



## Pool Reserve Report - Oil      PIMS8310

### THE FOLLOWING RESERVES AND PRODUCTION INFORMATION IS REPORTED

ORIGINAL IN PLACE	= OFFICIAL OIL VOLUME IN PLACE, IN THOUSANDS OF CUBIC METRES.
INITIAL RESERVES	= LATEST ESTIMATED RECOVERABLE OIL RESERVES IN THOUSANDS OF CUBIC METRES.
ANNUAL PROD	= ANNUAL OIL PRODUCTION FOR THIS YEAR, IN THOUSANDS OF CUBIC METRES.
CUMUL. PROD	= CUMULATIVE OIL PRODUCTION, IN THOUSANDS OF CUBIC METRES.
REMAINING RESERVES	= REMAINING OIL RESERVES, IN THOUSANDS OF CUBIC METRES.
WELL COUNT	= NUMBER OF WELLS IN THE POOL AT YEAR END.
DATE LAST UPDATED	= DATE RESERVES WERE LAST UPDATED IN YYYY-MM FORMAT.



## Pool Reserve Report - Oil PIMS8310

Date Run: 2019DEC17

# Pool Reserve Report - Oil As of December 31, 2018

Total Areas: 108      Total Pools: 554

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
0100 AIRPORT								
HALFWAY - B - RANGER PROJECT	70	2.4	2	0	2	0	X	65
HALFWAY - C	66	8.0	5	0	5	0	D	0
BELLOU - A	65	10.0	6	0	0	6	V	65
<b>TOTAL FIELD:</b>	<b>201</b>		<b>13</b>	<b>0</b>	<b>7</b>	<b>6</b>		
0200 AITKEN CREEK								
GETHING - A - AITKEN CREEK GAS PROJECT	2,234	65.0	1,452	0	1,370	82	D	0
<b>TOTAL FIELD:</b>	<b>2,234</b>		<b>1,452</b>	<b>0</b>	<b>1,370</b>	<b>82</b>		
0380 BEAR FLAT								
BEAR FLAT - A - COURAGE PROJECT	650	16.0	104	0	96	8	D	0
BEAR FLAT - B - DEVON PROJECT	160	15.0	24	0	18	6	M	0
BEAR FLAT - D - DEVON PROJECT	46	15.0	7	0	6	1	V	0
<b>TOTAL FIELD:</b>	<b>856</b>		<b>135</b>	<b>0</b>	<b>120</b>	<b>15</b>		
0400 BEATTON RIVER								
BLUESKY - A	92	10.0	9	0	2	7	V	65
BLUESKY - C	93	10.0	9	0	0	9	V	70
BLUESKY - D	83	15.0	12	0	1	11	V	70
GETHING - A	59	5.0	3	0	3	0		70
HALFWAY - A - ENCAL PROJECT	3,430	47.1	1,617	0	1,616	1	X	0
HALFWAY - B - ENCAL PROJECT	95	25.0	24	0	19	5	D	0
HALFWAY - C	558	6.6	37	0	37	0	X	221
HALFWAY - D	901	18.0	162	0	153	9	D	0
HALFWAY - G - ENCAL PROJECT #1	1,438	30.0	432	0	426	6	D	0
<b>TOTAL FIELD:</b>	<b>6,749</b>		<b>2,305</b>	<b>0</b>	<b>2,257</b>	<b>48</b>		
0600 BEATTON RIVER WEST								
BLUESKY - A	270	.6	2	0	2	0	X	387
BLUESKY - A - CNRL UNIT #1	2,956	38.0	1,123	0	1,098	25	D	560
BLUESKY - B	115	20.0	23	0	0	23	V	65
<b>TOTAL FIELD:</b>	<b>3,341</b>		<b>1,148</b>	<b>0</b>	<b>1,100</b>	<b>48</b>		
0700 BEAVERDAM								
LOWER HALFWAY - A	124	5.0	6	0	3	3	V	38
<b>TOTAL FIELD:</b>	<b>124</b>		<b>6</b>	<b>0</b>	<b>3</b>	<b>3</b>		



**Pool Reserve Report - Oil  
As of December 31, 2018**

2019DEC17  
PIMS8310

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>0100 AIRPORT</b>												
3.1	8.4	48.0	334	1.259	823	808	13,747	88.6	1	2014-12	04515	1978
4.8	14.3	25.0	332	1.299	816	816	13,483	92.3	1	2015-12	19941	2005
2.3	8.2	27.0	344	1.377	827	1,254	17,702	129.4	1		07548	1991
<b>0200 AITKEN CREEK</b>												
5.0	11.9	26.5	333	1.306	814	387	10,760	0.0	7	2017-12	00485	1959
<b>0380 BEAR FLAT</b>												
0.0	14.9	13.9	327	1.201	831	713	13,691	89.0	2	2010-12	02352	1968
1.1	14.2	21.8	329	1.259	831	698	12,687	0.0	1	2010-12	13572	2000
1.6	6.4	36.8	326	1.258	831	698	12,681	79.6	1	2004-12	14094	2001
<b>0400 BEATTON RIVER</b>												
2.4	13.5	50.0	326	1.140	827	255	7,326	38.5	1	2012-12	06847	1988
1.5	15.8	34.5	321	1.166	809	243	8,600	0.0	1	2008-12	11023	1998
1.3	18.9	45.1	322	1.143	809	245	6,752	0.0	1	2001-12	00896	2000
1.2	13.3	38.9	324	1.162	813	260	6,653	0.0	1	2006-12	11023	1998
3.2	21.7	23.2	327	1.153	823	346	8,189	49.1	17	2012-12	00309	1958
1.5	9.0	46.8	327	1.153	825	343	8,113	49.1	4	2005-12	00869	1961
2.3	17.6	28.1	327	1.153	826	352	8,182	49.1	2		02915	1971
2.0	19.0	14.4	327	1.153	834	353	8,195	130.0	3	2015-12	02909	1971
3.7	19.1	36.2	327	1.152	834	356	7,833	49.0	8	2014-12	06630	1987
<b>0600 BEATTON RIVER WEST</b>												
1.3	11.9	45.5	321	1.209	811	265	7,141	0.0	3	2003-12	00408	1959
0.0	15.4	33.5	321	1.156	821	265	6,818	50.0	21	2015-12	00408	1959
2.0	15.1	29.2	330	1.209	812	249	7,040	66.8	1		07011	1989
<b>0700 BEAVERDAM</b>												
3.5	12.9	12.9	331	1.202	823	404	9,409	64.0	1	2005-12	01653	1965

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Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>0760 BEAVERTAIL</b>								
HALFWAY - B - CNRL PROJECT	499	17.5	87	0	87	0	D	0
HALFWAY - C - STARVEST PROJECT	133	1.3	2	0	2	0	X	65
HALFWAY - G	109	20.0	22	0	1	21	V	71
HALFWAY - H	134	15.0	20	0	1	19		71
HALFWAY - H - CNRL PROJECT	874	20.0	175	1	171	4	D	0
HALFWAY - K	92	20.6	19	0	19	0	V	71
<b>TOTAL FIELD:</b>	<b>1,841</b>		<b>325</b>	<b>1</b>	<b>281</b>	<b>44</b>		
<b>1260 BIRCH</b>								
BALDONNEL - C - CNRL PROJECT #1	2,058	50.0	1,029	30	904	125	D	0
BALDONNEL - G	186	4.0	7	0	0	7	V	71
<b>TOTAL FIELD:</b>	<b>2,244</b>		<b>1,036</b>	<b>30</b>	<b>904</b>	<b>132</b>		
<b>1280 BIRLEY CREEK</b>								
HALFWAY - C	241	20.0	48	0	42	6	V	0
HALFWAY - F - ANDERSON PROJECT	193	10.0	19	0	6	13	V	70
HALFWAY - H - ANDERSON PROJECT	142	10.0	14	0	12	2	D	65
<b>TOTAL FIELD:</b>	<b>576</b>		<b>81</b>	<b>0</b>	<b>60</b>	<b>21</b>		
<b>1350 BLACK CREEK</b>								
BALDONNEL - A - NUVISTA PROJECT	267	17.0	45	1	38	7	D	0
<b>TOTAL FIELD:</b>	<b>267</b>		<b>45</b>	<b>1</b>	<b>38</b>	<b>7</b>		
<b>1400 BLUEBERRY</b>								
CHARLIE LAKE - A	111	.5	1	0	1	0	X	71
DOIG - A - SUNCOR PROJECT	63	2.0	1	0	1	0	V	71
DEBOLT - A - SUNCOR PROJECT	7,802	35.0	2,731	0	2,473	258	D	0
DEBOLT - B - SUNCOR PROJECT	3,021	20.0	604	0	558	46	D	0
DEBOLT - E	123	20.0	25	0	19	6	V	71
DEBOLT - E - SUNCOR PROJECT	1,211	30.0	363	0	354	9	V	515
<b>TOTAL FIELD:</b>	<b>12,331</b>		<b>3,725</b>	<b>0</b>	<b>3,406</b>	<b>319</b>		
<b>1800 BLUEBERRY WEST</b>								
BELLOY - A	70	20.0	14	0	0	14	V	55
DEBOLT - B	195	10.0	20	0	18	2	V	65
DEBOLT - C	644	20.0	129	0	5	124	V	65
<b>TOTAL FIELD:</b>	<b>909</b>		<b>163</b>	<b>0</b>	<b>23</b>	<b>140</b>		

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Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>0760 BEAVERTAIL</b>												
1.5	16.0	41.9	334	1.242	815	517	10,173	79.8	5	2018-12	04508	1978
3.3	12.8	40.6	334	1.225	814	514	10,260	76.2	1	2014-12	06494	1986
2.1	17.8	50.0	330	1.220	816	511	9,956	74.4	1		08448	1994
2.0	20.9	43.5	331	1.256	810	547	10,619	0.0	1		09016	1995
0.0	18.4	34.3	331	1.247	810	542	10,619	65.0	8	2018-12	09016	1995
2.1	13.5	44.3	328	1.214	824	521	9,837	64.4	1	2004-12	06199	1985
<b>1260 BIRCH</b>												
0.0	7.5	33.1	323	1.262	820	459	12,614	300.0	60	2018-12	04826	1979
4.3	9.6	21.1	326	1.246	823	435	10,787	80.0	1		08155	1993
<b>1280 BIRLEY CREEK</b>												
1.7	17.1	13.3	330	1.260	870	507	9,030	0.0	2	2001-12	08335	1994
2.0	18.2	9.1	321	1.200	813	511	8,950	70.9	1		08640	1994
2.0	15.3	16.2	321	1.170	809	511	8,793	90.1	1		08660	1994
<b>1350 BLACK CREEK</b>												
2.9	16.2	36.6	336	1.132	839	339	6,050	34.7	15	2018-12	09746	1996
<b>1400 BLUEBERRY</b>												
2.0	12.0	22.5	336	1.189	809	676	7,477	0.0	1	2005-12	16400	2004
4.0	6.0	30.0	336	1.895	784	871	23,758	294.9	1	2006-12	13934	2001
12.7	10.4	19.5	348	1.354	827	1,253	19,181	113.6	21		00242	1957
0.0	9.9	18.6	348	1.375	827	1,241	19,085	112.5	8	2016-12	00175	1956
3.8	8.1	24.1	348	1.354	823	1,248	19,085	200.0	1	2015-12	00175	1956
4.3	9.4	21.2	349	1.354	827	1,242	19,086	113.5	5	2016-12	00205	1957
<b>1800 BLUEBERRY WEST</b>												
10.5	2.0	5.0	347	1.577	809	1,236	19,500	0.0	1		06672	1987
6.8	7.3	14.6	348	1.410	804	1,257	18,420	136.4	2	2006-12	06672	1987
26.3	6.4	14.7	344	1.450	808	1,267	18,523	152.1	1		12092	1999

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	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>1880 BOUDREAU</b>								
BELLOY - A - SUNCOR PROJECT	388	10.0	39	0	33	6	V	105
BELLOY - B	269	3.0	8	1	4	4	D	65
BELLOY - C	254	9.0	23	1	21	2	D	0
<b>TOTAL FIELD:</b>	<b>911</b>		<b>70</b>	<b>2</b>	<b>58</b>	<b>12</b>		
<b>2000 BOUNDARY LAKE</b>								
CECIL - A	461	5.0	23	0	19	4	V	313
CECIL - B	645	5.0	32	0	5	27	V	287
CECIL - E	203	20.0	41	0	0	41	V	66
CECIL - F - TWIN BUTTE PROJECT	132	20.0	26	0	17	9	D	0
BOUNDARY LAKE - A	3,160	15.0	474	10	395	79	D	2,210
BOUNDARY LAKE - A - ESSO UNIT #1	43,666	48.0	20,960	126	19,724	1,236	D	0
BOUNDARY LAKE - A - ESSO UNIT #2	30,218	44.0	13,296	50	12,783	513	D	5,983
BOUNDARY LAKE - A - PRIMEWEST PROJECT #1	5,769	60.0	3,462	24	3,133	329	D	1,296
BOUNDARY LAKE - A - PRIMEWEST PROJECT #2	1,587	65.0	1,032	5	984	48	D	0
BOUNDARY LAKE - A - NCE PROJECT	1,947	12.0	234	5	188	46	D	453
COPLIN - B	51	18.0	9	0	9	0	V	65
HALFWAY - H	221	10.0	22	0	0	22	V	65
HALFWAY - K - KXL PROJECT #1	818	20.0	164	10	118	46	D	0
HALFWAY - M - KXL PROJECT #1	1,001	10.0	100	6	85	15	D	0
HALFWAY	1,714	11.0	188	1	181	7	D	0
HALFWAY - PETRO-CANADA PROJECT	1,239	17.3	214	0	214	0	D	0
HALFWAY - KAISER PROJECT	206	20.0	41	0	33	8	D	0
HALFWAY - IMPERIAL PROJECT	1,005	18.0	181	3	166	15	D	260
HALFWAY - PETRO-CANADA PROJECT	267	15.0	40	1	29	11	V	66
HALFWAY - PETRO-CANADA PROJECT	200	8.0	16	0	13	3	D	0
LOWER HALFWAY - A - PETRO-CANADA PROJECT	33	17.0	6	0	5	1	D	0
LOWER HALFWAY - B - PETRO-CANADA PROJECT	362	20.0	72	0	43	29	V	66
BELLOY - L	549	3.0	16	0	0	16	V	84
BELLOY - L - CNRL PROJECT	399	15.0	60	1	44	16	D	0
TAYLOR FLAT - A - NEWPORT PROJECT	63	18.0	11	0	11	0	D	66
<b>TOTAL FIELD:</b>	<b>95,916</b>		<b>40,720</b>	<b>242</b>	<b>38,199</b>	<b>2,521</b>		

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Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
1880	BOUDREAU											
7.2	10.6	32.3	338	1.399	811	1,257	17,866	0.0	2	2005-12	10545	1998
10.7	6.5	35.0	341	1.425	801	1,254	17,851	131.8	1	2018-12	11308	1998
4.9	10.6	32.8	341	1.368	820	1,261	17,816	120.0	2	2018-12	11410	1998
2000	BOUNDARY LAKE											
1.3	16.0	20.0	320	1.130	926	510	11,808	53.4	2		02931	1971
2.1	15.8	23.5	320	1.130	926	510	11,808	53.4	1		02977	1972
2.1	22.7	27.3	320	1.129	0	533	11,808	0.0	1		01810	1966
1.2	9.9	38.9	321	1.114	933	547	11,765	33.5	1	2018-12	21839	2006
1.6	17.9	30.2	321	1.279	860	518	12,652	94.0	28	2018-12	00101	1955
2.9	20.6	12.4	321	1.279	860	518	12,631	94.0	225	2018-12	00101	1955
0.0	21.5	7.3	321	1.279	860	518	12,505	73.7	153	2018-12	00101	1955
0.0	21.4	4.9	321	1.342	860	553	12,631	116.6	54	2018-12	00101	1955
2.9	23.2	5.8	321	1.279	860	518	12,631	94.0	9	2018-12	00101	1955
3.0	19.1	8.2	321	1.279	860	547	12,652	94.0	8	2018-12	00101	1955
1.5	9.3	28.3	341	1.278	822	523	10,876	0.0	1		05159	1980
3.6	16.6	30.4	325	1.226	804	631	12,347	82.3	0		06246	1985
3.8	15.4	38.7	328	1.247	811	594	11,030	0.0	4	2018-12	14854	2002
3.1	14.8	40.9	328	1.233	811	588	10,682	69.1	6	2018-12	19281	2005
2.3	14.9	35.2	325	1.226	804	628	11,822	82.3	13	2018-12	00667	1960
3.1	16.4	36.4	325	1.226	804	632	11,822	82.3	4	2018-12	00667	1960
3.3	19.9	22.2	325	1.217	804	630	11,822	82.3	1	2018-12	00667	1960
0.0	0.0	0.0	324	1.324	809	632	14,099	104.6	4	2018-12	00687	1961
4.6	16.6	35.0	325	1.226	804	634	11,822	82.3	1	2018-12	00667	1960
2.6	10.2	34.8	325	1.226	804	632	11,822	0.0	4	2016-12	00667	1960
1.7	10.2	19.6	325	1.273	803	645	9,585	89.2	1	2018-12	15094	2002
8.7	11.8	35.4	325	1.208	809	642	9,947	66.9	1	2004-12	15098	2002
6.6	17.9	32.7	332	1.216	830	1,125	17,313	0.0	1		09516	1995
3.4	12.9	41.6	332	1.216	830	1,114	17,313	0.0	2	2018-12	09516	1995
0.0	12.6	31.6	331	1.342	811	978	15,764	716.0	1	2015-12	10376	1997



