

FORM 51-102F3
MATERIAL CHANGE REPORT

1. Name and address of Company

Athabasca Oil Sands Corp. (“**AOSC**” or the “**Company**”)
2000, 250 – 6th Avenue S.W.
Calgary, Alberta T2P 2H7

2. Date of Material Change

June 9, 2010

3. News Release

On June 9, 2010 AOSC issued a news release through Marketwire in respect of the material change described in this report.

4. Summary of Material Change

AOSC announced the results of the recently completed independent reserve and resource evaluation reports (the “**GLJ Report**” and the “**D&M Report**”, respectively) each dated effective April 30, 2010 prepared by GLJ Petroleum Consultants Ltd. (“**GLJ**”) and DeGolyer and MacNaughton Canada Limited (“**D&M**”) for AOSC’s properties in the Athabasca region of north eastern Alberta. The independent reports incorporate the results of AOSC’s 2009/2010 68-well winter drilling program at its Dover, Dover West and Grosmont properties in northeastern Alberta and reflect an increase in AOSC’s company gross resource volumes by approximately 20% to 8.705 billion barrels.

5. Full Description of Material Change

On June 9, 2010, AOSC announced the results of the GLJ Report and the D&M Report. The estimates were prepared by GLJ and D&M and incorporate the results of AOSC’s 2009/2010 68-well winter drilling program at its Dover, Dover West and Grosmont properties in north eastern Alberta. AOSC increased its company gross resource volumes by approximately 20% to 8.705 billion barrels, compared to the estimates (pro forma the completion of AOSC’s transaction with PetroChina International Investment Company Limited) set out in AOSC’s Statement of Oil and Gas Reserves Data and Other Oil and Gas Information for the year ended December 31, 2009 (the “**Statement**”). AOSC’s 8.705 billion barrels of resource is comprised of 8.591 billion barrels of contingent resource (best estimate) and 114 million barrels of probable reserves. Additional information with respect to AOSC and its properties is contained in the Statement.

Reserves:

The tables below summarize the Company's bitumen reserves and associated future net revenues as at April 30, 2010, as evaluated by GLJ in the GLJ Report. AOSC’s bitumen reserves are located in the MacKay area. Probable and Possible Reserves have been assigned by GLJ to Phase 1 of the MacKay Oil Sands Project, for which regulatory application has been made for development. All evaluations of future

revenue are after the deduction of royalties, development costs, production costs and well abandonment costs but before consideration of indirect costs such as administrative, overhead and other miscellaneous expenses. The estimated future net revenues contained in the following tables do not necessarily represent the fair market value of the Company's reserves. There is no assurance that the forecast price and cost assumptions contained in the GLJ Report will be realized and variances could be material. The recovery and reserves estimates are estimates only. The actual reserves may be greater or less than those calculated.

MacKay Phase 1 Reserves based on Forecast Prices and Costs⁵

	Bitumen Reserves (mmbbls ¹)	
	<u>Gross</u> ²	<u>Net</u> ²
Total Probable ³	113.9	88.3
Total Possible ⁴	25.8	17.6
Total Probable Plus Possible	139.7	105.9

Property	Probable Reserves ³	NPV (Before Tax, Company Interest)						
		GLJ Apr 1, 2010 Dilbit Pricing						
		0%	5%	8%	9%	10%	12%	15%
GLJ Report								
Established Technology								
	(mmbbls ¹)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)
Dover								
MacKay	114	2,977	1,266	779	663	564	407	243
Dover West								
	114	2,977	1,266	779	663	564	407	243
Technology Under Development								
DW Devonian								
West JV								
GLJ Subtotal	114	2,977	1,266	779	663	564	407	243
D&M Report								
Established Technology								
Birch								
Hangingstone								
D&M Subtotal								
Company Total	114	2,977	1,266	779	663	564	407	243

