

SURGE ENERGY INC.

# Waterflood Progress Report for 2012

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Waskada Unit No. 15

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## Background

The Waskada Unit No. 15 pressure maintenance project commenced water injection into the Lower Amaranth A Pool in accordance with Manitoba Energy and Mines Order No. PM 54 dated January 29, 1987. This order was then rescinded and replaced by PM 58 dated February 2, 1988.

In 2011, a waterflood progress report was submitted for March 1987 to December 2010. It was noted that no previous pressure maintenance reports for Waskada Unit No. 15 have been found in any files that Surge Energy received when acquiring working interest ownership and Unit Operator status in 2010.

The purpose of this document is to update and summarize the Waskada Unit 15 activity for 2012 and to lay out our proposed future development plans for 2013 and 2014.

## Waskada Unit No. 15

### Original Producers:

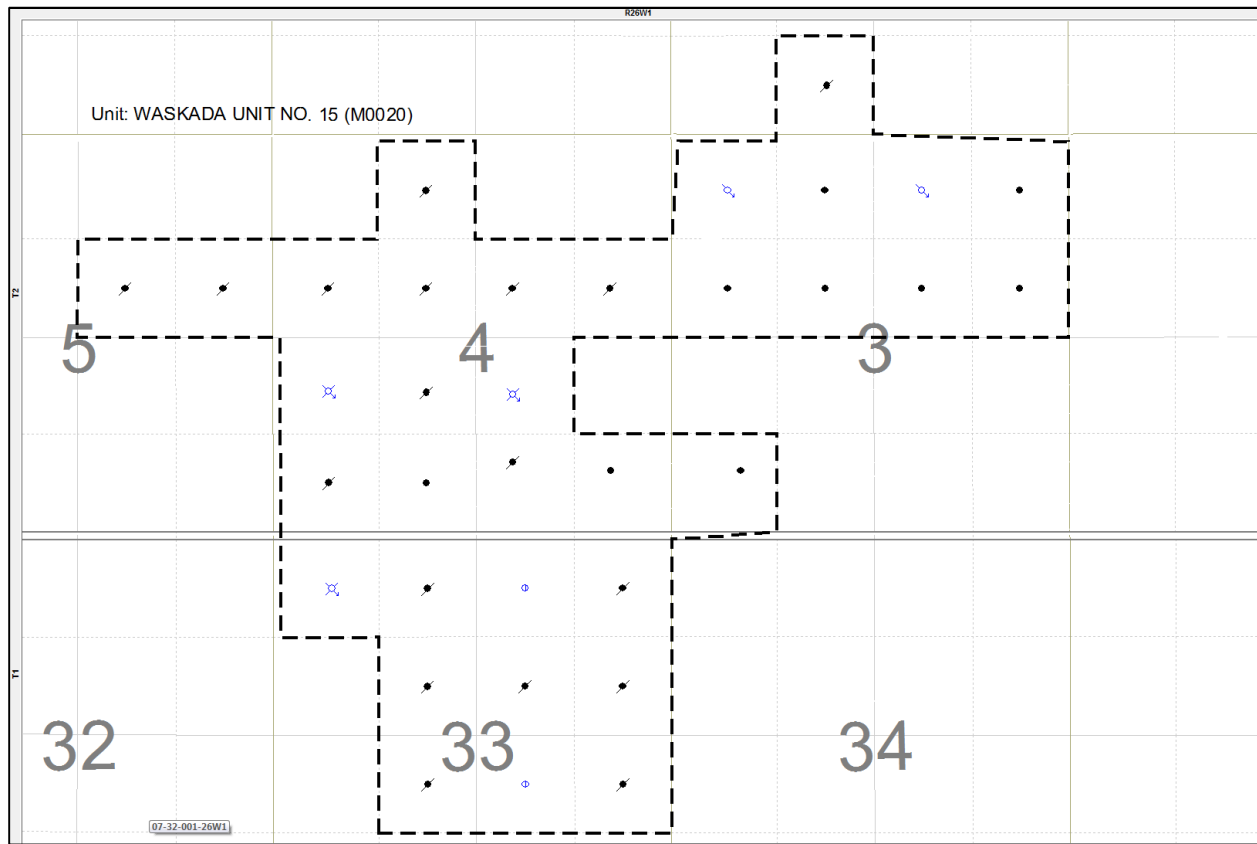


Figure 1: 34 Original Producers - 7 Converted to Injectors

Table 1: 34 Original Producers

34 Original Producers		
Sec 03, 05, and 10	Sec 04	Sec 33
100/04-03-002-26W1/02	100/01-04-002-26W1/00	100/06-33-001-26W1/00
100/09-03-002-26W1/00	100/02-04-002-26W1/00	100/07-33-001-26W1/00
100/10-03-002-26W1/00	100/03-04-002-26W1/00	100/08-33-001-26W1/00
100/11-03-002-26W1/00	100/04-04-002-26W1/00	100/09-33-001-26W1/00
100/12-03-002-26W1/00	100/05-04-002-26W1/00	100/10-33-001-26W1/00
100/13-03-002-26W1/00	102/06-04-002-26W1/00	100/11-33-001-26W1/00
100/14-03-002-26W1/00	100/07-04-002-26W1/00	100/13-33-001-26W1/02
100/15-03-002-26W1/00	100/09-04-002-26W1/00	100/14-33-001-26W1/00
100/16-03-002-26W1/00	100/10-04-002-26W1/00	100/15-33-001-26W1/00
100/09-05-002-26W1/00	100/11-04-002-26W1/00	100/16-33-001-26W1/00
100/10-05-002-26W1/00	100/12-04-002-26W1/00	
100/03-10-002-26W1/00	100/14-04-002-26W1/00	

Table 2: 7 of 34 Converted to Injectors

7 Converted to Injectors
100/07-33-001-26W1/00
100/13-33-001-26W1/02
100/15-33-001-26W1/00
100/13-03-002-26W1/00
100/15-03-002-26W1/00
100/05-04-002-26W1/00
100/07-04-002-26W1/00

Prior to Surge's acquisition and activity in Waskada during 2010, Unit No. 15 consisted of 34 producers, 7 of which were converted to injection wells with a nine spot injection pattern (Figure 1). Water injection commenced March 1987 and continued through to February 1998 when injection was halted. Scattered injection continued through 2000 to 2002, and then again from 2005 until 2010 when all unit injectors and producing wells were shut in.

### 2010 Activity:

Three horizontal wells were drilled Q4 2010, and came on production in December 2010 (Figure 2).

