

**WASKADA UNIT NO. 3**

**WATERFLOOD PROGRESS REPORT**

**January 1, through December 31, 2010**

**PennWest Exploration**

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## **Introduction**

The WASKADA UNIT NO.3 pressure maintenance project commenced water injection into the Lower Amaranth designed and in accordance with Manitoba Energy and Mines Approval No. PM 58.

PRESSURE MAINTENANCE: Governed by Board Order No. PM 58

### UNIT INFORMATION:

UNITIZED ZONE: Lower Amaranth

Original Unit May 1, 1984 Voluntary

First Enlargement Sept. 1, 1984 Board Order Voluntary

Second Enlargement Aug. 1, 1985 Board Order Voluntary

Third Enlargement July 1, 1986 Board Order Voluntary

Fourth Enlargement Nov. 1, 1986 Board Order Voluntary

POOL: Waskada Lower Amaranth A (03 29A)

This report documents the performance of the Waskada Lower Amaranth unit # 2 pressure maintenance project for the period of January 1 to December 31, 2010.

Unit # 3 is part of main Waskada. The Waskada field is situated on the northeast rim of the Williston Basin in southern Manitoba. It comprises a large portion of Township 1 and 2, Ranges 25 and 26 (W1PM).

The Waskada Fields produce light density crude (approximately 36° API), predominantly from the Lower Amaranth formation. The interlaminated, shallow marine to subtidal succession of sandstones, siltstones, and shale progressively onlaps the Mississippian unconformity surface from basin center, up dip to the north and eastern basin limits in Saskatchewan and Manitoba. The fine grained reservoir rock has a complex reservoir characterization with 13 to 16 % porosity and permeability on the order of 0.5 to 15 md. The lower Amaranth, the oldest Mesozoic unit is a clastic red bed sequence lying directly on the Paleozoic erosional surface. It consists of a series of dolomitic siltstones and sandstones interbedded with argillaceous siltstones and shales. The section is usually subdivided into a lower sandy unit and an overlying shale unit. The lower sequence is the

oil production zone. The bulk of pay is founded in the laminated sandstone/siltstone facies.

The Lower Amaranth has been classified into four general lithological types:

1. Interbedded shale/siltstone/sandstone by grain size, color and texture
2. Siltstone – This lithology occurs in distinct intervals up to two or three meters in thickness. It is generally light green in color and dolomitic.
3. Laminated sandstone – This occurs in distinct sandy intervals with a wide range of grain sizes and primary sedimentary structures.
4. Massive sandstone – This lithology occurs in thin intervals and usually associated with the laminated sandstones facies. Beds are usually light grey to reddish grey in color and coarse to medium – grained.

### **Waskada Unit # 3 (Unit History)**

<b>Abbreviated Well ID</b>	<b>Date Well Spudded</b>	<b>On Prod YYYY/MM</b>	<b>Org Operator Name</b>	<b>Ground Elevation (m)</b>	<b>TVD (m)</b>
00/02-30-001-25W1/0	8/16/1982	1982/10	Omega Hydcbns Ltd	468.3	955.0
02/04-30-001-25W1/0	9/16/1982	1982/12	Omega Hydcbns Ltd	469.0	950.0
00/05-30-001-25W1/23	16/1967	1980/12	NCE Petrofund Corp	467.9	973.8
02/07-30-001-25W1/012	4/1985	1985/12	Omega Hydcbns Ltd	468.4	947.0
00/08-30-001-25W1/27	29/1982	1983/09	Omega Hydcbns Ltd	468.6	952.0
00/09-30-001-25W1/012	4/1981	1982/03	Omega Hydcbns Ltd	468.8	944.0
00/11-30-001-25W1/212	29/1966	1980/06	NCE Petrofund Corp	468.2	957.7
02/11-30-001-25W1/28	24/1985	1985/11	NCE Petrofund Corp	467.7	937.0
02/12-30-001-25W1/010	31/1983	1983/12	Omega Hydcbns Ltd	467.6	925.0
00/13-30-001-25W1/07	14/1982	1982/08	Omega Hydcbns Ltd	467.4	954.0
00/14-30-001-25W1/07	18/1982	1982/09	Omega Hydcbns Ltd	470.2	952.3
00/15-30-001-25W1/07	25/1982	1982/09	Omega Hydcbns Ltd	470.2	953.0
00/16-30-001-25W1/07	22/1982	1982/09	Omega Hydcbns Ltd	468.9	956.7
00/01-31-001-25W1/06	10/1983	1983/07	Omega Hydcbns Ltd	471.6	949.0
00/02-31-001-25W1/07	3/1982	1982/10	Omega Hydcbns Ltd	468.6	953.0
00/03-31-001-25W1/010	3/1981	1982/03	Omega Hydcbns Ltd	468.7	950.0
02/04-31-001-25W1/07	7/1982	1982/08	Omega Hydcbns Ltd	467.3	948.0
03/04-31-001-25W1/09	10/2009	2009/12		469.7	900.0
04/04-31-001-25W1/09	16/2009	2009/12		469.2	902.0

00/05-31-001-25W1/02/19/1983	1983/06	Omega Hydcbns Ltd	466.9	950.0
00/06-31-001-25W1/07/11/1982	1982/09	Omega Hydcbns Ltd	469.9	950.0
00/07-31-001-25W1/06/6/1983	1983/07	Omega Hydcbns Ltd	469.2	950.0
00/08-31-001-25W1/06/14/1983	1983/07	Omega Hydcbns Ltd	471.0	948.0
00/09-31-001-25W1/08/16/1984	1984/09	Omega Hydcbns Ltd	470.9	945.0
00/10-31-001-25W1/08/17/1984	1984/11	Omega Hydcbns Ltd	470.7	940.0
00/11-31-001-25W1/09/22/1982	1982/12	Omega Hydcbns Ltd	468.6	944.0
00/12-31-001-25W1/26/21/1983	1984/07	NCE Petrofund Corp	467.0	949.0
00/13-31-001-25W1/03/2/1983	1983/03	Omega Hydcbns Ltd	467.6	951.0
00/14-31-001-25W1/08/7/1983	1983/09	Omega Hydcbns Ltd	470.0	935.0
00/15-31-001-25W1/08/20/1984	1984/11	Omega Hydcbns Ltd	469.5	940.0
00/16-31-001-25W1/08/22/1984	1984/10	Omega Hydcbns Ltd	471.1	940.0
00/11-32-001-25W1/08/25/1984	1984/09	Omega Hydcbns Ltd	470.8	930.0
00/12-32-001-25W1/08/20/1984	1984/11	Omega Hydcbns Ltd	470.9	940.0
00/13-32-001-25W1/08/28/1984	1984/11	Omega Hydcbns Ltd	470.8	936.0
00/14-32-001-25W1/09/1/1982	1982/10	Omega Hydcbns Ltd	469.9	947.0
00/04-36-001-26W1/01/6/1986	1986/02	Omega Hydcbns Ltd	468.2	972.0
00/05-36-001-26W1/09/4/1983	1983/10	Omega Hydcbns Ltd	467.3	947.0
00/06-36-001-26W1/05/31/1985	1985/07	Omega Hydcbns Ltd	467.6	992.0
00/07-36-001-26W1/011/26/1985	1985/12	Omega Hydcbns Ltd	466.7	940.0
00/08-36-001-26W1/06/13/1984	1984/07	Omega Hydcbns Ltd	467.9	950.0
00/09-36-001-26W1/210/31/1982	1984/02	NCE Petrofund Corp	469.1	942.0
00/10-36-001-26W1/06/17/1984	1984/07	Omega Hydcbns Ltd	469.7	950.0
00/11-36-001-26W1/08/24/1983	1983/09	Omega Hydcbns Ltd	466.6	949.0
00/13-36-001-26W1/09/27/1983	1983/10	Omega Hydcbns Ltd	464.8	950.0
00/14-36-001-26W1/010/9/1983	1983/11	Omega Hydcbns Ltd	463.8	954.0
00/15-36-001-26W1/06/21/1984	1984/07	Omega Hydcbns Ltd	469.2	950.0
00/16-36-001-26W1/07/12/1985	1985/08	Omega Hydcbns Ltd	467.2	951.0
02/16-36-001-26W1/01/27/2010	2010/05		465.5	898.2
00/01-05-002-25W1/011/6/1984	1985/01	Omega Hydcbns Ltd	471.0	935.0
00/02-05-002-25W1/011/10/1984	1985/01	Omega Hydcbns Ltd	471.9	935.0
00/03-05-002-25W1/011/10/1982	1982/11	Omega Hydcbns Ltd	470.8	915.0
00/04-05-002-25W1/09/24/1985	1985/10	Omega Hydcbns Ltd	470.8	925.0
00/07-05-002-25W1/011/3/1984	1984/12	Omega Hydcbns Ltd	471.5	932.0
00/08-05-002-25W1/011/14/1984	1984/12	Omega Hydcbns Ltd	473.1	934.0

### Waskada Unit #3 (Production & Injection History)

Abbreviated Well ID	First Prod YYY Y/M M	On Inject. YYYY/M M	Last Prod. YYYY/M M	Cumulati ve OIL Prod. (m3)	Cumulati ve WTR Prod. (m3)	First 12 mo. Ave WC %	Last Inject. YYYY/M M
00/02-30-001-25W1/0	1982 /10		1989/07	1,324	2,664	44.0	
02/04-30-001-25W1/0	1982 /12		1990/06	6,964	34,070	78.4	
00/05-30-001-25W1/2	1980 /12	1984/08	1984/06	570	1,305	65.6	1998/10
02/07-30-001-25W1/0	1985 /12	1987/12	1987/11	4,182	2,452	26.1	2003/07
00/08-30-001-25W1/2	1983 /09		1996/06	4,571	14,855	88.4	
00/09-30-001-25W1/0	1982 /03		1989/04	1,144	1,518	48.5	
00/11-30-001-25W1/2	1980 /06		1984/11	2,182	5,444	64.5	
02/11-30-001-25W1/2	1985 /11		1997/10	5,783	37,157	63.1	
02/12-30-001-25W1/0	1983 /12		1994/07	8,747	10,698	27.4	
00/13-30-001-25W1/0	1982 /08	1984/06	1984/05	772	1,351	66.8	2006/10
00/14-30-001-25W1/0	1982 /09		1990/08	2,877	6,789	46.9	
00/15-30-001-25W1/0	1982 /09	1984/06	1984/05	1,773	7,390	74.9	2006/11
00/16-30-001-25W1/0	1982 /09		1991/12	3,054	3,615	51.3	
00/01-31-001-25W1/0	1983 /07		1990/09	5,057	33,880	65.7	
00/02-31-001-25W1/0	1982 /10		1990/10	3,540	18,478	71.6	
00/03-31-001-25W1/0	1982 /03		1990/08	2,828	2,334	26.4	
02/04-31-001-25W1/0	1982 /08		1989/10	1,960	2,800	43.8	
03/04-31-001-25W1/0	2009 /12		2010/12	7,513	5,332	42.0	
04/04-31-001-25W1/0	2009 /12		2010/12	1,228	8,523	87.4	
00/05-31-001-25W1/0	1983 /06	1984/06	1984/05	778	321	29.2	1998/02
00/06-31-001-25W1/0	1982 /09		1990/08	3,197	13,522	65.8	
00/07-31-001-25W1/0	1983 /07	1984/06	1984/05	1,361	1,280	48.5	1992/04
00/08-31-001-25W1/0	1983 /07		1990/07	5,573	22,603	66.6	

Abbreviated Well ID	First Prod YYY Y/M M	On Inject. YYYY/M M	Last Prod. YYYY/M M	Cumulati ve OIL Prod. (m3)	Cumulati ve WTR Prod. (m3)	First 12 mo. Ave WC %	Last Inject. YYYY/M M
00/09-31-001-25W1/0	1984/09		1990/07	9,679	29,079	58.8	
00/10-31-001-25W1/0	1984/11		1990/10	566	1,947	47.6	
00/11-31-001-25W1/0	1982/12		1990/06	2,393	4,836	57.1	
00/12-31-001-25W1/2	1984/07		1991/09	4,256	16,751	70.9	
00/13-31-001-25W1/0	1983/03	1985/10	1985/08	513	572	47.2	1998/02
00/14-31-001-25W1/0	1983/09		1990/05	827	3,050	82.2	
00/15-31-001-25W1/0	1984/11	1986/01	1985/09	1,028	1,662	61.8	1998/02
00/16-31-001-25W1/0	1984/10		1989/05	1,740	2,802	59.0	
00/11-32-001-25W1/0	1984/09		2010/11	7,683	21,316	54.2	
00/12-32-001-25W1/0	1984/11		2010/11	5,538	2,913	47.2	
00/13-32-001-25W1/0	1984/11	1985/10	1985/09	695	697	50.1	1999/04
00/14-32-001-25W1/0	1982/10		1997/09	4,595	13,367	58.9	
00/04-36-001-26W1/0	1986/02		1996/02	2,430	698	25.8	
00/05-36-001-26W1/0	1983/10	1986/12	1986/11	3,814	521	12.3	2005/06
00/06-36-001-26W1/0	1985/07		2010/12	5,449	1,325	15.8	
00/07-36-001-26W1/0	1985/12	1986/11	1986/10	839	137	14.1	2004/05
00/08-36-001-26W1/0	1984/07		2003/03	4,915	17,332	64.8	
00/09-36-001-26W1/2	1984/02		1995/11	6,636	31,124	60.1	
00/10-36-001-26W1/0	1984/07		2010/12	6,715	1,141	14.3	
00/11-36-001-26W1/0	1983/09		2010/12	7,083	1,420	22.2	
00/13-36-001-26W1/0	1983/10	1985/10	1985/09	2,605	445	14.4	2005/11
00/14-36-001-26W1/0	1983/11		2010/12	6,225	1,195	17.1	
00/15-36-001-26W1/0	1984/07	1985/10	1985/09	1,272	356	21.6	2006/01
00/16-36-001-26W1/0	1985/08		1989/01	613	511	44.5	

Abbreviated Well ID	First Prod YYY Y/M M	On Inject. YYYY/M M	Last Prod. YYYY/M M	Cumulative OIL Prod. (m3)	Cumulative WTR Prod. (m3)	First 12 mo. Ave WC %	Last Inject. YYYY/M M
02/16-36-001-26W1/0	2010/05		2010/12	2,935	6,183	67.7	
00/01-05-002-25W1/0	1985/01		2009/10	7,128	14,932	37.7	
00/02-05-002-25W1/0	1985/01		2010/11	9,085	1,677	39.1	
00/03-05-002-25W1/0	1982/11		2010/11	5,920	2,179	6.6	
00/04-05-002-25W1/0	1985/10		2010/11	7,408	13,296	71.4	
00/07-05-002-25W1/0	1984/12	1986/07	1986/07	1,194	1,193	58.3	1994/03
00/08-05-002-25W1/0	1984/12		2010/11	18,448	2,707	7.6	

### **Discussion:**

#### **Production Performance**

Production Response versus Injection: Since injection began, early 1984, injection rates fluctuated to the some degree amongst the injectors; it is difficult to link any production responses to any specific injector. Water breakthrough of certain producers could not be directly correlated with over injection in associated injectors. Some wells showed no change in oil rate when injection was ceased in 2006.

#### **Voidage Replacement Ratio Calculation**

What could be described as very limited success, the waterflood was not maintained properly and injection rate dropped year after year in most cases. The cumulative VRR in the pool is about 1.0 and the current monthly VRR is zero and, no injection since 2006. All of the injectors are shut in currently. PennWest has no plans to reactivate the old injectors (See Appendix C).

To understand the past performance of the Lower Amaranth waterflood, we are doing some reservoir engineering work to come up with potential solutions. One of our plans is to do a pilot program in section 2: The objective of the pilot:



1. See if we can inject water into the Lower Amaranth Formation
  - i. Particle size less than 1 micron
  - ii. Total Suspended Solid (TSS) less than 10 ppm
  - iii. Oil less than 10 ppm
2. Inject below the frac pressure
3. Test the simulation model that we have built.

#### 2011 Waskada Lower Amaranth Waterflood Pilot Location

The pilot producer will be 102/12-01-02-26W1/00 (a horizontal well) and the injectors will be two vertical wells; 100/12-01-02-26W1 and 100/11-01-02-26 (need to be converted to injectors)

#### **Corrosion and Scale Prevention Program**

We currently inject ScalCor down all the new horizontal wells. Plus, PennWest will be installing cathodic protection on the wells. Also, the new gathering system is Fiberglass and as such is not susceptible to corrosion.

#### **Summary and Recommendations**

##### **Producers**

##### **Current Producing Wells**

1. 03/04-31-001-25W1/0
2. 04/04-31-001-25W1/0
3. 00/06-36-001-26W1/0
4. 00/10-36-001-26W1/0
5. 00/14-36-001-26W1/0
6. 02/16-36-001-26W1/0

##### **Current Suspended Wells**

1. 00/11-32-001-25W1/0 (since 2010/12)
2. 00/12-32-001-25W1/0 (since 2010/12)
3. 00/11-36-001-26W1/0 (since 2011/01)
4. 00/01-05-002-25W1/0 (since 2009/11)
5. 00/02-05-002-25W1/0 (since 2010/12)

6. 00/03-05-002-25W1/0 (since 2010/12)
7. 00/04-05-002-25W1/0 (since 2010/12)
8. 00/08-05-002-25W1/0 (since 2010/12)

#### **Abandoned Wells**

1. 00/02-30-001-25W1/0 (since 1989/08)
2. 02/04-30-001-25W1/0 (since 1990/07)
3. 00/08-30-001-25W1/2 (since 1996/07)
4. 00/09-30-001-25W1/0 (since 1989/05)
5. 00/11-30-001-25W1/2 (since 1984/12)
6. 02/11-30-001-25W1/2 (since 1997/11)
7. 02/12-30-001-25W1/0 (since 1994/08)
8. 00/14-30-001-25W1/0 (since 1990/09)
9. 00/16-30-001-25W1/0 (since 1992/01)
10. 00/01-31-001-25W1/0 (since 1990/10)
11. 00/02-31-001-25W1/0 (since 1990/11)
12. 00/03-31-001-25W1/0 (since 1990/09)
13. 02/04-31-001-25W1/0 (since 1989/11)
14. 00/06-31-001-25W1/0 (since 1990/09)
15. 00/08-31-001-25W1/0 (since 1990/08)
16. 00/09-31-001-25W1/0 (since 1990/08)
17. 00/10-31-001-25W1/0 (since 1990/11)
18. 00/11-31-001-25W1/0 (since 1990/07)
19. 00/12-31-001-25W1/2 (since 1991/10)
20. 00/14-31-001-25W1/0 (since 1990/06)
21. 00/16-31-001-25W1/0 (since 1989/06)
22. 00/14-32-001-25W1/0 (since 1997/10)
23. 00/04-36-001-26W1/0 (since 1996/03)
24. 00/08-36-001-26W1/0 (since 2003/04)
25. 00/09-36-001-26W1/2 (since 1995/12)
26. 00/16-36-001-26W1/0 (since 1989/02)

## **Injectors**

### **Current Injecting Wells**

None

### **Current Suspended Wells**

1. 00/13-30-001-25W1/0 (since 2006/11)
2. 00/13-32-001-25W1/0 (since 1999/05)
3. 00/05-36-001-26W1/0 (since 2005/07)
4. 00/07-36-001-26W1/0 (since 2004/06)
5. 00/13-36-001-26W1/0 (since 2005/12)
6. 00/15-36-001-26W1/0 (since 2006/02)

### **Abandoned Wells**

1. 00/05-30-001-25W1/2 (since 1998/11)
2. 02/07-30-001-25W1/0 (since 2003/08)
3. 00/15-30-001-25W1/0 (since 2006/12)
4. 00/05-31-001-25W1/0 (since 1998/03)
5. 00/07-31-001-25W1/0 (since 1992/05)
6. 00/13-31-001-25W1/0 (since 1998/03)
7. 00/15-31-001-25W1/0 (since 1998/03)
8. 00/07-05-002-25W1/0 (since 1994/04)

The behavior of a Waskada Unit 3 producers are indicated by examining the oil rate versus time plots (see Appendix B). Waskada Unit 3 exhibited relatively high initial oil productivity (most of the wells drilled in the past were vertical), rapidly declining to flat/low decline rates, with almost no discernible water flood response. This behavior can be explained by drop in the reservoir pressure from initial (approximately 8700 kPag) to above in some wells or below in others bubble point pressure (about 4200 kPag) followed by solution gas breakout which adversely affected the relative permeability to oil. (See Table # 2)

Also, it is believed that fracture stimulation treatments, performed on these wells prior to initiation of water injection, “broke” through into the higher productivity Mississippian zone and that majority of injected water to date has entered this zone. This is one of the major explanations for lack of waterflood response to date and the continued decline in oil productivities.

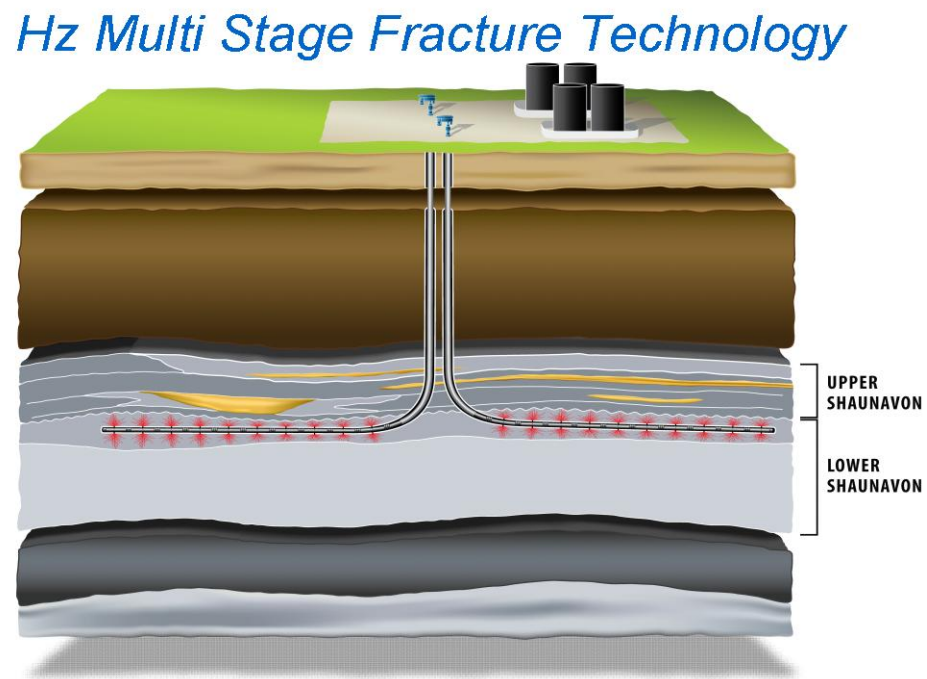
The Waskada Unit # 3 is becoming a non-conventional tight oil resources play that utilizes horizontal multi-stage frac drilling technology (small multi-stage frac stimulations on newly drilled wells will remain “in zone” within the Lower Amaranth) to re-develop the thick low perm oil zones adjacent to the conventional Amaranth zone that was discovered in the 1

980’s. PennWest drilled 19 horizontal wells, to increase the Recovery Factor (RF), in year 2010.

<b>1</b>	102/08-05-002-25W1
<b>2</b>	103/08-05-002-25W1
<b>3</b>	104/08-05-002-25W1
<b>4</b>	102/01-05-002-25W1
<b>5</b>	103/01-05-002-25W1
<b>6</b>	104/01-05-002-25W1
<b>7</b>	102/01-31-001-25W1
<b>8</b>	103/01-31-001-25W1
<b>9</b>	102/09-31-001-25W1
<b>10</b>	102/12-31-001-25W1
<b>11</b>	102/13-31-001-25W1
<b>12</b>	102/16-31-001-25W1
<b>13</b>	104/04-36-001-26W1
<b>14</b>	102/08-36-001-26W1
<b>15</b>	102/09-36-001-26W1
<b>16</b>	102/14-36-001-26W1
<b>17</b>	103/14-36-001-26W1
<b>18</b>	102/16-36-001-26W1
<b>19</b>	103/16-36-001-26W1

PennWest’s plan is to drill six more horizontal well in 2011. PennWest’s next plan is to convert some of the recent horizontal producing wells to injection wells to increase the sweep efficiency and ultimately increase the recoverable oil in place.

The following is the HZ Multi Stage Fracture Technology development plan that we are using:-



## **TABLES**

### **Waskada Unit #3**

**Table 1: Rate History**

Date	OIL		Water		Inj Water	
Year	m3/year	m3/day	m3/year	m3/day	m3/year	m3/day
1980	183	0.50	315	0.86	0	0.00
1981	1,124	3.08	2,500	6.85	0	0.00
1982	6,379	17.48	5,322	14.58	0	0.00
1983	19,167	52.51	34,598	94.79	0	0.00
1984	24,582	67.35	49,131	134.61	68,953	188.91
1985	24,638	67.50	53,585	146.81	85,890	235.32
1986	26,265	71.96	49,175	134.73	143,288	392.57
1987	17,020	46.63	42,395	116.15	88,310	241.95
1988	12,535	34.34	36,320	99.51	46,449	127.26
1989	9,713	26.61	28,005	76.72	11,519	31.56
1990	6,630	18.17	15,180	41.59	27,898	76.43
1991	6,384	17.49	11,631	31.87	35,537	97.36
1992	6,335	17.36	16,071	44.03	33,244	91.08
1993	6,308	17.28	14,199	38.90	48,126	131.85
1994	3,922	10.74	11,965	32.78	21,512	58.94
1995	4,424	12.12	13,839	37.92	22,294	61.08
1996	2,925	8.01	6,174	16.92	19,503	53.43
1997	3,315	9.08	4,165	11.41	16,774	45.96
1998	2,782	7.62	2,406	6.59	7,958	21.80
1999	2,628	7.20	2,651	7.26	4,079	11.18
2000	1,996	5.47	2,140	5.86	4,886	13.39
2001	1,400	3.84	1,589	4.35	3,538	9.69
2002	1,511	4.14	1,419	3.89	3,284	9.00
2003	1,476	4.04	1,445	3.96	3,172	8.69
2004	1,620	4.44	1,145	3.14	1,967	5.39
2005	1,717	4.70	921	2.52	1,944	5.33
2006	1,788	4.90	1,442	3.95	1,515	4.15
2007	1,541	4.22	1,268	3.47	0	0.00
2008	1,636	4.48	1,245	3.41	0	0.00
2009	2,293	6.28	3,461	9.48	0	0.00
2010	12,970	35.53	20,042	54.91	0	0.00

### Waskada Unit #3

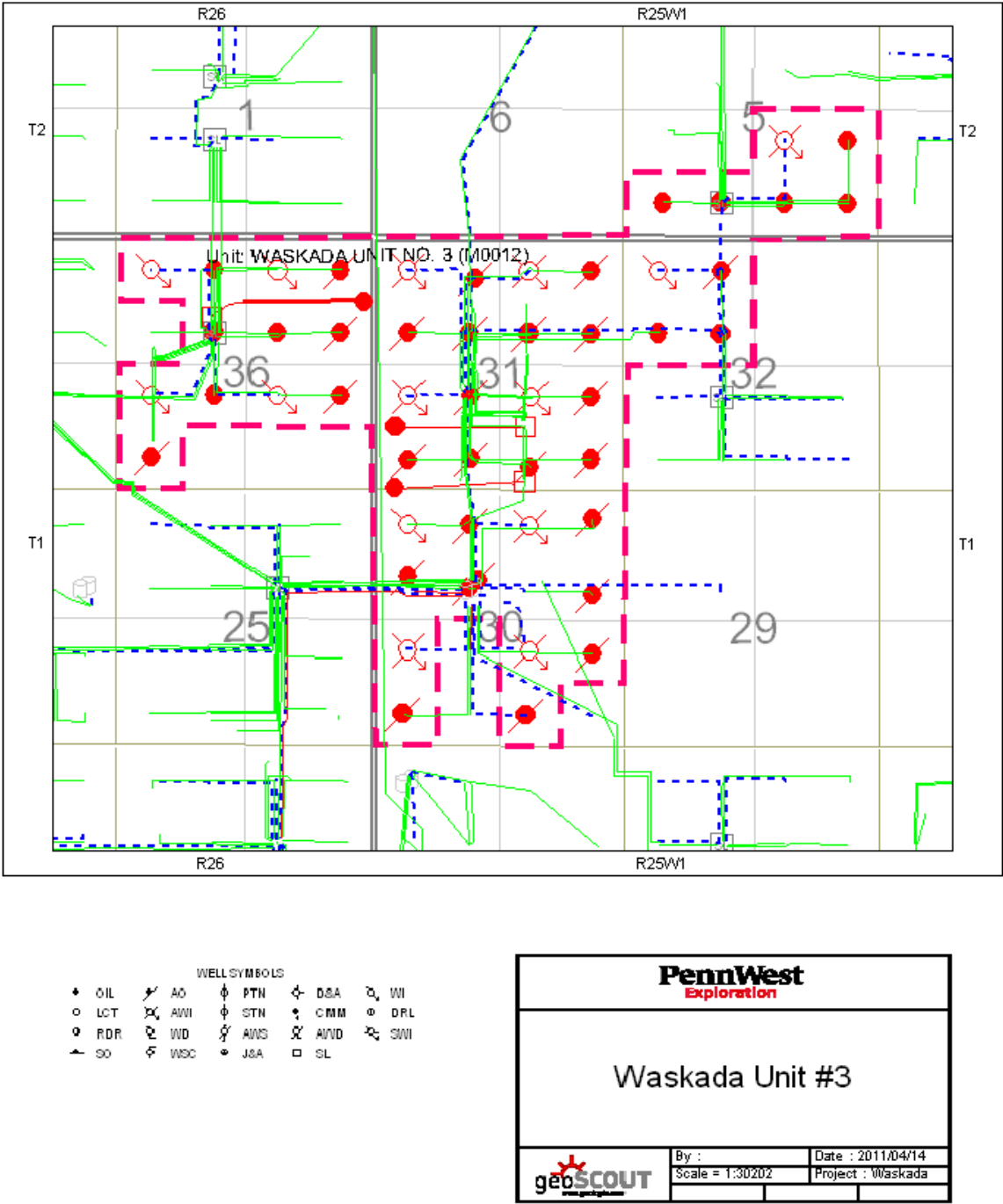
**Table 2: Pressure Surveys**

Location	Shut In Date	Date of Survey	Type of Survey	Pressure @ Datum Depth (kPa)
04/04-31-001-25W1/0	17-Oct-10	24-Oct-10	BHP Build Up	9335
00/11-32-001-25W1/0	(16.1 days)	29-Nov-06	Acoustic Build Up	8384
00/14-36-001-26W1/0		10-Jan-10	BHP, Assuming WC from Last Prod'n	3172
02/16-36-001-26W1/0	17-Oct-10	24-Oct-10	BHP Build Up	2704
00/01-05-002-25W1/0		14-Jan-10	BHP, Assuming WC from Last Prod'n	7405
00/02-05-002-25W1/0		2008	BHP, Assuming WC from Last Prod'n	4570

## **APPENDIX A**

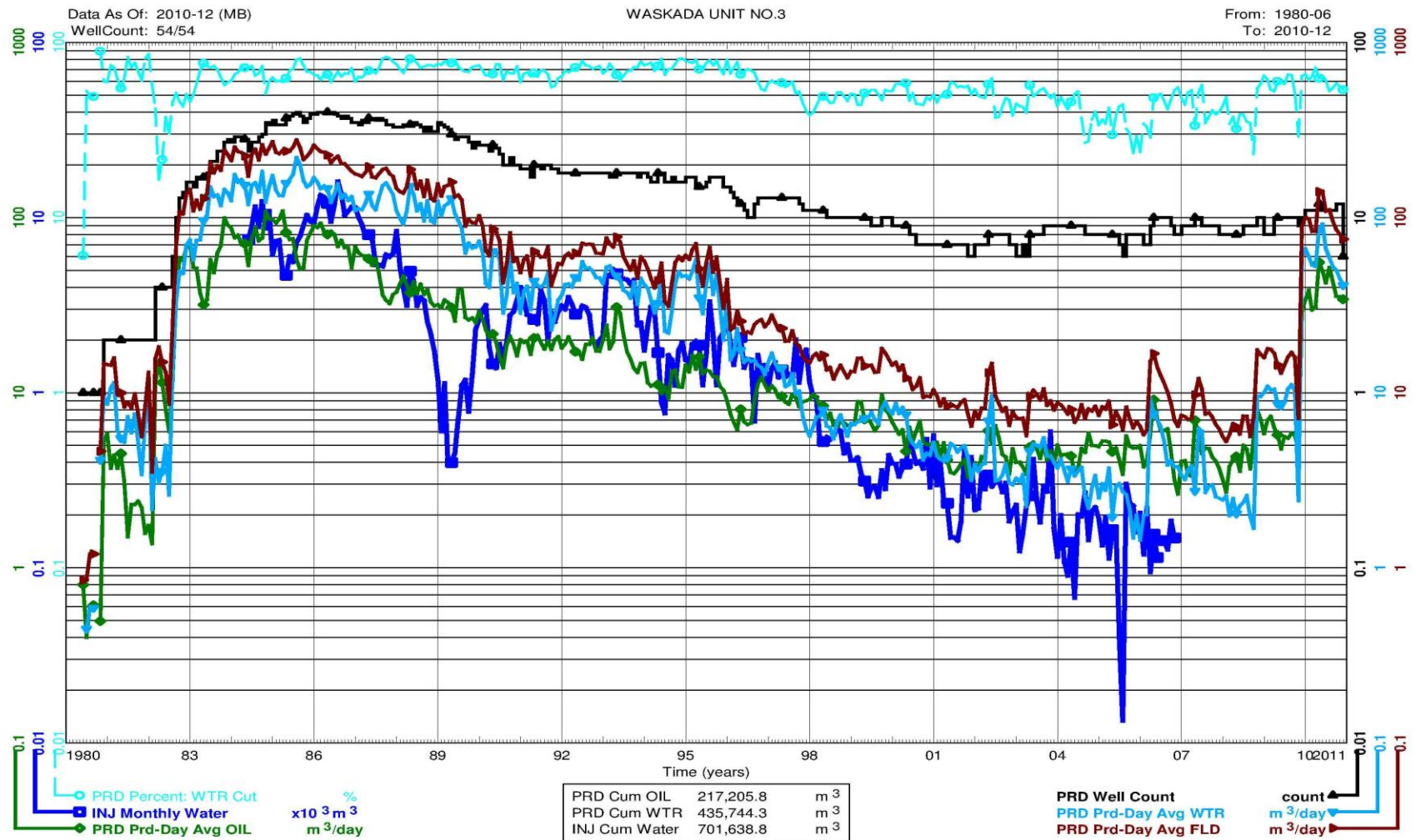


Appendix A – Area Map



## **APPENDIX B**

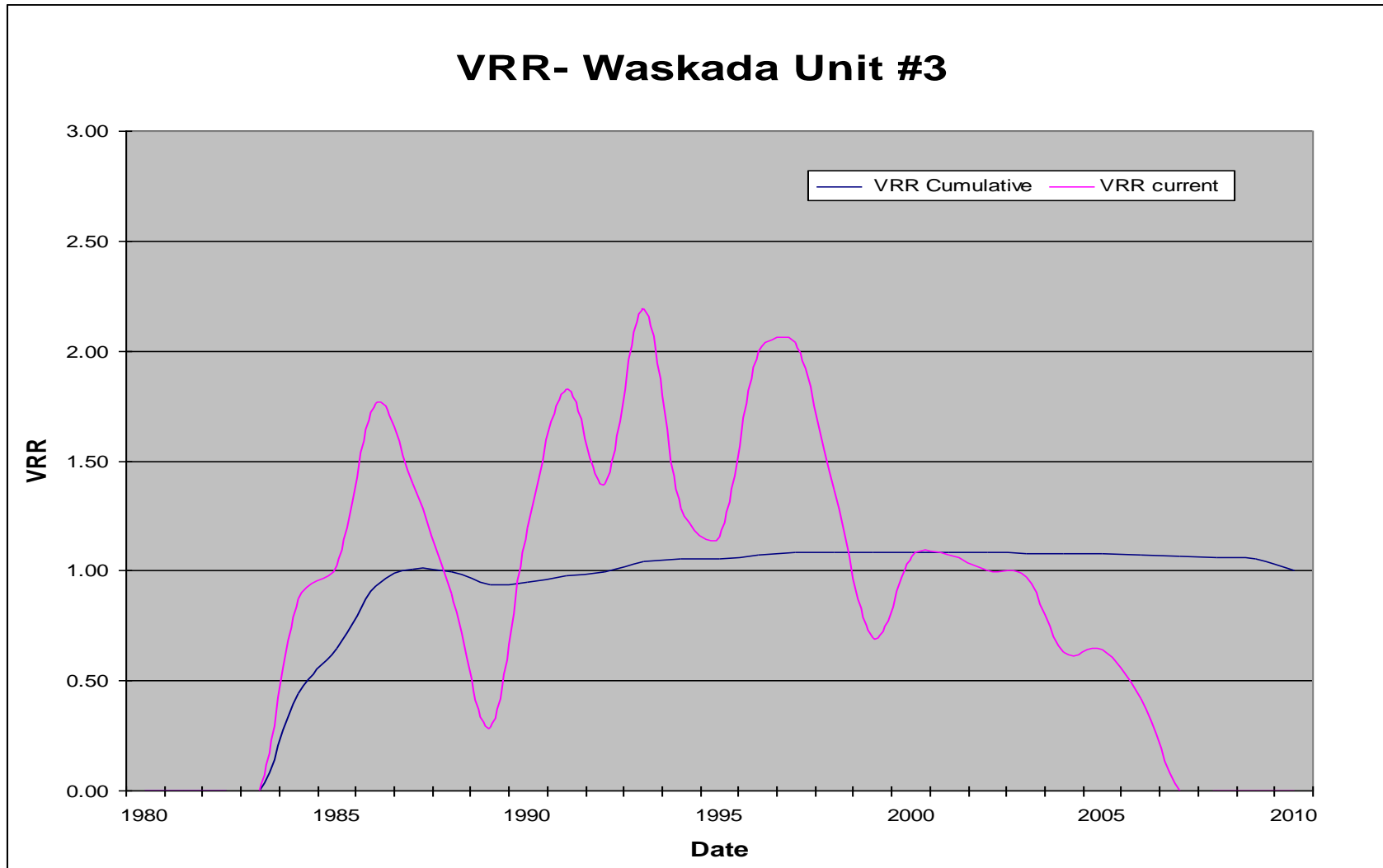
## Appendix B – Production and Injection History plot



