

Waskada Unit No. 4

Waterflood Progress Report 2018

January 1st through December 31st 2018

Prepared for:

Manitoba Industry, Economic Development and Mines

Petroleum Branch

Prepared by:

Tundra Oil and Gas

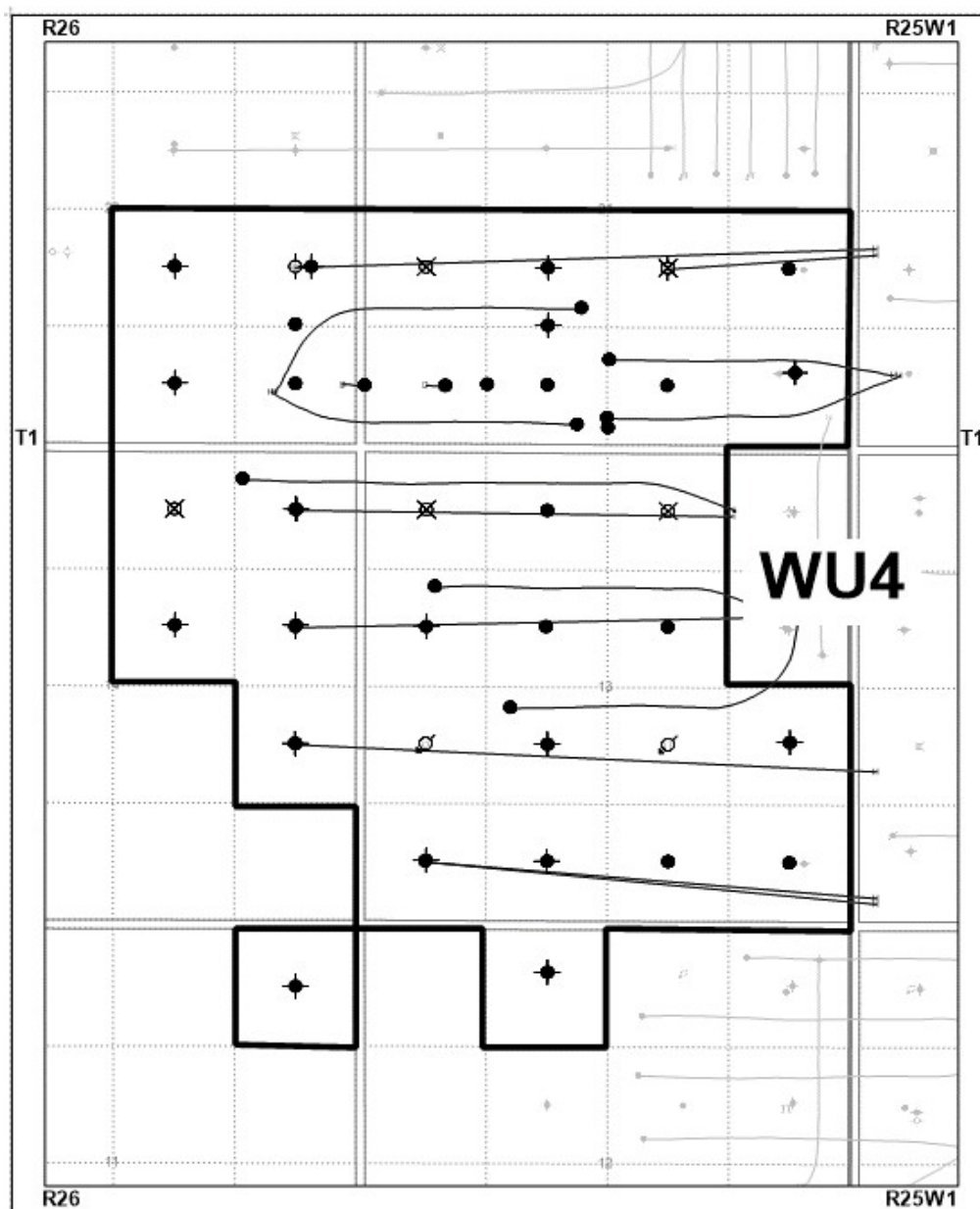
March 8, 2019

INTRODUCTION

Waskada Unit No. 4 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Board Order No. PM58 effective June 1984. The Unit area contains 24 abandoned/inactive wells, including 9 inactive/abandoned injectors, 23 producing wells and 5 horizontal wells waiting to be completed in 33 LSDs in Township 1 Range 26 W1 as shown in the figure below.

This unit is currently not on injection and there are no plans for injector re-activation.

