

Alberta's Oil Sands Projects and Upgraders

DISCLAIMER:
This map excludes active projects with production of less than 1,000 barrels of bitumen in the last six months.

Locations are approximate and may not represent the full extent of project areas. Leased Oil Sands Area information is shown to the nearest quarter section, and therefore may appear to include minerals not owned by the Alberta Crown and/or Minerals Reserved From Disposition.

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PROJECT STATUS DEFINITION:
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Approved: Regulatory approvals required to operate have been received.
Application: Application is being reviewed by the AER and/or ESRD.
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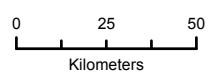
SOURCE INFORMATION:
Projects & Upgraders Information:
 - Oil Sands Administration & Strategic Information System, Alberta Energy
 - Alberta Energy Regulator - Integrated Application Registry
 - Alberta Oil Sands Industry - Quarterly Update (Spring 2014)
 - Oil Sands Review & CanOils
Industrial Heartland: Alberta's Industrial Heartland Association (AIHA)
Leased Oil Sands Area: Alberta Energy (July 2014)
Oil Sands & Surface Mineable Areas: Alberta Energy Regulator (AER)
Urban Development Sub-Region (UDSR): Environment & Sustainable Resource Development (ESRD)
 Base Data provided by Spatial Data Warehouse Ltd.

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Transverse Mercator Projection (10TM)
North American Datum 1983 (NAD83)

Date: July 2014
Author: Oil Sands Operations, Alberta Energy (MN)
Produced by: Resource Mapping & Analysis, Alberta Energy (JS)

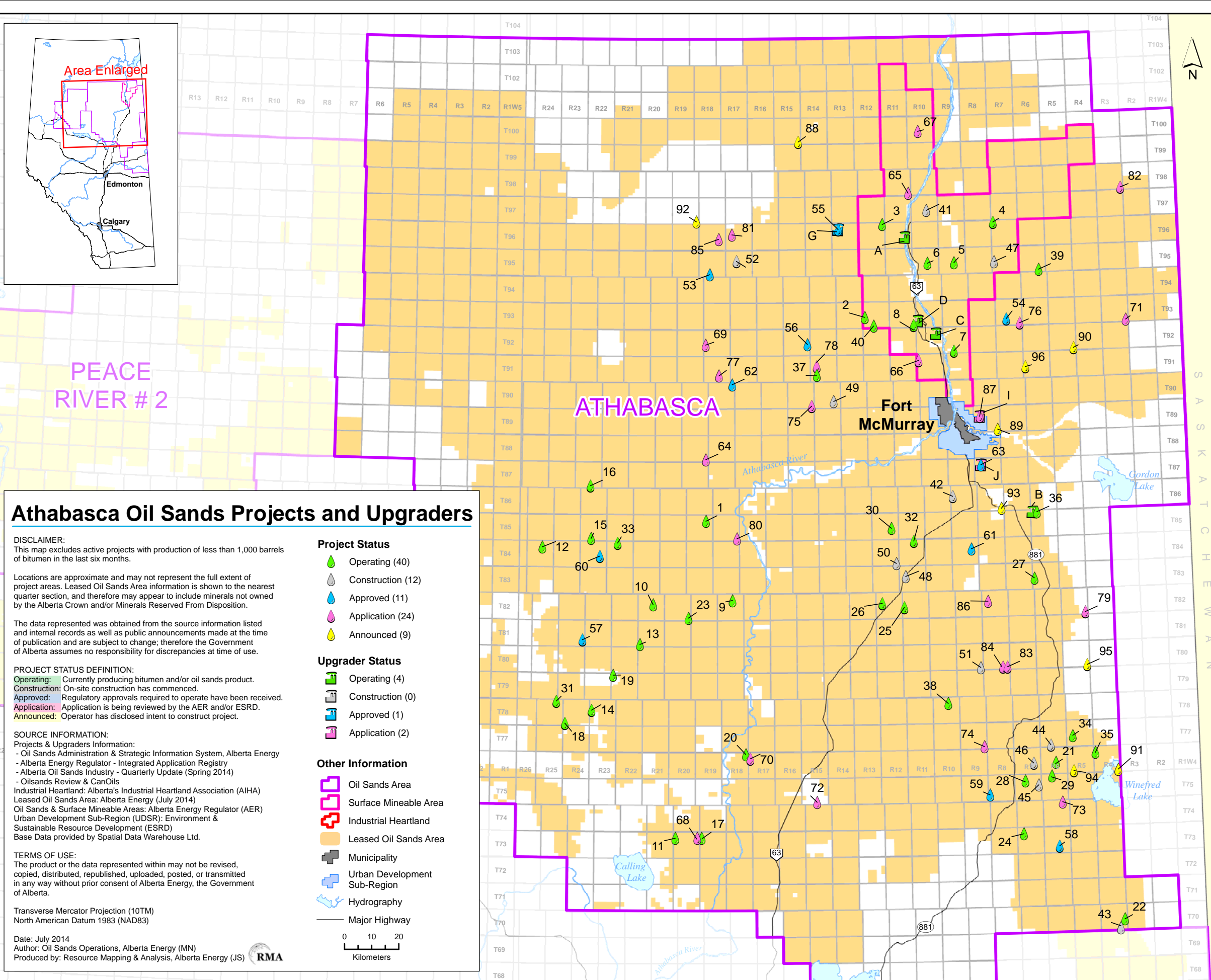
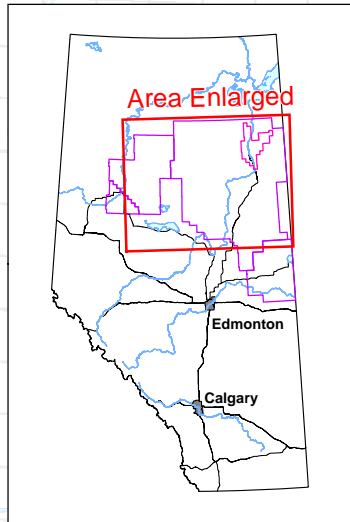
- Project Status**
- Operating (132)
 - Construction (13)
 - Approved (15)
 - Application (29)
 - Announced (9)
- Upgrader Status**
- Operating (5)
 - Construction (1)
 - Approved (2)
 - Application (2)
- Other Information**
- Oil Sands Area
 - Surface Mineable Area
 - Industrial Heartland
 - Leased Oil Sands Area
 - Municipality
 - Urban Development Sub-Region
 - Hydrography
 - Major Highway



