

WASKADA UNIT NO. 7

WATERFLOOD PROGRESS REPORT

January 1, through December 31, 2012

PennWest Exploration

**Prepared by:
Siros Mahmody, P.Eng.
Senior Waterflood Exploitation Engineer**

TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	3
UNIT HISTORY	4
DISCUSSION	6
<ul style="list-style-type: none">• Production Performance• Voidage Replacement Ratio Calculation• Corrosion and Scale Prevention Program	
SUMMARY & RECOMMENDATIONS	8
TABLES	11
<ul style="list-style-type: none">• Table 1 - Rates History• Table 2 – Pressure Survey	
APPENDICES	
<ul style="list-style-type: none">• Appendix A – Area Map• Appendix B – Production and Injection History plot• Appendix C – Voidage Replacement Ratio VRR• Appendix D – Production and Injection Profiles (Individual wells)	

INTRODUCTION

The WASKADA LOWER AMARANTH UNIT NO.7 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, Nov.1, 1986 Board Order; Voluntary

POOL: Waskada Lower Amaranth A (03 29A)

This report documents the performance of the Waskada Unit # 7 pressure maintenance project for the period of January 1 to December 31, 2012.

Unit # 7 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.

UNIT HISTORY

Waskada Unit No.7 (Unit History)

CPA Pretty Well ID	Date Well Spudded	On Prod YYYY/MM/DD	Org Operator Name	Ground Elevation (m)	TVD (m)
100/11-17-001-25W1/00	8/14/1983	9/1/1983	Omega Hydcbns Ltd	469	950
102/11-17-001-25W1/00	8/11/2012	10/1/2012		468.2	909.5
103/11-17-001-25W1/00	8/16/2012	10/1/2012		468.4	910.6
100/12-17-001-25W1/00	8/11/1983	9/1/1983	Omega Hydcbns Ltd	469.6	944
100/13-17-001-25W1/00	8/3/1983	8/1/1983	Omega Hydcbns Ltd	469.2	942
100/14-17-001-25W1/00	11/5/1982	12/1/1982	Omega Hydcbns Ltd	467.1	950
102/14-17-001-25W1/00	7/25/2012	10/1/2012		467.6	913.8
103/14-17-001-25W1/00	7/31/2012	10/1/2012		467.8	912.8
104/14-17-001-25W1/00	8/5/2012	10/1/2012		468.1	910.9
100/01-18-001-25W1/00	6/25/1984	7/1/1984	Omega Hydcbns Ltd	466.3	951
100/02-18-001-25W1/00	6/4/1984	7/1/1984	Omega Hydcbns Ltd	466.7	955
100/07-18-001-25W1/02	6/9/1984	7/1/1984	NCE Petrofund Corp	466.9	950
100/08-18-001-25W1/00	11/9/1983	1/1/1984	Omega Hydcbns Ltd	468.1	970
100/09-18-001-25W1/00	11/1/1983	12/1/1983	Omega Hydcbns Ltd	470	940
102/09-18-001-25W1/00	7/23/2010	10/1/2010	Penn West Enrg Trust	468.2	912.2
100/16-18-001-25W1/00	7/24/1983	8/1/1983	Omega Hydcbns Ltd	467.9	934
100/08-19-001-25W1/02	7/23/1985	9/1/1985	NCE Petrofund Corp	468.5	957
100/03-20-001-25W1/00	3/7/1983	3/1/1984	Omega Hydcbns Ltd	467.2	957
102/03-20-001-25W1/00	1/20/2012		Penn West Petrl Ltd	470.7	906.8
103/03-20-001-25W1/00	7/11/2012			469.7	

104/03-20-001-25W1/00	7/6/2012			469.6	
105/03-20-001-25W1/00	7/4/2012			468.3	
103/04-20-001-25W1/00	7/16/2012	8/1/2012		469.9	914.7
106/04-20-001-25W1/00	7/21/2012	9/1/2012		468.5	910.2
100/05-20-001-25W1/00	8/2/1985	9/1/1985	Omega Hydcbns Ltd	468.4	959
102/05-20-001-25W1/00	7/21/2012	9/1/2012		467.7	906.8
103/05-20-001-25W1/00	7/26/2012	9/1/2012		467.7	905.3
100/06-20-001-25W1/00	7/29/1985	12/1/1985	Omega Hydcbns Ltd	469.3	957
100/11-20-001-25W1/00	2/24/1983	3/1/1983	Omega Hydcbns Ltd	469.1	950
102/12-20-001-25W1/00	2/27/2012	8/1/2012	Penn West Enrg Trust	470	902.9
103/12-20-001-25W1/00	6/27/2012			470	904.7
104/12-20-001-25W1/00	7/1/2012	9/1/2012		470.1	903.6
100/13-20-001-25W1/02	9/28/1983	12/1/1983	NCE Petrofund Corp	469.5	944
102/13-20-001-25W1/00	12/4/2011	3/1/2012	Penn West Petr Ltd	470.7	907.6
103/13-20-001-25W1/00	12/14/2011		Penn West Petr Ltd	470.8	906.2
100/14-20-001-25W1/00	6/27/1984	11/1/1984	Omega Hydcbns Ltd	469.4	950
100/15-20-001-25W1/00	10/26/1982	12/1/1982	Omega Hydcbns Ltd	470.2	950
100/16-20-001-25W1/00	7/10/1984	8/1/1984	Omega Hydcbns Ltd	470.7	941
102/16-20-001-25W1/00	3/4/2011	10/1/2011	Penn West Enrg Trust	470.4	902.9
103/16-20-001-25W1/00	2/26/2011	10/1/2011	Penn West Enrg Trust	470.5	901.7