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Field / Pool / Project	1	2	3	4	5	6	7	8
	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
2020 BOUNDARY LAKE NORTH								
CECIL - B	77	10.0	8	0	4	4	V	66
CECIL - C	44	10.0	4	0	0	4	V	66
COPLIN - J	98	17.0	17	0	14	3	D	0
HALFWAY - B	108	20.0	22	1	13	9	D	0
HALFWAY - D - VENTURION PROJ	562	20.0	112	4	101	11	D	389
HALFWAY - H	89	20.0	18	3	8	10	D	66
HALFWAY - I - VENTURION PROJ	1,086	40.0	434	19	334	100	D	0
HALFWAY - S	311	10.0	31	0	1	30	V	66
HALFWAY - T	55	25.0	14	2	8	6	D	0
DOIG - A - CNRL PROJECT	1,023	12.0	123	1	116	7	D	0
DOIG - C	34	16.0	5	0	5	0	D	97
DOIG - D	156	18.0	28	0	27	1	D	0
DOIG - E	19	15.0	3	0	1	2	V	66
DOIG - F	205	15.0	31	0	0	31	V	66
<b>TOTAL FIELD:</b>	<b>3,867</b>		<b>850</b>	<b>30</b>	<b>632</b>	<b>218</b>		
2100 BRASSEY								
ARTEX - A - CANHUNTER BRASSEY PROJECT #1	94	16.0	15	0	14	1	V	73
ARTEX - B - CONOCOPHILLIPS PROJECT	3,198	54.0	1,727	0	1,717	10	D	0
ARTEX - D - CONOCOPHILLIPS PROJECT	801	37.0	296	0	294	2	V	489
ARTEX - E	21	8.1	2	0	2	0	V	65
ARTEX - G - CANHUNTER BRASSEY PROJECT	353	42.3	149	0	149	0	X	335
<b>TOTAL FIELD:</b>	<b>4,467</b>		<b>2,189</b>	<b>0</b>	<b>2,176</b>	<b>13</b>		
2240 BUBBLES NORTH								
COPLIN - A - BG CANADA PROJECT	144	30.0	43	0	42	1	V	340
COPLIN - B	31	15.0	5	0	1	4	V	70
<b>TOTAL FIELD:</b>	<b>175</b>		<b>48</b>	<b>0</b>	<b>43</b>	<b>5</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>2020 BOUNDARY LAKE NORTH</b>												
1.8	13.0	44.7	335	1.116	937	408	9,264	0.0	1	2010-12	20551	2006
1.7	8.5	48.7	330	1.124	928	435	9,544	0.0	1	2007-12	20551	2006
0.7	12.4	27.4	331	1.183	830	483	9,484	130.0	3	2018-12	15115	2003
1.3	15.5	29.7	332	1.205	841	556	10,678	62.4	7	2018-12	01529	1964
2.7	13.8	37.8	331	1.244	825	533	10,478	170.0	5	2018-12	03242	1973
3.5	15.0	38.0	328	1.240	861	538	10,340	132.0	3	2018-12	07699	1991
3.0	15.1	33.1	333	1.210	824	540	9,938	110.0	16	2018-12	04023	1977
9.5	8.8	34.2	332	1.168	859	523	10,412	0.0	1	2007-12	21017	2006
4.0	15.0	40.0	330	1.200	861	527	9,898	460.0	1	2018-12	31607	2015
3.1	14.6	29.9	334	1.268	821	559	11,114	84.2	4	2018-12	01451	1964
0.0	13.8	10.5	334	1.289	821	553	11,114	500.0	2	2018-12	15062	2002
2.5	13.9	40.2	332	1.240	809	560	9,938	0.0	3	2018-12	15070	2002
1.1	6.6	53.2	333	1.192	851	529	10,560	57.0	1	2004-12	15113	2002
3.1	14.5	17.0	324	1.202	851	503	11,268	64.0	2	2004-12	15889	2003
<b>2100 BRASSEY</b>												
2.1	14.0	16.8	372	1.890	750	0	30,693	255.0	1	2004-12	05030	1980
2.2	16.8	2.6	372	1.790	750	1,944	39,445	255.0	17	2007-12	06736	1987
2.2	14.6	3.6	372	1.890	750	2,037	31,006	255.0	6	2012-12	06886	1988
0.7	8.5	4.9	372	1.790	750	2,071	37,333	255.0	1		06888	1988
1.5	13.1	3.9	359	1.790	750	2,011	39,580	0.0	2	2014-12	06859	1988
<b>2240 BUBBLES NORTH</b>												
0.6	11.6	13.1	339	1.430	795	472	14,806	139.9	4	2016-12	13390	2001
0.7	10.8	16.0	340	1.433	795	458	14,907	0.0	1	2004-12	16335	2003

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	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>2400 BUICK CREEK</b>								
GETHING - B - AMOCO PROJECT	84	10.0	8	0	0	8	V	65
DUNLEVY - A	870	5.0	43	0	22	21	V	413
DUNLEVY - B	162	15.0	24	1	21	3	D	0
DUNLEVY - C - CNRL PROJECT	49	10.0	5	0	5	0	D	71
DUNLEVY - C - BONAVISTA PROJECT	951	10.0	95	3	71	24	D	0
DUNLEVY - L	35	10.0	3	0	2	1	V	65
DUNLEVY - P - DOMINION PROJECT	690	15.0	103	4	85	18	D	0
BALDONNEL - A	37	20.0	7	0	6	1	D	0
NORTH PINE - D	31	15.0	5	0	0	5	V	66
LOWER HALFWAY - A - RIGEL PROJECT	542	15.0	81	0	72	9	D	0
LOWER HALFWAY - B - CNRL PROJECT	1,080	14.2	153	0	153	0	D	0
LOWER HALFWAY - C - CNRL PROJECT	5,124	15.0	769	2	755	14	D	0
LOWER HALFWAY - C - TALISMAN PROJECT	655	12.0	79	1	75	4	D	0
LOWER HALFWAY - D - CNRL PROJECT	2,424	15.0	364	1	359	5	D	0
LOWER HALFWAY - E - CNRL PROJECT	1,844	10.0	184	0	96	88	V	130
LOWER HALFWAY - H - CNRL PROJECT	122	12.5	15	0	14	1	V	18
LOWER HALFWAY - I - CNRL PROJECT	1,637	10.8	177	0	176	1	V	260
LOWER HALFWAY - J - CNRL PROJECT	2,701	15.0	405	0	343	62	V	261
LOWER HALFWAY - K - CNRL PROJECT	1,171	15.0	176	0	163	13	V	142
LOWER HALFWAY - K - RIGEL PROJECT	740	5.0	37	0	29	8	V	65
LOWER HALFWAY - L	561	20.0	112	0	0	112	V	142
LOWER HALFWAY - N - CNRL PROJECT	474	5.0	24	0	23	1	D	0
LOWER HALFWAY - O - CNRL PROJECT	901	15.0	135	0	124	11	V	142
LOWER HALFWAY - S - TALISMAN PROJECT	20	10.0	2	0	0	2	D	0
LOWER HALFWAY - T - TALISMAN PROJECT	138	20.0	28	0	23	5	V	142
LOWER HALFWAY - U - CNRL PROJECT	915	15.0	137	0	19	118	V	142
<b>TOTAL FIELD:</b>	<b>23,958</b>		<b>3,171</b>	<b>12</b>	<b>2,636</b>	<b>535</b>		
<b>2700 BUICK CREEK NORTH</b>								
DUNLEVY - C	41	15.8	6	0	6	0	X	65
DUNLEVY - E - DOMINION PROJECT	105	10.0	11	0	10	1	D	0
DUNLEVY - U - DOMINION PROJECT	40	14.6	6	0	6	0	D	0
LOWER DUNLEVY - A	50	1.0	1	0	0	1	D	0
<b>TOTAL FIELD:</b>	<b>236</b>		<b>24</b>	<b>0</b>	<b>22</b>	<b>2</b>		

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9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>2400 BUICK CREEK</b>												
2.0	11.2	33.4	306	1.150	858	345	7,632	53.0	0		04970	1979
2.9	11.9	25.8	323	1.216	836	384	8,991	79.8	16	2012-12	01500	1964
2.7	11.4	35.0	392	1.143	831	392	7,253	38.9	19	2018-12	10521	1998
0.0	13.0	10.0	323	1.182	831	393	8,991	53.8	2	2010-12	13791	2001
3.4	13.8	21.4	323	1.103	852	366	5,587	26.4	2	2018-12	21881	2006
0.9	15.2	53.6	328	1.181	835	367	9,094	286.9	1	2012-12	06659	1987
2.1	16.4	7.0	323	1.232	836	381	10,589	275.0	1	2018-12	15179	2003
5.0	10.0	15.0	324	1.190	842	428	10,233	200.0	1	2018-12	09470	1995
0.8	11.0	35.0	330	1.231	825	293	10,823	78.4	1	2001-12	04774	1999
10.3	9.6	8.2	330	1.451	808	678	14,483	119.1	2	2007-12	04172	1977
6.7	10.2	7.9	330	1.451	808	679	14,547	159.6	12	2017-12	06872	1988
7.6	10.4	10.2	330	1.390	812	678	13,516	123.0	28	2018-12	07200	1990
10.0	11.0	8.0	330	1.452	801	668	13,516	280.0	2	2018-12	07200	1990
9.8	10.0	10.5	328	1.450	810	683	13,263	145.3	12	2018-12	07679	1991
21.4	9.6	6.1	330	1.360	801	721	14,302	129.0	3	2014-12	07479	1990
8.0	11.1	8.0	319	1.210	808	689	8,750	76.2	1	2003-12	09204	1995
8.3	11.1	8.3	327	1.342	812	664	13,030	115.2	7	2015-12	09365	1995
16.1	9.9	11.3	328	1.366	811	707	14,073	127.3	5	2012-12	09412	1995
11.2	10.7	10.2	330	1.305	815	694	13,299	104.7	2	2004-12	09766	1996
15.0	11.0	10.0	330	1.305	815	700	13,299	104.7	1	2003-12	09766	1996
9.6	9.8	43.4	330	1.347	815	637	13,000	0.0	2		09872	1996
11.0	10.2	12.0	330	1.378	812	687	13,193	127.0	1	2016-12	10173	1996
10.0	9.6	10.0	328	1.361	810	684	13,240	0.0	2	2003-12	10397	1997
5.0	12.0	10.0	330	1.328	809	678	12,033	108.7	1	2006-12	12928	2000
2.1	7.5	15.0	330	1.375	816	695	14,259	126.2	1	2005-12	14844	2002
8.9	10.7	8.6	330	1.351	809	684	13,487	116.0	2	2007-12	16175	2003
<b>2700 BUICK CREEK NORTH</b>												
2.1	8.3	56.4	323	1.219	842	255	9,030	80.1	3	2014-12	04529	1978
2.3	16.0	17.0	328	1.215	829	401	9,511	71.5	1	2016-12	11366	1998
1.3	14.8	14.0	329	1.221	822	406	9,289	226.0	1	2018-12	17339	2004
2.1	13.2	14.0	326	1.212	816	414	9,341	63.0	2	2010-12	11425	1999

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Field / Pool / Project	1 Original Oil In Place (km3)	2 Recovery Factor (%)	3 Initial Reserves (km3)	4 Annual Prod (km3)	5 Cumul Prod (km3)	6 Remaining Reserves (km3)	7 Official Calc Method	8 Area (ha)
2800 BUICK CREEK WEST								
GETHING - A	149	1.3	2	0	2	0	X	65
DUNLEVY - A	5	10.7	1	0	1	0	D	0
DUNLEVY - B	6	11.0	1	0	1	0	V	13
DUNLEVY - N	70	20.0	14	0	5	9	V	84
BALDONNEL - D	114	10.0	11	0	1	10	V	71
BALDONNEL - G	171	4.0	7	0	5	2	V	71
<b>TOTAL FIELD:</b>	<b>515</b>		<b>36</b>	<b>0</b>	<b>15</b>	<b>21</b>		
2820 BULRUSH								
HALFWAY - A - CNRL UNIT #1	854	40.0	342	3	331	11	D	401
HALFWAY - B - CNRL PROJECT	272	4.0	11	0	10	1	D	0
HALFWAY - C - CNRL UNIT #1	96	4.5	4	0	4	0	X	65
<b>TOTAL FIELD:</b>	<b>1,222</b>		<b>357</b>	<b>3</b>	<b>345</b>	<b>12</b>		



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2019DEC17  
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9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
2800	BUICK CREEK WEST											
1.8	17.4	15.7	320	1.148	805	369	9,106	51.4	1	2005-12	04049	1977
2.9	14.2	34.0	325	1.219	831	382	9,129	0.0	7	2010-12	00271	1957
1.0	11.2	46.9	325	1.219	832	380	9,129	0.0	7	2003-12	00280	1957
0.9	14.4	14.1	331	1.328	830	378	11,358	103.7	3	2011-12	13931	2001
3.0	9.5	34.0	327	1.175	834	432	8,420	0.0	1		08718	1994
4.9	9.0	36.0	327	1.172	830	429	8,726	0.0	1	2009-12	08509	1994
2820	BULRUSH											
1.8	16.1	15.4	329	1.199	820	402	9,118	213.0	5	2018-12	01267	1963
0.0	0.0	0.0	332	1.239	820	409	8,529	64.2	1	2003-12	04124	1977
1.2	17.2	13.9	329	1.199	820	402	9,188	62.6	1	2005-12	01629	1965

