

SINCLAIR UNIT NO. 10

Waterflood Progress Report 2020

Prepared for:

Manitoba Industry, Economic Development and Mines

Petroleum Branch

Prepared by:



TUNDRA OIL & GAS

Date: 2021-08-26

Introduction

Sinclair Unit No. 10 was approved on August 1, 2013 with Tundra Oil and Gas (Tundra) as Operator. The Unit area contains wells in 48 LSDs in Township 8 Range 29 W1. The Unit contains 55 wells. 46 producers, 8 injectors, and 1 abandoned/suspended/other.

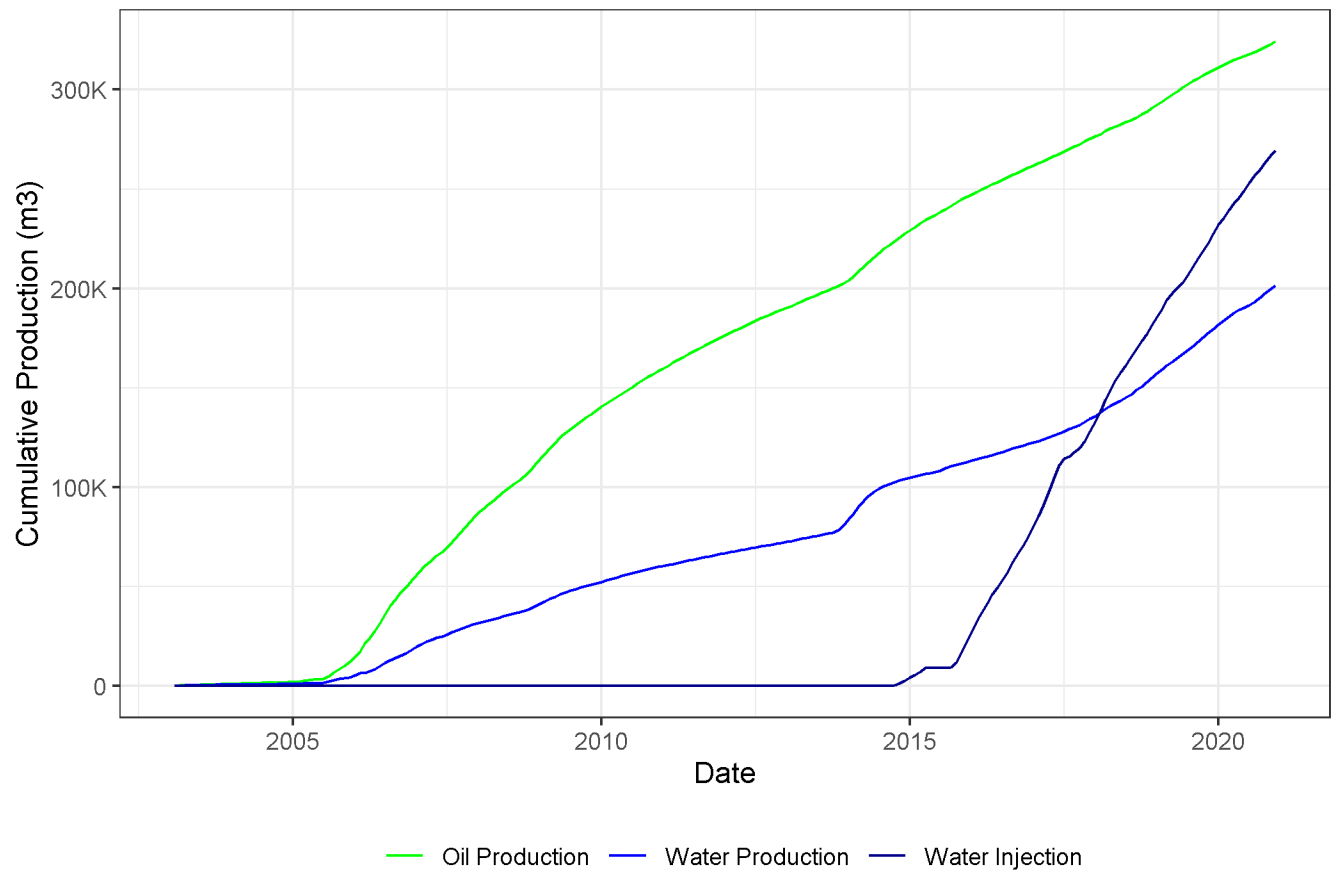
Monthly oil and water production rates, injection rate, GOR and WOR