Waskada Unit No.7 (Production & Injection History)

CPA Pretty Well ID	First Prod YYYY/MM	On Inject. YYYY/MM/DD	Last Prod. YYYY/MM	Cumulative OIL Prod. (m3)	Cumulative WTR Prod. (m3)	Last Inject. YYYY/MM
100/11-17-001-25W1/00	1983/09		1991/03	3114	2823	
102/11-17-001-25W1/00	2012/10		2012/10	243	281	
103/11-17-001-25W1/00	2012/10		2012/10	150	221	
100/12-17-001-25W1/00	1983/09		1991/01	2445	3725	
100/13-17-001-25W1/00	1983/08	1/1/1987	1986/11	575	546	1991/03
100/14-17-001-25W1/00	1982/12		1991/02	3330	3407	
102/14-17-001-25W1/00	2012/10		2012/10	54	280	
103/14-17-001-25W1/00	2012/10		2012/10	31	113	
104/14-17-001-25W1/00	2012/10		2012/10	92	360	
100/01-18-001-25W1/00	1984/07		1989/09	1219	4170	
100/02-18-001-25W1/00	1984/07		1989/01	470	2010	
100/07-18-001-25W1/02	1984/07	1/1/1987	1986/11	552	1360	1989/06
100/08-18-001-25W1/00	1984/01		1989/06	995	1771	
100/09-18-001-25W1/00	1983/12		1989/05	472	801	
102/09-18-001-25W1/00	2010/10		2012/10	5026	8589	

100/16-18-001-25W1/00	1983/08		1987/09	392	1633	
100/08-19-001-25W1/02	1985/09		1993/02	1430	681	
100/03-20-001-25W1/00	1984/03		1988/07	619	1305	
102/03-20-001-25W1/00						
103/03-20-001-25W1/00						
104/03-20-001-25W1/00						
105/03-20-001-25W1/00						
103/04-20-001-25W1/00	2012/08		2012/10	1544	2268	
106/04-20-001-25W1/00	2012/09		2012/10	853	1511	
100/05-20-001-25W1/00	1985/09	1/1/1987	1986/11	301	34	1998/01
102/05-20-001-25W1/00	2012/09		2012/10	653	1747	
103/05-20-001-25W1/00	2012/09		2012/10	1594	713	
100/06-20-001-25W1/00	1985/12		1989/11	1739	15353	
100/11-20-001-25W1/00	1983/03		2012/10	16688	2200	
102/12-20-001-25W1/00	2012/08		2012/10	2450	2203	
103/12-20-001-25W1/00						
104/12-20-001-25W1/00	2012/09		2012/10	223	2447	
100/13-20-001-25W1/02	1983/12	1/1/1987	1986/11	1796	3158	1998/02
102/13-20-001-25W1/00	2012/03		2012/10	5112	10622	
103/13-20-001-25W1/00						
100/14-20-001-25W1/00	1984/11		1996/02	14475	31845	
100/15-20-001-25W1/00	1982/12	1/1/1987	1986/11	2111	1140	1998/02
100/16-20-001-25W1/00	1984/08		1989/08	471	2593	
102/16-20-001-25W1/00	2011/10		2012/10	4008	6422	
103/16-20-001-25W1/00	2011/10		2012/10	3391	11359	

DISCUSSION:

Production Performance

Production Response versus Injection: Since injection began, early 1987, injection rates fluctuated to 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 1998.

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 0.85 (under injected) and the current monthly VRR is zero.

(See Appendix C). All of the injectors are shut in currently. PennWest has no plan to re-activate the old injectors.

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 is to:

1. See if we inject water continuously 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.

2012 Waskada Lower Amaranth Waterflood Pilot Location

The pilot producer is 102/12-01-02-26W1/00 (the existing horizontal well) and the injectors are two vertical wells; 100/12-01-02-26W1 and 100/11-01-02-26 (converted to injectors). The pilot started late 2012, but because of some technical issues and cold weather the operation suspended, and it was postponed until spring 2013.

Corrosion and Scale Prevention Program

We currently inject ScalCor down all the new horizontal wells. In addition to that, 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

102/11-17-001-25W1/00
103/11-17-001-25W1/00
102/14-17-001-25W1/00
103/14-17-001-25W1/00
104/14-17-001-25W1/00
102/09-18-001-25W1/00
103/04-20-001-25W1/00
106/04-20-001-25W1/00
102/05-20-001-25W1/00
103/05-20-001-25W1/00
100/11-20-001-25W1/00
102/12-20-001-25W1/00
104/12-20-001-25W1/00
102/13-20-001-25W1/00
102/16-20-001-25W1/00
103/16-20-001-25W1/00
102/03-20-001-25W1/00 (Completing)
103/03-20-001-25W1/00 (Completing)
104/03-20-001-25W1/00 (Completing)
105/03-20-001-25W1/00 (Completing)
103/13-20-001-25W1/00(Completing)

Current Suspended Wells

103/12-20-001-25W1/00

Abandoned Wells

1. 00/11-17-001-25W1/0 (since 1991/04)
2. 00/12-17-001-25W1/0 (since 1991/02)
3. 00/14-17-001-25W1/0 (since 1991/03)
4. 00/01-18-001-25W1/0 (since 1989/10)
5. 00/02-18-001-25W1/0 (since 1989/02)
6. 00/08-18-001-25W1/0 (since 1989/07)
7. 00/09-18-001-25W1/0 (since 1989/06)

8. 00/16-18-001-25W1/0 (since 1987/10)
9. 00/08-19-001-25W1/2 (since 1993/03)
10. 00/03-20-001-25W1/0 (since 1988/08)
11. 00/06-20-001-25W1/0 (since 1989/12)
12. 00/14-20-001-25W1/0 (since 1996/03)
13. 00/16-20-001-25W1/0 (since 1989/09)