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Field / Pool / Project	1	2	3	4	5	6	7	8
	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
2920 CACHE CREEK								
BLUESKY - C	40	4.7	2	0	2	0	D	66
COPLIN - A - DOMINION PROJECT	79	15.0	12	0	11	1	D	66
DOIG - AA	332	1.0	3	0	3	0	D	0
DOIG - BB	134	10.0	13	0	8	5	D	0
DOIG - C - DOMINION PROJECT	513	5.0	26	0	26	0	D	339
DOIG - CC - ARTEK PROJECT	617	5.0	31	0	3	28	V	65
DOIG - E - SUNCOR PROJECT	488	5.0	24	0	24	0	D	0
DOIG - F - DOMINION PROJECT	39	10.0	4	0	3	1	D	0
DOIG - H - REMINGTON PROJECT	696	1.3	9	0	9	0	X	66
DOIG - I - BAYTEX PROJECT	202	1.7	3	0	3	0	V	66
DOIG - J - BAYTEX PROJECT	57	2.5	1	0	1	0	V	66
DOIG - K	106	.4	0	0	0	0	X	66
DOIG - M - BAYTEX PROJECT	32	7.0	2	0	1	1	D	0
DOIG - N - BAYTEX PROJECT	78	4.7	4	0	4	0	D	0
DOIG - O - BAYTEX PROJECT	278	2.0	6	0	3	3	V	66
DOIG - Q - BAYTEX PROJECT	249	5.0	12	0	6	6	V	66
DOIG - R	74	10.0	7	0	2	5	V	71
DOIG - T	303	2.0	6	0	6	0	V	66
DOIG - W	91	1.5	1	0	1	0	V	66
DOIG - X	83	10.0	8	0	7	1	V	0
DOIG - Y	456	2.5	11	0	9	2	V	66
DOIG - Z	265	15.0	40	0	18	22	V	66
<b>TOTAL FIELD:</b>	<b>5,212</b>		<b>225</b>	<b>0</b>	<b>150</b>	<b>75</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
2920	CACHE CREEK											
0.0	9.1	48.0	321	1.201	836	351	10,329	63.5	1	2017-12	09004	1997
0.0	11.1	15.0	332	1.304	834	695	15,803	96.7	8	2018-12	02423	1969
23.6	9.3	9.1	337	1.450	793	940	21,677	145.0	1	2015-12	25047	2009
9.1	7.3	10.3	335	1.387	807	857	14,321	127.0	1	2015-12	25994	2010
2.8	9.9	7.8	338	1.629	790	864	19,233	216.3	6	2018-12	10012	1996
22.6	7.7	13.8	337	1.580	786	933	19,450	194.0	1	2012-12	27127	2011
12.6	9.1	5.9	336	1.870	765	848	20,143	280.3	2	2016-12	10155	1997
3.0	9.9	5.7	335	1.503	815	879	21,683	168.8	1	2015-12	10684	1997
19.6	10.2	8.0	331	1.745	784	860	20,424	250.8	1	2010-12	10578	1997
7.8	8.6	20.9	338	1.735	778	858	22,079	248.9	1	2018-12	17868	2005
2.0	7.9	15.0	338	1.545	778	863	17,967	177.0	1	2018-12	17845	2005
5.4	5.3	19.5	335	1.438	817	862	19,495	0.0	2	2008-12	19618	2005
7.1	8.6	12.3	337	1.819	734	856	17,738	0.0	1	2016-12	17864	2005
14.6	9.0	17.7	339	1.539	780	872	17,216	793.0	1	2016-12	19850	2006
9.9	8.1	25.0	336	1.427	779	853	13,463	136.1	1	2016-12	20211	2006
7.0	9.3	14.3	319	1.480	798	876	16,520	168.0	1	2008-12	20583	2006
2.1	8.4	19.4	333	1.358	799	778	13,302	114.7	1	2008-12	19898	2005
10.5	9.9	25.0	337	1.699	775	884	21,486	235.8	1	2014-12	21027	2006
3.0	9.5	20.0	337	1.658	775	834	20,313	220.6	1	2016-12	21146	2007
5.3	8.2	20.0	337	1.552	775	890	17,177	0.0	1	2015-12	22671	2007
16.1	10.1	25.0	337	1.764	770	931	23,028	258.9	1	2014-12	22983	2007
7.3	9.9	10.6	337	1.610	781	924	19,647	204.5	1	2010-12	23261	2007



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Field / Pool / Project	1 Original Oil In Place (km3)	2 Recovery Factor (%)	3 Initial Reserves (km3)	4 Annual Prod (km3)	5 Cumul Prod (km3)	6 Remaining Reserves (km3)	7 Official Calc Method	8 Area (ha)
<b>2960 CECIL LAKE</b>								
SIPHON - A - CNRL PROJECT	942	22.0	207	3	170	37	D	0
SIPHON - B	188	20.0	38	1	30	8	D	130
CECIL - A - CNRL PROJECT	313	15.0	47	0	44	3	D	0
CECIL - B - SCURRY PROJECT	266	4.7	12	0	12	0	X	130
CECIL - C	169	7.0	12	0	10	2	V	65
CECIL - D - NCE PROJECT	1,091	40.0	437	5	358	79	D	0
CECIL - E - ENCAL PROJECT	278	20.0	56	0	24	32	V	130
NORTH PINE - A - SCURRY UNIT #1	449	24.6	111	0	111	0	D	0
NORTH PINE - A - SCURRY PROJECT #1	53	20.0	11	0	10	1	D	0
NORTH PINE - A - SCURRY PROJECT #2	299	25.0	75	1	69	6	D	148
NORTH PINE - B - SCURRY PROJECT #3	94	12.3	12	0	11	1	V	86
NORTH PINE - C - SCURRY PROJECT #4	628	17.0	107	0	99	8	D	0
NORTH PINE - C - NCE PROJECT	114	20.0	23	0	22	1	M	129
NORTH PINE - E	35	10.0	4	0	0	4	V	65
<b>TOTAL FIELD:</b>	<b>4,919</b>		<b>1,152</b>	<b>10</b>	<b>970</b>	<b>182</b>		
<b>2985 CHINCHAGA RIVER</b>								
HALFWAY - A	198	15.0	30	0	0	30	V	70
LOWER CHARLIE LAKE/MONTNEY - A	1,415	5.0	71	3	49	22	V	590
<b>TOTAL FIELD:</b>	<b>1,613</b>		<b>101</b>	<b>3</b>	<b>49</b>	<b>52</b>		
<b>3260 CRUSH</b>								
HALFWAY - A	130	.3	0	0	0	0	X	71
HALFWAY - A - CNRL UNIT #1	1,449	35.2	510	0	503	7	D	0
HALFWAY - B - CNRL UNIT #1	149	37.5	56	0	50	6	D	0
<b>TOTAL FIELD:</b>	<b>1,728</b>		<b>566</b>	<b>0</b>	<b>553</b>	<b>13</b>		
<b>3300 CURRANT</b>								
HALFWAY - A - CNRL UNIT #1	793	52.9	419	0	419	0	X	320
HALFWAY - A - CNRL UNIT #2	159	5.6	9	0	9	0	X	144
HALFWAY - C - APACHE PROJECT	176	18.0	32	0	31	1	D	87
HALFWAY - D - CNRL UNIT #1	122	20.0	24	0	8	16	V	65
<b>TOTAL FIELD:</b>	<b>1,250</b>		<b>484</b>	<b>0</b>	<b>467</b>	<b>17</b>		
<b>3320 CURRANT WEST</b>								
HALFWAY - B	81	20.0	16	0	1	15	V	65
<b>TOTAL FIELD:</b>	<b>81</b>		<b>16</b>	<b>0</b>	<b>1</b>	<b>15</b>		

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9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>2960 CECIL LAKE</b>												
1.1	9.5	24.0	330	0.000	853	563	11,546	63.8	9	2018-12	04909	1979
0.0	9.0	31.1	330	1.186	849	556	10,213	55.6	2	2018-12	07675	1991
1.5	13.1	13.5	333	1.158	863	572	9,530	52.0	4	2018-12	08053	1993
2.1	15.5	20.4	325	1.265	834	580	12,659	0.0	1	2014-12	03184	1972
3.0	12.9	25.9	330	1.101	800	634	2,905	0.0	1	2007-12	05752	1983
1.3	15.4	18.9	333	1.250	863	569	12,107	400.0	11	2018-12	03806	1976
2.4	15.0	28.0	326	1.210	849	573	11,586	0.0	2		08693	1994
1.5	13.7	13.2	327	1.259	823	663	13,362	92.4	4	2016-12	03045	1972
1.6	10.7	23.7	327	1.259	823	663	13,381	92.4	2		03045	1972
0.0	12.5	12.9	327	1.259	823	663	13,381	92.4	2	2018-12	03045	1972
1.7	11.5	29.5	327	1.262	822	721	13,401	92.4	1		03462	1974
2.7	13.1	10.9	327	1.259	825	713	13,270	92.4	2	2017-12	03804	1976
0.9	14.4	14.2	327	1.259	825	713	13,270	0.0	1	2004-12	03804	1976
1.6	6.6	35.4	327	1.259	818	649	13,151	0.0	0	2010-12	06336	1985
<b>2985 CHINCHAGA RIVER</b>												
2.3	18.2	23.0	323	1.137	825	188	6,584	0.0	0	2005-12	17029	2004
3.5	15.2	50.2	322	1.105	860	191	6,602	26.3	132	2018-12	08454	1994
<b>3260 CRUSH</b>												
1.4	17.9	12.0	325	1.201	809	438	6,014	0.0	1	2005-12	02220	1967
2.4	18.2	16.6	329	1.201	814	427	9,450	63.6	9		02220	1967
1.0	11.4	33.6	328	1.201	0	428	9,239	0.0	1	2004-12	02253	1968
<b>3300 CURRANT</b>												
2.7	13.7	19.3	330	1.205	835	474	9,747	66.5	7	2005-12	01635	1965
1.2	13.7	19.0	330	1.205	835	474	9,747	66.5	4	2014-12	01635	1965
0.0	19.9	23.4	322	1.250	819	484	9,541	83.3	3	2018-12	07902	1992
1.3	20.2	14.3	330	1.200	0	476	8,154	66.5	1	2013-12	07774	1991
<b>3320 CURRANT WEST</b>												
1.8	11.1	25.0	325	1.205	818	480	9,849	62.1	1		04857	1979

## Pool Reserve Report - Oil As of December 31, 2018

Field / Pool / Project	1 Original Oil In Place (km3)	2 Recovery Factor (%)	3 Initial Reserves (km3)	4 Annual Prod (km3)	5 Cumul Prod (km3)	6 Remaining Reserves (km3)	7 Official Calc Method	8 Area (ha)
<b>3380 DAHL</b>								
HALFWAY - D	174	10.0	17	0	14	3	D	0
<b>TOTAL FIELD:</b>	<b>174</b>		<b>17</b>	<b>0</b>	<b>14</b>	<b>3</b>		
<b>3410 DESAN</b>								
DEBOLT - A	164	3.0	5	0	0	5	V	65
DEBOLT - B	76	3.0	2	0	0	2	V	65
SHUNDA - A	1,536	1.2	18	0	16	2	V	1,040
SHUNDA - D	173	3.0	5	0	5	0	V	130
SHUNDA - E	912	1.6	15	0	14	1	V	195
PEKISKO - ISH PROJECT	1,306	12.0	157	3	141	16	V	676
PEKISKO - ISH WATERFLOOD PROJECT	5,388	20.0	1,078	25	880	198	D	0
<b>TOTAL FIELD:</b>	<b>9,555</b>		<b>1,280</b>	<b>28</b>	<b>1,056</b>	<b>224</b>		
<b>3425 DOE</b>								
BALDONNEL - B	412	20.0	82	0	1	81	V	65
<b>TOTAL FIELD:</b>	<b>412</b>		<b>82</b>	<b>0</b>	<b>1</b>	<b>81</b>		
<b>3426 DOIG RAPIDS</b>								
BLUESKY - F	60	10.0	6	0	0	6	V	92
NORDEGG-BALDONNEL - F - CNRL PROJECT	194	10.0	19	0	10	9	V	71
HALFWAY - A	76	10.0	8	0	8	0	X	0
HALFWAY - C - CNRL PROJECT	344	6.5	22	0	21	1	V	92
<b>TOTAL FIELD:</b>	<b>674</b>		<b>55</b>	<b>0</b>	<b>39</b>	<b>16</b>		
<b>3430 DRAKE</b>								
HALFWAY - B	76	10.0	8	0	4	4	V	126
<b>TOTAL FIELD:</b>	<b>76</b>		<b>8</b>	<b>0</b>	<b>4</b>	<b>4</b>		
<b>3440 EAGLE</b>								
GETHING - A	212	10.0	21	0	21	0	V	65
SIPHON - A	64	20.0	13	0	8	5	V	65
NORTH PINE - A	148	.5	1	0	0	1	V	195
NORTH PINE - B	138	15.0	21	0	0	21	V	65
BELLOY - A	188	5.0	9	0	0	9	V	65
BELLOY-KISKATINAW	2,221	10.0	222	2	201	21	D	0
BELLOY-KISKATINAW - HOME EAST EAGLE UNIT #1	6,929	40.0	2,772	16	2,564	208	D	0
<b>TOTAL FIELD:</b>	<b>9,900</b>		<b>3,059</b>	<b>18</b>	<b>2,794</b>	<b>265</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>3380 DAHL</b>												
4.0	20.9	11.2	327	1.250	826	0	7,404	230.0	1	2016-12		
<b>3410 DESAN</b>												
2.3	22.3	47.5	308	1.067	904	6	4,258	22.5	0		06045	1984
2.0	9.9	37.0	308	1.067	904	6	4,280	0.0	1	2002-12	06212	1985
1.8	13.9	36.9	316	1.069	900	5	4,539	0.0	10	2018-12	05804	1983
1.0	18.4	22.7	316	1.069	900	5	4,539	23.5	2	2018-12	06032	1984
6.0	13.7	39.2	316	1.069	900	3	4,409	23.5	3	2018-12	05905	1984
3.3	10.7	41.9	317	1.062	909	0	4,936	55.6	49	2018-12	05804	1983
3.3	10.7	41.9	317	1.062	909	0	4,936	55.6	70	2018-12	05804	1983
<b>3425 DOE</b>												
10.6	12.4	38.1	330	1.285	835	794	13,797	0.0	1		11629	1998
<b>3426 DOIG RAPIDS</b>												
0.8	15.5	41.0	320	1.123	870	266	7,866	127.0	1	2012-12	18681	2005
4.2	19.0	61.7	323	1.117	0	310	8,362	39.6	1	2003-12	09620	1996
2.3	18.6	14.3	328	1.198	820	403	9,161	0.0	1	2005-12	01843	1966
3.4	15.6	17.2	324	1.175	812	408	9,034	63.8	1	2008-12	08074	1993
<b>3430 DRAKE</b>												
1.1	8.8	29.0	327	1.141	817	277	7,403	0.0	3	2014-12	05757	1982
<b>3440 EAGLE</b>												
4.8	11.0	26.7	319	1.187	853	320	11,716	117.0	1	2015-12	06334	1985
1.8	10.7	36.7	322	1.244	848	565	12,843	84.7	1		03782	1976
1.3	9.1	17.3	326	1.291	844	657	14,781	95.7	2	2018-12	04027	1977
2.0	14.5	12.4	329	1.193	847	656	13,614	0.0	1		11419	1999
4.9	10.6	28.1	346	1.291	822	1,169	16,800	0.0	0	2001-12	10543	1997
3.1	12.5	22.8	341	1.290	818	1,175	15,970	125.0	18	2018-12	03202	1979
6.8	11.5	20.9	344	1.290	818	1,175	16,911	150.0	55	2018-12	03202	1979

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	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>3445 EAGLE WEST</b>								
NORTH PINE - A	58	20.0	12	0	0	12	V	65
MONTNEY - A	225	20.0	45	0	40	5	D	133
MONTNEY - B	142	2.5	4	0	3	1		65
BELLOY - A	936	30.0	281	0	278	3	D	0
BELLOY - A - SCURRY WEST EAGLE UNIT #1	20,337	31.0	6,305	5	6,252	53	D	0
BELLOY - A - HOME PROJECT	1,313	28.0	368	2	340	28	D	0
BELLOY - A - HOME PROJECT	865	5.5	48	0	0	48	D	0
BELLOY - C - DEVON PROJECT	374	10.5	39	0	38	1	D	0
BELLOY - D	835	20.0	167	6	130	37	D	195
<b>TOTAL FIELD:</b>	<b>25,085</b>		<b>7,269</b>	<b>13</b>	<b>7,081</b>	<b>188</b>		
<b>3460 ELM</b>								
GETHING - A	624	10.0	62	0	27	35	V	188
GETHING - B - PENGROWTH PROJECT	1,773	7.4	131	0	129	2	D	0
GETHING - F	633	5.0	32	0	2	30	V	70
HALFWAY - A - MURPHY PROJECT #1	733	10.0	73	0	69	4	D	551
HALFWAY - C - ENCAL PROJECT	581	20.0	116	0	89	27	D	0
HALFWAY - D	156	20.0	31	0	0	31	V	65
<b>TOTAL FIELD:</b>	<b>4,500</b>		<b>445</b>	<b>0</b>	<b>316</b>	<b>129</b>		
<b>3520 FIREBIRD</b>								
BLUESKY - F - PENN WEST PROJECT	78	15.0	12	0	4	8	V	70
GETHING - C	33	15.0	5	0	5	0	D	70
<b>TOTAL FIELD:</b>	<b>111</b>		<b>17</b>	<b>0</b>	<b>9</b>	<b>8</b>		
<b>3540 FIREWEED</b>								
DUNLEVY - A	26	20.0	5	0	5	0	X	0
DUNLEVY - D	472	1.0	5	0	4	1	V	65
DUNLEVY - G	134	5.0	7	0	0	7	V	65
DUNLEVY - L - CREW ENERGY PROJECT	427	10.0	43	0	10	33	V	147
LOWER HALFWAY - A - CNRL PROJECT	2,624	15.0	394	15	245	149	D	994
DOIG - A - SAMSON PROJECT	80	10.0	8	0	4	4	M	0
DOIG - B - PETRO-CAN PROJECT	29	10.0	3	0	1	2	M	0
<b>TOTAL FIELD:</b>	<b>3,792</b>		<b>465</b>	<b>15</b>	<b>269</b>	<b>196</b>		

