

ENERGY RESOURCES CONSERVATION BOARD

IN THE MATTER of the *ENERGY RESOURCES CONSERVATION ACT*, R.S.A. 2000, Chapter E-10; the *OIL AND GAS CONSERVATION ACT*, R.S.A. 2000, Chapter O-7; and Section 3 of the *OIL SANDS CONSERVATION REGULATION*, AR 76/88.

AND IN THE MATTER OF APPLICATION NUMBER 1647807 and a Submission filed on April 15, 2010 by Athabasca Oil Sands Corp.

INTERIM SHUT-IN ORDER 11-001

WHEREAS on May 7, 2009, Sunshine Oilsands Ltd. (Sunshine) filed Application No. 1613543 with the Energy Resources Conservation Board (ERCB/Board), requesting that the ERCB shut in gas production from 155 intervals in 104 wells in the northern part of the Athabasca Oil Sands Area;

AND WHEREAS on May 21, 2009, Total E&P Canada Limited (Total) filed Application No. 1616123 to have the perforated interval in the well at 6-4-94-17W4M included within Sunshine's region of influence;

AND WHEREAS on September 25, 2009, Sunshine requested the permanent shut-in of gas production from three additional intervals, of which two were in additional wells;

AND WHEREAS on February 25, 2010, the Board scheduled a final hearing to commence on November 23, 2010 for the Sunshine and Total applications, and Application 1506272 by Paramount Energy Operating Corp. (predecessor to Perpetual Energy Operating Corp. [Perpetual]) for approval to produce gas;

AND WHEREAS on April 15, 2010, Athabasca Oil Sands Corp. (Athabasca) filed a submission to support Sunshine's application and requested interim and permanent shut-in of 38 intervals in 25 wells and filed Application No. 1647807 requesting interim and permanent shut-in of 256 intervals in 188 wells;

AND WHEREAS on June 30, 2010, the Board decided to postpone the final hearing of the applications by Sunshine, Total, and Perpetual in order to first consider, in a written hearing, Athabasca's interim shut-in submission and application;

AND WHEREAS on May 10, 2011, the Board issued Decision 2011 ABERCB 012 with respect to Athabasca's interim shut-in submission and application.

THEREFORE, for the purpose of conservation of the ultimate recovery of bitumen in the Wabiskaw-McMurray of the Athabasca Oil Sands Area, it is ordered that

1. The licensees of the wells listed in Tables 1 and 2 attached to this Order, or their respective successors, shall shut in or cause to remain shut in (as the case may be), on an interim basis, the particular intervals listed in Tables 1 and 2 attached to this Order, effective the 31st day of May, 2011.
2. In overlapping gas pools, where one pool is allowed to produce and another pool or other pools are required to be or remain shut in, the pools must be segregated in all the wellbores that encounter a pool that is allowed to produce. Zonal segregation tests demonstrating segregation in the wellbores shall be conducted and submitted to the Board in accordance with subsections 11.150(1) and (2) of the *Oil and Gas Conservation Regulations*. If segregation between pools in all the wellbores is not achieved or is not demonstrated by zonal segregation tests that are submitted to the Board, then all pools encountered by the wellbores must be or must remain shut in (as the case may be).
3. This Order supersedes any previously issued orders or approvals respecting commingled production of Wabiskaw-McMurray and Devonian gas from the intervals listed in Tables 1 and 2.

Made at the City of Calgary, in the Province of Alberta, this 25th day of May, 2011.

ENERGY RESOURCES CONSERVATION BOARD

<original signed by>

**J. D. Dilay, P. Eng.
Board Member**

Table 1. Shut-in Order 11-001

Note that intervals not requested for shut-in by Athabasca but shut in by the Board because they are in the same pools as the intervals requested for shut-in by Athabasca or are in contact with potentially recoverable bitumen are indicated by *.