[Injectors]

Current Injecting Wells

None

Current Suspended Wells

1. None

Abandoned Wells

1. 00/05-20-001-25W1/0 (since 1998/02)
2. 00/07-18-001-25W1/2 (since 1989/07)
3. 00/13-17-001-25W1/0 (since 1991/04)
4. 00/13-20-001-25W1/2 (since 1998/03)
5. 00/15-20-001-25W1/0 (since 1998/03)

2012 drill list – Unit # 7

- 102/03-20-001-25W1
- 102/05-20-001-25W1
- 102/11-17-001-25W1
- 102/12-20-001-25W1
- 102/14-17-001-25W1
- 103/03-20-001-25W1
- 103/04-20-001-25W1
- 103/05-20-001-25W1
- 103/11-17-001-25W1
- 103/12-20-001-25W1
- 103/14-17-001-25W1
- 104/03-20-001-25W1
- 104/12-20-001-25W1
- 104/14-17-001-25W1

- 105/03-20-001-25W1
- 106/04-20-001-25W1

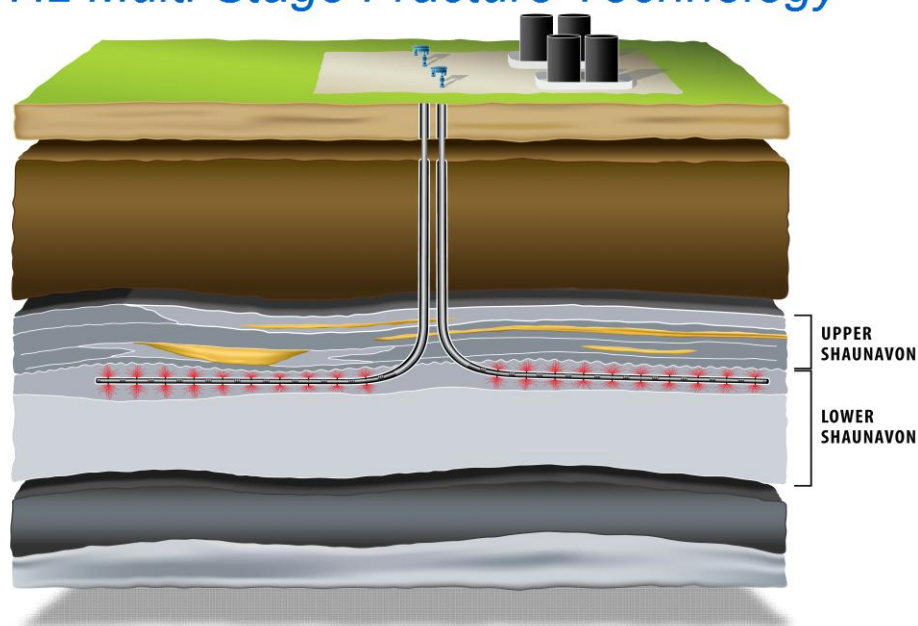
The behavior of a Waskada Unit 7 producers are indicated by examining the oil rate versus time plots (see Appendix B). Waskada Unit 7 exhibited relatively high initial oil productivity (most of the vertical wells that drilled in the past), rapidly declining to flat/low decline rates, with almost no discernible water flood response. We are planning to do more pressure survey, in few more wells, to understand the reservoir better, this year.

It is believed that fracture stimulation treatments, performed on these wells prior to initiation of water injection, “broke” through into the higher productivity Mississippian 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 Lower Amaranth 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 1980’s. Penn West’s follow up 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:

Hz Multi Stage Fracture Technology



TABLES

Waskada Unit #7

Table 1: Rates History

Production Data						
Date	Oil		Water		Injection Water	
Year	m3/year	m3/day	m3/year	m3/day	m3/year	m3/day
1982	409	1.12	175	0.48	0	0.00
1983	4,630	12.69	3,544	9.71	0	0.00
1984	7,337	20.10	6,433	17.62	0	0.00
1985	6,906	18.92	12,628	34.60	0	0.00
1986	7,259	19.89	15,666	42.92	0	0.00
1987	4,083	11.19	17,409	47.70	56,975	0.00
1988	3,990	10.93	9,108	24.95	24,688	0.00
1989	2,167	5.94	5,783	15.84	4,055	0.00
1990	1,090	2.99	2,399	6.57	8,295	0.00
1991	781	2.14	1,533	4.20	2,560	0.00
1992	1,420	3.89	871	2.39	3,335	0.00
1993	1,698	4.65	1,271	3.48	5,099	0.00
1994	962	2.64	1,065	2.92	4,636	0.00
1995	806	2.21	1,750	4.80	4,386	0.00
1996	700	1.92	270	0.74	5,135	0.00
1997	855	2.34	54	0.15	3,863	0.00

1998	762	2.09	89	0.24	409	0.00
1999	492	1.35	49	0.14	0	0.00
2000	525	1.44	40	0.11	0	0.00
2001	505	1.38	28	0.08	0	0.00
2002	796	2.18	39	0.11	0	0.00
2003	774	2.12	34	0.09	0	0.00
2004	661	1.81	42	0.12	0	0.00
2005	562	1.54	47	0.13	0	0.00
2006	602	1.65	43	0.12	0	0.00
2007	497	1.36	37	0.10	0	0.00
2008	481	1.32	34	0.09	0	0.00
2009	431	1.18	29	0.08	0	0.00
2010	2,053	5.62	2,896	7.93	0	0.00
2011	5,471	14.99	8,828	24.19	0	0.00
2012	18,911	51.81	37,497	102.73	0	0.00

