


EWART UNIT NO. 3  
Waterflood Progress Report 2020

Prepared for:  
Manitoba Industry, Economic Development and Mines  
Petroleum Branch

Prepared by:  
 **TUNDRA OIL & GAS**

Date: 2021-08-26

## Introduction

Ewart Unit No. 3 Enhance Oil Recovery (EOR) Waterflood Project was approved under Waterflood Order No. 30 effective August 1, 2013 with Tundra Oil and Gas (Tundra) as Operator. The Unit area contains wells in 16 LSDs in Township 8 Range 28 W1. The Unit contains 7 wells. 5 producers, 2 injectors, and 0 abandoned/suspended/other.

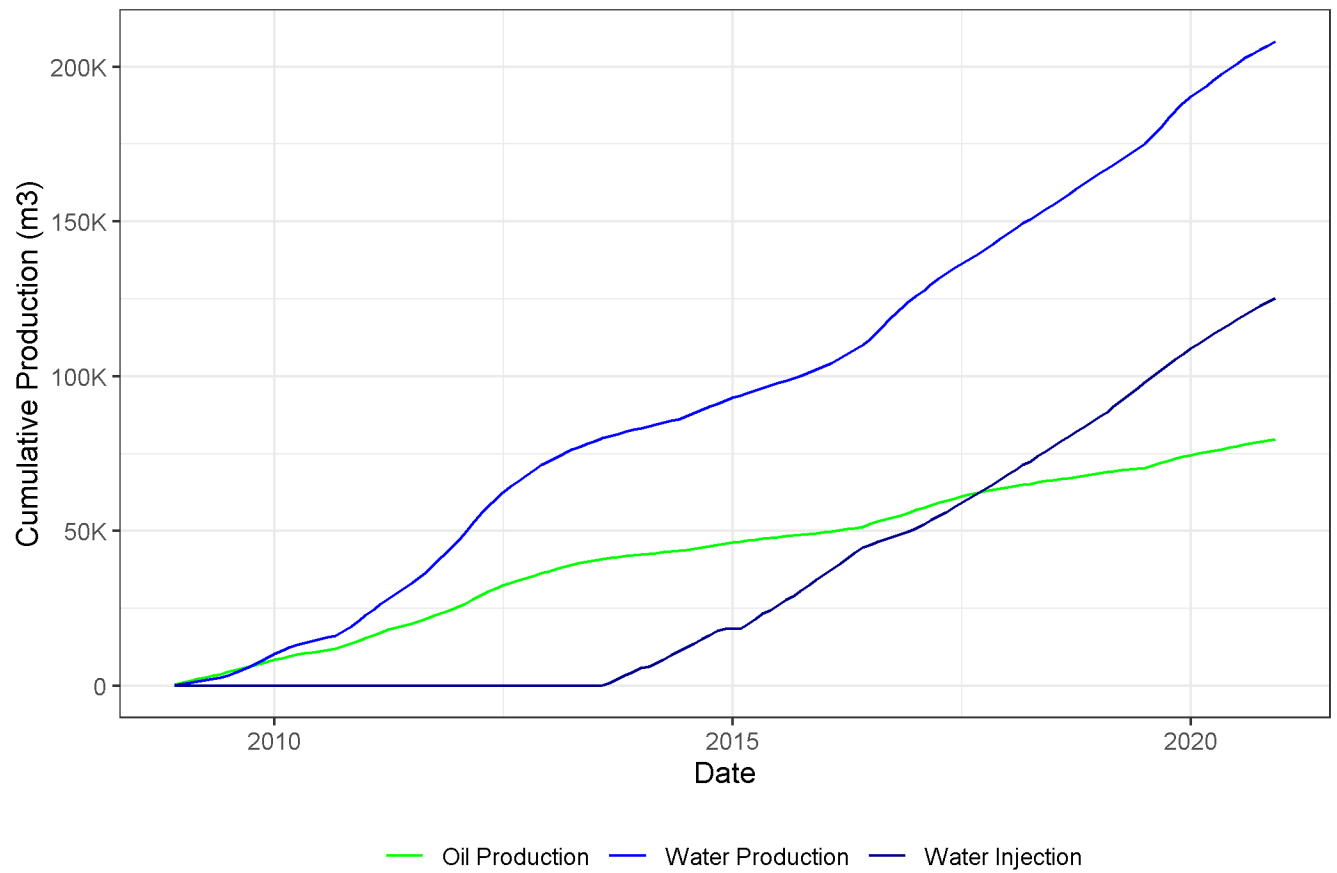
## Monthly oil and water production rates, injection rate, GOR and WOR

