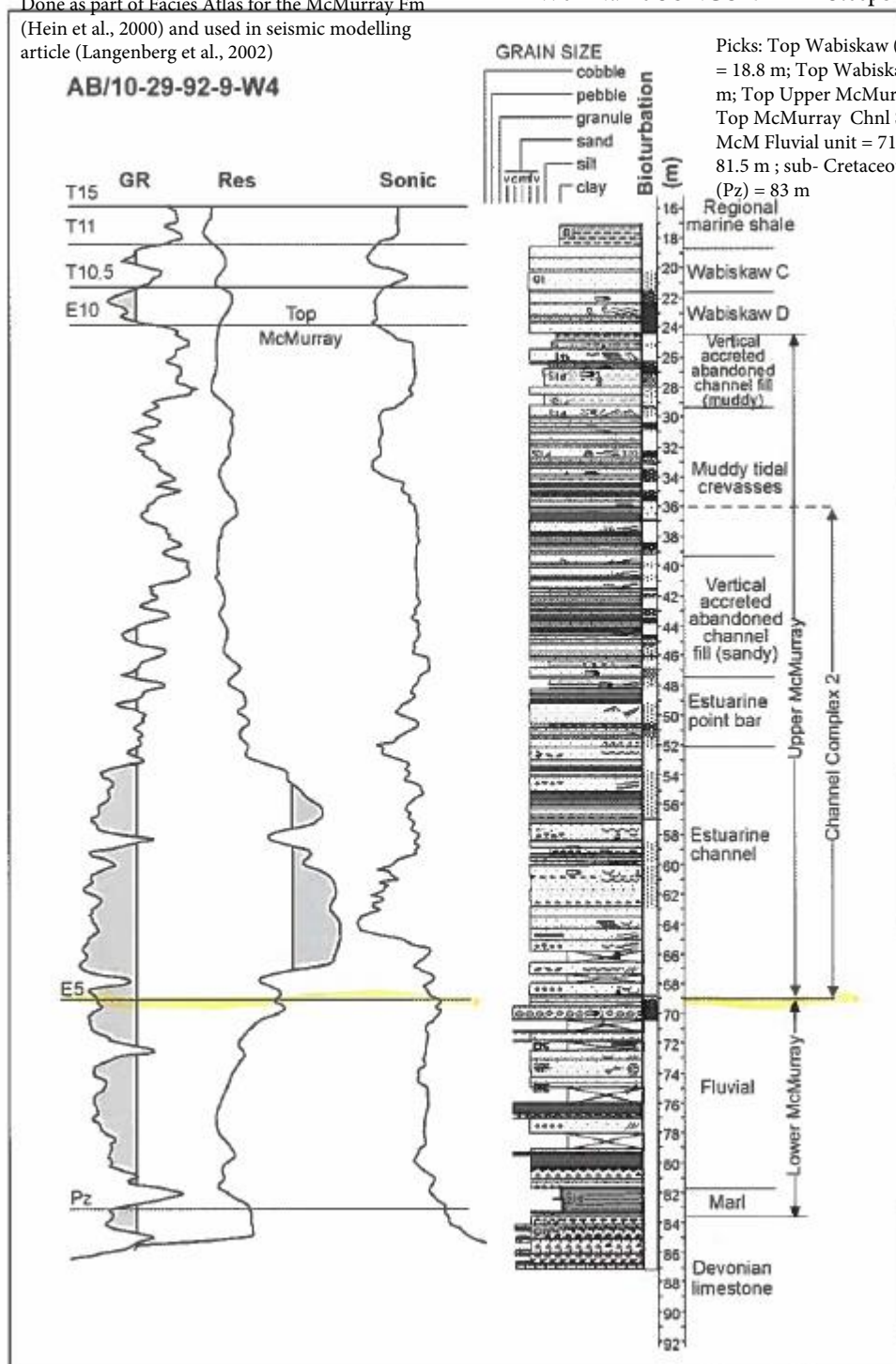


Well License 0199335

Well Name SUNCOR FL1 B Steepbank 10-29-92-9

Done as part of Facies Atlas for the McMurray Fm
(Hein et al., 2000) and used in seismic modelling
article (Langenberg et al., 2002)