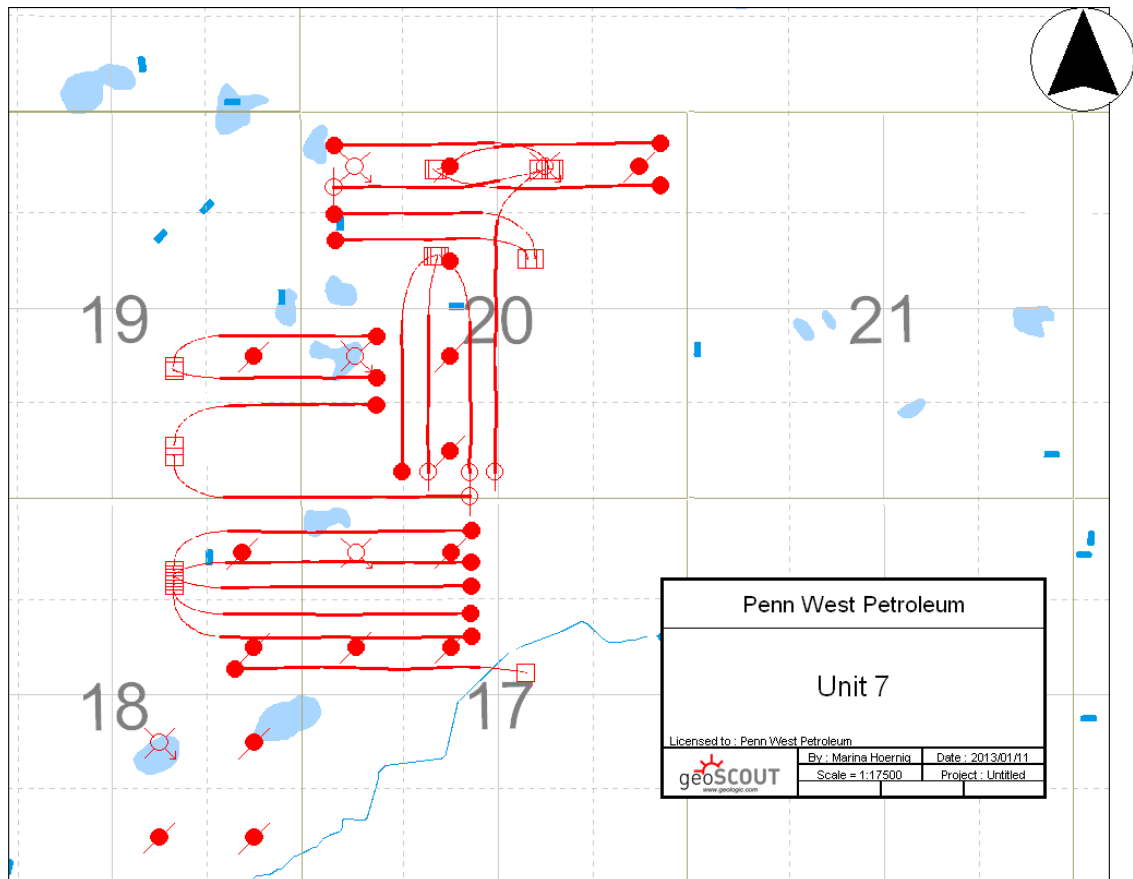
Table 2: Pressure Survey

Location	Shut In Date	Date of Survey	Type of Survey	Pressure @ Datum Depth (kPa)
00/15-20-001-25W1/0	Jan-91	(18 days)	Static Gradient	10186