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9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>3445 EAGLE WEST</b>												
1.2	11.5	12.3	344	1.350	824	661	13,790	109.8	1		04472	1978
3.0	13.1	9.0	344	1.425	824	1,084	19,877	195.0	2	2018-12	06860	1988
2.2	15.9	3.8	338	1.536	815	1,139	20,403	0.0	1	2006-12	08863	1994
3.1	11.6	30.5	346	1.291	822	1,150	16,800	350.0	19	2018-12	04682	1979
6.9	12.9	26.8	346	1.291	822	1,152	16,800	97.9	97	2018-12	04682	1979
0.0	0.0	0.0	346	1.291	825	1,152	16,800	97.9	3	2018-12	04682	1979
0.0	0.0	0.0	346	1.291	0	1,153	16,800	97.9	0		04682	1979
3.8	12.4	25.2	344	1.291	822	881	14,620	0.0	2	2017-12	07476	1990
4.0	11.3	31.5	339	1.374	816	1,162	17,544	116.3	4	2018-12	11373	1999
<b>3460 ELM</b>												
5.9	9.1	28.4	324	1.158	813	321	6,653	0.0	3	2002-12	09687	1996
6.9	13.7	37.3	330	1.314	804	567	7,869	108.5	21	2015-12	09671	1996
12.3	13.7	36.9	330	1.175	816	330	6,901	275.0	1	2014-12	11711	1999
1.2	23.9	26.8	326	1.210	822	323	7,961	64.7	5	2016-12	02856	1971
2.0	27.1	27.0	325	1.218	824	341	8,140	67.7	1	2011-12	06471	1986
2.1	22.7	42.0	324	1.150	827	303	7,586	0.0	0		08385	1994
<b>3520 FIREBIRD</b>												
2.0	11.9	45.0	317	1.180	793	301	7,617	68.8	1	2013-12	08023	1993
2.5	16.1	23.4	321	1.210	831	323	8,174	0.0	1	2017-12	13787	2001
<b>3540 FIREWEED</b>												
12.8	11.5	36.0	329	1.158	849	422	9,225	53.2	16	2018-12	07123	1997
16.1	9.8	47.3	329	1.144	842	400	9,177	44.0	8	2002-12	00455	1959
3.7	13.3	48.0	329	1.244	831	403	9,464	78.0	0		03803	1976
3.7	11.6	20.1	329	1.180	849	411	9,285	95.0	2	2015-12	04503	1978
15.3	6.6	27.6	337	1.387	799	727	13,639	124.7	21	2018-12	09767	1996
15.5	9.0	10.0	344	1.570	815	823	19,899	0.0	2	2004-12	04369	1978
5.6	9.0	10.7	344	1.570	815	823	19,510	0.0	0		04454	1978

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	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>3560 FLATROCK</b>								
FLATROCK - B	216	12.5	27	0	26	1	D	0
BOUNDARY LAKE - A	90	15.0	14	0	11	3	M	0
BOUNDARY LAKE - B	608	12.0	73	0	71	2	D	162
NORTH PINE - A	79	20.0	16	0	0	16	V	65
HALFWAY - E - ENCAL PROJECT	1,209	13.5	163	0	163	0	D	1,090
HALFWAY - F	6	1.3	0	0	0	0	X	0
HALFWAY - G	96	10.0	10	0	7	3	D	0
HALFWAY - J - CDN FOREST PROJECT	535	17.3	93	0	91	2	D	230
HALFWAY - O	131	10.0	13	0	6	7	D	0
BELLOY - A - INISFAIL PROJECT	312	2.6	8	0	8	0	V	65
<b>TOTAL FIELD:</b>	<b>3,282</b>		<b>417</b>	<b>0</b>	<b>383</b>	<b>34</b>		
<b>3580 FLATROCK WEST</b>								
CECIL - A	477	19.5	93	0	92	1	D	0
CECIL - B	172	15.0	26	0	18	8	D	0
CECIL - C - PROGRESS PROJECT	220	20.0	44	0	41	3	D	0
FLATROCK - A	188	.5	1	0	1	0	V	66
NORTH PINE - A	175	5.0	9	0	0	9	V	65
NORTH PINE - C	132	3.0	4	0	3	1	D	0
NORTH PINE - D	130	15.0	19	0	5	14	V	64
HALFWAY - D - RIGEL PROJECT	1,297	17.0	220	0	217	3	D	397
HALFWAY - D - ENCAL PROJECT	334	7.0	23	0	16	7	D	0
HALFWAY - G	24	20.0	5	0	3	2	D	71
HALFWAY - G - CNRL PROJECT	1,415	11.0	156	0	153	3	D	0
<b>TOTAL FIELD:</b>	<b>4,564</b>		<b>600</b>	<b>0</b>	<b>549</b>	<b>51</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
3560	FLATROCK											
1.5	17.6	16.5	328	1.100	845	627	5,888	0.0	2	2016-12	07729	1991
4.9	20.0	15.1	329	1.269	830	614	12,112	90.1	1	2003-12	02852	1971
0.0	18.4	8.5	329	1.269	835	615	12,684	90.1	3	2017-12	04632	1979
1.6	11.3	16.7	333	1.240	829	653	12,883	0.0	1		08067	1993
0.0	14.2	44.2	333	1.312	819	765	13,246	99.9	10	2016-12	03221	1972
0.0	11.4	44.1	334	1.270	816	783	12,521	97.5	0	2005-12	05793	1982
0.0	0.0	0.0	332	0.000	751	0	7,467	250.0	3	2014-12		
0.0	14.3	18.3	338	1.239	815	762	11,370	64.9	3	2017-12	07766	1991
6.1	9.8	36.8	334	1.161	823	720	7,410	37.9	2	2016-12	26769	2011
5.5	14.6	17.0	339	1.389	825	1,127	18,843	132.9	1	2018-12	07497	1991
3580	FLATROCK WEST											
1.6	18.2	18.8	345	1.195	861	567	11,637	250.0	7	2016-12	08150	1993
1.5	11.7	31.3	353	1.185	859	558	10,417	0.0	1	2007-12	06925	1988
0.8	13.4	32.4	330	1.197	809	572	10,762	460.0	2	2015-12	14733	2001
3.4	19.6	49.0	326	1.195	826	613	10,971	0.0	1		08220	1993
3.2	11.2	8.3	333	1.220	826	657	12,059	77.1	1		08220	1993
1.9	14.8	12.0	333	1.220	826	632	12,059	0.0	1		08913	1994
1.6	16.2	9.3	333	1.161	855	639	9,680	0.0	1	2004-12	16169	2003
4.6	17.4	32.6	338	1.280	816	765	12,321	91.2	6	2017-12	06735	1988
2.4	13.0	25.0	338	1.280	816	770	12,321	91.2	1	2014-12	06735	1988
0.0	10.8	46.7	333	1.333	785	741	12,268	99.5	1	2009-12	05409	1980
4.2	13.8	37.3	357	1.270	810	742	12,843	83.5	10	2018-12	08077	1993



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	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>3600 FORT ST JOHN</b>								
GETHING - A	429	1.4	6	0	6	0	X	0
CECIL - A	62	15.0	9	0	2	7	V	65
NORTH PINE - A - PETRO-CAN UNIT #1	449	50.0	225	0	224	1	V	361
NORTH PINE - A - CALAHOO PROJECT	223	50.0	112	0	107	5	D	181
NORTH PINE - C - CALAHOO PROJECT	165	35.0	58	0	56	2	D	0
NORTH PINE - D - CALAHOO PROJECT	168	16.0	27	0	26	1	D	146
DOIG - A	23	10.0	2	0	1	1	V	65
BELLOY - B	229	2.3	5	0	5	0	X	65
BELLOY - D	94	.1	0	0	0	0	V	30
BELLOY - G - RIGEL PROJECT	206	17.5	36	0	27	9	D	65
<b>TOTAL FIELD:</b>	<b>2,048</b>		<b>480</b>	<b>0</b>	<b>454</b>	<b>26</b>		
<b>4000 FORT ST JOHN SOUTHEAST</b>								
BEAR FLAT - A	67	13.4	9	0	9	0	V	62
<b>TOTAL FIELD:</b>	<b>67</b>		<b>9</b>	<b>0</b>	<b>9</b>	<b>0</b>		
<b>4100 GOOSE</b>								
BLUESKY - A	226	2.0	5	0	4	1	V	65
DOIG - A	20	1.0	0	0	0	0	M	0
<b>TOTAL FIELD:</b>	<b>246</b>		<b>5</b>	<b>0</b>	<b>4</b>	<b>1</b>		
<b>4150 GOPHER</b>								
HALFWAY - B	388	1.0	4	0	0	4	V	66
<b>TOTAL FIELD:</b>	<b>388</b>		<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>		
<b>4390 GROUNDBIRCH</b>								
CECIL - A - DUVERNAY PROJECT	184	15.0	28	0	24	4	D	0
ARTEX - A	47	20.0	9	0	8	1	V	65
ARTEX - B - DUVERNAY PROJECT	470	25.0	118	0	109	9	M	0
<b>TOTAL FIELD:</b>	<b>701</b>		<b>155</b>	<b>0</b>	<b>141</b>	<b>14</b>		
<b>4600 HALFWAY</b>								
BLUEBERRY - A - BERKLEY PROJECT	85	10.0	9	0	8	1	V	66
INGA - A - BERKLEY PROJECT	132	6.5	9	0	9	0	V	130
HALFWAY - B - CNRL PROJECT	230	20.0	46	0	39	7	D	0
DEBOLT - A - BERKLEY PROJECT	950	10.0	95	0	95	0	X	0
<b>TOTAL FIELD:</b>	<b>1,397</b>		<b>159</b>	<b>0</b>	<b>151</b>	<b>8</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>3600 FORT ST JOHN</b>												
0.0	0.0	0.0	320	1.142	823	311	7,665	0.0	0	2005-12	00269	1957
1.2	14.0	23.0	592	1.348	758	0	10,456	106.8	1	2006-12	10773	1997
1.6	13.2	25.0	325	1.273	819	0	13,231	88.3	5	2010-12	00034	1952
0.0	14.2	33.8	325	1.273	819	710	13,231	85.5	2	2013-12	00034	1952
1.3	16.8	33.6	325	1.260	819	713	11,917	81.0	2	2015-12	04416	1978
0.0	10.3	23.8	337	1.251	814	713	11,392	70.0	2	2015-12	05355	1980
2.2	3.5	35.0	326	1.430	805	915	16,271	145.6	1	2013-12	06254	2006
6.4	10.1	25.0	342	1.374	825	1,272	19,085	133.0	0	2005-12	00171	1956
5.8	13.8	47.9	341	1.334	839	1,180	16,938	0.0	0		03122	1972
6.0	11.6	31.4	346	1.510	822	1,234	22,702	0.0	1		08201	1993
<b>4000 FORT ST JOHN SOUTHEAST</b>												
1.4	12.6	18.4	306	1.327	824	728	14,090	271.0	1	2018-12	19082	2005
<b>4100 GOOSE</b>												
3.2	15.1	12.9	308	1.209	836	203	10,503	0.0	2	2017-12	10588	1997
3.0	6.4	24.1	328	1.500	801	925	16,575	177.0	0	2004-12	04540	1978
<b>4150 GOPHER</b>												
6.2	16.2	26.0	333	1.263	809	711	12,147	0.0	1	2006-12	19065	2005
<b>4390 GROUND BIRCH</b>												
1.0	8.6	20.5	343	1.580	780	1,220	19,266	185.8	3	2009-12	08314	1993
1.5	10.4	7.7	363	1.979	804	1,591	21,823	186.0	1	2006-12	07430	1990
1.2	17.4	32.7	350	1.580	782	1,557	21,876	182.0	4	2006-12	08635	1994
<b>4600 HALFWAY</b>												
1.5	15.0	24.2	319	1.324	814	639	14,034	122.5	2	2016-12	01986	1966
1.5	10.0	10.6	324	1.316	814	657	14,551	101.6	2	2016-12	01986	1966
28.0	7.9	25.0	326	1.368	800	1,791	14,705	550.0	1	2015-12	11521	1998
22.7	5.9	6.7	350	1.590	787	1,328	19,586	190.6	8	2005-12	06938	1989

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>4650 HAY RIVER</b>								
BLUESKY - A - HARVEST PROJECT	36,992	20.0	7,398	189	5,647	1,751	D	0
<b>TOTAL FIELD:</b>	<b>36,992</b>		<b>7,398</b>	<b>189</b>	<b>5,647</b>	<b>1,751</b>		
<b>4700 HELMET</b>								
TETCHO - C	197	10.0	20	1	14	6	D	198
TETCHO - F	114	10.0	11	1	7	4	D	0
JEAN MARIE - K - ENCANA PROJECT	882	20.0	176	3	97	79	D	0
JEAN MARIE - L	163	1.0	2	0	1	1	V	66
<b>TOTAL FIELD:</b>	<b>1,356</b>		<b>209</b>	<b>5</b>	<b>119</b>	<b>90</b>		
<b>4900 INGA</b>								
DUNLEVY - E	318	20.0	64	0	2	62	V	71
DUNLEVY - F	198	5.0	10	0	2	8	V	71
BALDONNEL - A	125	.3	0	0	0	0	X	66
COPLIN - C - PURSUIT PROJ	107	15.0	16	0	12	4	D	0
INGA - A	518	10.0	52	0	48	4	D	0
INGA - A - CNRL UNIT #1	8,356	40.0	3,342	2	3,328	14	D	4,475
INGA - A - PURSUIT UNIT #2	7,521	31.1	2,335	0	2,335	0	D	0
INGA - A - REMINGTON UNIT #4	1,401	45.5	637	0	627	10	D	0
INGA - A - PURSUIT UNIT #5	1,716	34.0	584	0	558	26	D	0
INGA - B - BERKLEY PROJECT	47	10.0	5	0	4	1	V	66
A MARKER/BASE OF LIME - A	33	10.0	3	0	0	3	V	65
DOIG - A	65	20.0	13	0	3	10	V	66
<b>TOTAL FIELD:</b>	<b>20,405</b>		<b>7,061</b>	<b>2</b>	<b>6,919</b>	<b>142</b>		
<b>4925 INGA SOUTH</b>								
INGA - A	21	20.0	4	0	4	0	X	0
<b>TOTAL FIELD:</b>	<b>21</b>		<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>		
<b>5000 JEDNEY</b>								
BALDONNEL - A	123	5.0	6	0	0	6	V	70
<b>TOTAL FIELD:</b>	<b>123</b>		<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>		
<b>5150 JUNIOR</b>								
JEAN MARIE - A	135	20.0	27	0	0	27	V	68
<b>TOTAL FIELD:</b>	<b>135</b>		<b>27</b>	<b>0</b>	<b>0</b>	<b>27</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>4650 HAY RIVER</b>												
2.5	26.8	36.8	298	1.046	907	46	3,591	14.0	436	2018-12	06443	1986
<b>4700 HELMET</b>												
2.2	7.3	20.8	321	1.100	825	400	3,834	153.0	2	2018-12	27937	2012
1.5	6.0	30.0	0	0.000	0	439	0	109.0	1	2018-12	28724	2013
4.4	9.1	36.4	342	1.144	817	762	5,469	28.5	3	2018-12	12619	2002
5.5	7.0	25.0	342	1.171	809	757	6,656	303.0	1	2017-12	20343	2006
<b>4900 INGA</b>												
5.7	10.8	15.0	325	1.170	836	429	9,006	60.2	2		08531	1994
6.1	10.5	48.1	320	1.193	834	418	9,094	61.8	2	2010-12	04100	1978
4.0	9.0	34.8	320	1.241	835	548	12,458	0.0	0	2005-12	00933	1962
2.0	13.4	6.5	322	1.267	0	750	13,663	77.8	2	2010-12	07924	1992
1.2	5.9	27.2	333	1.349	818	0	16,023	116.2	7	2017-12	01776	1966
2.4	12.2	15.2	333	1.349	819	741	16,023	119.9	36	2018-12	01776	1966
2.4	10.3	2.0	333	1.349	819	741	16,023	110.0	49	2018-12	01776	1966
1.5	15.6	22.3	333	1.349	819	741	16,023	119.9	5	2016-12	01776	1966
2.1	10.9	14.2	333	1.349	819	741	16,023	119.9	12	2013-12	01776	1966
1.9	9.8	49.4	333	1.334	821	801	15,708	117.0	1		05104	1980
0.7	12.0	20.0	335	1.309	814	814	13,844	94.1	1	2012-12	28059	2012
4.0	5.0	10.0	335	1.836	791	952	24,561	282.5	1	2003-12	11409	1998
<b>4925 INGA SOUTH</b>												
0.0	0.0	0.0	333	1.336	830	802	16,164	118.8	1	2005-12	05792	1982
<b>5000 JEDNEY</b>												
2.7	9.6	16.0	339	1.244	817	442	11,309	0.0	1	2008-12	21062	2007
<b>5150 JUNIOR</b>												
4.4	5.7	1.8	352	1.243	798	1,014	9,358	52.6	1	2004-12	13727	2001

