

WASKADA UNIT NO. 8 - PM 58

Waterflood Progress Report 2020

Prepared for:

Manitoba Industry, Economic Development and Mines

Petroleum Branch

Prepared by:



TUNDRA OIL & GAS

Date: 2021-08-26

Introduction

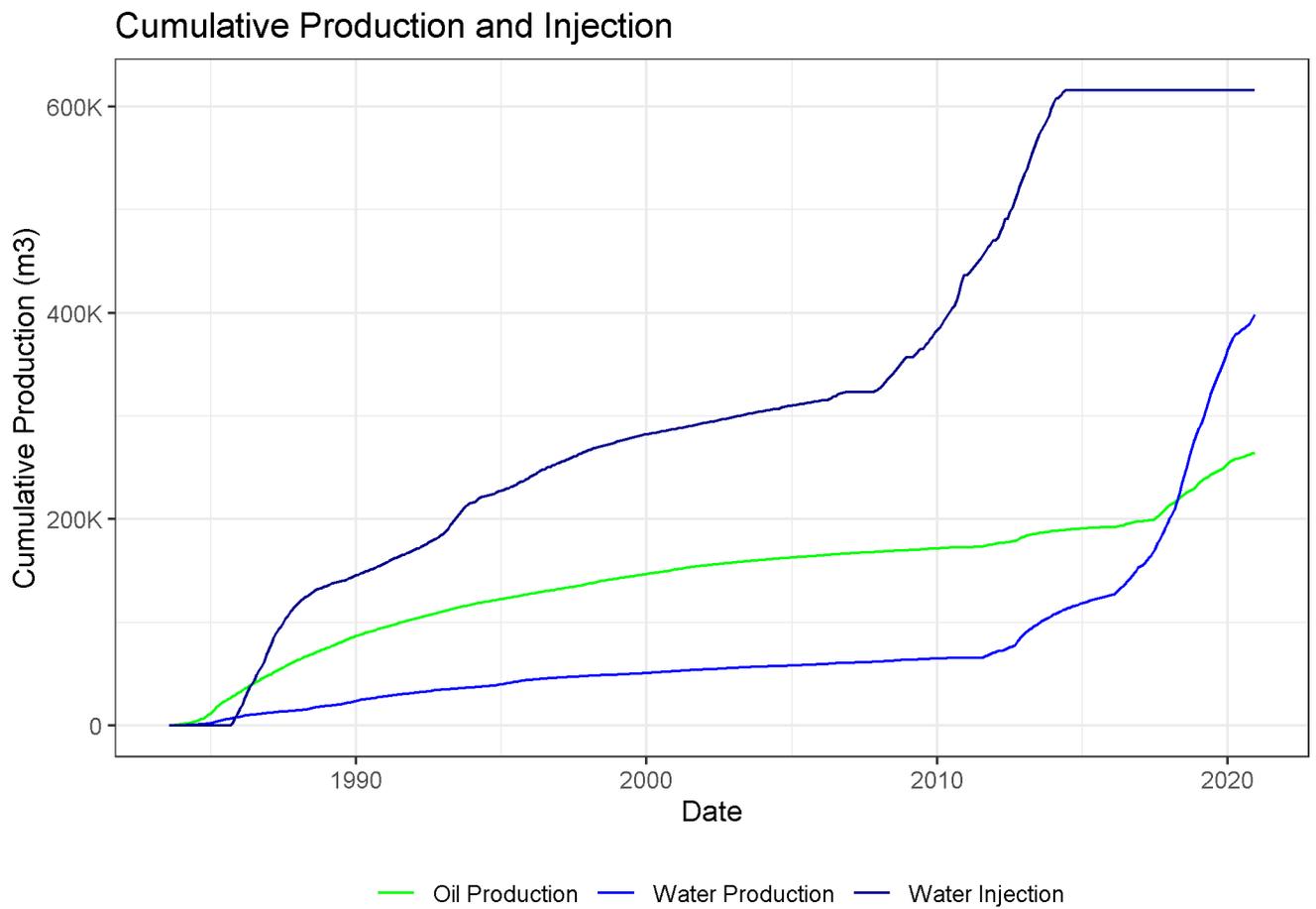
Waskada Unit No. 8 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Board Order No. PM 58 effective October 1985. The Unit area contains wells in 20 LSDs in Township 1, Range 25 W1. The Unit contains 39 wells. 18 producers, 0 injectors, and 21 abandoned/suspended/other.