APPENDIX A

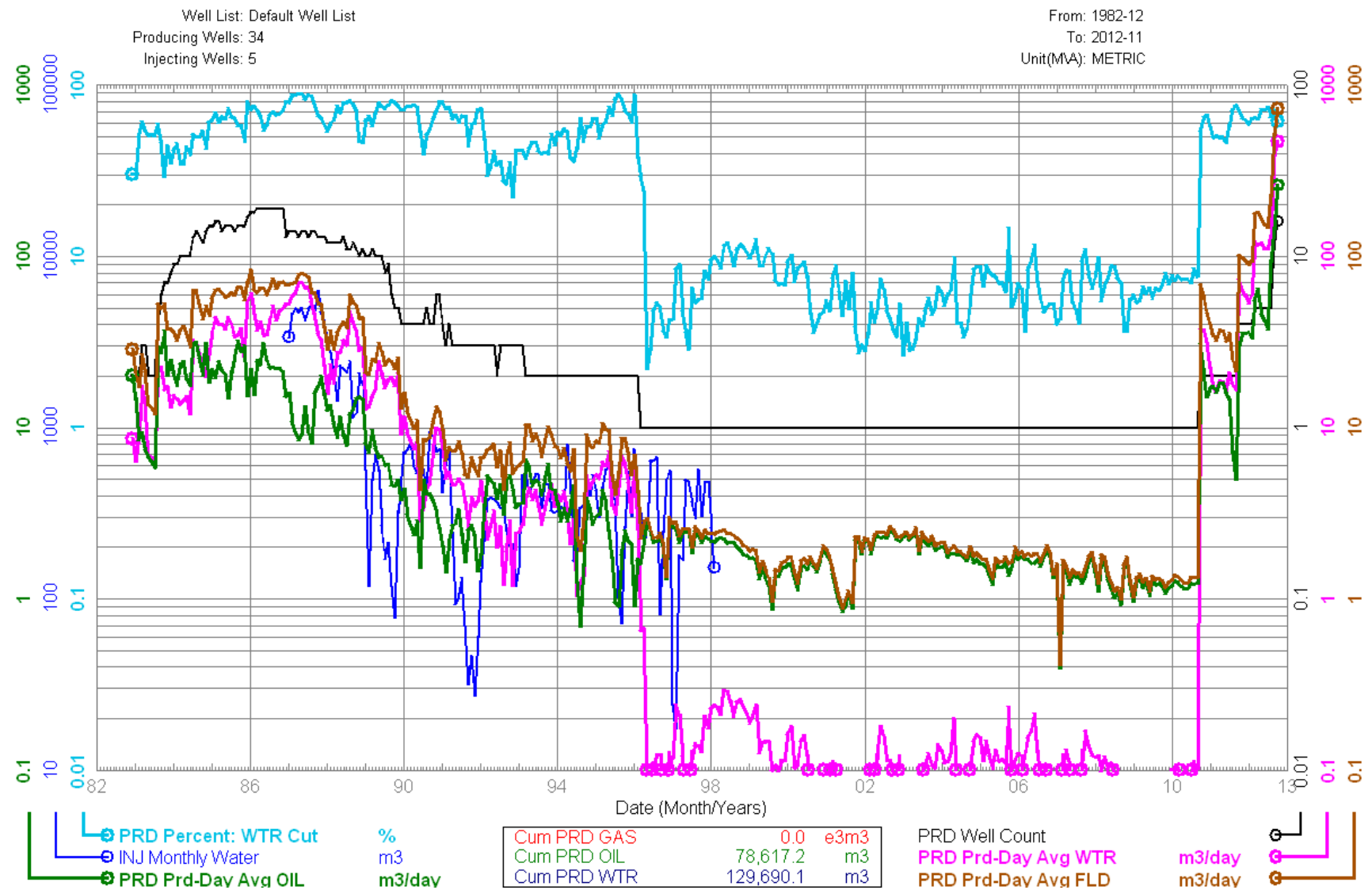
Appendix A – Area

Map



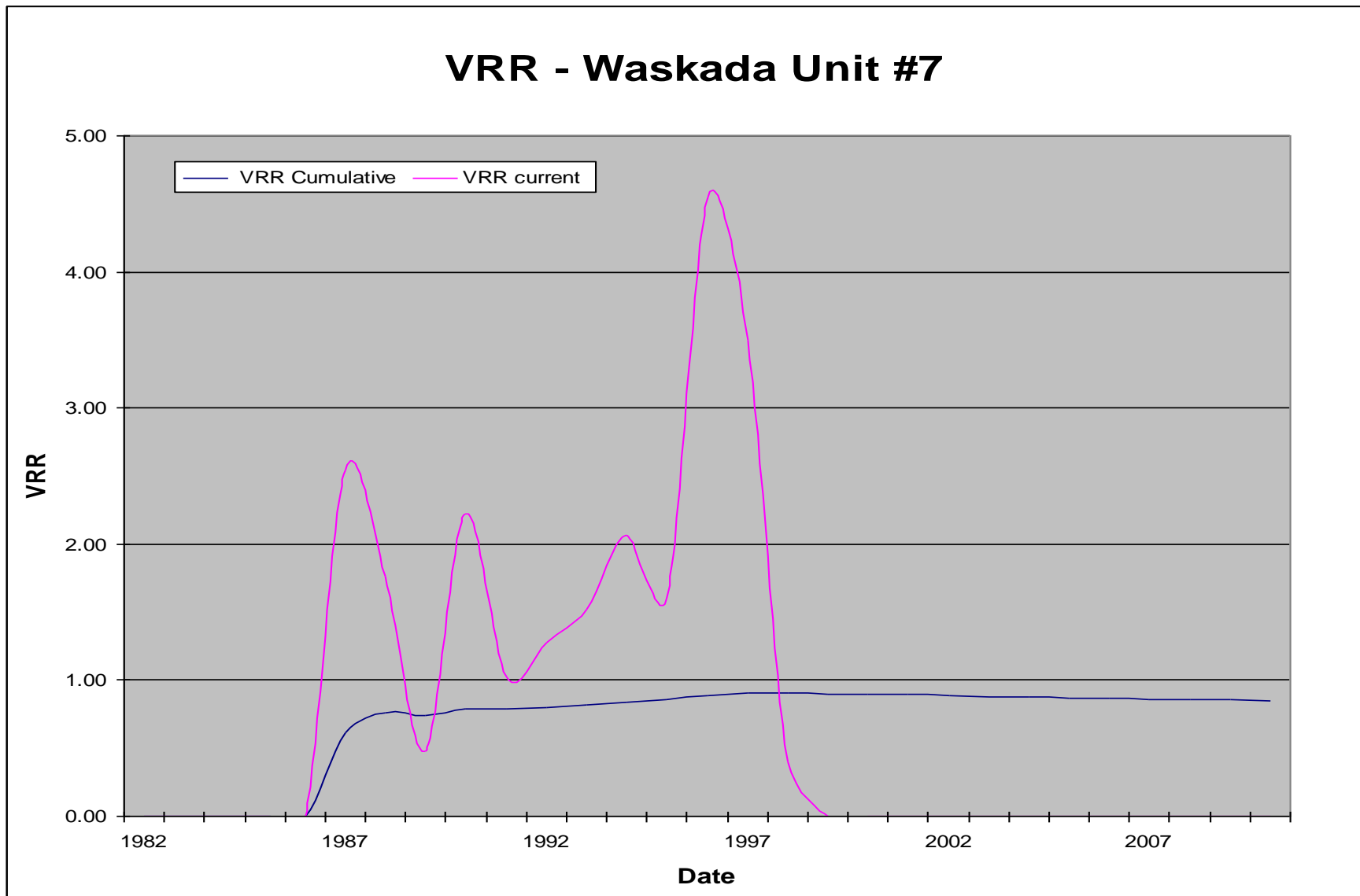
APPENDIX B

Appendix B – Production and Injection History plot



APPENDIX C

Appendix C – Voidage Replacement Ratio VRR



APPENDIX D

Appendix D – Production and Injection Profiles

Data As Of: 2012-10 (MB)

