal	Approved Approved Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Alhabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nenhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood	Thermal Thermal Thermal Experimental Mining Thermal Thermal Thermal Thermal Thermal Thermal Thermal Thermal Thermal	Approved Approved Approved Application Application Application Application Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkrik Marathon Oil Corporation - Birchwood MEG Energy - Surmont	Thermal Thermal Thermal Thermal Experimental Wining Mining Thermal The	Approved Approved Approved Application Application Application Application Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik	Thermal Thermal Thermal Thermal Experimental Mining Thermal	Approved Approved Approved Application Application Application Application Application Application Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood Merathon Oil Corporation - Birchwood SUM - Sepiko Kesik Prosper Petroleum Ltd Rigel	Thermal Thermal Thermal Thermal Experimental Mining Thermal Th	Approved Approved Approved Application Application Application Application Application Application Application Application Application Application Application Application Application Application Application Application
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63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood Merathon Oil Corporation - Birchwood SUM - Sepiko Kesik Prosper Petroleum Ltd Rigel	Thermal Thermal Thermal Thermal Experimental Mining Thermal Th	Approved Approved Approved Application Application Application Application Application Application Application Application Application Application Application Application Application Application Application Application
63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkik Martton Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik Prosper Petroleum Ltd Rigel PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-South Leismer PTT Exploration and Production - Mariana-Thombury SilverWillow Energy - Tamger Ret Pilot	Thermal Thermal Thermal Thermal Experimental Mining Thermal Th	Approved Approved Approved Application
63 64 65 66 67 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thornbury SilkerWillow Energy - Audet Pilot Sumshine Oilsands - Legen Lake	Thermal Thermal Thermal Thermal Experimental Mining Mining Thermal The	Approved Approved Approved Apprication Application
63 64 65 66 67 70 71 72 73 74 75 76 77 78 80 81 82 83 84 83 84 85 86	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - Dover West Sands & Clastics Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik Prosper Petroleum Ltd Rigel PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thornbury SilwerVillow Energy - Audet Pilot Sunshine Oilsands - Legend Lake Sumont Energy - Wildwood	Thermal Thermal Thermal Thermal Experimental Wining Mining Thermal The	Approved Approved Approved Application
63 64 65 66 67 70 71 72 73 74 75 76 77 75 76 77 78 80 81 82 83 84 85 86 86 87	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkrik Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik Prosper Petroleum Ltd Rigel PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thornbury SilverVillow Energy - Wildwood Sumshine Oilsands - Legend Lake Sumshine Oilsands - Legend Lake	Thermal Thermal Thermal Thermal Experimental Mining Mining Thermal The	Approved Approved Approved Application