Legend for Stratigraphic Sections and Core

LITHOLOGY

	Sand/Sandstone		Silt/Siltstone		Silty Shale		Conglomerate
	Silty Sand		Sandy Silt		Sandy Shale		Breccia
	Shaly Sand		Shale/Mudstone		Organic Shale		Limestone

CONTACTS

	Scoured		Undulating
--	---------	--	------------

PHYSICAL STRUCTURES

	- Current Ripples		- Trough Cross-strat.		- Oscillatory Ripples
	- Planar Tabular Bedding		- High Angle Tabular Bedding		- Low Angle Tabular Bedding
	- Flaser Bedding		- Wavy Parallel Bedding		- Lenticular Bedding
	- Herringbone Cross-strat.		- Convolute Bedding		- Chaotic Bedding
	- Scour		- Fault		

LITHOLOGIC ACCESSORIES

	- Shale Lamina		- Pebbles/Granules		- Calcareous
	- Siderite		- Glaucconitic		- Rip Up Clasts

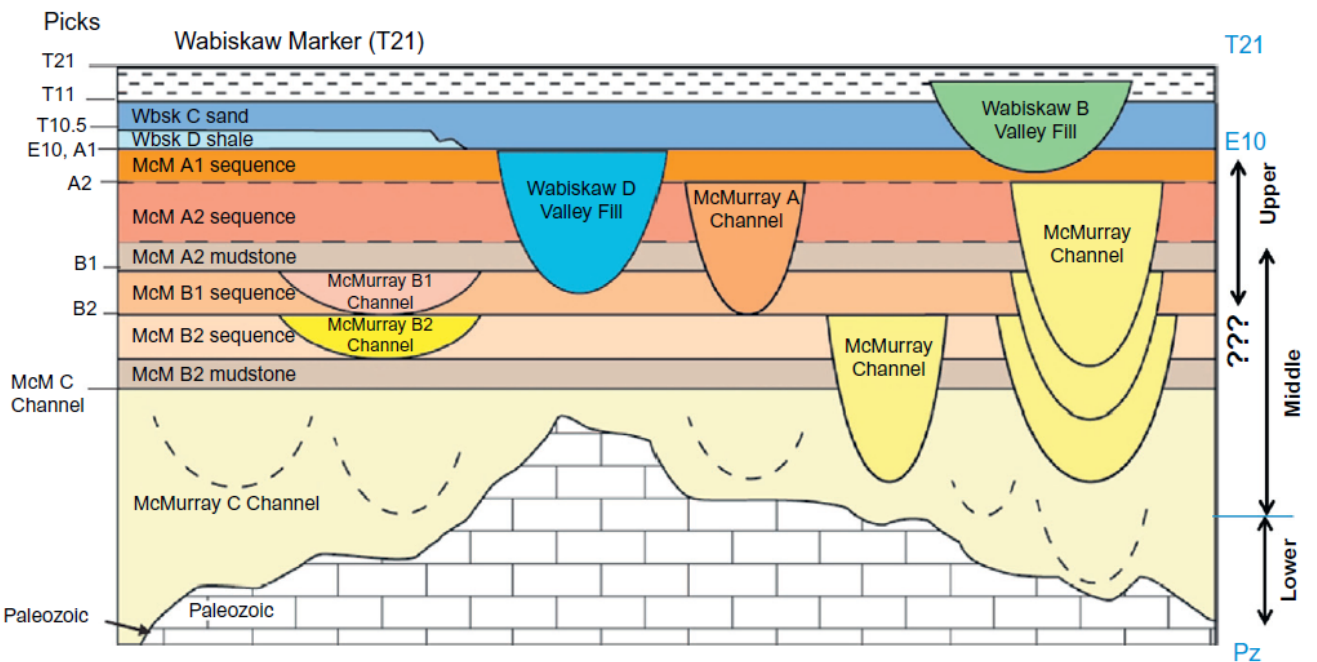
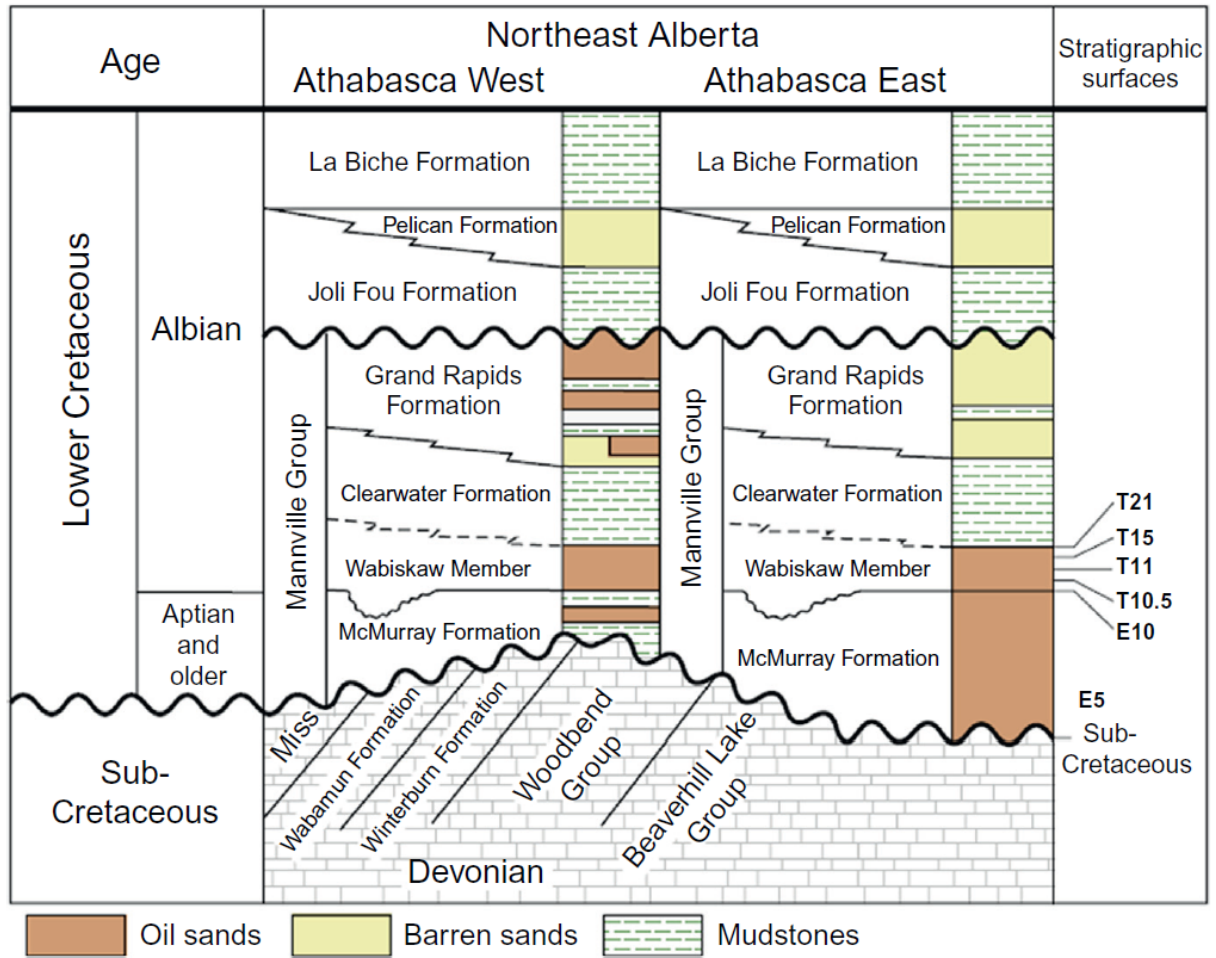
ICHTNOFOSSILS

	- Rootlets		- Skolithos		- Planolites
	- Cylindrichnus		- Bergaueria		- Conichnus
	- Thalassinoides				

BIOTURBATION

	Abundant		Common		Moderate		Rare		Barren
--	----------	--	--------	--	----------	--	------	--	--------

Stratigraphic Nomenclature for Picks



References Posted on Alberta Energy Regulator and Alberta Geological Survey websites