Thursday, March 31, 2011, 03:12 PM

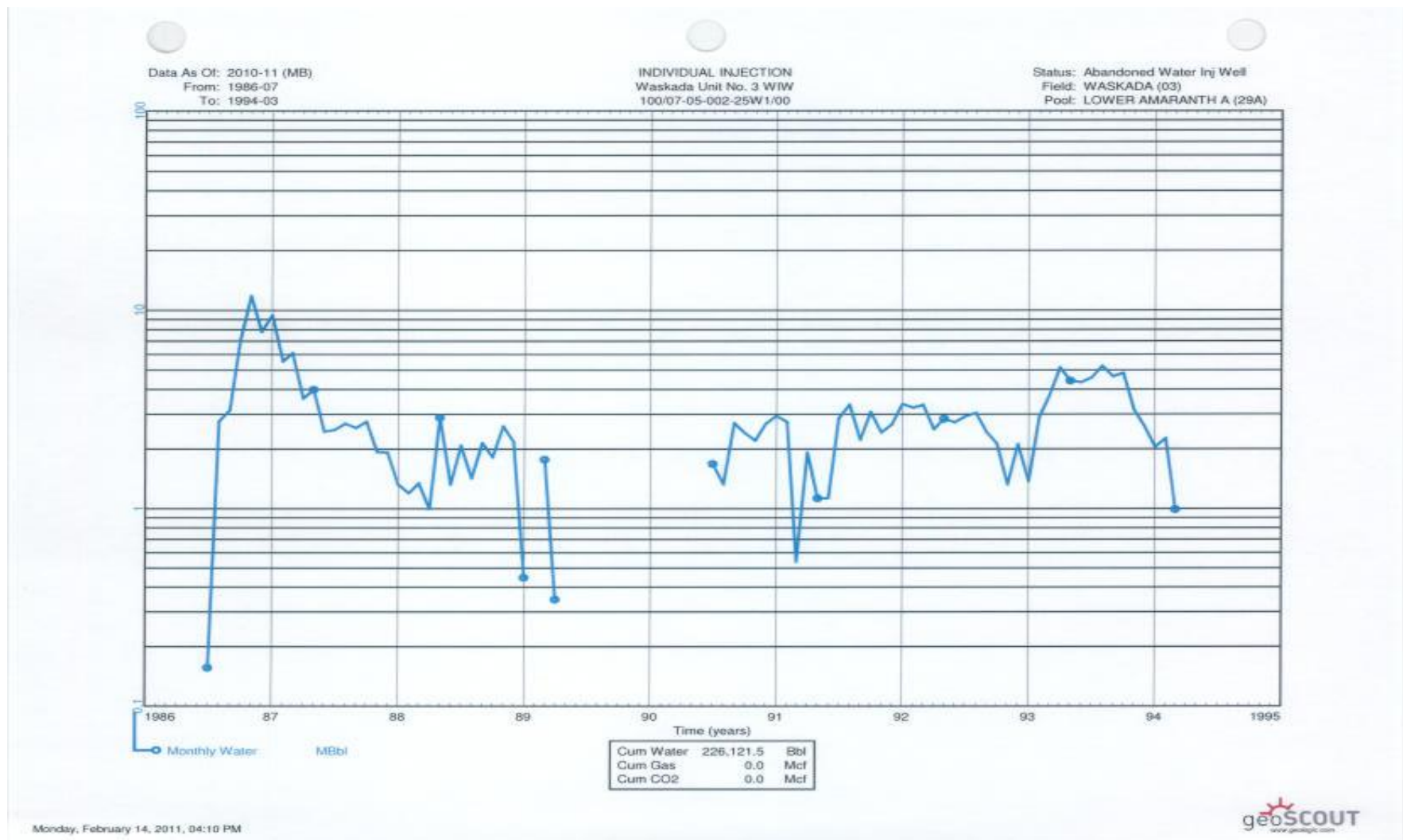
## **APPENDIX C**

Appendix C – Voidage Replacement Ratio VRR



## **APPENDIX D**

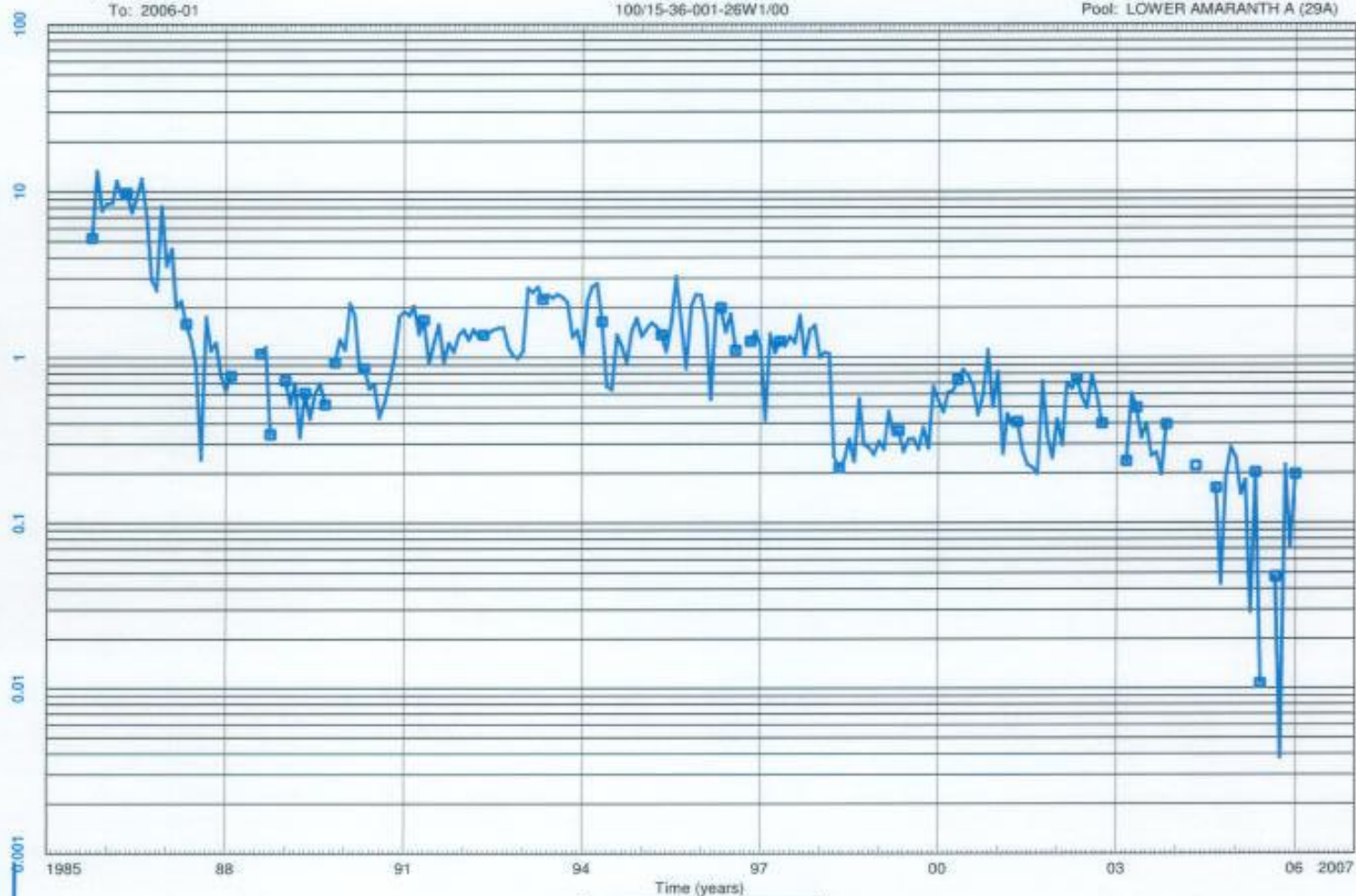
## Appendix D – Production and Injection Profiles (Individual wells)



Data As Of: 2011-01 (MB)  
From: 1985-10  
To: 2006-01

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
100/15-36-001-26W1/00

Status: Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Monthly Water MBbl

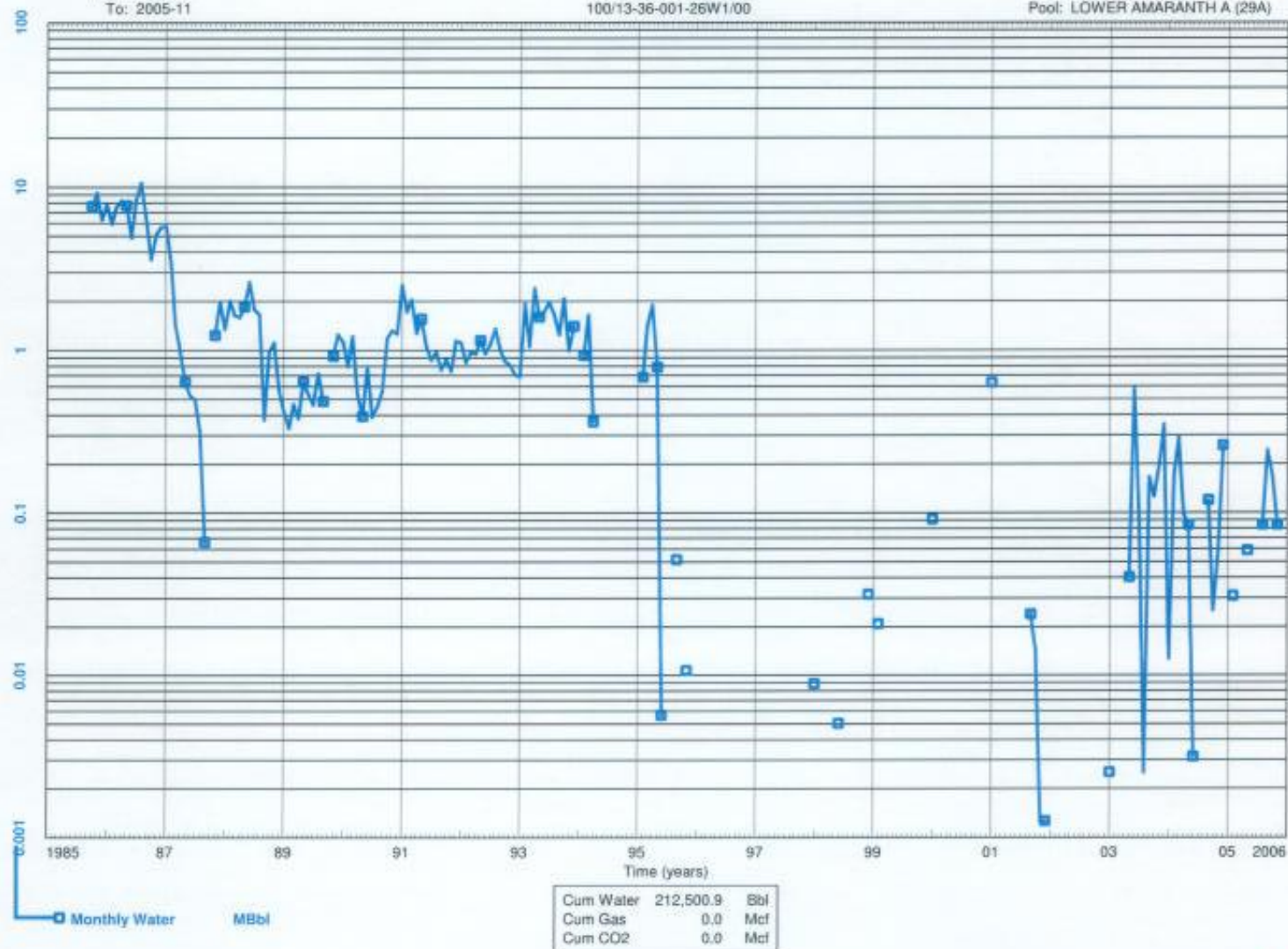
Cum Water	327,049.2	Bbl
Cum Gas	0.0	Mcf
Cum CO2	0.0	Mcf



Data As Of: 2011-01 (MB)  
From: 1985-10  
To: 2005-11

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
100/13-36-001-26W1/00

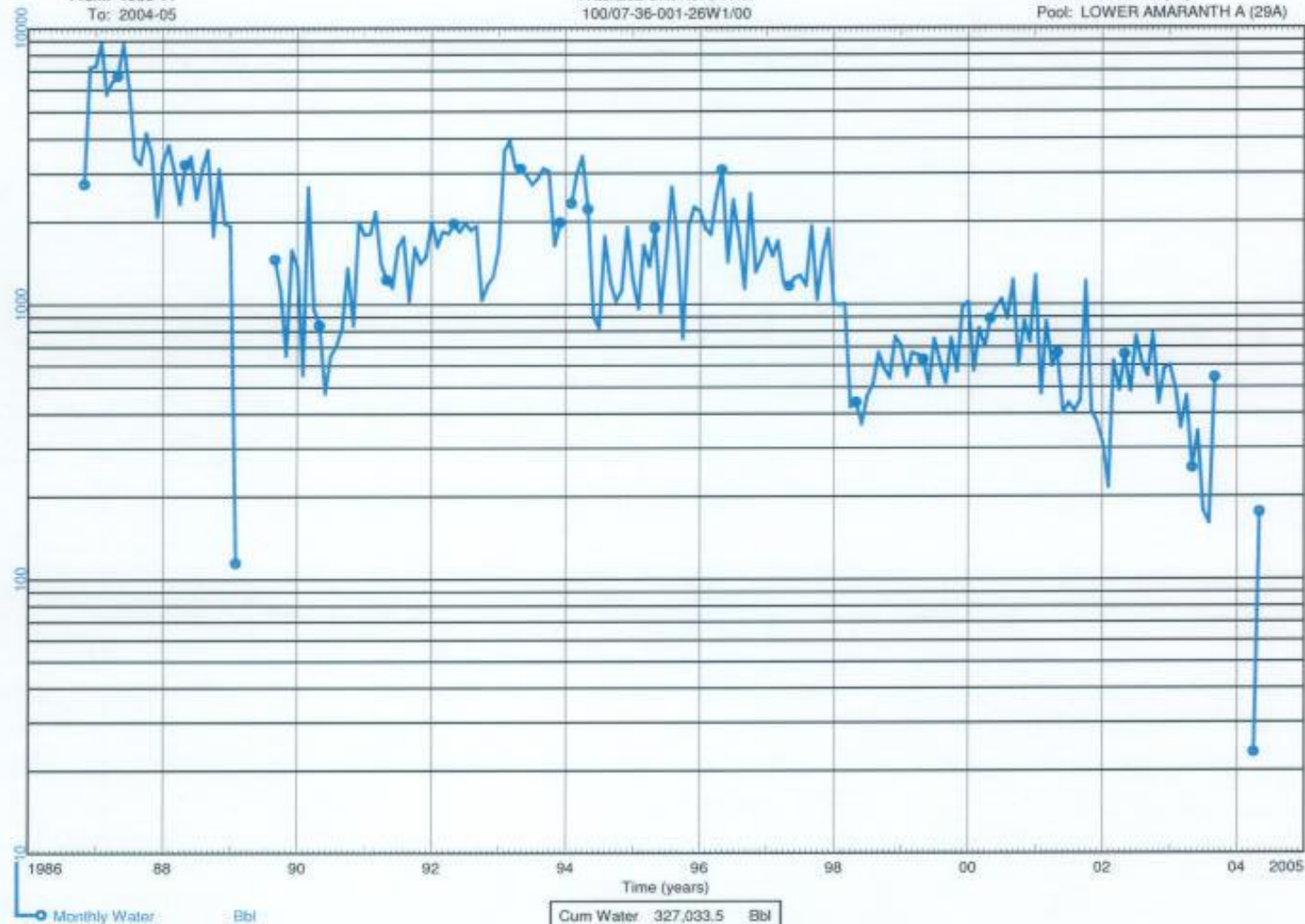
Status: Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1986-11  
To: 2004-05

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
100/07-36-001-26W1/00

Status: Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)

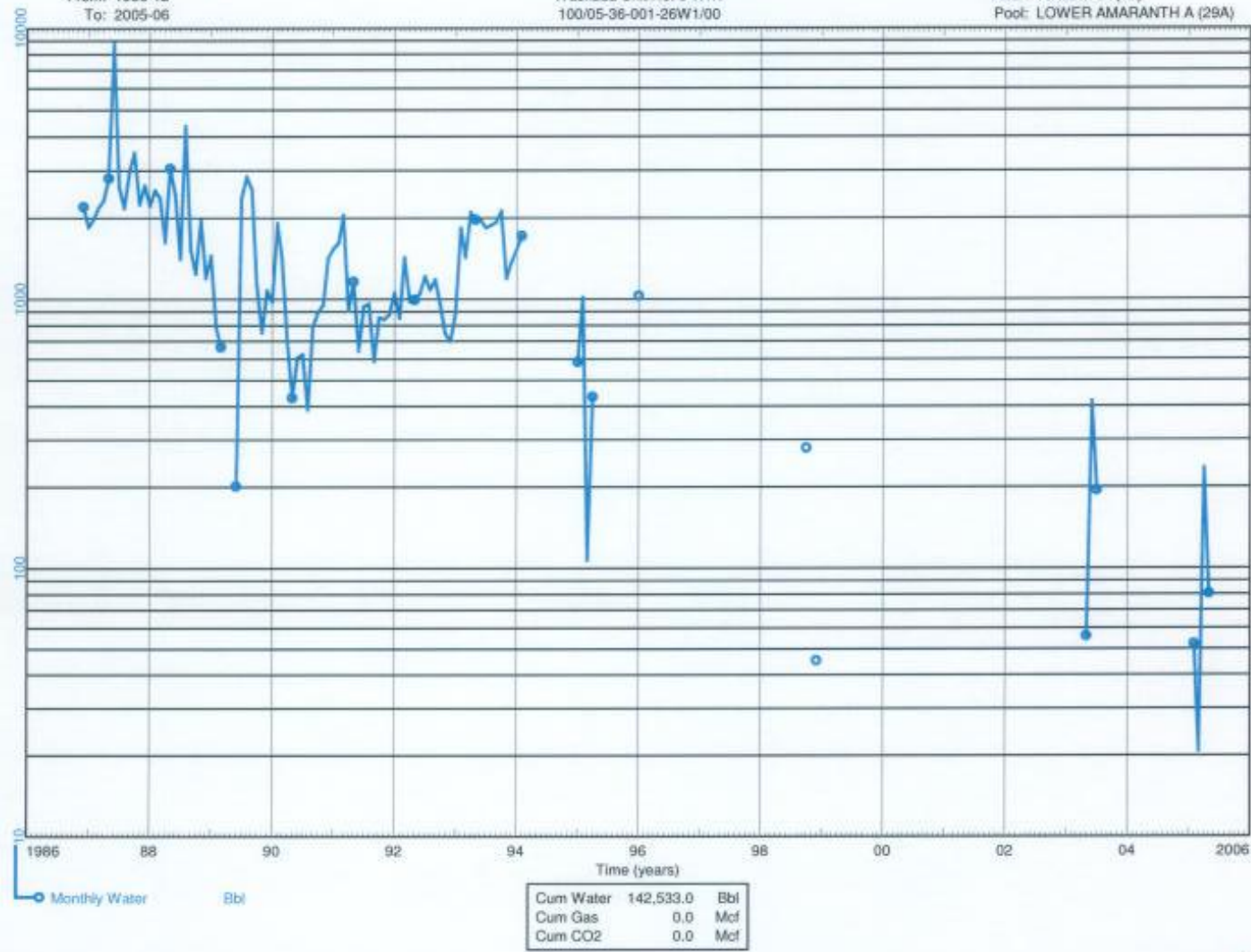


Cum Water	327,033.5	Bbl
Cum Gas	0.0	Mcf
Cum CO2	0.0	Mcf

Data As Of: 2010-11 (MB)  
From: 1986-12  
To: 2005-06

INDIVIDUAL INJECTION  
Waskada Unit No. 3 W/W  
100/05-36-001-26W1/00

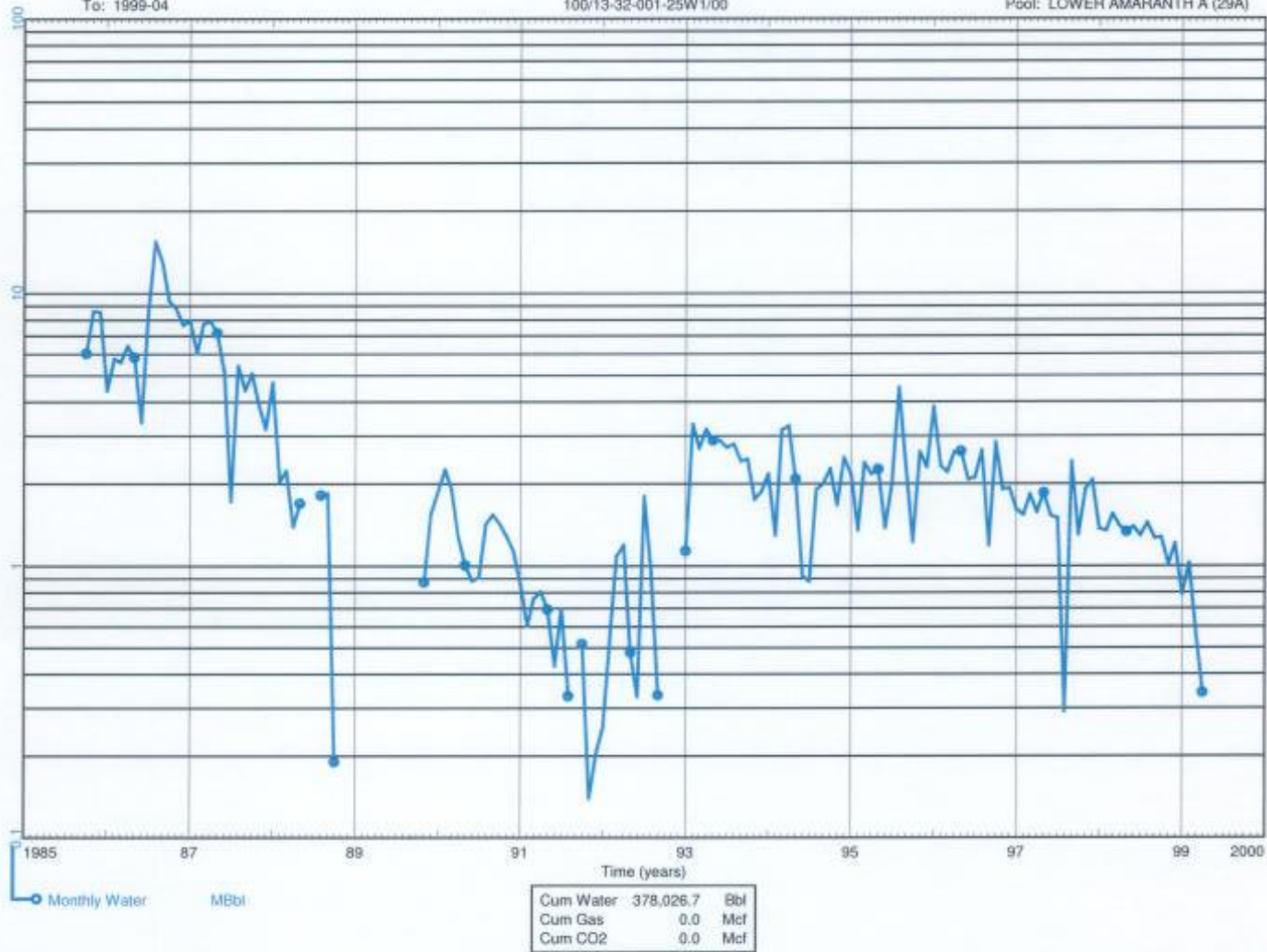
Status: Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1985-10  
To: 1999-04

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
106/13-32-001-25W1/00

Status: Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)

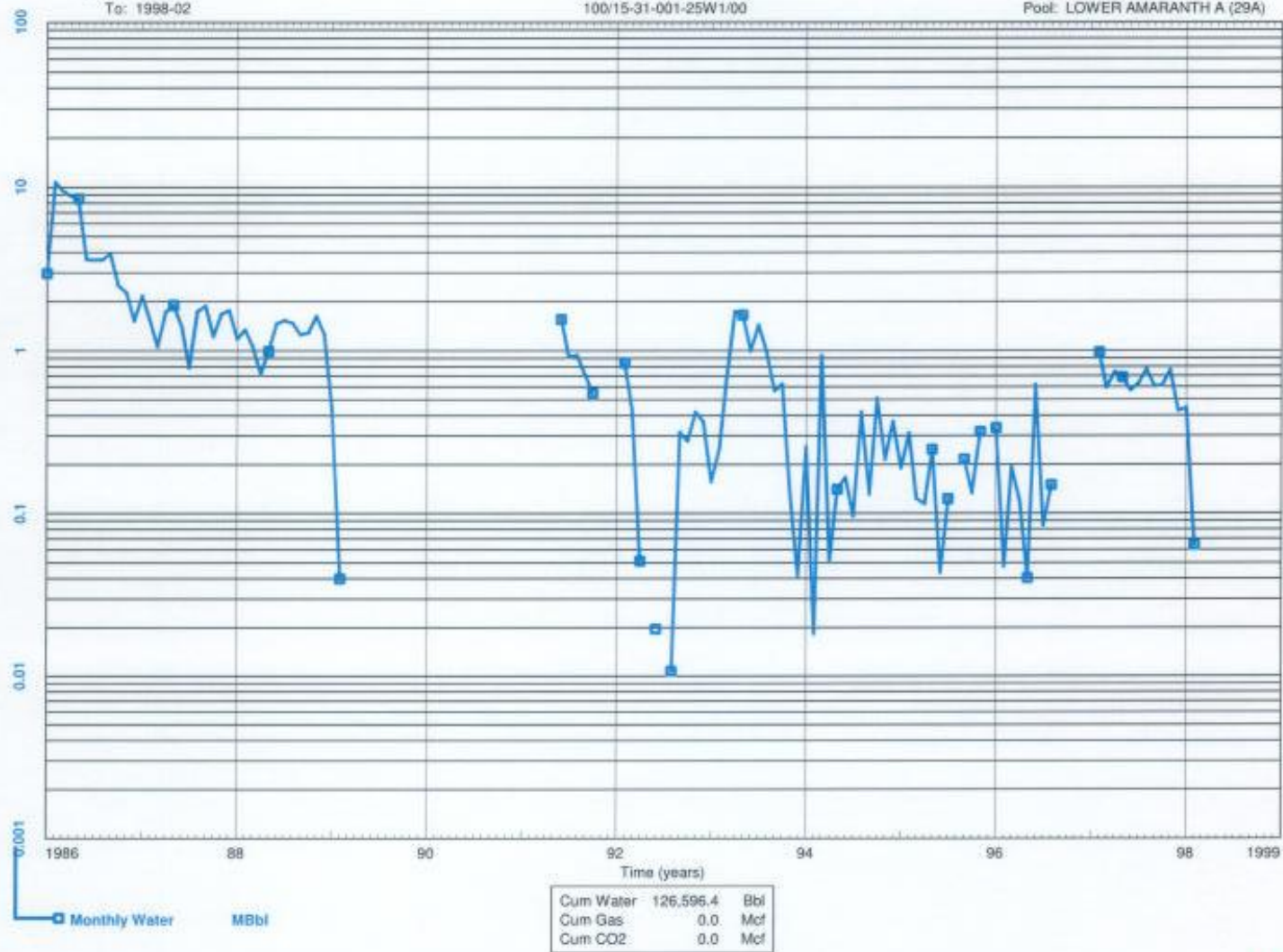




Data As Of: 2011-01 (MB)  
From: 1986-01  
To: 1998-02

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
100/15-31-001-25W1/00

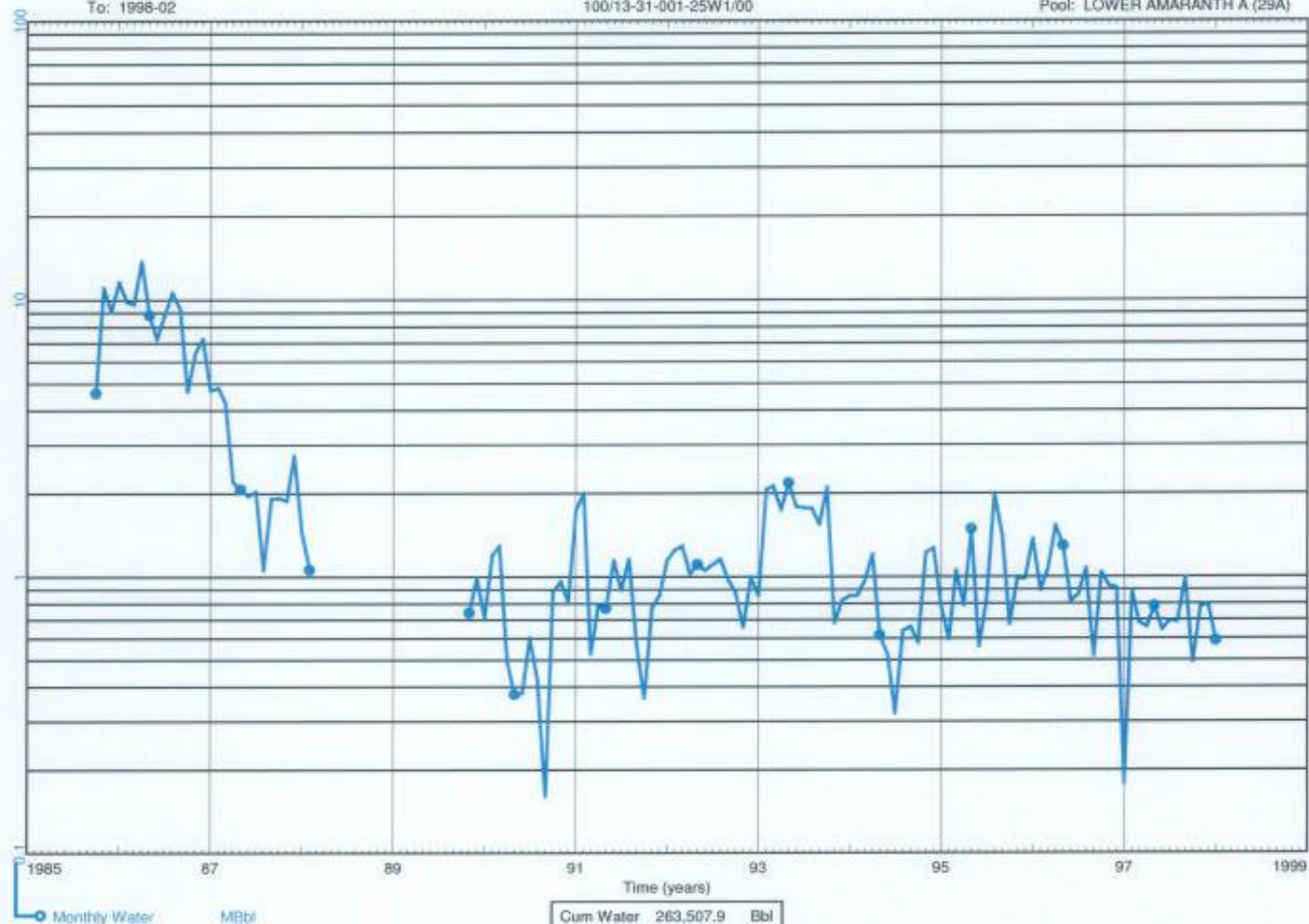
Status: Abandoned Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1985-10  
To: 1996-02

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WW  
100/13-31-001-25W1/00

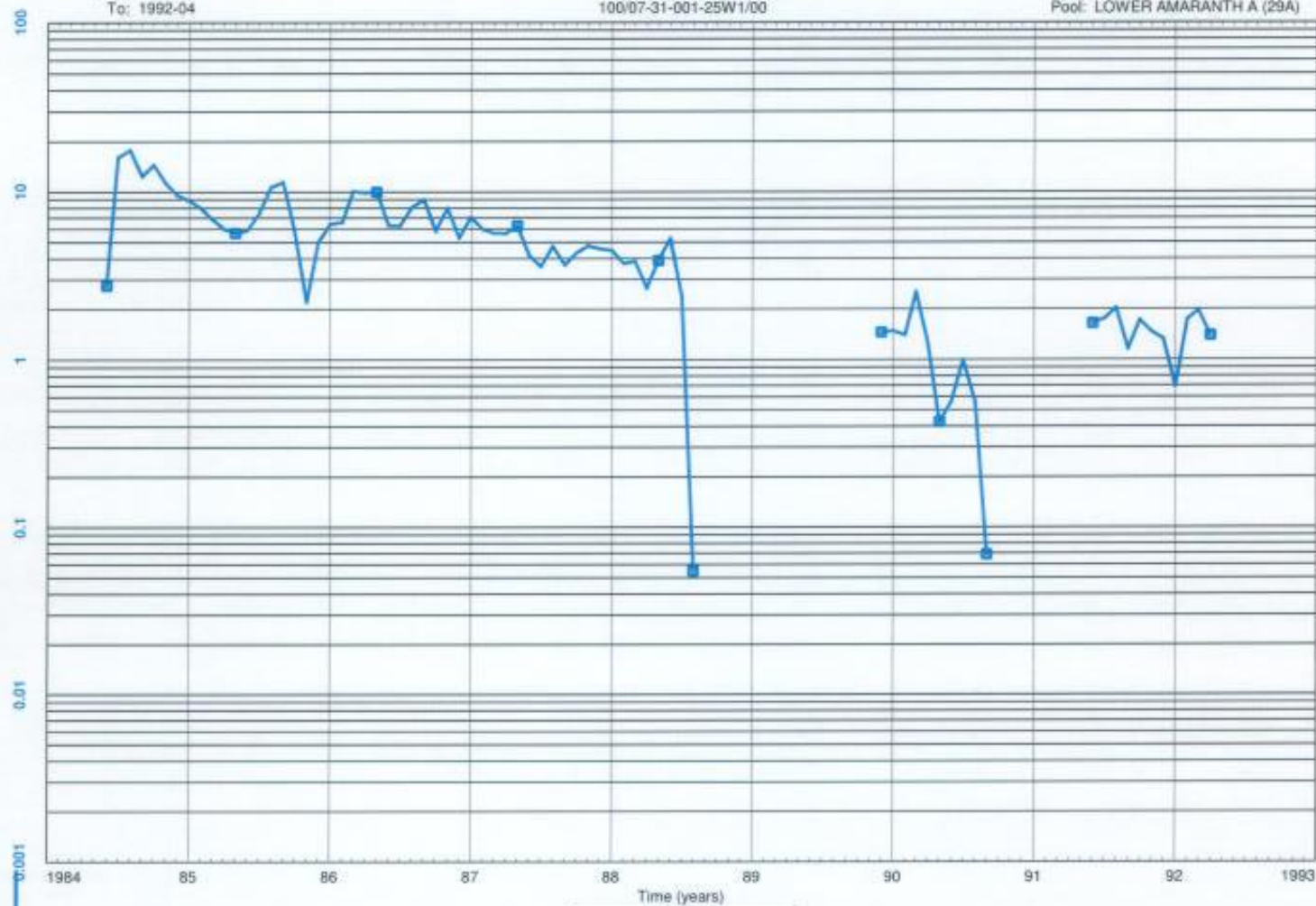
Status: Abandoned Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
From: 1984-06  
To: 1992-04