REF. #	OPERATOR - PROJECT NAME	PROJECT TYPE	STAGE	REF. #	OPERATOR - PROJECT NAME	PROJECT TYPE	STAGE
Upgrader				Cold Lake			
A	CNRL - Horizon	Upgrader	Operating	95	Suncor - Chard	Thermal	Announced
B	Nexen - Long Lake	Upgrader	Operating	96	Suncor - Lewis	Thermal	Announced
C	Suncor - Base and Millennium	Upgrader	Operating	97	Baytex Energy - Mann Lake East	Primary	Operating
D	Syncrude - Mildred Lake	Upgrader	Operating	98	Baytex Energy - Reita Lake III	Primary	Operating
E	Shell - Scotford	Upgrader	Operating	99	Baytex Energy - Reita Lake I	Primary	Operating
F	North West Upgrading - Redwater	Upgrader	Construction	100	Black Pearl Resources - John Lake	Primary	Operating
G	Value Creation - Terre de Grace Pilot	Upgrader	Approved	101	CNRL - Ashmont	Primary	Operating
H	Value Creation - Heartland	Upgrader	Approved	102	CNRL - Beartrap	Primary	Operating
I	Value Creation - Advanced TriStar	Upgrader	Application	103	CNRL - Denwent 11574	Primary	Operating
J	Value Creation - Tristar Pilot	Upgrader	Application	104	CNRL - East Fishing Lake	Primary	Operating
Athabasca				Peace River			
1	Larcina Energy - Saleski SAGD Pilot	Experimental	Operating	105	CNRL - Edward Lake	Primary	Operating
2	Suncor - Dover Demonstration	Experimental	Operating	106	CNRL - Elizabeth	Primary	Operating
3	CNRL - Horizon	Mining	Operating	107	CNRL - Elk Point	Primary	Operating
4	Imperial Oil - Kearl	Mining	Operating	108	CNRL - Elk Point Project	Primary	Operating
5	Shell - Jackpine Mine	Mining	Operating	109	CNRL - Fire Tower	Primary	Operating
6	Shell - Muskeg River Mine	Mining	Operating	110	CNRL - Fishing Lake	Primary	Operating
7	Suncor - Suncor Oil Sands	Mining	Operating	111	CNRL - Frog Lake	Primary	Operating
8	Syncrude - Syncrude Mine	Mining	Operating	112	CNRL - Ft. Kent	Primary	Operating
9	Cenovus - Pelican Lake III	Primary	Operating	113	CNRL - John Lake	Primary	Operating
10	CNRL - Brintnell	Primary	Operating	114	CNRL - John Lake 11428	Primary	Operating
11	CNRL - Cherpeta	Primary	Operating	115	CNRL - Lindbergh North	Primary	Operating
12	CNRL - Goodlow	Primary	Operating	116	CNRL - Lindbergh Primary	Primary	Operating
13	CNRL - South Brintnell	Primary	Operating	117	CNRL - Marwayne	Primary	Operating
14	CNRL - South Wabasca	Primary	Operating	118	CNRL - Moose Hills	Primary	Operating
15	CNRL - Wabasca North	Primary	Operating	119	CNRL - North Murphy Lindbergh	Primary	Operating
16	CNRL - Woodenhouse	Primary	Operating	120	CNRL - Ranger Cold Lake	Primary	Operating
17	Husky - Amadou	Primary	Operating	121	CNRL - Reita Lake 11089	Primary	Operating
18	Husky - McMullen Primary Heavy Oil	Primary	Operating	122	CNRL - Reita Lake II	Primary	Operating
19	Legacy O&G - Brintnell 9774	Primary	Operating	123	CNRL - Seibert Lake	Primary	Operating
20	Black Pearl Resources - Blackrod SAGD Pilot	Thermal	Operating	124	CNRL - South Lindbergh	Primary	Operating
21	Cenovus - Christina Lake Thermal	Thermal	Operating	125	CNRL - West Marwayne	Primary	Operating
22	Cenovus - Foster Creek	Thermal	Operating	126	Devon - East Tulabi John Lake	Primary	Operating
23	Cenovus - Pelican Lake Grand Rapids	Thermal	Operating	127	Devon - Iron River	Primary	Operating
24	CNRL - Kirby Commercial Project	Thermal	Operating	128	Devon - Manatoka	Primary	Operating
25	Connacher - Algar	Thermal	Operating	129	Devon - Manatoka 10310	Primary	Operating
26	Connacher - Great Divide	Thermal	Operating	130	Devon - Mann North	Primary	Operating
27	Conoco Phillips - Surmont	Thermal	Operating	131	Devon - Tulabi/John Lake	Primary	Operating
28	Devon - Jackfish 2 SAGD Thermal Project	Thermal	Operating	132	Gear Energy - Lindbergh Louis	Primary	Operating
29	Devon - Jackfish 3 SAGD Thermal Project	Thermal	Operating	133	Gear Energy - Passage Elk	Primary	Operating
30	Grizzly Oil Sands - Algar Lake	Thermal	Operating	134	Gear Energy - Swimming	Primary	Operating
31	Husky - McMullen Thermal Conduction Pilot	Thermal	Operating	135	Harvest Operations - Lindbergh South	Primary	Operating
32	JACOS - Hangingstone	Thermal	Operating	136	Husky - Lindbergh 10259	Primary	Operating
33	Larcina Energy - Germain	Thermal	Operating	137	Husky - Lindbergh 10619	Primary	Operating
34	MEG Energy - Christina Lake Regional	Thermal	Operating	138	Husky - Lindbergh 10812	Primary	Operating
35	MEG Energy - Christina Lake Regional Project Phase 3 SE	Thermal	Operating	139	Husky - Lindbergh 11041	Primary	Operating
36	Nexen - Long Lake	Thermal	Operating	140	Husky - Lindbergh 11205	Primary	Operating
37	Southern Pacific - STP McKay SAGD	Thermal	Operating	141	Husky - Lindbergh 9873, 11822, 11541	Primary	Operating
38	Statoil - Leismer Demonstration Project	Thermal	Operating	142	Husky - Marwayne 10597	Primary	Operating
39	Suncor - Firebag	Thermal	Operating	143	Husky - Marwayne 11287	Primary	Operating
40	Suncor - MacKay River	Thermal	Operating	144	Husky - Marwayne 7990	Primary	Operating
41	Suncor - Fort Hills Oil Sands Project	Mining	Construction	145	Husky - Marwayne 8655	Primary	Operating
42	Athabasca Oil Sands - Hangingstone	Thermal	Construction	146	Husky - Tucker Lake 9835	Primary	Operating
43	Cenovus - Clearwater Thermal Project	Thermal	Construction	147	Long Run Exploration - Lindbergh 10631	Primary	Operating