Property	Probable Reserves ³	NPV (After Tax, Company Interest)						
		GLJ Apr 1, 2010 Dilbit Pricing						
		0%	5%	8%	9%	10%	12%	15%

GLJ Report

Established

Technology	(mmbbls)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)
Dover	0							
MacKay	114	2,223	915	543	455	380	261	136
Dover West	0							
	114	2,223	915	543	455	380	261	136

Technology Under Development

DW Devonian	0							
West JV	0							
	0	0	0	0	0	0	0	0
GLJ Subtotal	114	2,223	915	543	455	380	261	136

D&M Report

Established Technology

Birch	0							
Hangingstone	0							
	0	0	0	0	0	0	0	0
D&M Subtotal	0	0	0	0	0	0	0	0
Company Total	114	2,223	915	543	455	380	261	136

Notes:

- (1) "mmbbls" means million barrels
- (2) "Gross Reserves" are the Company's working interest (operating or non-operating) share before deducting royalties and without including any royalty interests of the Company. "Net Reserves" are the Company's working interest (operating or non-operating) share after deduction of royalty obligations, plus the Company's royalty interests in reserves.
- (3) "Probable Reserves" are those additional reserves that are less certain to be recovered than Proved Reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated Proved Reserves plus Probable Reserves.
- (4) "Possible Reserves" are those additional reserves that are less certain to be recovered than Probable Reserves. There is a 10% probability that the quantities actually recovered will equal or exceed the sum of Proved Reserves plus Probable Reserves plus Possible Reserves.
- (5) The pricing assumptions used in the GLJ Report with respect to values of future net revenue as well as the inflation rates used for operating and capital costs are set forth below under "– GLJ – April 1, 2010 Pricing Assumptions".

Contingent Resources:

The tables below summarize the Company's Contingent Resources and associated future net revenues as of April 30, 2010, as evaluated by GLJ and D&M in the GLJ Report and the D&M Report, respectively. It should not be assumed that the estimates of recovery, production and net revenue presented in the tables below represent the fair market value of AOSC's bitumen resources. There is no assurance that the forecast prices and cost assumptions will be realized and variances could be material. The actual resources may be greater than or less than the estimates provided. The contingencies which currently prevent the classification of the Contingent Resources disclosed in the table as reserves consist of: further facility design, preparation of firm development plans, and regulatory applications (including associated reservoir studies and delineation drilling), and Company approvals. There is no certainty that it will be commercially viable to produce any portion of the Contingent Resources. Both the GLJ Report and the D&M Report are based on GLJ's April 1, 2010 pricing (see GLJ – April 1, 2010 Pricing Assumptions below).

Contingent Resources^{1, 10, 11} (mmbbls)

	<u>Low Estimate²</u>	<u>Best Estimate³</u>	<u>High Estimate⁴</u>
GLJ Report			
Established Technology			
MacKay ⁶	345	573	983
Dover	772	1,358	1,775
DoverWest Clastics	<u>1,318</u>	<u>2,013</u>	2,736
	<u>2,435</u>	<u>3,944</u>	<u>5,494</u>
Technology Under Development ⁸			
Dover West Leduc Carbonates	N/A ⁹	2,725	4,650
Grosmont	N/A ⁹	369	1,843
Total GLJ Report	<u>2,435</u>	<u>7,038</u>	<u>11,987</u>
D&M Report			
Established Technology			
Birch	130	1,141	1,826
Hangingstone	123	412	711
Total D&M Report	<u>253</u>	<u>1,553</u>	<u>2,537</u>
TOTAL COMPANY^{5, 6, 7}	<u>2,688</u>	<u>8,591</u>	<u>14,524</u>