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	67.39	198.75	0	2.95	0
FEB 2020	67.78	195.77	0	2.89	0
MAR 2020	49.21	170.72	0	3.47	0
APR 2020	40.75	129.99	0	3.19	0
MAY 2020	23.82	48.96	0	2.06	0
JUN 2020	26.00	59.14	0	2.27	0
JUL 2020	16.85	43.93	0	2.61	0
AUG 2020	21.30	53.82	0	2.53	0
SEP 2020	26.31	67.15	0	2.55	0
OCT 2020	25.97	66.54	0	2.56	0
NOV 2020	34.26	159.29	0	4.65	0
DEC 2020	34.78	134.39	0	3.86	0
Average	36.20	110.70	0		

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

Categories	m3
Oil Production	13,203
Water Production	40,375
Gas Production	0
Water Injection	0
Cumulative Oil	264,812
Cumulative Water	398,342
Cumulative Injection	615,644



Monthly Wellhead Pressure

NO INJECTION

Monthly Injected Volumes

NO INJECTION

Voidage

All Volumes are in m3 Oil Formation Volume Factor (Rm3/Sm3) = 1.17

MONTH	Oil	Water Injection	Cumulative Oil	Cumulative Water	Cumulative Injection	VRR	Cumulative VRR	
JAN 2020	2,089	6,161	0	253,701	364,137	615,653	0	0.931
FEB 2020	1,965	5,678	0	255,666	369,815	615,653	0	0.920
MAR 2020	1,525	5,293	0	257,191	375,108	615,653	0	0.911
APR 2020	1,222	3,900	0	258,413	379,008	615,653	0	0.904
MAY 2020	738	1,517	0	259,151	380,525	615,653	0	0.900
JUN 2020	780	1,774	0	259,931	382,299	615,653	0	0.897
JUL 2020	523	1,362	0	260,454	383,661	615,653	0	0.894
AUG 2020	660	1,669	0	261,114	385,330	615,653	0	0.891
SEP 2020	789	2,014	0	261,903	387,344	615,653	0	0.887
OCT 2020	805	2,062	0	262,708	389,406	615,653	0	0.884
NOV 2020	1,028	4,779	0	263,736	394,185	615,653	0	0.876
DEC 2020	1,078	4,166	0	264,814	398,351	615,653	0	0.869

Workovers

UWI	Date	Description
102.03-08-002-25W1.00	2020-11-16	Rigless Acid Stimulation
102.08-07-002-25W1.00	2020-11-12	Rigless Acid Stimulation
102.14-08-002-25W1.00	2020-11-14	Rigless Acid Stimulation
102.16-07-002-25W1.00	2020-12-07	Rigless Acid Stimulation
103.03-08-002-25W1.00	2020-11-18	Rigless Acid Stimulation
103.09-07-002-25W1.00	2020-10-23	Rigless Acid Stimulation
103.11-08-002-25W1.00	2020-10-23	Rigless Acid Stimulation

Well List

UWI	Type	Status
100.01-07-002-25W1.00	Vertical	Abandoned
102.01-07-002-25W1.00	Horizontal	Producing
103.01-07-002-25W1.00	Horizontal	Producing
100.08-07-002-25W1.00	Vertical	Abandoned Zone
102.08-07-002-25W1.00	Horizontal	Producing
103.08-07-002-25W1.00	Horizontal	Producing
100.09-07-002-25W1.00	Vertical	Abandoned Zone
102.09-07-002-25W1.00	Horizontal	Producing
103.09-07-002-25W1.00	Horizontal	Producing
100.16-07-002-25W1.00	Vertical	Abandoned
102.16-07-002-25W1.00	Horizontal	Producing
103.16-07-002-25W1.00	Horizontal	Producing
100.01-08-002-25W1.00	Vertical	Abandoned
102.01-08-002-25W1.00	Horizontal	Producing
103.01-08-002-25W1.00	Horizontal	Producing
100.02-08-002-25W1.00	Vertical	Abandoned
100.03-08-002-25W1.02	Vertical	Producing
102.03-08-002-25W1.00	Horizontal	Producing
103.03-08-002-25W1.00	Horizontal	Producing
100.04-08-002-25W1.00	Vertical	Abandoned Zone
100.05-08-002-25W1.00	Vertical	Abandoned
100.06-08-002-25W1.00	Vertical	Abandoned Zone
100.07-08-002-25W1.00	Vertical	Abandoned
100.08-08-002-25W1.02	Vertical	Abandoned Zone
102.08-08-002-25W1.00	Horizontal	Producing
103.08-08-002-25W1.00	Horizontal	Producing
100.09-08-002-25W1.00	Vertical	Abandoned
100.10-08-002-25W1.00	Vertical	Abandoned
100.11-08-002-25W1.00	Vertical	Producing
102.11-08-002-25W1.00	Horizontal	Producing
103.11-08-002-25W1.00	Horizontal	Producing
1A0.11-08-002-25W1.00	Vertical	Abandoned Zone
100.12-08-002-25W1.00	Vertical	Abandoned
100.13-08-002-25W1.00	Vertical	Abandoned
100.14-08-002-25W1.00	Vertical	Producing
102.14-08-002-25W1.00	Horizontal	Producing
103.14-08-002-25W1.00	Horizontal	Producing
100.15-08-002-25W1.00	Vertical	Injection
100.16-08-002-25W1.00	Vertical	Producing