44	Cenovus - Narrows Lake	Thermal	Construction	148	Solara - Lindbergh 11429	Primary	Operating
45	Devon - Jackfish 3 SAGD Project	Thermal	Construction	149	Twin Butte Energy - Frog Lake	Primary	Operating
46	Harvest Energy - BlackGold	Thermal	Construction	150	Twin Butte Energy - Frog Lake 11256	Primary	Operating
47	Husky - Sunrise Thermal	Thermal	Construction	151	Twin Butte Energy - Swimming 11191	Primary	Operating
48	JACOS - Hangingstone Expansion Project	Thermal	Construction	152	Baytex Energy - Gemini Pilot	Thermal	Operating
49	MacKay Operating Corp. - MacKay River	Thermal	Construction	153	CNRL - Burnt Lake	Thermal	Operating
50	N-Solv Corporation - Dover	Thermal	Construction	154	CNRL - Elk Point CA	Thermal	Operating
51	Statoil - Corner	Thermal	Construction	155	CNRL - Lindbergh CA	Thermal	Operating
52	Sunshine Oilsands - West Eils	Thermal	Construction	156	CNRL - Primrose	Thermal	Operating
53	Athabasca Oil Sands - Dover West Carbonates (Leduc)	Experimental	Approved	157	CNRL - Wolf Lake CA	Thermal	Operating
54	Oak Point Energy - Lewis SAGD Pilot	Experimental	Approved	158	Husky - Tucker	Thermal	Operating
55	BP P.L.C. - Terre de Grace	Thermal	Approved	159	Imperial Oil - Cold Lake	Thermal	Operating
56	Brion Energy - Dover Commercial Project	Thermal	Approved	160	Pengrowth - Lindbergh SAGD Pilot	Thermal	Operating
57	Cavalier Energy Inc. - Hoole	Thermal	Approved	161	Shell - Orion	Thermal	Operating
58	Cenovus - West Kirby	Thermal	Approved	162	Husky - Caribou Lake	Thermal	Approved
59	CNRL - Kirby Expansion (North)	Thermal	Approved	163	OSUM - Taiga	Thermal	Approved
60	Koch - Muskwa	Thermal	Approved	164	Rife Resources - Upper Mannville	Primary	Application
61	Suncor - Meadow Creek	Thermal	Approved	165	Birchwood Resources - Sage Thermal Pilot	Thermal	Application
62	Sunshine Oilsands - Thickwood	Thermal	Approved	166	Devon - Walleys	Thermal	Application
63	Value Creation - Tristar Pilot	Thermal	Approved	Peace River			
64	Husky - Saleski Carbonate Pilot	Experimental	Application	167	Penn West Petroleum Ltd. - Seal Harmon Valley South Thermal Pilot	Experimental	Operating
65	Shell - Pierre River	Mining	Application	168	Baytex Energy - Cadotte Heavy Oil	Primary	Operating
66	Suncor - Voyageur South	Mining	Application	169	Baytex Energy - Dawson 11327	Primary	Operating
67	Teck Resources - Frontier	Mining	Application	170	Baytex Energy - Reno	Primary	Operating
68	CNRL - McLaren Channel Deposit	Primary	Application	171	Baytex Energy - Tangent 11437	Primary	Operating
69	Athabasca Oil Sands - Dover West Sands & Clastics	Thermal	Application	172	Baytex Energy - Harmon Valley Bluesky	Primary	Operating
70	Black Pearl Resources - Blackrod Commercial	Thermal	Application	173	Koch - Seal South	Primary	Operating
71	Cenovus - Telephone Lake Borealis	Thermal	Application	174	Murphy Oil - Chipmunk	Primary	Operating
72	CNRL - Grouse	Thermal	Application	175	Murphy Oil - Chipmunk II	Primary	Operating
73	Devon - Pike	Thermal	Application	176	Murphy Oil - Cliffdale	Primary	Operating
74	Grizzly Oil Sands - May River	Thermal	Application	177	Murphy Oil - Murphy Seal	Primary	Operating
75	Grizzly Oil Sands - Thickwood	Thermal	Application	178	Murphy Oil - Peace River	Primary	Operating
76	Imperial Oil - Aspen	Thermal	Application	179	Murphy Oil - Seal I	Primary	Operating
77	Koch - Dunkirk	Thermal	Application	180	Murphy Oil - Seal Cadotte	Primary	Operating
78	Marathon Oil Corporation - Birchwood	Thermal	Application	181	Murphy Oil - Seal-Northern Cadotte Block	Primary	Operating
79	MEG Energy - Surmont	Thermal	Application	182	Murphy Oil - Seal-Northern Cadotte Block II	Primary	Operating
80	OSUM - Sepiko Kesik	Thermal	Application	183	Penn West Petroleum - Harmon Valley	Primary	Operating
81	Prosper Petroleum Ltd. - Rigel	Thermal	Application	184	Penn West Petroleum - Seal Cadotte	Primary	Operating
82	SilverWillow Energy - Audet Pilot	Thermal	Application	185	Penn West Petroleum - Seal Harmon Valley South	Primary	Operating
83	Statoil - Hangingstone	Thermal	Application	186	Penn West Petroleum - Seal Main East	Primary	Approved
84	Statoil - Thornbury	Thermal	Application	187	Shell - Cliffdale	Thermal	Approved
85	Sunshine Oilsands - Legend Lake	Thermal	Application	188	Shell - Galloway	Primary	Operating
86	Summont Energy - Wildwood	Thermal	Application	189	Baytex Energy - Cliffdale	Thermal	Operating
87	Value Creation - Advanced TriStar	Thermal	Application	190	Penn West Petroleum - Dawson Seal	Thermal	Operating
88	Athabasca Oil Sands - Birch	Thermal	Announced	191	Shell - Carmon Creek	Thermal	Operating
89	Cenovus - East McMurray	Thermal	Announced	192	Shell - Peace River	Thermal	Operating
90	Cenovus - Steepbank	Thermal	Announced	193	Touchstone Exploration - Dawson	Thermal	Operating
91	Cenovus - Winefred Lake	Thermal	Announced	194	Andora - Sawn Lake	Thermal	Construction
92	CNRL - Birch Mountain	Thermal	Announced	195	Penn West Petroleum - Seal Main East	Primary	Approved
93	CNRL - Gregoire Lake	Thermal	Announced	196	Northern Alberta Oil - Sawn Lake	Thermal	Approved
94	Devon - Jackfish East	Thermal	Announced	197	Baytex Energy - Walrus	Primary	Application
				198	One Earth Oil & Gas Inc. - Bluesky	Primary	Application