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
LIEGE	LEDUC B	00/13-09-092-18W4/0	250.8	260.4	Leduc	CNRL
		00/04-16-092-18W4/0*	256	263.3	Leduc	CNRL
	MCMURRAY AA	00/05-32-091-17W4/0*	218.8	223	McMurray #1	CNRL
	MCMURRAY BB	00/09-10-092-17W4/0	209.2	212.5	McMurray #1	PERPETUAL
	MCMURRAY DD	00/02-10-093-17W4/0	207.8	210.4	McMurray #1	PERPETUAL
	MCMURRAY F	00/13-23-091-18W4/2	321.2	820	McMurray #1	CNRL
		00/07-27-091-18W4/2	338	816	McMurray #1	CNRL
		00/07-33-091-18W4/0*	225.8	230.5	McMurray #1	CNRL
		00/07-04-092-18W4/2*	227	235	McMurray #1	CNRL
		00/11-04-092-18W4/0*	230.2	235	McMurray #1	CNRL
		02/10-05-092-18W4/0*	232.4	235	McMurray #1	CNRL
		00/10-08-092-18W4/0*	226.5	231.5	McMurray #1	CNRL
		00/07-09-092-18W4/0*	231.5	236	McMurray #1	CNRL
		00/05-16-092-18W4/0*	225	232.8	McMurray #1	CNRL
		00/06-17-092-18W4/0*	228.8	230	McMurray #1	CNRL
	MCMURRAY FF	00/12-13-092-17W4/2	279.2	391.7	McMurray	PERPETUAL
		00/08-14-092-17W4/0	259.9	397	McMurray	PERPETUAL
	MCMURRAY H	00/14-03-091-17W4/2*	208	212.8	McMurray #1	CNRL
		00/14-04-091-17W4/0*	212.5	215	McMurray #1	CNRL
		00/15-04-091-17W4/0	312	834	McMurray #1	CNRL
		00/10-09-091-17W4/2*	207	212	McMurray #1	CNRL
		00/11-10-091-17W4/0*	205.9	211.4	McMurray #1	CNRL
		00/12-11-091-17W4/0*	204	207	McMurray #1	CNRL
		00/03-15-091-17W4/2*	205.6	209.1	McMurray #1	CNRL
		00/07-16-091-17W4/0*	208.6	213	McMurray #1	CNRL
	MCMURRAY J	00/11-10-091-17W4/0*	213.8	214.7	McMurray #2	CNRL
	MCMURRAY M	00/08-27-091-16W4/2*	186	188	McMurray #1	PERPETUAL
		00/05-32-091-16W4/2*	264	421	McMurray #1	PERPETUAL
		00/07-34-091-16W4/0*	180.1	184.5	McMurray #1	PERPETUAL
		00/03-06-092-16W4/0*	273.3	322.6	McMurray #1	PERPETUAL
		00/07-09-092-16W4/2*	264	516	McMurray #1	PERPETUAL
		02/02-16-092-16W4/2*	223.1	269	McMurray #1	PERPETUAL
		00/03-20-092-16W4/2*	316	422	McMurray #1	PERPETUAL
		00/15-01-092-17W4/0	200.2	204	McMurray #1	PERPETUAL
	MCMURRAY N	00/16-15-091-16W4/0*	199.6	206.1	McMurray #2	PERPETUAL
		00/09-22-091-16W4/2*	288	541	McMurray #2	PERPETUAL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	MCMURRAY N (cont'd)	00/08-27-091-16W4/2*	196.8	207	McMurray #2	PERPETUAL
		00/07-34-091-16W4/0*	192.1	204	McMurray #2	PERPETUAL
	MCMURRAY Q	00/14-21-092-17W4/0	297.9	610	McMurray	PERPETUAL
		00/11-28-092-17W4/0	217.6	221.5	McMurray	PERPETUAL
	MCMURRAY R	00/03-04-093-17W4/0	216.5	219.3	McMurray #1	PERPETUAL
	MCMURRAY T	00/06-23-091-17W4/2*	203	205.8	McMurray #1	CNRL
	MCMURRAY U	00/06-06-092-16W4/0*	228	229	L McMurray	PERPETUAL
	WABISKAW BB	02/10-34-091-18W4/0*	229.2	232.8	Wabiskaw C	CNRL
	WABISKAW CC	00/06-03-092-18W4/0*	230.9	234	Wabiskaw C	CNRL
	WABISKAW DD	00/02-23-092-17W4/0*	204.4	212	Wabiskaw C	PERPETUAL
	WABISKAW EE	00/03-29-092-17W4/0*	222	229	Wabiskaw C	PERPETUAL
	WABISKAW Q	00/04-12-093-18W4/0*	225.8	232	Wabiskaw D	CNRL
	WABISKAW X	02/13-21-092-17W4/0	201.5	203.0	Wabiskaw A	PERPETUAL
	WABISKAW Y	00/11-31-093-17W4/0	231.5	233	Wabiskaw #1	PERPETUAL
	UNDEFINED (040)	00/11-28-092-17W4/0	199.3	200.5	Wabiskaw	PERPETUAL
	UNDEFINED (058)	00/13-05-092-17W4/0*	223	231	Wabiskaw C	PERPETUAL
		00/14-06-092-17W4/0*	231	234	McMurray #1	PERPETUAL
	UNDEFINED (066)	00/04-36-091-17W4/0	200	204.2	McMurray #1	CNRL
	UNDEFINED (076)	00/07-15-093-18W4/0*	242.7	244.5	McMurray	CNRL
	UNDEFINED (081)	02/13-21-092-17W4/0	234.5	235.5	Wabiskaw D	PERPETUAL
	Not designated	00/07-09-091-17W4/0*	393.2	804.5	Wabiskaw C	CNRL
	Not designated	00/06-10-091-17W4/0*	304	773	Wabiskaw C	CNRL
	Not designated	00/03-15-091-17W4/0*	210	211.5	Wabiskaw C	CNRL
	Not designated	00/06-23-091-17W4/0*	211.8	212.3	Wabiskaw D	CNRL
	Not designated	00/10-29-091-17W4/0*	219.7	220.5	Wabiskaw C	CNRL
	Not designated	00/07-31-091-17W4/0*	221	225.7	Wabiskaw C	CNRL
	Not designated	00/04-36-091-17W4/0	209.5	210	McMurray #2	CNRL
	Not designated	00/10-01-091-18W4/0*	208.3	212	Wabiskaw C	CNRL
	Not designated	00/10-01-091-18W4/0*	217.3	218.2	Wabiskaw D	CNRL
	Not designated	02/10-26-091-18W4/0*	222	224	Wabiskaw C	CNRL
	Not designated	00/07-27-091-18W4/2*	288.9	338	Wabiskaw C	CNRL
	Not designated	00/08-28-091-18W4/0*	225.8	226.8	Wabiskaw C	CNRL
	Not designated	00/09-10-092-17W4/0	189	190.4	Wabiskaw A	PERPETUAL
	Not designated	00/09-10-092-17W4/0	229	230.5	McMurray	PERPETUAL
	Not designated	02/09-10-092-17W4/0	253	388	Wabiskaw A	PERPETUAL
	Not designated	00/06-16-092-17W4/0	198.2	199.8	Wabiskaw A	PERPETUAL
	Not designated	00/06-16-092-17W4/0	220	221	Wabiskaw C	PERPETUAL
	Not designated	00/14-19-092-17W4/0	208.4	209.4	Wabiskaw A	PERPETUAL
	Not designated	00/14-19-092-17W4/0	231.5	232.8	Wabiskaw C	PERPETUAL
	Not designated	00/14-19-092-17W4/0	235.6	236.6	Wabiskaw C	PERPETUAL
	Not designated	00/04-26-092-17W4/0	204	205	Wabiskaw A	PERPETUAL
	Not designated	00/04-26-092-17W4/0	216	218	Wabiskaw C	PERPETUAL
	Not designated	00/07-30-092-17W4/0	206.6	208.8	Wabiskaw A	PERPETUAL
	Not designated	00/07-30-092-17W4/0	229	230.2	Wabiskaw C	PERPETUAL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	Not designated	02/06-10-092-18W4/0*	230.8	235	Wabiskaw C	CNRL
	Not designated	00/02-03-093-17W4/0	214	215	Wabiskaw C	PERPETUAL
	Not designated	00/03-12-093-17W4/0	198	200	Wabiskaw A	PERPETUAL
	Not designated	00/03-12-093-17W4/0	202	203	Wabiskaw A	PERPETUAL
	Not designated	00/06-04-094-17W4/0*	229.9	231	Wabiskaw C	PERPETUAL
	Not designated	00/12-11-094-17W4/0	231.8	233.2	Wabiskaw A	PERPETUAL
	Not designated	AA/14-31-094-17W4/0*	247	265	Wabiskaw C	SUNSHINE
	Not designated	AA/14-31-094-17W4/0*	270	270.5	Wabiskaw D	SUNSHINE
	Not designated	00/12-12-094-18W4/2	235.5	237.5	Wabiskaw C	PERPETUAL
	Not designated	00/12-12-094-18W4/2	242.6	243.4	Wabiskaw D	PERPETUAL
	Not designated	00/12-12-094-18W4/2	244	245.5	Wabiskaw D	PERPETUAL
	Not designated	AA/07-36-094-18W4/0*	269	269.5	Wabiskaw C	SUNSHINE