From: 1982-12

To: 1986-11

100/15-20-001-25W1/00

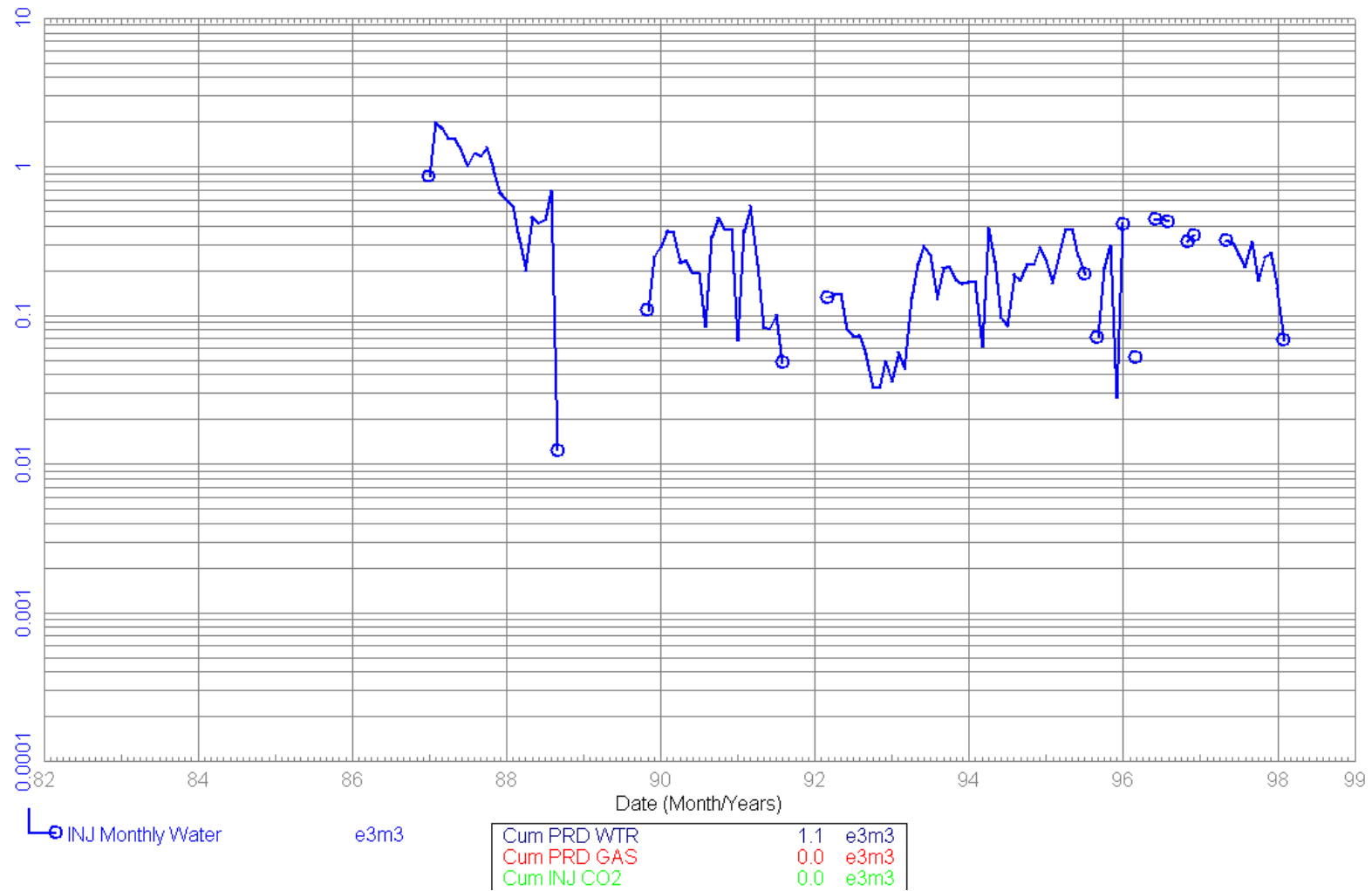
Waskada Unit No. 7 WWV

Abandoned Water Inj Well

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)