Property	Contingent Resources (Best Estimate) ^{1,3}	NPV (Before Tax, Company Interest)						
		GLJ Apr 1, 2010 Dilbit Pricing						
		0%	5%	8%	9%	10%	12%	15%
GLJ Report								
Established Technology	(mmbbls)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)
Dover	1,358	41,788	10,733	5,335	4,283	3,456	2,273	1,220
MacKay	573	14,142	3,932	1,980	1,592	1,284	842	448
Dover West	2,013	51,414	13,449	6,513	5,146	4,069	2,529	1,175
	3,944	107,344	28,114	13,828	11,021	8,809	5,644	2,843
Technology Under Development								
DW Devonian	2,725	77,122	21,951	11,215	9,051	7,329	4,839	2,601
Grosmont	369	6,513	1,588	606	413	262	52	-117
	3,094	83,635	23,539	11,821	9,464	7,591	4,891	2,484
GLJ Subtotal	7,038	190,979	51,653	25,649	20,485	16,400	10,535	5,327
D&M Report								
Established Technology								
Birch	1,141	31,314	8,615	4,388	3,545	2,876	1,906	1,024
Hangingstone	412	11,300	4,470	2,626	2,204	1,850	1,302	757
	1,553	42,614	13,085	7,014	5,749	4,726	3,208	1,781
D&M Subtotal	1,553	42,614	13,085	7,014	5,749	4,726	3,208	1,781
Company Total	8,591	233,593	64,738	32,663	26,234	21,126	13,743	7,108

Property	Contingent Resources (Best Estimate)	NPV (After Tax, Company Interest)						
		GLJ Apr 1, 2010 Dilbit Pricing						
		0%	5%	8%	9%	10%	12%	15%

GLJ Report

Established

Technology	(mmbbls)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)	(\$Million)
Dover	1,358	31,177	7,797	3,776	2,996	2,384	1,513	745
MacKay	573	10,472	2,801	1,364	1,081	857	539	260
Dover West	2,013	38,177	9,565	4,426	3,421	2,633	1,516	548
	3,944	79,826	20,163	9,566	7,498	5,874	3,568	1,553

Technology Under Development

DW Devonian	2,725	57,579	15,978	7,967	6,360	5,086	3,251	1,616
Grosmont	369	4,832	1,037	301	159	50	-97	-209
	3,094	62,411	17,015	8,268	6,519	5,136	3,154	1,407

GLJ Subtotal	7,038	142,237	37,178	17,834	14,017	11,010	6,722	2,960
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D&M Report

Established Technology

Birch	1,141	23,608	6,292	3,125	2,497	2,000	1,282	633
Hangingstone	412	8,372	3,257	1,879	1,563	1,299	890	486
	1,553	31,980	9,549	5,004	4,060	3,299	2,172	1,119
D&M Subtotal	1,553	31,980	9,549	5,004	4,060	3,299	2,172	1,119
Company Total	8,591	174,217	46,727	22,838	18,077	14,309	8,894	4,079