Table 2. Shut-in Order 11-001

Note that intervals not requested for shut-in by Athabasca but shut in by the Board because they are in the same pools as the intervals requested for shut-in by Athabasca or are in contact with potentially recoverable bitumen are indicated by *.

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
LIEGE	GROSMONT A	00/05-29-091-20W4/0	236.5	244.3	Grosmont C	PERPETUAL
		00/03-30-091-20W4/0	231	248.2	Grosmont C	PERPETUAL
		00/10-31-091-20W4/0	226.5	251.7	Grosmont	PERPETUAL
		02/07-26-091-21W4/0	245	254.1	Grosmont C	CNRL
		00/06-36-091-21W4/0	245.1	257	Grosmont C	CNRL
		00/01-05-092-20W4/0	224	247.5	Grosmont C	CNRL
		00/07-06-092-20W4/0	219.2	251.8	Grosmont C	CNRL
		00/11-07-092-20W4/0	228	257.5	Grosmont C	CNRL
		00/11-08-092-20W4/0	215.5	243.23	Grosmont	CNRL
		00/10-18-092-20W4/0	229.5	258.8	Grosmont C	CNRL
		00/10-19-092-20W4/0	223	254.3	Grosmont C	CNRL
		00/02-20-092-20W4/0	224	246	Grosmont	CNRL
		00/11-22-092-20W4/0	214	243	Grosmont	CNRL
		00/07-28-092-20W4/0	212	245.6	Grosmont	CNRL
		00/06-29-092-20W4/0	214.6	241.9	Grosmont	CNRL
		00/06-31-092-20W4/0	231	262.5	Grosmont C	CNRL
		00/15-01-092-21W4/0	241.2	247.5	Grosmont	CNRL
		00/06-02-092-21W4/0	251.5	260.4	Grosmont C	CNRL
		00/07-09-092-21W4/0	270.5	282	Grosmont	CNRL
		00/06-10-092-21W4/0	251	271	Grosmont	CNRL
		00/11-12-092-21W4/0	247	269.1	Grosmont	CNRL
		00/06-13-092-21W4/0	250.5	270.9	Grosmont	CNRL
		00/10-14-092-21W4/0	241.8	263	Grosmont	CNRL
		00/07-15-092-21W4/0	241.8	265.2	Grosmont	CNRL
		00/01-16-092-21W4/2	265.8	282.2	Grosmont C	CNRL
		00/07-17-092-21W4/0	260.36	261.35	Grosmont C	CNRL
		00/10-20-092-21W4/0	242.2	262	Grosmont C	CNRL
		00/10-21-092-21W4/0	249	272.6	Grosmont	CNRL
		00/10-22-092-21W4/0	246.5	265.9	Grosmont	CNRL
		00/07-24-092-21W4/0	226.6	256	Grosmont	CNRL
		00/06-26-092-21W4/0	244.3	279.3	Grosmont	CNRL
		00/05-27-092-21W4/0	238.4	262.3	Grosmont	CNRL
		00/10-32-092-21W4/0	258.5	286.7	Grosmont	CNRL
		00/06-35-092-21W4/0	245	275.8	Grosmont	CNRL
		00/06-36-092-22W4/0*	318	333	Grosmont C	TERCERO
		00/06-03-093-20W4/0	237	240.2	Grosmont	CNRL
		00/11-08-093-20W4/0	229	256.3	Grosmont	CNRL
		00/06-29-093-20W4/0	289	314	Grosmont	CNRL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	GROSMONT A (cont'd)	00/05-31-093-20W4/0	332	363.4	Grosmont C	PERPETUAL
		00/06-01-093-21W4/0	233	269	Grosmont	CNRL
		00/02-02-093-21W4/3	241	278.7	Grosmont B&C	CNRL
		00/02-03-093-21W4/0	246.6	277	Grosmont B&C	CNRL
		00/03-04-093-21W4/0	254.5	282.3	Grosmont C	CNRL
		00/06-10-093-21W4/0	253	279.7	Grosmont	CNRL
		00/11-14-093-21W4/0*	270.1	295.9	Grosmont	IMPERIAL
		00/16-33-093-21W4/0	359	391.1	Grosmont B&C	PERPETUAL
		00/15-35-093-21W4/0	356.2	390.8	Grosmont B&C	PERPETUAL
		00/08-02-093-22W4/0*	325	344.8	Grosmont C	TERCERO
		00/16-02-093-22W4/0*	342.9	349.2	Grosmont	TERCERO
		00/09-11-093-22W4/0*	342	355.6	Grosmont C	TERCERO
		00/15-11-093-22W4/0*	355	368.1	Grosmont C	TERCERO
		00/16-15-093-22W4/0*	381.9	392.9	Grosmont C	TERCERO
		00/06-23-093-22W4/0	388.3	411.7	Grosmont C	CNRL
		00/11-26-093-22W4/0	390	405.8	Grosmont	CNRL
		00/07-28-093-22W4/0	414.5	427.9	Grosmont	CNRL
		00/14-35-093-22W4/0	415.4	429.3	Grosmont C	PERPETUAL
		00/07-06-094-20W4/0	355	386.5	Grosmont A&B	PERPETUAL
		00/04-01-094-21W4/0	369.3	392.7	Grosmont AB&C	PERPETUAL
		00/10-02-094-21W4/0*	368.8	408.3	Grosmont AB&C	PERPETUAL
		00/10-03-094-21W4/0	366	400.9	Grosmont AB&C	PERPETUAL
		02/11-04-094-21W4/0	377.9	410	Grosmont B&C	PERPETUAL
		00/13-05-094-21W4/0	384	409.7	Grosmont B&C	PERPETUAL
		00/15-06-094-21W4/0	356.2	382.2	Grosmont B&C	PERPETUAL
		02/06-08-094-21W4/0	364	392.2	Grosmont B&C	PERPETUAL
		00/07-09-094-21W4/0	372	410.5	Grosmont B&C	PERPETUAL
		00/01-10-094-21W4/0*	368	406.7	Grosmont AB&C	PERPETUAL
		02/10-10-094-21W4/0	359	400.8	Grosmont AB&C	PERPETUAL
		00/06-11-094-21W4/0	339.5	383.9	Grosmont AB&C	PERPETUAL
		00/07-15-094-21W4/0	383	415.6	Grosmont AB&C	PERPETUAL
		00/10-17-094-21W4/0	377.3	394.1	Grosmont	PERPETUAL
		02/11-22-094-21W4/0	386.6	415.6	Grosmont AB&C	PERPETUAL
		00/04-23-094-21W4/0	349.7	387.3	Grosmont AB&C	PERPETUAL
		00/11-29-094-21W4/0	469.4	489.5	Grosmont	PERPETUAL
		00/10-01-094-22W4/0	403	430.2	Grosmont B&C	PERPETUAL
		00/04-02-094-22W4/0	411	433.8	Grosmont C	PERPETUAL
		00/05-03-094-22W4/0	393	419	Grosmont	PERPETUAL
		00/07-09-094-22W4/0	418.2	445	Grosmont	CNRL
		00/07-19-094-22W4/0	462.5	472.7	Grosmont C	PERPETUAL
		00/11-21-094-22W4/0	481	491.2	Grosmont	PERPETUAL
		00/11-22-094-22W4/0	466	474.3	Grosmont	PERPETUAL
		00/14-23-094-22W4/0	467	484.2	Grosmont	PERPETUAL
		00/10-08-095-21W4/0*	520.3	541.3	Grosmont	PERPETUAL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	GROSMONT A (cont'd)	00/07-02-095-22W4/0*	507.5	526.6	Grosmont	PERPETUAL
		00/07-21-095-22W4/0*	509.5	516.2	Grosmont	PERPETUAL
	GROSMONT E	00/07-19-090-19W4/0	244.5	257	Grosmont B	PERPETUAL
		00/04-30-090-19W4/0	240.4	250	Grosmont C	PERPETUAL
		00/06-25-090-20W4/0	238.5	255.5	Grosmont C	PERPETUAL
		00/10-29-090-20W4/0*	225.9	239.0	Grosmont C	BONAVISTA
		00/14-34-090-20W4/0	231.0	259	Grosmont C	PERPETUAL
		00/01-35-090-20W4/0	240.5	259.1	Grosmont B	PERPETUAL
		00/04-35-090-20W4/0	245.6	256.6	Grosmont C	PERPETUAL
		00/04-07-091-19W4/0	233	248	Grosmont C	PERPETUAL
		00/06-01-091-20W4/0	229.8	240.1	Grosmont C	PERPETUAL
		00/07-02-091-20W4/2	229.5	242.8	Grosmont C	PERPETUAL
		00/11-03-091-20W4/0	225.9	242.6	Grosmont C	PERPETUAL
		00/11-07-091-20W4/0	230.3	253	Grosmont C	PERPETUAL
		00/12-17-091-20W4/0	230	255	Grosmont C	PERPETUAL
		00/06-18-091-20W4/0	229	254.1	Grosmont C	PERPETUAL
		00/01-19-091-20W4/0	225.3	258	Grosmont C	PERPETUAL
		00/16-12-091-21W4/0	233.8	250.8	Grosmont C	PERPETUAL
	GROSMONT G	00/13-13-090-19W4/0	231.0	241.6	Grosmont A	PERPETUAL
		00/10-21-090-19W4/0	236.9	249.8	Grosmont B	PERPETUAL
		00/10-22-090-19W4/0	237.5	245.3	Grosmont A	PERPETUAL
		00/06-27-090-19W4/0	231.6	241.0	Grosmont A	PERPETUAL
		00/06-28-090-19W4/0	237.0	244.5	Grosmont B	PERPETUAL
		00/06-35-090-19W4/0	231.5	238.5	Grosmont A	PERPETUAL
		00/11-10-091-19W4/0	242.7	249	Grosmont A	PERPETUAL
		00/10-16-091-19W4/2	251.5	260.5	Grosmont A	PERPETUAL
		02/02-22-091-19W4/0*	243.0	243.7	Grosmont A	PERPETUAL
	GROSMONT H	00/10-03-090-20W4/0	252	260.5	Grosmont C	BONAVISTA
	GROSMONT I	00/10-10-092-19W4/0	266.5	270	Grosmont	PERPETUAL
		00/10-16-092-19W4/0	265.8	270	Grosmont	PERPETUAL
	GROSMONT J	00/02-05-092-19W4/0	251	256.3	Grosmont	PERPETUAL
	MCMURRAY CC	00/02-29-092-19W4/0	251.2	253	McMurray	PERPETUAL
	MCMURRAY K	00/02-26-091-19W4/0	233.5	236	McMurray #1	PERPETUAL
		02/06-35-091-19W4/0	237.5	239.4	McMurray #1	PERPETUAL
		00/06-01-092-19W4/0	238.3	239.1	McMurray #1	PERPETUAL
		00/06-02-092-19W4/0	240.3	241.3	McMurray #1	PERPETUAL
		00/10-16-092-19W4/0*	242.6	243.8	McMurray #1	PERPETUAL
	MCMURRAY L	00/06-02-092-19W4/0	249.8	253	McMurray #2	PERPETUAL
		00/10-10-092-19W4/0	250	251.7	McMurray #2	PERPETUAL
	NISKU-U IRETON-GSMT A	00/16-33-089-20W4/0*	245.8	266.5	Grosmont D	BONAVISTA
		00/10-34-089-20W4/0*	243.3	266.6	Grosmont D	BONAVISTA
		00/07-10-089-21W4/0*	257.1	270.5	Grosmont D	BONAVISTA
		00/11-11-089-21W4/0*	254	267.7	U Ireton	BONAVISTA
		00/05-17-089-21W4/0*	230.8	237.8	Nisku	BONAVISTA

