

**Cromer Unit No. 2**

**Waterflood Progress Report 2018**

**January 1<sup>st</sup> through December 31<sup>st</sup> 2018**

**Prepared for:**

**Manitoba Industry, Economic Development and Mines**

**Petroleum Branch**

**Prepared by:**

**Tundra Oil and Gas**

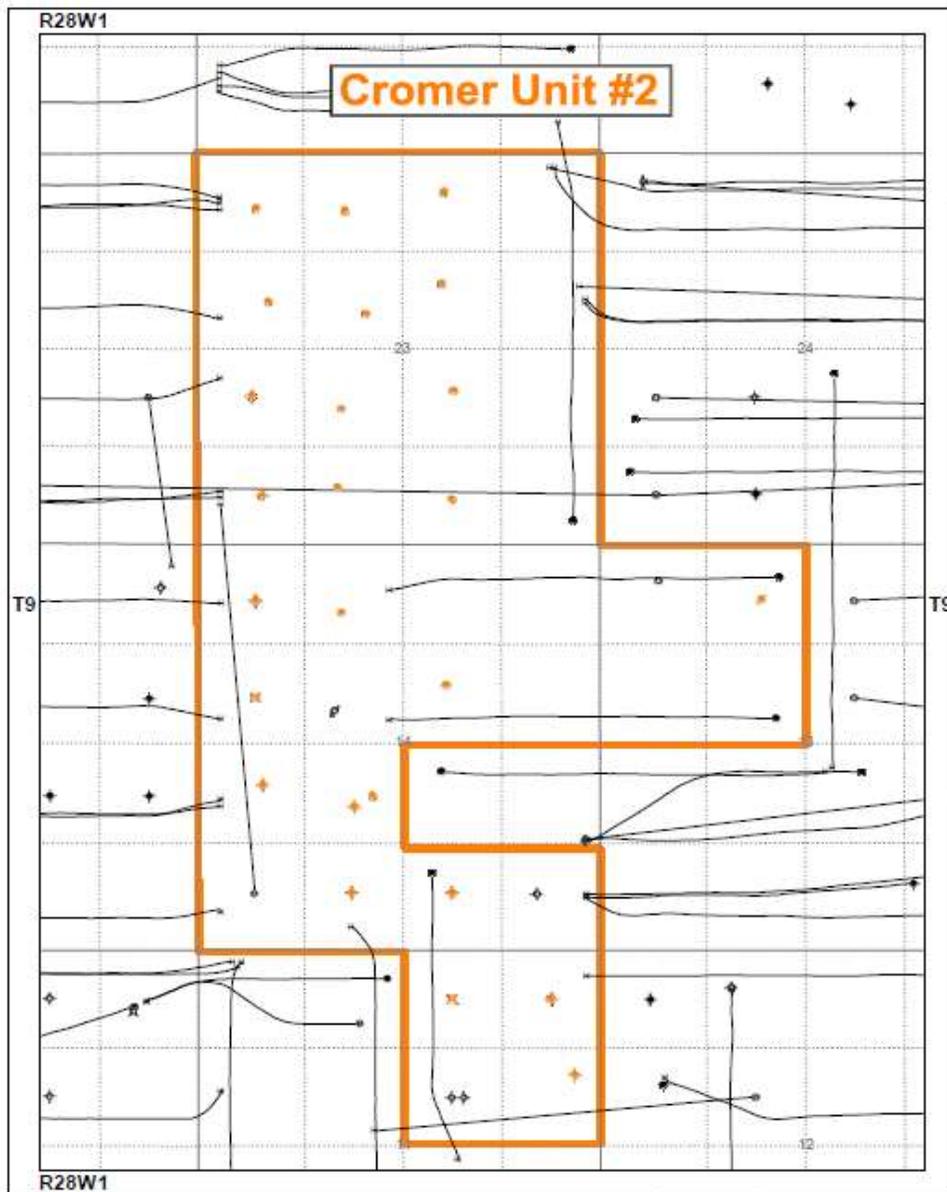
**April 1, 2019**

# INTRODUCTION

Cromer Unit No. 2 Enhanced Oil Recovery (EOR) Waterflood Project was approved on June 30, 2016 with Tundra Oil and Gas as Operator. The EOR project area, outlined in orange in Figure 1, contains 26 wells in 38 LSDs in Township 9, Range 28W1.