INDIVIDUAL INJECTION  
Omega Waskada WW-  
100/07-31-001-25W1/00

Status: Abandoned Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



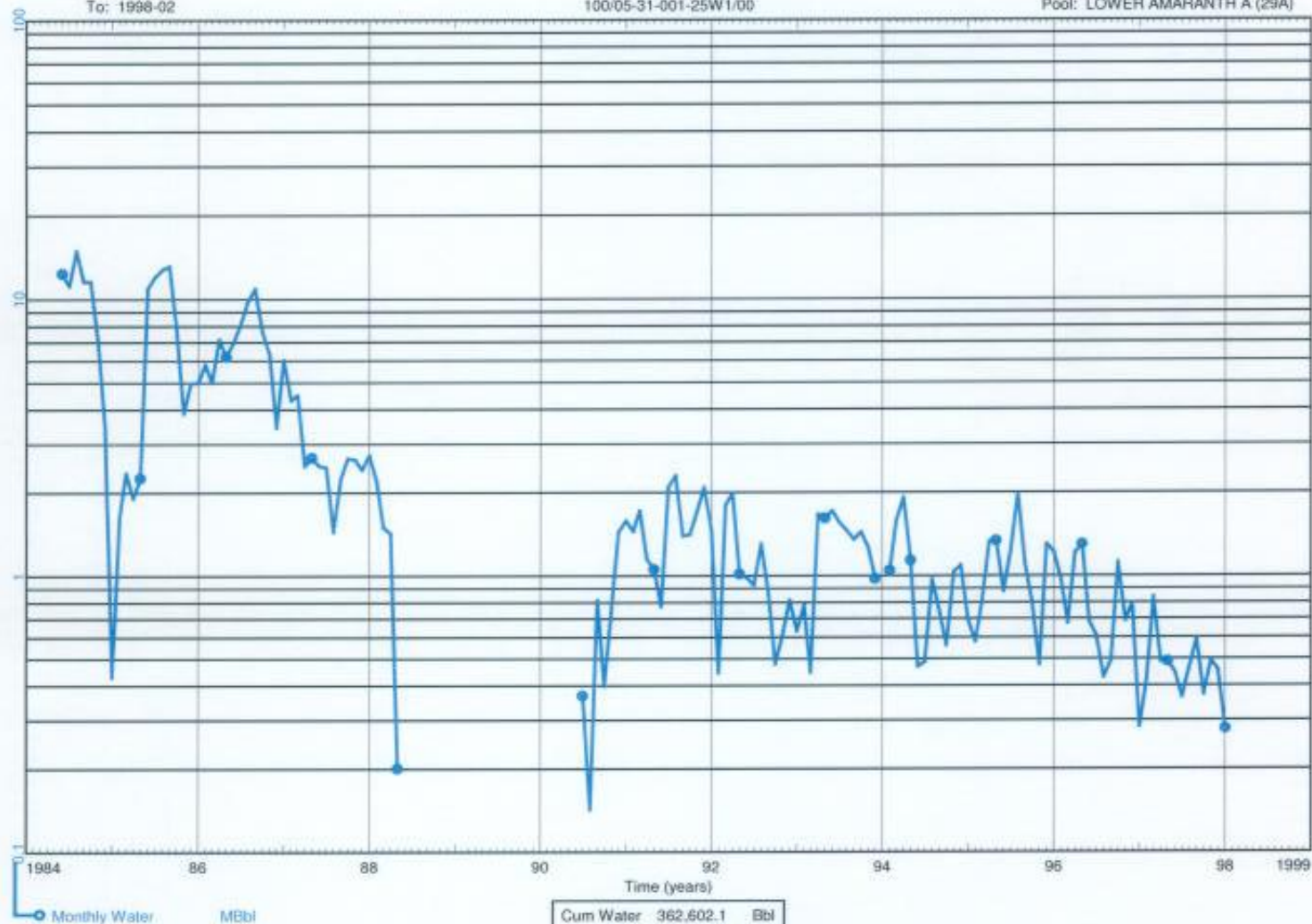
Monthly Water MBbl

Cum Water	372,345.5	Bbl
Cum Gas	0.0	Mcf
Cum CO2	0.0	Mcf

Data As Of: 2010-11 (MB)  
From: 1984-06  
To: 1998-02

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WW  
100/05-31-001-25W1/00

Status: Abandoned Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



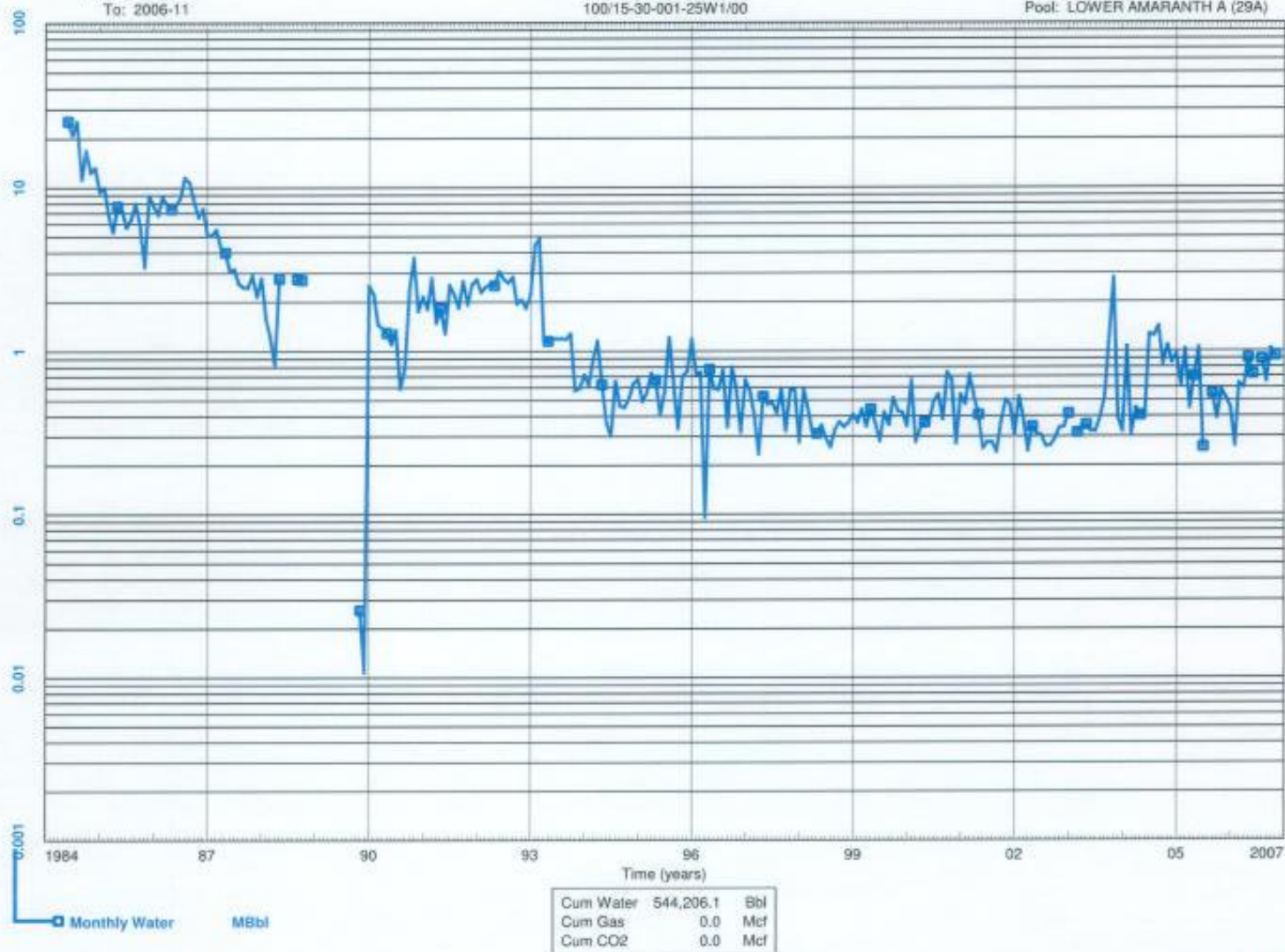
Cum Water	362,602.1	Bbl
Cum Gas	0.0	Mcf
Cum CO2	0.0	Mcf



Data As Of: 2011-01 (MB)  
From: 1984-06  
To: 2006-11

INDIVIDUAL INJECTION  
Penn West Waskada SWD...  
100/15-30-001-25W1/00

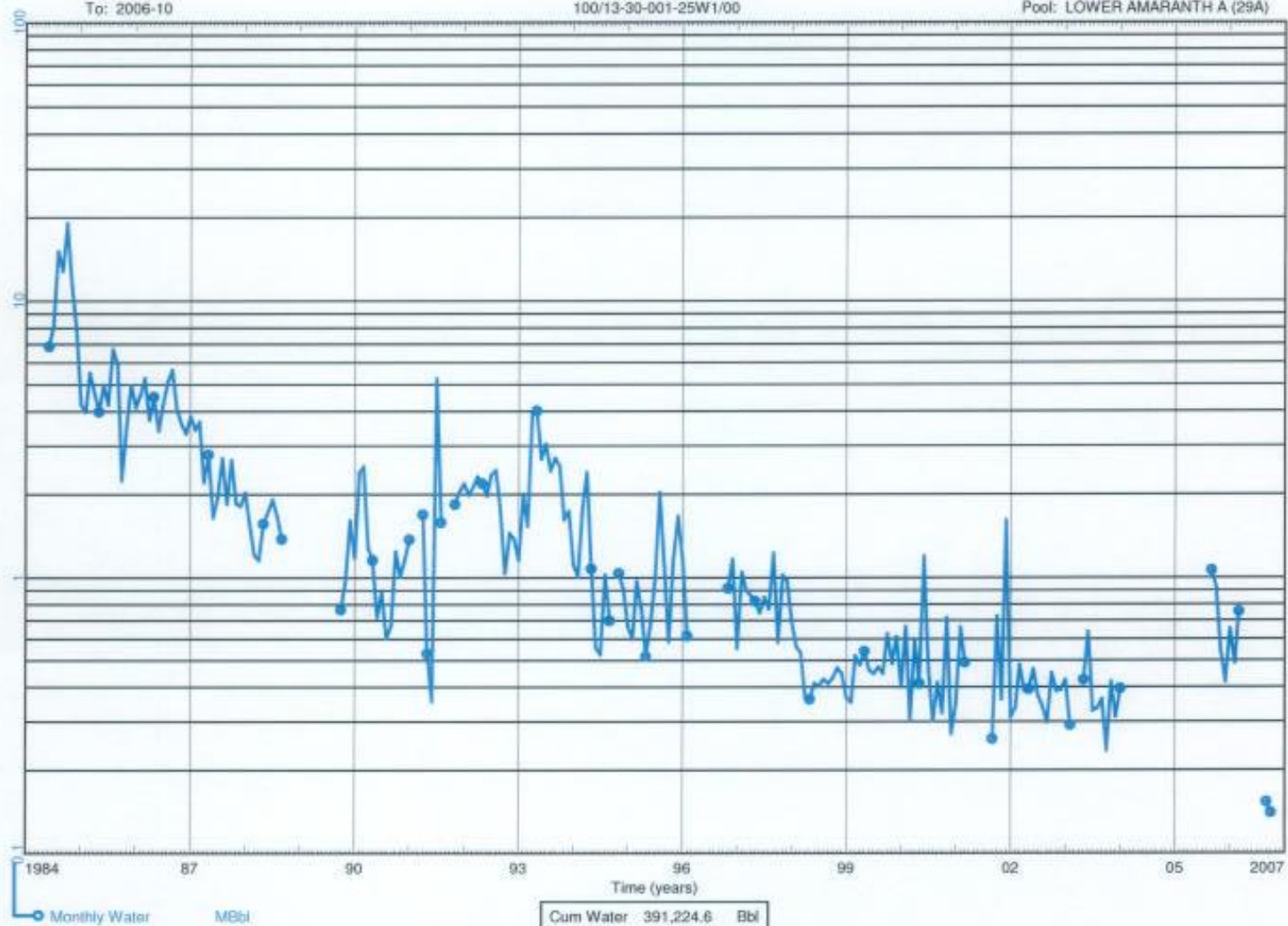
Status: Abandoned Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1984-06  
To: 2006-10

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
100/13-30-001-25W1/00

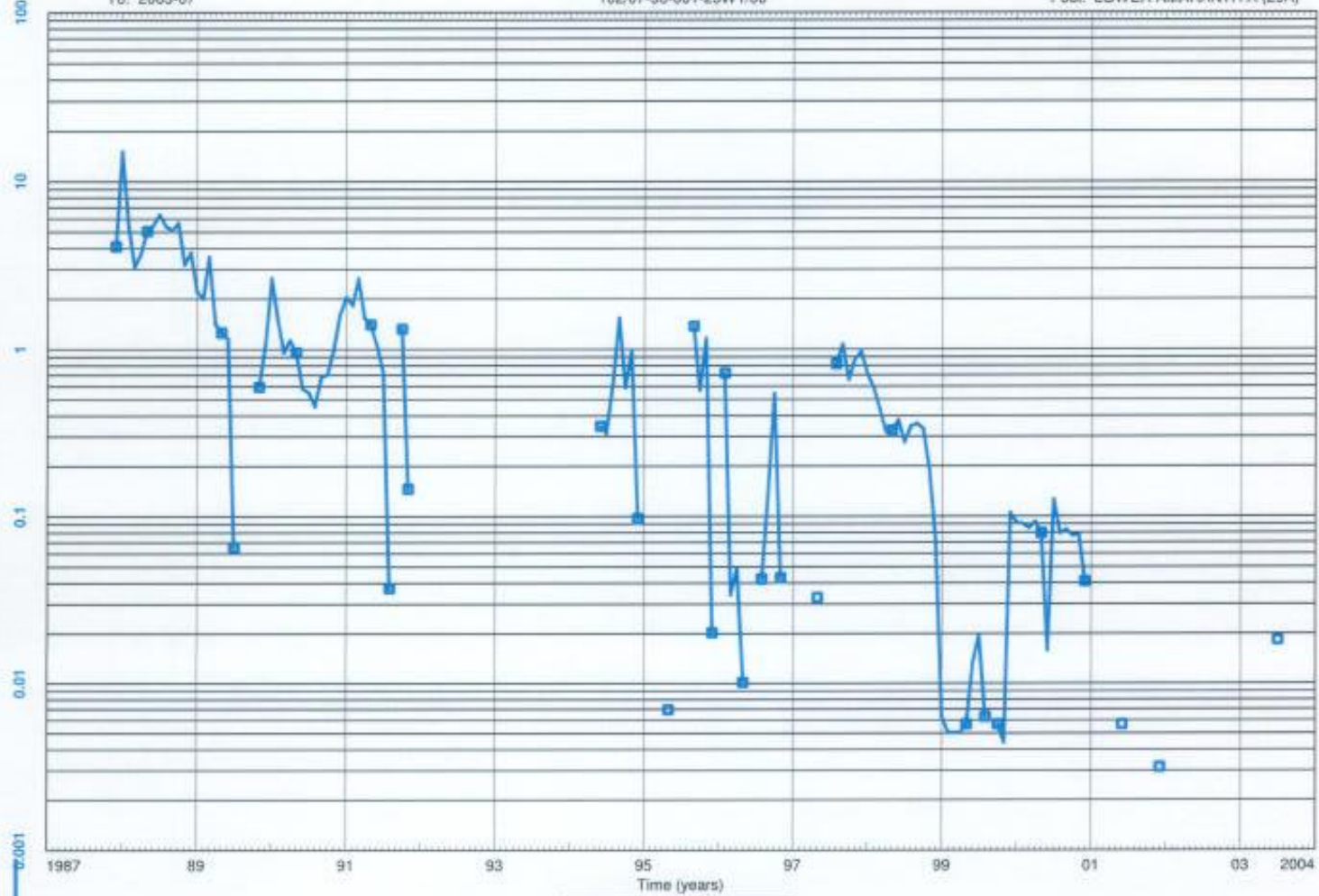
Status: Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 1987-12  
 To: 2003-07

INDIVIDUAL INJECTION  
 Waskada Unit No. 3 Prov. WIW  
 102/07-30-001-25W1/00

Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



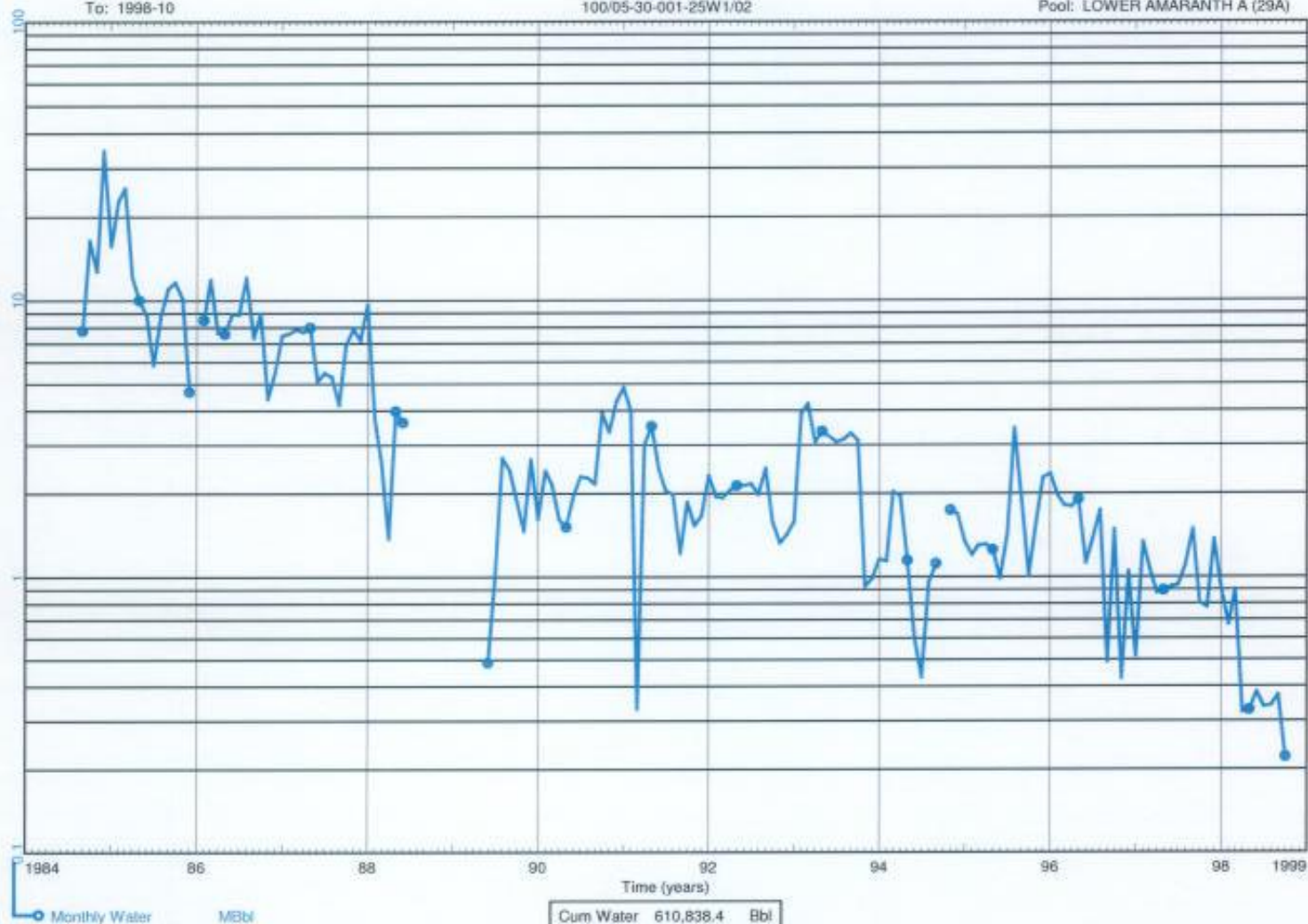
Monthly Water MBbl

Cum Water	128,791.0	Bbl
Cum Gas	0.0	Mcf
Cum CO2	0.0	Mcf

Data As Of: 2010-11 (MB)  
From: 1984-08  
To: 1998-10

INDIVIDUAL INJECTION  
Waskada Unit No. 3 WIW  
100/05-30-001-25W1/02

Status: Abandoned Water Inj Well  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



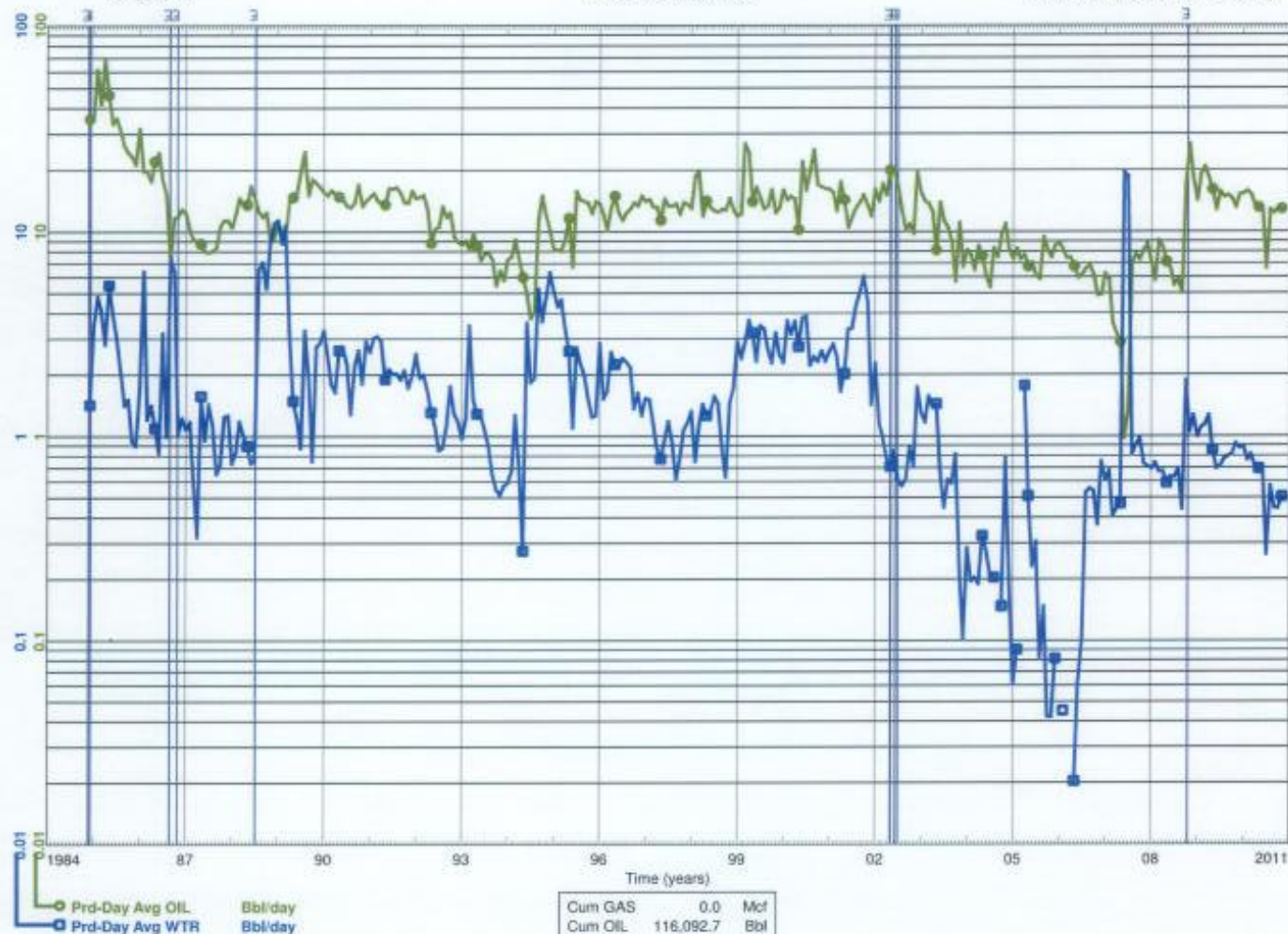
Cum Water	610,838.4	Bbl
Cum Gas	0.0	Mcf
Cum CO2	0.0	Mcf



Data As Of: 2011-01 (MB)  
From: 1984-12  
To: 2010-11

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3  
100/08-05-002-25W1/00

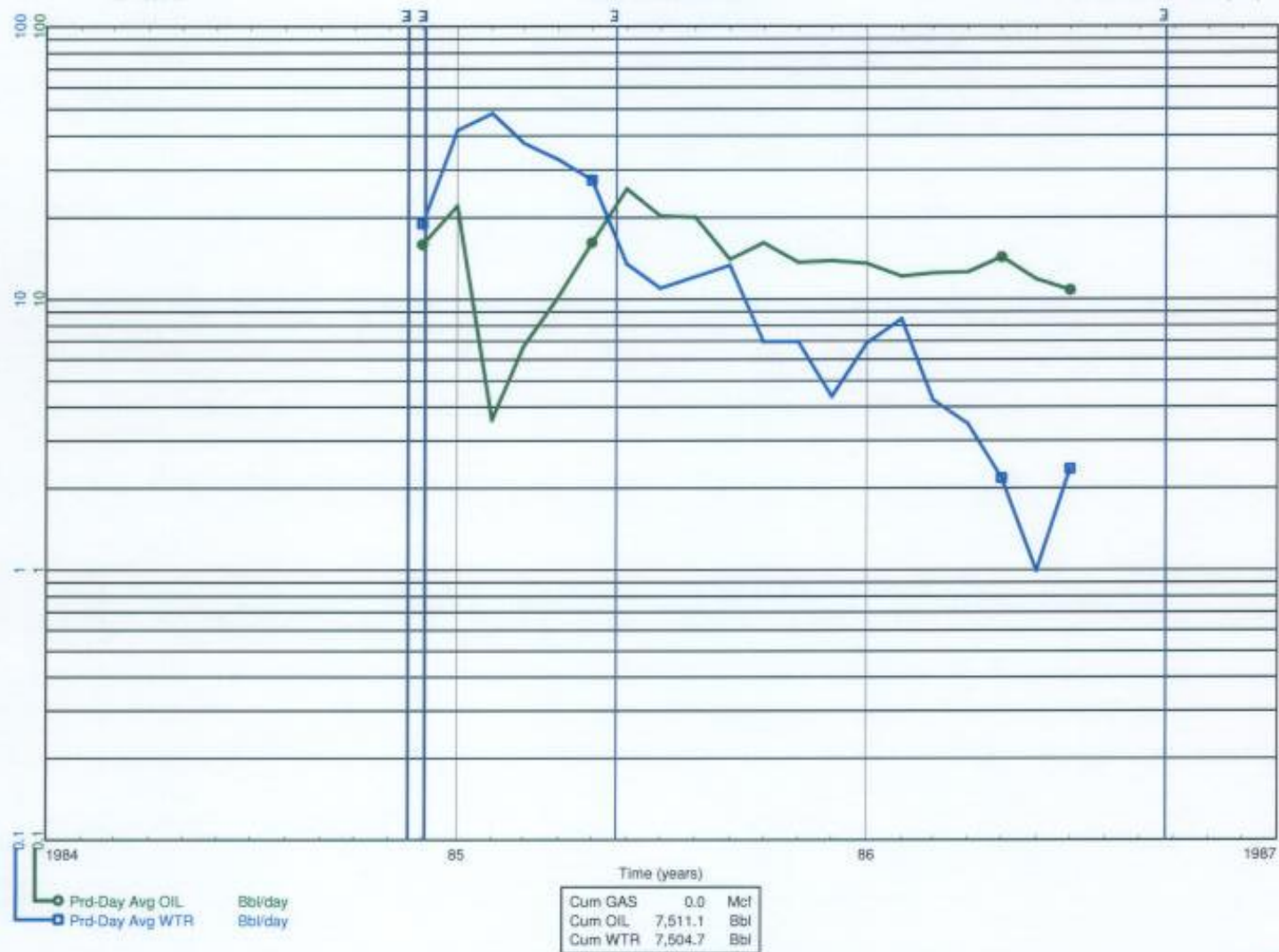
Status: Capable Of Oil Prod  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1984-12  
 To: 1986-07

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/07-05-002-25W1/00

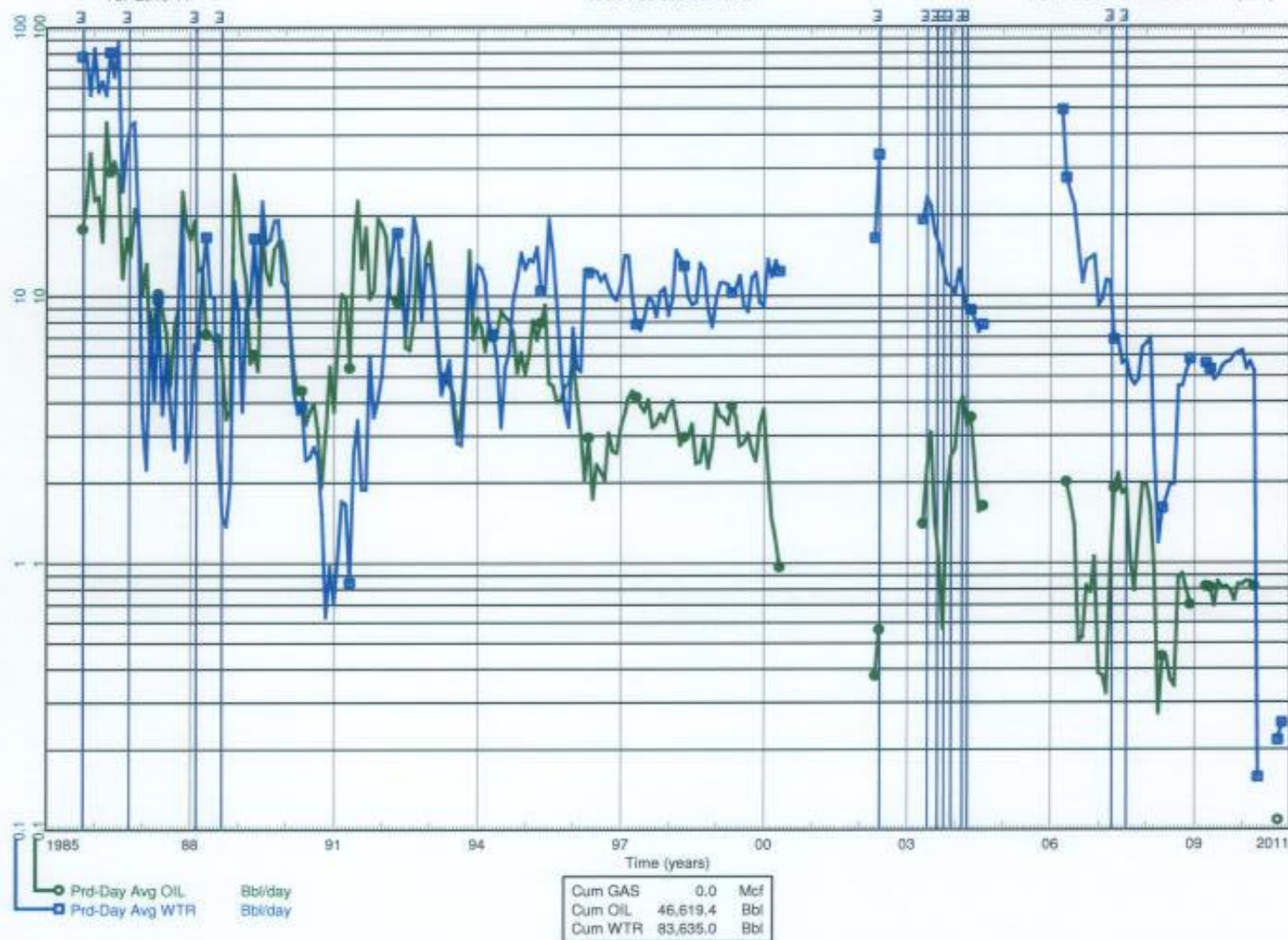
Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1985-10  
 To: 2010-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/04-05-002-25W1/00

Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

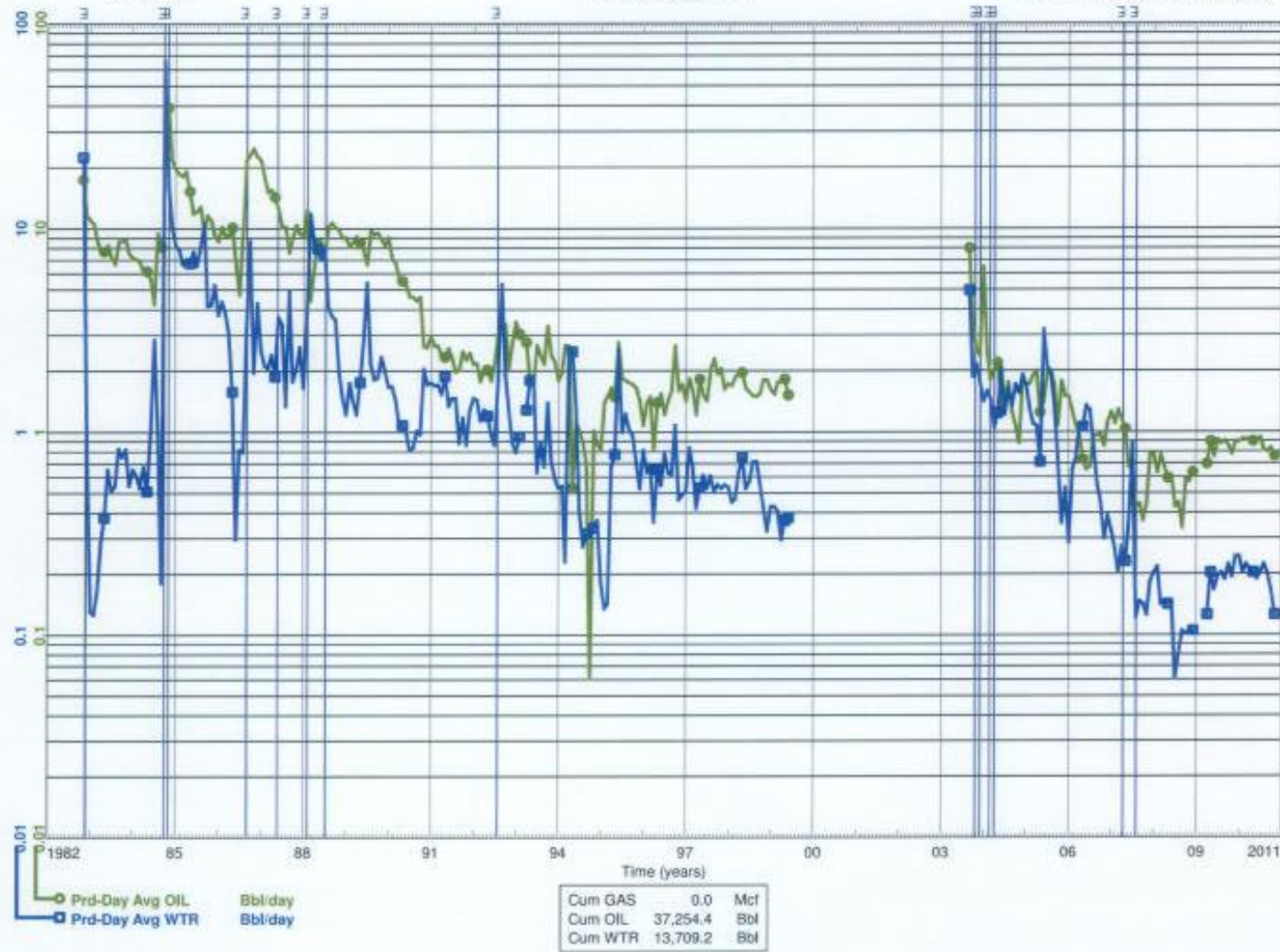




Data As Of: 2011-01 (MB)  
From: 1982-11  
To: 2010-11

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3  
100/03-05-002-25W1/00

Status: Capable Of Oil Prod  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)

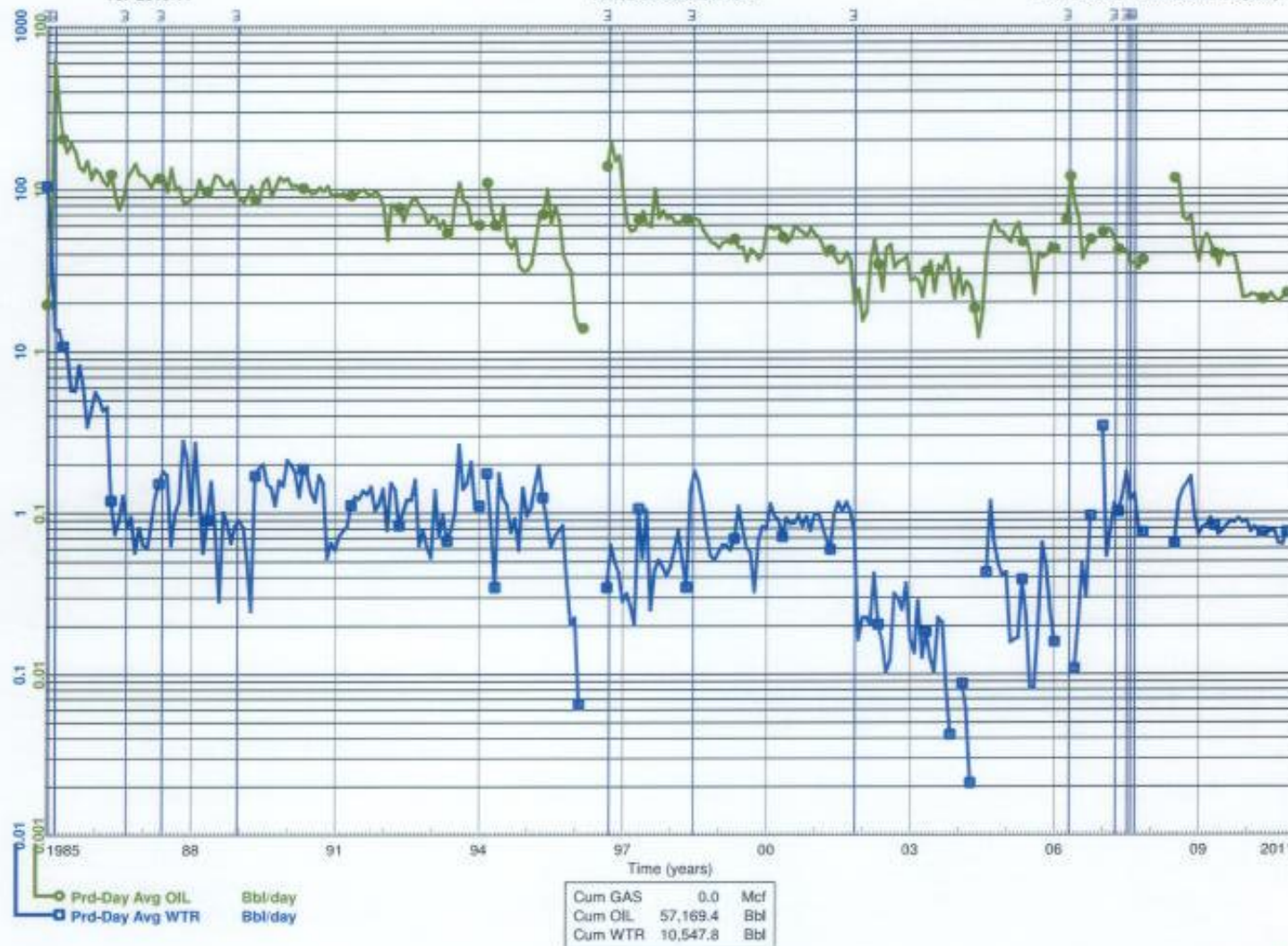




Data As Of: 2011-01 (MB)  
 From: 1985-01  
 To: 2010-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/02-05-002-25W1/00