- (1) “**Contingent Resources**” are defined in the Canadian Oil and Gas Evaluation Handbook (the “COGE Handbook”) as those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations using established technology or technology under development, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingencies may include factors such as economic, legal, environmental, political and regulatory matters or a lack of markets. It is also appropriate to classify as “Contingent Resources” the estimated discovered recoverable quantities associated with a project in the early evaluation stage. Contingent Resources are further classified in accordance with the level of certainty associated with the estimates and may be subclassified based on project maturity and/or characterized by their economic status. The volumes of contingent bitumen resources in the above table were calculated at the outlet of the proposed extraction plant.
- (2) “**Low Estimate**” is a classification of estimated resources described in the COGE Handbook as being considered to be a conservative estimate of the quantity that will actually be recovered. It is likely that the actual remaining quantities recovered will exceed the Low Estimate. If probabilistic methods are used, there should be a 90% probability (P90) that the quantities actually recovered will equal or exceed the Low Estimate.
- (3) “**Best Estimate**” is a classification of estimated resources described in the COGE Handbook as being considered to be the best estimate of the quantity that will actually be recovered. It is equally likely that the actual remaining quantities recovered will be greater or less than the Best Estimate. If probabilistic methods are used, there should be a 50% probability (P50) that the quantities actually recovered will equal or exceed the Best Estimate.
- (4) “**High Estimate**” is a classification of estimated resources described in the COGE Handbook as being considered to be an optimistic estimate of the quantity that will actually be recovered. It is unlikely that the actual remaining quantities recovered will exceed the High Estimate. If probabilistic methods are used, there should be a 10% probability (P10) that the quantities actually recovered will equal or exceed the High Estimate.
- (5) These volumes are arithmetic sums of multiple estimates of contingent bitumen resources, which statistical principles indicate may be misleading as to volumes that may actually be recovered. Readers should give attention to the estimates of individual classes of resources and appreciate the differing probabilities of recovery associated with each class as explained. In particular, readers should be aware that the likelihood of attaining the sum of the High Estimate is extremely low and of the Low Estimate quite high.
- (6) These figures do not include the Probable and Possible Reserves volumes and values that have been assigned by GLJ to Phase 1 of the MacKay Oil Sands Project. See “MacKay Phase 1 Reserves” table above.
- (7) Totals may not add due to rounding
- (8) The Company’s resources at its Dover West Leduc Carbonates and Grosmont assets are contained in carbonate reservoirs. Steam Assisted Gravity Drainage (“SAGD”) and Cyclic Steam Stimulation (“CSS”), the proposed in-situ bitumen recovery processes to develop these assets, are considered by GLJ to be “technology under development” in carbonate reservoirs. The successful development of the Company’s carbonate reservoirs depends on, among other things, the successful development and application of SAGD and CSS or other recovery processes to carbonate reservoirs. Although the technology has been developed for application to non-carbonate reservoirs, there are no known successful commercial projects that use SAGD or CSS to recover bitumen from carbonate formations and there exists a large range in the expected recoverable volumes, the lower end of which may not be economically viable. The principal risks associated with SAGD and CSS recovery in carbonate reservoirs are (i) the possibility of unexpected steam channelling which would increase steam requirements resulting in increased costs and potentially reduced economically recoverable bitumen volumes, and (ii) potential mechanical operating problems due to production of fines which could cause wellbore plugging and reduced bitumen production rates and potential interruption of surface production operations. Although the technical risks associated with “technology under development” have been accounted for in the GLJ Report, the timeline for verification of “technology under development” has inherent uncertainty. Development will involve significant capital expenditures and a lengthy time to project payout and project payout is not assured. If a pilot project and/or the technology under development do not demonstrate potential commerciality in carbonate reservoirs then the Company’s projects on these assets may not proceed and this may occur only after significant expenditures have been incurred by the Company. With respect to the Company’s Grosmont asset, the Company’s strategy is to continue delineation drilling efforts in the area in order to increase the resource base. The Company has not prepared a development plan or timeline for the Grosmont area, and is monitoring industry activity toward demonstrating successful development and production methods for the Grosmont Formation.
- (9) The GLJ Report does not calculate Low Estimate Contingent Resources associated with the Dover West Leduc Carbonates and Grosmont assets because GLJ does not believe that a high certainty or Low Estimate case would be economic. Readers should be aware that if calculated, the

discounted future net revenues associated with the Dover West Leduc Carbonates and Grosmont assets in the Low Estimate would likely be negative since the Low Estimate result would be realized only after considerable capital has been invested.

- (10) The table sets forth arithmetic sums of (i) the Contingent Resource estimates contained in the GLJ Report with respect to MacKay, Dover, Dover West Clastics, Dover West Leduc Carbonates and Grosmont, and (ii) the Contingent Resource estimates contained in the D&M Report with respect to Birch and Hangingstone. The evaluation procedures employed by GLJ and D&M are generally consistent with each other and in compliance with standards contained in the COGE Handbook.

The GLJ Report and D&M Report were each prepared using assumptions and methodology guidelines outlined in the Canadian oil and Gas Evaluation Handbook and in accordance with National Instrument 51-101 – *Standards of Disclosure for Oil and Gas Activities*.