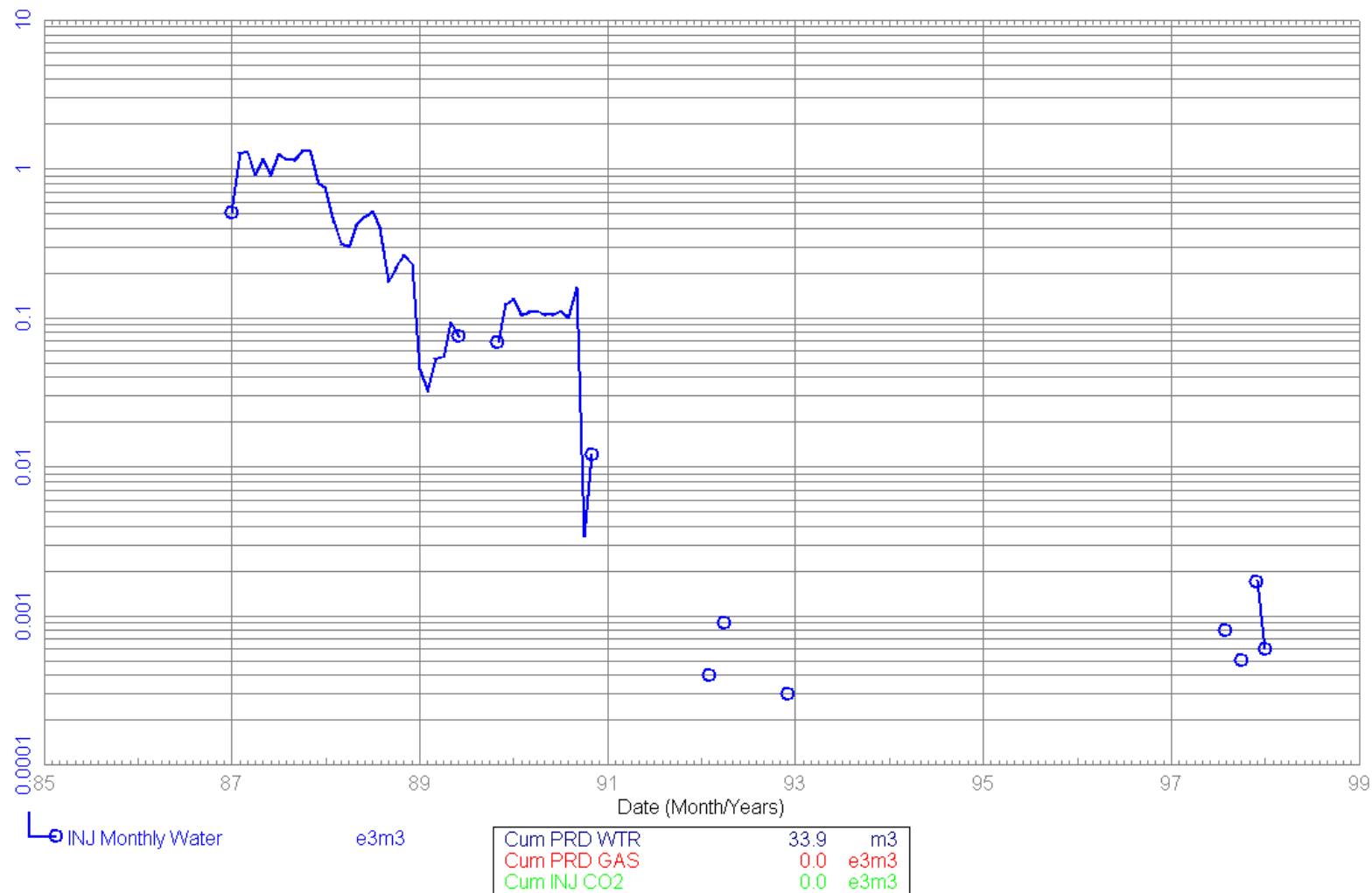
Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1985-09
 To: 1986-11

100/05-20-001-25W1/00
 Waskada Unit No. 7 Prov. WIW
 Abandoned Water Inj Well

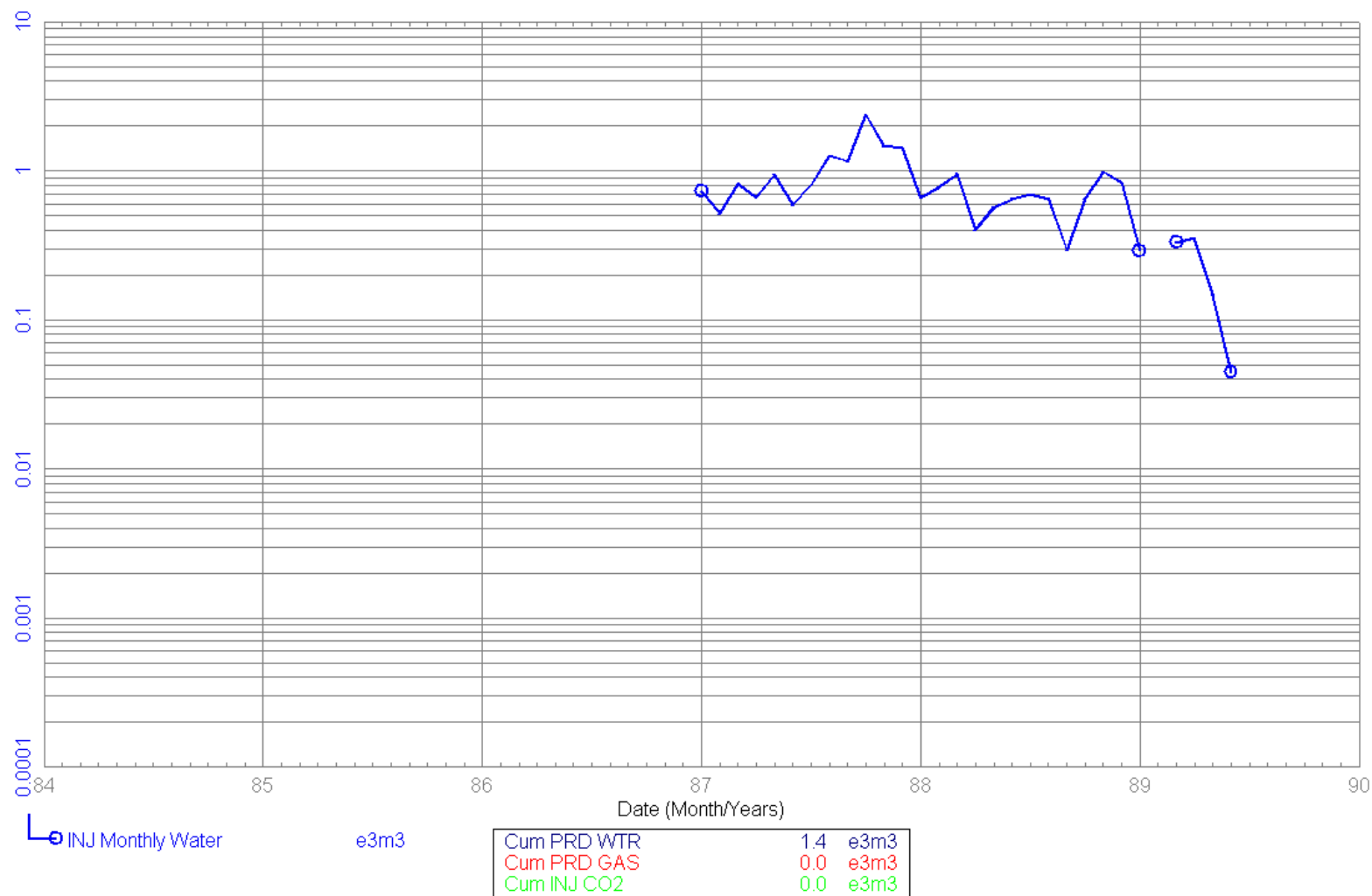
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 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
From: 1984-07
To: 1986-11