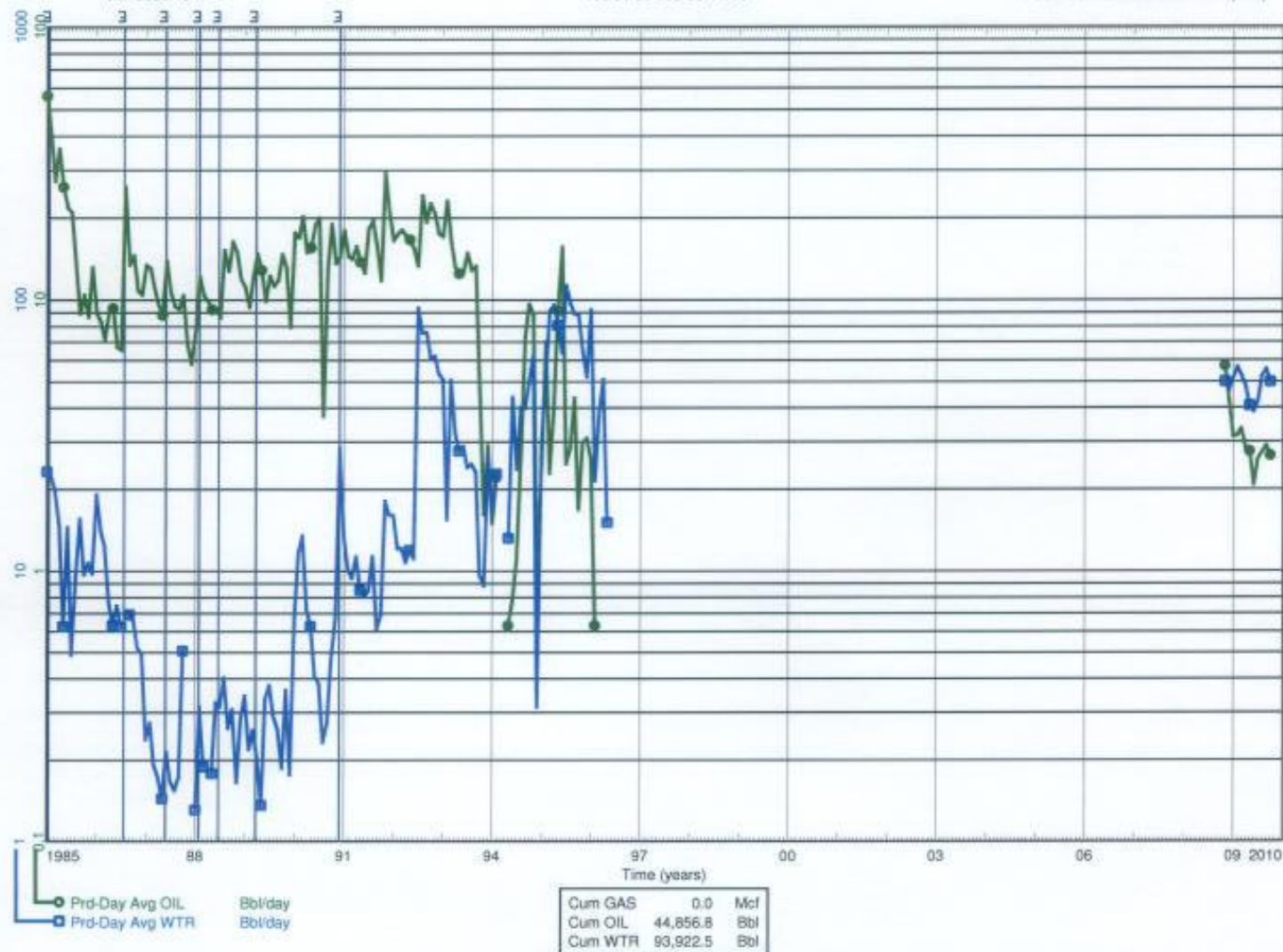
Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1985-01  
 To: 2009-10

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/01-05-002-25W1/00

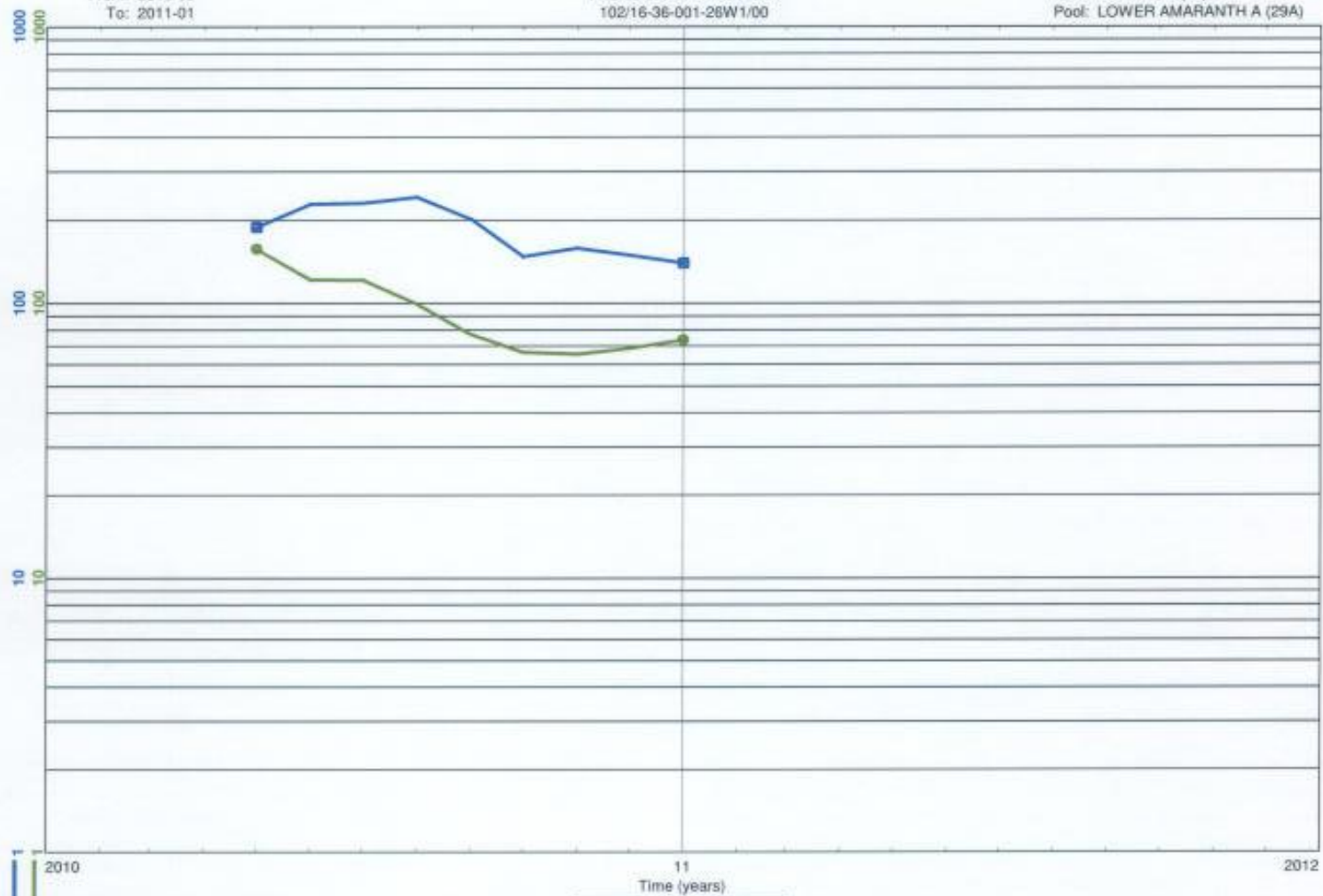
Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 2010-05  
 To: 2011-01

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 HZNTL  
 102/16-36-001-26W1/00

Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

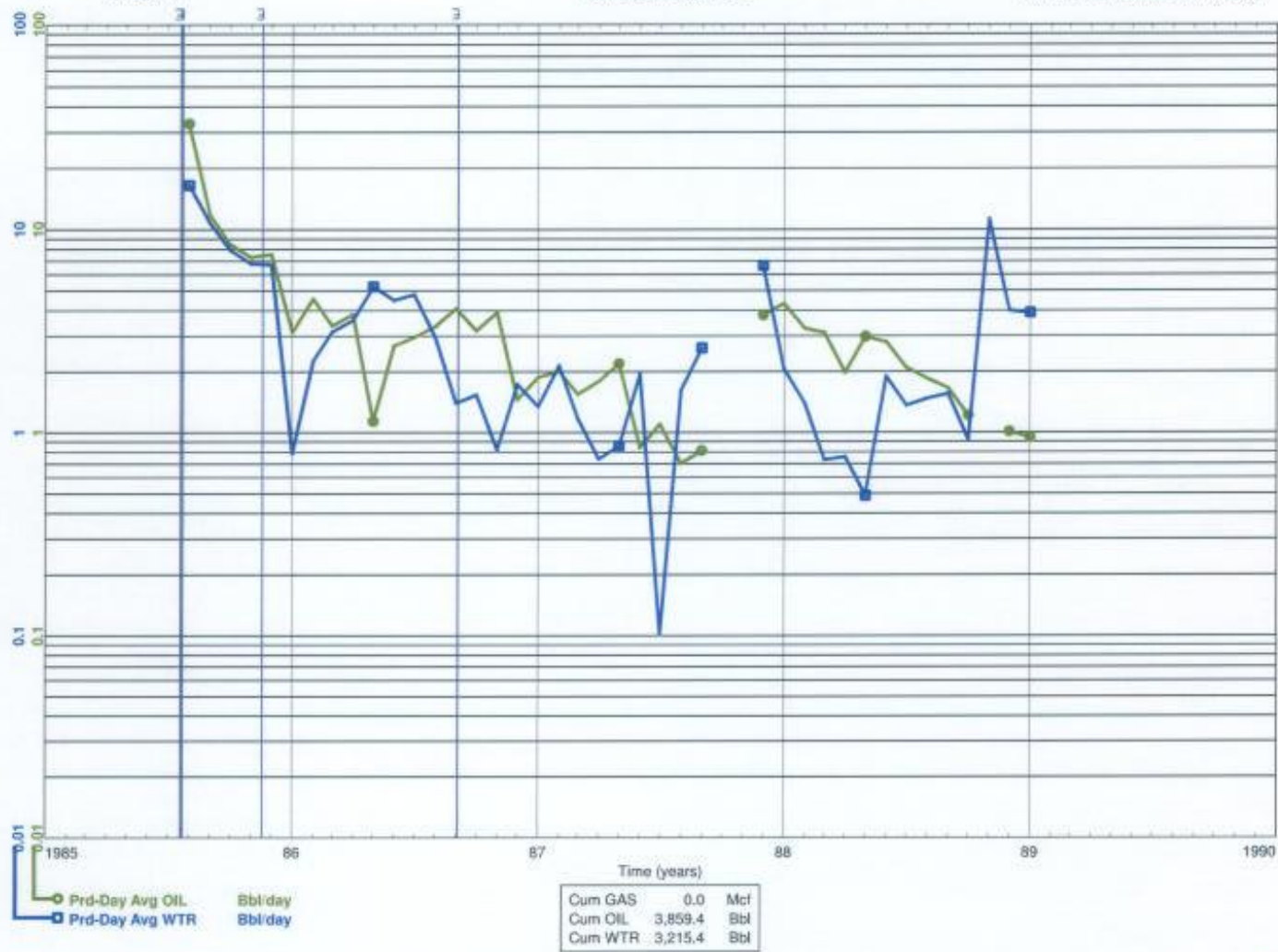


Cum GAS	0.7	Mcf
Cum OIL	19,957.8	Bbl
Cum WTR	41,726.6	Bbl

Data As Of: 2011-01 (MB)  
 From: 1985-08  
 To: 1989-01

INDIVIDUAL PRODUCTION  
 -Omega-Waskada-  
 100/16-36-001-26W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

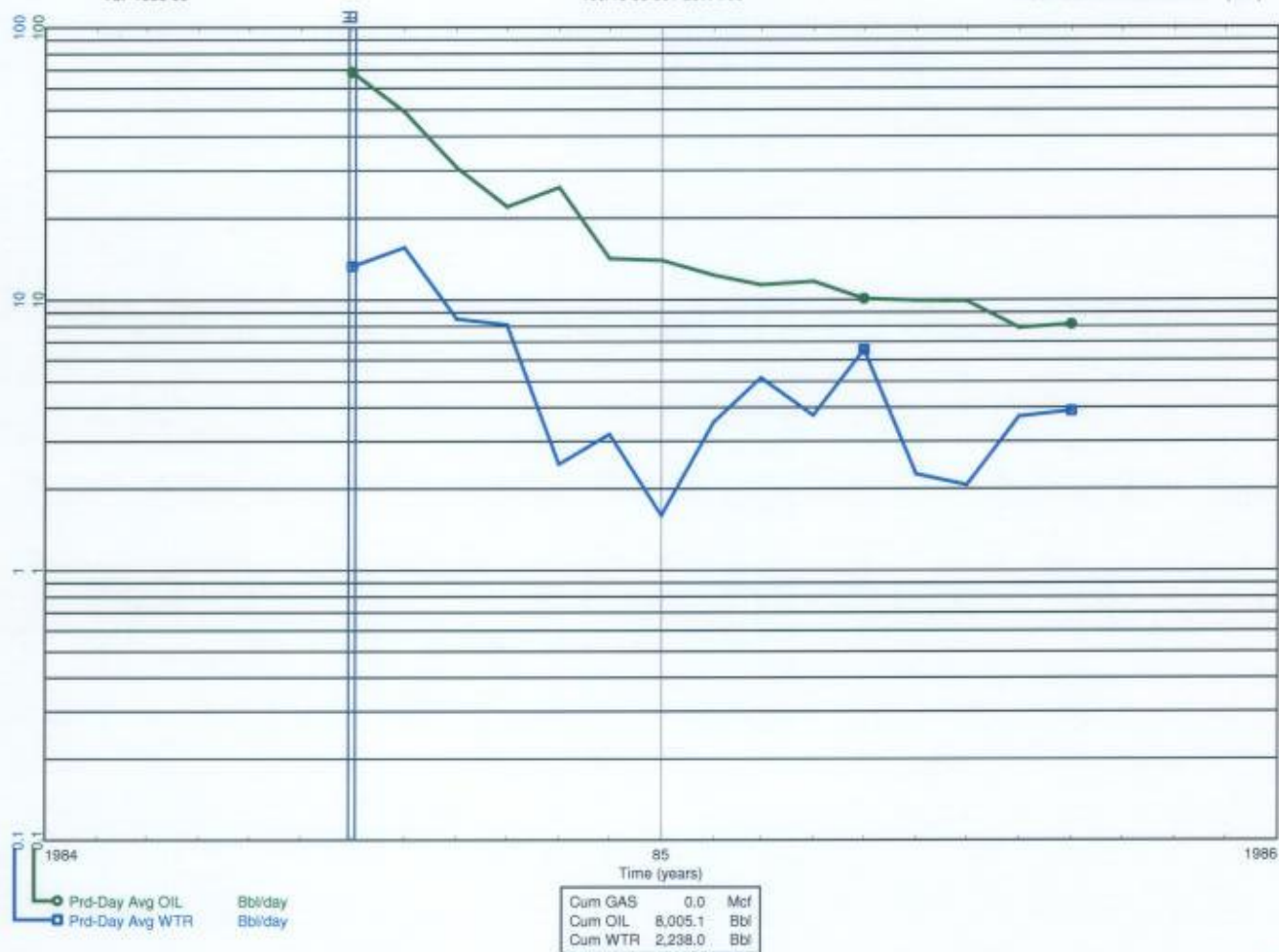




Data As Of: 2010-11 (MB)  
 From: 1984-07  
 To: 1985-09

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/15-36-001-26W1/00

Status: Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



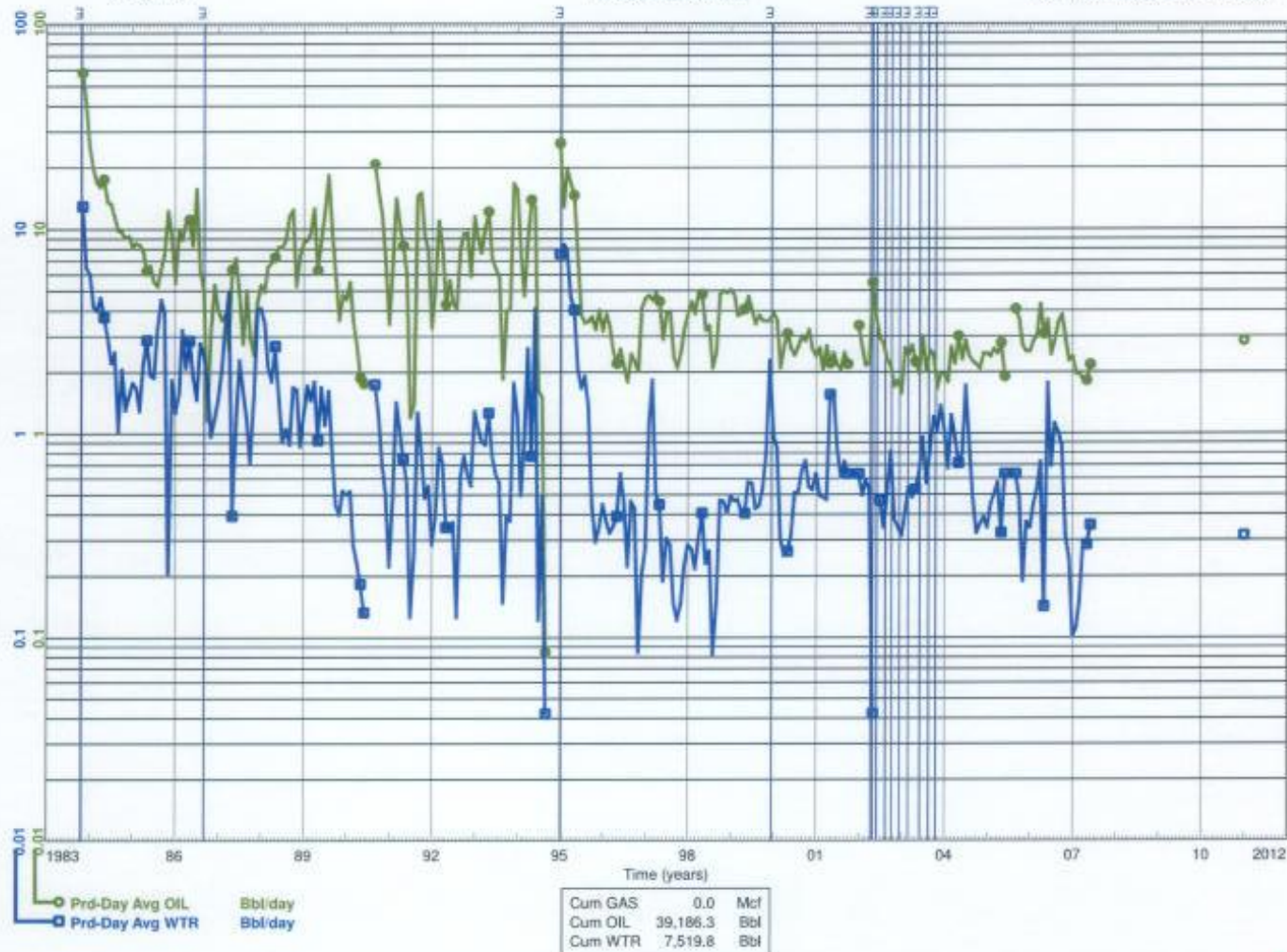
Friday, February 11, 2011, 03:54 PM

geoSCOUT  
 www.geoscout.com

Data As Of: 2011-01 (MB)  
 From: 1983-11  
 To: 2011-01

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/14-36-001-26W1/00

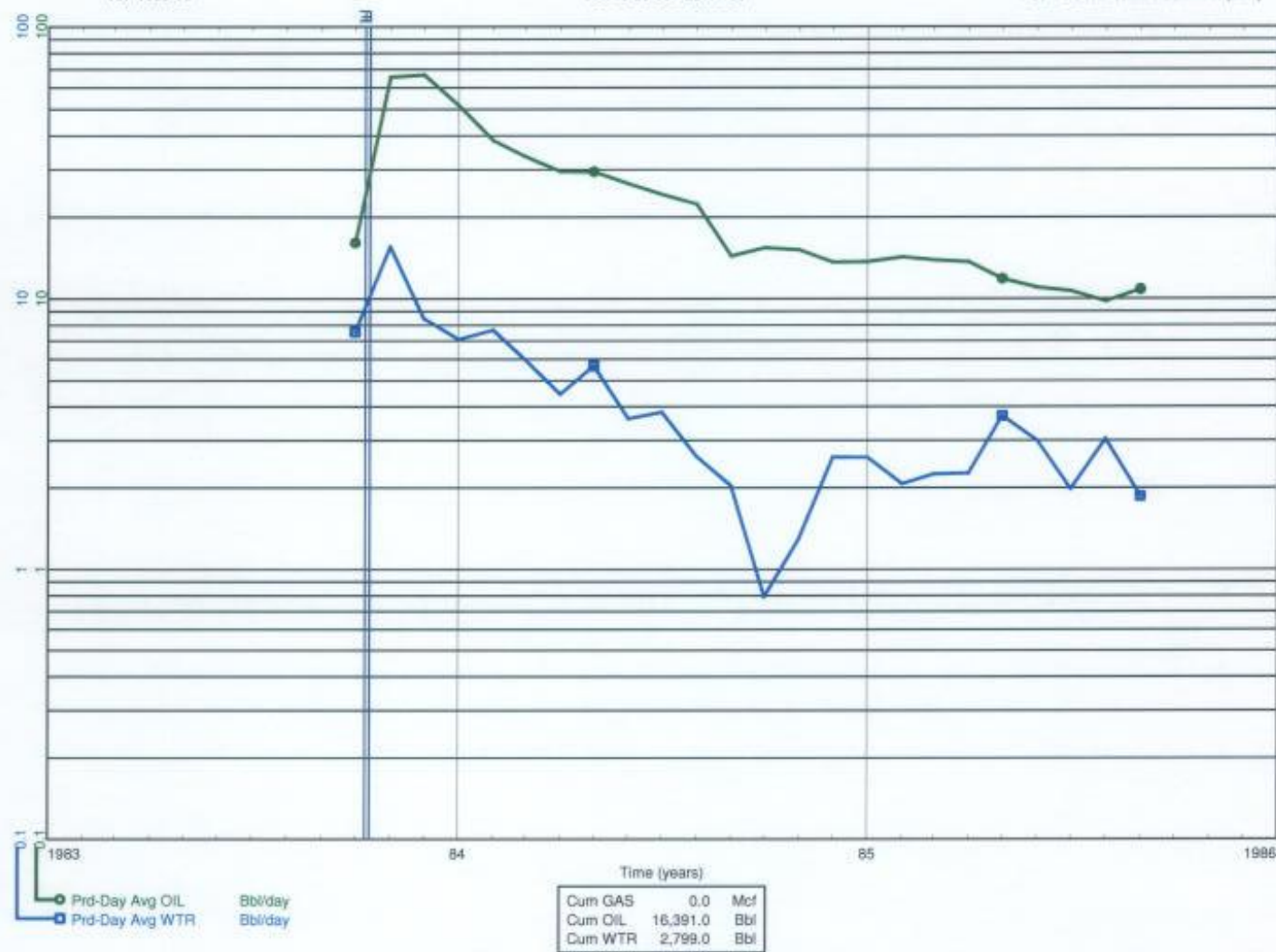
Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1983-10  
 To: 1985-09

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/13-36-001-26W1/00

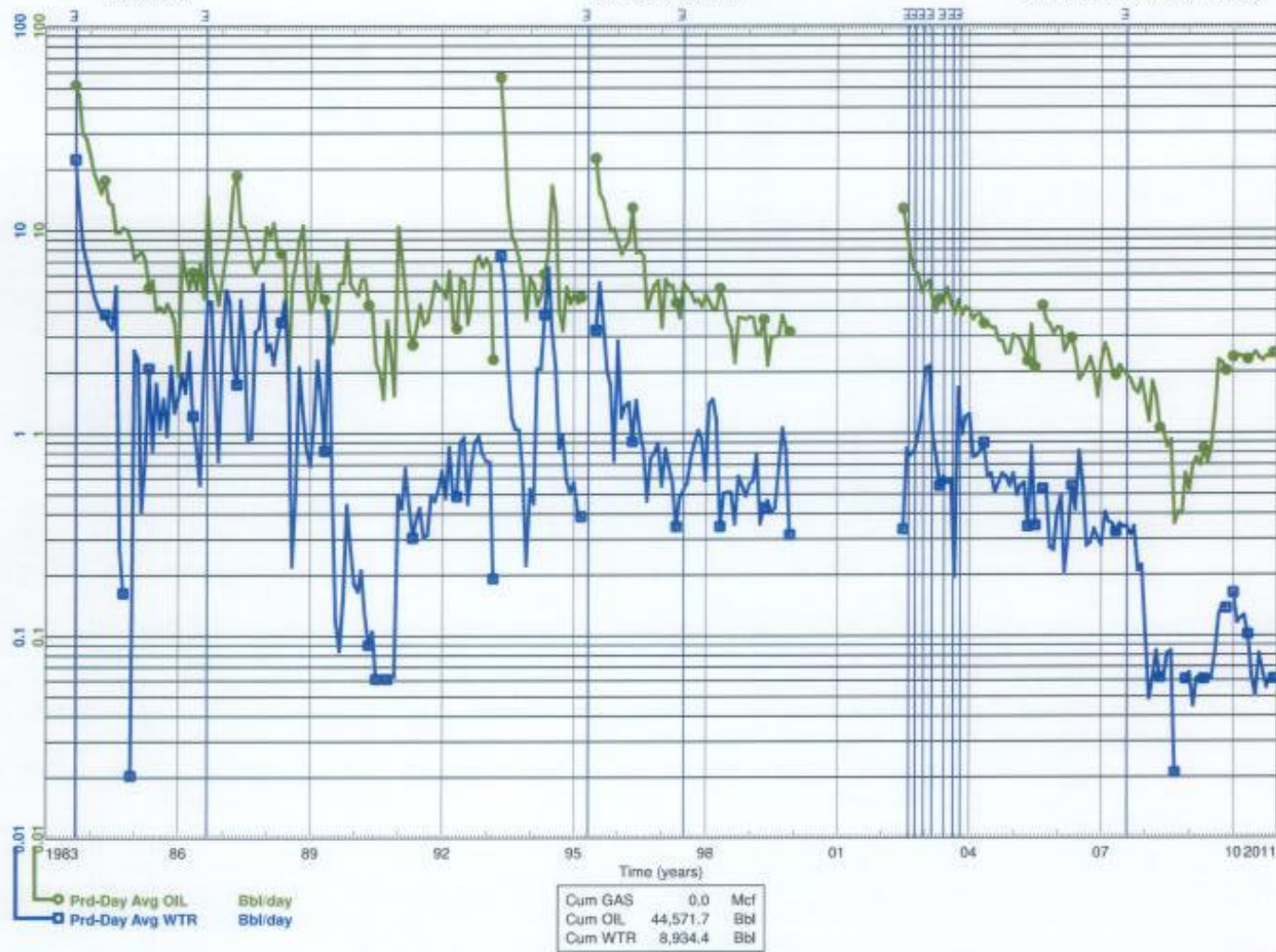
Status: Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 1983-09  
 To: 2010-12

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/11-36-001-26W1/00

Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

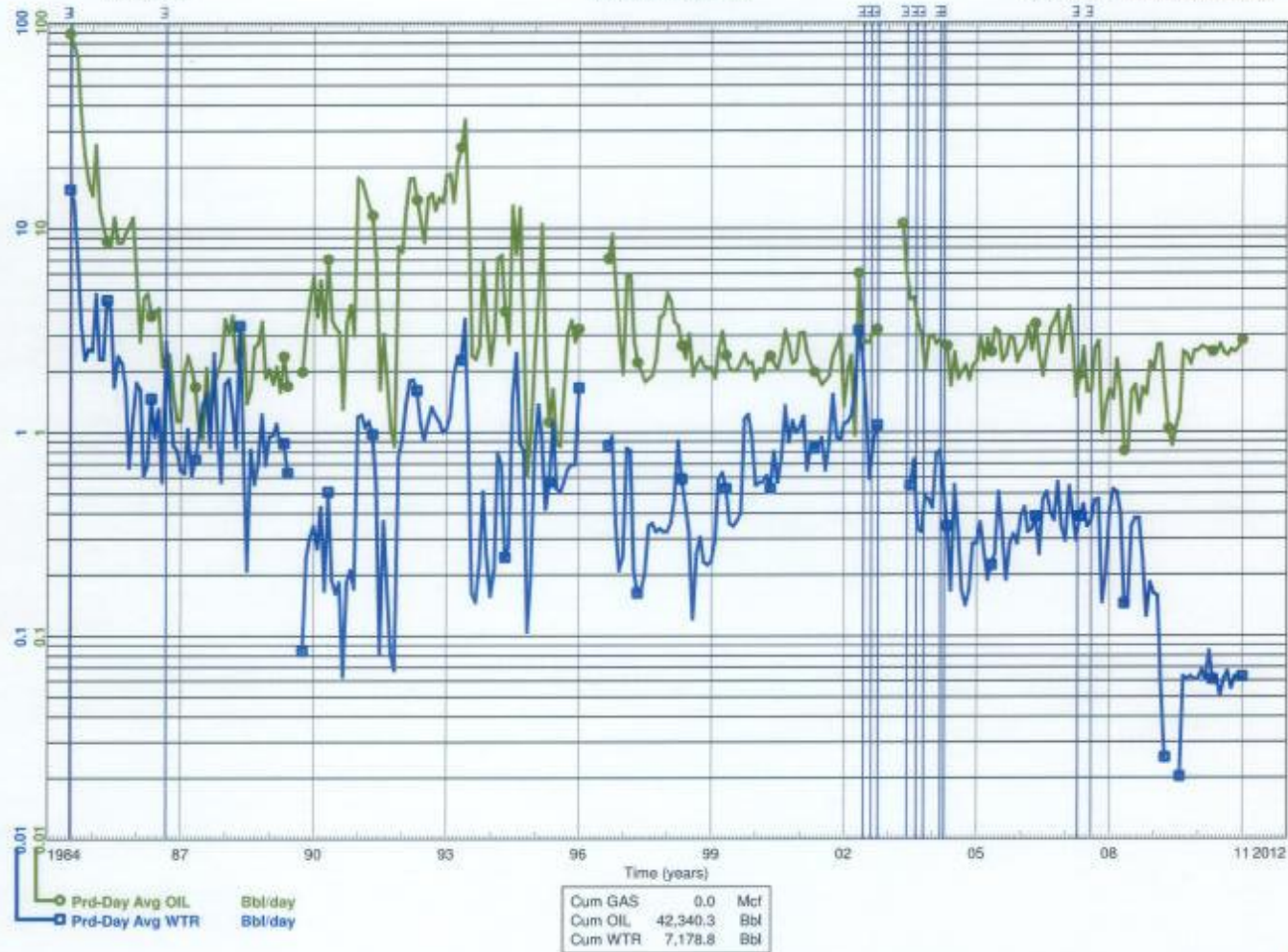




Data As Of: 2011-01 (MB)  
From: 1984-07  
To: 2011-01

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3  
100/10-36-001-25W1/00

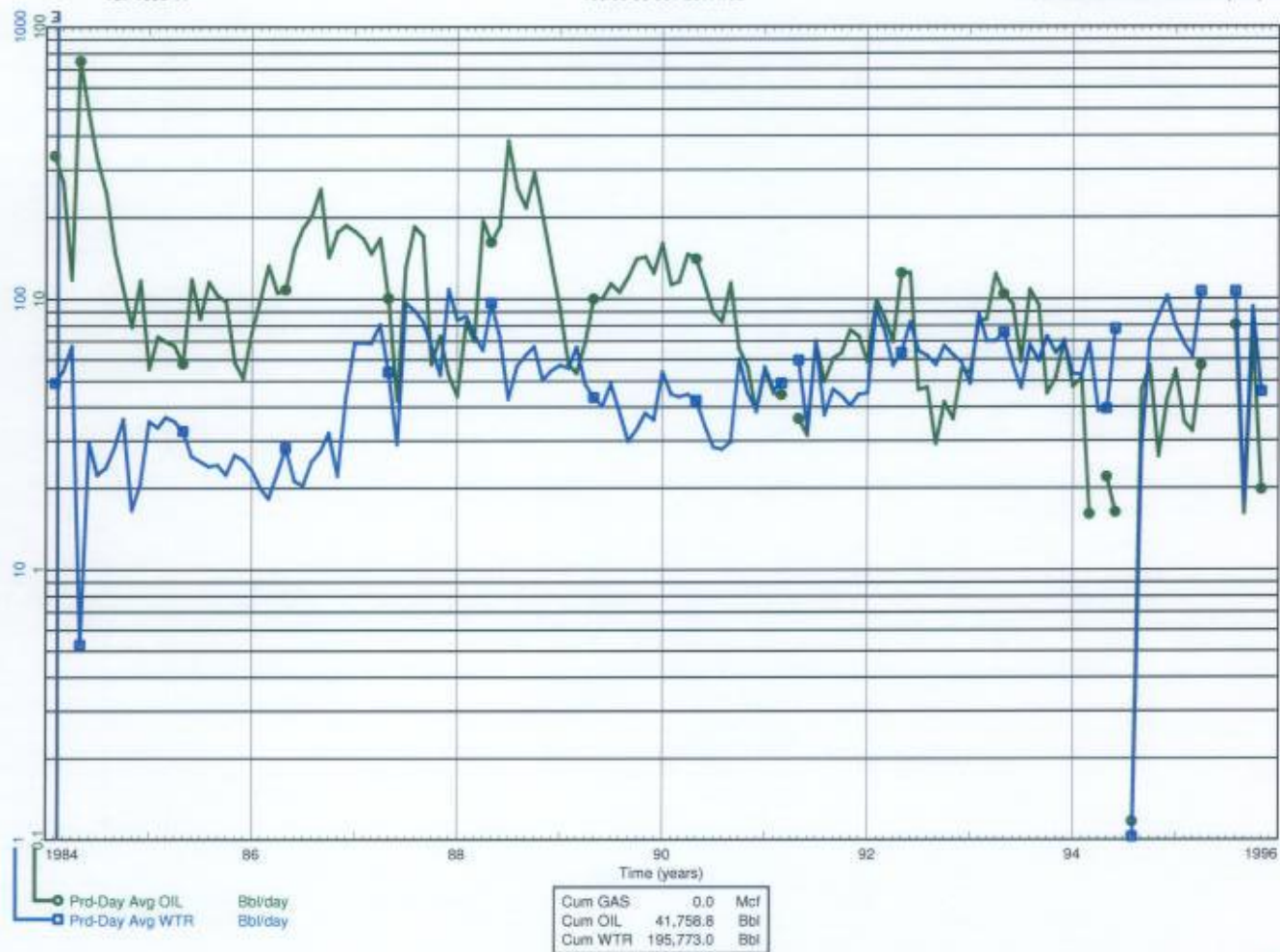
Status: Capable Of Oil Prod  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1984-02  
 To: 1995-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/09-36-001-26W1/02