The price forecasts that formed the basis for the net present value estimates in the GLJ Report and the D&M Report were based on GLJ's april 1, 2010 pricing models. A summary of selected price forecasts is set forth below.

GLJ – April 1, 2010 Pricing Assumptions ^{(1), (2)}

	Oil Sands Inflation %	Bank of Canada Average Noon Rate \$US/\$Cdn	West Texas Intermediate Crude Oil at Cushing Oklahoma Current \$/US/bbl	Light,Sweet Crude Oil (40 API, 0.3%S) at Edmonton Current \$/Cdn/bbl	LLB Crude Oil Stream Quality at Hardisty Current \$/Cdn/bbl	Dil-bit Quality Differential Current \$/Cdn/bbl	Diluent at Field Current ⁽³⁾ \$/Cdn/bbl	Sandstones 0.42857 Bitumen Wellhead Current \$/Cdn/bbl	Carbonates 0.46 Bitumen Wellhead Current ⁽⁴⁾ \$/Cdn/bbl
2010	2.0	0.950	80.00	83.26	72.58	-4.25	90.93	53.65	52.83
2011	2.0	0.950	83.00	86.42	71.30	-3.25	94.15	51.87	50.93
2012	2.0	0.950	86.00	89.58	72.11	-2.25	97.37	53.07	52.09
2013	2.0	0.950	89.00	92.74	72.80	-1.25	100.59	54.10	53.08
2014	2.0	0.950	92.00	95.90	75.28	-1.25	103.82	56.26	55.22
2015	2.0	0.950	93.84	97.84	76.80	-1.25	105.80	57.59	56.53
2016	2.0	0.950	95.72	99.81	78.35	-1.25	107.81	60.01	58.96
2017	2.0	0.950	97.64	101.83	79.93	-1.25	109.87	61.39	60.32
2018	2.0	0.950	99.59	103.88	81.55	-1.25	111.96	63.52	62.45
2019	2.0	0.950	101.58	105.98	83.19	-1.28	114.10	64.91	63.83
2020	2.0	0.950	103.61	108.10	84.85	-1.30	116.26	67.04	65.95
2021	2.0	0.950	105.69	110.26	86.55	-1.33	118.47	68.48	67.38
2022	2.0	0.950	107.80	112.47	88.28	-1.35	120.72	69.95	68.83
2023+	2.0	0.950	+2.0%/yr	+2.0%/yr	+2.0%/yr		+2.0%/yr	+2.0%/yr	+2.0%/yr

Notes

- (1) Blending Ratio = 1 bbl bitumen: 0.42857 bbl Diluent for Bitumen Netback pricing. This blending ratio equates to a bitumen blend (dilbit) comprised of 30% condensate and 70% bitumen.
- (2) Blending Ratio = 1 bbl bitumen: 0.46 bbl Diluent for Carbonates Bitumen Netback pricing. This blending ratio equates to a bitumen blend (dilbit) comprised of 31.5% condensate and 68.5% bitumen.
- (3) Includes diluent transportation and postings costs of Cdn\$6.00/bbl.
- (4) Net of transportation costs of Cdn\$3.50/bbl from 2010 through 2015, Cdn\$2.75/bbl from 2016 through 2017, Cdn\$2.25 from 2018 through 2019, and Cdn\$1.75/bbl thereafter.

