

Cromer Unit No. 2

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

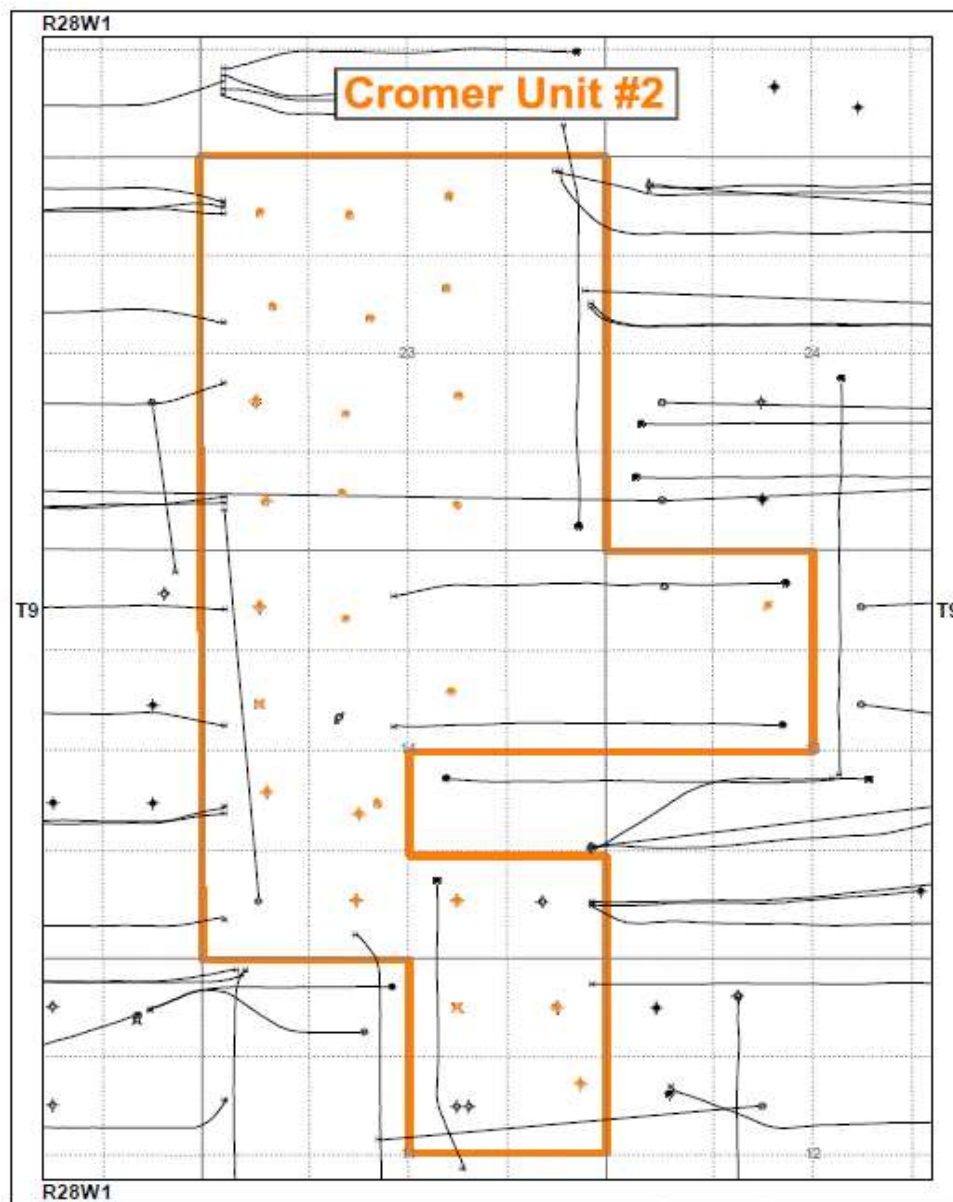
March 17, 2020

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 2019 EOR report as per section 73 of the Drilling and Production Regulations.

