

DALY UNIT NO. 12

WATERFLOOD EOR PROJECT

ANNUAL REPORT FOR 2016

July 24, 2017

Tundra Oil and Gas Partnership

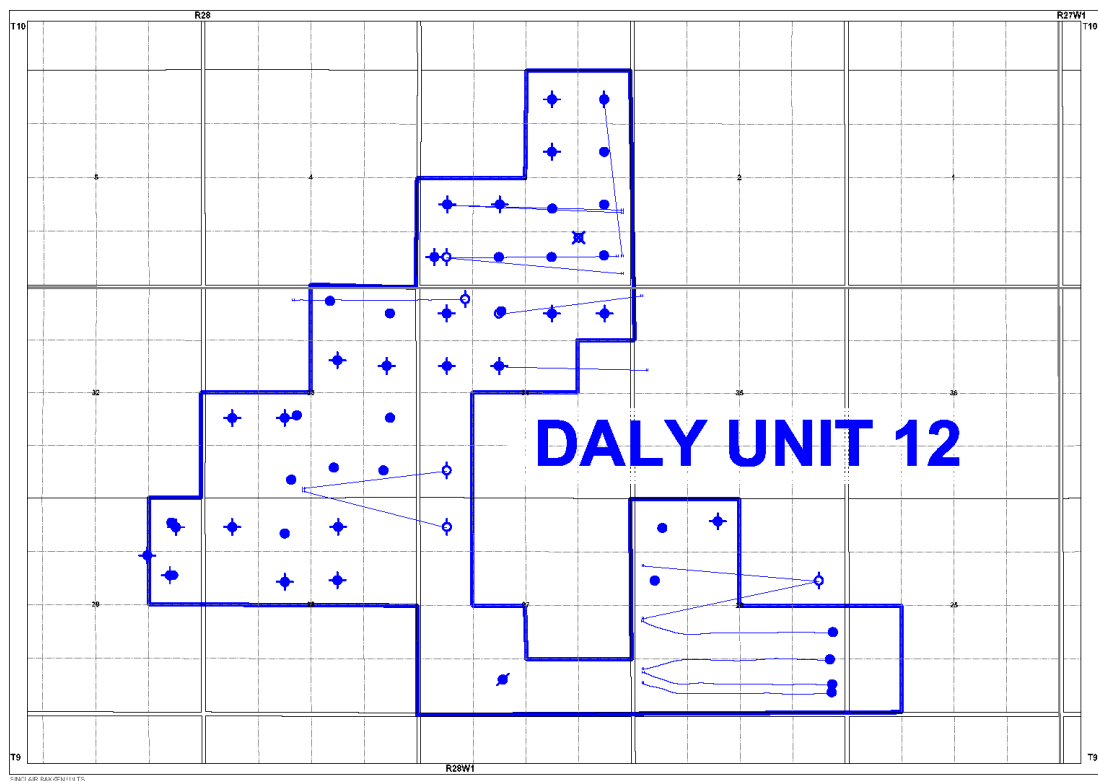
Table of Contents

INTRODUCTION.....	3
DISCUSSION.....	3
Production History	3
Waterflood History.....	5
Waterflood EOR Operating Strategy and Performance	6
Water Source and Quality	6
Injection Wellhead Pressures	6
Reservoir Pressure	6
Well Servicing	6
Waterflood Performance Discussion	6
List of Appendices.....	7
Appendix A: Well Name and Well Status	

INTRODUCTION

Daly Unit No. 12 Enhanced Oil Recovery (EOR) Waterflood Project was approved on January 1, 2016 with Tundra Oil and Gas (Tundra) as Operator. The EOR project area, outlined in blue in Figure 1, contains 45 vertical wells (18 producing, 27 abandoned/suspended/disposal) and 16 horizontal wells (4 producing, 12 drilled & cased) in 65 LSDs in Townships 9-10, Range 28W1. Well list and well status is available in Appendix A.

Figure 1: Daly Unit No. 12 Area Outline



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra submits the following 2016 Annual Progress Report for Daly Unit No. 12.

DISCUSSION

Production History

For the wells included in Daly Unit No. 12, production started in August 1952 with the 00/16-03-010-28W1/0 vertical well. Oil production peaked at 48.04 m³/d in March 2016. In 2016, the average production for the unit was 31.51 m³/d of oil and 21.35 m³/d of

water and the average WOR was 0.69 m³/m³. There is currently no water injection in Daly Unit No. 12. The rates and WOR are presented in Figure 2.