Forward Looking Statements and Advisories

This material change report contains forward-looking information that involves various risks, uncertainties and other factors. All statements other than statements of historical fact are forward-looking statements. The use of any of the words "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "should", "believe", "predict", "pursue" and "potential" and similar expressions are intended to identify forward-looking statements. The forward-looking information is not historical fact, but rather is based on the current plans, objectives, goals, strategies, estimates, assumptions and projections about the industry, business and future financial results of AOSC. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. No assurance can be given that these expectations will prove to be correct and such forward-looking statements included in this material change report should not be unduly relied upon. These statements speak only as of the date of this material change report. In particular, this material change report contains forward-looking statements pertaining to the estimated quantity of the Company's Probable and Possible Reserves and Contingent Resources. With respect to forward-looking statements and forward-looking information contained in this material change report, assumptions have been made regarding, among other things: the Company's ability to obtain qualified staff and equipment in a timely and cost-efficient manner; the regulatory framework governing royalties, taxes

and environmental matters in the jurisdictions in which the Company conducts and will conduct its business; the applicability of technologies for the recovery and production of the Company's reserves and resources; future capital expenditures to be made by the Company; future sources of funding for the Company's capital programs; geological and engineering estimates in respect of the Company's reserves and resources; the geography of the areas in which the Company is conducting exploration and development activities; and the Company's ability to obtain financing on acceptable terms. Actual results could differ materially from those anticipated in these forward-looking statements as a result of the risk factors set forth below and included in documents referenced elsewhere in this in this material change report, including: fluctuations in market prices for crude oil and bitumen blend; general economic, market and business conditions; dependence on the joint venture participant in the MacKay and Dover oil sands projects; variations in foreign exchange and interest rates; factors affecting potential profitability; the global financial crisis; uncertainties inherent in estimating quantities of reserves and resources; AOSC's status and stage of development; uncertainties inherent in SAGD and CSS and other bitumen recovery processes; failure to meet development schedules and potential cost overruns; increases in operating costs making projects uneconomic; the effect of diluent and natural gas supply constraints and increases in the costs thereof; gas over bitumen issues; environmental risks and hazards and the cost of compliance with environmental regulations, including greenhouse gas regulations and potential Canadian and U.S. climate change legislation; failure to obtain or retain key personnel; the substantial capital requirements of the Company's projects; the need to obtain regulatory approvals and maintain compliance with regulatory requirements; extent of, and cost of compliance with, government laws and regulations and the effect of changes in such laws and regulations from time to time; changes to royalty regimes; political risks; failure to accurately estimate abandonment and reclamation costs; risks inherent in the Company's operations, including those related to exploration, development and production of oil sands reserves and resources, including the production of oil sands reserves and resources using SAGD, CSS or other in-situ technologies; the potential for management estimates and assumptions to be inaccurate; long term reliance on third parties; reliance on third party infrastructure for project facilities; failure by counterparties (including without limitation affiliates of PetroChina to make payments or perform their operational or other obligations to the Company in compliance with the terms of contractual arrangements between the Company and such counterparties and the possible consequences thereof; the potential lack of available drilling equipment and limitations on access to the Company's assets; hedging risks; claims made in respect of the Company's operations, properties or assets; competition for, among other things, capital, the acquisition of reserves and resources, export pipeline capacity and skilled personnel; and the failure of the Company or the holder of certain licenses or leases to meet specific requirements of such licenses or leases. In addition, information and statements in this material change report relating to "reserves" and "resources" are deemed to be forward-looking information and statements, as they involve the implied assessment, based on certain estimates and assumptions, that the reserves and resources described exist in the quantities predicted or estimated, and that the reserves and resources described can be profitably produced in the future. The risks and uncertainties referred to above are described in more detail in AOSC's prospectus dated March 30, 2010 and its Statement of Oil and Gas Reserves Data and Other Oil and Gas Information for the year ended December 31, 2009, each of which is also available on the SEDAR website at www.sedar.com. Readers are cautioned that the foregoing list of risk factors should not be construed as exhaustive. The forward-looking statements included in this material change report are expressly qualified by this cautionary statement and are made as of the date of this material change report. The Company does not undertake any obligation to publicly update or revise any forward-looking statements except as required by applicable securities laws.

7. Reliance on subsection 7.1(2) of National Instrument 51-102

N/A

8. Omitted Information

N/A

9. Executive Officer

For further information, please contact:

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10. Date of Report:

June 18, 2010