

**Waskada Unit No. 13**

**Waterflood Progress Report 2017**

**January 1<sup>st</sup> through December 31<sup>st</sup> 2017**

**Prepared for:**

**Manitoba Industry, Economic Development and Mines**

**Petroleum Branch**

**Prepared by:**

**Tundra Oil and Gas**

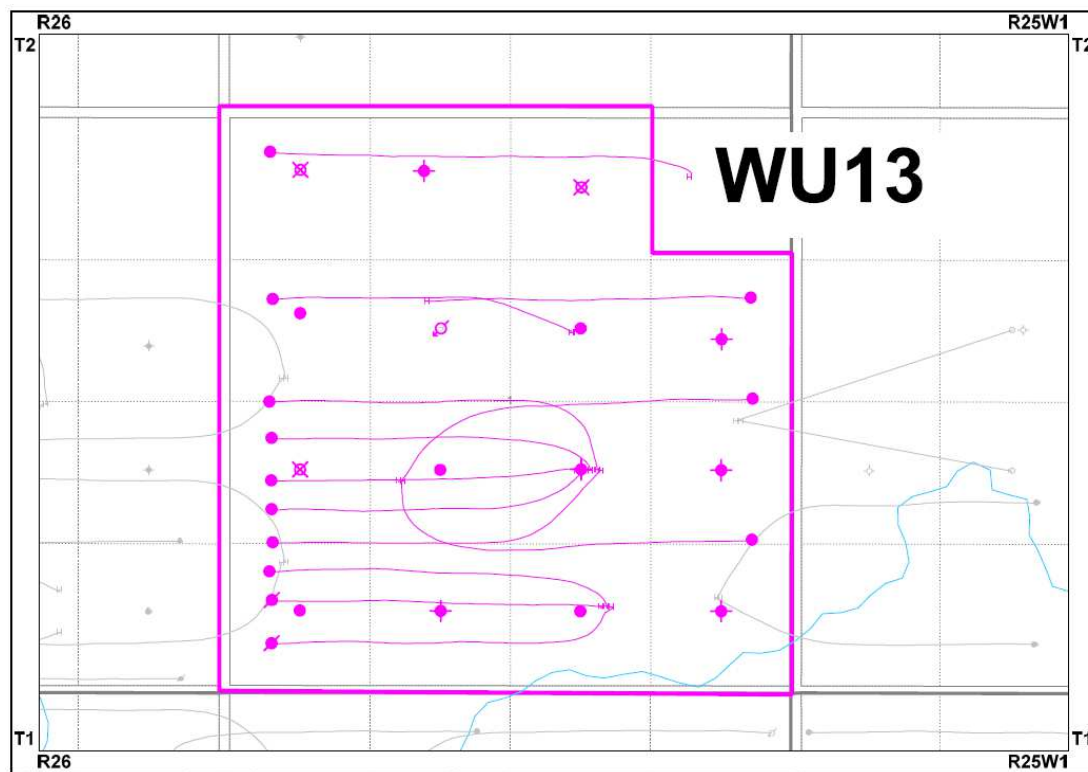
**July 30, 2018**

## INTRODUCTION

Waskada Unit No. 13 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Board Order No. PM 58 effective December 1986. The Unit area contains 12 abandoned/suspended wells, including 5 abandoned/inactive injectors, and 16 producing/inactive wells in 15 LSDs in Township 2, 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. 13 Area Outline**



## Waskada Unit No. 13

Tundra Oil and Gas (Tundra), as the operator of the Waskada Unit No. 13 Enhanced Oil Recovery (EOR) project hereby submits the 2017 EOR report as per section 73 of the Drilling and Production Regulations.

