

Waskada Unit No. 23

Waterflood Progress Report 2019

January 1st through December 31st 2019

Prepared for:

Manitoba Industry, Economic Development and Mines

Petroleum Branch

Prepared by:

Tundra Oil and Gas

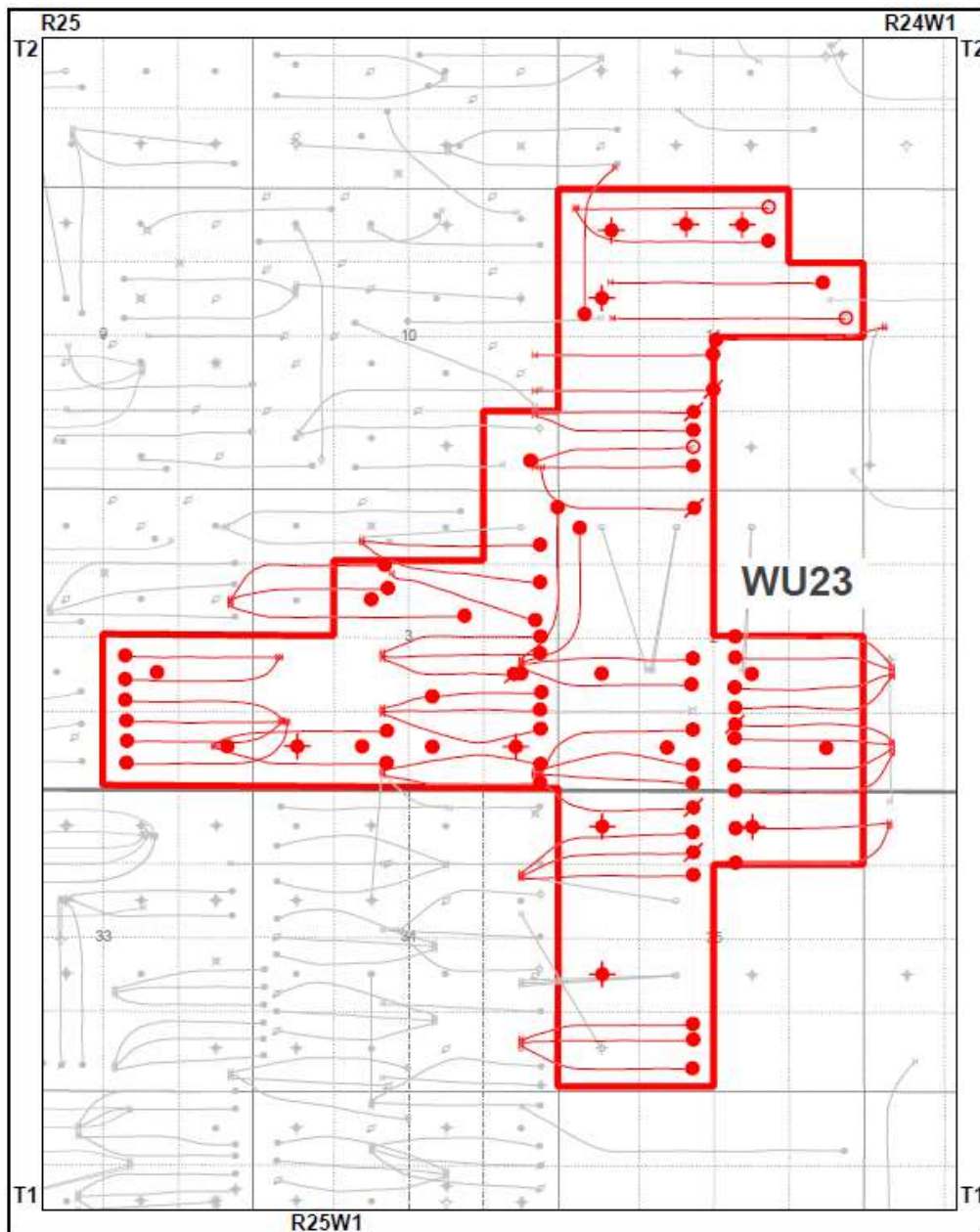
March 19, 2020

INTRODUCTION

Waskada Unit No. 23 Enhanced Oil Recovery (EOR) Waterflood Project was approved November 1, 2017. Waskada Unit No. 23 area contains 21 vertical wells (13 abandoned, 8 producing) and 59 horizontal wells (7 suspended, 52 producing), in 50 Legal Sub Divisions (LSD) in Townships 1 and 2, Range 25 W1 as shown in the figure below.

This unit is currently not on injection.

Figure 1: Waskada Unit No. 23 Area Outline



Waskada Unit No. 23

Tundra Oil and Gas (Tundra), as the operator of the Waskada Unit No. 23 Enhanced Oil Recovery (EOR) project hereby submits the 2019 EOR report as per section 73 of the Drilling and Production Regulations.