Figure 2: Daly Unit No. 12 Production/Injection Rates and WOR vs. Time

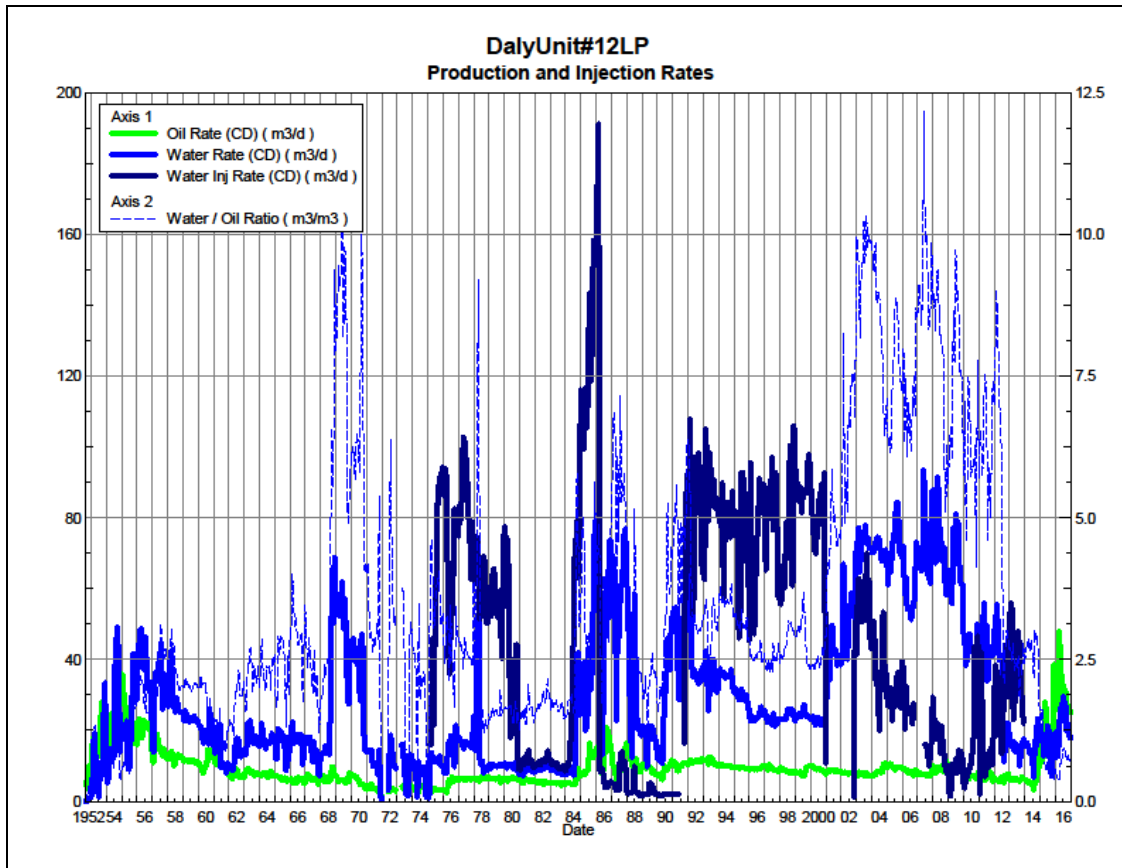
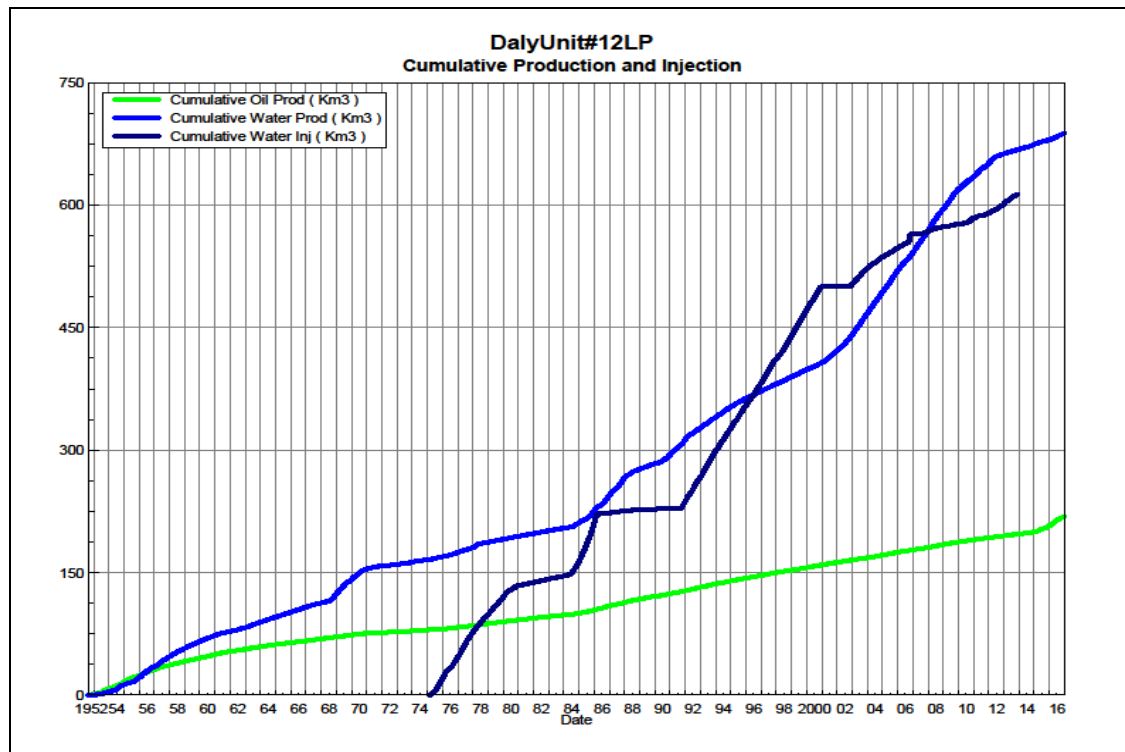