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

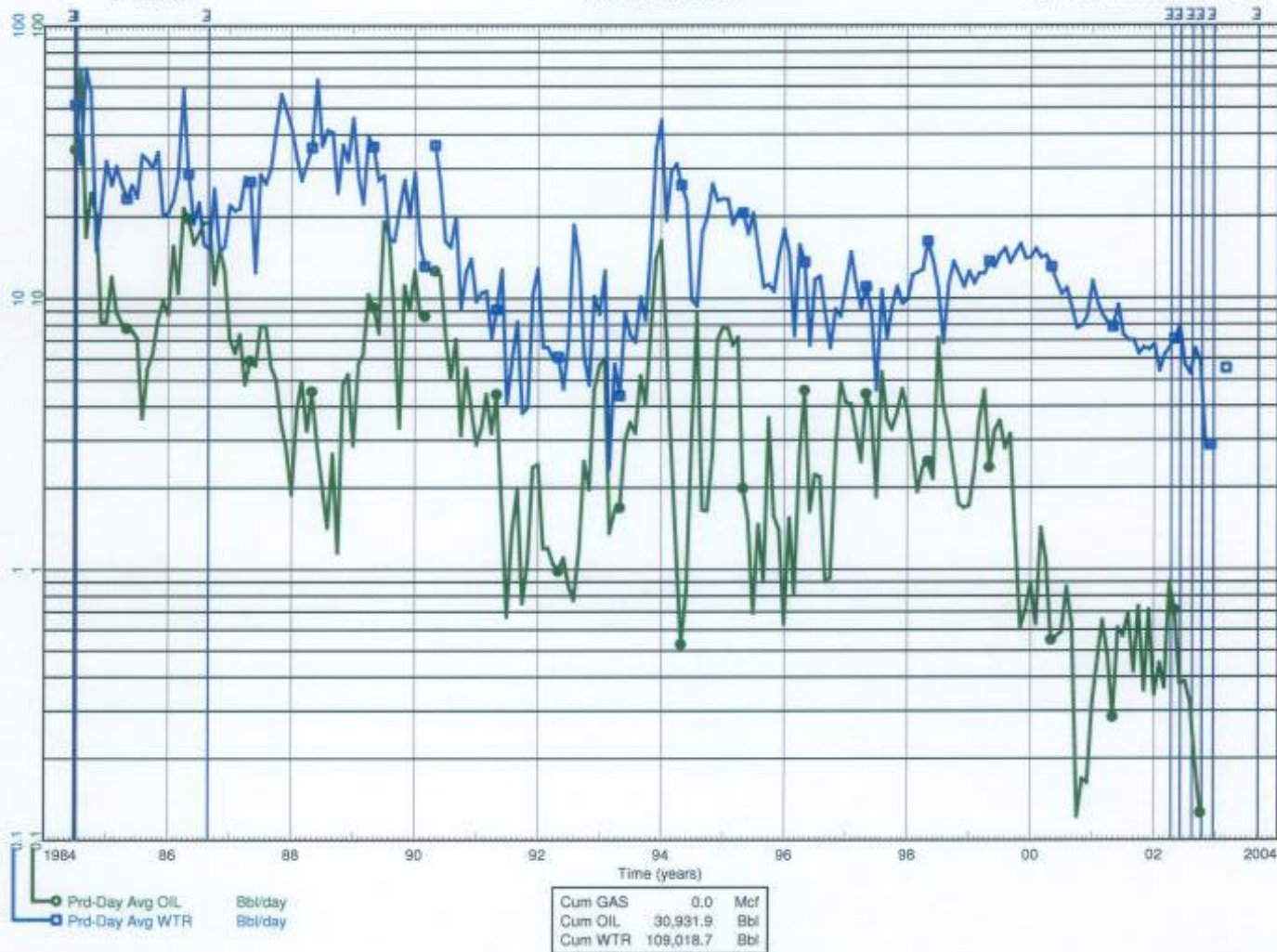


Friday, February 11, 2011, 03:53 PM

Data As Of: 2010-11 (MB)  
 From: 1984-07  
 To: 2003-03

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/08-36-001-26W1/00

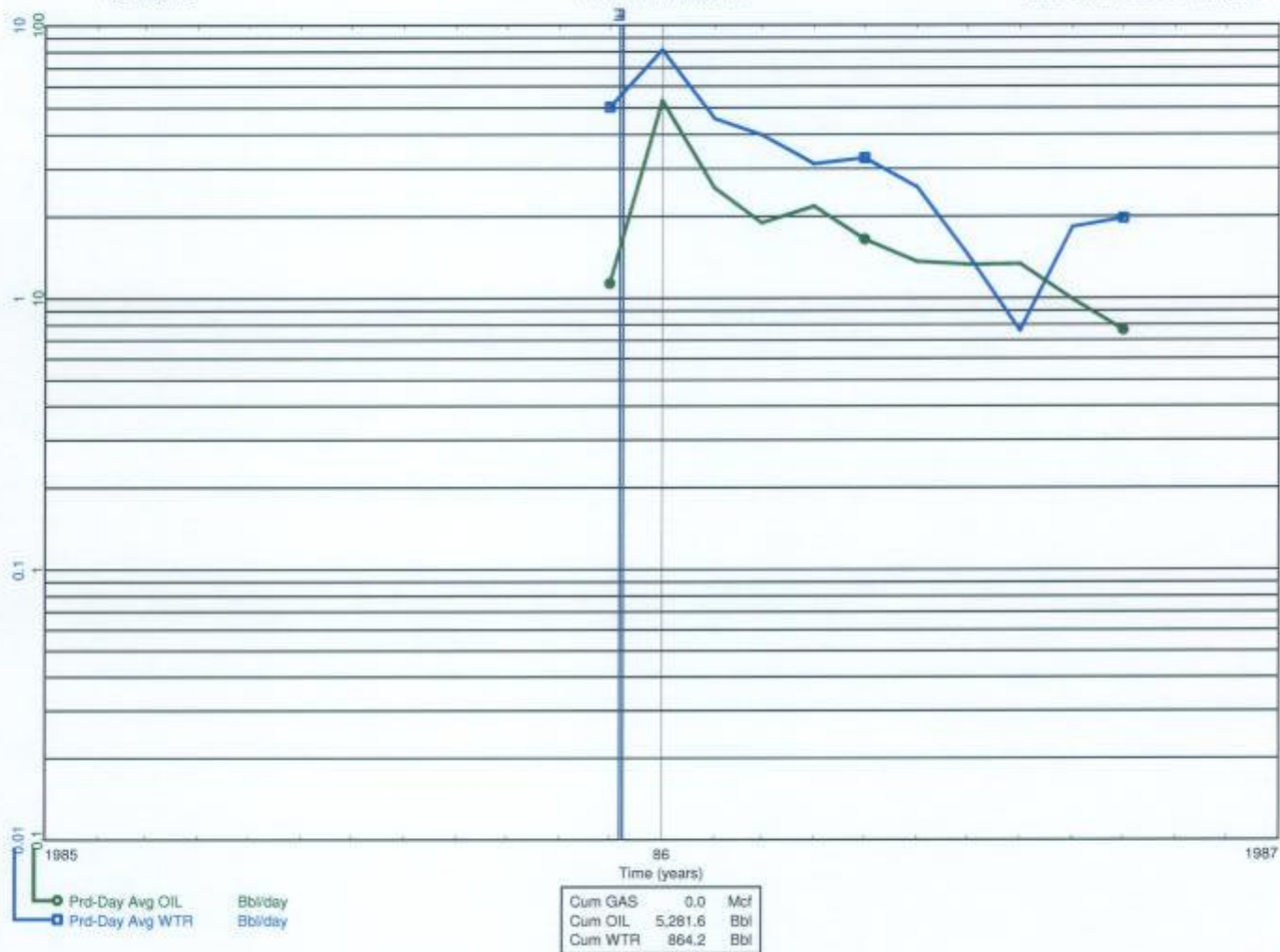
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1985-12  
 To: 1986-10

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/07-36-001-26W1/00

Status: Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

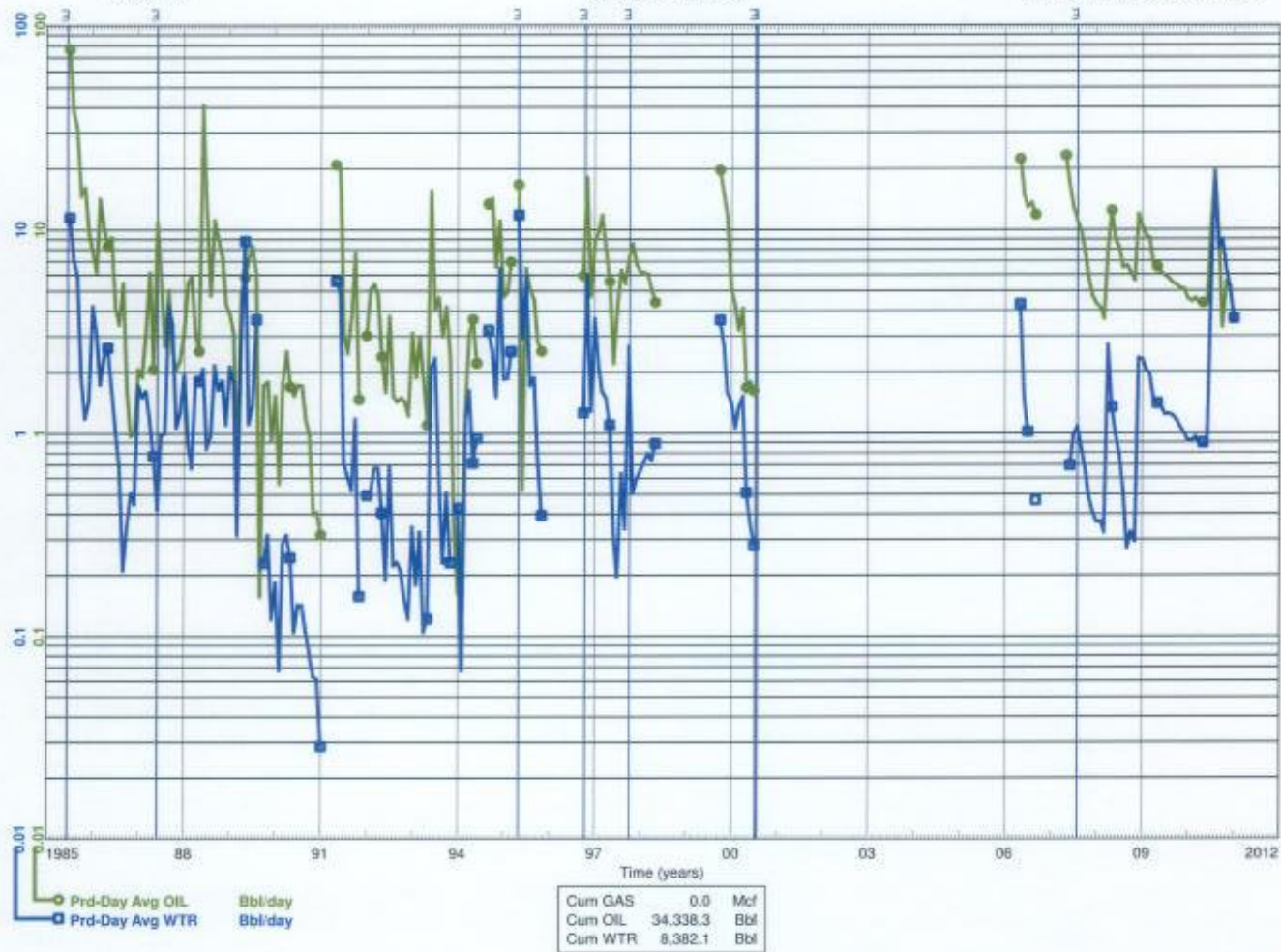




Data As Of: 2011-01 (MB)  
 From: 1985-07  
 To: 2011-01

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/06-36-001-26W1/00

Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

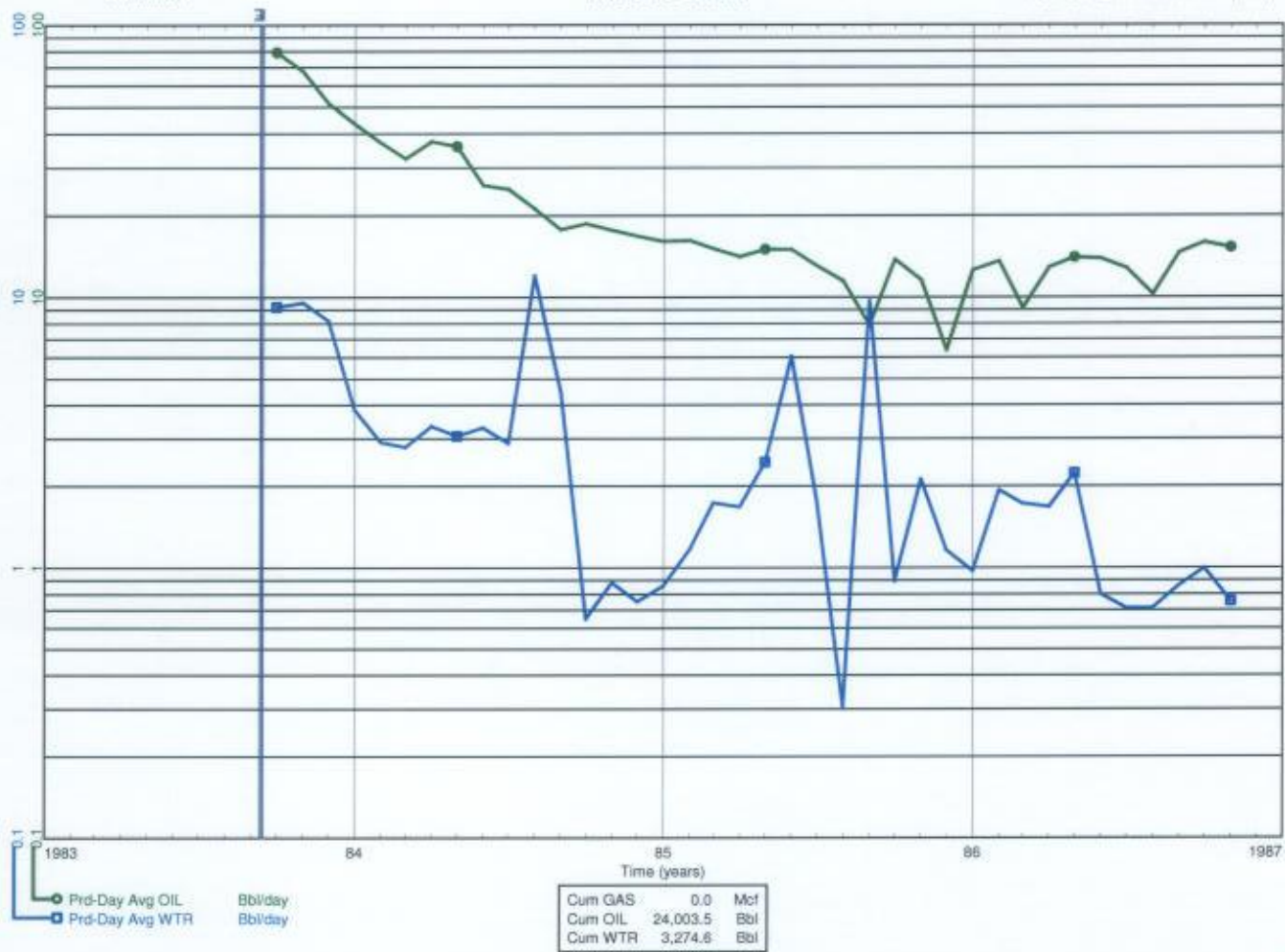


Thursday, April 21, 2011, 01:53 PM

Data As Of: 2010-11 (MB)  
 From: 1983-10  
 To: 1986-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/05-36-001-26W1/00

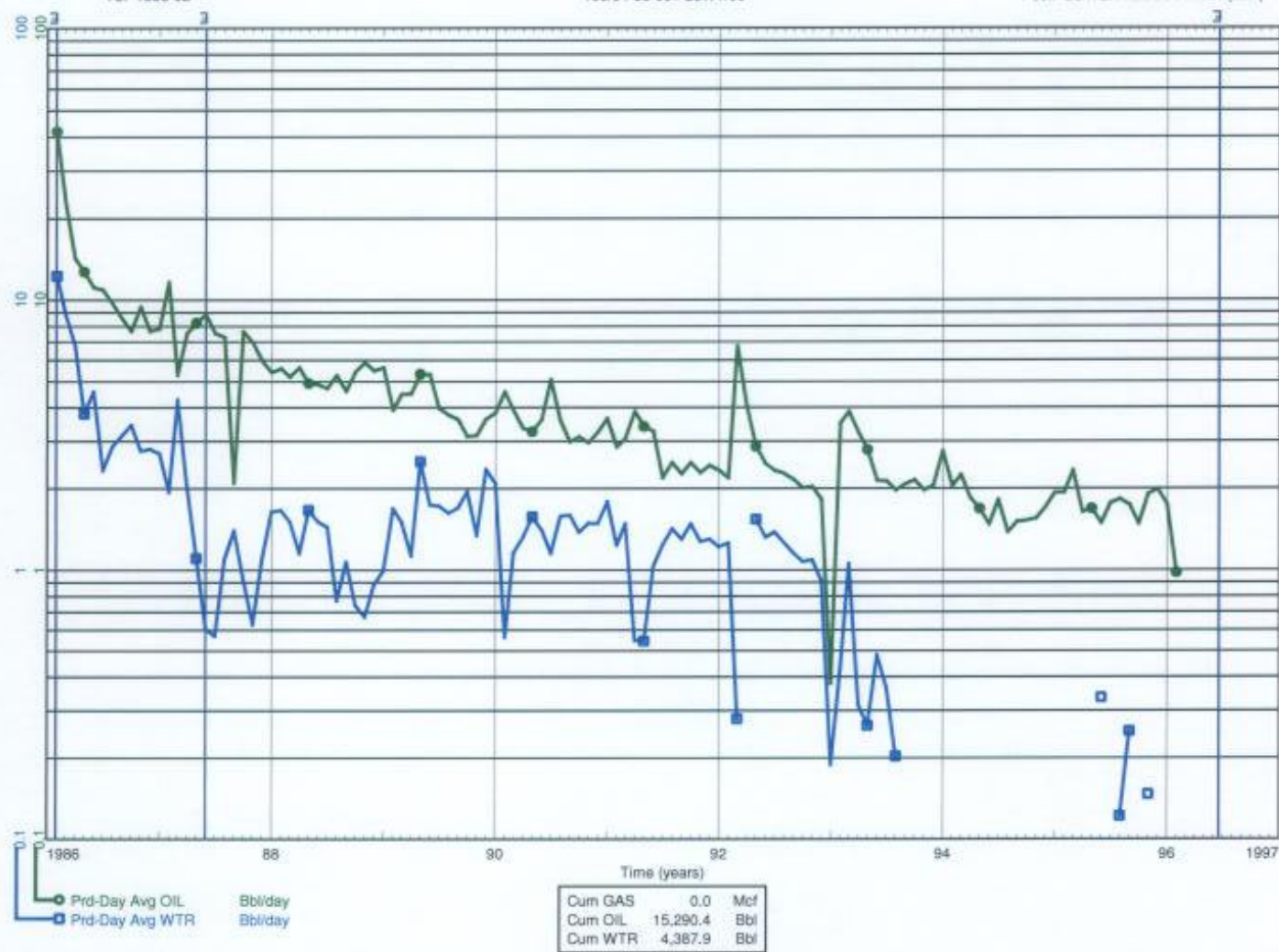
Status: Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1986-02  
To: 1996-02

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3  
100/04-36-001-26W1/00

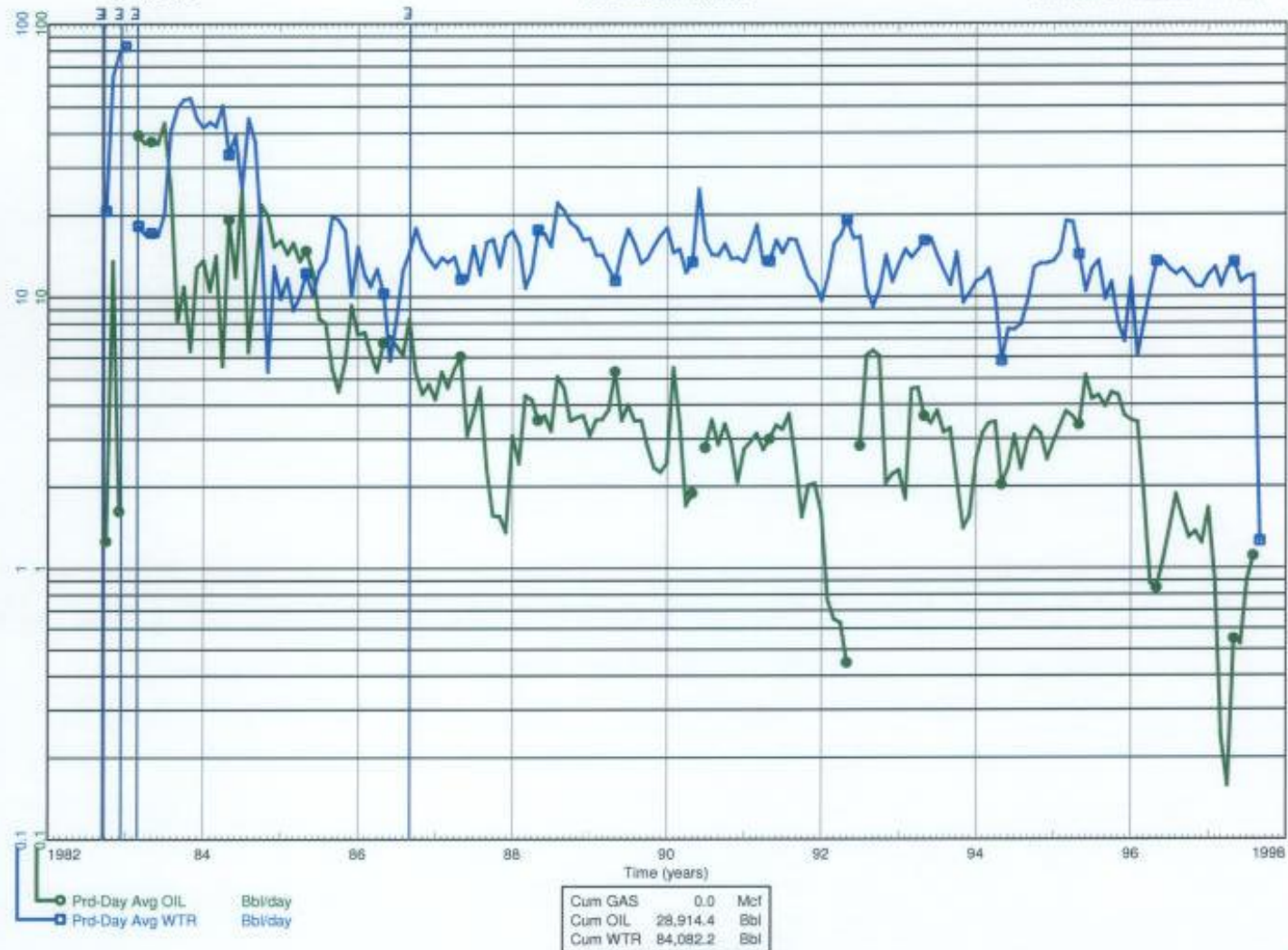
Status: Abandoned Producer  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Date As Of: 2010-11 (MB)  
 From: 1982-10  
 To: 1997-09

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/14-32-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

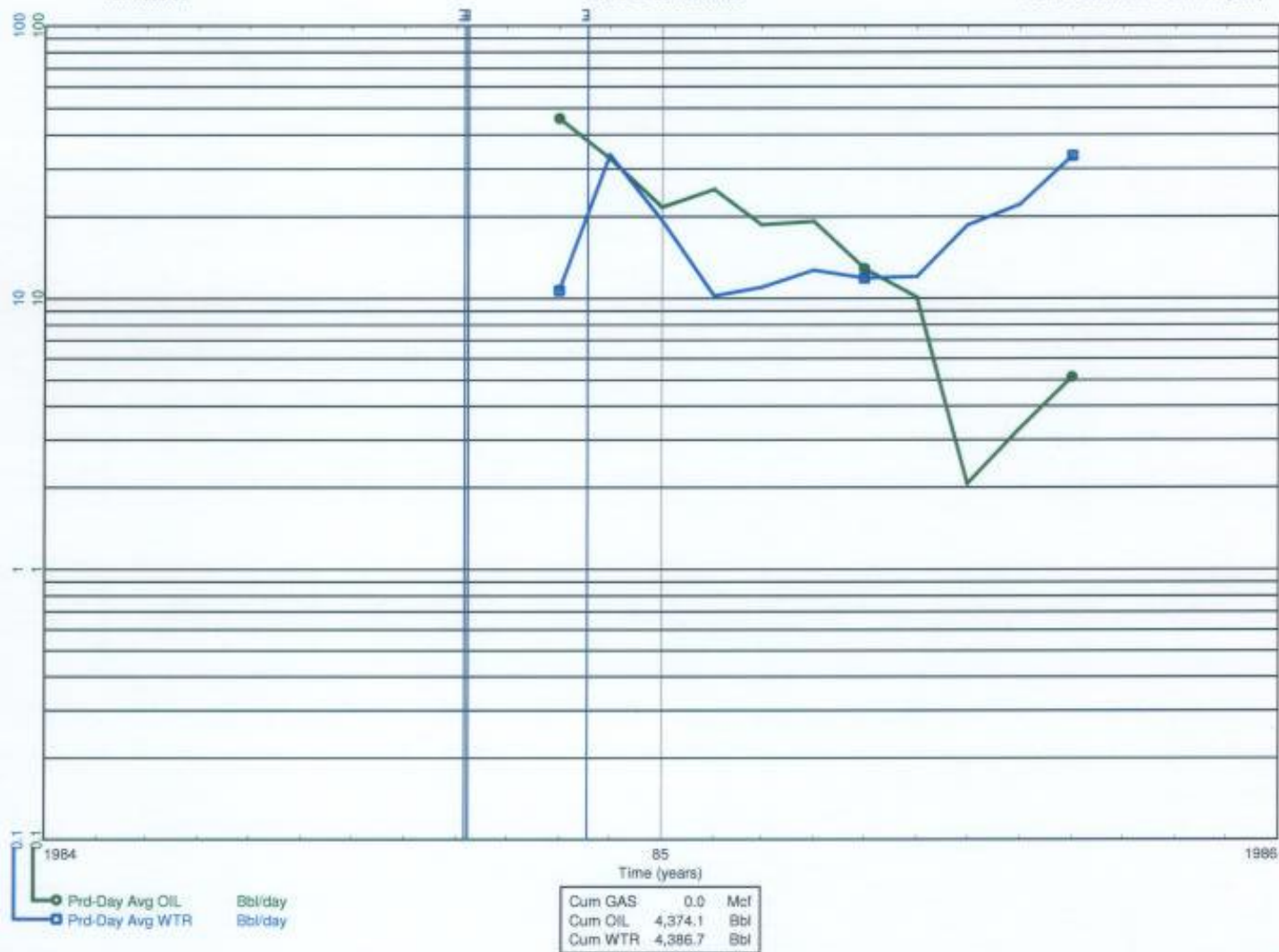




Data As Of: 2010-11 (MB)  
 From: 1984-11  
 To: 1985-09

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/13-32-001-25W1/00

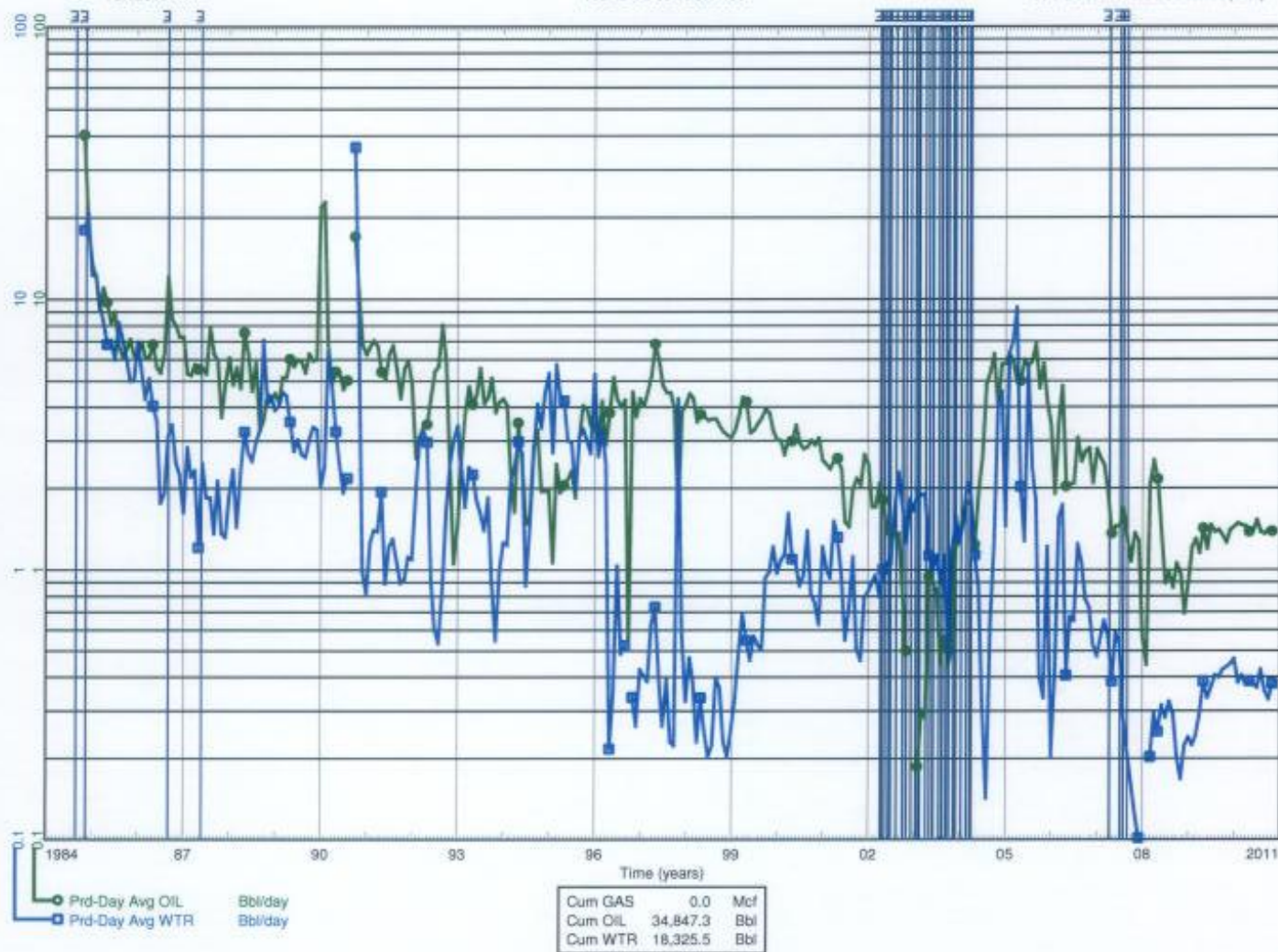
Status: Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1984-11  
 To: 2010-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/12-32-001-25W1:00

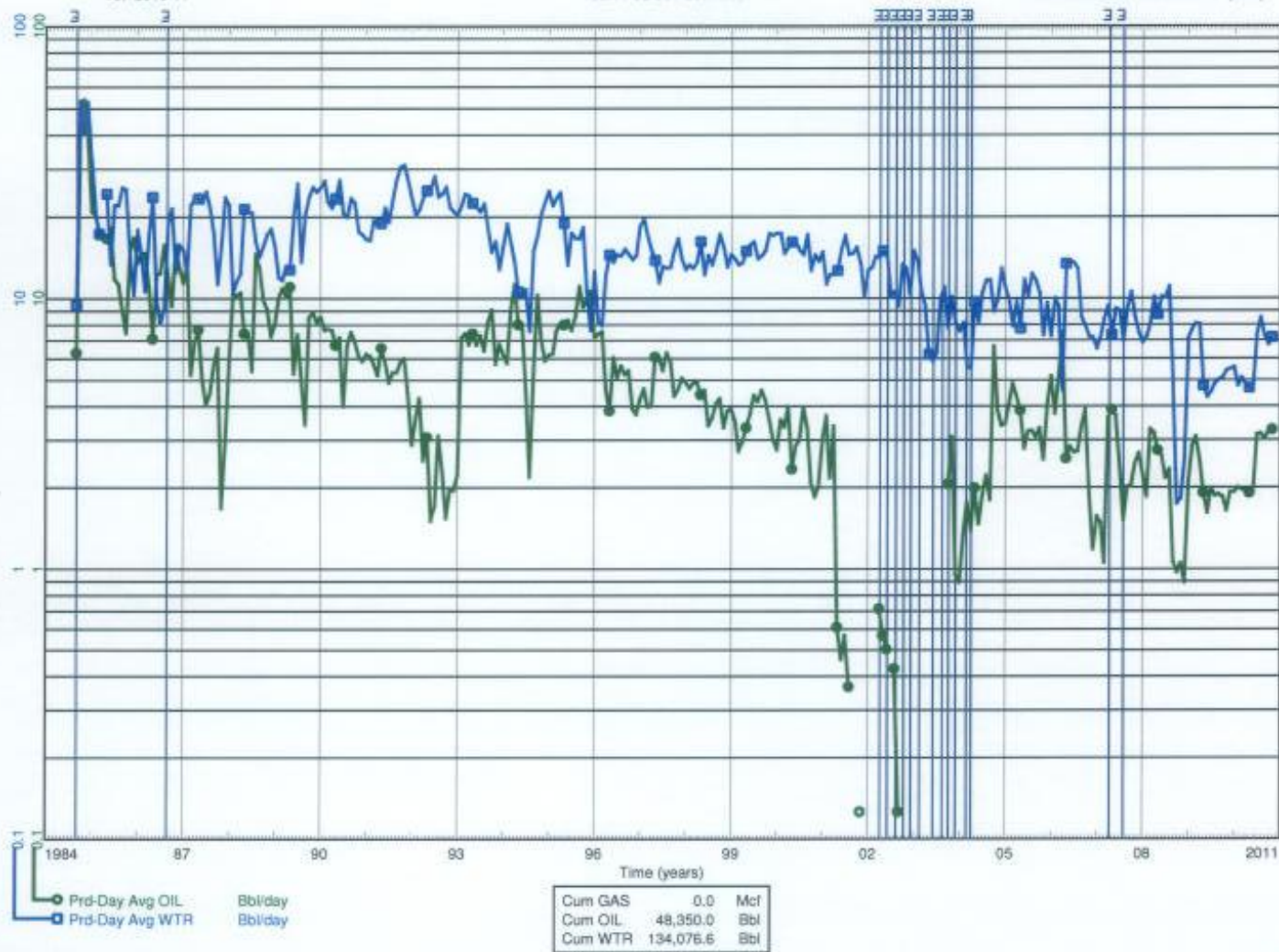
Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1984-09  
 To: 2010-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/11-32-001-25W1/00

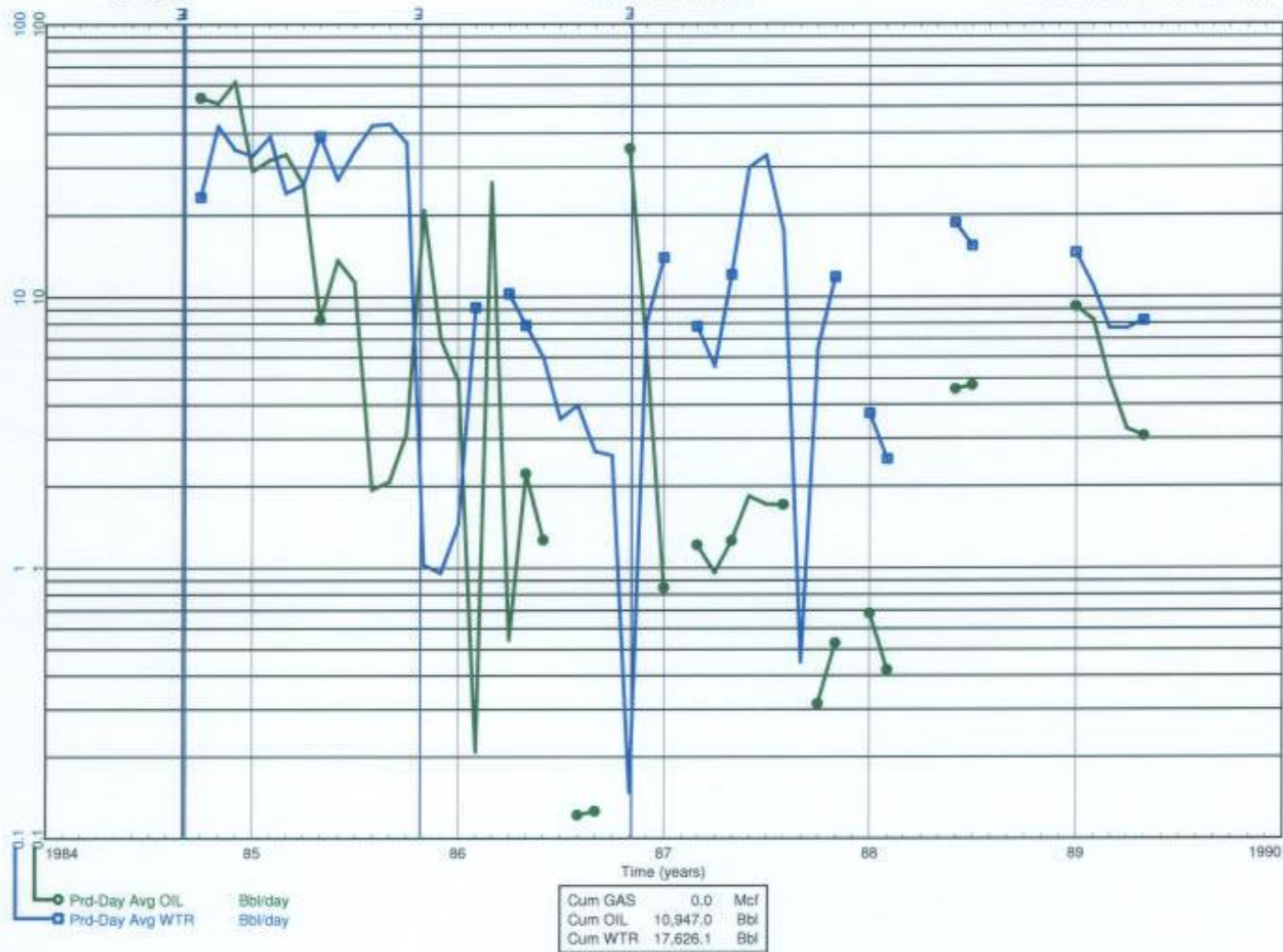
Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1984-10  
 To: 1989-05

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/16-31-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