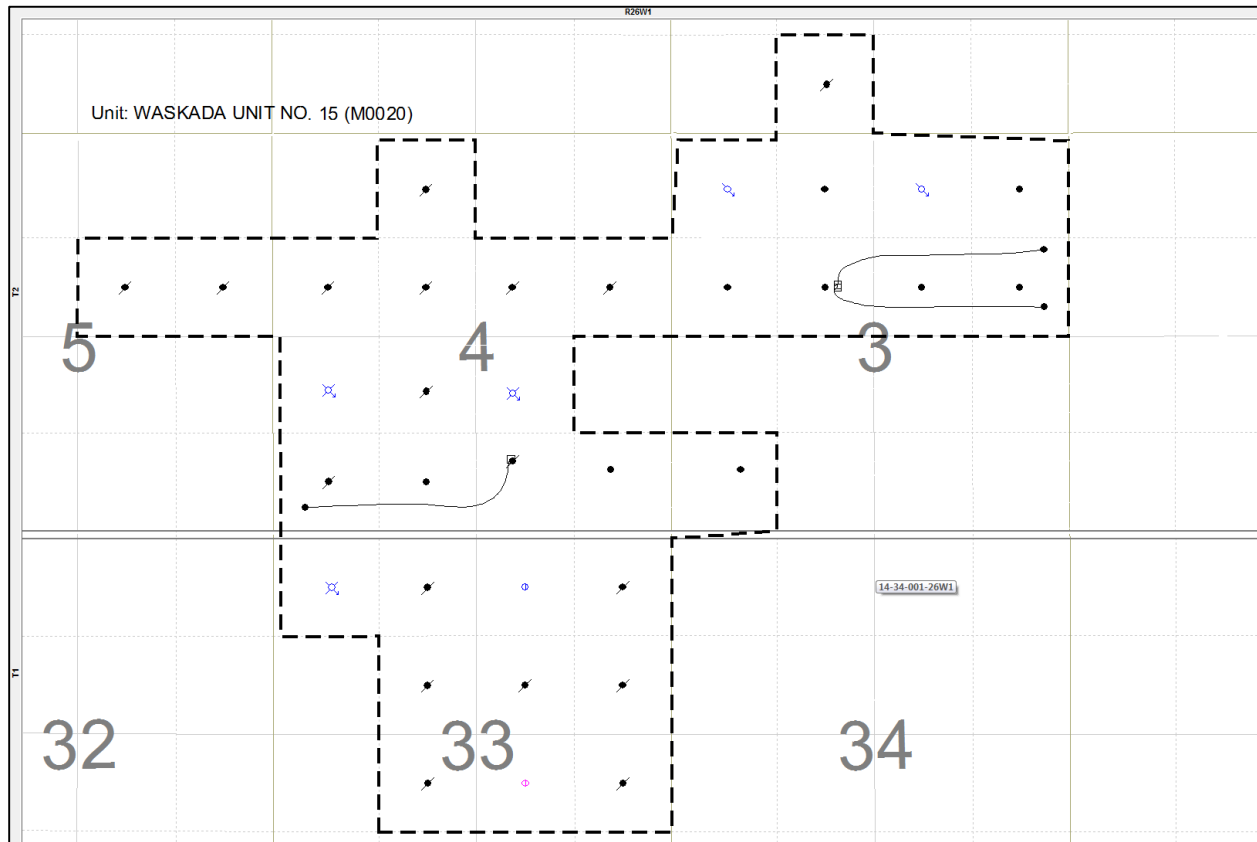