Figure 3 shows the cumulative production for Daly Unit No. 12 to the end of December 2016 as 219.0 e³m³ of oil and 687.9 e³m³ of water, representing a 2.1% recovery factor of the OOIP.

Figure 3: Daly Unit No. 12 Cumulative Oil, Water and Water Injected vs. Time



Waterflood History and Development Plan

Wells in Daly Unit No. 12 have been on 40 acre primary production since the early 1950's, coincident with primary developments in the offset Daly Unit Nos. 1 & 3. In the mid-1970's Chevron successfully implemented a pilot waterflood focused in the SE/4 of Sec 03-010-28W1, within the proposed Unit boundary. The pilot targeted the Lodgepole reservoir via an inverted 5-spot vertical pattern flood, whereby the 100/01-03-010-28W1 vertical was converted to injection to flood the offsetting 4 vertical producers. It appears the flood was successful in arresting decline rates and improving the overall recovery of the Lodgepole reservoir in this area.

Where there are existing undrilled DSU's in Daly Unit No. 12, Tundra plans to drill infill 40 acre verticals. Additional E-W horizontals will be drilled between existing rows of vertical wells, resulting in an effective 20 acre spacing over the Unit area. Every second horizontal will then be converted to water injection service after a period of production (expected 2-3 years after each well's first production). Plans are for the new future injection wells to be cemented liner horizontals, stimulated via multiple hydraulic fracture treatments to obtain suitable injection rates. This helps ensure optimum placement of each fracture stage to prevent, or minimize, the potential for out-of-zone fracture growth thereby limiting the potential for future out-of-zone injection.

In 2017, Tundra anticipates drilling 10 horizontal wells which will be closely monitored to determine future waterflood patterns. There are no immediate plans to convert wells in 2017/2018.

Any future revisions to the waterflood development or surveillance plan would be based on new production or performance response data, technical studies, or observed reservoir behavior and reserves recovery interpretations.

Waterflood EOR Operating Strategy and Performance

Water Source and Quality

The injection water for Ewart Unit No. 10 will be sourced from the 02/14-30-007-28W1 well (Mannville formation). The water is treated at the 04-01-008-29W1 filtration plant where it is filtered to 0.1 microns and has scale inhibitor and biocide added. The injection water is then distributed to the injectors through the dedicated infrastructure system.

Injection Wellhead Pressures

No wellhead injection pressure is available for Daly Unit No. 12.

Reservoir Pressure

Where practical, Tundra is committed to collecting pressure data from newly drilled wells. For Daly Unit No. 12, no reservoir pressure measurements were taken in 2016.

Well Servicing

No maintenance was required on the 61 wells in Daly Unit No. 12 in 2016.

Waterflood Performance Discussion

At the end of 2016, there is currently no water injection in Daly Unit No. 12, therefore, there is no waterflood analysis that can be done at this time.