**This unit is currently not on injection.**

**Figure 1: Cromer Unit No. 2 Area Outline**



## Cromer Unit No. 2

Tundra Oil and Gas (Tundra), as the operator of the Cromer Unit No. 2 Enhanced Oil Recovery (EOR) project hereby submits the 2018 EOR report as per section 73 of the Drilling and Production Regulations.

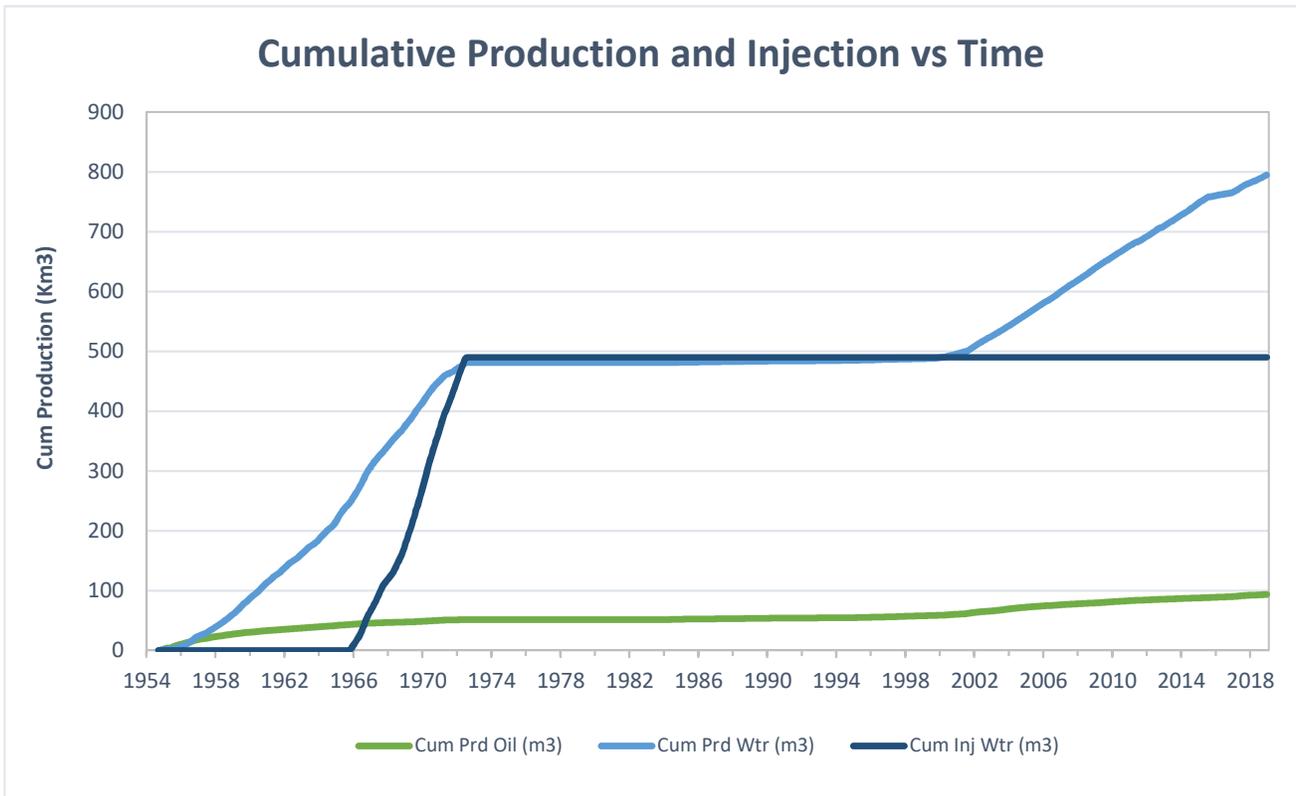
**a) Monthly oil and water production rates, injection rate, GOR and WOR**