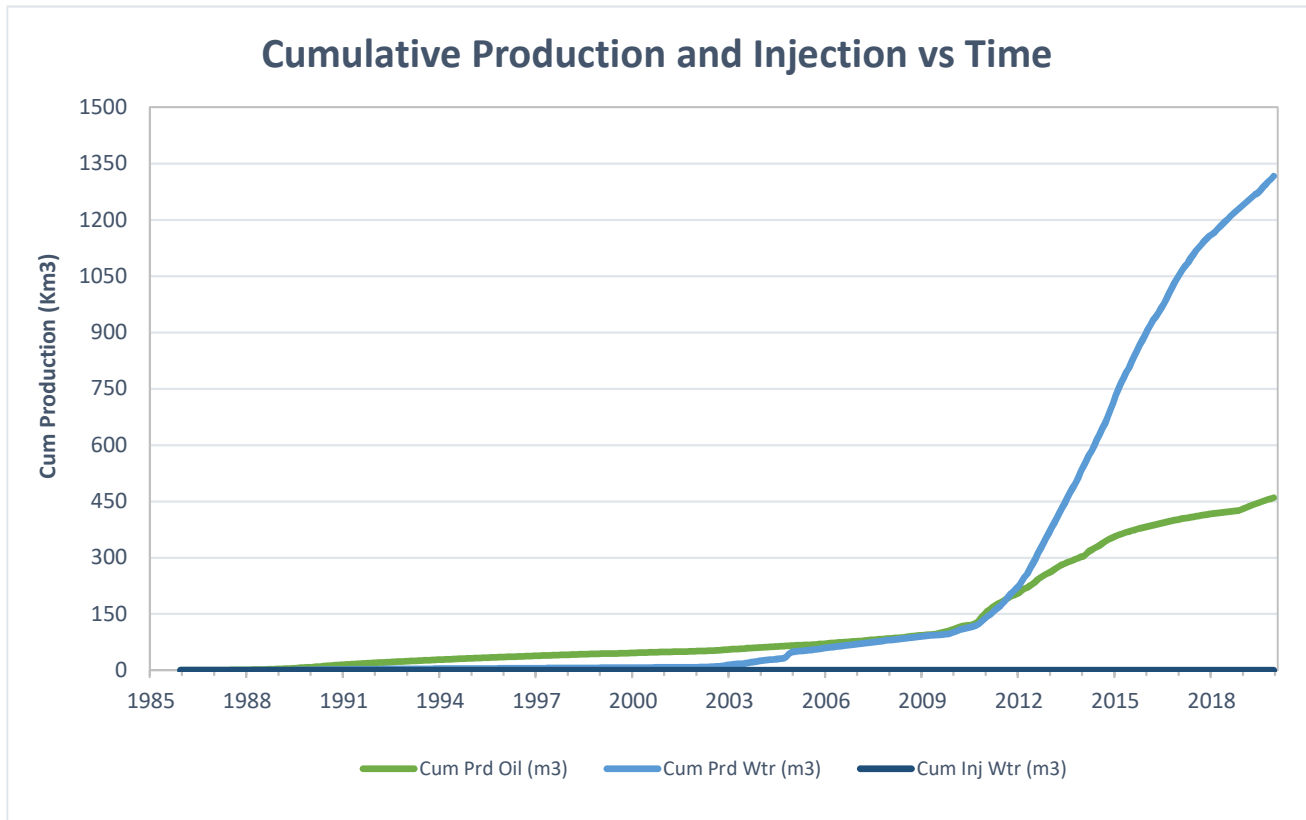
a) Monthly oil and water production rates, injection rate, GOR and WOR

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-2019	109.42	223.12	0.00	2.04	4.6
Feb-2019	107.45	217.23	0.00	2.02	5.18
Mar-2019	97.31	209.24	0.00	2.15	5.17
Apr-2019	90.55	194.22	0.00	2.14	5.74
May-2019	86.13	190.18	0.00	2.21	0
Jun-2019	76.22	166.98	0.00	2.19	0
Jul-2019	82.62	204.69	0.00	2.48	0
Aug-2019	93.40	278.51	0.00	2.98	0
Sep-2019	83.37	256.33	0.00	3.07	0
Oct-2019	75.98	241.75	0.00	3.18	0
Nov-2019	69.78	239.65	0.00	3.43	0
Dec-2019	70.98	243.07	0.00	3.42	0

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

2019 PRODUCTION	
Produced Oil (m ³)	31,697
Produced Gas (m ³)	62
Produced Water (m ³)	81,105
Fluid Injected (m ³)	0
CUMULATIVE PRODUCTION	
Produced Oil (m ³)	459,900
Produced Water (m ³)	1,316,624