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Primary/EOR - These projects utilize the natural energy available in the reservoirs (in some cases supplemented by non-thermal EOR processes) to produce bitumen.
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Athabasca Oil Sands Projects and Upgraders

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Transverse Mercator Projection (10TM)
 North American Datum 1983 (NAD83)

Date: July 2014
 Author: Oil Sands Operations, Alberta Energy (MN)
 Produced by: Resource Mapping & Analysis, Alberta Energy (JS)

Project Status

- Operating (40)
- Construction (12)
- Approved (11)
- Application (24)
- Announced (9)

Upgrader Status

- Operating (4)
- Construction (0)
- Approved (1)
- Application (2)

Other Information

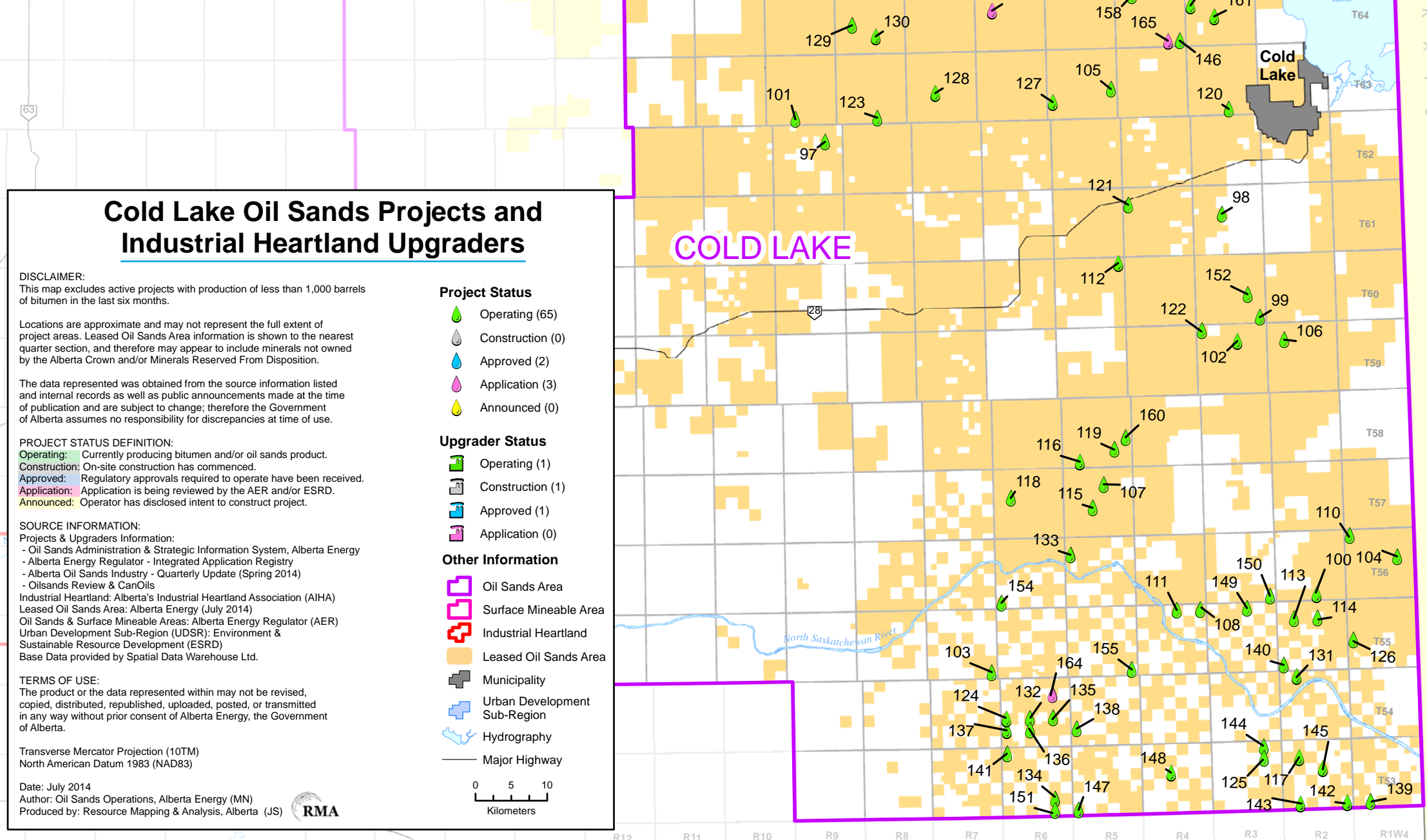
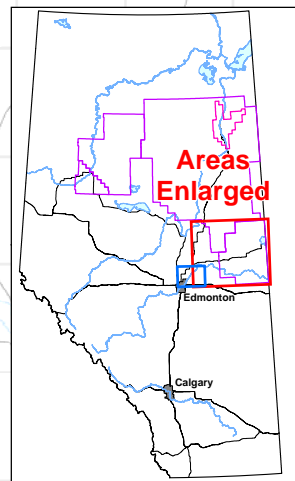
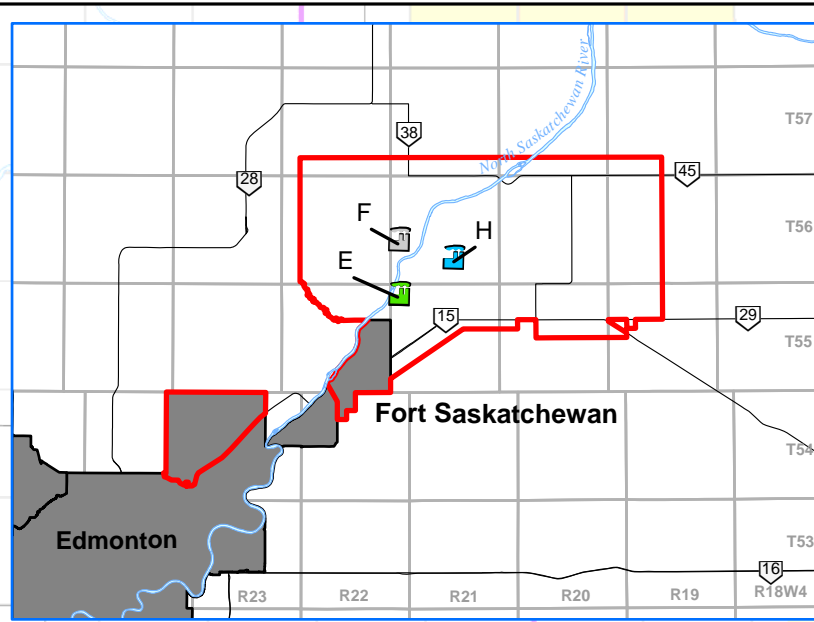
- Oil Sands Area
- Surface Mineable Area
- Industrial Heartland
- Leased Oil Sands Area
- Municipality
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- Hydrography
- Major Highway