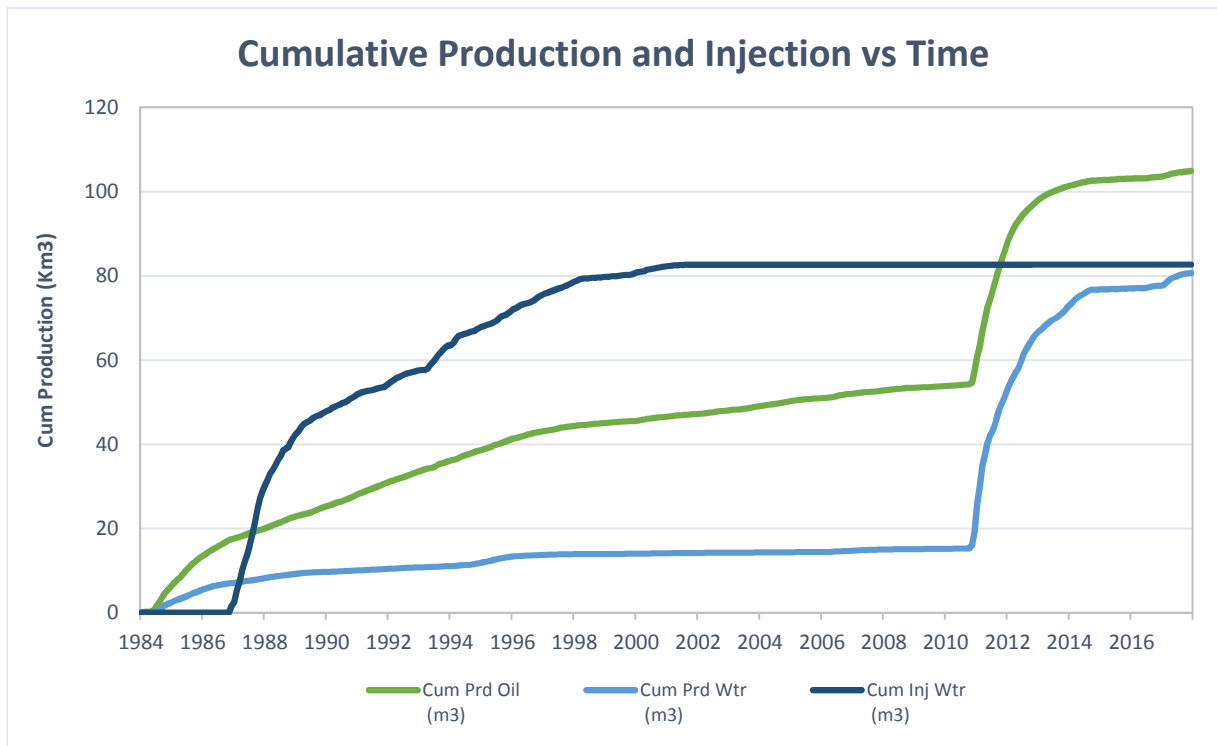
**a) Monthly oil and water production rates, injection rate, GOR and WOR**

MONTH	Cal Dly Oil m <sup>3</sup> /day	Cal Dly Wtr m <sup>3</sup> /day	Cal Inj Wtr m <sup>3</sup> /day	WOR m <sup>3</sup> /m <sup>3</sup>	GOR m <sup>3</sup> /m <sup>3</sup>
Jan-2017	1.97	1.95	0.00	0.99	0
Feb-2017	4.33	16.41	0.00	3.79	0
Mar-2017	6.10	19.59	0.00	3.21	0
Apr-2017	6.66	14.69	0.00	2.21	0
May-2017	4.79	9.16	0.00	1.91	0
Jun-2017	4.14	8.31	0.00	2.01	0
Jul-2017	3.45	7.18	0.00	2.08	0
Aug-2017	3.14	6.40	0.00	2.04	0
Sep-2017	3.22	5.56	0.00	1.72	0
Oct-2017	2.76	4.91	0.00	1.78	0
Nov-2017	2.20	3.66	0.00	1.66	0
Dec-2017	1.31	1.85	0.00	1.42	0

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

2017 PRODUCTION	
Produced Oil (m <sup>3</sup> )	1,337
Produced Gas (m <sup>3</sup> )	0
Produced Water (m <sup>3</sup> )	3,009
Fluid Injected (m <sup>3</sup> )	0
CUMULATIVE PRODUCTION	
Produced Oil (m <sup>3</sup> )	104,892
Produced Water (m <sup>3</sup> )	80,654

## Waskada Unit No. 13



<i><b>UWI</b></i>	<i><b>Type</b></i>	<i><b>Status</b></i>	<i><b>Future Plans</b></i>
100/01-01-002-26W1/0	Vertical	Abandoned	-
100/02-01-002-26W1/0	Vertical	Producing	-
100/03-01-002-26W1/0	Vertical	Abandoned Zone	-
100/04-01-002-26W1/0	Vertical	Producing	-
102/04-01-002-26W1/0	Horizontal	Producing	-
103/04-01-002-26W1/0	Horizontal	Suspended	-
104/04-01-002-26W1/0	Horizontal	Producing	-
105/04-01-002-26W1/0	Horizontal	Suspended	-
100/05-01-002-26W1/0	Vertical	Abandoned	-
102/05-01-002-26W1/0	Horizontal	Producing	-
103/05-01-002-26W1/0	Horizontal	Producing	-
104/05-01-002-26W1/0	Horizontal	Producing	-
105/05-01-002-26W1/0	Horizontal	Producing	-
100/06-01-002-26W1/0	Vertical	Producing	-
100/07-01-002-26W1/0	Vertical	Abandoned	-
100/08-01-002-26W1/0	Vertical	Abandoned	-
102/08-01-002-26W1/0	Horizontal	Producing	-
100/09-01-002-26W1/0	Vertical	Abandoned	-
102/09-01-002-26W1/0	Horizontal	Producing	-
103/09-01-002-26W1/0	Horizontal	Producing	-
100/10-01-002-26W1/0	Vertical	Producing	-
100/11-01-002-26W1/0	Vertical	Injection	-
100/12-01-002-26W1/0	Vertical	Producing	-
102/12-01-002-26W1/0	Horizontal	Producing	-
100/13-01-002-26W1/0	Vertical	Abandoned	-
102/13-01-002-26W1/0	Horizontal	Producing	-
100/14-01-002-26W1/0	Vertical	Abandoned Zone	-
100/15-01-002-26W1/0	Vertical	Abandoned	-