63 64 65 66 67 70 71 72 73 74 75 76 77 76 77 78 80 81 82 83 84 85 86 87 88	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nenhoe Energy - Tamarack Koch - Dunkirk Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thornbury Silnshire Oilsands - Legael Lake Sumstine Oilsands - Legael Lake Surmont Energy - Wildwood	Thermal Thermal Thermal Thermal Experimental Mining Mining Thermal The	Approved Approved Approved Approved Application
63 64 65 66 67 70 71 72 73 74 75 76 77 78 76 77 78 80 81 82 83 84 82 83 84 85 86 87 88 88 88	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkik Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik Prosper Petroleum Ltd Rigel PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thombury SilverWillow Energy - Wildwood Summot Energy - Wildwood Sumstine Oilsands - Legend Lake Summot Energy - Wildwood	Thermal Thermal Thermal Thermal Experimental Wining Mining Thermal The	Approved Approved Approved Application
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63 64 65 66 67 70 71 72 73 74 75 76 77 78 76 77 78 80 81 82 83 84 82 83 84 85 86 87 88 88 88	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkik Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik Prosper Petroleum Ltd Rigel PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thombury SilverWillow Energy - Wildwood Summot Energy - Wildwood Sumstine Oilsands - Legend Lake Summot Energy - Wildwood	Thermal Thermal Thermal Thermal Experimental Wining Mining Thermal The	Approved Approved Approved Application
63 64 65 66 67 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 88 88 89 90 91	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackwood Commercial CNRL - Grouse Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhon Oil Corporation - Birchwood MeG Energy - Summark Koch - Dunkirk Marathon Oil Corporation - Birchwood PTE Septoration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thornbury SilmerWillow Energy - Audet Pilot Summot Energy - Wildwood Value Creation - Advanced TriStar Athabasca Oil Sands - Birch Cenous - West Kirby	Thermal Thermal Thermal Thermal Thermal Experimental Wining Mining Thermal The	Approved Approved Approved Application App
63 64 65 66 67 70 71 73 73 74 76 76 77 78 76 77 78 80 81 82 83 84 85 86 87 88 88 88 88 89 90 91 92 93 94	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunkik Marathon Oil Corporation - Birchwood MEG Energy - Sumont OSUM - Sepiko Kesik Prosper Petroleum LLG - Rigel PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-Thornbury SilkerWillow Energy - Audet Pilot Summot Energy - Wildwood Value Creation - Advanced TriStar Athabasca Oil Sands - Birch Cenows - Sate McMurray Cenows - Steepbank Cenows - Steepbank Cenows - Wienfed Lake CNRL - Birch Mountain CNRL - Birch Mountain	Thermal Thermal Thermal Thermal Thermal Experimental Wining Mining Thermal The	Approved Approved Approved Application App