- Alberta Energy and Utilities Board (2003): Athabasca Wabiskaw-McMurray Regional Geological Study, Alberta Energy and Utilities Board Report, 187 p., URL < <https://www.aer.ca/documents/reports/r2003-a.pdf>. > [January 2017].
- Hein, F. J. (2000): Historical overview of the Fort McMurray area and oil sands industry in northeast Alberta (with expanded bibliographies on oil sands, surficial geology, hydrogeology, minerals and bedrock in northeast Alberta); Alberta Energy and Utilities Board, Alberta Geological Survey, Earth Sciences Report 2000-05, 26 p with appendices, URL < http://www.ags.gov.ab.ca/publications/ESR_2000_05.html > [May 2017]
- Hein, F. J., Berhane, H., and Weiss, J. A. (2007): Cold Lake oil sands area: Formation picks and correlation of associated stratigraphy; Alberta Energy and Utilities Board, Alberta Geological Survey, Geo-Note 2006-03, 17 p., URL < http://www.ags.gov.ab.ca/publications/GEO_2006_03.html > [May 2017]
- Hein, F.J. and Cotterill, D.K. (2007): Field guide: Regional sedimentology and processes of deposition of the Athabasca oil sands, northeast Alberta; Alberta Energy and Utilities Board/Alberta Geological Survey, Geo-Note 2006-04, 157 p., URL < http://www.ags.gov.ab.ca/publications/GEO_2006_04.html > [May 2017]
- Hein, F.J., Cotterill, D.K., and Berhane, H. (2000): An atlas of lithofacies of the McMurray Formation, Athabasca oil sands deposit, northeastern Alberta: Surface and subsurface; Alberta Energy and Utilities Board, Alberta Geological Survey, Earth Sciences Report 2000-07, 216 p., URL < http://www.ags.gov.ab.ca/publications/ESR_2000_07.html > [May 2017]
- Hein, F.J., Cotterill, D.K., and Rice, R. (2006a): Subsurface geology of the Athabasca Wabiskaw-McMurray succession: Lewis – Fort McMurray area, northeastern Alberta (NTS 74D/14); Alberta Energy and Utilities Board/Alberta Geological Survey, Earth Sciences Report 2006-06, 67 p., URL < http://www.ags.gov.ab.ca/publications/ESR_2006_06.html > [May 2017].
- Hein, F.J., Cotterill, D.K., Weiss, J., and Berhane, H. (2006b): Subsurface geology and facies characterization of the Athabasca Wabiskaw-McMurray succession Firebag-Sunrise area, northeastern Alberta (NTS 74D/74E); Alberta Energy and Utilities Board/Alberta Geological Survey, Earth Sciences Report 2006-08, 73 p., URL < http://www.ags.gov.ab.ca/publications/ESR_2006_08.html > [May 2017].
- Hein, F. J. and Dolby, G. (2017): Palynology, lithostratigraphy, and biostratigraphy of the Athabasca oil-sands deposit, northeastern Alberta; Alberta Energy Regulator, Alberta Geological Survey, Open File Report (2017, under review), 56 p. with digital appendices.
- Hein, F.J., Langenberg, C.W., Kidston, C., Cotterill, D.K., Berhane, H., and Berezniuk T. (2001): Comprehensive field guide for facies characterization of the Athabasca oil sands, Fort

McMurray area, northeast Alberta; Energy and Utilities Board, EUB/AGS Special Report 13, 335 p., URL <
http://www.ags.gov.ab.ca/publications/SPE_013.html > [May 2017]

Wynne, D. A., Attalla, M., Berhane, H., Brulotte, M., Cotterill, D. K., Strobl, R., and Wightman, D. M. (1994): Athabasca oil sands database: McMurray/Wabiskaw deposit; Alberta Energy and Utilities Board, Alberta Geological Survey, Open File Report, 1994-14, 44 pp., URL <
http://www.ags.gov.ab.ca/publications/OFR_1994_14.html > [May 2017]

Langenberg, C. W., Hein, F. J., and Berhane, H. (2001): Three-dimensional geometry of fluvial-estuarine oil sand deposits of the Clarke Creek area (NTS 74D), northeastern Alberta; Energy and Utilities Board, EUB/AGS Special Report 13, 35 p., URL <
http://ags.aer.ca/publications/ESR_2001_06.html > [May 2017]

Langenberg, C. W., Hein, F. J., D. Lawton and Berhane, H. (2002): Seismic modeling of fluvial-estuarine deposits in the Athabasca Oil Sands using ray-tracing techniques, Steepbank River area, northeastern Alberta; Bulletin of Canadian Petroleum Geology, v. 50, no. 1, p. 178-204.