MONTH	Cal Day Oil m3/d	Cal Day Water m3/d	Cal Day Injection m3/d	WOR	GOR
JAN 2020	43.31	67.37	137.94	1.56	0
FEB 2020	44.46	63.95	119.55	1.44	0
MAR 2020	40.67	63.48	120.10	1.56	0
APR 2020	42.18	67.96	115.13	1.61	0
MAY 2020	38.64	51.70	92.35	1.34	0
JUN 2020	26.87	35.41	123.47	1.32	0
JUL 2020	31.56	39.22	120.42	1.24	0
AUG 2020	35.64	50.30	117.74	1.41	0
SEP 2020	41.47	71.12	112.23	1.71	0
OCT 2020	40.91	73.45	107.65	1.80	0
NOV 2020	44.47	70.09	106.50	1.58	0
DEC 2020	44.87	60.64	96.03	1.35	0
Average	39.59	59.56	114.09		

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

Categories	m3
Oil Production	14,482
Water Production	21,783
Gas Production	0
Water Injection	41,746
Cumulative Oil	324,164
Cumulative Water	201,470
Cumulative Injection	269,462

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
100.03-18-008-29W1.00	5,721	5,819	4,512	4,480	4,482	4,482	4,482	4,582	4,978	5,012	4,974	4,972	4,875
100.04-06-008-29W1.00	6,022	6,205	6,272	6,242	6,413	6,103	6,217	6,336	6,109	2,282	1,771	1,771	5,145
102.02-18-008-29W1.00	5,970	5,972	5,972	5,976	5,977	5,977	5,978	6,006	6,182	6,196	6,266	6,345	6,068
102.03-18-008-29W1.00	4,478	4,484	4,480	4,488	4,489	4,489	4,489	4,586	4,947	4,970	4,977	4,978	4,655
102.05-06-008-29W1.00	6,352	6,334	6,276	6,233	6,191	6,116	6,228	6,341	6,454	6,507	6,556	6,565	6,346
102.05-07-008-29W1.00	6,350	6,333	6,274	6,232	6,185	6,109	6,225	6,330	6,439	6,494	6,555	5,930	6,288
102.12-06-008-29W1.00	6,340	6,321	6,265	6,224	6,195	6,104	6,217	6,329	6,443	6,493	6,550	6,565	6,337
102.13-06-008-29W1.00	6,334	6,319	6,264	6,225	6,184	6,104	6,220	6,330	6,445	6,489	6,552	6,564	6,336

Monthly Injected Volumes

All Volumes are in m3

UWI	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
100.03-18-008-29W1.00	618	312	350	363	340	395	395	431	449	425	395	399	4,872
100.04-06-008-29W1.00	402	340	350	301	324	427	389	260					2,793
102.02-18-008-29W1.00	790	693	710	656	506	662	652	640	628	623	606	642	7,808
102.03-18-008-29W1.00	374	318	323	302	264	303	298	326	340	317	293	291	3,749
102.05-06-008-29W1.00	404	351	385	346	264	380	396	393	387	383	381	384	4,454
102.05-07-008-29W1.00	694	608	682	641	525	669	697	700	674	674	633	371	7,568
102.12-06-008-29W1.00	440	377	412	381	280	398	421	421	418	430	415	413	4,806
102.13-06-008-29W1.00	554	468	511	464	360	470	485	479	470	485	472	477	5,695
Grand Total	4,276	3,467	3,723	3,454	2,863	3,704	3,733	3,650	3,366	3,337	3,195	2,977	41,745