0 10 20
Kilometers

REF. #	OPERATOR - PROJECT NAME	PROJECT TYPE	STAGE
Upgrader			
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B	Nexen - Long Lake	Upgrader	Operating
C	Suncor - Base and Millennium	Upgrader	Operating
D	Syncrude - Mildred Lake	Upgrader	Operating
G	Value Creation - Terre de Grace Pilot	Upgrader	Approved
I	Value Creation - Advanced TriStar	Upgrader	Application
J	Value Creation - Tristar Pilot	Upgrader	Application
Athabasca			
1	Laricina Energy - Saleski SAGD Pilot	Experimental	Operating
2	Suncor - Dover Demonstration	Experimental	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	Mining	Operating
9	Cenovus - Pelican Lake III	Primary	Operating
10	CNRL - Brintnell	Primary	Operating
11	CNRL - Cherpeta	Primary	Operating
12	CNRL - Goodflow	Primary	Operating
13	CNRL - South Brintnell	Primary	Operating
14	CNRL - South Wabasca	Primary	Operating
15	CNRL - Wabasca North	Primary	Operating
16	CNRL - Woodenhouse	Primary	Operating
17	Husky - Amadou	Primary	Operating
18	Husky - McMullen Primary Heavy Oil	Primary	Operating
19	Legacy O&G - Brintnell 974	Primary	Operating
20	Black Pearl Resources - Blackrod SAGD Pilot	Thermal	Operating
21	Cenovus - Christina Lake Thermal	Thermal	Operating
22	Cenovus - Foster Creek	Thermal	Operating
23	Cenovus - Pelican Lake Grand Rapids	Thermal	Operating
24	CNRL - Kirby Commercial Project	Thermal	Operating
25	Comanche - Algar	Thermal	Operating
26	Comanche - Great Divide	Thermal	Operating
27	Conoco Phillips - Summit	Thermal	Operating
28	Devon - Jackfish 2 SAGD Thermal Project	Thermal	Operating
29	Devon - Jackfish SAGD Thermal Project	Thermal	Operating
30	Grizzly Oil Sands - Algar Lake	Thermal	Operating
31	Husky - McMullen Thermal Conduction Pilot	Thermal	Operating
32	JACOS - Hangingstone	Thermal	Operating
33	Laricina Energy - Germain	Thermal	Operating
34	MEG Energy - Christina Lake Regional	Thermal	Operating
35	MEG Energy - Christina Lake Regional Project Phase 3 SE	Thermal	Operating
36	Nexen - Long Lake	Thermal	Operating
37	Southern Pacific - STP McKay SAGD	Thermal	Operating
38	Statoil - Letsmer Demonstration Project	Thermal	Operating
39	Suncor - Firebag	Thermal	Operating
40	Suncor - MacKay River	Thermal	Operating
41	Suncor - Fort Hills Oil Sands Project	Mining	Construction
42	Athabasca Oil Sands - Hangingstone	Thermal	Construction
43	Cenovus - Clearwater Thermal Project	Thermal	Construction
44	Cenovus - Narrows Lake	Thermal	Construction
45	Devon - Jackfish 3 SAGD Project	Thermal	Construction
46	Harvest Energy - BlackGold	Thermal	Construction
47	Husky - Sunrise Thermal	Thermal	Construction
48	JACOS - Hangingstone Expansion Project	Thermal	Construction
49	MacKay Operating Corp. - MacKay River	Thermal	Construction
50	N-Solv Corporation - Dover	Thermal	Construction
51	Statoil - Corner	Thermal	Construction
52	Sunshine Oilsands - West Ellis	Thermal	Construction
53	Athabasca Oil Sands - Dover West Carbonates (Leduc)	Experimental	Approved
54	Oak Point Energy - Lewis SAGD Pilot	Experimental	Approved
55	BP P.L.C. - Terre de Grace	Thermal	Approved
56	Brion Energy - Dover Commercial Project	Thermal	Approved
57	Cavelier Energy Inc. - Hoole	Thermal	Approved
58	Cenovus - West Kirby	Thermal	Approved
59	CNRL - Kirby Expansion (North)	Thermal	Approved
60	Koch - Muskwa	Thermal	Approved
61	Suncor - Meadow Creek	Thermal	Approved
62	Sunshine Oilsands - Thickwood	Thermal	Approved
63	Value Creation - Tristar Pilot	Thermal	Approved
64	Husky - Saleski Carbonate Pilot	Experimental	Application
65	Shell - Pierre River	Mining	Application
66	Suncor - Voyageur South	Mining	Application
67	Teck Resources - Frontier	Mining	Application
68	CNRL - McLaren Channel Deposit	Primary	Application
69	Athabasca Oil Sands - Dover West Sands & Clastics	Thermal	Application
70	Black Pearl Resources - Blackrod Commercial	Thermal	Application
71	Cenovus - Telephone Lake Borealis	Thermal	Application
72	CNRL - Grouse	Thermal	Application
73	Devon - Pike	Thermal	Application
74	Grizzly Oil Sands - May River	Thermal	Application
75	Grizzly Oil Sands - Thickwood	Thermal	Application
76	Imperial Oil - Aspen	Thermal	Application
77	Koch - Dunkirk	Thermal	Application
78	Marathon Oil Corporation - Birchwood	Thermal	Application
79	MEG Energy - Summit	Thermal	Application
80	OSUM - Sepiko Kesik	Thermal	Application