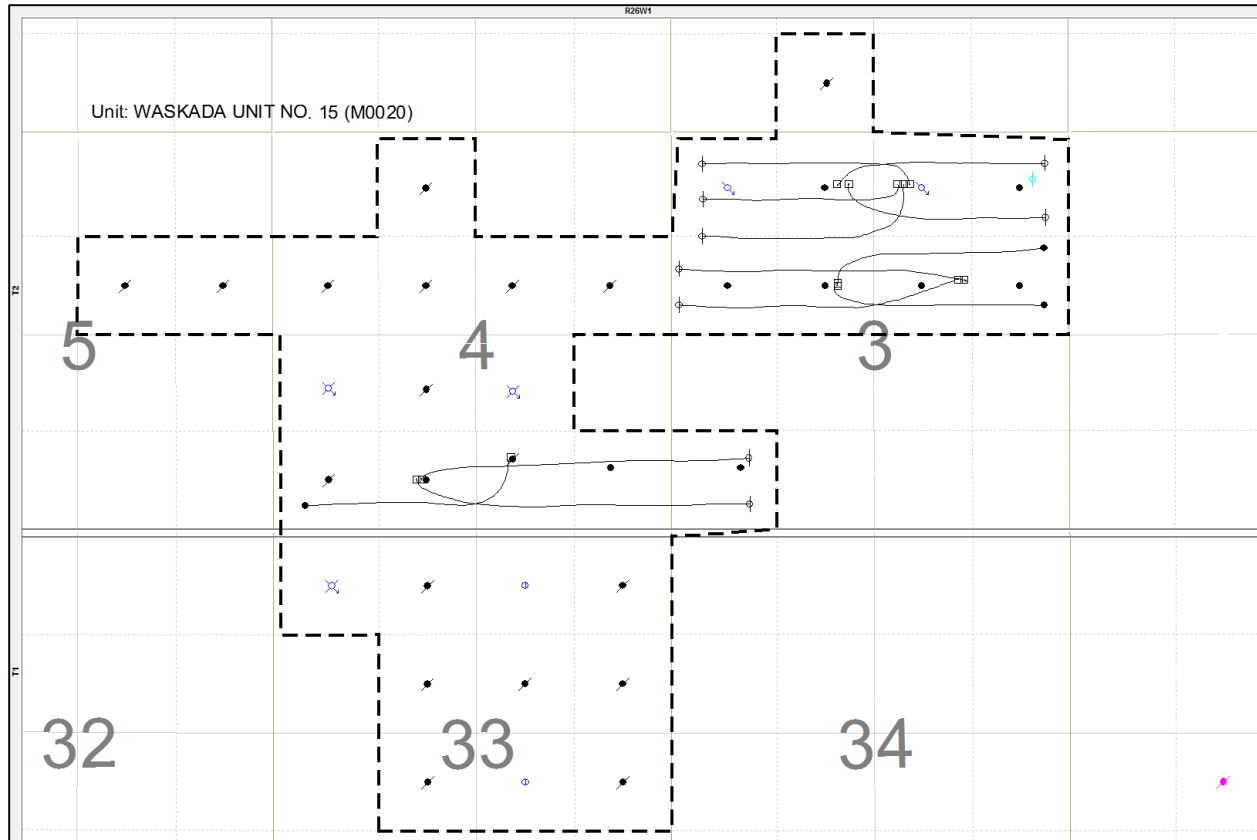
Figure 2: 3 Hz (2010 On Prod)