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	NISKU-U IRETON-GSMT A (cont'd)	00/05-17-089-21W4/0*	237.9	254.1	U Ireton	BONAVISTA
		00/11-18-089-21W4/0*	234.9	244.9	Nisku	BONAVISTA
		00/11-18-089-21W4/0*	245	254.2	U Ireton	BONAVISTA
		00/04-19-089-21W4/0*	236.3	250.9	Nisku	BONAVISTA
		00/04-19-089-21W4/0*	251	254.4	U Ireton	BONAVISTA
		00/06-20-089-21W4/0*	219.2	223.4	Nisku	BONAVISTA
		00/06-20-089-21W4/0*	223.5	243.4	U Ireton	BONAVISTA
		00/16-23-089-21W4/0*	242.6	254.1	Grosmont D	BONAVISTA
		00/14-24-089-21W4/0*	240.3	255.5	Grosmont D	BONAVISTA
		00/06-25-089-21W4/0*	243.2	260.3	Grosmont D	BONAVISTA
		00/11-26-089-21W4/0*	243.9	245.9	U Ireton	BONAVISTA
		00/11-26-089-21W4/0*	246	258.2	Grosmont D	BONAVISTA
		00/16-34-089-21W4/0*	224	240.1	Grosmont D	BONAVISTA
		00/10-35-089-21W4/0*	231	246.9	Grosmont D	BONAVISTA
		00/10-11-089-22W4/0*	246.2	260.3	Nisku	BONAVISTA
		00/06-13-089-22W4/0*	240.3	259	Nisku	BONAVISTA
		00/07-14-089-22W4/0*	240.8	257	Nisku	BONAVISTA
		00/16-22-089-22W4/0*	241.5	257.9	Nisku	BONAVISTA
		02/10-23-089-22W4/0*	221.3	244.6	Nisku	BONAVISTA
		02/10-23-089-22W4/0*	244.7	246.7	U Ireton	BONAVISTA
		00/03-24-089-22W4/0*	228.3	244.4	Nisku	BONAVISTA
		00/06-27-089-22W4/0*	242.3	257.8	Nisku	BONAVISTA
		00/07-28-089-22W4/0*	247.6	260.4	Nisku	BONAVISTA
		00/10-03-090-20W4/0	242.0	251.0	Grosmont D	BONAVISTA
		00/11-04-090-20W4/0*	247.2	267.3	Grosmont D	BONAVISTA
		00/11-09-090-20W4/0*	249.6	270.7	Grosmont D	BONAVISTA
		00/10-15-090-20W4/0*	244.5	253	Grosmont D	PERPETUAL
		00/10-17-090-20W4/0*	236.6	246.8	Grosmont D	BONAVISTA
		00/10-28-090-20W4/0*	232.0	236.1	Grosmont D	PERPETUAL
		00/10-29-090-20W4/0*	222.0	222.9	Grosmont D	BONAVISTA
		02/10-02-090-21W4/0	229.6	245.8	Grosmont D	CNRL
		00/10-08-090-21W4/0	229.5	256.7	U Ireton	CNRL
		00/06-14-090-21W4/0	224	241.5	Grosmont D	CNRL
		00/06-15-090-21W4/0	221	251	Grosmont D	CNRL
		00/10-17-090-21W4/0	230.0	257	Grosmont D	CNRL
		00/08-21-090-21W4/0	227.4	235	Grosmont D	CNRL
		00/10-22-090-21W4/0	219.8	248.9	Grosmont D	CNRL
		00/07-26-090-21W4/0	238.7	254.0	Grosmont D	CNRL
		00/11-27-090-21W4/0	217.7	221.7	Grosmont D	CNRL
		00/09-28-090-21W4/0*	222.5	252.5	Grosmont D	CNRL
		00/11-32-090-21W4/0	210.0	240.6	Grosmont D	CNRL
		00/06-33-090-21W4/0	218.5	250.5	Grosmont D	CNRL
		00/05-17-090-22W4/0	219.5	231	Nisku	BONAVISTA