Figure 1: Waskada Unit No. 4 Area Outline



Waskada Unit No. 4

Tundra Oil and Gas (Tundra), as the operator of the Waskada Unit No. 4 Enhanced Oil Recovery (EOR) project hereby submits the 2018 EOR report as per section 73 of the Drilling and Production Regulations.

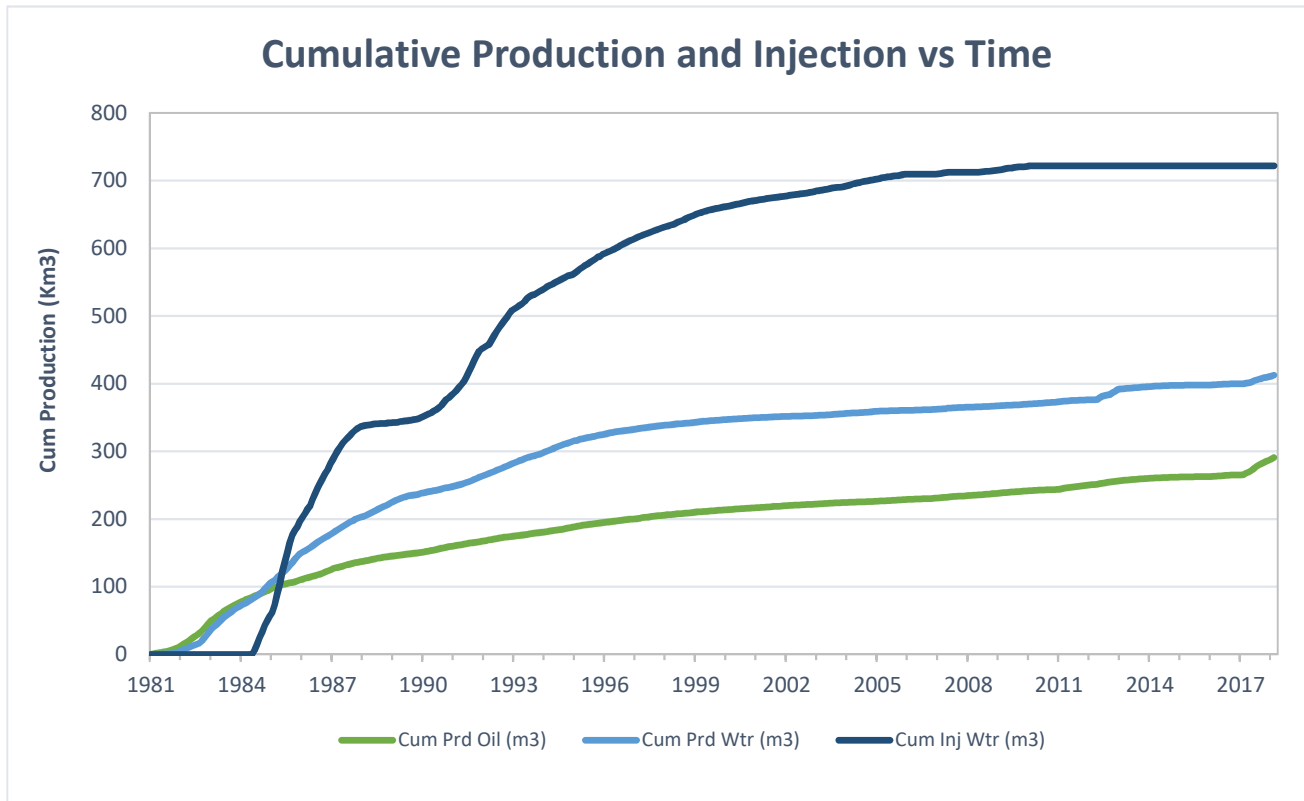
a) Monthly oil and water production rates, injection rate, GOR and WOR

MONTH	Cal Dly Oil m ³ /day	Cal Dly Wtr m ³ /day	Cal Inj Wtr m ³ /day	WOR m ³ /m ³	GOR m ³ /m ³
Jan-2018	51.90	14.68	0.00	0.28	0
Feb-2018	38.28	10.13	0.00	0.26	0
Mar-2018	77.68	35.75	0.00	0.46	0.96
Apr-2018	93.32	50.96	0.00	0.55	0.82
May-2018	91.10	42.82	0.00	0.47	0.81
Jun-2018	80.66	41.45	0.00	0.51	0.91
Jul-2018	68.15	36.27	0.00	0.53	1.09
Aug-2018	60.96	32.85	0.00	0.54	1.22
Sep-2018	52.84	27.55	0.00	0.52	1.45
Oct-2018	46.39	26.33	0.00	0.57	1.67
Nov-2018	63.69	38.61	0.00	0.61	1.26
Dec-2018	69.40	36.06	0.00	0.52	1.12