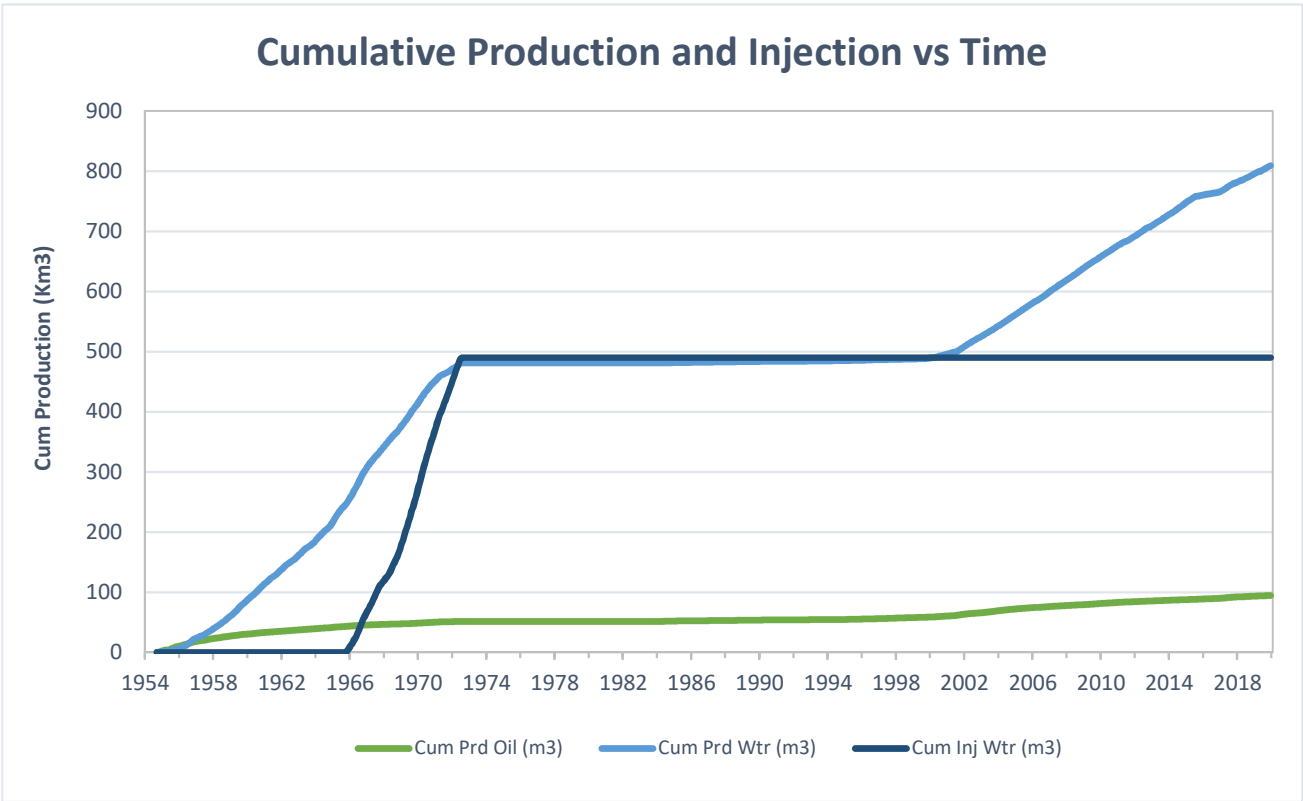
a) Monthly oil and water production rates, injection rate, GOR and WOR

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	3.06	41.16	0.00	13.45	0
Feb-2019	2.78	39.66	0.00	14.28	0
Mar-2019	3.05	44.63	0.00	14.66	0
Apr-2019	3.19	23.39	0.00	7.32	0
May-2019	2.67	26.02	0.00	9.73	0
Jun-2019	3.45	46.22	0.00	13.41	0
Jul-2019	2.86	39.81	0.00	13.90	0
Aug-2019	2.79	43.45	0.00	15.57	0
Sep-2019	3.13	40.90	0.00	13.07	0
Oct-2019	3.48	41.22	0.00	11.85	0
Nov-2019	3.28	42.98	0.00	13.09	0
Dec-2019	4.72	41.02	0.00	8.69	0

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

2019 PRODUCTION	
Produced Oil (m ³)	1,171
Produced Gas (m ³)	0
Produced Water (m ³)	14,312
Fluid Injected (m ³)	0
CUMULATIVE PRODUCTION	
Produced Oil (m ³)	94,620
Produced Water (m ³)	808,976

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.