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	NISKU-U IRETON-GSMT A (cont'd)	00/05-17-090-22W4/0*	231	236.5	U Ireton	BONAVISTA
		00/11-18-090-22W4/0	239	257.8	Nisku	BONAVISTA
		00/03-19-090-22W4/0	245	251.5	Nisku	BONAVISTA
		00/03-19-090-22W4/0	251.5	259.5	U Ireton	BONAVISTA
		00/10-24-090-22W4/0	210	237	Grosmont D	CNRL
		00/07-28-090-22W4/0	252.2	269.4	U Ireton	CNRL
		00/02-26-090-23W4/0*	247.8	264	Nisku	CNRL
		00/09-27-090-23W4/0*	256.5	272.9	Nisku	CNRL
		00/12-17-091-20W4/0	228.2	229.8	Grosmont D	PERPETUAL
		00/06-18-091-20W4/0	225.8	227.7	Grosmont D	PERPETUAL
		00/03-03-091-21W4/0	212.5	237.5	Grosmont D	CNRL
		00/11-08-091-21W4/0	225.6	254	Grosmont D	CNRL
		00/16-12-091-21W4/0	229	232.5	Grosmont D	PERPETUAL
		00/11-13-091-21W4/0	226.8	233.3	Grosmont D	PERPETUAL
		00/07-14-091-21W4/0	228.5	246	Grosmont D	CNRL
		00/11-18-091-21W4/0	257	279.2	Grosmont D	CNRL
		00/11-24-091-21W4/0*	232.3	239.8	Grosmont D	CNRL
		02/07-26-091-21W4/0	239	245	Grosmont D	CNRL
		00/06-29-091-21W4/0	260.8	278.8	Grosmont D	CNRL
		00/10-32-091-21W4/0	252	270	Grosmont D	CNRL
		00/06-34-091-21W4/0*	256.1	263	Grosmont D	CNRL
		00/06-36-091-21W4/0	239	245	Grosmont D	CNRL
		00/11-05-091-22W4/0	282.3	290.7	U Ireton	CNRL
		00/11-13-091-22W4/0	259.3	260.1	U Ireton	CNRL
		00/11-13-091-22W4/0	260.1	279.9	Grosmont D	CNRL
		00/07-20-091-22W4/0*	291.3	298.5	U Ireton	TERCERO
		00/07-26-091-22W4/0	272.5	291.3	Grosmont D	CNRL
		00/07-33-091-22W4/0*	287.4	305.4	Grosmont D	TERCERO
		00/11-10-091-23W4/0*	280.5	296.7	Nisku	CNRL
		00/10-24-091-23W4/0*	287.5	294.5	U Ireton	TERCERO
		00/10-24-091-23W4/0*	294.5	303.5	Grosmont D	TERCERO
		00/10-36-091-23W4/0*	296	315	U Ireton	TERCERO
		00/06-02-092-21W4/0	242	248.2	Grosmont D	CNRL
		00/12-04-092-21W4/0	267	268.8	Grosmont D	CNRL
		00/10-06-092-21W4/0	281	298	Grosmont D	CNRL
		00/11-08-092-21W4/0	272.8	274	Grosmont D	CNRL
		00/01-16-092-21W4/2	256.5	260.8	Grosmont D	CNRL
		00/07-17-092-21W4/0	256	258	Grosmont D	CNRL
		00/07-05-092-22W4/0*	306.5	319.7	Grosmont D	TERCERO
		00/07-16-092-22W4/0*	296	319.7	Grosmont D	TERCERO
		00/10-17-092-22W4/0*	303	324.6	Grosmont D	TERCERO
		00/10-20-092-22W4/0*	323.5	345.4	Grosmont D	TERCERO
		00/10-21-092-22W4/0*	310.3	328.9	Grosmont D	TERCERO