Waskada Unit No. 23



<i>UWI</i>	<i>Type</i>	<i>Status</i>	<i>Future Plans</i>
100/03-35-001-25W1/0	Horizontal	Producing	-
102/03-35-001-25W1/0	Horizontal	Producing	-
103/03-35-001-25W1/0	Horizontal	Producing	-
100/05-35-001-25W1/0	Vertical	Abandoned Zone	-
100/11-35-001-25W1/0	Horizontal	Producing	-
100/13-35-001-25W1/0	Vertical	Abandoned Zone	-
100/14-35-001-25W1/0	Horizontal	Suspended	-
102/14-35-001-25W1/0	Horizontal	Producing	-
103/14-35-001-25W1/0	Horizontal	Suspended	-
100/15-35-001-25W1/0	Vertical	Abandoned Zone	-
102/15-35-001-25W1/0	Horizontal	Producing	-
103/15-35-001-25W1/0	Horizontal	Producing	-
104/15-35-001-25W1/0	Horizontal	Producing	-
100/01-02-002-25W1/0	Vertical	Producing	-
100/02-02-002-25W1/0	Horizontal	Producing	-
102/02-02-002-25W1/0	Horizontal	Producing	-
103/02-02-002-25W1/0	Horizontal	Suspended	-
100/03-02-002-25W1/0	Vertical	Abandoned Zone	-
102/03-02-002-25W1/0	Horizontal	Producing	-
103/03-02-002-25W1/0	Horizontal	Producing	-
104/03-02-002-25W1/0	Horizontal	Producing	-
100/05-02-002-25W1/0	Vertical	Abandoned Zone	-
102/06-02-002-25W1/0	Horizontal	Producing	-
103/06-02-002-25W1/0	Horizontal	Producing	-
100/07-02-002-25W1/0	Vertical	Producing	-
102/07-02-002-25W1/0	Horizontal	Producing	-
103/07-02-002-25W1/0	Horizontal	Producing	-
104/07-02-002-25W1/0	Horizontal	Producing	-
100/13-02-002-25W1/0	Horizontal	Producing	-
100/14-02-002-25W1/0	Horizontal	Suspended	-
100/01-03-002-25W1/0	Vertical	Abandoned	-
102/01-03-002-25W1/0	Horizontal	Producing	-
103/01-03-002-25W1/0	Horizontal	Producing	-
104/01-03-002-25W1/0	Horizontal	Producing	-
100/02-03-002-25W1/0	Vertical	Producing	-
100/03-03-002-25W1/2	Vertical	Abandoned Zone	-
102/03-03-002-25W1/0	Horizontal	Producing	-
103/03-03-002-25W1/0	Horizontal	Producing	-
100/04-03-002-25W1/0	Vertical	Abandoned Zone	-
100/06-03-002-25W1/0	Horizontal	Producing	-
102/06-03-002-25W1/0	Horizontal	Producing	-
100/07-03-002-25W1/0	Vertical	Pumping	-
100/08-03-002-25W1/0	Vertical	Producing	-
102/08-03-002-25W1/0	Horizontal	Producing	-
103/08-03-002-25W1/0	Horizontal	Producing	-

c) Well List

Waskada Unit No. 23 Well List

<i>UWI</i>	<i>Type</i>	<i>Status</i>	<i>Future Plans</i>
104/08-03-002-25W1/0	Horizontal	Suspended	-
105/08-03-002-25W1/0	Horizontal	Producing	-
106/08-03-002-25W1/0	Horizontal	Producing	-
100/09-03-002-25W1/0	Horizontal	Producing	-
102/09-03-002-25W1/0	Horizontal	Producing	-
100/10-03-002-25W1/0	Horizontal	Producing	-
100/11-03-002-25W1/0	Vertical	Pumping	-
102/11-03-002-25W1/0	Horizontal	Producing	-
103/11-03-002-25W1/0	Horizontal	Producing	-
100/16-03-002-25W1/0	Horizontal	Producing	-
102/16-03-002-25W1/0	Horizontal	Producing	-
100/01-04-002-25W1/0	Vertical	Producing	-
100/02-04-002-25W1/0	Horizontal	Producing	-
102/02-04-002-25W1/0	Horizontal	Producing	-
103/02-04-002-25W1/0	Horizontal	Producing	-
100/07-04-002-25W1/2	Vertical	Producing	-
102/07-04-002-25W1/0	Horizontal	Producing	-
103/07-04-002-25W1/0	Horizontal	Producing	-
104/07-04-002-25W1/0	Horizontal	Producing	-
100/01-10-002-25W1/0	Vertical	Abandoned Zone	-
100/03-11-002-25W1/0	Horizontal	Producing	-
102/03-11-002-25W1/0	Horizontal	Producing	-
103/03-11-002-25W1/0	Horizontal	Producing	-
104/03-11-002-25W1/0	Horizontal	Suspended	-
100/06-11-002-25W1/0	Horizontal	Suspended	-
102/06-11-002-25W1/0	Horizontal	Producing	-
100/09-11-002-25W1/0	Horizontal	Producing	-
102/09-11-002-25W1/0	Horizontal	Producing	-
100/12-11-002-25W1/0	Vertical	Abandoned Zone	-
102/12-11-002-25W1/0	Horizontal	Producing	-
100/13-11-002-25W1/0	Vertical	Abandoned Zone	-
100/14-11-002-25W1/0	Vertical	Abandoned Zone	-
100/15-11-002-25W1/0	Vertical	Abandoned Zone	-
102/15-11-002-25W1/0	Horizontal	Producing	-
103/15-11-002-25W1/0	Horizontal	Producing	-