Table 3: 3 Hz (2010 On Prod)

3 Hz (2010 On Prod)
102/09-03-002-26W1/00
103/09-03-002-26W1/00
102/04-04-002-26W1/00

### 2011 Activity:

Nine more horizontal wells were drilled and came on production in 2011. Figure 3 shows the three horizontal wells from 2010 with the nine horizontal wells from 2011.



**Figure 3: 9 Hz (2011 On Prod) and 1 Vert Disposal**

The two horizontal wells in 16-03 came on production Q3 of 2011, and the other 7 horizontal wells came on production through Q4 of 2011. The planned battery facility at 16-03-002-26W1 received approval and was commissioned Q4 2011.

**Table 4: 2011 Activity**

<b>2011 Activity</b>	
<b>9 Hz (2011 On Prod)</b>	<b>1 Vert Disposal</b>
102/04-03-002-26W1/00	105/16-03-002-26W1/00
103/04-03-002-26W1/00	
102/12-03-002-26W1/00	
103/12-03-002-26W1/00	
104/12-03-002-26W1/00	
102/13-03-002-26W1/00	
103/13-03-002-26W1/00	
102/16-03-002-26W1/00	
103/16-03-002-26W1/00	

## 2012 Activity:

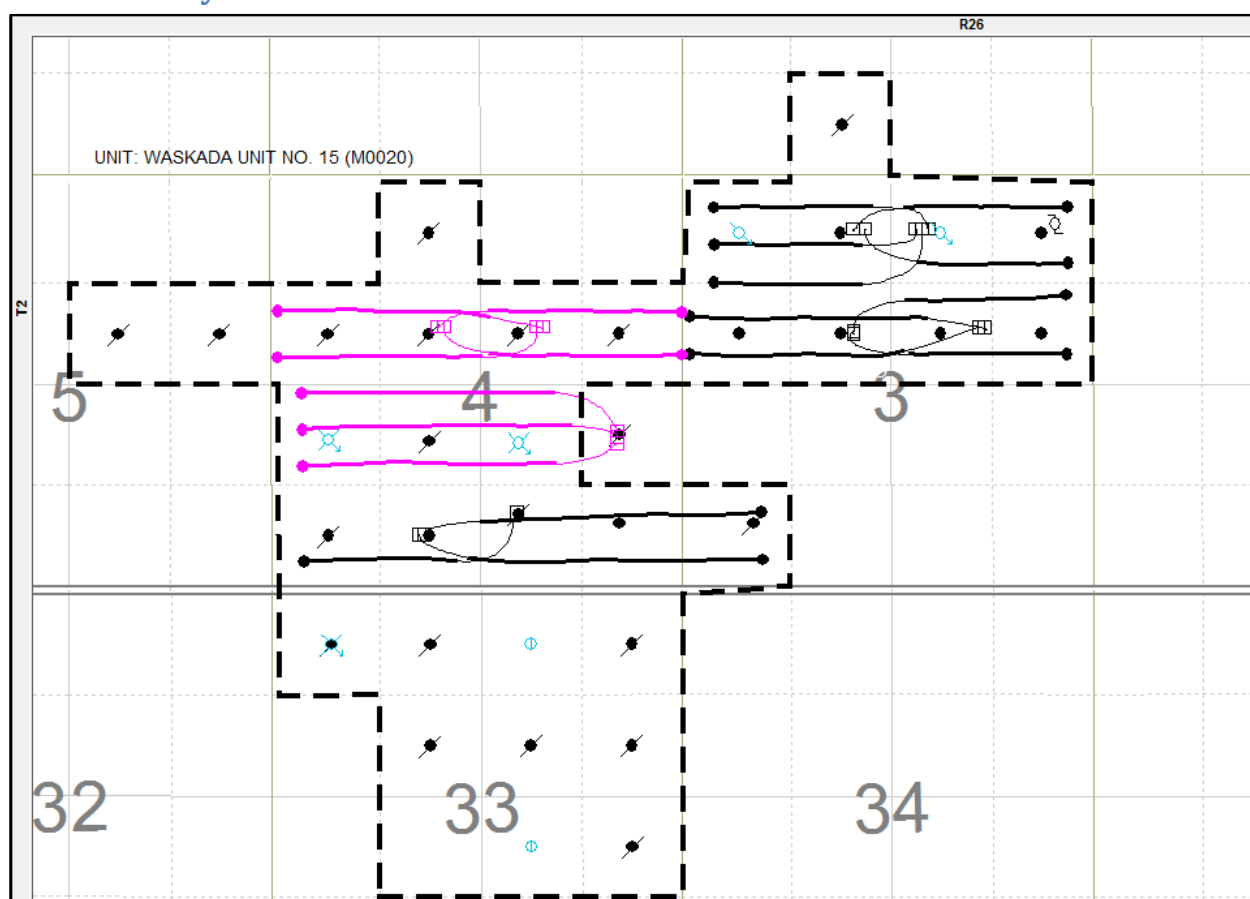


Figure 4: 7 Hz (2012 On Prod)

Figure 4 shows the same wells as figure 3 with the addition of the 7 horizontal wells (in pink) that came on in 2012 (Table 5). Four of these wells were rig released in Q4 of 2011 – the two wells in 09-04 and the two wells in 12-04. Current average pool production up until October 2012 is about 300 bbls/d of oil and 700 bbls/d of water.

Table 5: 2012 Activity

2012 Activity
7 Hz (2012 On Prod)
102/09-04-002-26W1
103/09-04-002-26W1
103/12-04-002-26W1
102/12-04-002-26W1
102/05-04-002-26W1
103/05-04-002-26W1