MONTH	Cal Dly Oil m <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-2018	3.67	40.85	0.00	11.12	0
Feb-2018	2.69	39.18	0.00	14.57	0
Mar-2018	2.64	25.29	0.00	9.59	0
Apr-2018	2.94	18.53	0.00	6.30	0
May-2018	3.57	42.27	0.00	11.83	0
Jun-2018	4.15	37.94	0.00	9.15	0
Jul-2018	3.85	35.88	0.00	9.32	0
Aug-2018	3.82	39.04	0.00	10.22	0
Sep-2018	3.87	40.12	0.00	10.38	0
Oct-2018	3.86	41.40	0.00	10.72	0
Nov-2018	3.88	42.23	0.00	10.87	0
Dec-2018	3.93	43.45	0.00	11.06	0

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

<b>2018 PRODUCTION</b>	
Produced Oil (m <sup>3</sup> )	1,306
Produced Gas (m <sup>3</sup> )	0
Produced Water (m <sup>3</sup> )	13,576
Fluid Injected (m <sup>3</sup> )	0
<b>CUMULATIVE PRODUCTION</b>	
Produced Oil (m <sup>3</sup> )	93,449
Produced Water (m <sup>3</sup> )	794,665

## Cromer Unit No. 2



## c) Well List

## Cromer Unit No. 2 Well List

<i>UWI</i>	<i>Type</i>	<i>Status</i>	<i>Future Plans</i>
100/09-11-009-28W1/0	Vertical	Abandoned	-
100/15-11-009-28W1/0	Vertical	Abandoned	-
100/16-11-009-28W1/0	Vertical	Abandoned Zone	-
100/14-13-009-28W1/0	Vertical	Abandoned Zone	-
100/02-14-009-28W1/0	Vertical	Abandoned	-
100/03-14-009-28W1/0	Vertical	Abandoned	-
100/05-14-009-28W1/0	Vertical	Abandoned Zone	-
100/06-14-009-28W1/0	Vertical	Abandoned	-
102/06-14-009-28W1/0	Vertical	Commingled	-
100/10-14-009-28W1/2	Vertical	Commingled	-
100/12-14-009-28W1/0	Vertical	Suspended	-
100/13-14-009-28W1/2	Vertical	Abandoned	-
100/14-14-009-28W1/2	Vertical	Commingled	-
100/02-23-009-28W1/0	Vertical	Commingled	-
100/03-23-009-28W1/2	Vertical	Producing	-
100/04-23-009-28W1/0	Vertical	Abandoned	-
100/04-23-009-28W1/2	Vertical	Commingled	-
100/05-23-009-28W1/2	Vertical	Abandoned	-
100/06-23-009-28W1/0	Vertical	Commingled	-
100/07-23-009-28W1/0	Vertical	Pumping	-
100/10-23-009-28W1/0	Vertical	Producing	-
100/11-23-009-28W1/2	Vertical	Producing	-
100/12-23-009-28W1/2	Vertical	Pumping	-
100/13-23-009-28W1/2	Vertical	Pumping	-
100/14-23-009-28W1/2	Vertical	Pumping	-
100/15-23-009-28W1/0	Vertical	Producing	-

#### **d) Waterflood Discussion**

Water disposal into the Lodgepole started in November 1965 in the 00/15-11-009-28W1/0 well, followed by the 00/12-14-009-28 in August 1969. In August 1972, water disposal into Cromer Unit No. 2 was suspended.

Tundra no longer wants to use produced water for injection in Cromer Unit No. 2, so they are currently evaluating a new source of water. Tundra is also working on re-starting the water injection as a waterflood, instead of as disposal, in this Unit. It is anticipated that additional wells will be drilled or current wells re-configured to inject water in this Unit in the near future.