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>5170 KELLY</b>								
DOE CREEK - A	493	5.0	25	1	19	6	D	148
<b>TOTAL FIELD:</b>	<b>493</b>		<b>25</b>	<b>1</b>	<b>19</b>	<b>6</b>		
<b>5500 LADYFERN</b>								
BLUESKY - F - CNRL PROJECT	181	20.0	36	2	29	7	D	70
BLUESKY - L	23	10.0	2	0	0	2	V	65
BLUESKY - N	37	10.0	4	0	1	3	V	70
BLUESKY - O	22	15.0	3	0	3	0	D	0
<b>TOTAL FIELD:</b>	<b>263</b>		<b>45</b>	<b>2</b>	<b>33</b>	<b>12</b>		
<b>5540 LAGARDE</b>								
DUNLEVY - B - PEACE PROJECT	275	21.0	58	0	56	2	D	0
<b>TOTAL FIELD:</b>	<b>275</b>		<b>58</b>	<b>0</b>	<b>56</b>	<b>2</b>		
<b>5560 LAPP</b>								
HALFWAY - C - CNRL PROJECT	1,037	45.0	467	0	452	15	D	0
HALFWAY - D - CNRL PROJECT	395	42.5	168	0	166	2	D	0
<b>TOTAL FIELD:</b>	<b>1,432</b>		<b>635</b>	<b>0</b>	<b>618</b>	<b>17</b>		
<b>5600 LAPRISE CREEK</b>								
CHARLIE LAKE - A	56	3.0	2	0	1	1	V	70
COPLIN - A - CREW ENERGY PROJECT	410	25.0	102	2	79	23	D	0
COPLIN - B	29	30.0	9	0	4	5	M	0
COPLIN - B - CREW PROJECT	258	30.0	77	0	72	5	M	0
COPLIN - C	64	15.0	10	0	6	4	V	70
<b>TOTAL FIELD:</b>	<b>817</b>		<b>200</b>	<b>2</b>	<b>162</b>	<b>38</b>		
<b>5850 MARTIN</b>								
BLUESKY - K - PIONEER PROJECT	66	10.8	7	0	7	0	X	70
<b>TOTAL FIELD:</b>	<b>66</b>		<b>7</b>	<b>0</b>	<b>7</b>	<b>0</b>		
<b>5852 MAXHAMISH LAKE</b>								
CHINKEH - A - ENCAN CONCURRENT PROJECT	888	10.0	89	6	64	25	V	325
MATTSON - J	479	10.0	48	0	0	48	V	65
<b>TOTAL FIELD:</b>	<b>1,367</b>		<b>137</b>	<b>6</b>	<b>64</b>	<b>73</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>5170 KELLY</b>												
2.3	14.6	20.6	320	1.130	824	396	6,281	46.1	2	2018-12	08211	1993
<b>5500 LADYFERN</b>												
3.3	19.3	34.8	321	1.131	823	193	5,900	70.0	1	2018-12	18051	2005
0.5	16.5	50.0	319	1.141	825	185	7,084	38.5	1	2012-12	20394	2006
0.7	11.5	25.0	325	1.147	825	188	7,050	38.7	1	2008-12	15488	2003
3.0	14.6	29.0	324	1.145	823	186	7,000	55.0	1	2018-12	19701	2014
<b>5540 LAGARDE</b>												
2.4	15.0	31.7	328	1.150	846	367	9,687	51.4	4		06324	1985
<b>5560 LAPP</b>												
2.0	22.4	24.5	326	1.150	819	278	6,891	47.3	10	2017-12	10055	1997
1.5	28.3	28.5	325	1.150	816	286	6,560	70.0	2	2017-12	13631	2001
<b>5600 LAPRISE CREEK</b>												
1.0	10.0	15.0	336	1.067	809	533	5,742	0.0	1	2006-12	17887	2004
0.7	10.6	19.2	337	1.386	795	457	13,239	124.0	5	2018-12	16042	2003
0.6	10.9	12.4	339	1.432	805	463	12,787	132.1	2	2012-12	16377	2003
0.6	10.9	12.4	339	1.432	805	463	12,787	132.1	6	2013-12	16377	2003
1.4	12.0	25.0	335	1.371	809	502	12,499	220.0	1	2013-12	17887	2004
<b>5850 MARTIN</b>												
1.1	14.3	26.0	331	1.236	808	324	7,456	71.3	1	2017-12	12464	1998
<b>5852 MAXHAMISH LAKE</b>												
2.6	18.5	30.8	336	1.218	814	1,113	9,197	61.0	129	2018-12	11617	1998
6.8	16.8	28.0	317	1.116	853	300	7,287	32.2	0	2013-12	13590	2001

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>5860 MICA</b>								
BOUNDARY LAKE - A	126	1.8	2	0	2	0	X	65
MICA - A - STORM PROJECT	1,129	40.0	451	13	309	142	D	0
MICA - C	81	1.0	1	0	1	0	X	65
DOIG - B - VENTURION OIL	498	25.0	125	6	92	33	V	368
DOIG - D	230	1.3	3	0	3	0	D	65
DOIG - D - SABRETOOTH PROJECT	214	12.0	26	1	18	8	D	0
<b>TOTAL FIELD:</b>	<b>2,278</b>		<b>608</b>	<b>20</b>	<b>425</b>	<b>183</b>		
<b>5880 MIKE</b>								
BLUESKY - A - CNRL PROJECT	929	6.0	56	0	56	0	V	270
<b>TOTAL FIELD:</b>	<b>929</b>		<b>56</b>	<b>0</b>	<b>56</b>	<b>0</b>		
<b>6000 MILLIGAN CREEK</b>								
GETHING - B	149	3.0	4	0	3	1	V	65
HALFWAY - A - CNRL UNIT #1	12,119	53.0	6,423	0	6,376	47	D	0
HALFWAY - A - CNRL UNIT #2	2,160	50.0	1,080	4	1,022	58	D	0
<b>TOTAL FIELD:</b>	<b>14,428</b>		<b>7,507</b>	<b>4</b>	<b>7,401</b>	<b>106</b>		
<b>6020 MILLIGAN CREEK WEST</b>								
HALFWAY - D	188	20.0	38	0	1	37	V	65
HALFWAY - H	441	7.3	32	0	32	0	X	70
HALFWAY - I	630	8.0	50	0	46	4	D	0
<b>TOTAL FIELD:</b>	<b>1,259</b>		<b>120</b>	<b>0</b>	<b>79</b>	<b>41</b>		
<b>6100 MOBERLY LAKE</b>								
PINGEL - A	80	15.0	12	0	6	6	M	0
<b>TOTAL FIELD:</b>	<b>80</b>		<b>12</b>	<b>0</b>	<b>6</b>	<b>6</b>		
<b>6140 MONIAS</b>								
CHARLIE LAKE - B	25	5.5	1	0	1	0	V	65
<b>TOTAL FIELD:</b>	<b>25</b>		<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>5860 MICA</b>												
1.5	17.0	5.7	329	1.243	850	843	13,966	0.0	0	2005-12	04087	1977
0.0	17.2	13.4	329	1.342	814	874	14,948	300.0	14	2018-12	03649	1976
1.5	12.6	12.6	333	1.326	814	887	14,325	115.2	0	2005-12	04649	1979
1.7	12.9	15.2	332	1.373	803	1,038	15,927	117.7	5	2018-12	14916	2002
1.3	10.9	32.0	333	1.352	801	1,039	14,188	110.3	1	2018-12	23999	2008
2.0	12.2	16.0	333	1.352	801	1,029	14,188	600.0	1	2018-12	23999	2008
<b>5880 MIKE</b>												
2.4	19.8	17.4	308	1.141	818	308	7,646	80.0	1	2018-12	03463	1974
<b>6000 MILLIGAN CREEK</b>												
2.7	13.8	25.7	322	1.209	829	236	7,060	66.8	2	2009-12	00985	1962
5.4	23.5	18.9	330	1.160	832	344	8,039	49.8	33	2012-12	00248	1958
3.0	22.3	25.8	330	1.160	832	357	8,143	65.0	9	2018-12	00248	1958
<b>6020 MILLIGAN CREEK WEST</b>												
2.4	23.2	40.3	330	1.148	825	382	8,397	50.5	1		06647	1987
5.0	16.6	11.3	328	1.169	840	363	8,600	56.6	2	2014-12	07705	1991
2.1	23.5	29.6	325	1.152	800	373	7,920	0.0	3	2015-12	07850	1992
<b>6100 MOBERLY LAKE</b>												
1.2	14.0	9.0	327	1.341	811	681	15,897	124.1	2		02019	1967
<b>6140 MONIAS</b>												
0.8	8.1	9.4	317	1.498	819	732	20,707	176.6	1	2016-12	26407	2011



## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
6200 MONTNEY								
BLUESKY - D	246	20.0	49	0	1	48	V	64
CECIL - B - ENCAL PROJECT	120	15.0	18	0	14	4	D	130
CECIL - C	73	20.0	15	0	13	2	D	0
HALFWAY - C	214	1.3	3	0	3	0	X	65
HALFWAY - D - POCO PROJECT	708	15.0	106	0	96	10	D	0
HALFWAY - H - POCO PROJECT	41	25.0	10	0	9	1	V	65
<b>TOTAL FIELD:</b>	<b>1,402</b>		<b>201</b>	<b>0</b>	<b>136</b>	<b>65</b>		
6230 MUSKRAT								
CECIL - B - APACHE PROJECT	111	20.0	22	0	2	20	V	66
BOUNDARY LAKE - A - DEVON PROJECT	1,003	40.0	401	8	370	31	V	351
HALFWAY - D	240	9.0	22	0	20	2	D	65
HALFWAY - E - WAINOCO PROJECT	378	9.0	34	0	32	2	D	0
HALFWAY	483	14.0	68	0	67	1	V	200
HALFWAY - SAMSON PROJECT	101	15.0	15	0	0	15	V	65
LOWER HALFWAY - A - DEVON PROJECT	465	23.5	109	0	107	2	D	0
LOWER HALFWAY - B	370	4.0	15	0	14	1	V	65
LOWER HALFWAY - C	359	5.0	18	0	15	3	V	65
<b>TOTAL FIELD:</b>	<b>3,510</b>		<b>704</b>	<b>8</b>	<b>627</b>	<b>77</b>		
6400 NIG CREEK								
BALDONNEL - A - HUBER PROJECT	221	10.0	22	0	1	21	V	65
BALDONNEL - D	422	10.0	42	0	35	7	D	0
<b>TOTAL FIELD:</b>	<b>643</b>		<b>64</b>	<b>0</b>	<b>36</b>	<b>28</b>		
6440 NORTH PINE								
NORTH PINE - B - REMINGTON PROJECT	78	25.0	19	0	18	1	D	201
<b>TOTAL FIELD:</b>	<b>78</b>		<b>19</b>	<b>0</b>	<b>18</b>	<b>1</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>6200 MONTNEY</b>												
3.9	15.4	27.5	321	1.135	851	330	8,761	0.0	1		12566	1999
1.5	11.0	31.5	327	1.220	844	547	12,275	0.0	1		08035	1993
1.0	15.0	37.0	329	1.310	842	551	12,180	0.0	1		08278	1993
5.5	16.2	54.3	329	1.236	826	724	12,546	83.3	1	2005-12	04509	1978
2.5	16.6	29.9	334	1.240	828	710	11,597	74.1	3	2012-12	07178	1989
1.5	7.9	33.5	334	1.240	743	704	11,597	0.0	1		07178	1989
<b>6230 MUSKRAT</b>												
2.5	13.0	33.0	324	1.292	0	535	11,942	0.0	1		09841	1996
2.5	17.6	19.7	325	1.237	837	623	12,028	75.3	16	2018-12	09218	1995
3.8	14.7	20.6	332	1.202	839	697	12,180	0.0	2		09358	1995
5.4	14.9	10.9	333	1.233	828	720	12,216	0.0	1	2007-12	09335	1995
2.7	15.5	29.0	345	1.230	818	689	12,117	75.3	4	2018-12	06979	1989
2.6	11.0	33.0	345	1.230	818	689	12,117	75.3	0	2014-12	06979	1989
2.8	15.7	24.9	332	1.237	825	691	12,239	81.9	3	2015-12	09421	1995
4.9	19.4	25.9	332	1.237	825	699	12,239	0.0	1	2017-12	10035	1996
5.2	17.1	22.2	331	1.251	825	696	11,053	0.0	1	2007-12	11938	1999
<b>6400 NIG CREEK</b>												
5.6	9.0	18.2	334	1.214	827	426	10,680	70.9	1		00061	1954
5.9	11.2	26.2	336	1.260	829	431	10,696	130.0	3	2016-12	02152	1967
<b>6440 NORTH PINE</b>												
0.6	9.5	15.1	329	1.251	815	645	13,355	92.4	2	2007-12	04457	1978

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>6460 OAK</b>								
BALDONNEL - D	2	10.0	0	0	0	0	X	0
BALDONNEL - E	186	15.0	28	0	2	26	V	74
BALDONNEL - H	155	1.0	2	0	1	1	V	0
BALDONNEL - H - CANETIC PROJECT	155	2.0	3	0	1	2	V	54
BALDONNEL - I	175	5.0	9	0	0	9	V	64
CECIL - B - PENGROWTH UNIT	424	23.6	100	0	100	0	V	260
CECIL - C - PENGROWTH PROJECT	908	60.0	545	6	437	108	D	894
CECIL - E - PENGROWTH PROJECT	1,264	48.0	607	1	603	4	D	446
CECIL - I - APACHE PROJECT	616	40.0	246	0	237	9	D	381
CECIL - K - SAMSON PROJECT	180	18.2	33	0	33	0	D	65
BOUNDARY LAKE - A - SABRETOOTH PROJECT	256	10.0	26	1	21	5	D	65
BOUNDARY LAKE - B	81	12.0	10	0	7	3	D	0
HALFWAY - A	118	11.5	14	0	13	1	V	65
HALFWAY - B	1,883	20.0	377	0	296	81	V	471
HALFWAY - C	341	.2	1	0	0	1	V	226
LOWER HALFWAY - A	168	5.0	8	0	8	0	D	264
LOWER HALFWAY - B	120	10.0	12	0	12	0	D	0
<b>TOTAL FIELD:</b>	<b>7,032</b>		<b>2,021</b>	<b>8</b>	<b>1,771</b>	<b>250</b>		
<b>6490 OSBORN</b>								
GETHING - C	193	10.0	19	0	1	18	V	74
<b>TOTAL FIELD:</b>	<b>193</b>		<b>19</b>	<b>0</b>	<b>1</b>	<b>18</b>		
<b>6500 OSPREY</b>								
HALFWAY - A	201	39.7	80	0	80	0	X	0
HALFWAY - D - CNRL PROJECT	710	10.0	71	1	60	11	D	244
HALFWAY - E - CNRL PROJECT #3	302	10.0	30	0	27	3	D	133
HALFWAY - G	61	15.0	9	0	1	8	V	71
HALFWAY - H	189	.2	0	0	0	0	V	71
HALFWAY - K - PROGRESS PROJECT	594	8.6	51	0	51	0	V	142
HALFWAY - M	83	5.0	4	0	0	4	V	71
<b>TOTAL FIELD:</b>	<b>2,140</b>		<b>245</b>	<b>1</b>	<b>219</b>	<b>26</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
6460 OAK												
1.4	16.0	25.5	326	1.174	842	476	10,526	0.0	1	2005-12	08273	2000
2.5	13.9	14.2	326	1.186	842	479	10,350	64.8	2	2001-12	10492	1997
4.3	11.2	29.5	327	1.186	838	487	10,255	53.2	1	2010-12	11454	2001
4.3	11.2	29.5	327	1.186	838	487	10,255	53.2	2	2010-12	11454	2001
4.7	10.6	35.2	327	1.178	847	473	10,324	51.4	1	2008-12	16534	2003
1.5	15.6	13.9	328	1.234	837	557	12,150	72.5	5	2017-12	05575	1981
1.3	13.0	26.1	327	1.230	832	553	11,463	75.3	21	2018-12	07166	1989
0.0	18.4	21.1	328	1.180	861	554	11,991	52.4	16	2018-12	08099	1993
0.0	15.7	23.9	325	1.220	858	535	12,031	72.6	9	2017-12	08650	1994
0.0	14.8	32.6	328	1.204	845	558	12,277	64.1	1	2018-12	11257	1998
0.0	12.0	34.3	328	1.232	834	593	12,291	70.5	1	2018-12	22573	2007
3.0	16.8	31.6	328	1.239	834	594	12,581	226.0	1	2018-12	24873	2008
1.7	18.4	23.2	329	1.325	823	718	12,755	108.1	10	2017-12	03269	1973
3.9	16.1	21.3	329	1.236	825	713	12,753	83.3	4	2014-12	03363	1973
2.5	15.3	53.0	328	1.190	827	717	11,057	69.1	1		07733	1991
1.1	16.2	37.3	327	1.200	826	697	12,223	0.0	4	2017-12	08344	1993
2.0	18.8	34.9	331	1.247	809	684	11,750	0.0	1	2018-12	08928	1994
6490 OSBORN												
2.0	20.9	30.6	327	1.110	858	322	8,272	0.0	1	2007-12	17433	2004
6500 OSPREY												
1.2	11.3	19.5	326	1.157	825	465	9,598	55.8	3	2014-12	01610	1965
3.0	20.0	46.0	325	1.143	827	433	9,192	53.0	4	2018-12	06138	1984
2.0	21.6	38.2	325	1.162	835	444	9,411	56.0	1	2018-12	06174	1985
1.2	17.5	51.5	329	1.191	837	484	9,490	57.1	3	2010-12	07862	1992
3.1	17.0	41.5	328	1.160	812	429	9,028	0.0	1		08206	1993
3.5	21.0	32.3	327	1.189	835	487	9,402	57.0	2	2015-12	11199	1998
1.0	22.7	43.6	327	1.096	846	483	9,402	0.0	1	2007-12	16729	2003