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	1,342	2,088	4,276	311,022	181,776	231,996	1.213	0.451
FEB 2020	1,290	1,854	3,467	312,312	183,630	235,463	1.072	0.454
MAR 2020	1,261	1,968	3,723	313,573	185,598	239,186	1.122	0.459
APR 2020	1,265	2,039	3,454	314,838	187,637	242,640	1.018	0.462
MAY 2020	1,198	1,603	2,863	316,036	189,240	245,503	0.992	0.465
JUN 2020	806	1,062	3,704	316,842	190,302	249,207	1.924	0.471
JUL 2020	978	1,216	3,733	317,820	191,518	252,940	1.649	0.476
AUG 2020	1,104	1,560	3,650	318,924	193,078	256,590	1.331	0.480
SEP 2020	1,243	2,134	3,367	320,167	195,212	259,957	0.972	0.483
OCT 2020	1,268	2,276	3,337	321,435	197,488	263,294	0.918	0.486
NOV 2020	1,334	2,103	3,195	322,769	199,591	266,489	0.905	0.489
DEC 2020	1,391	1,880	2,977	324,160	201,471	269,466	0.883	0.491

Workovers

UWI	Date	Description
103.13-07-008-29W1.00	2020-12-19	Rigless Acid Stimulation

Well List

UWI	Type	Status
102.01-06-008-29W1.00	Vertical	Producing
100.02-06-008-29W1.00	Vertical	Producing
100.03-06-008-29W1.00	Vertical	Producing
100.04-06-008-29W1.00	Horizontal	Injection
100.05-06-008-29W1.00	Vertical	Producing
102.05-06-008-29W1.00	Horizontal	Injection
100.06-06-008-29W1.00	Vertical	Producing
100.07-06-008-29W1.00	Vertical	Producing
100.08-06-008-29W1.00	Vertical	Producing
100.09-06-008-29W1.00	Vertical	Producing
100.10-06-008-29W1.00	Vertical	Producing
100.11-06-008-29W1.00	Vertical	Producing
100.12-06-008-29W1.00	Vertical	Producing
102.12-06-008-29W1.00	Horizontal	Injection
100.13-06-008-29W1.00	Vertical	Producing
102.13-06-008-29W1.00	Horizontal	Injection
100.14-06-008-29W1.00	Vertical	Producing
100.15-06-008-29W1.00	Vertical	Producing
100.16-06-008-29W1.00	Vertical	Producing
102.16-06-008-29W1.00	Horizontal	Producing
100.01-07-008-29W1.00	Vertical	Producing
102.01-07-008-29W1.00	Horizontal	Producing
100.02-07-008-29W1.00	Vertical	Producing
102.03-07-008-29W1.00	Vertical	Producing
100.04-07-008-29W1.00	Vertical	Producing
102.04-07-008-29W1.00	Horizontal	Producing
100.05-07-008-29W1.00	Vertical	Producing
102.05-07-008-29W1.00	Horizontal	Injection
100.06-07-008-29W1.00	Vertical	Producing
100.07-07-008-29W1.00	Vertical	Producing
100.08-07-008-29W1.00	Vertical	Producing
100.09-07-008-29W1.00	Vertical	Producing
100.10-07-008-29W1.00	Vertical	Producing
100.11-07-008-29W1.00	Vertical	Producing
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100.13-07-008-29W1.00	Vertical	Producing
102.13-07-008-29W1.00	Horizontal	Producing
103.13-07-008-29W1.00	Horizontal	Producing
100.14-07-008-29W1.00	Vertical	Producing
100.15-07-008-29W1.00	Vertical	Producing
100.16-07-008-29W1.00	Vertical	Producing
100.01-18-008-29W1.00	Vertical	Producing
100.02-18-008-29W1.00	Vertical	Producing

UWI	Type	Status
102.02-18-008-29W1.00	Horizontal	Injection
100.03-18-008-29W1.00	Horizontal	Injection
102.03-18-008-29W1.00	Horizontal	Injection
100.07-18-008-29W1.00	Vertical	Producing
100.08-18-008-29W1.00	Vertical	Producing
100.09-18-008-29W1.00	Vertical	Producing
100.10-18-008-29W1.00	Vertical	Producing
100.13-18-008-29W1.00	Horizontal	Producing
100.14-18-008-29W1.00	Horizontal	Producing
100.15-18-008-29W1.00	Vertical	Producing
100.16-18-008-29W1.00	Vertical	Producing
102.16-18-008-29W1.00	Horizontal	Producing