

NORTH PIERSON UNIT NO. 2

Waterflood Progress Report 2020

Prepared for:

Manitoba Industry, Economic Development and Mines

Petroleum Branch

Prepared by:



TUNDRA OIL & GAS

Date: 2021-08-26

## Introduction

North Pierson Unit No. 2 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Waterflood Order No. 33, effective June 1, 2014 with Legacy Oil and Gas Inc. as Operator. In 2019, Tundra Oil and Gas Limited acquired the unit and became operator. The EOR project area, contains wells in the S/2 Section 8 Township 2, Range 28W1. The Unit contains 4 wells. 3 producers, 1 injectors, and 0 abandoned/suspended/other.

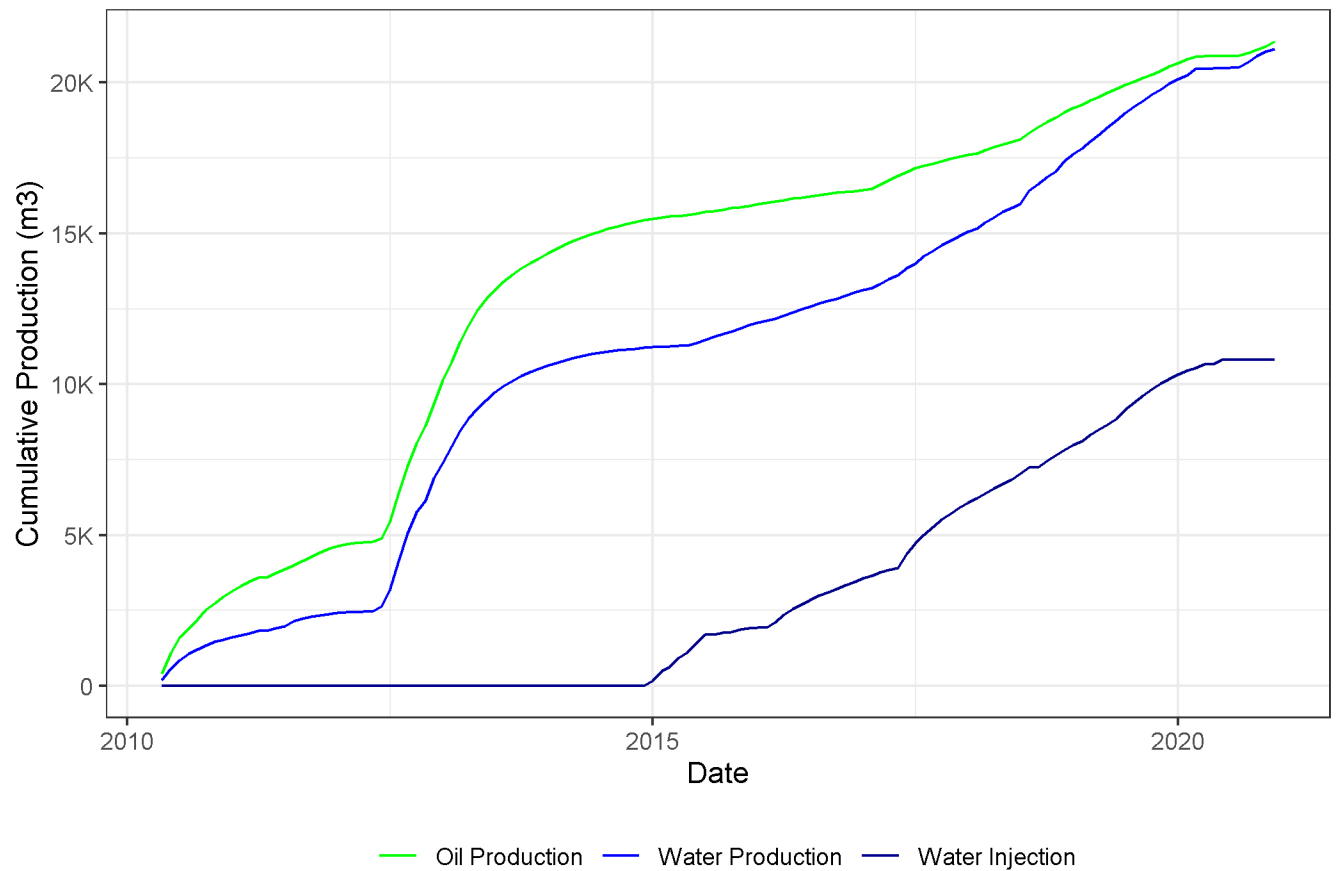
## Monthly oil and water production rates, injection rate, GOR and WOR

MONTH	Cal Day Oil m3/d	Cal Day Water m3/d	Cal Day Injection m3/d	WOR	GOR
JAN 2020	3.84	4.59	4.87	1.20	0
FEB 2020	3.82	4.76	3.93	1.25	0
MAR 2020	3.32	6.64	2.99	2.00	0
APR 2020	0.20	0.43	4.36	2.15	0
MAY 2020	0.15	0.35	0.00	2.33	0
JUN 2020	0.09	0.21	5.00	2.33	0
AUG 2020	0.47	0.95	0.00	2.02	0
SEP 2020	2.93	6.08	0.00	2.08	0
OCT 2020	3.30	5.92	0.00	1.79	0
NOV 2020	4.08	4.95	0.00	1.21	0
DEC 2020	4.90	2.93	0.00	0.60	0
Average	2.46	3.44	1.92		

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

Categories	m3
Oil Production	825
Water Production	1,150
Gas Production	0
Water Injection	638
Cumulative Oil	21,360
Cumulative Water	21,115
Cumulative Injection	10,815

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
102.01-08-002-28W1.00	3,244	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250	3,250

## Monthly Injected Volumes

All Volumes are in m3

UWI	JAN	FEB	MAR	APR	JUN	Total
102.01-08-002-28W1.00	151	114	93	131	150	639
Grand Total	151	114	93	131	150	639

## Voidage

All Volumes are in m3      Oil Formation Volume Factor (Rm3/Sm3) = 1.24								
MONTH	Oil	Water	Injection	Cumulative Oil	Cumulative Water	Cumulative Injection	VRR	Cumulative VRR
JAN 2020	119	142	151	20,650	20,103	10,326	0.521	0.226
FEB 2020	111	138	114	20,761	20,241	10,440	0.414	0.227
MAR 2020	103	206	93	20,864	20,447	10,533	0.279	0.227
APR 2020	6	13	131	20,870	20,460	10,664	6.409	0.230
MAY 2020	5	11	0	20,875	20,471	10,664	0.000	0.230
JUN 2020	3	6	150	20,878	20,477	10,814	15.432	0.233
AUG 2020	15	29	0	20,893	20,506	10,814	0.000	0.233
SEP 2020	88	183	0	20,981	20,689	10,814	0.000	0.232
OCT 2020	102	184	0	21,083	20,873	10,814	0.000	0.230
NOV 2020	122	148	0	21,205	21,021	10,814	0.000	0.229
DEC 2020	152	91	0	21,357	21,112	10,814	0.000	0.227

## Workovers

UWI	Date	Description
100.01-08-002-28W1.00	2020-10-28	Rigless Acid Stimulation

## Well List

UWI	Type	Status
100.01-08-002-28W1.00	Horizontal	Producing
102.01-08-002-28W1.00	Horizontal	Injection
100.08-08-002-28W1.00	Horizontal	Producing
102.08-08-002-28W1.00	Horizontal	Producing