104/05-04-002-26W1



Surge has obtained pressures in the Lower Amaranth A Pool from wells: 105/16-03-002-002-26W1, 103/09-04-002-26W1 and 103/12-04-002-26W1 that range between 8,300 to 10,300 kPa. These pressures are at or near the original pool pressure of 8,650 kPa and well above the estimated bubble point pressure of 4,200 kPa. Surge believes these higher pressures may be due to regional aquifer expansion combined with the lower permeability and limited drainage of the pool itself.

### **2013 Activity:**

Surge plans to restart the injection of water into the Lower Amaranth A Pool through a small scale pilot or test using existing horizontal wells. The pilot is planned to start in Q1 of 2013 in section 3. The preliminary design is to convert 103/13-03-002-26W1/00 and 102/12-03-002-26W1/00 horizontal wells to water injector wells.

In Q1, Surge started field installation of the fiberglass water injection pipeline and did some facility modifications for water injection. Surge also received approval to convert the 103/13-03-002-26W1/00 and 102/12-03-002-26W1/00 into water injectors.

Surge's go forward plan for the rest of 2013 is to extend the waterflood to include 102/09-03-002-26W1/00 in Q3.

As the results from the waterflood come in, Surge will continue with some analytical reservoir work and more detailed modeling to support the water injection pilot and the economics for pool wide horizontal injection.

The horizontal water injection converts for 2013 are outlined in dark blue in figure 5.