81	Prosper Petroleum Ltd. - Rigel	Thermal	Application
82	SilverWillow Energy - Audet Pilot	Thermal	Application
83	Statoil - Hangingstone	Thermal	Application
84	Statoil - Thornbury	Thermal	Application
85	Sunshine Oilsands - Legend Lake	Thermal	Application
86	Summont Energy - Wildwood	Thermal	Application
87	Value Creation - Advanced TriStar	Thermal	Application
88	Athabasca Oil Sands - Birch	Thermal	Announced
89	Cenovus - East McMurray	Thermal	Announced
90	Cenovus - Steepbank	Thermal	Announced
91	Cenovus - Winefred Lake	Thermal	Announced
92	CNRL - Birch Mountain	Thermal	Announced
93	CNRL - Gregoire Lake	Thermal	Announced
94	Devon - Jackfish East	Thermal	Announced
95	Suncor - Chard	Thermal	Announced
96	Suncor - Lewis	Thermal	Announced

Notes:
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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
Upgrader			
E	Shell - Scotford	Upgrader	Operating
F	North West Upgrading - Redwater	Upgrader	Construction
H	Value Creation - Heartland	Upgrader	Approved
Cold Lake			
97	Baytex Energy - Mann Lake East	Primary	Operating
98	Baytex Energy - Reita Lake III	Primary	Operating
99	Baytex Energy - Reita Lake I	Primary	Operating
100	Black Pearl Resources - John Lake	Primary	Operating
101	CNRL - Ashmont	Primary	Operating
102	CNRL - Beartrap	Primary	Operating
103	CNRL - Derwent 11574	Primary	Operating
104	CNRL - East Fishing Lake	Primary	Operating
105	CNRL - Edward Lake	Primary	Operating
106	CNRL - Elizabeth	Primary	Operating
107	CNRL - Elk Point	Primary	Operating
108	CNRL - Elk Point Project	Primary	Operating
109	CNRL - Fire Tower	Primary	Operating
110	CNRL - Fishing Lake	Primary	Operating
111	CNRL - Frog Lake	Primary	Operating
112	CNRL - Ft. Kent	Primary	Operating
113	CNRL - John Lake	Primary	Operating
114	CNRL - John Lake 11428	Primary	Operating
115	CNRL - Lindbergh North	Primary	Operating
116	CNRL - Lindbergh Primary	Primary	Operating
117	CNRL - Marwayne	Primary	Operating
118	CNRL - Moose Hills	Primary	Operating
119	CNRL - North Murphy Lindbergh	Primary	Operating
120	CNRL - Ranger Cold Lake	Primary	Operating
121	CNRL - Reita Lake 11089	Primary	Operating
122	CNRL - Reita Lake II	Primary	Operating
123	CNRL - Seibert Lake	Primary	Operating
124	CNRL - South Lindbergh	Primary	Operating
125	CNRL - West Marwayne	Primary	Operating
126	Devon - East Tulabi John Lake	Primary	Operating
127	Devon - Iron River	Primary	Operating
128	Devon - Manatokan	Primary	Operating
129	Devon - Manatokan 10310	Primary	Operating
130	Devon - Mann North	Primary	Operating
131	Devon - Tulabi/John Lake	Primary	Operating
132	Gear Energy - Lindbergh Louis	Primary	Operating
133	Gear Energy - Passage Elk	Primary	Operating
134	Gear Energy - Swimming	Primary	Operating
135	Harvest Operations - Lindbergh South	Primary	Operating
136	Husky - Lindbergh 10259	Primary	Operating
137	Husky - Lindbergh 10619	Primary	Operating
138	Husky - Lindbergh 10812	Primary	Operating
139	Husky - Lindbergh 11041	Primary	Operating
140	Husky - Lindbergh 11205	Primary	Operating
141	Husky - Lindbergh 9873, 11822, 11541	Primary	Operating
142	Husky - Marwayne 10597	Primary	Operating
143	Husky - Marwayne 11287	Primary	Operating
144	Husky - Marwayne 7990	Primary	Operating
145	Husky - Marwayne 8655	Primary	Operating
146	Husky - Tucker Lake 9835	Primary	Operating
147	Long Run Exploration - Lindbergh 10631	Primary	Operating
148	Solara - Lindbergh 11429	Primary	Operating
149	Twin Butte Energy - Frog Lake	Primary	Operating
150	Twin Butte Energy - Frog Lake 11256	Primary	Operating
151	Twin Butte Energy - Swimming 11191	Primary	Operating
152	Baytex Energy - Gemini Pilot	Thermal	Operating
153	CNRL - Burnt Lake	Thermal	Operating
154	CNRL - Elk Point CA	Thermal	Operating
155	CNRL - Lindbergh CA	Thermal	Operating
156	CNRL - Primrose	Thermal	Operating
157	CNRL - Wolf Lake CA	Thermal	Operating
158	Husky - Tucker	Thermal	Operating
159	Imperial Oil - Cold Lake	Thermal	Operating
160	Pengrowth - Lindbergh SAGD Pilot	Thermal	Operating
161	Shell - Orion	Thermal	Operating
162	Husky - Caribou Lake	Thermal	Approved
163	OSUM - Taiga	Thermal	Approved
164	Rife Resources - Upper Mannville	Primary	Application
165	Birchwood Resources - Sage Thermal Pilot	Thermal	Application
166	Devon - Walleye	Thermal	Application