List of Appendices

Appendix A: Well Name and Well Status

APPENDIX A

<i>UWI</i>	<i>Surface Hole Location</i>	<i>License Number</i>	<i>Type</i>	<i>Status</i>
102/01-26-009-28W1/0	102042600928W100	009647	Horizontal	Producing
103/01-26-009-28W1/0	102042600928W100	010303	Horizontal	Producing
104/01-26-009-28W1/0	104042600928W100	010427	Horizontal	Producing
102/08-26-009-28W1/0	102052600928W100	010477	Horizontal	Producing
103/09-26-009-28W1/0	103122600928W100	010639	Horizontal	Drilled & Cased
104/09-26-009-28W1/0	104052600928W100	010640	Horizontal	Drilled & Cased
100/12-26-009-28W1/0	100122600928W100	003795	Vertical	Producing
100/13-26-009-28W1/0	100132600928W100	003796	Vertical	Comingled
100/14-26-009-28W1/0	100142600928W100	003797	Vertical	Abandoned Zone
100/03-27-009-28W1/0	100032700928W100	003264	Vertical	Suspended
102/13-27-009-28W1/0	102033300928W100	010638	Horizontal	Drilled & Cased
100/10-28-009-28W1/0	100102800928W100	000928	Vertical	Abandoned
100/11-28-009-28W1/0	100112800928W100	000903	Vertical	Abandoned
100/13-28-009-28W1/0	100132800928W100	000589	Vertical	Abandoned
100/14-28-009-28W1/0	100142800928W100	003322	Vertical	Producing
100/15-28-009-28W1/0	100152800928W100	003654	Vertical	Abandoned
100/09-29-009-28W1/0	100092900928W100	000573	Vertical	Abandoned Zone
102/09-29-009-28W1/0	102092900928W100	003448	Vertical	Producing
102/10-29-009-28W1/0	102102900928W100	002318	Vertical	Abandoned
100/16-29-009-28W1/0	100162900928W100	000552	Vertical	Abandoned
102/16-29-009-28W1/0	102162900928W100	003412	Vertical	Producing
100/01-33-009-28W1/0	100013300928W100	005275	Vertical	Producing
100/02-33-009-28W1/0	100023300928W100	006725	Vertical	Comingled
100/03-33-009-28W1/0	100033300928W100	006400	Vertical	Producing
100/05-33-009-28W1/0	100053300928W100	000388	Vertical	Abandoned
100/06-33-009-28W1/0	100063300928W100	000398	Vertical	Abandoned
102/06-33-009-28W1/0	102063300928W100	006813	Vertical	Comingled
100/08-33-009-28W1/0	100083300928W100	005276	Vertical	Producing
100/09-33-009-28W1/0	100093300928W100	003653	Vertical	Abandoned
100/09-33-009-28W1/2	100093300928W102	005256	Vertical	Abandoned Zone
100/10-33-009-28W1/0	100103300928W100	003638	Vertical	Abandoned
100/15-33-009-28W1/0	100153300928W100	003572	Vertical	Producing
100/16-33-009-28W1/0	100163300928W100	000314	Vertical	Producing
102/04-34-009-28W1/0	102033300928W100	010637	Horizontal	Drilled & Cased
100/11-34-009-28W1/0	100113400928W100	003785	Vertical	Abandoned
102/11-34-009-28W1/0	102123500928W100	010557	Horizontal	Drilled & Cased
100/12-34-009-28W1/0	100123400928W100	003615	Vertical	Abandoned Zone
100/13-34-009-28W1/0	100133400928W100	000261	Vertical	Abandoned Zone
102/13-34-009-28W1/0	102143300928W100	010538	Horizontal	Drilled & Cased
100/14-34-009-28W1/0	100143400928W100	000362	Vertical	Producing
102/14-34-009-28W1/0	102133500928W100	010674	Horizontal	N/A
100/15-34-009-28W1/0	100153400928W100	000494	Vertical	Abandoned
100/16-34-009-28W1/0	100163400928W100	001071	Vertical	Abandoned
100/01-03-010-28W1/0	100010301028W100	002533	Vertical	Abandoned Disposal Well
102/01-03-010-28W1/0	102010301028W100	002586	Vertical	Producing
100/02-03-010-28W1/0	100020301028W100	000361	Vertical	Producing
100/03-03-010-28W1/0	100030301028W100	000302	Vertical	Producing
100/04-03-010-28W1/0	100040301028W100	000198	Vertical	Abandoned
102/04-03-010-28W1/0	102010301028W100	010615	Horizontal	Drilled & Cased

<i>UWI</i>	<i>Surface Hole Location</i>	<i>License Number</i>	<i>Type</i>	<i>Status</i>
103/04-03-010-28W1/0	103010301028W100	010616	Horizontal	Drilled & Cased
100/05-03-010-28W1/0	100050301028W100	000301	Vertical	Abandoned
102/05-03-010-28W1/0	102080301028W100	010618	Horizontal	Drilled & Cased
103/05-03-010-28W1/0	103080301028W100	010619	Horizontal	Drilled & Cased
100/06-03-010-28W1/0	100060301028W100	000277	Vertical	Abandoned
100/07-03-010-28W1/0	100070301028W100	000260	Vertical	Producing
100/08-03-010-28W1/0	100080301028W100	000352	Vertical	Producing
100/09-03-010-28W1/0	100090301028W100	000278	Vertical	Producing
100/10-03-010-28W1/0	100100301028W100	000190	Vertical	Abandoned
100/15-03-010-28W1/0	100150301028W100	000201	Vertical	Abandoned Zone
100/16-03-010-28W1/0	100160301028W100	000180	Vertical	Producing
102/16-03-010-28W1/0	102010301028W100	010617	Horizontal	Drilled & Cased