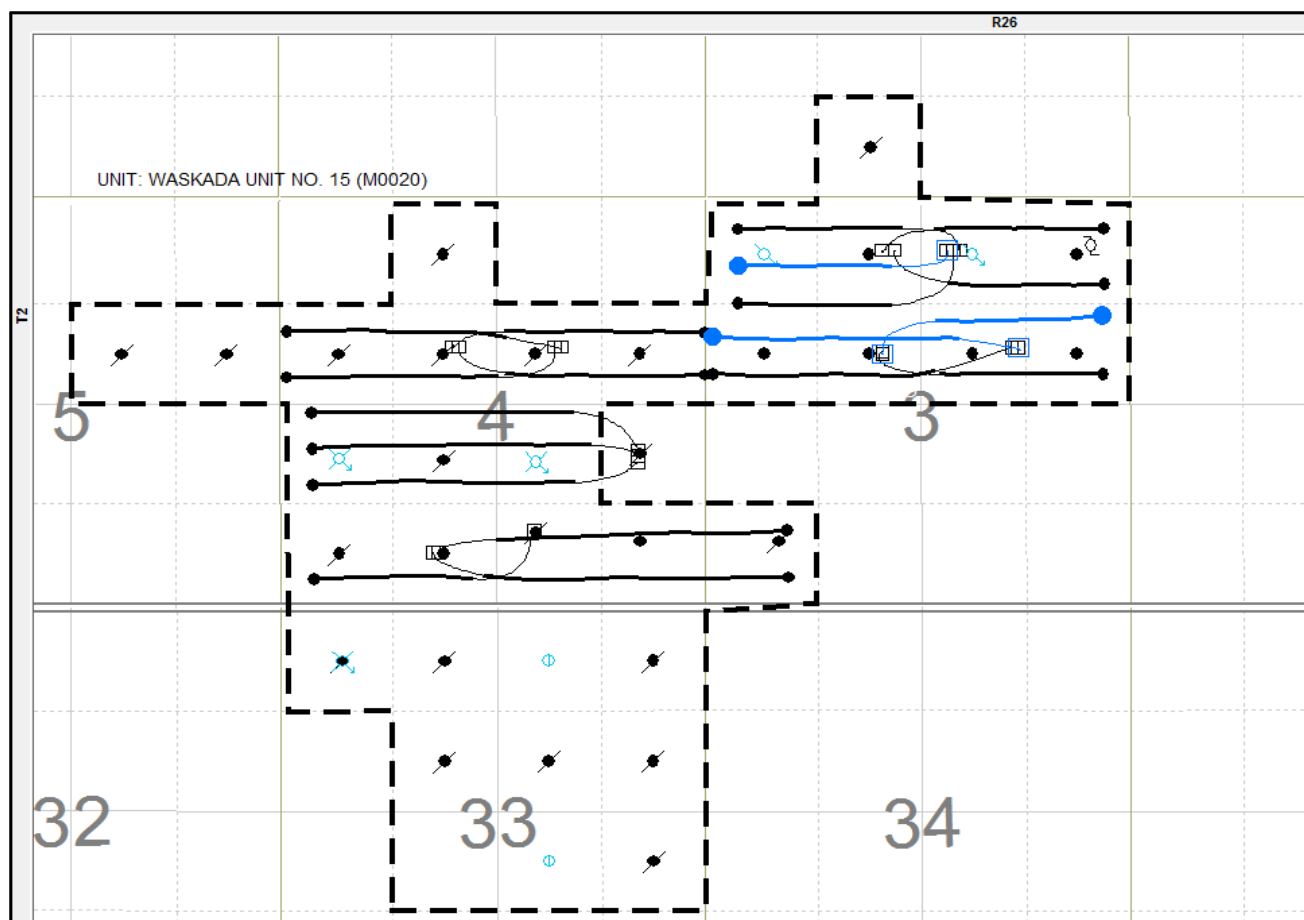


Figure 5: 2013 Activity

Table 6: 2013 Activity

2013 Activity	
3 Inj. Conversions	
103/13-03-002-26W1/00	
102/12-03-002-26W1/00	
102/09-03-002-26W1/00	

### Planned 2014 Activity:

In 2014, Surge plans to extend the waterflood to include section 4.