b) Cumulative volume of oil, gas and water produced and fluid injected

2018 PRODUCTION	
Produced Oil (m ³)	24,220
Produced Gas (m ³)	1
Produced Water (m ³)	12,009
Fluid Injected (m ³)	0
CUMULATIVE PRODUCTION	
Produced Oil (m ³)	290,720
Produced Water (m ³)	412,484

Waskada Unit No. 4



c) Well List

Waskada Unit No. 4 Well List

<i>UWI</i>	<i>Type</i>	<i>Status</i>	<i>Future Plans</i>
100/16-11-001-26W1/0	Vertical	Abandoned	-
100/14-12-001-26W1/0	Vertical	Abandoned	-
100/01-13-001-26W1/0	Vertical	Producing	-
100/02-13-001-26W1/0	Vertical	Producing	-
100/03-13-001-26W1/0	Vertical	Abandoned	-
100/04-13-001-26W1/0	Vertical	Abandoned	-
102/04-13-001-26W1/0	Horizontal	Producing	-
103/04-13-001-26W1/0	Horizontal	Producing	-
100/05-13-001-26W1/0	Vertical	Injection	-
100/06-13-001-26W1/0	Vertical	Abandoned	-
102/06-13-001-26W1/0	Horizontal	Producing	-
100/07-13-001-26W1/0	Vertical	Injection	-
100/08-13-001-26W1/0	Vertical	Abandoned	-
100/10-13-001-26W1/0	Vertical	Producing	-
100/11-13-001-26W1/0	Vertical	Producing	-
100/12-13-001-26W1/0	Vertical	Abandoned Zone	-
102/12-13-001-26W1/0	Horizontal	Producing	-
100/13-13-001-26W1/0	Vertical	Abandoned	-
100/14-13-001-26W1/0	Vertical	Producing	-
100/15-13-001-26W1/0	Vertical	Abandoned	-
100/08-14-001-26W1/0	Vertical	Abandoned	-
102/08-14-001-26W1/0	Horizontal	Drilled & Cased	-
100/09-14-001-26W1/0	Vertical	Abandoned	-
102/09-14-001-26W1/0	Horizontal	Drilled & Cased	-
100/10-14-001-26W1/0	Vertical	Abandoned	-
100/15-14-001-26W1/0	Vertical	Abandoned	-
100/16-14-001-26W1/0	Vertical	Abandoned	-
102/16-14-001-26W1/0	Horizontal	Producing	-
103/16-14-001-26W1/0	Horizontal	Drilled & Cased	-
100/01-23-001-26W1/0	Vertical	Producing	-
100/02-23-001-26W1/0	Vertical	Abandoned	-
100/07-23-001-26W1/2	Vertical	Abandoned	-
102/08-23-001-26W1/0	Vertical	Abandoned	-
103/08-23-001-26W1/0	Horizontal	Drilled & Cased	-
1A0/08-23-001-26W1/0	Vertical	Producing	-
102/01-24-001-26W1/0	Vertical	Abandoned	-
100/02-24-001-26W1/0	Vertical	Producing	-
102/02-24-001-26W1/0	Horizontal	Producing	-
1B0/02-24-001-26W1/0	Vertical	Producing	-
100/03-24-001-26W1/0	Vertical	Producing	-
102/03-24-001-26W1/0	Horizontal	Producing	-
103/03-24-001-26W1/0	Horizontal	Producing	-
1C0/03-24-001-26W1/0	Vertical	Producing	-
100/04-24-001-26W1/0	Vertical	Producing	-
1C0/04-24-001-26W1/0	Dir/Dev	Producing	-

c) Well List

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<i>UWI</i>	<i>Type</i>	<i>Status</i>	<i>Future Plans</i>
100/05-24-001-26W1/0	Vertical	Abandoned	-
100/06-24-001-26W1/0	Vertical	Abandoned Zone	-
102/06-24-001-26W1/0	Horizontal	Producing	-
1A0/06-24-001-26W1/0	Vertical	Abandoned Zone	-
100/07-24-001-26W1/0	Vertical	Abandoned	-
102/07-24-001-26W1/0	Horizontal	Drilled & Cased	-
102/08-24-001-26W1/0	Vertical	Pumping	-