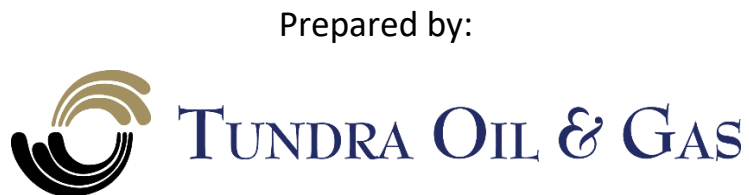


EAST MANSON UNIT NO. 8
Waterflood Progress Report 2020

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



Date: 2021-08-26

Introduction

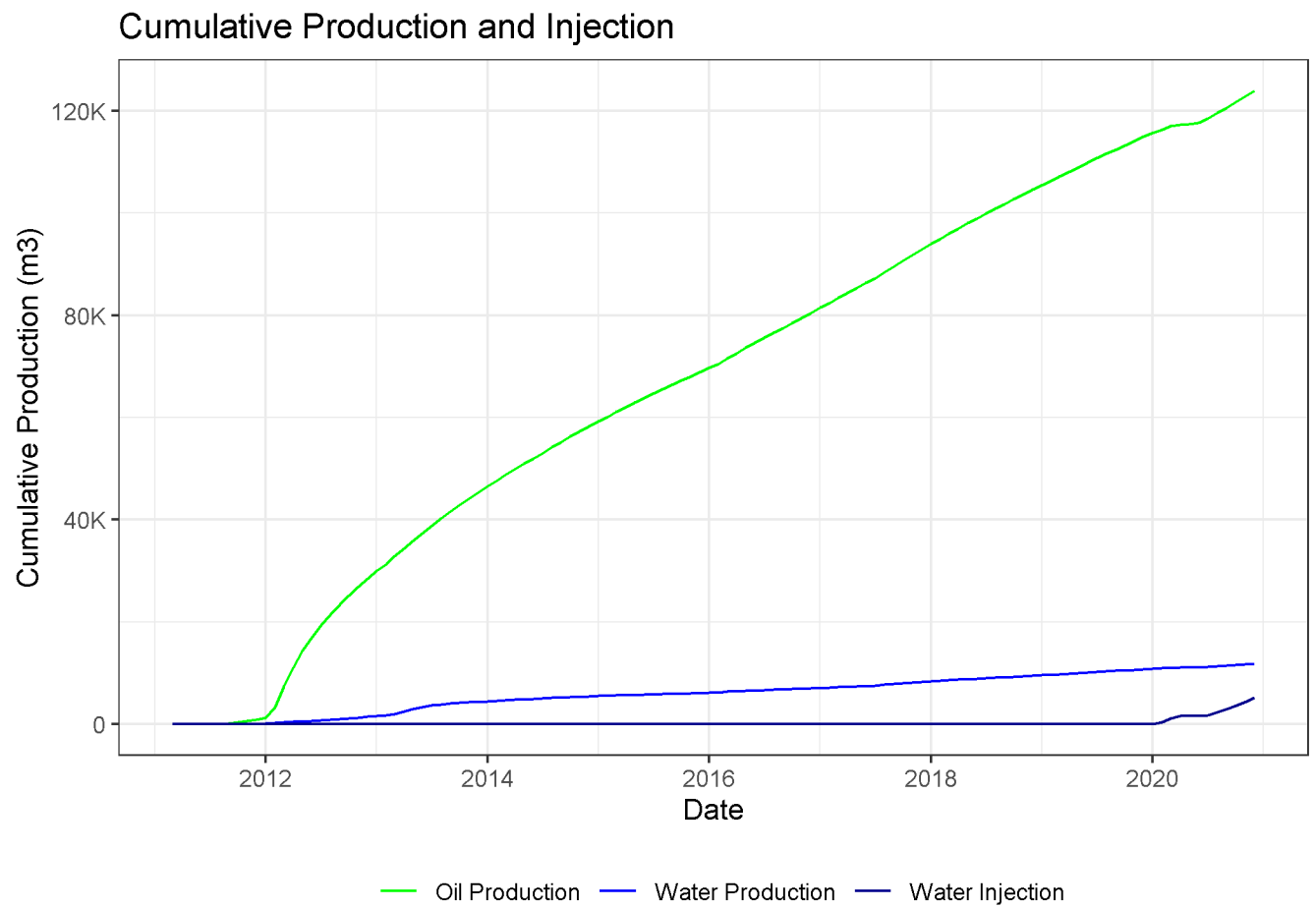
East Manson Unit No. 8 Enhanced Oil Recovery (EOR) Waterflood Project was approved November 1, 2017. The Unit area contains wells in Township 13, Ranges 28 W1 as shown in the figure below. The Unit contains 8 wells. 6 producers, 1 injectors, and 1 abandoned/suspended/other.