## Production

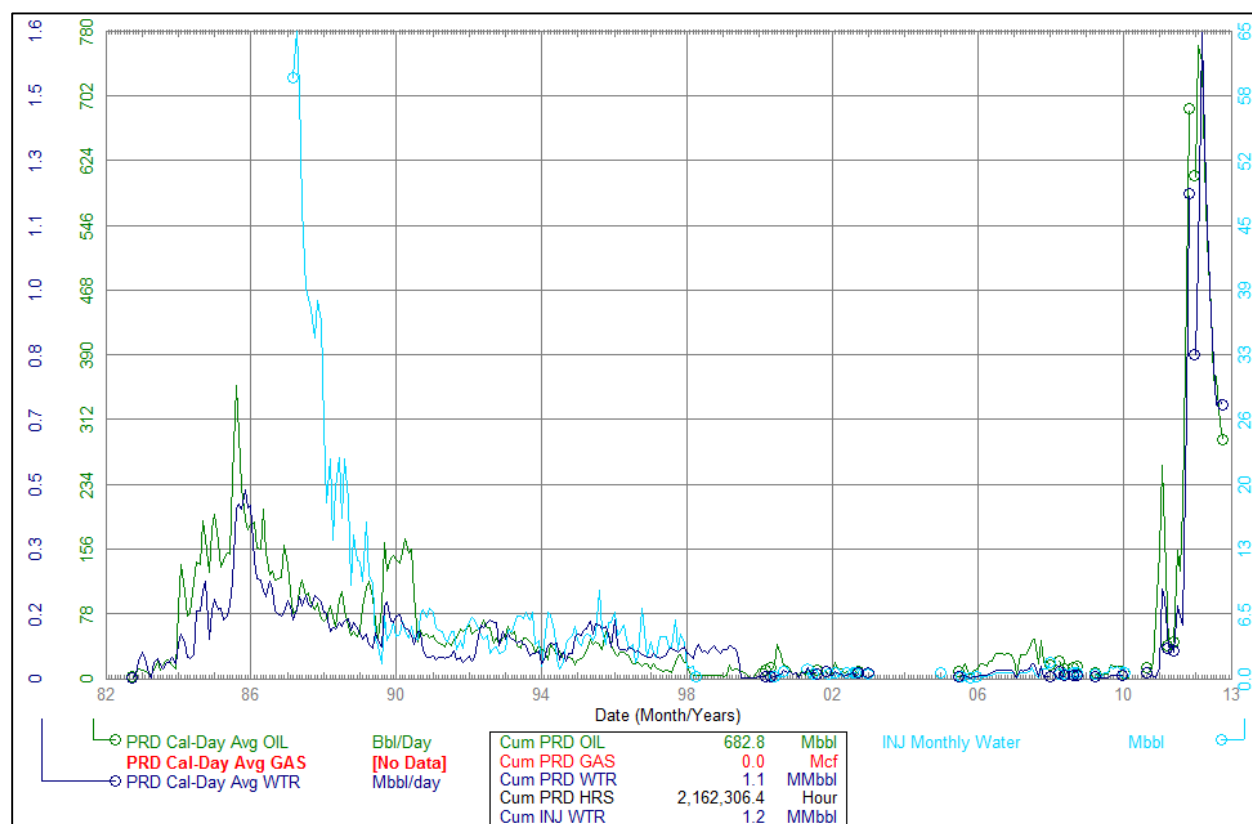


Figure 6: Waskada Unit 15 Production from October 1982 to October 2012

Figure 6 above shows Unit 15's group production up until October 2012, and table 7 below zooms in on the public production for 2012 only.

Table 7: Waskada Unit 15 Production from January 2012 to October 2012

Report Month	PRD Prd-Day Avg OIL (Bbl/Day)	PRD Prd-Day Avg GAS (Mcf/Day)	PRD Prd-Day Avg WTR (Bbl/Day)	INJ Inj-Day Avg Water (Bbl/Day)
01-2012	698.79	0	840.19	0
02-2012	780.48	0	1073.39	0
03-2012	832.33	0	1987.95	0
04-2012	661.14	0	1414.89	0
05-2012	659.54	0	1239.49	0
06-2012	469.67	0	955.34	0
07-2012	384.02	0	858.79	0
08-2012	408.94	0	783.13	0
09-2012	327.14	0	757.74	0
10-2012	294.59	0	703.92	0

## Conclusions

From 2010 until the end of 2011, twelve (12) horizontal producers were drilled in Waskada Unit 15, and a new unit battery was built at 16-03-002-26W1. Seven (7) horizontal wells started production by the end of 2012. In an effort to better support these new horizontal producing wells, Surge's plan is to start the waterflood pilot project in 2013.

The planned activity for 2014 is to continue on with the waterflood project. Surge also plans to continue on with its analytical reservoir work to help maintain the waterflood.