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	NISKU-U IRETON-GSMT A (cont'd)	00/16-26-092-22W4/0*	303	313	Grosmont D	TERCERO
		00/12-29-092-22W4/0*	329.5	347	Grosmont D	TERCERO
		00/06-36-092-22W4/0*	309.9	313	Grosmont D	TERCERO
		00/10-11-092-23W4/0*	321.8	331.1	Grosmont D	TERCERO
		00/10-24-092-23W4/0*	334	355	Grosmont D	TERCERO
	WABISKAW D	00/11-07-091-20W4/0	218	224.4	Wabiskaw #1	PERPETUAL
		00/12-17-091-20W4/0	219	227	Wabiskaw #1	PERPETUAL
		00/06-18-091-20W4/0	217	225.8	Wabiskaw #1	PERPETUAL
		02/07-20-091-20W4/0	301.3	467	Wabiskaw #1	PERPETUAL
		00/11-28-091-20W4/0	224.9	228.6	Wabiskaw #1	PERPETUAL
		00/05-29-091-20W4/0	220	225.5	Wabiskaw #1	PERPETUAL
		00/03-30-091-20W4/0	224.3	228.3	Wabiskaw #1	PERPETUAL
		00/01-32-091-20W4/0	311	497	Wabiskaw #1	PERPETUAL
		00/06-33-091-20W4/0	282	515	Wabiskaw #1	PERPETUAL
		00/16-12-091-21W4/0	217	220	Wabiskaw #1	PERPETUAL
		00/11-13-091-21W4/0	219.5	223.8	Wabiskaw #1	PERPETUAL
		00/07-14-091-21W4/0	224.9	227	Wabiskaw #1	CNRL
		00/11-24-091-21W4/0	225.9	229.3	Wabiskaw #1	CNRL
		02/07-26-091-21W4/0	234	237	Wabiskaw #1	CNRL
	WABISKAW E	02/07-20-090-21W4/0	226.8	234.8	Wabiskaw	CNRL
	WABISKAW H	00/07-14-091-19W4/2	299	431	Wabiskaw #1	PERPETUAL
		00/16-15-091-19W4/0	309.0	474.6	Wabiskaw #1	PERPETUAL
		02/02-22-091-19W4/0	213.4	215.3	Wabiskaw #1	PERPETUAL
		00/07-22-091-19W4/0	308	521	Wabiskaw #1	PERPETUAL
		00/11-23-091-19W4/0	292.5	611	Wabiskaw #1	CNRL
		02/05-25-091-19W4/0	354.5	548.0	Wabiskaw #1	PERPETUAL
		00/02-26-091-19W4/0	212.5	216.4	Wabiskaw #1	PERPETUAL
		00/06-35-091-19W4/0	281.3	378.0	Wabiskaw #1	PERPETUAL
		02/06-35-091-19W4/0	218	222	Wabiskaw #1	PERPETUAL
		00/06-01-092-19W4/0	217.5	218.7	Wabiskaw #1	PERPETUAL
		00/06-02-092-19W4/0	220.8	223.6	Wabiskaw #1	PERPETUAL
		00/06-08-092-19W4/0	226.8	227.7	Wabiskaw #1	PERPETUAL
		00/04-09-092-19W4/0	223.9	226	Wabiskaw #1	PERPETUAL
		00/10-10-092-19W4/0	222	224	Wabiskaw #1	PERPETUAL
		00/10-16-092-19W4/0	222.8	224.3	Wabiskaw #1	PERPETUAL
		00/11-17-092-19W4/0	302.9	761	Wabiskaw #1	CNRL
		00/16-18-092-19W4/0	337.6	619	Wabiskaw #1	CNRL
		00/08-19-092-19W4/2	315.5	700.7	Wabiskaw #1	CNRL
		00/06-20-092-19W4/2	308	739	Wabiskaw #1	CNRL
		00/05-28-092-19W4/0	284.2	491.7	Wabiskaw #1	PERPETUAL
		00/02-29-092-19W4/0	228.5	235	Wabiskaw #1	PERPETUAL
		00/11-30-092-19W4/0	222	225.5	Wabiskaw #1	PERPETUAL
		00/08-31-092-19W4/2	298.6	306.8	Wabiskaw #1	PERPETUAL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	WABISKAW H (cont'd)	00/05-32-092-19W4/0	300.4	355.7	Wabiskaw #1	PERPETUAL
		00/06-33-092-19W4/2	284.5	454	Wabiskaw #1	PERPETUAL
		00/11-08-092-20W4/0	210.9	215.4	Wabiskaw #1	CNRL
		00/10-18-092-20W4/0	220	229.5	Wabiskaw #1	CNRL
		00/10-19-092-20W4/0	214.7	222	Wabiskaw #1	CNRL
		00/02-20-092-20W4/2	212	223.5	Wabiskaw #1	CNRL
		00/11-22-092-20W4/0	201.5	213.5	Wabiskaw #1	CNRL
		00/04-24-092-20W4/0	213	217	Wabiskaw #1	CNRL
		00/13-25-092-20W4/0	216.6	222.3	Wabiskaw #1	CNRL
		00/15-26-092-20W4/0	292	712	Wabiskaw #1	CNRL
		00/07-28-092-20W4/0	204	211.5	Wabiskaw #1	CNRL
		00/06-29-092-20W4/0	205.4	213.4	Wabiskaw #1	CNRL
		00/06-31-092-20W4/0	223.8	230.5	Wabiskaw #1	CNRL
		00/09-34-092-20W4/2	291	816	Wabiskaw #1	CNRL
		00/05-36-092-20W4/0	218.4	224.7	Wabiskaw #1	PERPETUAL
		00/06-02-092-21W4/0	239.5	242	Wabiskaw #1	CNRL
		00/12-04-092-21W4/0	256.5	258.1	Wabiskaw #1	CNRL
		00/11-08-092-21W4/0	261.5	263.3	Wabiskaw #1	CNRL
		00/07-09-092-21W4/0	259.5	261.2	Wabiskaw #1	CNRL
		00/11-12-092-21W4/0	239.5	244.5	Wabiskaw #1	CNRL
		00/06-13-092-21W4/0	240.5	247.5	Wabiskaw #1	CNRL
		00/10-14-092-21W4/0	236	241	Wabiskaw #1	CNRL
		00/07-15-092-21W4/0	238.2	241	Wabiskaw #1	CNRL
		00/07-17-092-21W4/0	246.5	250.3	Wabiskaw #1	CNRL
		00/10-20-092-21W4/0	235.5	237	Wabiskaw #1	CNRL
		00/10-21-092-21W4/0	246.5	247.8	Wabiskaw #1	CNRL
		00/10-22-092-21W4/0	238	241	Wabiskaw #1	CNRL
		00/12-23-092-21W4/0	239.6	244.1	Wabiskaw #1	CNRL
		00/11-36-092-21W4/0	229.5	233	Wabiskaw #1	CNRL