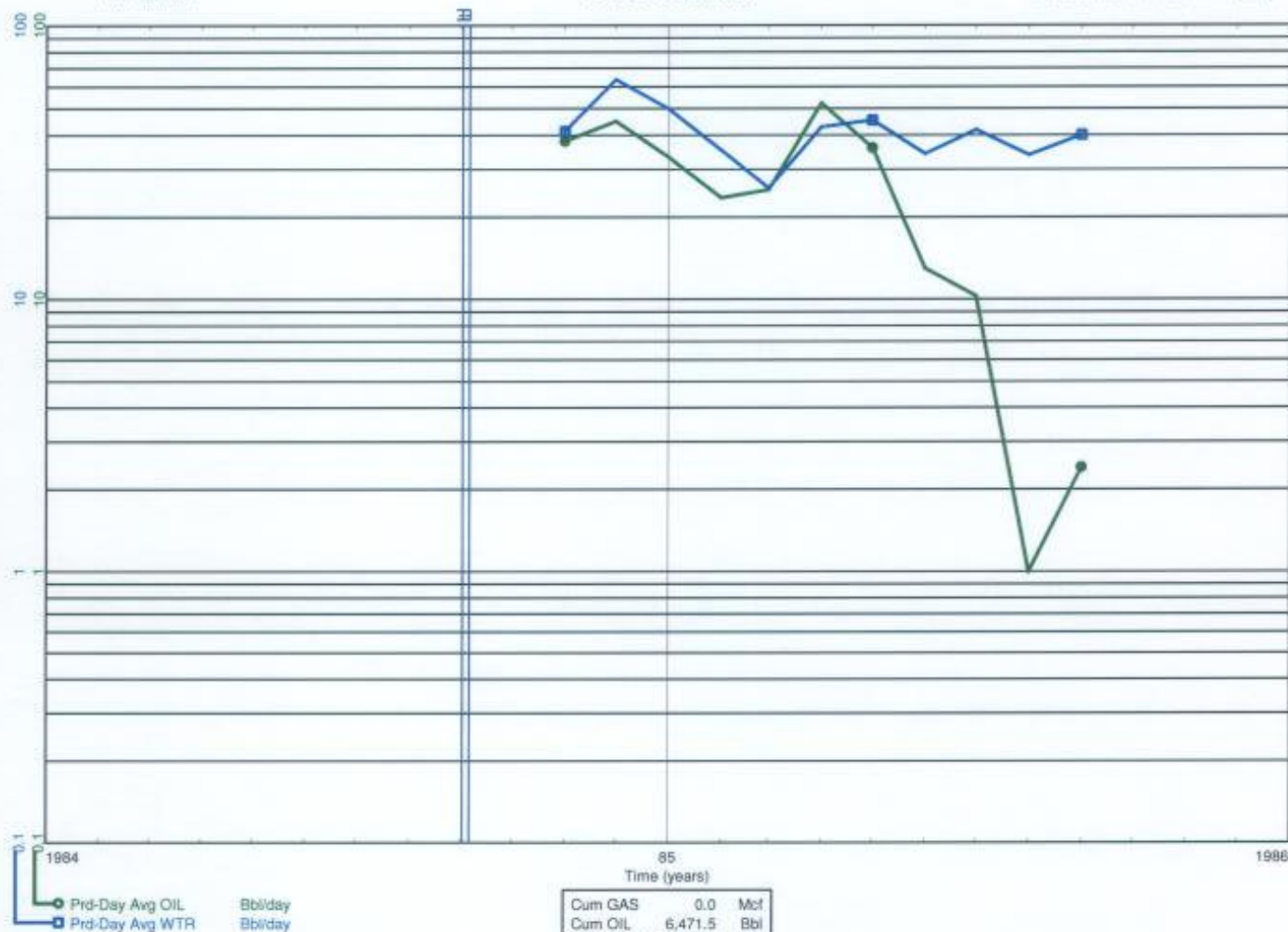




Data As Of: 2010-11 (MB)  
 From: 1984-11  
 To: 1985-09

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/15-31-001-25W1/00

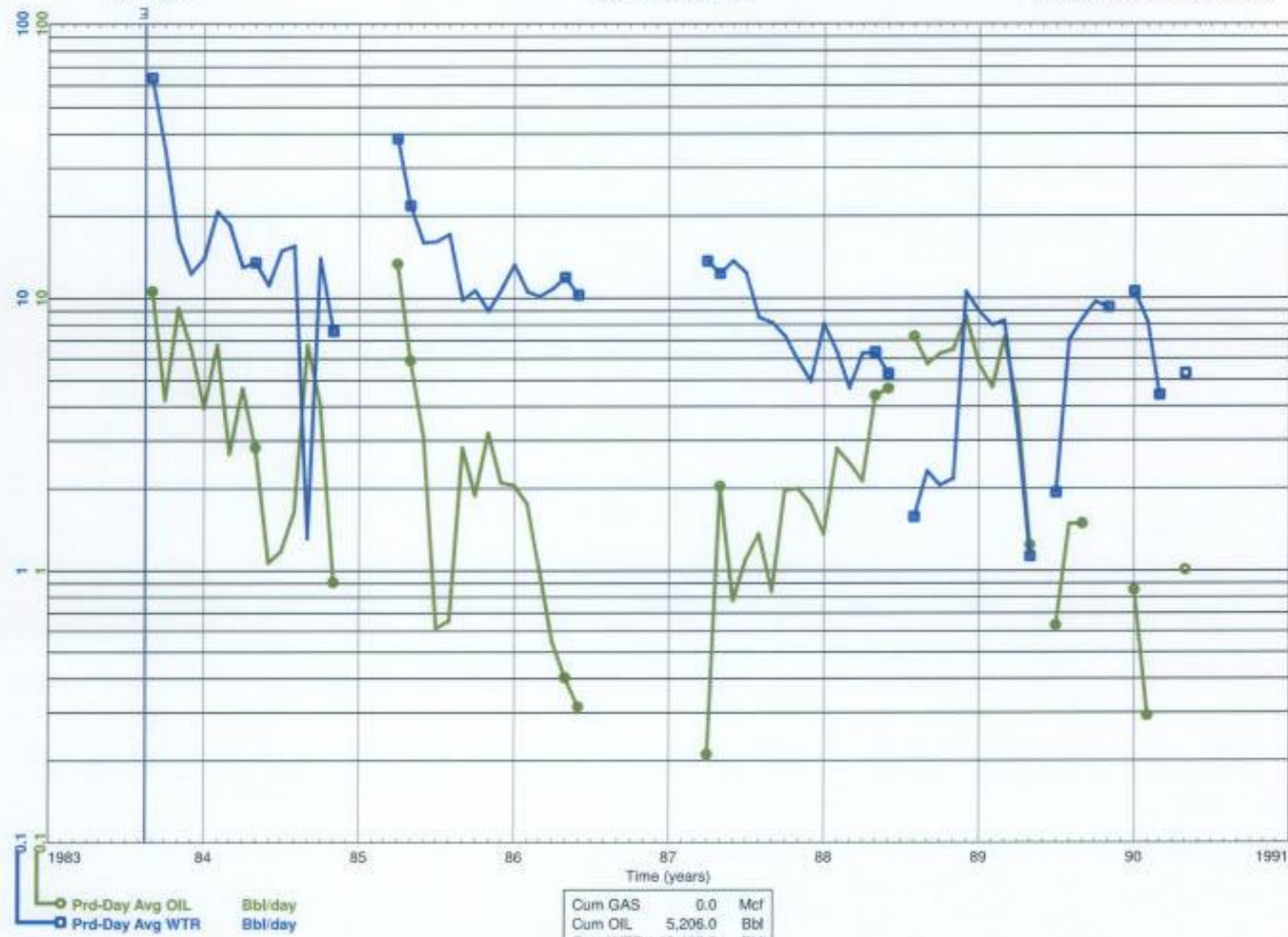
Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

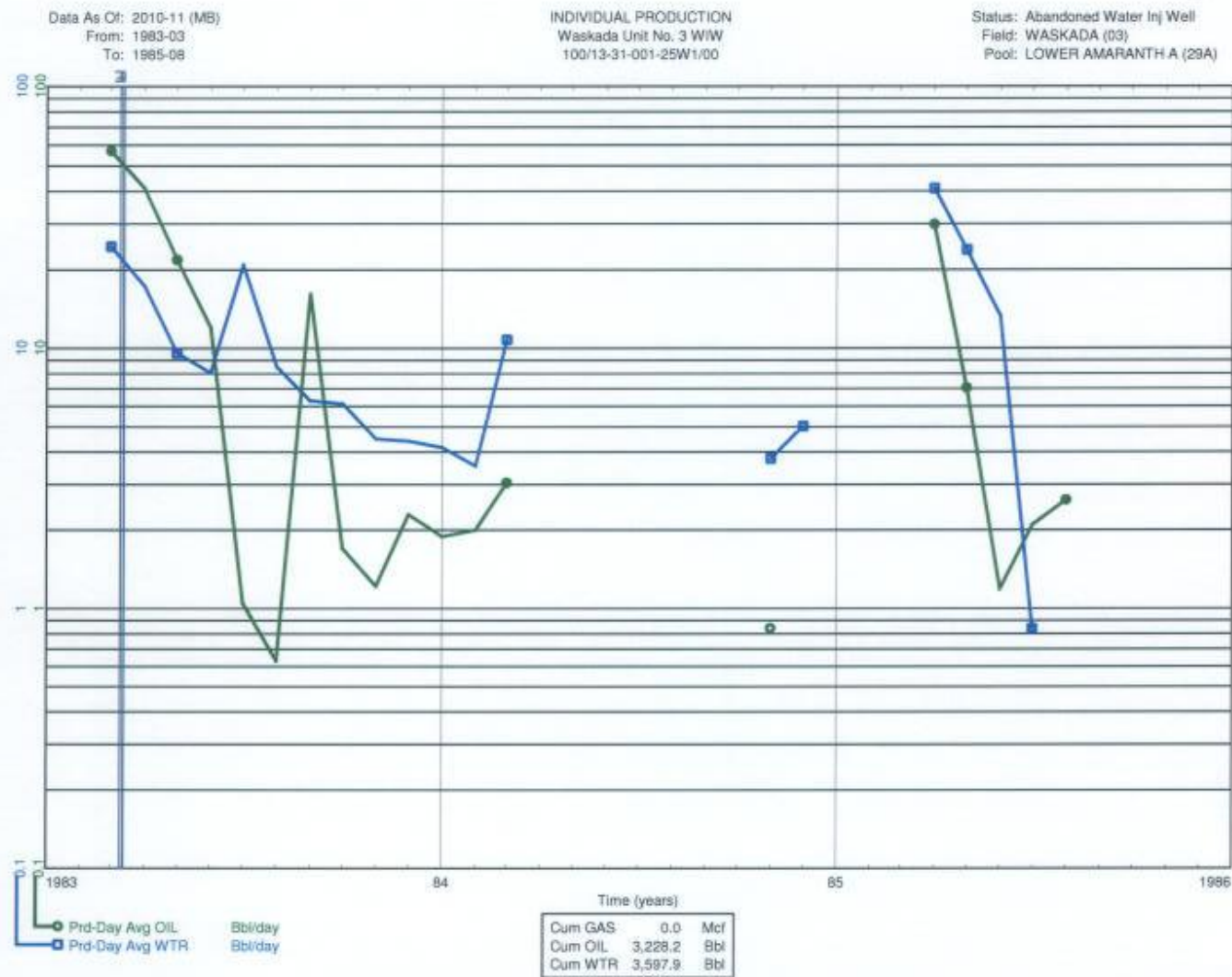


Data As Of: 2011-01 (MB)  
 From: 1983-09  
 To: 1990-05

INDIVIDUAL PRODUCTION  
 -Omega-Waskada-  
 100/14-31-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



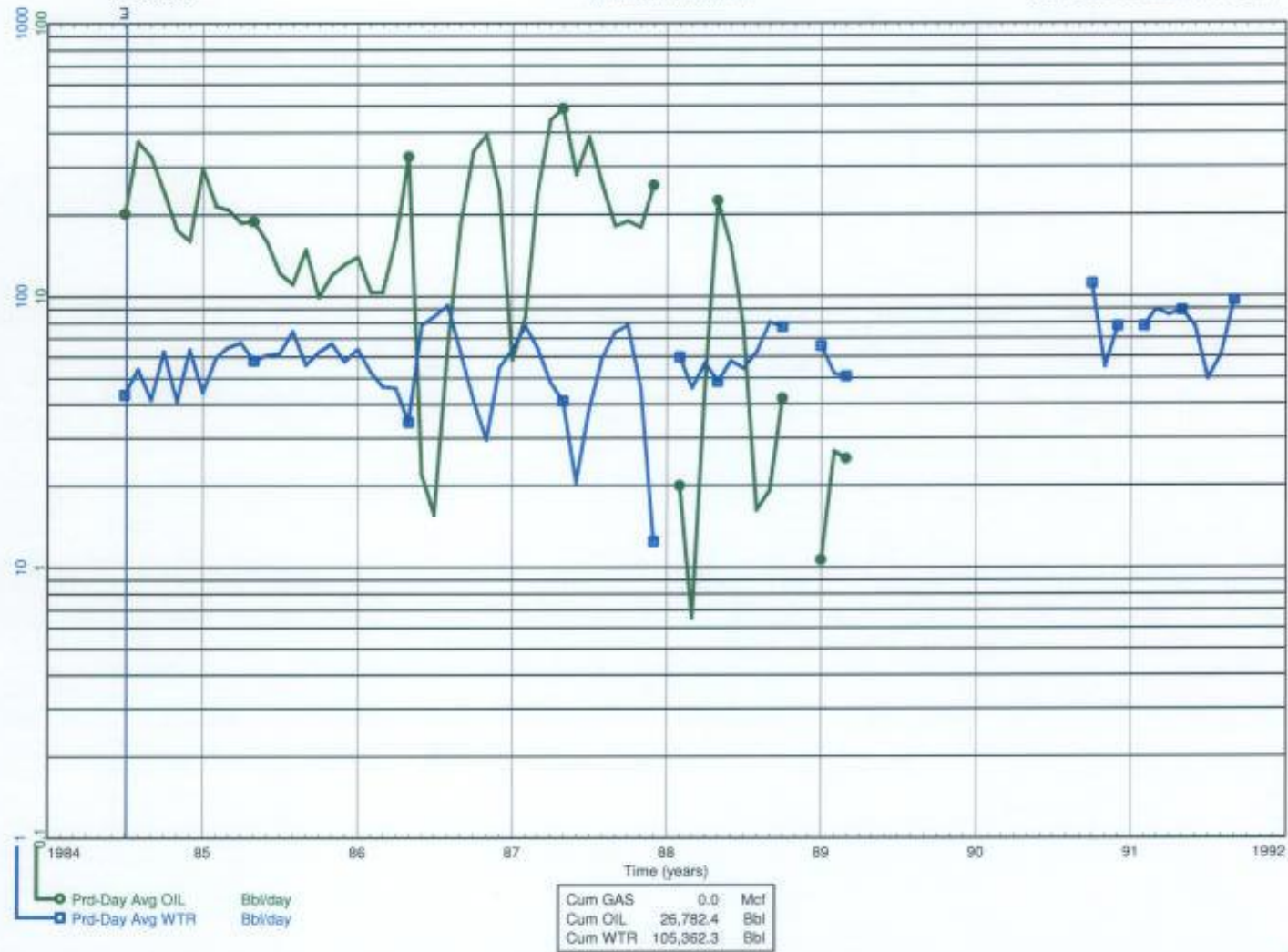


Friday, February 11, 2011, 02:11 PM

Data As Of: 2010-11 (MB)  
 From: 1984-07  
 To: 1991-09

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/12-31-001-25W1/02

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

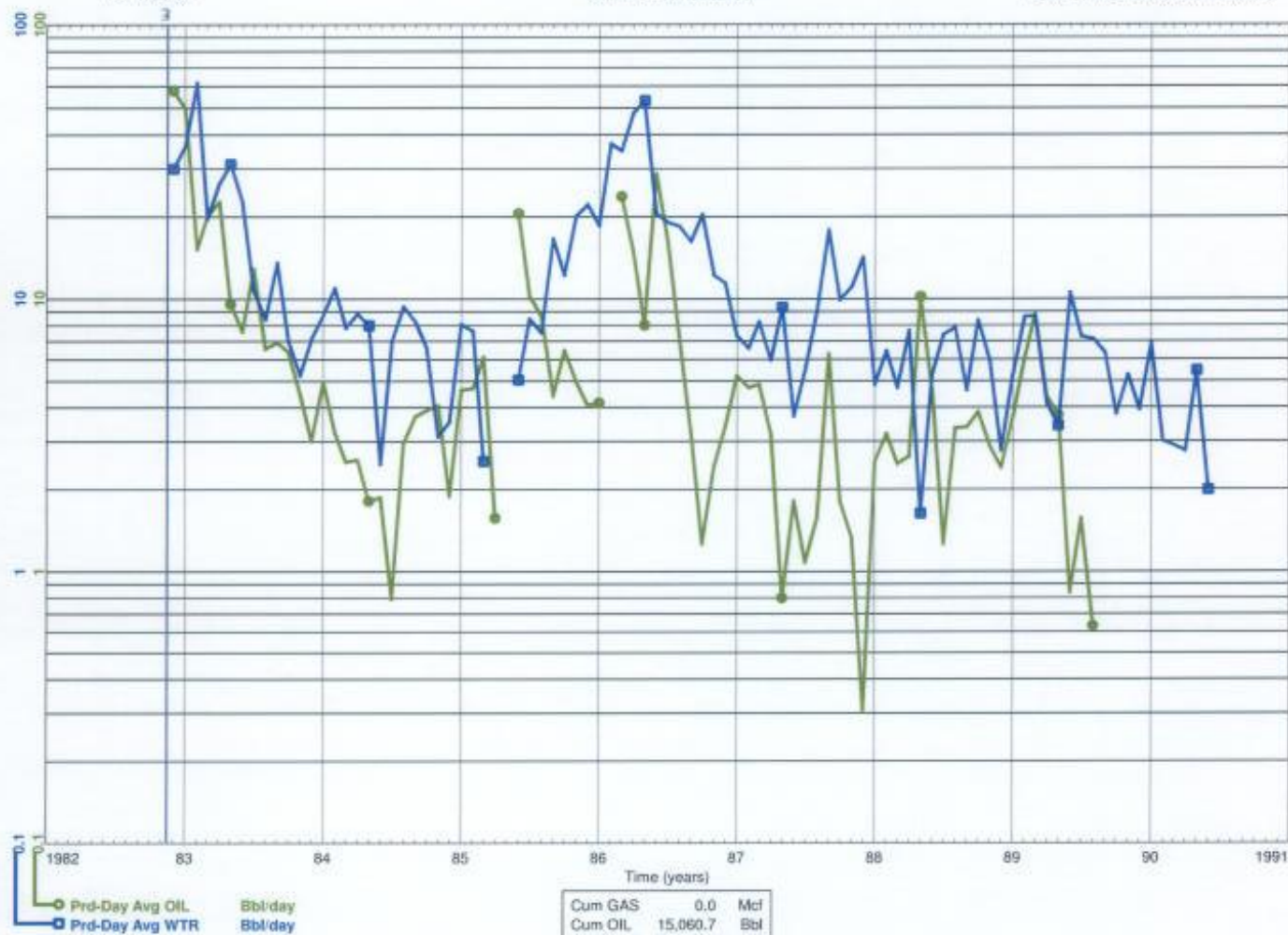


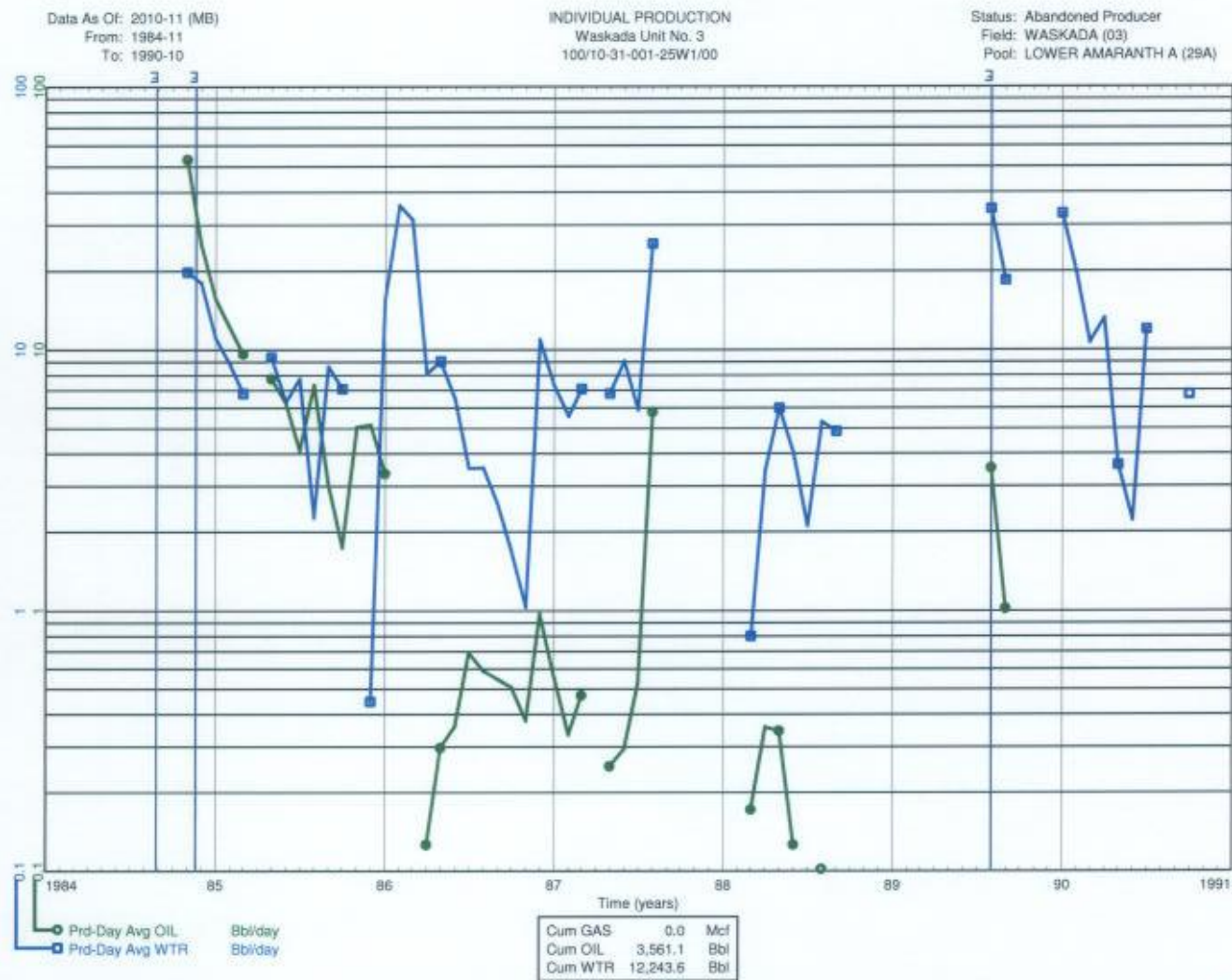


Data As Of: 2011-01 (MB)  
 From: 1982-12  
 To: 1990-06

INDIVIDUAL PRODUCTION  
 Omega Waskada  
 100/11-31-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



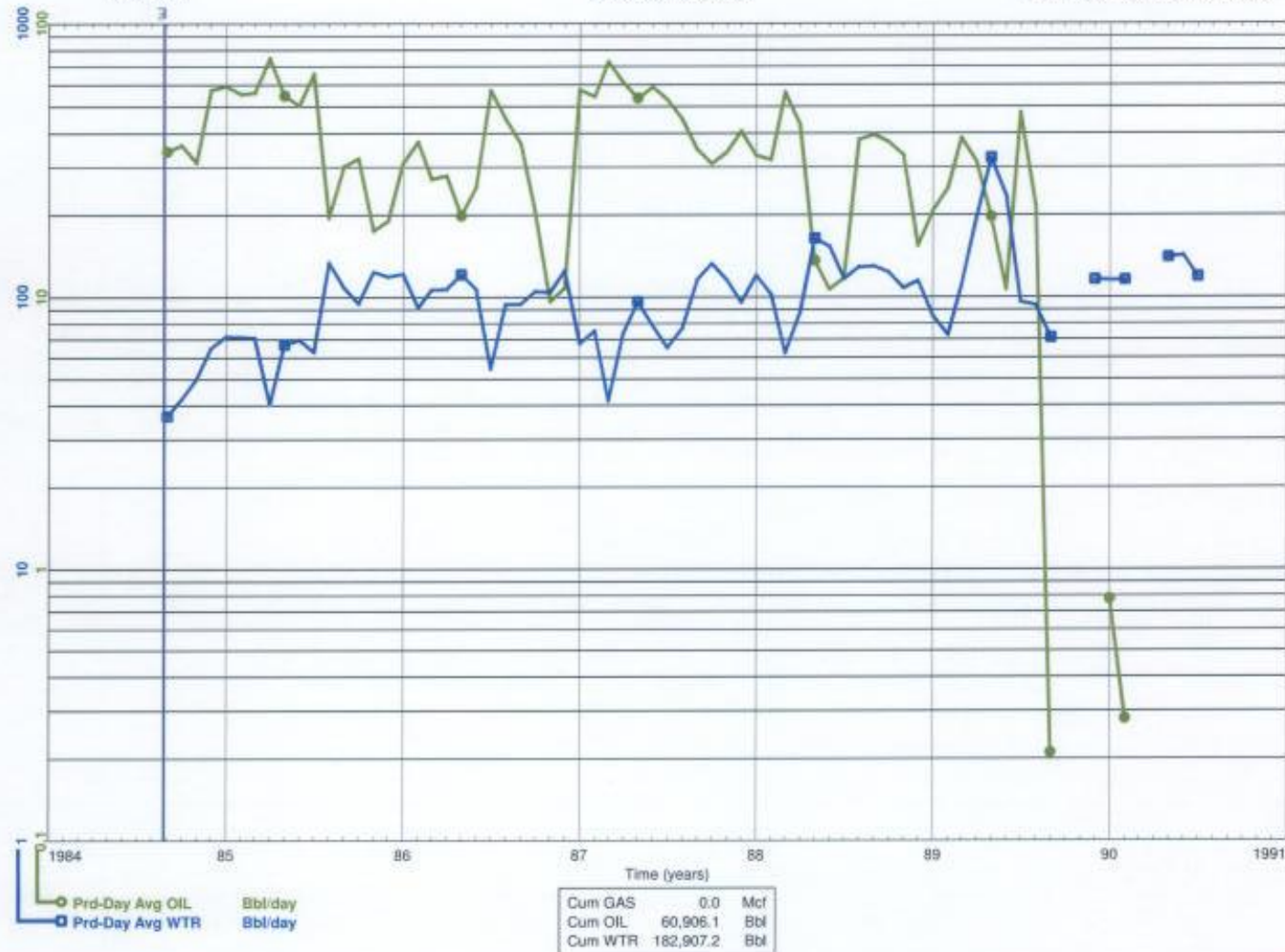


Friday, February 11, 2011, 02:10 PM

Data As Of: 2011-01 (MB)  
 From: 1984-09  
 To: 1990-07

INDIVIDUAL PRODUCTION  
 -Omega Waskada  
 100/09-31-001-25W1/00

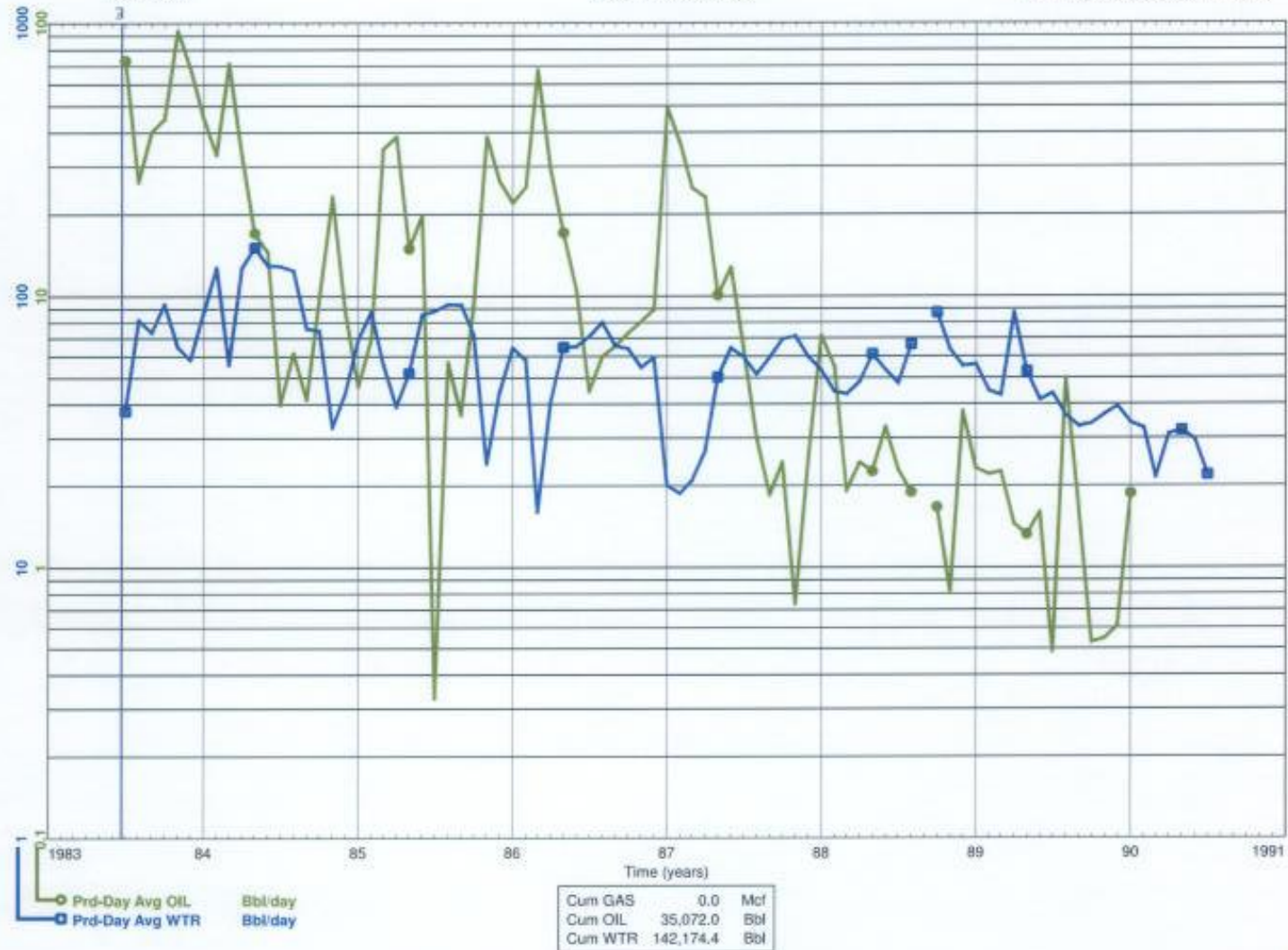
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 1983-07  
 To: 1990-07

INDIVIDUAL PRODUCTION  
 -Omega Waskada  
 100/08-31-001-25W1/00

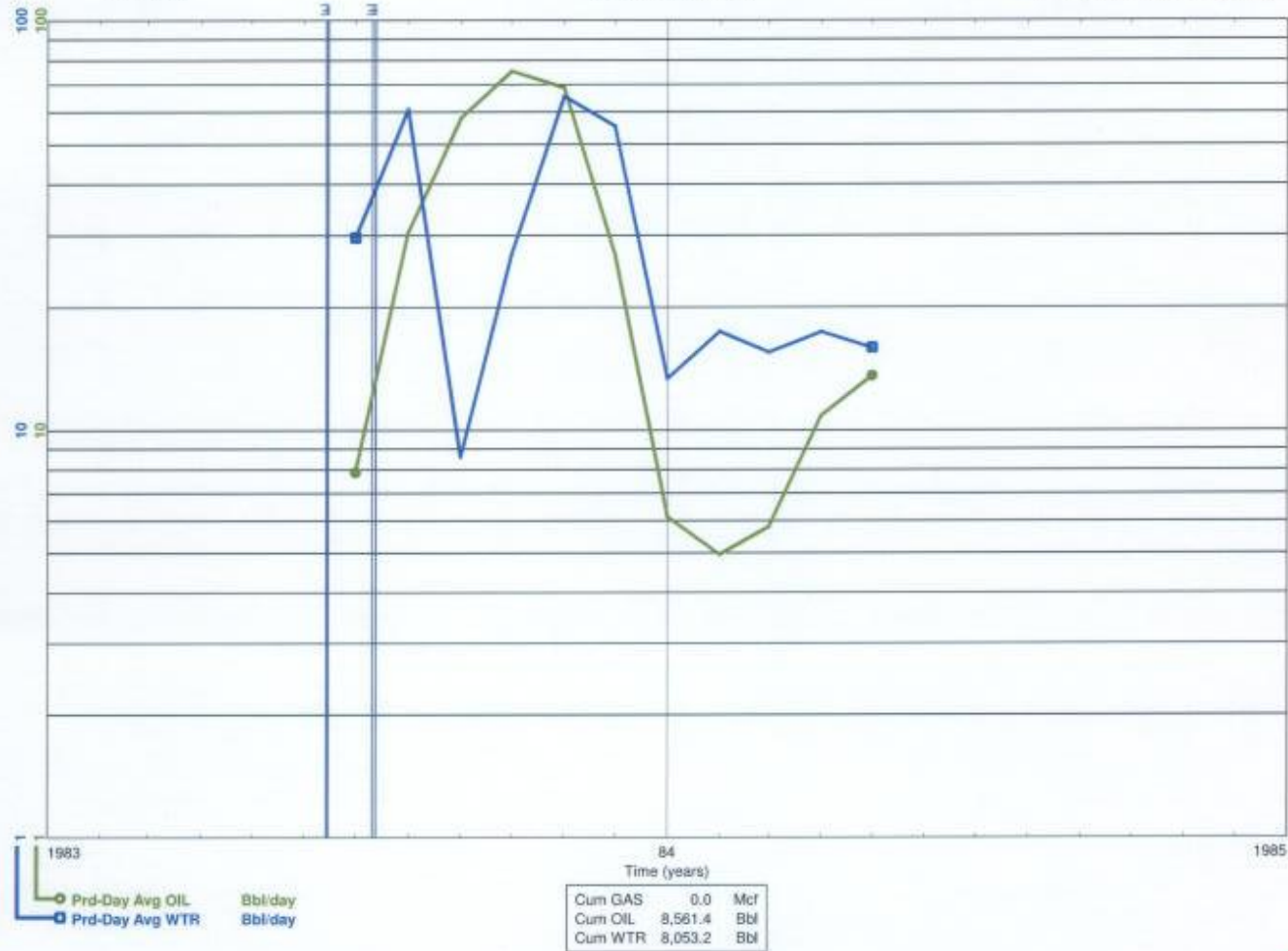
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 1983-07  
 To: 1984-05

INDIVIDUAL PRODUCTION  
 -Omega Waskada WIW  
 100/07-31-001-25W1/00

Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Thursday, April 21, 2011, 11:29 AM