Notes:
Primary/EOR - These projects utilize the natural energy available in the reservoirs (in some cases supplemented by non-thermal EOR processes) to produce bitumen.
Thermal - These projects apply thermal energy (usually steam) in situ 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.

Cold Lake Oil Sands Projects and Industrial Heartland Upgraders

DISCLAIMER:
 This map excludes active projects with production of less than 1,000 barrels of bitumen in the last six months.

Locations are approximate and may not represent the full extent of project areas. Leased Oil Sands Area information is shown to the nearest quarter section, and therefore may appear to include minerals not owned by the Alberta Crown and/or Minerals Reserved From Disposition.

The data represented was obtained from the source information listed and internal records as well as public announcements made at the time of publication and are subject to change; therefore the Government of Alberta assumes no responsibility for discrepancies at time of use.

PROJECT STATUS DEFINITION:
 Operating: Currently producing bitumen and/or oil sands product.
 Construction: On-site construction has commenced.
 Approved: Regulatory approvals required to operate have been received.
 Application: Application is being reviewed by the AER and/or ESRD.
 Announced: Operator has disclosed intent to construct project.

SOURCE INFORMATION:
 Projects & Upgraders Information:
 - Oil Sands Administration & Strategic Information System, Alberta Energy
 - Alberta Energy Regulator - Integrated Application Registry
 - Alberta Oil Sands Industry - Quarterly Update (Spring 2014)
 - Oilsands Review & CanOils
 Industrial Heartland: Alberta's Industrial Heartland Association (AIHA)
 Leased Oil Sands Area: Alberta Energy (July 2014)
 Oil Sands & Surface Mineable Areas: Alberta Energy Regulator (AER)
 Urban Development Sub-Region (UDSR): Environment & Sustainable Resource Development (ESRD)
 Base Data provided by Spatial Data Warehouse Ltd.

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Transverse Mercator Projection (10TM)
 North American Datum 1983 (NAD83)

Date: July 2014
 Author: Oil Sands Operations, Alberta Energy (MN)
 Produced by: Resource Mapping & Analysis, Alberta (JS)

Project Status

- Operating (65)
- Construction (0)
- Approved (2)
- Application (3)
- Announced (0)

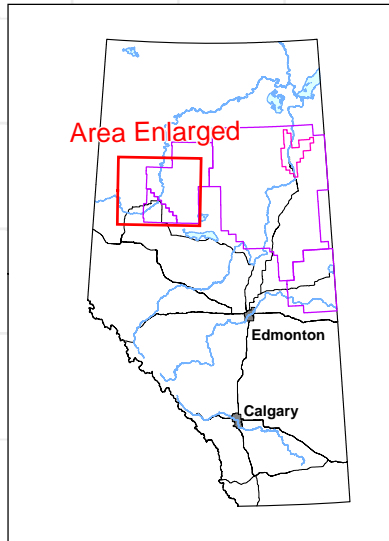
Upgrader Status

- Operating (1)
- Construction (1)
- Approved (1)
- Application (0)

Other Information

- Oil Sands Area
- Surface Mineable Area
- Industrial Heartland
- Leased Oil Sands Area
- Municipality
- Urban Development Sub-Region
- ~ Hydrography
- Major Highway