MONTH	Cal Day Oil m3/d	Cal Day Water m3/d	Cal Day Injection m3/d	WOR	GOR
JAN 2020	17.02	65.20	56.18	3.83	0
FEB 2020	15.46	59.38	54.57	3.84	0
MAR 2020	14.33	53.48	53.17	3.73	0
APR 2020	15.30	66.65	51.46	4.36	0
MAY 2020	16.28	62.53	49.23	3.84	0
JUN 2020	16.91	57.51	48.48	3.40	0
JUL 2020	15.22	54.56	49.50	3.58	0
AUG 2020	15.70	54.46	48.12	3.47	0
SEP 2020	16.16	47.00	47.25	2.91	0
OCT 2020	15.63	45.02	46.06	2.88	0
NOV 2020	14.27	41.74	44.40	2.93	0
DEC 2020	14.25	42.31	42.55	2.97	0
Average	15.54	54.15	49.25		

## Year summary of produced oil, gas, water and fluid injected

Categories	m3
Oil Production	5,690
Water Production	19,813
Gas Production	0
Water Injection	18,019
Cumulative Oil	79,785
Cumulative Water	208,124
Cumulative Injection	125,299

Cumulative Production and Injection



## Monthly Wellhead Pressure

All readings are in kPa

UWI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average
102.12-29-008-28W1.00	5,936	5,872	5,938	5,897	5,603	5,818	5,905	5,934	5,833	5,931	5,967	5,925	5,880
103.12-29-008-28W1.00	6,508	6,364	6,493	6,470	6,122	6,330	6,481	6,550	6,501	6,520	6,510	6,469	6,443

## Monthly Injected Volumes

All Volumes are in m3

UWI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
102.12-29-008-28W1.00	894	822	845	784	791	747	783	755	713	709	658	654	9,155
103.12-29-008-28W1.00	848	760	803	760	735	708	752	737	705	719	674	665	8,866
Grand Total	1,742	1,582	1,648	1,544	1,526	1,455	1,535	1,492	1,418	1,428	1,332	1,319	18,021

## Voidage

All Volumes are in m3 Oil Formation Volume Factor (Rm3/Sm3) = 1.071

MONTH	Oil	Water	Injection	Cumulative Oil	Cumulative Water	Cumulative Injection	VRR	Cumulative VRR
JAN 2020	528	2,021	1,742	74,617	190,328	109,023	0.674	0.403
FEB 2020	448	1,722	1,582	75,065	192,050	110,605	0.719	0.406
MAR 2020	444	1,658	1,648	75,509	193,708	112,253	0.772	0.409
APR 2020	459	2,000	1,544	75,968	195,708	113,797	0.620	0.411
MAY 2020	505	1,939	1,526	76,473	197,647	115,323	0.615	0.413
JUN 2020	507	1,725	1,454	76,980	199,372	116,777	0.641	0.414
JUL 2020	472	1,692	1,534	77,452	201,064	118,311	0.698	0.417
AUG 2020	487	1,688	1,492	77,939	202,752	119,803	0.675	0.419
SEP 2020	485	1,410	1,418	78,424	204,162	121,221	0.735	0.421
OCT 2020	485	1,396	1,428	78,909	205,558	122,649	0.746	0.423
NOV 2020	428	1,252	1,332	79,337	206,810	123,981	0.779	0.425
DEC 2020	442	1,311	1,319	79,779	208,121	125,300	0.739	0.427

## Workovers

UWI	Date	Description
100.12-29-008-28W1.00	2020-12-14	Rigless Acid Stimulation

## Well List

UWI	Type	Status
100.04-29-008-28W1.00	Horizontal	Producing
102.05-29-008-28W1.00	Horizontal	Producing
100.12-29-008-28W1.00	Horizontal	Producing
102.12-29-008-28W1.00	Horizontal	Injection
103.12-29-008-28W1.00	Horizontal	Injection
100.13-29-008-28W1.00	Horizontal	Producing
104.12-07-009-29W1.00	Horizontal	Producing