		00/14-03-093-19W4/0*	213.1	215.4	Wabiskaw #1	PERPETUAL
		00/10-04-093-19W4/0*	212.1	215.2	Wabiskaw #1	PERPETUAL
		00/11-06-093-19W4/2	223.5	227	Wabiskaw #1	PERPETUAL
		00/03-01-093-20W4/2	316.0	603.7	Wabiskaw #1	PERPETUAL
		00/06-03-093-20W4/0	217	224	Wabiskaw #1	CNRL
	WABISKAW J	00/11-12-091-19W4/0	202.8	206	Wabiskaw #1	PERPETUAL
		00/11-12-091-19W4/2*	202.5	206.5	Wabiskaw #1	PERPETUAL
	WABISKAW L	00/14-24-089-21W4/2*	228.3	230	Wabiskaw A	BONAVISTA
	WABISKAW U	00/10-22-090-21W4/0	214.2	215.5	Wabiskaw #1	CNRL
	WABISKAW V	00/10-22-090-21W4/0*	216.5	218.8	Wabiskaw #2	CNRL
	UNDEFINED (033)	00/14-03-093-19W4/0*	247.3	248.2	Wabiskaw D	PERPETUAL
	UNDEFINED (036)	00/09-28-090-21W4/0	217.4	222.0	Wabiskaw #1	CNRL
	Not designated	00/15-34-088-22W4/0*	253.5	256.5	Nisku	CENOVUS
	Not designated	00/06-25-089-21W4/0*	230.5	233	Wabiskaw A	BONAVISTA
	Not designated	00/11-22-090-20W4/0*	233.5	234.2	Wabiskaw C	PERPETUAL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	Not designated	00/06-25-090-20W4/0	231.0	232.0	Wabiskaw C	PERPETUAL
	Not designated	00/06-27-090-20W4/0*	230.5	231.0	McMurray #1	PERPETUAL
	Not designated	00/10-08-090-21W4/0*	326.0	332.0	Grosmont B	CNRL
	Not designated	00/10-17-090-21W4/0*	226.0	228.0	Wabiskaw A	CNRL
	Not designated	00/11-27-090-21W4/0	211.3	217.0	Wabiskaw A	CNRL
	Not designated	00/06-33-090-21W4/0	215.5	218.5	Wabiskaw A	CNRL
	Not designated	00/05-18-090-22W4/0	237	364	Nisku	SHELL
	Not designated	00/04-07-091-19W4/0	225	226.5	Wabiskaw C	PERPETUAL
	Not designated	00/13-11-091-19W4/0	219.4	221.2	Wabiskaw A	PERPETUAL
	Not designated	00/11-12-091-19W4/2*	232	243	Grosmont A	PERPETUAL
	Not designated	00/04-13-091-19W4/0	203.4	206.4	Wabiskaw A	MIDWAY
	Not designated	00/10-16-091-19W4/2	218.5	219.5	Wabiskaw #1	PERPETUAL
	Not designated	00/10-16-091-19W4/2	237.0	237.8	Wabiskaw C	PERPETUAL
	Not designated	00/02-26-091-19W4/0	240.8	241.2	Wabiskaw D	PERPETUAL
	Not designated	02/01-27-091-19W4/0*	302.5	359.6	Grosmont A	CNRL
	Not designated	02/01-27-091-19W4/2	243.7	247.1	Wabiskaw A	CNRL
	Not designated	00/13-28-091-19W4/2	248.3	248.7	Wabiskaw C	PERPETUAL
	Not designated	00/13-28-091-19W4/2	262.7	269.5	Grosmont A	PERPETUAL
	Not designated	02/08-32-091-19W4/2	229.5	231	Wabiskaw #1	PERPETUAL
	Not designated	02/08-32-091-19W4/2	247.2	249.1	Wabiskaw D	PERPETUAL
	Not designated	02/06-35-091-19W4/0*	239.0	242.0	Wabiskaw C	PERPETUAL
	Not designated	02/06-35-091-19W4/0*	245.0	246.0	Wabiskaw D	PERPETUAL
	Not designated	02/06-35-091-19W4/0	246.7	249.7	Wabiskaw D	PERPETUAL
	Not designated	00/07-02-091-20W4/2	221.0	222.0	Wabiskaw C	PERPETUAL
	Not designated	00/10-07-091-20W4/0	336.3	491.0	Wabiskaw A	PERPETUAL
	Not designated	00/10-01-091-21W4/0	226.0	244.0	Wabiskaw A	CNRL
	Not designated	00/10-01-091-21W4/0	247.0	250.0	Grosmont C	CNRL
	Not designated	00/06-34-091-21W4/0	246.4	249.0	Wabiskaw A	CNRL
	Not designated	00/06-34-091-21W4/0	249.0	258.0	Grosmont D	CNRL
	Not designated	00/06-36-091-21W4/0	235	237.8	Wabiskaw #1	CNRL
	Not designated	00/16-03-091-23W4/0*	237.8	316.3	Grosmont D	SHELL
	Not designated	00/06-01-092-19W4/0*	219.5	252	Wabiskaw A	PERPETUAL
	Not designated	00/06-01-092-19W4/0	268.2	270	Grosmont A	PERPETUAL
	Not designated	00/06-02-092-19W4/0	267	293	Grosmont	PERPETUAL
	Not designated	00/07-03-092-19W4/0	232.5	233.2	Wabiskaw A	PERPETUAL
	Not designated	00/07-03-092-19W4/0	251.7	252	Wabiskaw C	PERPETUAL
	Not designated	00/07-03-092-19W4/0	261.3	261.6	Wabiskaw D	PERPETUAL
	Not designated	00/02-05-092-19W4/0	224	226.5	Wabiskaw A	PERPETUAL
	Not designated	00/02-05-092-19W4/0	242	245	Wabiskaw D	PERPETUAL
	Not designated	00/06-08-092-19W4/0	243.8	244.9	Wabiskaw C	PERPETUAL
	Not designated	00/06-08-092-19W4/0	253	254.8	Grosmont A	PERPETUAL
	Not designated	00/06-08-092-19W4/0*	287	292	Grosmont A	PERPETUAL
	Not designated	00/04-09-092-19W4/0	253.5	287.0	Grosmont A	PERPETUAL
	Not designated	00/04-11-092-19W4/0	266.5	267.3	Grosmont A	PERPETUAL