REF. #	OPERATOR - PROJECT NAME	PROJECT TYPE	STAGE
Peace River			
167	Penn West Petroleum Ltd. - Seal Harmon Valley South Thermal Pilot	Experimental	Operating
168	Baytex Energy - Cadotte Heavy Oil	Primary	Operating
169	Baytex Energy - Dawson 11327	Primary	Operating
170	Baytex Energy - Reno	Primary	Operating
171	Baytex Energy - Tangent 11437	Primary	Operating
172	Baytex Energy - Harmon Valley Bluesky	Primary	Operating
173	Koch - Seal South	Primary	Operating
174	Murphy Oil - Chipmunk	Primary	Operating
175	Murphy Oil - Chipmunk II	Primary	Operating
176	Murphy Oil - Cliffdale	Primary	Operating
177	Murphy Oil - Murphy Seal	Primary	Operating
178	Murphy Oil - Peace River	Primary	Operating
179	Murphy Oil - Seal I	Primary	Operating
180	Murphy Oil - Seal Cadotte	Primary	Operating
181	Murphy Oil - Seal-Northern Cadotte Block	Primary	Operating
182	Murphy Oil - Seal-Northern Cadotte Block II	Primary	Operating
183	Penn West Petroleum - Harmon Valley	Primary	Operating
184	Penn West Petroleum - Seal Cadotte	Primary	Operating
185	Penn West Petroleum - Seal Harmon Valley South	Primary	Operating
186	Penn West Petroleum - Seal North	Primary	Operating
187	Shell - Cliffdale	Primary	Operating
188	Shell - Galloway	Primary	Operating
189	Baytex Energy - Cliffdale	Thermal	Operating
190	Penn West Petroleum - Dawson Seal	Thermal	Operating
191	Shell - Carmon Creek	Thermal	Operating
192	Shell - Peace River	Thermal	Operating
193	Touchstone Exploration - Dawson	Thermal	Operating
194	Andora - Sawn Lake	Thermal	Construction
195	Penn West Petroleum - Seal Main East	Primary	Approved
196	Northern Alberta Oil - Sawn Lake	Thermal	Approved
197	Baytex Energy - Walrus	Primary	Application
198	One Earth Oil & Gas Inc. - Bluesky	Primary	Application

Peace River Oil Sands Projects

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 - Oilsands Review & CanOils
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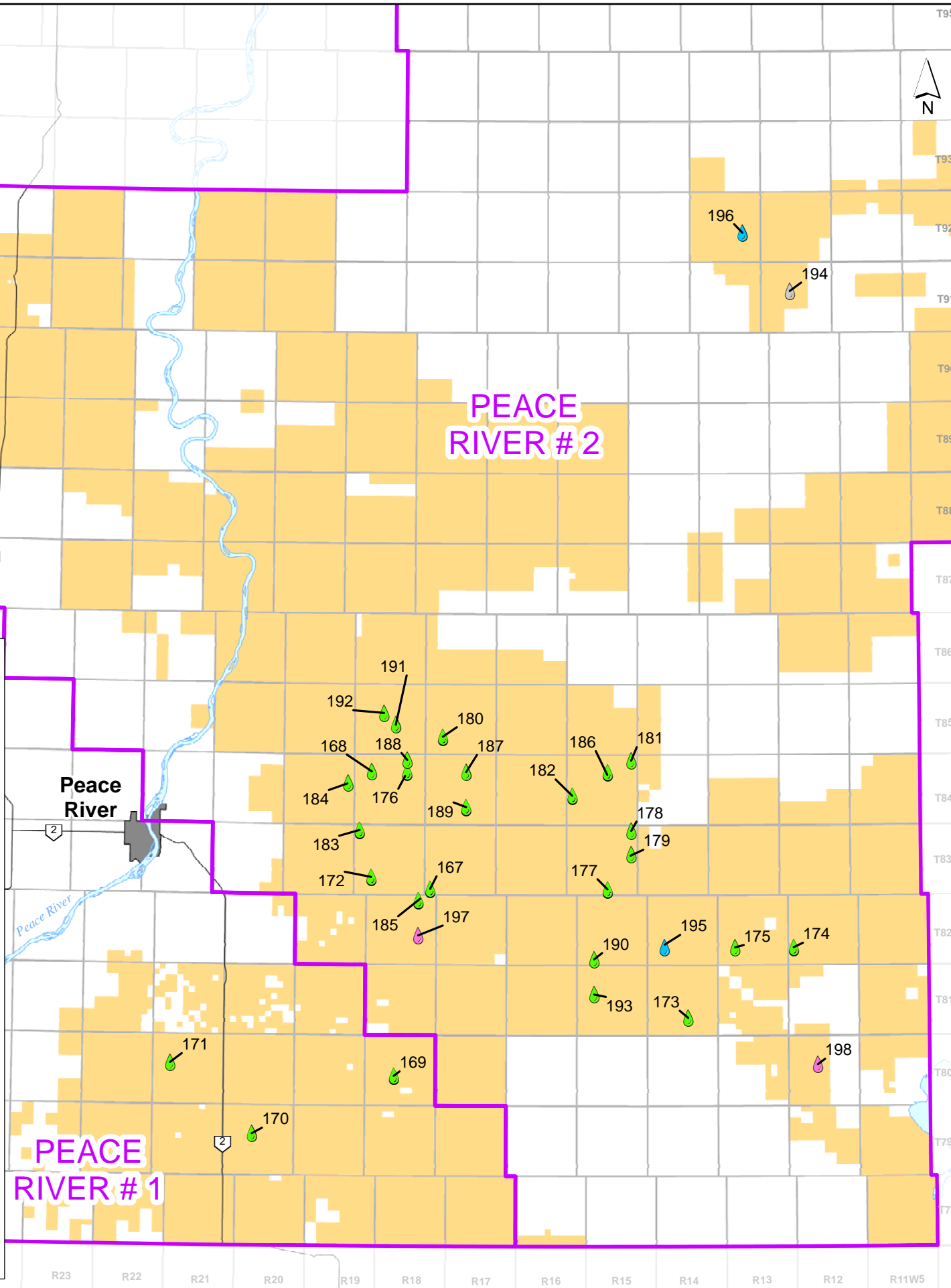


Project Status

- Operating (27)
- Construction (1)
- Approved (2)
- Application (2)
- Announced (0)

Other Information

- Oil Sands Area
- Surface Mineable Area
- Industrial Heartland
- Leased Oil Sands Area
- Municipality
- Urban Development Sub-Region
- Hydrography
- Major Highway



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