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>6530 OWL</b>								
BLUESKY - A	42	.3	0	0	0	0	X	65
CECIL - A	246	30.0	74	1	65	9	D	0
CECIL - A - DEVON PROJECT	717	45.0	323	0	320	3	D	0
<b>TOTAL FIELD:</b>	<b>1,005</b>		<b>397</b>	<b>1</b>	<b>385</b>	<b>12</b>		
<b>6560 PARADISE</b>								
GETHING - A	181	10.0	18	0	8	10	D	0
SIPHON - A	59	15.0	9	0	3	6	V	202
BOUNDARY LAKE - A	108	15.0	16	0	13	3	D	66
HALFWAY - B	78	15.0	12	0	2	10	V	65
MONTNEY - A	31	10.0	3	0	3	0	D	66
MONTNEY - A - SUNCOR PROJECT	164	8.5	14	0	13	1	D	0
<b>TOTAL FIELD:</b>	<b>621</b>		<b>72</b>	<b>0</b>	<b>42</b>	<b>30</b>		
<b>6800 PEEJAY</b>								
GETHING - S	10	10.0	1	0	1	0	D	0
BALDONNEL - B	271	20.0	54	0	0	54	V	65
HALFWAY - L - ENCAL PROJECT	202	6.0	12	0	9	3	V	65
HALFWAY - N - CNRL PROJECT	89	15.0	13	0	11	2	D	74
HALFWAY - O	97	.2	0	0	0	0	X	65
HALFWAY - R - CNRL PROJECT	290	15.0	44	0	34	10	V	224
HALFWAY - T	63	20.0	13	0	0	13	V	65
HALFWAY - W	352	20.0	70	2	53	17	D	0
HALFWAY	2,141	15.0	321	5	307	14	M	0
HALFWAY - CNRL UNIT #1	5,803	38.4	2,228	0	2,227	1	V	1,542
HALFWAY - CNRL UNIT #2	8,938	43.0	3,843	3	3,802	41	V	2,786
HALFWAY - CNRL UNIT #3	7,897	44.3	3,498	1	3,485	13	D	0
HALFWAY - NORTH PEEJAY PROJECT	141	15.0	21	0	19	2	V	251
HALFWAY - CNRL PROJECT	2,836	35.0	992	1	982	10	D	533
HALFWAY - CNRL PROJECT #2	94	.8	1	0	1	0	X	71
<b>TOTAL FIELD:</b>	<b>29,224</b>		<b>11,111</b>	<b>12</b>	<b>10,931</b>	<b>180</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
6530	OWL											
1.0	16.0	54.8	325	1.130	839	329	7,343	46.6	1	2005-12	07986	1992
2.7	13.8	34.8	328	1.246	846	563	12,402	150.0	1	2018-12	06668	1987
1.7	14.1	24.6	328	1.246	753	570	12,402	86.3	9	2016-12	06668	1987
6560	PARADISE											
5.3	20.1	16.3	329	1.158	847	385	9,240	42.1	1	2014-12	21481	2006
0.6	9.5	41.0	324	1.154	902	534	12,241	0.0	2	2007-12	19770	2005
0.0	12.9	30.0	329	1.243	809	581	11,557	0.0	2	2018-12	21097	2006
2.2	10.5	35.7	328	1.242	813	700	12,477	90.4	1		07912	1992
0.8	13.0	15.0	335	1.436	813	967	18,041	0.0	3	2018-12	24209	2008
2.2	15.2	11.2	339	1.464	800	973	18,120	0.0	1	2016-12	10284	1997
6800	PEEJAY											
3.5	12.1	38.5	324	1.146	831	265	7,247	82.6	1	2015-12	22595	2007
5.4	13.5	35.6	321	1.128	829	312	7,810	43.0	1		08457	1994
2.4	17.9	13.1	318	1.203	831	424	9,333	63.5	1		02323	1968
4.0	9.5	18.9	334	1.170	831	406	8,652	54.9	2	2018-12	06289	1985
1.3	18.4	26.6	340	1.175	819	460	10,379	0.0	2	2014-12	06992	1989
1.2	15.9	19.0	327	1.192	825	411	9,151	64.2	3		08345	1993
1.4	12.9	36.1	315	1.186	825	468	9,289	69.8	1		09091	1995
0.0	0.0	0.0	328	1.211	825	440	9,465	111.1	1	2018-12	17522	2004
1.6	0.0	0.0	329	0.000	812	442	9,485	59.0	17	2018-12	00418	1959
3.4	15.5	16.1	329	1.175	812	442	9,418	59.0	29	2017-12	00418	1959
3.3	15.2	23.7	329	1.193	812	440	9,398	60.8	55	2018-12	01575	1965
4.2	13.3	23.4	329	1.185	812	442	9,384	55.8	48	2018-12	01407	1964
1.2	8.9	36.9	329	1.201	823	407	9,363	63.6	3		00725	1961
4.8	16.5	20.4	329	1.185	812	442	9,384	55.8	12	2018-12	01497	1964
1.6	12.1	19.8	329	1.169	831	440	9,485	56.8	1	2005-12	00418	1959

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>7000 PEEJAY WEST</b>								
HALFWAY - A - CNRL PROJECT	1,561	40.0	624	11	520	104	D	0
HALFWAY - C - CNRL PROJECT	511	40.0	204	4	158	46	V	195
HALFWAY - D - DEKALB PROJECT	341	15.0	51	0	0	51	D	0
HALFWAY - D - CNRL PROJECT	454	18.0	82	0	0	82	D	0
HALFWAY - E	242	10.0	24	0	0	24	V	71
HALFWAY - G	193	10.0	19	0	19	0	D	0
<b>TOTAL FIELD:</b>	<b>3,302</b>		<b>1,004</b>	<b>15</b>	<b>697</b>	<b>307</b>		
<b>7265 PINTAIL</b>								
COPLIN - A - ENCAL PROJECT	115	10.0	11	0	0	11	V	65
<b>TOTAL FIELD:</b>	<b>115</b>		<b>11</b>	<b>0</b>	<b>0</b>	<b>11</b>		
<b>7275 PLUTO</b>								
CECIL - A	78	15.0	12	0	1	11	V	66
<b>TOTAL FIELD:</b>	<b>78</b>		<b>12</b>	<b>0</b>	<b>1</b>	<b>11</b>		
<b>7400 RED CREEK</b>								
DOIG - B - REMINGTON PROJECT	301	5.0	15	0	8	7	V	66
DOIG - C - TERRA PROJECT	609	25.0	152	1	149	3	D	307
<b>TOTAL FIELD:</b>	<b>910</b>		<b>167</b>	<b>1</b>	<b>157</b>	<b>10</b>		
<b>7410 RED CREEK NORTH</b>								
DOIG - B - CNRL PROJECT	575	5.0	29	0	7	22	V	179
DOIG - B - CHINOOK PROJECT	296	5.0	15	0	1	14	V	65
<b>TOTAL FIELD:</b>	<b>871</b>		<b>44</b>	<b>0</b>	<b>8</b>	<b>36</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
7000 PEEJAY WEST												
0.0	22.0	37.5	327	1.201	823	493	9,878	57.5	12	2018-12	00956	1962
1.9	21.4	23.7	334	1.184	833	493	9,866	59.1	7	2018-12	03953	1977
1.9	21.0	34.7	338	1.140	819	490	7,215	0.0	0	2007-12	07901	1992
3.8	24.0	27.5	338	1.140	819	491	7,215	0.0	0	2007-12	07901	1992
3.1	22.3	43.0	325	1.157	826	490	8,444	0.0	1		08807	1994
3.3	22.4	32.1	326	1.160	828	499	8,272	41.6	1	2017-12	10328	1997
7265 PINTAIL												
2.1	12.8	13.7	322	1.316	819	716	14,325	115.2	1		03157	1972
7275 PLUTO												
1.5	12.3	25.0	328	1.172	879	546	12,402	63.5	1	2003-12	14043	2001
7400 RED CREEK												
9.5	9.0	26.0	330	1.388	821	878	17,503	141.0	2	2007-12	03770	1976
19.3	11.8	10.1	329	1.442	808	789	17,967	160.5	12	2018-12	10108	1997
7410 RED CREEK NORTH												
5.1	9.3	7.7	333	1.362	809	893	14,201	117.7	1	2007-12	10062	1997
5.0	13.4	6.4	332	1.375	804	886	13,425	123.6	3	2012-12	10575	1997



## Pool Reserve Report - Oil As of December 31, 2018

Field / Pool / Project	1 Original Oil In Place (km3)	2 Recovery Factor (%)	3 Initial Reserves (km3)	4 Annual Prod (km3)	5 Cumul Prod (km3)	6 Remaining Reserves (km3)	7 Official Calc Method	8 Area (ha)
7600 RIGEL								
DUNLEVY - A - PROCYON PROJECT	196	9.7	19	0	19	0	X	0
DUNLEVY - B - NCE PROJECT #2	155	9.0	14	0	14	0	X	0
DUNLEVY - D	65	1.0	1	0	0	1	V	65
DUNLEVY - E - CNRL PROJ	331	20.0	66	0	64	2	D	71
DUNLEVY - I - WINCAN PROJECT	172	7.1	12	0	12	0	V	196
DUNLEVY - R	27	15.0	4	0	4	0	X	0
DUNLEVY - S	374	15.6	58	0	58	0	X	259
DUNLEVY - T	228	20.0	46	0	44	2	D	0
CECIL - B - PENGROWTH PROJECT	1,503	40.0	601	2	595	6	D	0
CECIL - D	235	15.0	35	0	34	1	V	230
CECIL - E	127	10.0	13	0	1	12	V	65
CECIL - G - PENGROWTH PROJECT	953	45.0	429	0	419	10	D	0
CECIL - H - PENGROWTH PROJECT	1,821	50.0	910	2	887	23	V	858
CECIL - I - PENGROWTH PROJECT	1,962	40.0	785	2	775	10	D	0
CECIL - J	39	15.0	6	0	0	6		66
HALFWAY - AA - CALAHOO PROJECT	141	.7	1	0	1	0	X	71
HALFWAY - C - ARCHEAN PROJECT	739	27.5	203	0	197	6	V	182
HALFWAY - C - CNRL UNIT #1	752	39.0	293	0	292	1	D	220
HALFWAY - DD	109	22.0	24	0	21	3	D	71
HALFWAY - E	65	20.0	13	0	1	12	V	65
HALFWAY - EE	343	10.0	34	1	27	7	D	0
HALFWAY - F - TALISMAN PROJECT	365	20.0	73	0	71	2	V	150
HALFWAY - GG	67	2.0	1	0	1	0	V	38
HALFWAY - H - HUNT OIL PROJECT #1	703	15.0	105	0	91	14	V	455
HALFWAY - I	266	20.0	53	0	0	53	V	197
HALFWAY - N	144	20.0	29	0	0	29	V	65
HALFWAY - O	411	20.0	82	0	81	1	D	0
HALFWAY - R	137	15.0	21	0	1	20	V	65
HALFWAY - T	341	20.0	68	1	61	7	D	0
HALFWAY - Z - CANADIAN FOREST PROJECT	104	20.0	21	0	7	14	V	140
LOWER HALFWAY - A	111	15.0	17	0	14	3	V	66
DOIG - A	103	20.0	21	0	0	21	V	65
<b>TOTAL FIELD:</b>	<b>13,089</b>		<b>4,058</b>	<b>8</b>	<b>3,792</b>	<b>266</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
7600	RIGEL											
0.0	14.6	27.6	323	1.196	839	377	11,365	58.3	1	2014-12	01942	1966
0.0	11.0	18.0	321	1.149	832	390	8,956	0.0	1	2005-12	01714	1965
1.6	11.1	35.0	321	1.149	832	397	8,981	56.7	1		02565	1969
0.0	12.3	28.0	323	1.138	0	374	7,033	37.8	1	2018-12	03109	1972
0.9	14.9	25.0	321	1.146	843	387	8,961	56.7	1	2008-12	05029	1979
4.3	14.6	27.6	324	1.183	832	395	8,940	55.1	0	2012-12	01555	1965
2.3	13.3	44.9	326	1.166	832	391	8,402	46.3	2	2012-12	01616	1965
1.0	15.2	49.1	326	1.219	839	396	11,508	66.5	3	2014-12	01942	1966
1.3	12.7	28.0	324	1.255	860	505	11,303	88.9	17	2018-12	08265	1993
1.3	15.1	40.3	326	1.149	883	429	10,296	53.2	4	2018-12	08208	1993
2.2	13.8	24.5	325	1.177	869	485	10,812	0.0	1		09452	1995
1.9	13.2	30.7	324	1.202	863	536	11,272	81.0	14	2015-12	10022	1996
1.9	17.7	24.4	327	1.198	863	502	11,174	68.3	18	2018-12	10636	1997
0.0	16.5	25.5	325	1.165	875	510	11,427	47.4	24	2018-12	10648	1997
0.7	14.0	30.0	324	1.170	875	505	11,427	63.8	1		11406	1998
2.4	15.4	35.0	331	1.207	823	505	10,497	70.0	1	2003-12	11135	1998
3.5	18.9	25.0	335	1.222	0	563	10,853	71.6	5	2007-12	06770	1988
3.0	17.3	25.9	335	1.222	825	573	10,853	71.6	8	2012-12	06770	1988
0.0	20.1	33.0	333	1.205	829	526	9,986	57.1	1	2018-12	11473	2002
1.3	20.3	51.9	340	1.260	827	667	11,440	67.3	1		07385	1990
4.0	22.7	31.0	324	1.205	829	0	10,126	85.0	1	2018-12	15380	2003
2.2	18.2	28.9	340	1.169	810	588	10,689	95.7	2		07384	1990
2.8	16.7	55.0	329	1.194	825	491	9,626	54.1	1	2008-12	15979	2003
1.9	14.8	29.3	331	1.287	824	677	12,099	97.0	12	2011-12	11318	1998
1.4	19.4	39.0	333	1.228	820	603	11,413	81.5	5	2011-12	07463	1990
2.7	18.7	46.0	332	1.230	823	578	10,672	66.1	1		07939	1992
2.7	19.2	41.0	332	1.210	818	534	10,341	74.1	2	2018-12	07976	1992
2.6	19.2	48.0	327	1.230	806	558	10,414	81.5	1		08325	1993
4.0	18.8	35.7	331	1.441	818	521	10,200	0.0	2	2018-12	08480	1994
1.0	17.2	45.5	333	1.257	817	614	11,413	0.0	2		09452	1995
1.7	19.7	37.8	328	1.235	819	676	12,124	83.5	1		10886	1997
4.5	6.7	36.0	332	1.220	827	582	10,333	0.0	1	2004-12	07228	1990