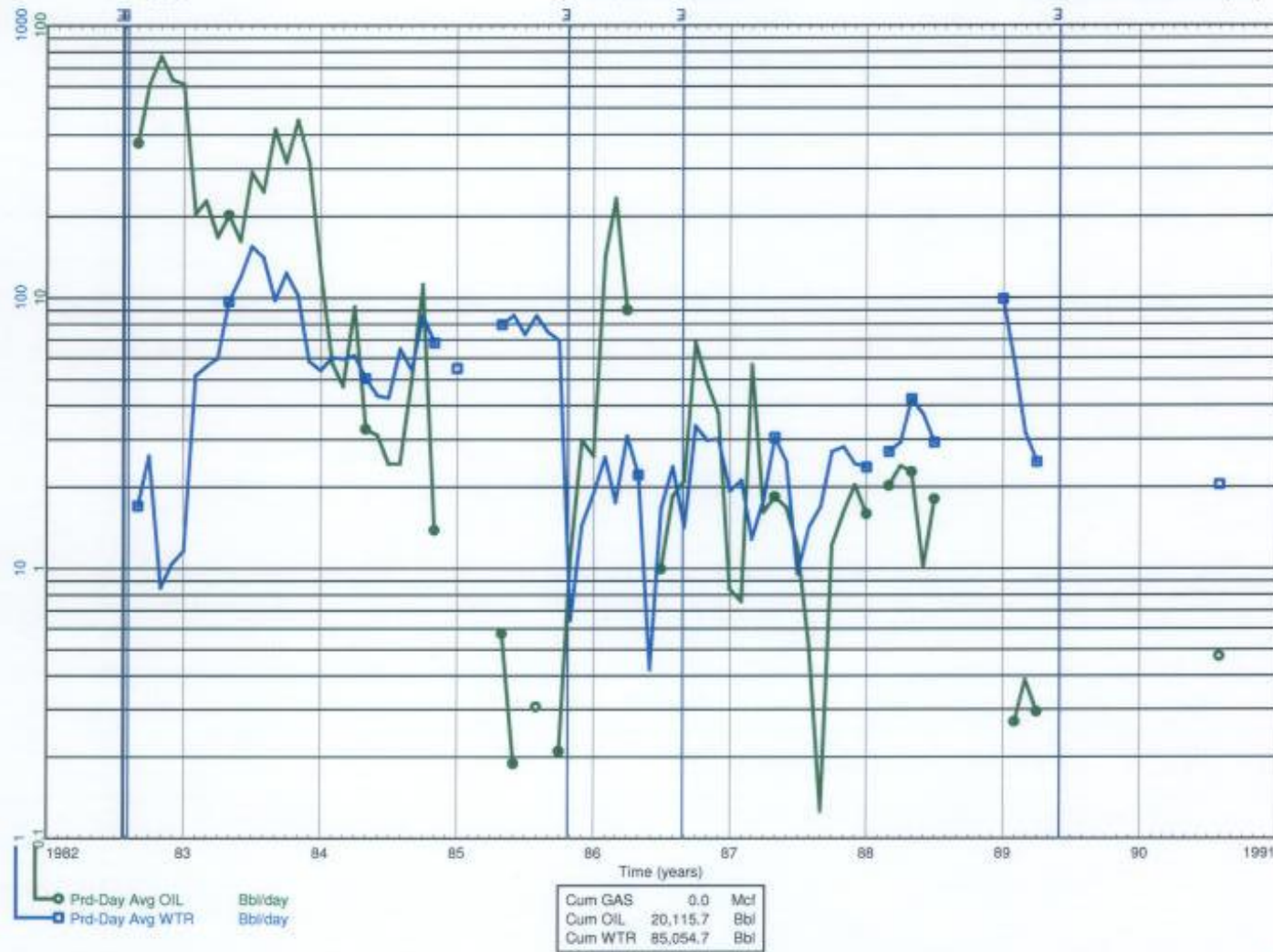
geoSCOUT  
 www.geoscout.com



Data As Of: 2010-11 (MB)  
 From: 1982-09  
 To: 1990-08

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/06-31-001-25W1/00

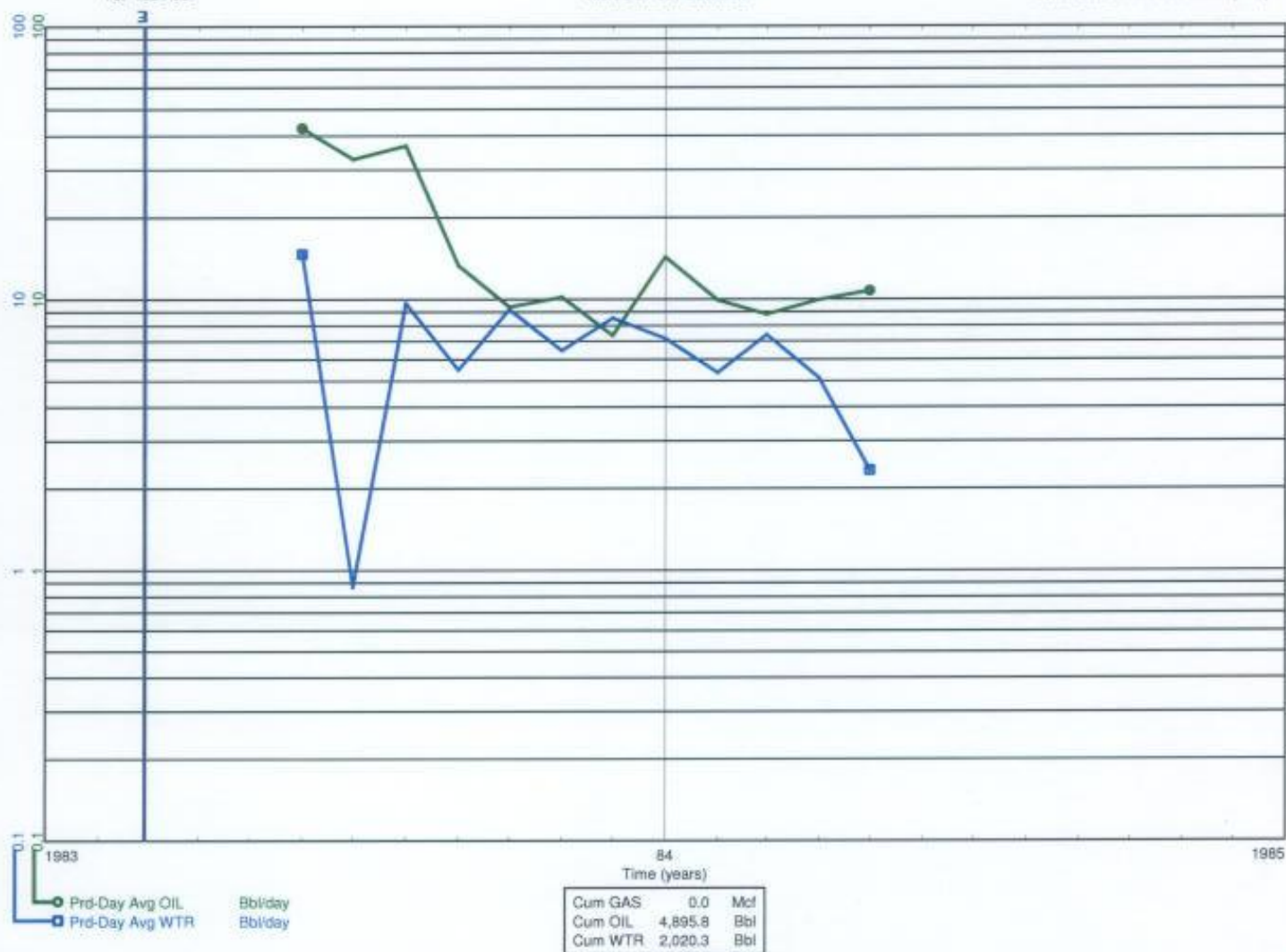
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1983-06  
 To: 1984-05

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/05-31-001-25W1/00

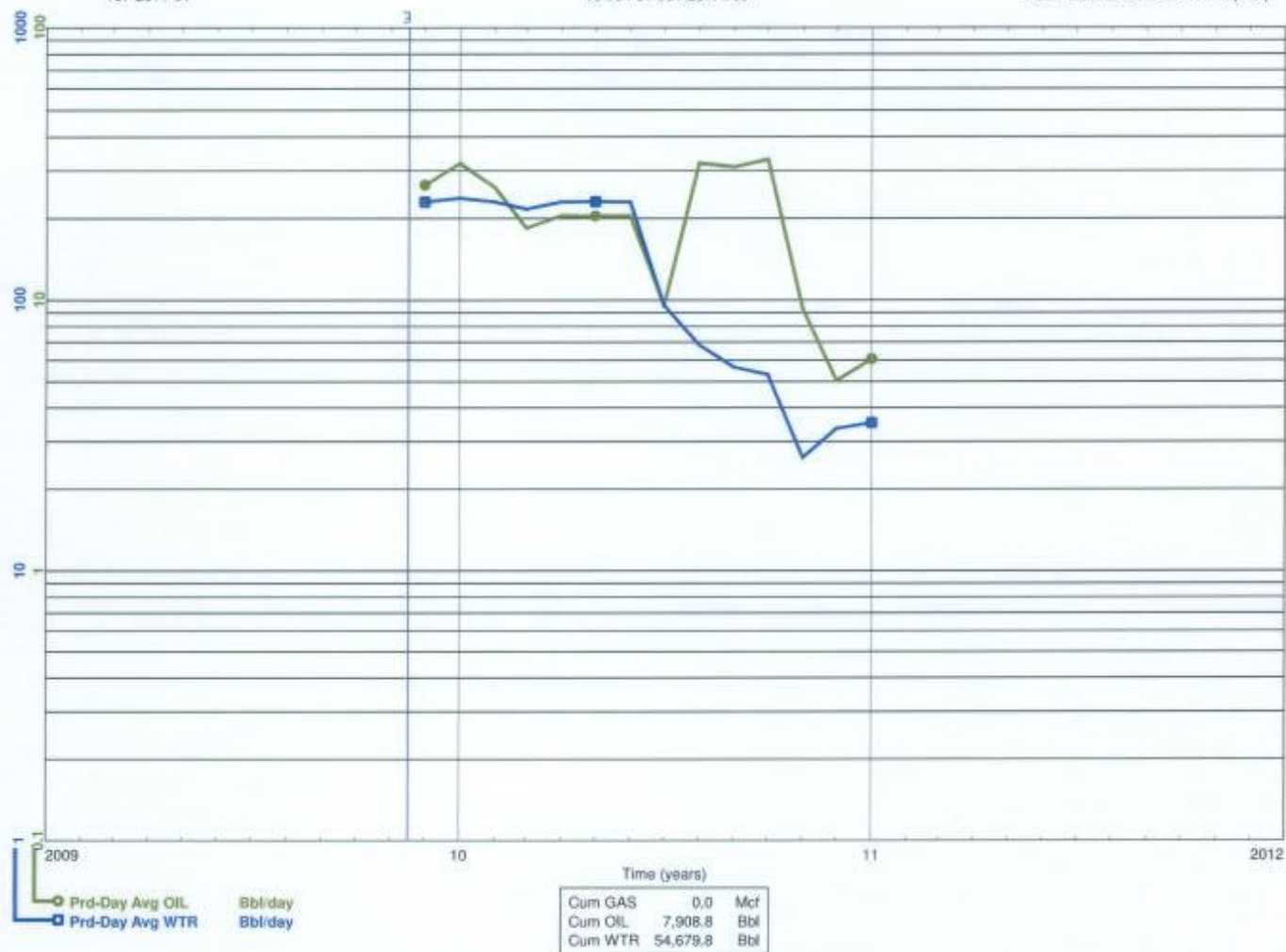
Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
From: 2009-12  
To: 2011-01

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3 HZNTL  
104/04-31-001-25W1/00

Status: Capable Of Oil Prod  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)

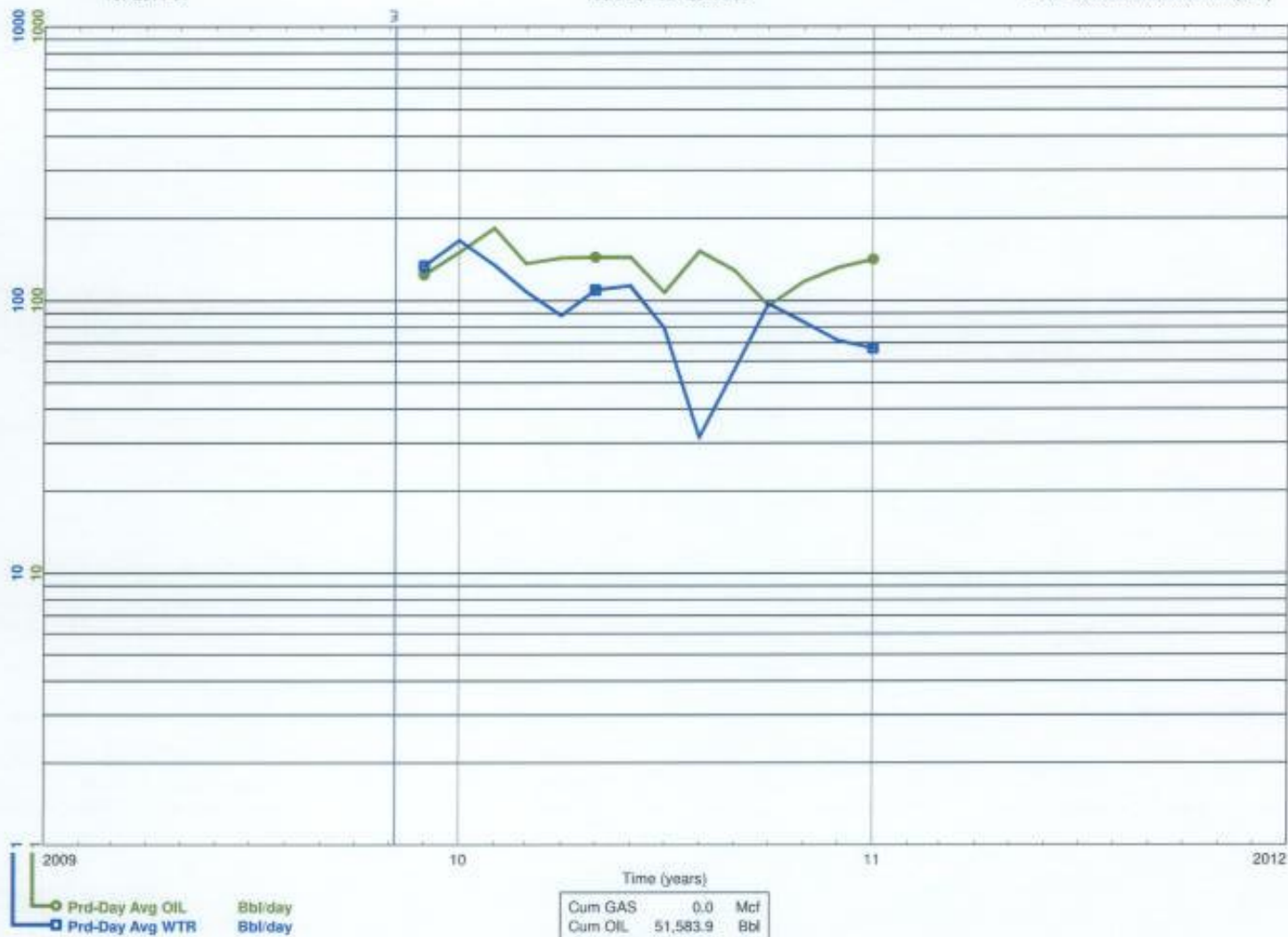




Data As Of: 2011-01 (MB)  
 From: 2009-12  
 To: 2011-01

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 HZNTL  
 103/04-31-001-25W1/00

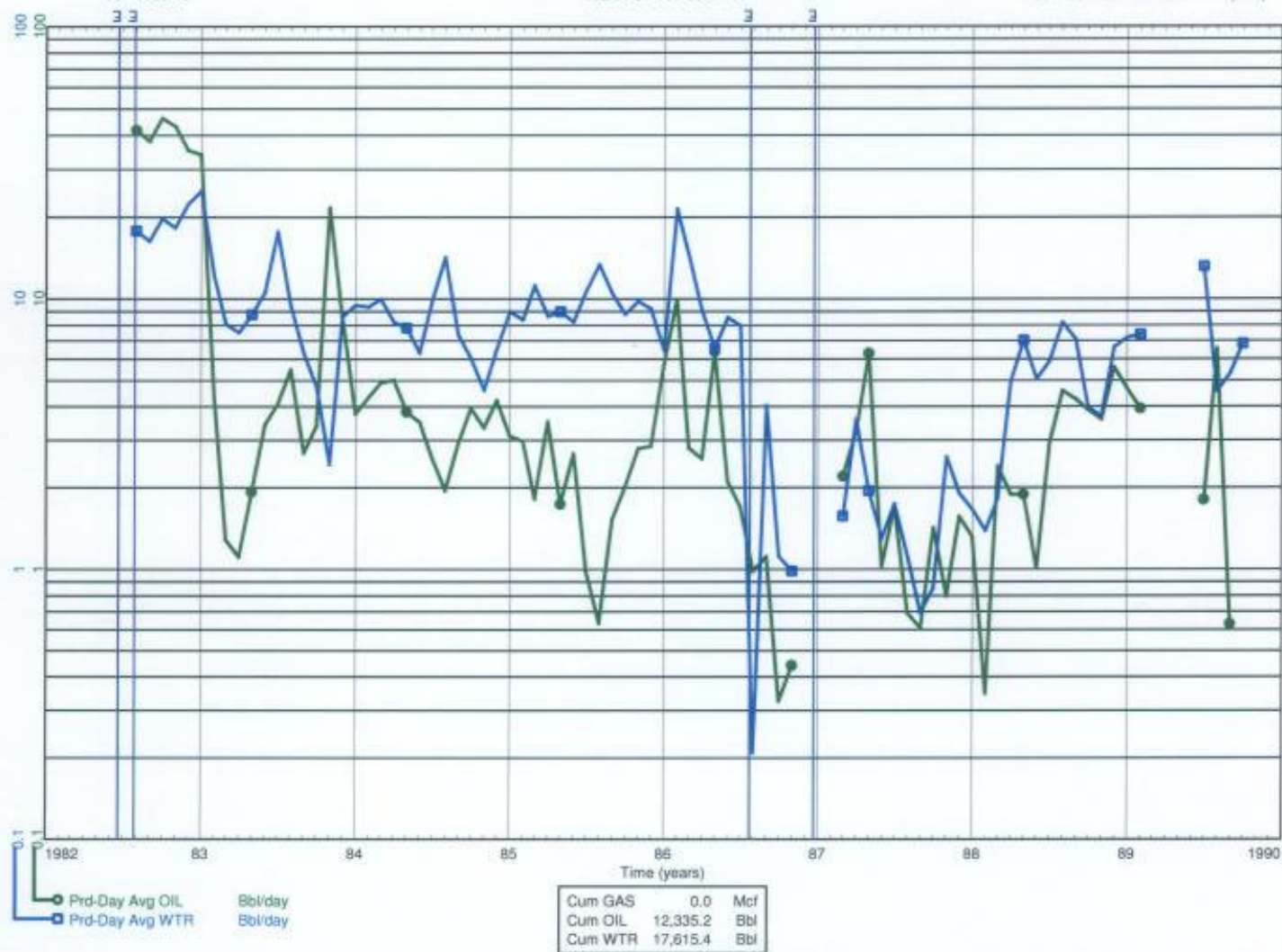
Status: Capable Of Oil Prod  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1982-08  
To: 1989-10

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3  
102/04-31-001-25W1/00

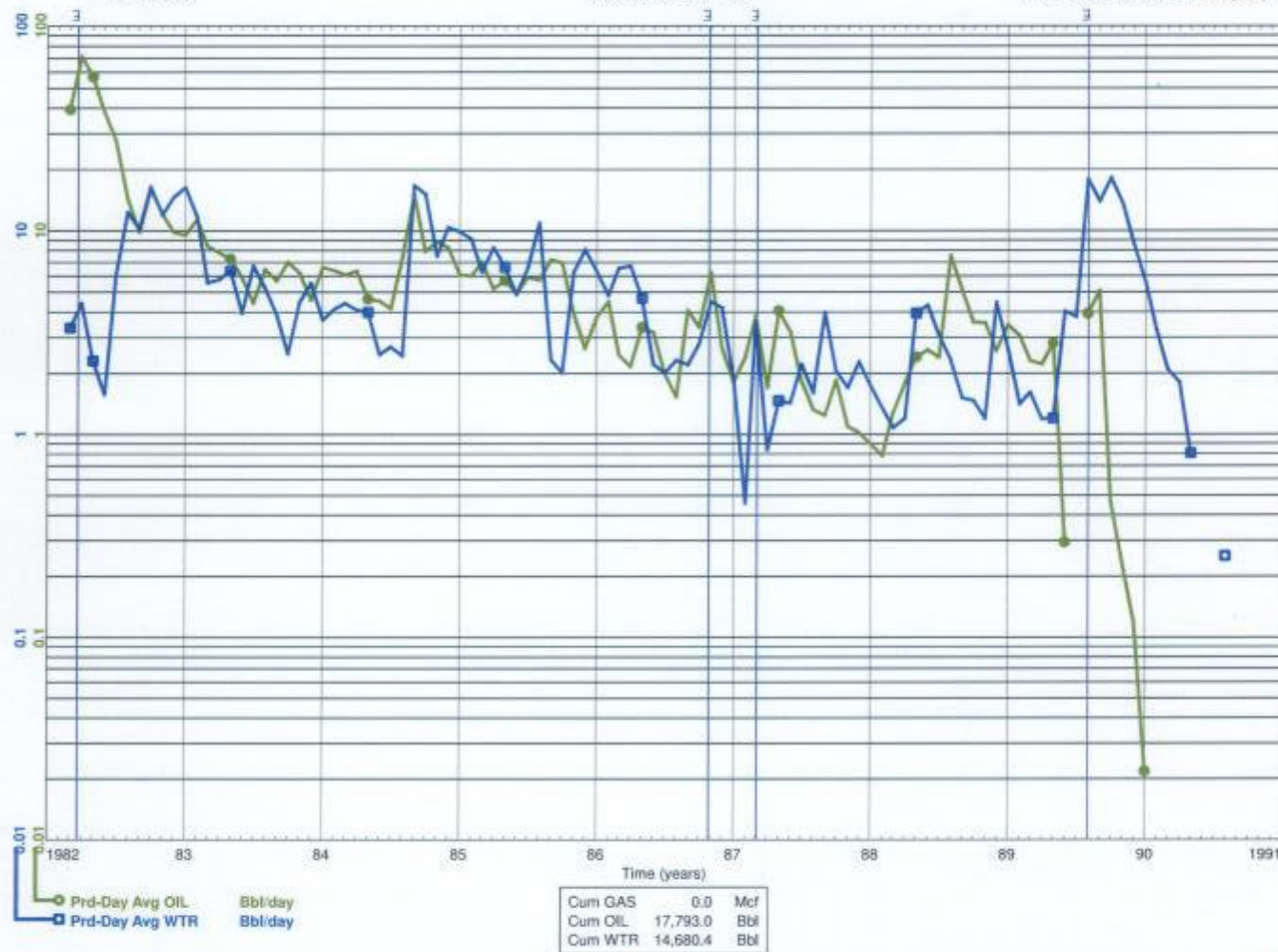
Status: Abandoned Producer  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 1982-03  
 To: 1990-08

INDIVIDUAL PRODUCTION  
 "Omega Waskada"  
 100/03-31-001-25W1/00

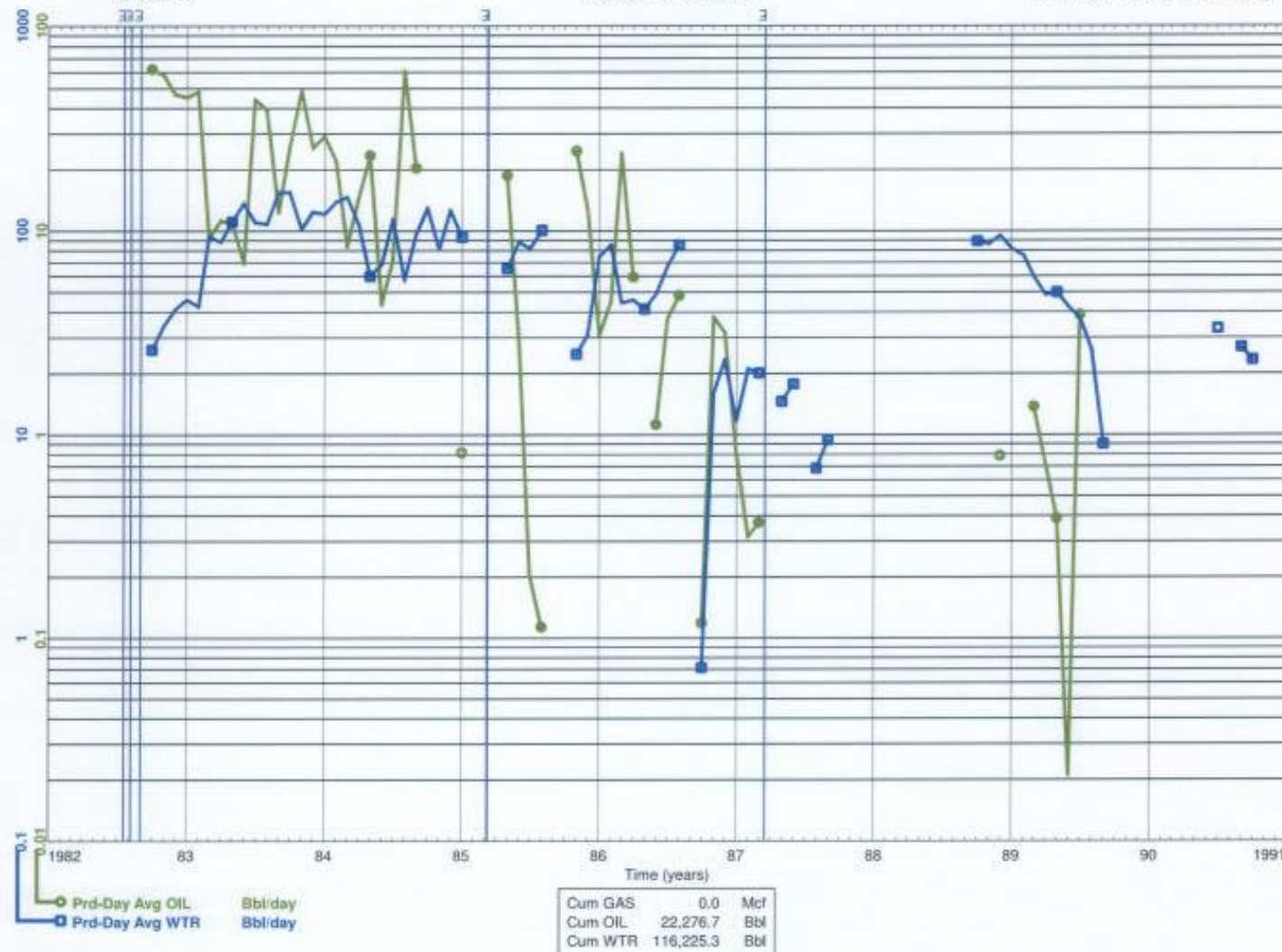
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-01 (MB)  
 From: 1982-10  
 To: 1990-10

INDIVIDUAL PRODUCTION  
 Omega-Waskada--  
 100/02-31-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

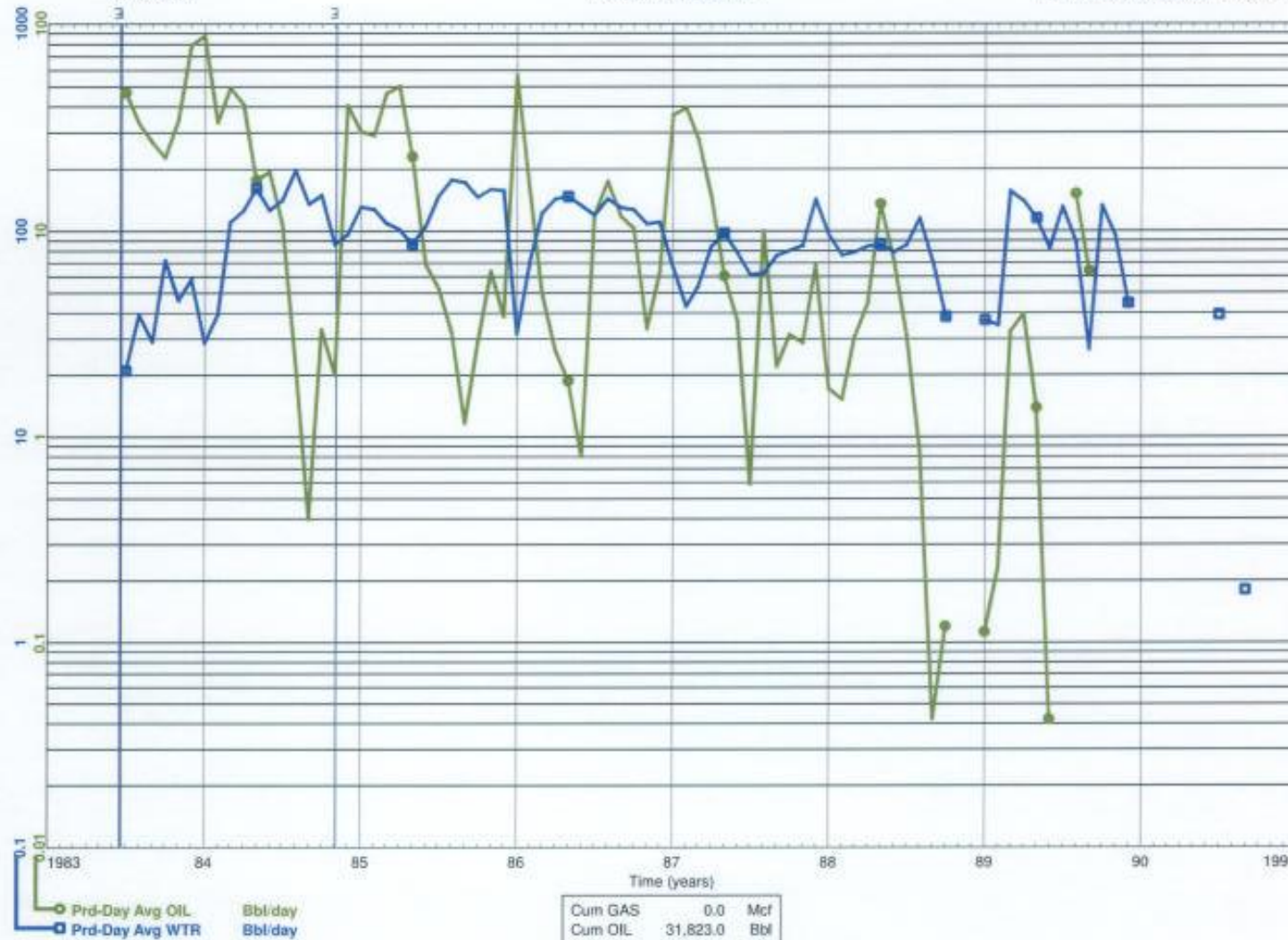




Data As Of: 2011-01 (MB)  
 From: 1983-07  
 To: 1990-09

INDIVIDUAL PRODUCTION  
 -Omega-Waskada-  
 100/01-31-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

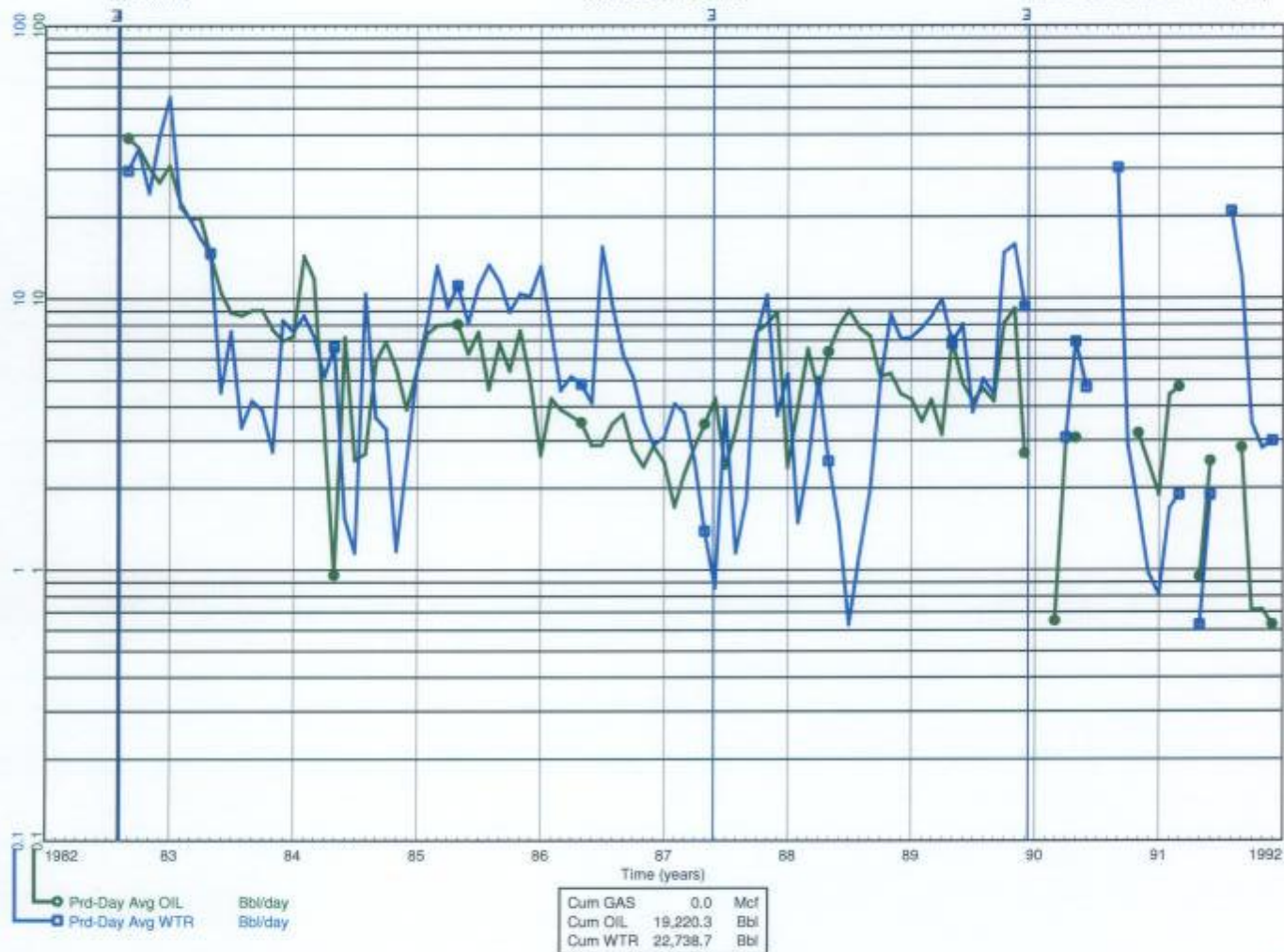


Cum GAS	0.0	Mcf
Cum OIL	31,823.0	Bbl
Cum WTR	213,111.0	Bbl

Data As Of: 2010-11 (MB)  
From: 1982-09  
To: 1991-12

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3  
100/16-30-001-25W1/00

Status: Abandoned Producer  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)

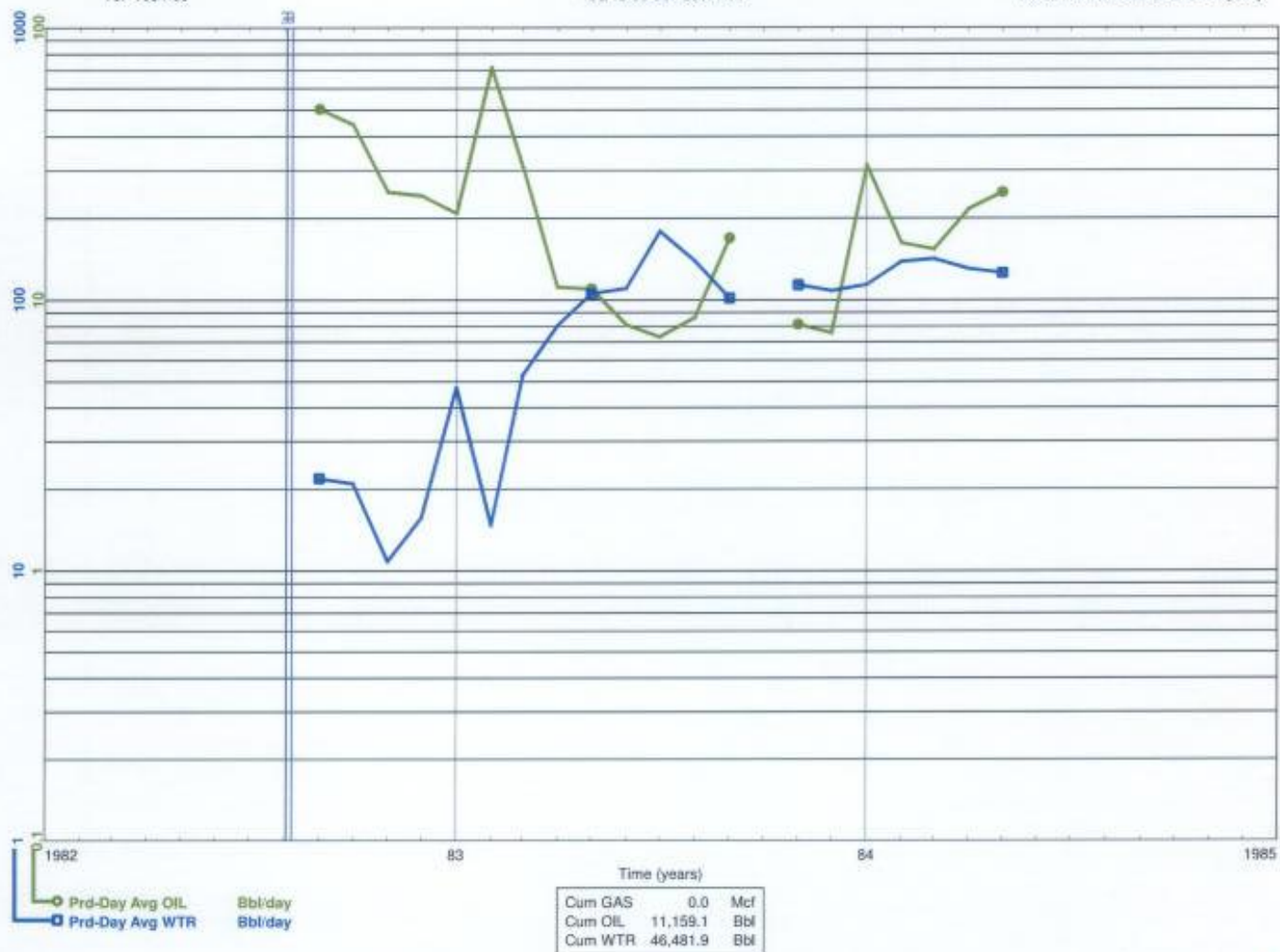




Data As Of: 2011-01 (MB)  
 From: 1982-09  
 To: 1984-05

INDIVIDUAL PRODUCTION  
 Penn West Waskada-SWB  
 100/15-30-001-25W1/00

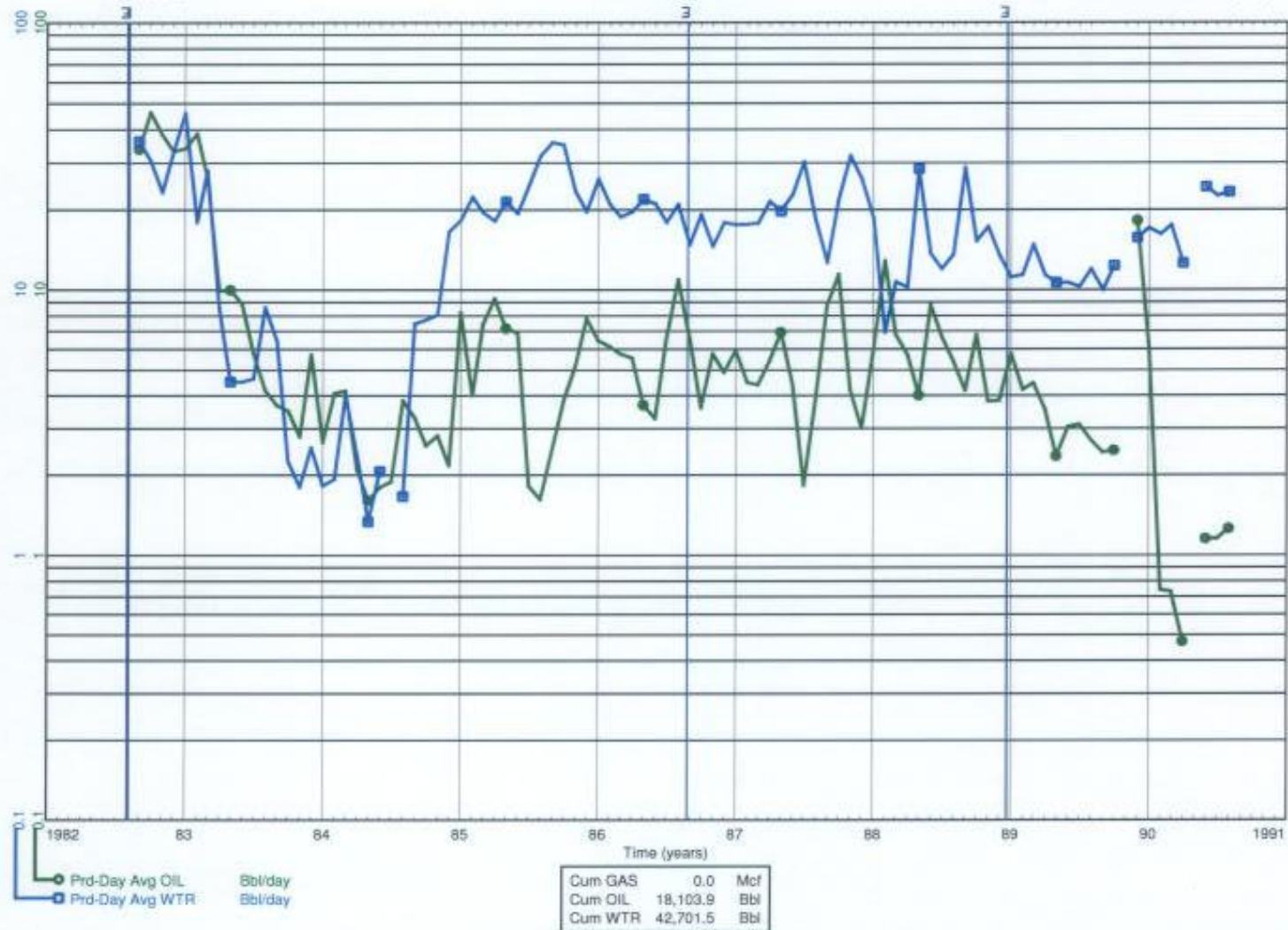
Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1982-09  
 To: 1990-08