63 64 65 66 67 70 71 73 73 74 75 76 77 78 79 78 79 78 80 81 82 83 84 83 84 83 84 85 86 87 88 89 90 91 92 93	Sunshine Oilsands - Thickwood Value Creation - Tristar Pilot Husky - Saleski Carbonate Pilot Suncor - Voyageur South Teck Resources - Frontier Athabasca Oil Sands - Dover West Sands & Clastics Black Pearl Resources - Blackrod Commercial CNRL - Grouse Grizzly Oil Sands - May River Grizzly Oil Sands - Thickwood Imperial Oil - Aspen Nanhoe Energy - Tamarack Koch - Dunklirk Marathon Oil Corporation - Birchwood MEG Energy - Surmont OSUM - Sepiko Kesik PTT Exploration and Production - Mariana-Hangingstone PTT Exploration and Production - Mariana-South Leismer PTT Exploration and Production - Mariana-South Leismer PTT Exploration and Production - Mariana-Thornbury SilverWillow Energy - Audet Pilot Sumstine Oilsands - Legend Lake Sumstine Oilsands - Birch Cenowus - East McMurray Cenowus - West Kirby	Thermal Thermal Thermal Thermal Thermal Experimental Mining Mining Thermal The	Approved Approved Approved Approved Application Applic

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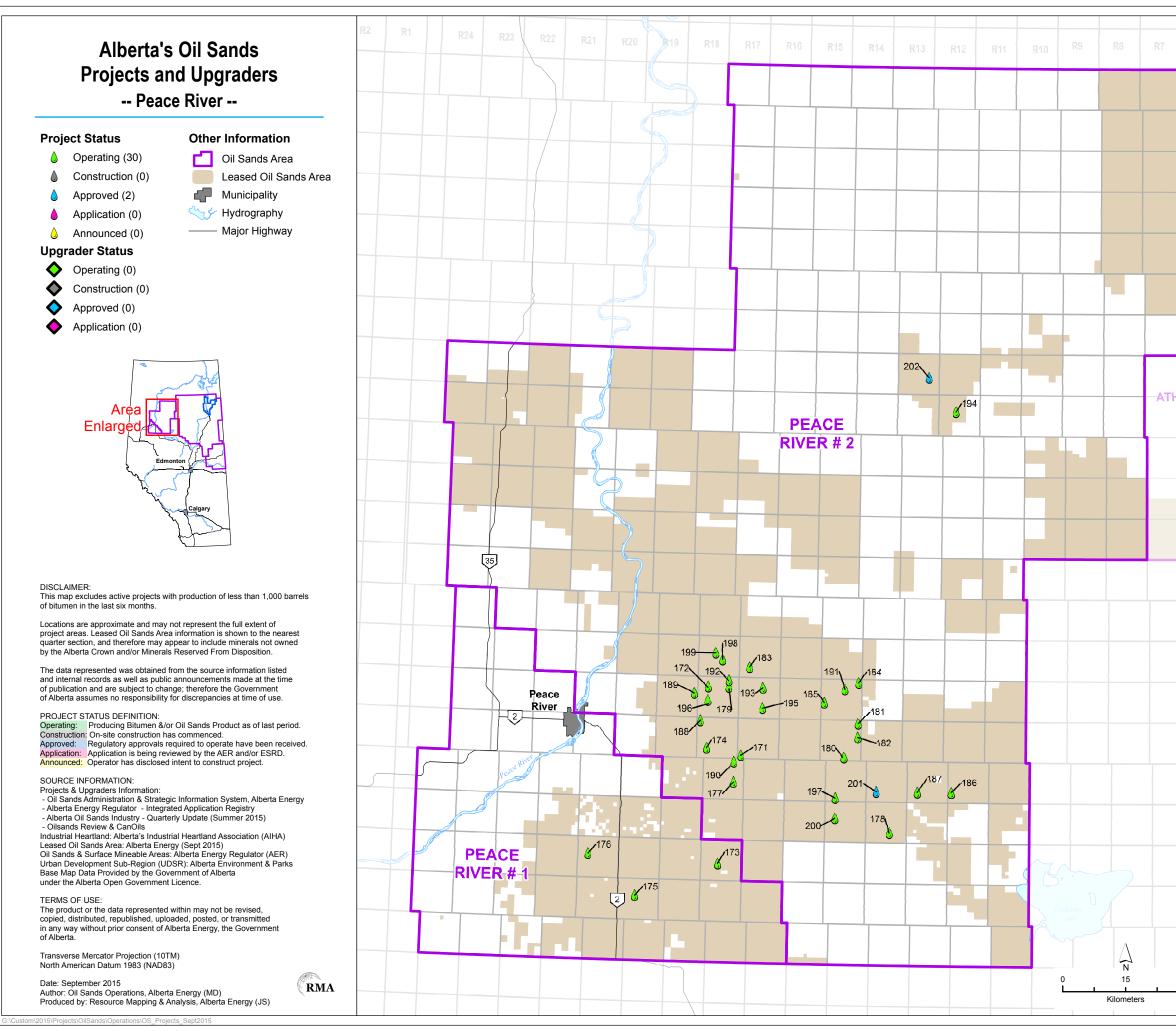
	Upgraders - Heartland Shell - Scotford	Upgrader	Operat
J	North West Upgrading - Redwater	Upgrader	Constru
K	Value Creation - Heartland	Upgrader	Approv
00	Cold Lake		
98 99	Baytex - Mann Lake East Baytex - Reita Lake I	Primary Primary	Operat Operat
100	Baytex - Reita Lake III	Primary	Operat
101	Black Pearl Resources - John Lake	Primary	Operat
102	CNRL - Ashmont	Primary	Operat
103	CNRL - Beartrap	Primary	Operat
104	CNRL - Beartrap East	Primary	Operat
105	CNRL - Derwent 11574	Primary	Operat
106 107	CNRL - East Fishing Lake CNRL - Edward Lake	Primary Primary	Operat Operat
107	CNRL - Elizabeth	Primary	Operat
109	CNRL - Elk Point	Primary	Operat
110	CNRL - Elk Point Project	Primary	Operat
111	CNRL - Fire Tower	Primary	Operat
112	CNRL - Fishing Lake	Primary	Operat
113	CNRL - Frog Lake	Primary	Operat
114	CNRL - Ft. Kent	Primary	Operat
115	CNRL - John Lake	Primary Priman/	Operat
116 117	CNRL - John Lake 11428 CNRL - Lindbergh North	Primary Primary	Operat
117	CNRL - Lindbergh North CNRL - Lindbergh Primary	Primary Primary	Operat Operat
110	CNRL - Lindbergh Phillary CNRL - Marwayne	Primary	Operat
120	CNRL - Moose Hills	Primary	Operat
121	CNRL - North Murphy Lindbergh	Primary	Operat
122	CNRL - Ranger Cold Lake	Primary	Operat
123	CNRL - Reita Lake 11089	Primary	Operat
124	CNRL - Reita Lake II	Primary	Opera
125	CNRL - Seibert Lake	Primary	Opera
126	CNRL - South Lindbergh	Primary	Operat
127 128	CNRL - West Marwayne	Primary	Operat
128	Devon - East Tulabi John Lake Devon - Iron River	Primary Primary	Opera Opera
130	Devon - Manatokan	Primary	Opera
131	Devon - Manatokan 10310	Primary	Opera
132	Devon - Mann North	Primary	Operat
133	Devon - Tulabi/John Lake	Primary	Opera
134	Gear Energy - Lindbergh Louis	Primary	Opera
135	Gear Energy - Passage Elk	Primary	Operat
136	Gear Energy - Swimming	Primary	Operat
137 138	Harvest Operations - Frog Lake Oil Sands Project Harvest Operations - Lindbergh South	Primary Primary	Operat Operat
138	Husky - Lindbergh 10259	Primary	Opera
140	Husky - Lindbergh 10619	Primary	Operat
141	Husky - Lindbergh 10812	Primary	Operat
142	Husky - Lindbergh 11041	Primary	Operat
143	Husky - Lindbergh 11205	Primary	Opera
144	Husky - Lindbergh 9873,11822,11541	Primary	Opera
145	Husky - Marwayne 10597	Primary	Operat
146		Primary	Operat
147 148	Husky - Marwayne 7990 Husky - Marwayne 8655	Primary Priman/	Operat
148	Husky - Marwayne 8655 Husky - Tucker Lake 9835	Primary Primary	Opera Opera
149	Long Run Exploration - Lindbergh 10631	Primary	Opera