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	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>7620 RIGEL EAST</b>								
GETHING - A - REMINGTON PROJECT	183	12.0	22	0	21	1	D	65
GETHING - H	353	10.0	35	0	1	34	V	66
CADOMIN - B	98	15.0	15	0	3	12	V	66
<b>TOTAL FIELD:</b>	<b>634</b>		<b>72</b>	<b>0</b>	<b>25</b>	<b>47</b>		
<b>7745 SATURN</b>								
CECIL - A - IMPERIAL PROJECT	482	15.0	72	0	56	16	V	318
SEPTIMUS - A	54	1.9	1	0	1	0	X	65
<b>TOTAL FIELD:</b>	<b>536</b>		<b>73</b>	<b>0</b>	<b>57</b>	<b>16</b>		
<b>7750 SEPTIMUS</b>								
NORTH PINE - A	124	20.0	25	0	1	24	V	65
HALFWAY - C	189	20.0	38	0	0	38	V	65
DOIG - C	131	20.0	26	1	18	8	D	0
<b>TOTAL FIELD:</b>	<b>444</b>		<b>89</b>	<b>1</b>	<b>19</b>	<b>70</b>		
<b>7780 SILVER</b>								
HALFWAY - D	75	20.0	15	0	2	13	V	70
<b>TOTAL FIELD:</b>	<b>75</b>		<b>15</b>	<b>0</b>	<b>2</b>	<b>13</b>		
<b>7820 SILVERBERRY</b>								
NORTH PINE - C	37	20.0	7	0	3	4	V	65
<b>TOTAL FIELD:</b>	<b>37</b>		<b>7</b>	<b>0</b>	<b>3</b>	<b>4</b>		
<b>7840 SIPHON</b>								
DUNLEVY - C	103	20.0	21	0	2	19	V	65
LOWER DUNLEVY - A	468	10.0	47	0	2	45	V	65
SIPHON - D	50	5.0	2	0	0	2	V	65
<b>TOTAL FIELD:</b>	<b>621</b>		<b>70</b>	<b>0</b>	<b>4</b>	<b>66</b>		
<b>7860 SIPHON EAST</b>								
BLUESKY - A	78	3.8	3	0	3	0	V	65
DUNLEVY - B	1,488	20.0	298	9	73	225	D	130
BALDONNEL - B	276	5.0	14	0	0	14	V	66
<b>TOTAL FIELD:</b>	<b>1,842</b>		<b>315</b>	<b>9</b>	<b>76</b>	<b>239</b>		



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2019DEC17  
PIMS8310

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
7620	RIGEL EAST											
0.0	19.4	15.7	328	1.170	0	365	9,218	40.2	3	2012-12	07433	1990
6.0	15.6	31.9	326	1.192	842	362	9,426	60.1	1	2012-12	21067	2006
2.0	12.0	34.0	326	1.068	851	372	6,036	0.0	1	2006-12	18422	2004
7745	SATURN											
1.5	13.6	8.1	335	1.236	743	882	15,360	82.3	3	2003-12	07772	1992
1.4	10.0	22.4	341	1.301	815	934	15,523	102.8	1	2005-12	05454	1981
7750	SEPTIMUS											
3.7	9.3	28.5	337	1.288	823	870	14,532	95.7	0		05233	1980
7.6	8.0	42.6	334	1.199	797	1,003	15,802	70.9	1	2005-12	08123	1993
9.3	9.4	37.6	330	1.400	809	1,041	15,645	0.0	1	2018-12	15081	2002
7780	SILVER											
0.9	16.8	16.2	334	1.178	809	395	6,988	0.0	1		08918	1995
7820	SILVERBERRY											
1.0	10.1	38.8	341	1.100	820	628	9,728	62.0	1		07051	1989
7840	SIPHON											
2.5	14.4	49.1	324	1.151	850	378	9,383	53.2	1		05583	1981
9.2	12.8	29.8	330	1.148	843	383	9,252	50.5	1		05948	1984
1.0	11.5	21.1	329	1.180	864	517	11,146	54.9	1	2009-12	04516	1978
7860	SIPHON EAST											
1.4	14.7	33.1	322	1.141	850	351	8,025	0.0	8	2018-12	03784	1976
3.4	18.0	35.0	326	1.131	800	0	7,972	75.0	1	2018-12	15147	2002
4.9	14.5	31.8	327	1.158	860	450	10,454	0.0	1	2004-12	15147	2002

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>7900 SQUIRREL</b>								
BLUESKY - A - PENGROWTH PROJECT	106	10.0	11	0	10	1	D	145
NORTH PINE - A - RANGER PROJECT	174	25.0	44	0	35	9	V	221
NORTH PINE - B	125	5.0	6	0	2	4	D	0
NORTH PINE - C - ENCAL PROJECT	1,376	30.0	413	0	409	4	D	1,235
<b>TOTAL FIELD:</b>	<b>1,781</b>		<b>474</b>	<b>0</b>	<b>456</b>	<b>18</b>		
<b>8000 STODDART</b>								
CECIL - A	187	6.5	12	0	11	1	V	65
CECIL - B	325	18.0	59	1	53	6	D	0
CECIL - C - PETRO-CAN PROJECT	60	20.0	12	0	11	1	V	65
CECIL - J - WAINOCO PROJECT	81	20.0	16	0	2	14	V	65
NORTH PINE - E - PETRO CANADA PROJECT	81	20.0	16	0	15	1	D	0
NORTH PINE - F	67	20.0	13	0	1	12	V	65
NORTH PINE - F - CALAHOO PROJECT	259	17.0	44	0	44	0	D	0
NORTH PINE - F - SEARCH PROJECT	160	15.0	24	0	24	0	D	0
NORTH PINE - G - PENGROWTH PROJECT	214	36.0	77	0	75	2	V	375
BELLOY - C - PROGRESS PROJECT	1,127	15.0	169	0	168	1	D	596
BELLOY - E	36	20.0	7	0	6	1	D	0
<b>TOTAL FIELD:</b>	<b>2,597</b>		<b>449</b>	<b>1</b>	<b>410</b>	<b>39</b>		
<b>8060 STODDART SOUTH</b>								
CECIL - A - PROGRESS PROJECT	104	12.0	13	0	11	2	D	0
BELLOY - A	109	25.0	27	1	19	8	V	66
BELLOY - A - ENCAL PROJECT	905	12.5	113	0	111	2	D	0
BELLOY - C	197	5.0	10	0	0	10	V	130
BELLOY - C - SCURRY PROJECT	108	5.0	5	0	1	4	V	65
KISKATINAW - A	110	20.0	22	0	0	22	V	65
<b>TOTAL FIELD:</b>	<b>1,533</b>		<b>190</b>	<b>1</b>	<b>142</b>	<b>48</b>		

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9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>7900 SQUIRREL</b>												
0.0	12.8	39.6	323	1.226	832	346	10,880	72.1	3	2013-12	17834	2004
0.8	15.2	20.2	336	1.229	816	609	12,940	0.0	2	2001-12	04506	1978
0.9	17.3	18.0	335	1.333	831	639	12,769	79.8	2		05664	1994
0.0	13.5	29.7	331	1.226	833	634	11,913	67.5	21	2010-12	12336	1999
<b>8000 STODDART</b>												
1.8	21.0	10.0	325	1.181	870	572	12,525	65.6	1		02548	1969
1.2	18.2	12.8	325	1.266	856	561	12,553	69.1	1	2018-12	03723	1976
0.9	14.5	16.8	325	1.186	856	561	12,548	69.1	1	2003-12	03985	1977
1.3	18.0	13.0	328	1.630	720	564	12,050	195.0	1		02583	1977
1.0	18.0	19.7	332	1.284	828	652	12,716	0.0	1	2016-12	08409	1994
1.5	10.6	20.1	330	1.236	825	647	11,493	0.0	1		08410	1994
0.8	12.4	10.6	330	1.230	825	645	11,493	79.7	4	2018-12	08410	1994
0.8	10.9	18.5	330	1.291	825	646	12,882	94.2	2	2010-12	08410	1994
0.8	11.3	19.9	329	1.269	822	643	11,853	131.0	5	2017-12	13428	2000
3.4	10.8	30.1	341	1.308	832	1,166	16,849	97.0	8	2016-12	01519	1964
6.1	9.0	44.9	343	1.261	841	1,149	14,502	0.0	1	2018-12	17655	2004
<b>8060 STODDART SOUTH</b>												
1.0	13.0	43.2	314	1.234	848	584	12,527	79.7	1	2016-12	04994	1979
2.4	15.1	39.3	342	1.336	824	1,162	16,472	211.0	1	2018-12	04559	1978
3.4	13.6	36.2	342	1.336	824	1,162	16,472	125.0	6	2018-12	04559	1978
2.6	13.2	38.5	344	1.390	809	1,174	16,680	108.8	1		04928	1979
2.8	12.6	34.7	344	1.390	809	1,174	16,680	108.8	1		04928	1979
6.8	5.1	35.0	342	1.336	824	1,186	16,472	0.0	0	2004-12	05422	2000

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Field / Pool / Project	1 Original Oil In Place (km3)	2 Recovery Factor (%)	3 Initial Reserves (km3)	4 Annual Prod (km3)	5 Cumul Prod (km3)	6 Remaining Reserves (km3)	7 Official Calc Method	8 Area (ha)
8100 STODDART WEST								
BALDONNEL - C	307	6.0	18	0	18	0	V	65
BALDONNEL - C - BAYTEX PROJECT	299	5.0	15	0	0	15	V	132
BALDONNEL - D	524	20.0	105	0	0	105	V	66
BALDONNEL - E	183	5.0	9	0	0	9	V	66
CECIL - B	95	1.0	1	0	0	1	V	65
CECIL - C	52	20.0	10	0	1	9	V	65
NORTH PINE - D - HUNT PROJECT	94	40.0	38	0	20	18	V	171
BEAR FLAT - A	29	10.0	3	0	0	3	V	65
BEAR FLAT - A - CUBE PROJECT	111	20.0	22	0	9	13	V	65
BEAR FLAT - C	31	1.0	0	0	0	0	X	66
BEAR FLAT - D	90	19.7	18	0	18	0	D	0
BEAR FLAT - D - DEVON PROJECT	452	35.0	158	0	156	2	D	0
ARTEX - A - SCURRY PROJECT	117	5.4	6	0	6	0	X	65
LOWER HALFWAY - A	172	2.2	4	0	4	0	X	65
LOWER HALFWAY - B	1,606	20.0	321	0	2	319	V	207
DOIG - A - BAYTEX PROJECT	141	8.5	12	0	12	0	D	0
DOIG - B - ANDERSON PROJECT	524	18.0	94	0	93	1	D	421
DOIG - C	92	20.0	18	0	16	2	V	130
DOIG - D - DOMINION EXPERIMENTAL	548	20.0	110	0	27	83	V	118
DOIG - E - REMINGTON PROJECT	4,425	15.0	664	0	662	2	D	0
BELLOY - C	154	15.0	23	0	20	3	D	0
BELLOY - C - PHILLIPS PROJECT	1,525	25.5	389	1	383	6	D	0
BELLOY - C - ANDERSON PROJECT	5,784	25.0	1,446	7	1,369	77	D	0
BELLOY - C - PROGRESS PROJECT	1,525	15.0	229	0	185	44	D	0
BELLOY - E	21	10.0	2	0	2	0	X	0
BELLOY - L - CNRL PROJECT	1,126	15.0	169	1	156	13	D	455
<b>TOTAL FIELD:</b>	<b>20,027</b>		<b>3,884</b>	<b>9</b>	<b>3,159</b>	<b>725</b>		
8130 SUNSET PRAIRIE								
CECIL - A - IMPERIAL PROJECT	882	40.0	353	0	329	24	D	0
CECIL - B	18	20.0	4	0	0	4	V	65
CECIL - C - IMPERIAL PROJECT	420	35.0	147	0	120	27	D	0
CECIL - D - IMPERIAL PROJECT	380	40.0	152	0	5	147	D	0
<b>TOTAL FIELD:</b>	<b>1,700</b>		<b>656</b>	<b>0</b>	<b>454</b>	<b>202</b>		

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9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>8100 STODDART WEST</b>												
5.7	11.6	14.5	329	1.197	847	478	10,812	59.7	3	2018-12	24899	2009
3.9	10.3	28.0	319	1.275	834	489	12,367	93.7	0	2016-12	16629	2003
7.7	14.9	16.5	330	1.206	841	506	10,343	63.0	1	2007-12	21448	2006
3.3	13.5	25.0	331	1.203	844	511	11,155	60.2	1	2008-12	10775	2007
1.8	17.0	41.3	330	1.224	825	576	11,954	0.0	1	2004-12	04112	1977
1.8	10.0	45.7	333	1.224	849	573	11,853	0.0	1		06844	1988
0.8	11.2	22.3	333	1.262	831	680	13,276	90.8	1	2005-12	07576	1999
0.9	8.0	17.8	324	1.308	836	674	16,087	0.0	0		05393	1980
2.0	12.6	11.4	324	1.308	836	674	16,087	103.7	1		05393	1980
1.0	7.4	16.6	332	1.300	842	677	13,684	0.0	1	2007-12	06724	1987
0.0	8.3	15.0	329	1.244	847	688	13,716	77.4	2	2018-12	06640	1994
1.2	7.8	58.6	329	1.230	809	688	13,500	80.1	5	2018-12	06640	1994
1.9	14.0	10.1	332	1.327	832	787	17,503	0.0	1	2012-12	06648	1987
5.7	7.6	11.3	333	1.450	810	814	14,688	0.0	1	2014-12	05317	1980
9.1	13.1	4.3	331	1.470	842	763	15,106	0.0	1		06367	1985
6.1	10.2	6.6	335	1.393	798	777	15,090	133.0	4	2017-12	04008	1977
2.1	9.9	12.8	336	1.391	811	857	18,290	200.0	5	2018-12	05449	1980
1.0	11.3	12.1	338	1.410	818	814	16,266	138.2	2	2001-12	06679	1987
8.4	11.9	8.0	337	1.979	764	844	18,350	268.1	4	2014-12	09611	1996
13.2	9.8	6.8	335	2.024	786	832	18,479	322.0	36	2016-12	09830	1996
1.8	11.0	36.0	345	1.296	844	1,179	16,807	97.9	1	2018-12	02814	1970
4.9	10.7	27.9	345	1.296	844	1,166	16,807	97.9	15	2018-12	02814	1970
7.2	11.1	30.2	345	1.296	844	1,179	16,807	97.9	41	2018-12	02814	1970
0.0	11.0	36.0	345	1.296	844	1,179	16,807	0.0	6	2016-12	02814	1970
6.2	9.0	31.2	347	1.354	823	1,175	15,305	111.1	2	2018-12	06739	1987
0.0	10.1	38.6	344	1.301	821	1,194	14,988	85.0	7	2018-12	02814	1970
<b>8130 SUNSET PRAIRIE</b>												
1.3	10.4	8.0	339	1.504	809	999	22,102	181.0	11	2009-12	07640	1991
0.7	6.8	5.6	339	1.580	806	989	21,773	0.0	1	2004-12	07960	1992
0.9	9.6	8.0	340	1.513	809	1,119	22,551	184.0	4	2007-12	08767	1994
1.1	10.1	8.0	334	1.560	803	891	21,535	200.2	2	2005-12	09410	1995



## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
8140 THETLAANDOA								
BANFF - B	131	10.0	13	0	5	8	V	65
<b>TOTAL FIELD:</b>	<b>131</b>		<b>13</b>	<b>0</b>	<b>5</b>	<b>8</b>		
8155 TOOGA								
DEBOLT - A	712	3.0	21	0	0	21	V	130
DEBOLT - B	329	3.0	10	0	0	10	V	65
<b>TOTAL FIELD:</b>	<b>1,041</b>		<b>31</b>	<b>0</b>	<b>0</b>	<b>31</b>		
8200 TWO RIVERS								
SIPHON - A - PROGRESS PROJECT	1,476	17.8	263	0	261	2	V	678
HALFWAY - B	406	2.5	10	0	9	1	V	114
HALFWAY - D	221	20.0	44	0	0	44	V	65
MONTNEY - A	281	.5	1	0	1	0	V	65
BELLOY - B	38	.9	0	0	0	0	X	65
<b>TOTAL FIELD:</b>	<b>2,422</b>		<b>318</b>	<b>0</b>	<b>271</b>	<b>47</b>		
8240 VELMA								
BLUESKY-GETHING	178	2.1	4	0	0	4	D	0
CHARLIE LAKE - A	137	10.0	14	0	1	13	V	65
<b>TOTAL FIELD:</b>	<b>315</b>		<b>18</b>	<b>0</b>	<b>1</b>	<b>17</b>		
8260 WARGEN								
GETHING - A - PETRO-CAN PROJECT	235	5.0	12	0	2	10	V	321
<b>TOTAL FIELD:</b>	<b>235</b>		<b>12</b>	<b>0</b>	<b>2</b>	<b>10</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>8140 THETLAANDOA</b>												
1.0	28.2	20.0	307	1.122	809	82	6,346	41.0	1	2012-12	19225	2006
<b>8155 TOOGA</b>												
5.9	14.4	31.0	317	1.071	904	3	4,841	25.0	2		05923	1984
4.9	15.0	26.2	319	1.071	908	3	4,880	25.0	1		06522	1986
<b>8200 TWO RIVERS</b>												
0.0	12.1	36.9	326	1.251	824	645	12,431	77.4	11	2017-12	02064	1967
7.2	11.5	42.3	335	1.341	817	871	14,454	115.0	2		04585	1978
4.0	17.7	36.2	324	1.326	803	769	13,448	0.0	1	2005-12	09488	1995
12.2	6.9	30.1	331	1.362	816	1,009	16,412	116.3	2	2017-12	24121	2008
2.0	8.0	45.0	344	1.516	817	1,329	20,043	168.0	1	2005-12	04950	1979
<b>8240 VELMA</b>												
1.5	13.5	43.2	326	1.118	827	217	6,692	121.0	1		01879	1966
1.2	27.0	13.1	326	1.334	827	204	6,410	62.1	1		03671	1976
<b>8260 WARGEN</b>												
1.3	11.6	44.6	322	1.143	825	334	7,809	51.4	4	2011-12	02324	1968

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
8300 WEASEL								
GETHING - B	352	5.0	18	0	6	12	V	70
GETHING - F	60	5.0	3	0	2	1	V	65
CECIL - C	67	.7	0	0	0	0	X	70
HALFWAY - A	28	1.0	0	0	0	0	V	65
HALFWAY - B	334	15.6	52	0	52	0	V	181
HALFWAY - C	436	10.0	44	0	0	44	V	70
HALFWAY - I - CNRL PROJECT	1,418	17.0	241	3	200	41	D	0
HALFWAY - K - ENCAL PROJECT #1	183	15.0	27	0	25	2	D	0
HALFWAY - L	139	20.0	28	0	9	19	V	65
HALFWAY - M - ENCAL PROJECT #2	385	14.7	57	0	55	2	D	0
HALFWAY - ENCAL UNIT #1	3,720	65.0	2,418	6	2,377	41	D	0
HALFWAY - CNRL UNIT #2	1,729	58.5	1,012	0	1,006	6	V	449
LOWER HALFWAY - A - CNRL UNIT #3	238	9.0	21	0	21	0	D	0
<b>TOTAL FIELD:</b>	<b>9,089</b>		<b>3,921</b>	<b>9</b>	<b>3,753</b>	<b>168</b>		
8320 WEASEL WEST								
HALFWAY - A	680	25.0	170	0	163	7	D	0
HALFWAY - B	137	15.0	21	0	19	2	D	211
<b>TOTAL FIELD:</b>	<b>817</b>		<b>191</b>	<b>0</b>	<b>182</b>	<b>9</b>		
8360 WILDER								
BOUNDARY LAKE - B	39	25.0	10	0	9	1	D	65
<b>TOTAL FIELD:</b>	<b>39</b>		<b>10</b>	<b>0</b>	<b>9</b>	<b>1</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
8300 WEASEL												
7.3	10.9	25.0	313	1.188	801	290	7,109	59.7	1	2007-12	01775	2003
0.8	17.4	24.9	324	1.141	828	285	6,996	36.5	1	2015-12	22513	2007
1.0	12.6	43.3	315	0.750	0	342	7,996	0.0	1	2010-12	01809	2001
1.2	10.5	60.0	326	1.170	829	0	8,575	46.5	2	2013-12	01531	1965
1.8	17.2	28.7	329	1.196	825	413	9,016	61.0	1		01734	1965
4.9	21.1	28.0	329	1.196	824	398	9,011	0.0	0		08833	1994
2.3	20.5	42.2	329	1.194	870	440	8,968	63.1	7	2018-12	05878	1984
1.4	15.3	26.0	334	1.130	819	424	6,625	0.0	3	2017-12	06815	1988
2.7	19.4	51.3	337	1.197	826	432	9,466	63.8	1		06943	1988
1.5	26.3	7.3	333	1.150	840	416	8,845	49.6	2	2017-12	06658	1987
3.4	19.6	23.0	329	1.196	824	410	9,011	180.0	22	2018-12	01601	1965
3.7	18.5	32.7	329	1.196	824	905	9,011	61.0	13		01644	1965
0.0	0.0	0.0	328	1.191	825	394	8,487	60.8	6	2018-12	00709	1961
8320 WEASEL WEST												
2.7	17.9	34.0	329	1.193	824	414	8,912	59.9	2	2018-12	02834	1971
0.0	19.5	49.0	325	1.208	830	417	8,726	58.7	3	2017-12	03115	1972
8360 WILDER												
0.0	12.0	35.0	325	1.267	822	624	13,124	0.0	1	2013-12	16152	2004

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
8400 WILDMINT								
GETHING - C	16	12.5	2	0	2	0	D	0
SIPHON - B	260	1.0	3	0	0	3	V	71
HALFWAY - A	36	5.0	2	0	1	1	V	32
HALFWAY - A - CNRL UNIT #1	2,868	53.8	1,543	0	1,542	1	D	0
HALFWAY - B - CALPINE PROJECT	282	32.5	92	0	91	1	D	0
HALFWAY - I	252	20.0	50	0	0	50	V	65
LOWER HALFWAY - A	177	20.0	35	0	31	4	V	130
LOWER HALFWAY - B - CNRL PROJECT	197	16.5	33	0	32	1	D	0
LOWER HALFWAY - B - CALPINE PROJECT	42	22.0	9	0	9	0	V	52
LOWER HALFWAY - D	204	.3	1	0	0	1	V	65
LOWER HALFWAY - G - TARCO PROJECT	64	20.0	13	0	12	1	D	0
<b>TOTAL FIELD:</b>	<b>4,398</b>		<b>1,783</b>	<b>0</b>	<b>1,720</b>	<b>63</b>		
8600 WILLOW								
GETHING - A	591	14.0	83	0	80	3	D	0
<b>TOTAL FIELD:</b>	<b>591</b>		<b>83</b>	<b>0</b>	<b>80</b>	<b>3</b>		
8700 WOLF								
HALFWAY - A - CNRL PROJECT	1,241	29.2	362	0	362	0	V	355
<b>TOTAL FIELD:</b>	<b>1,241</b>		<b>362</b>	<b>0</b>	<b>362</b>	<b>0</b>		
8740 WOODRUSH								
HALFWAY - A	23	.3	0	0	0	0	X	0
HALFWAY - D	51	10.0	5	0	0	5	V	65
HALFWAY - E - DEJOUR PROJECT	881	16.0	141	3	125	16	V	210
<b>TOTAL FIELD:</b>	<b>955</b>		<b>146</b>	<b>3</b>	<b>125</b>	<b>21</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>8400 WILDMINT</b>												
4.5	12.8	37.0	0	0.000	0	263	0	200.0	1	2018-12	20939	2006
3.9	14.0	24.0	324	1.134	840	314	7,318	0.0	1	2007-12	18171	2005
1.2	13.3	19.3	329	1.149	825	388	8,439	45.9	1	2010-12	00530	1960
2.8	21.7	24.1	329	1.149	825	388	8,439	45.9	23	2018-12	00530	1960
1.3	14.8	32.5	329	1.191	825	390	8,816	58.5	5	2010-12	01191	1962
3.4	16.3	20.0	328	1.143	835	374	8,187	47.8	1		07836	1992
2.0	10.0	18.7	329	1.191	825	404	8,816	58.5	1		01289	1963
1.1	14.0	34.4	329	1.149	825	412	8,492	45.9	3	2007-12	00984	1962
1.0	14.0	34.4	329	1.149	825	412	8,492	45.9	1	2015-12	00984	1962
5.5	9.1	28.0	329	1.149	825	390	8,391	45.9	0		01567	1965
1.1	24.4	14.3	318	1.140	832	381	7,875	50.3	1	2018-12	08789	1994
<b>8600 WILLOW</b>												
1.4	27.4	13.2	320	1.150	820	253	6,969	41.8	1	2011-12	00449	1959
<b>8700 WOLF</b>												
3.1	20.7	33.7	335	1.217	825	509	10,354	70.6	7	2017-12	01815	1966
<b>8740 WOODRUSH</b>												
0.6	16.0	13.7	327	1.154	822	323	8,067	53.2	3	2005-12	00559	1960
1.5	9.5	36.5	327	1.154	817	297	6,911	216.3	1	2013-12	21005	2007
1.7	22.0	12.8	328	1.182	817	304	7,694	51.7	6	2018-12	23844	2008

## Pool Reserve Report - Oil As of December 31, 2018

	1	2	3	4	5	6	7	8
Field / Pool / Project	Original Oil In Place (km3)	Recovery Factor (%)	Initial Reserves (km3)	Annual Prod (km3)	Cumul Prod (km3)	Remaining Reserves (km3)	Official Calc Method	Area (ha)
<b>8900 ZAREMBA</b>								
BALDONNEL - A	800	5.0	40	0	14	26	V	70
A MARKER/BASE OF LIME - A - CNRL PROJECT	84	20.0	17	0	16	1	D	0
A MARKER/BASE OF LIME - H	157	15.0	24	0	20	4	V	98
A MARKER/BASE OF LIME - K	85	15.0	13	0	4	9	V	70
A MARKER/BASE OF LIME - M - ENCAL PROJECT	199	2.0	4	0	2	2	V	70
A MARKER/BASE OF LIME - N	77	15.0	12	0	0	12	V	70
HALFWAY - C	210	15.0	31	0	23	8	V	70
HALFWAY - C - ANDERSON PROJECT	488	10.0	49	0	42	7	V	218
HALFWAY - I - ENCAL PROJECT	218	11.5	25	0	25	0	D	0
<b>TOTAL FIELD:</b>	<b>2,318</b>		<b>215</b>	<b>0</b>	<b>146</b>	<b>69</b>		
<b>9000 OTHER AREAS</b>								
D-051-J/094-A-09 - GETHING	7	1.0	0	0	0	0	V	65
D-060-D/094-A-16 - BALDONNEL	311	.2	1	0	1	0	X	65
06-15-085-18-W6M - SIPHON	23	15.0	3	0	3	0	V	65
09-22-083-14-W6M - BOUNDARY LAKE	73	.1	0	0	0	0	X	0
16-35-083-15-W6M - BOUNDARY LAKE	47	.1	0	0	0	0	X	0
06-22-083-20-W6M - WILDER	67	5.0	3	0	0	3	V	65
C-019-A/094-H-01 - DOIG	156	2.0	3	0	2	1	V	70
06-21-085-19-W6M - BELLOY	104	10.0	10	1	2	8	V	65
D-035-K/094-P-02 - MISSISSIPPIAN	180	.2	0	0	0	0	V	65
<b>TOTAL FIELD:</b>	<b>968</b>		<b>20</b>	<b>1</b>	<b>8</b>	<b>12</b>		
<b>9021 HERITAGE</b>								
MONTNEY - A - TOWER	*****	2.0	8,494	463	1,844	6,650	D	0
<b>TOTAL FIELD:</b>	<b>424,683</b>		<b>8,494</b>	<b>463</b>	<b>1,844</b>	<b>6,650</b>		
<b>9022 NORTHERN MONTNEY</b>								
MONTNEY - A - NORTHERN MONTNEY OIL WELLS	8,603	2.0	172	6	57	115	D	0
<b>TOTAL FIELD:</b>	<b>8,603</b>		<b>172</b>	<b>6</b>	<b>57</b>	<b>115</b>		
<b>Report Totals:</b>	<b>881,345</b>		<b>141,317</b>	<b>1,196</b>	<b>122,968</b>	<b>18,349</b>		

## Pool Reserve Report - Oil As of December 31, 2018

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy
<b>8900 ZAREMBA</b>												
14.4	13.6	32.6	321	1.155	829	306	7,478	0.0	1	2007-12	10234	1997
1.1	24.1	19.7	330	1.174	839	346	7,859	53.7	2	2014-12	09665	1996
0.0	24.5	13.7	331	1.173	852	344	8,503	0.0	1	2010-12	11193	1998
1.3	12.9	15.5	325	1.163	830	326	8,362	54.6	1		11247	1998
2.0	21.5	20.2	328	1.206	833	333	8,138	65.0	1	2001-12	12114	2000
1.3	13.6	27.8	329	1.162	840	344	8,345	51.9	1	2001-12	12727	2000
2.8	18.3	30.0	334	1.197	812	359	8,358	61.1	2	2002-12	10065	1997
1.8	22.0	32.3	334	1.197	812	360	8,358	61.1	2	2014-12	09121	1995
0.0	27.7	13.5	332	1.169	831	343	8,274	44.2	2	2015-12	10101	1997
<b>9000 OTHER AREAS</b>												
0.3	10.0	58.1	321	1.251	847	322	8,582	88.6	0		03921	1977
8.2	12.3	43.3	324	1.196	824	355	8,582	0.0	1	2007-12	03975	1977
1.2	6.1	41.2	327	1.222	827	569	12,925	79.8	0		02264	1968
3.0	9.0	31.0	316	1.246	0	549	10,829	0.0	0	2005-12	00831	1961
3.0	9.0	31.0	316	1.246	856	549	10,829	0.0	0	2005-12	01162	1962
0.9	16.0	6.5	323	1.311	820	692	15,311	115.2	0		04009	1977
3.3	14.6	46.8	315	1.150	838	310	8,305	55.6	1	2016-12	09868	1996
2.7	10.6	24.6	345	1.351	822	1,155	17,042	115.0	2	2018-12	04896	1979
3.6	12.2	34.6	308	1.040	900	2	3,481	13.0	1		06202	1985
<b>9021 HERITAGE</b>												
0.0	0.0	0.0	338	1.584	816	1,262	24,000	201.7	142	2018-12	23566	2008
<b>9022 NORTHERN MONTNEY</b>												
0.0	0.0	0.0	340	0.000	0	0	26,523	201.7	7	2018-12		



**Pool Reserve Report - Oil  
As of December 31, 2018**

	1	2	3	4	5	6	7	8
<b>Field / Pool / Project</b>	<b>Original Oil In Place (km3)</b>	<b>Recovery Factor (%)</b>	<b>Initial Reserves (km3)</b>	<b>Annual Prod (km3)</b>	<b>Cumul Prod (km3)</b>	<b>Remaining Reserves (km3)</b>	<b>Official Calc Method</b>	<b>Area (ha)</b>

\*\*\*\*\* Totals may not add up exactly, due to rounding. \*\*\*\*\*

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**Pool Reserve Report - Oil  
As of December 31, 2018**

2019DEC17  
PIMS8310

9	10	11	12	13	14	15	16	17	18	19	20	21
Net Pay Thick (m)	Porosity (%)	SW (%)	Form Temp (Deg-K)	Form Volume Factor	Density (kg/m3)	Datum Depth (m-SS)	Initial Pressure (kPaa)	Initial Gas/Oil Ratio	Well Count At Year End	Last Updated yyyy-mm	Discovery WA	Discovery Year yyyy

**\*\*\*\*\* Totals may not add up exactly, due to rounding. \*\*\*\*\***  
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