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 100/14-30-001-25W1/00

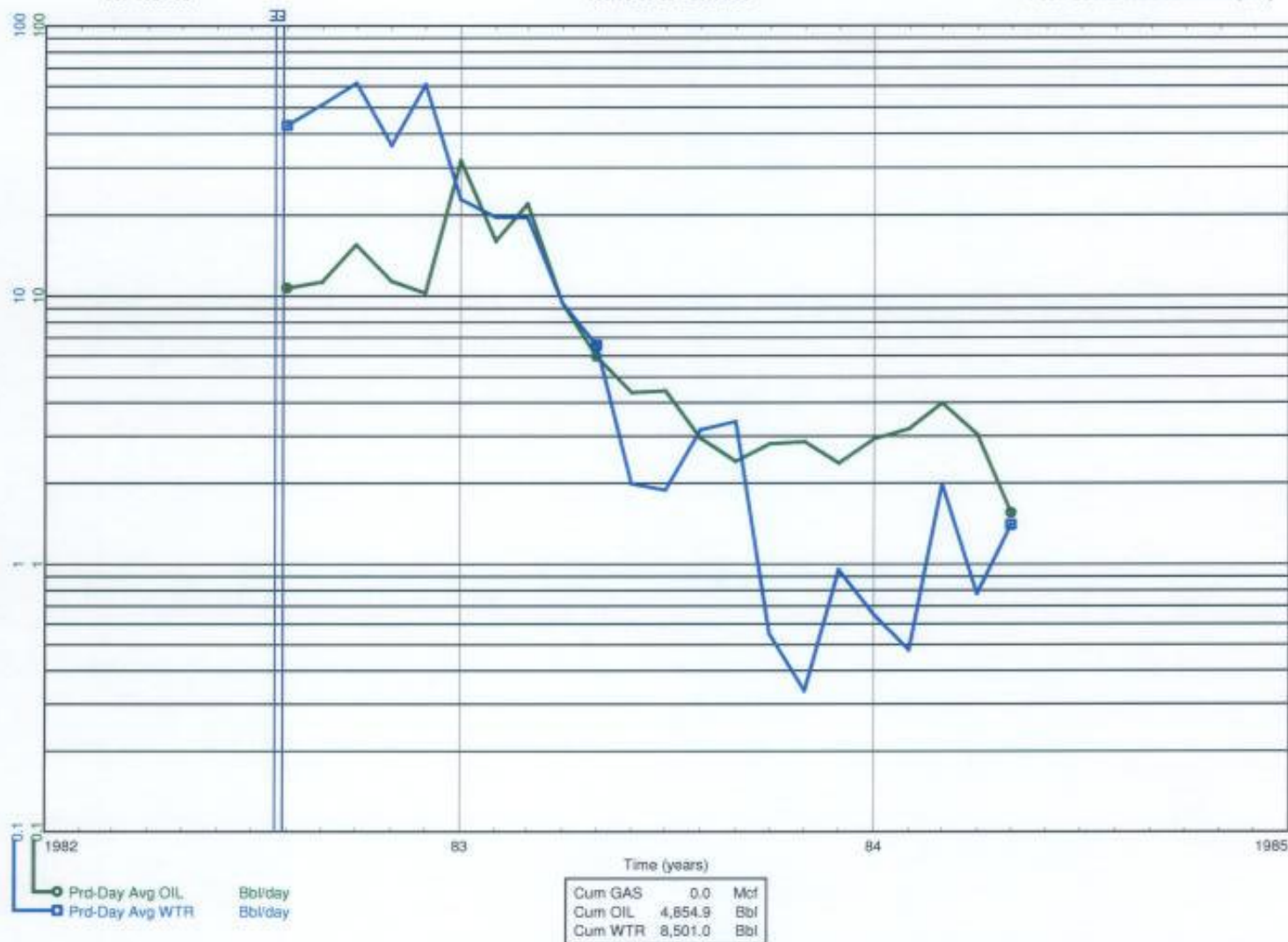
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1982-08  
 To: 1984-05

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/13-30-001-25W1/00

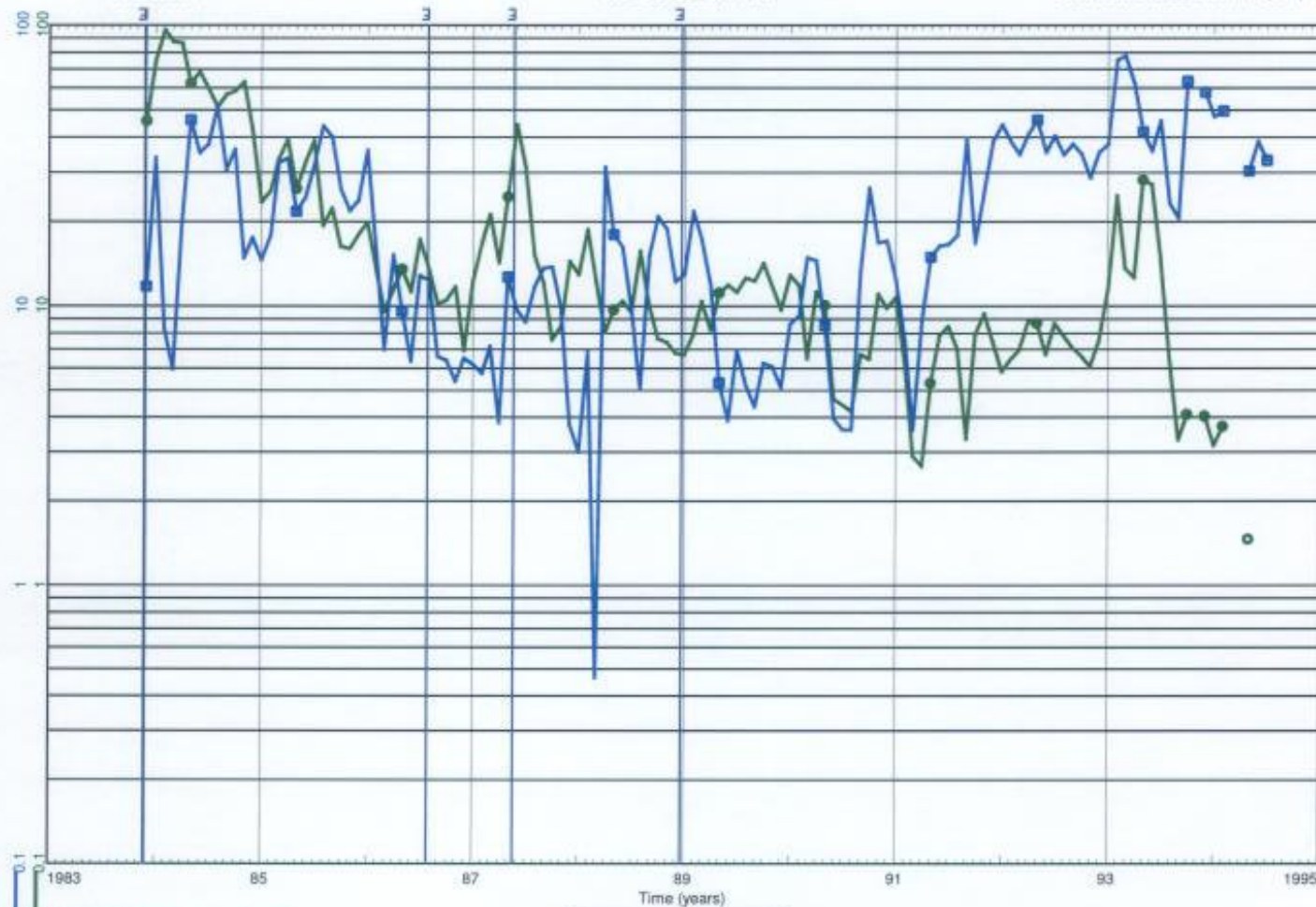
Status: Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1983-12  
 To: 1994-07

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 102/12-30-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



● Prd-Day Avg OIL Bbl/day  
 ■ Prd-Day Avg WTR Bbl/day

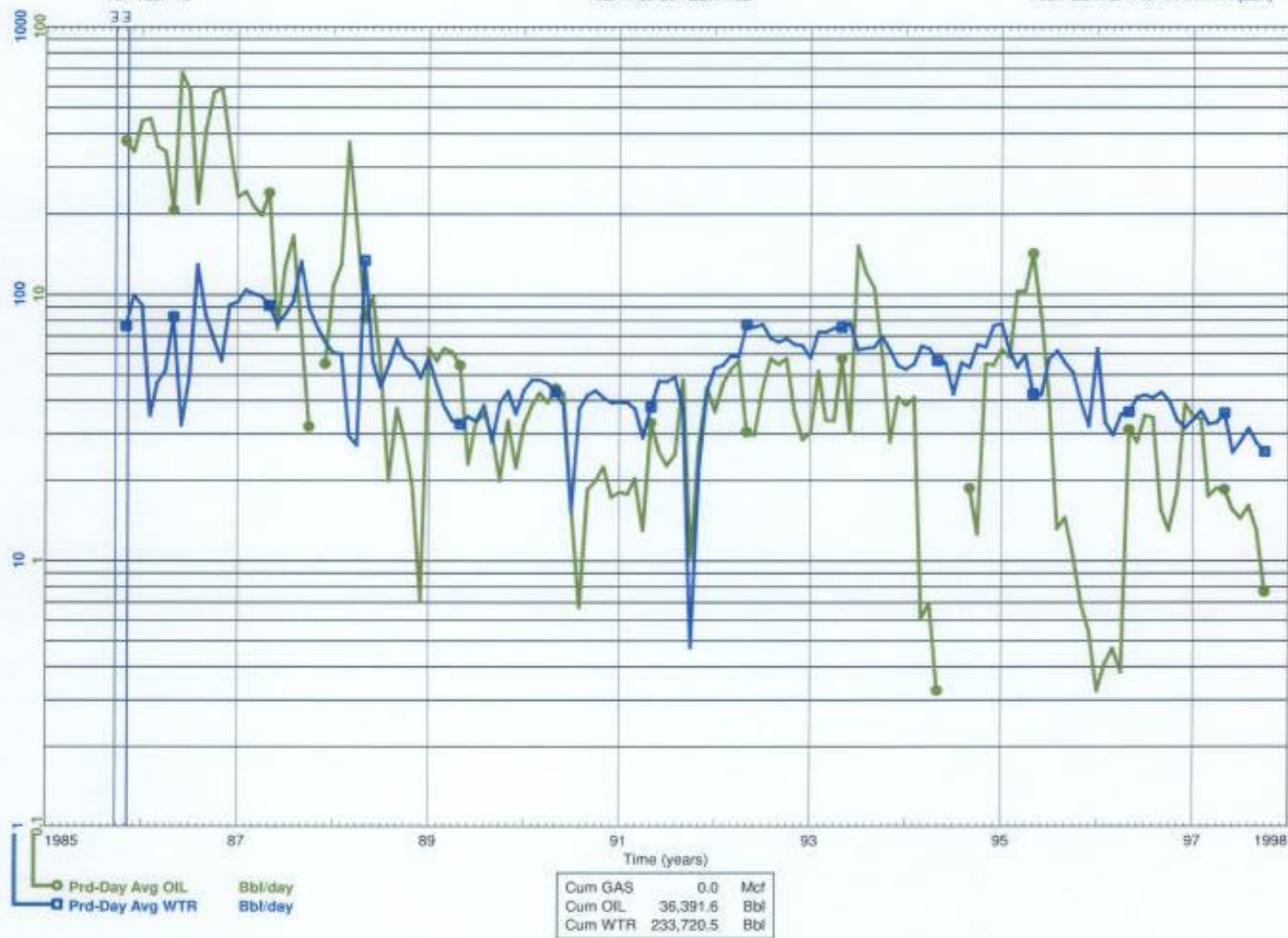
Cum GAS	0.0	Mcf
Cum OIL	55,044.9	Bbl
Cum WTR	67,290.8	Bbl



Data As Of: 2011-01 (MB)  
 From: 1985-11  
 To: 1997-10

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3  
 102/11-30-001-25W1/02

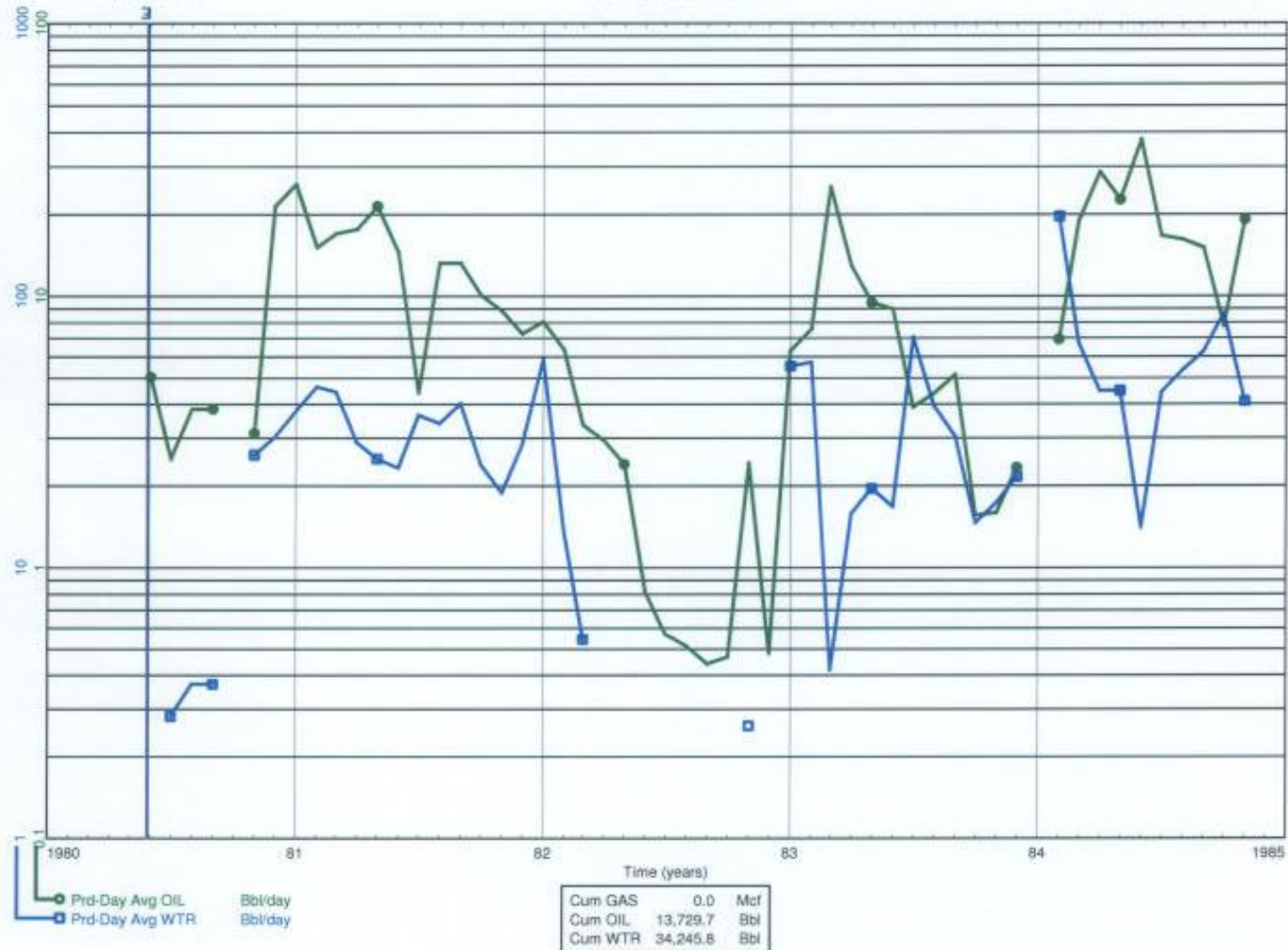
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



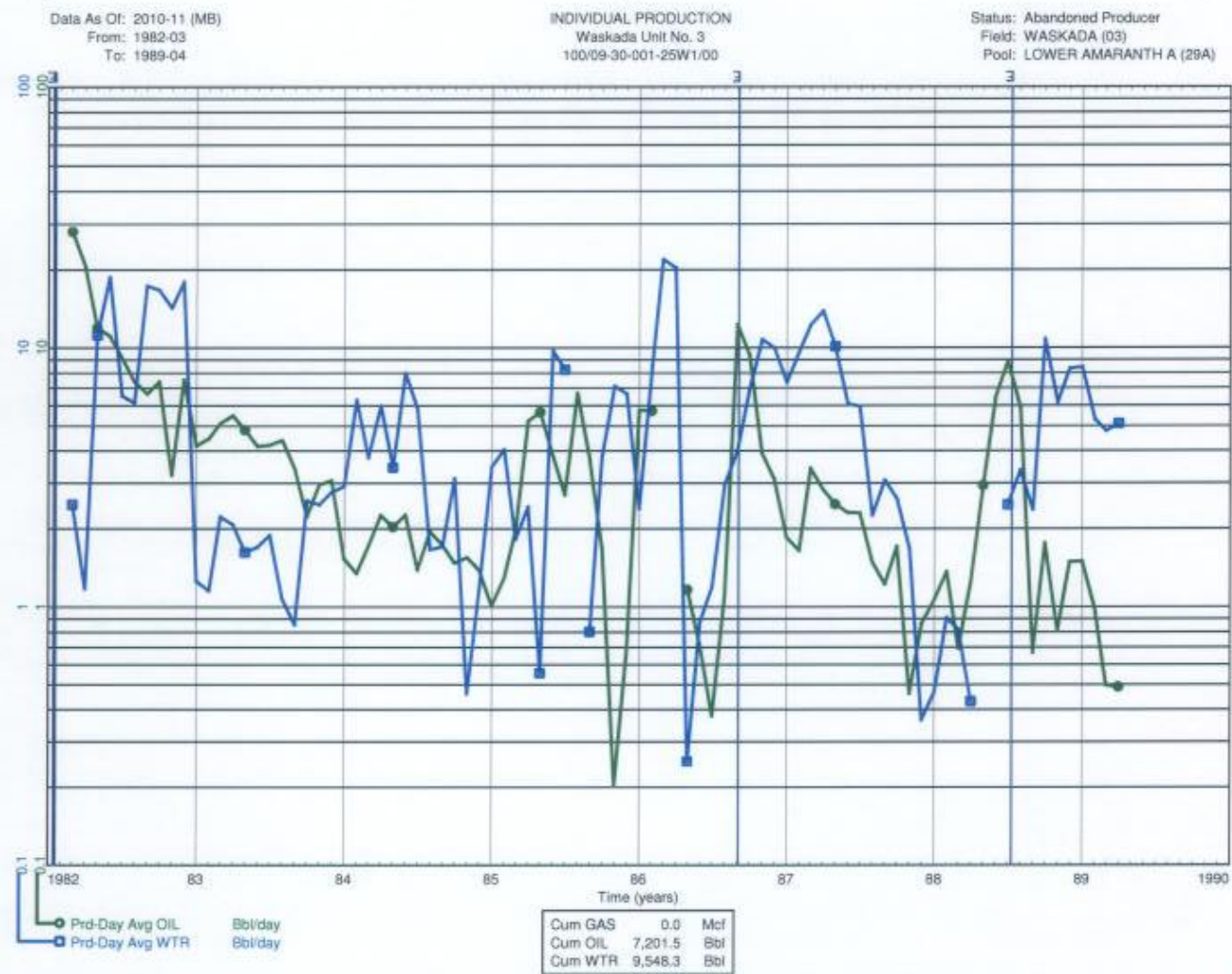
Data As Of: 2010-11 (MB)  
 From: 1980-06  
 To: 1984-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WSW  
 100/11-30-001-25W1/02

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)







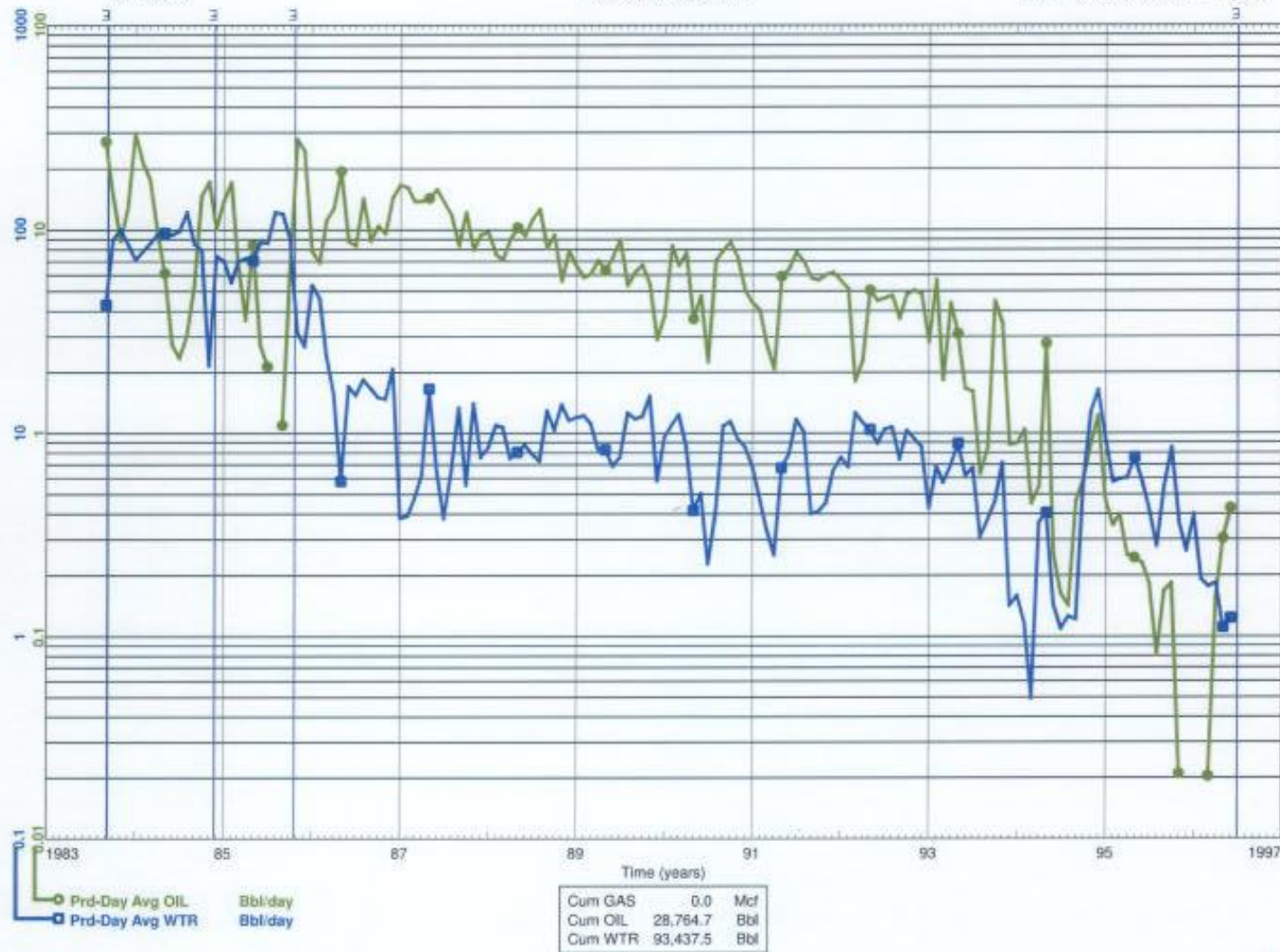
Friday, February 11, 2011, 02:05 PM

geoSCOUT  
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Data As Of: 2011-01 (MB)  
 From: 1983-09  
 To: 1996-06

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 Prov.  
 100/08-30-001-25W1/02

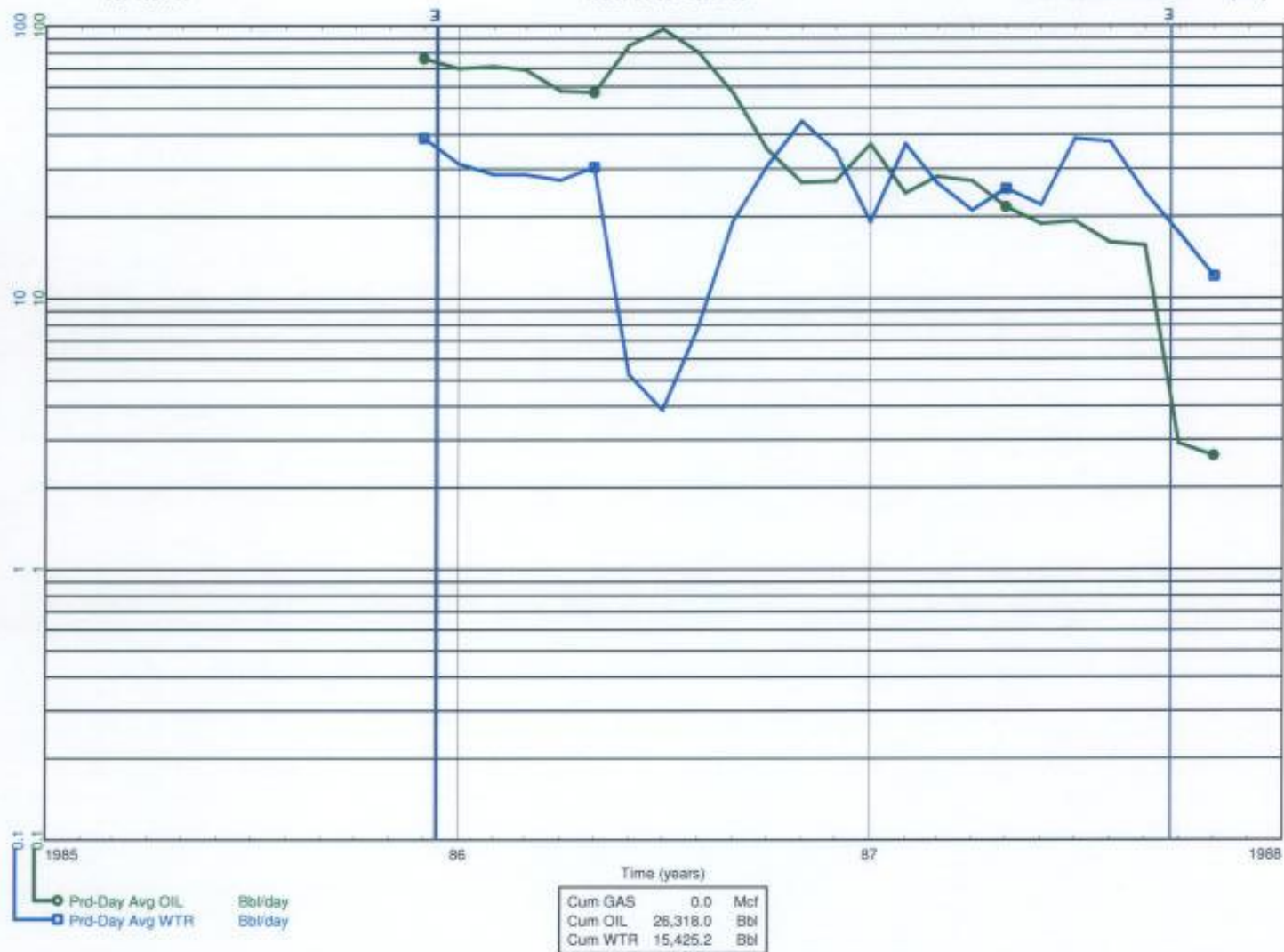
Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1985-12  
 To: 1987-11

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 Prov. WiW  
 102/07-30-001-25W1/00

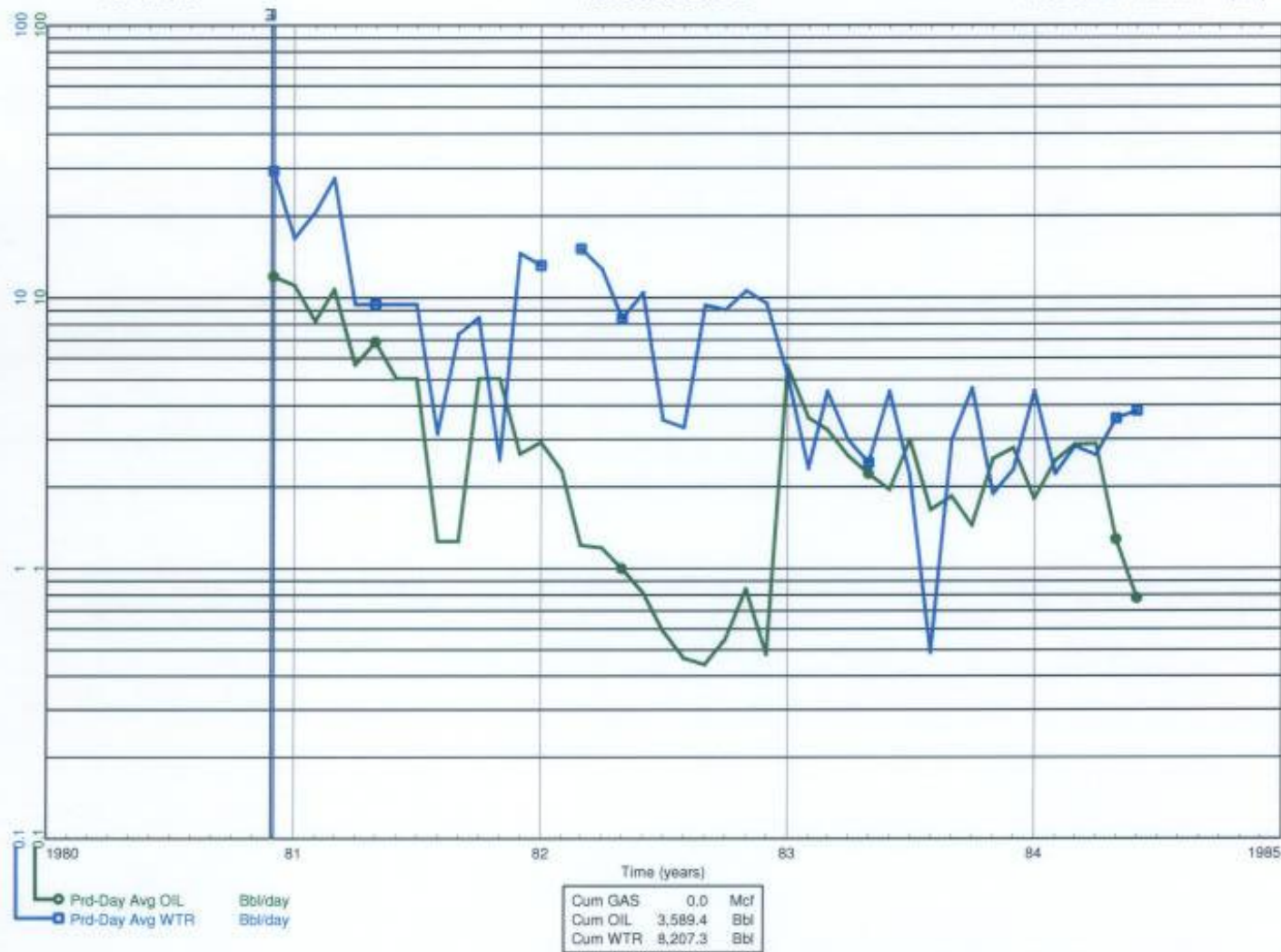
Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
 From: 1980-12  
 To: 1984-06

INDIVIDUAL PRODUCTION  
 Waskada Unit No. 3 WIW  
 100/05-30-001-25W1/02

Status: Abandoned Water Inj Well  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)

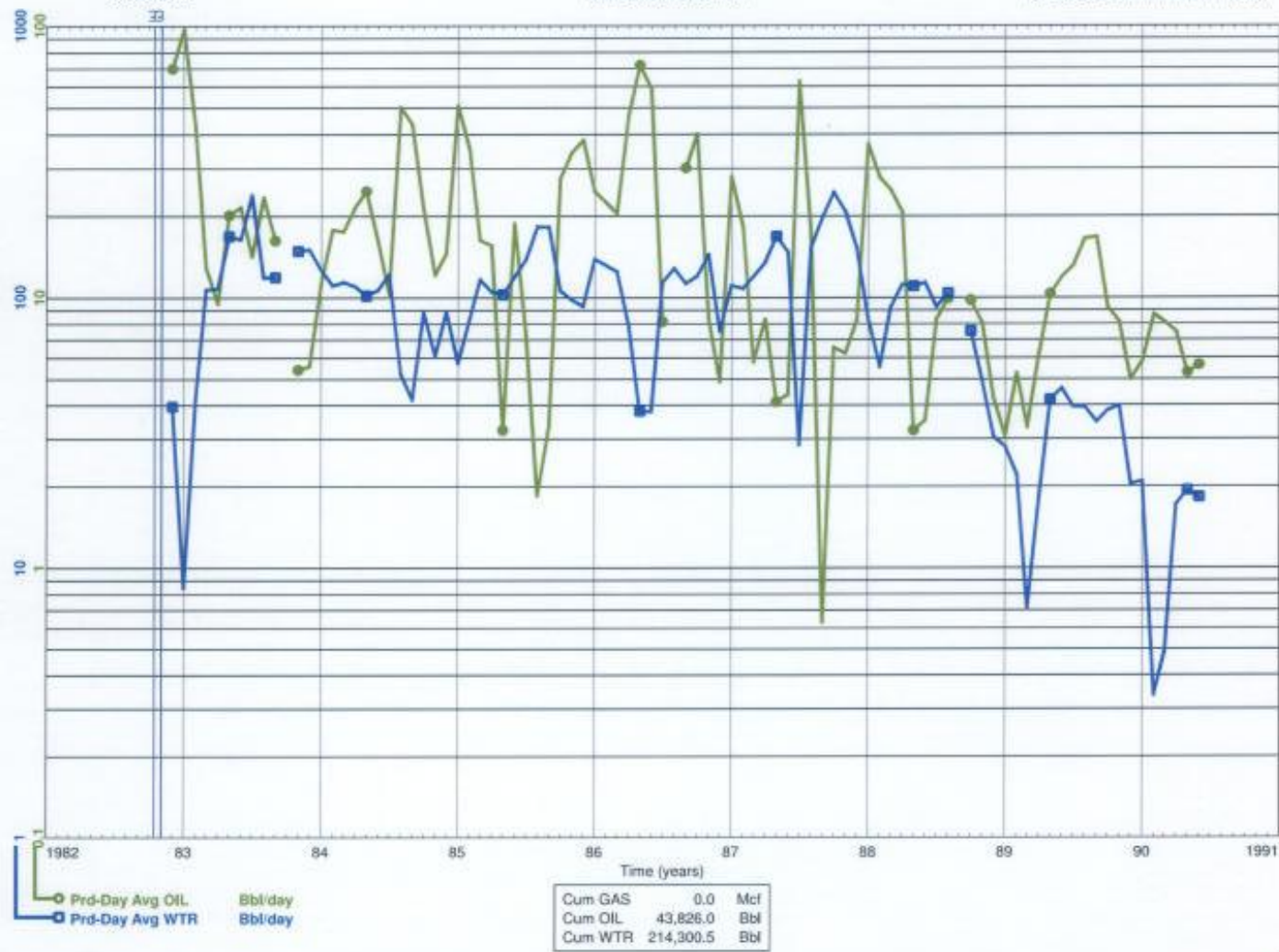




Data As Of: 2011-01 (MB)  
 From: 1982-12  
 To: 1990-06

INDIVIDUAL PRODUCTION  
 Omega Waskada  
 102/04-30-001-25W1/00

Status: Abandoned Producer  
 Field: WASKADA (03)  
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2010-11 (MB)  
From: 1982-10  
To: 1989-07

INDIVIDUAL PRODUCTION  
Waskada Unit No. 3 Prov. WSW  
100/02-30-001-25W1/00

Status: Abandoned Producer  
Field: WASKADA (03)  
Pool: LOWER AMARANTH A (29A)