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	23.52	2.71	0.00	0.12	0
FEB 2020	22.68	3.10	12.91	0.14	0
MAR 2020	23.84	3.18	25.77	0.13	0
APR 2020	6.85	0.96	12.71	0.14	0
MAY 2020	6.60	1.28	0.00	0.19	0
JUN 2020	8.60	1.52	0.00	0.18	0
JUL 2020	26.15	4.24	6.07	0.16	0
AUG 2020	34.76	3.82	19.46	0.11	0
SEP 2020	35.28	3.81	19.94	0.11	0
OCT 2020	35.01	3.62	20.59	0.10	0
NOV 2020	35.38	3.64	24.92	0.10	0
DEC 2020	35.57	2.98	25.77	0.08	0
Average	24.52	2.90	14.01		

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

Categories	m3
Oil Production	8,990
Water Production	1,064
Gas Production	0
Water Injection	5,129
Cumulative Oil	123,907
Cumulative Water	11,824
Cumulative Injection	5,129



Monthly Wellhead Pressure

All readings are in kPa

UWI	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Average
102.08-10-013-28W1.00	161	-17	-64	-89	-89	-80	-66	-81	-75	337	941	80

Monthly Injected Volumes

All Volumes are in m3

UWI	FEB	MAR	APR	JUL	AUG	SEP	OCT	NOV	DEC	Total
102.08-10-013-28W1.00	374	799	381	188	603	598	638	748	799	5,128
Grand Total	374	799	381	188	603	598	638	748	799	5,128

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	729	84	0	115,642	10,846	0	0.000	0.000
FEB 2020	658	90	374	116,300	10,936	374	0.471	0.003
MAR 2020	739	99	799	117,039	11,035	1,173	0.897	0.009
APR 2020	206	29	381	117,245	11,064	1,554	1.526	0.011
MAY 2020	205	39	0	117,450	11,103	1,554	0.000	0.011
JUN 2020	258	45	0	117,708	11,148	1,554	0.000	0.011
JUL 2020	810	132	188	118,518	11,280	1,742	0.188	0.013
AUG 2020	1,077	119	603	119,595	11,399	2,345	0.474	0.017
SEP 2020	1,058	114	598	120,653	11,513	2,943	0.480	0.021
OCT 2020	1,086	112	638	121,739	11,625	3,581	0.500	0.025
NOV 2020	1,062	109	748	122,801	11,734	4,329	0.600	0.030
DEC 2020	1,103	92	799	123,904	11,826	5,128	0.627	0.035

Workovers

UWI	Date	Description
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Well List

UWI	Type	Status
100.10-09-013-28W1.00	Horizontal	Producing
102.10-09-013-28W1.00	Horizontal	Producing
100.15-09-013-28W1.00	Horizontal	Producing
102.15-09-013-28W1.00	Horizontal	Producing
100.01-10-013-28W1.00	Horizontal	Producing
100.08-10-013-28W1.00	Horizontal	Producing
102.08-10-013-28W1.00	Horizontal	Producing
100.11-10-013-28W1.00	Vertical	Producing