151	Solara - Lindbergh 11429	Primary	Operat
152	Twin Butte Energy - Frog Lake	Primary	Operat
153	Twin Butte Energy - Frog Lake 11256	Primary	Operat
154	Twin Butte Energy - Swimming 11191	Primary	Operat
155	Baytex - Gemini Pilot	Thermal	Operat
156	CNRL - Burnt Lake	Thermal	Operat
157 158	CNRL - Elk Point CA CNRL - Lindbergh CA	Thermal Thermal	Opera Opera
150	CNRL - Lindbeigh CA CNRL - Primrose	Thermal	Opera
160	CNRL - Wolf Lake CA	Thermal	Opera
161	Husky - Tucker	Thermal	Opera
162	Imperial Oil - Cold Lake	Thermal	Opera
163	OSUM - Orion	Thermal	Opera
164	Pengrowth - Lindbergh SAGD Pilot	Thermal	Opera
165	Rife Resources - Upper Mannville	Primary	Approv
166	Husky - Caribou Lake	Thermal	Approv
167	OSUM - Taiga	Thermal	Approv
168	Birchwood Resources - Sage Thermal Pilot	Thermal	Applic
169	Devon - Walleye Imperial Oil - Midzaghe	Thermal Thermal	Applic Annou
170			

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Alberta



_		REF. #	OPERATOR - PROJECT NAME Peace River	PROJECT TYP	PE STAGE
		171	Penn West Petroleum - Seal Harmon Valley	Experimental	Operating
1		470	South Thermal Pilot	Drimer	Onenting
-		172 173	Baytex - Cadotte Heavy Oil Baytex - Dawson 11327	Primary Primary	Operating
		173	Baytex - Dawson 11327 Baytex - Harmon Valley Bluesky	Primary	Operating Operating
		175	Baytex - Reno	Primary	Operating
4		176	Baytex - Tangent 11437	Primary	Operating
		177	Baytex - Walrus	Primary	Operating
		178	Koch - Seal South	Primary	Operating
		179	Murphy Oil - Cliffdale	Primary	Operating
		180	Murphy Oil - Murphy Seal	Primary	Operating
		181	Murphy Oil - Peace River	Primary	Operating
		182 183	Murphy Oil - Seal I Murphy Oil - Seal Cadotte	Primary Primary	Operating Operating
		184	Murphy Oil - Seal-Northern Cadotte Block	Primary	Operating
		185	Murphy Oil - Seal-Northern Cadotte Block II	Primary	Operating
		186	One Earth Oil & Gas - Chipmunk	Primary	Operating
_		187	One Earth Oil & Gas - Chipmunk II	Primary	Operating
		188	Penn West Petroleum - Harmon Valley	Primary	Operating
		189	Penn West Petroleum - Seal Cadotte	Primary	Operating
		190	Penn West Petroleum - Seal Harmon Valley South		Operating
- 1		191	Penn West Petroleum - Seal North	Primary	Operating
		192 193	Shell - Galloway Shell - Cliffdale	Primary Primary	Operating Operating
		193	Andora - Sawn Lake	Thermal	Operating
		194	Baytex - Cliffdale	Thermal	Operating
		196	Baytex - Harmon Valley - Pilot	Thermal	Operating
		197	Penn West Petroleum - Dawson Seal	Thermal	Operating
1		198	Shell - Carmon Creek	Thermal	Operating
		199	Shell - Peace River	Thermal	Operating
		200	Touchstone Exploration - Dawson	Thermal	Operating
u l	BASCA	201	Penn West Petroleum - Seal Main East	Primary	Approved
ΠĄ	BASCA	202	Northern Alberta Oil - Sawn Lake	Thermal	Approved
	T87 T86 T85 T84				
	T83				
	T81				
	T80				
	T79				
	178		Notes: Primary/EOR - These projects utilize the natural energy available supplemented by non-thermal EOR processes) to produce bitume Thermal - These projects apply thermal energy (usually steam) in Mining -These projects utilize open pit mining methods to remove which is subsequently processed to recover bitumen.	n. situ to produce bitu	
3	0 T77		which is subsequently processed to recover bitumen. Experimental - These projects operate on a (non-commercial) pill and use innovative methods to recover bitumen.		perta