Field Name	Pool Name	Well ID	Pay Top Depth (TVD)	Pay Base Depth (TVD)	Stratigraphic Interval	Licensee
	Not designated	00/04-11-092-19W4/0*	263.6	294	Grosmont A	PERPETUAL
	Not designated	00/12-18-092-19W4/0	219.3	221.2	Wabiskaw A	CNRL
	Not designated	00/12-18-092-19W4/0*	245.5	246.7	Grosmont A	CNRL
	Not designated	00/03-27-092-19W4/2	216.9	218.1	Wabiskaw A	PERPETUAL
	Not designated	00/03-27-092-19W4/2*	319	375.5	Grosmont A	PERPETUAL
	Not designated	00/02-29-092-19W4/0	261.2	267	Grosmont A	PERPETUAL
	Not designated	00/07-29-092-19W4/0	343.3	502	Wabiskaw A	PERPETUAL
	Not designated	00/11-07-092-20W4/0	222.3	228	Grosmont C	CNRL
	Not designated	00/08-23-092-20W4/0	660.9	869.3	Wabiskaw A	CNRL
	Not designated	00/04-24-092-20W4/0	241.3	245.4	Grosmont A	CNRL
	Not designated	00/13-25-092-20W4/0	233.9	240	Grosmont C	CNRL
	Not designated	00/15-01-092-21W4/0	231.3	235.1	Wabiskaw A	CNRL
	Not designated	00/11-08-092-21W4/0*	278	288	Grosmont C	CNRL
	Not designated	00/01-16-092-21W4/0*	371	377	Grosmont A	CNRL
	Not designated	00/11-06-093-19W4/2*	258	301	Grosmont A	PERPETUAL
	Not designated	00/01-02-093-20W4/0	325.2	575.8	Wabiskaw A	PERPETUAL
	Not designated	00/09-10-093-20W4/0	221.6	226.3	Grosmont B	CNRL
	Not designated	00/02-14-093-20W4/0	235.0	242.2	Grosmont B	CNRL
	Not designated	00/11-14-093-21W4/0	266.5	270.0	Wabiskaw #1	IMPERIAL
	Not designated	00/15-15-093-22W4/0*	383.2	385.5	Grosmont D	TERCERO