100/07-18-001-25W1/02
Waskada Unit No. 7 SWD
Abandoned Water Inj Well

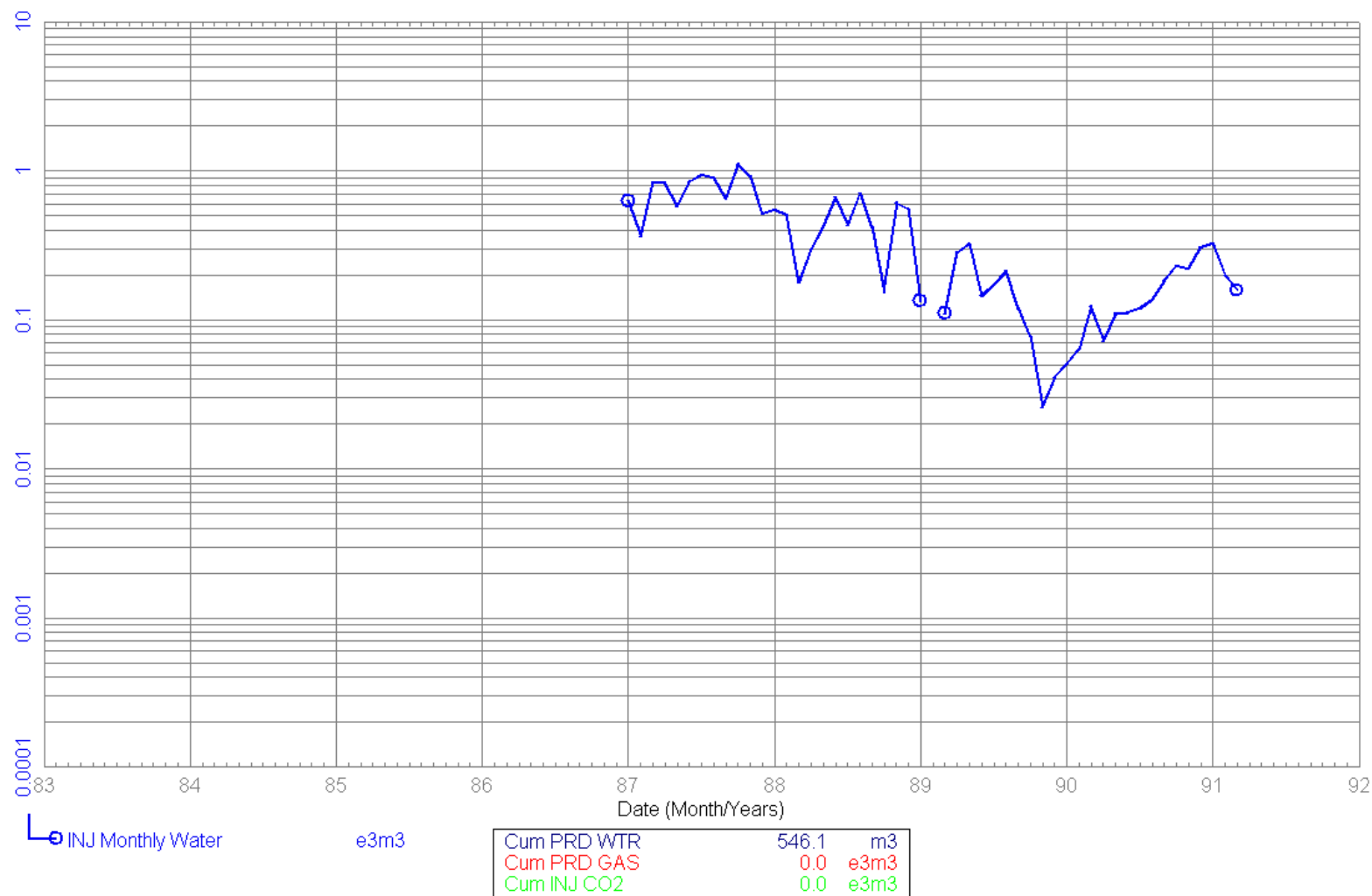
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Pool: LOWER AMARANTH A (29A)
Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
From: 1983-08
To: 1986-11

100/13-17-001-25W1/00
Waskada Unit No. 7 WW
Abandoned Water Inj Well

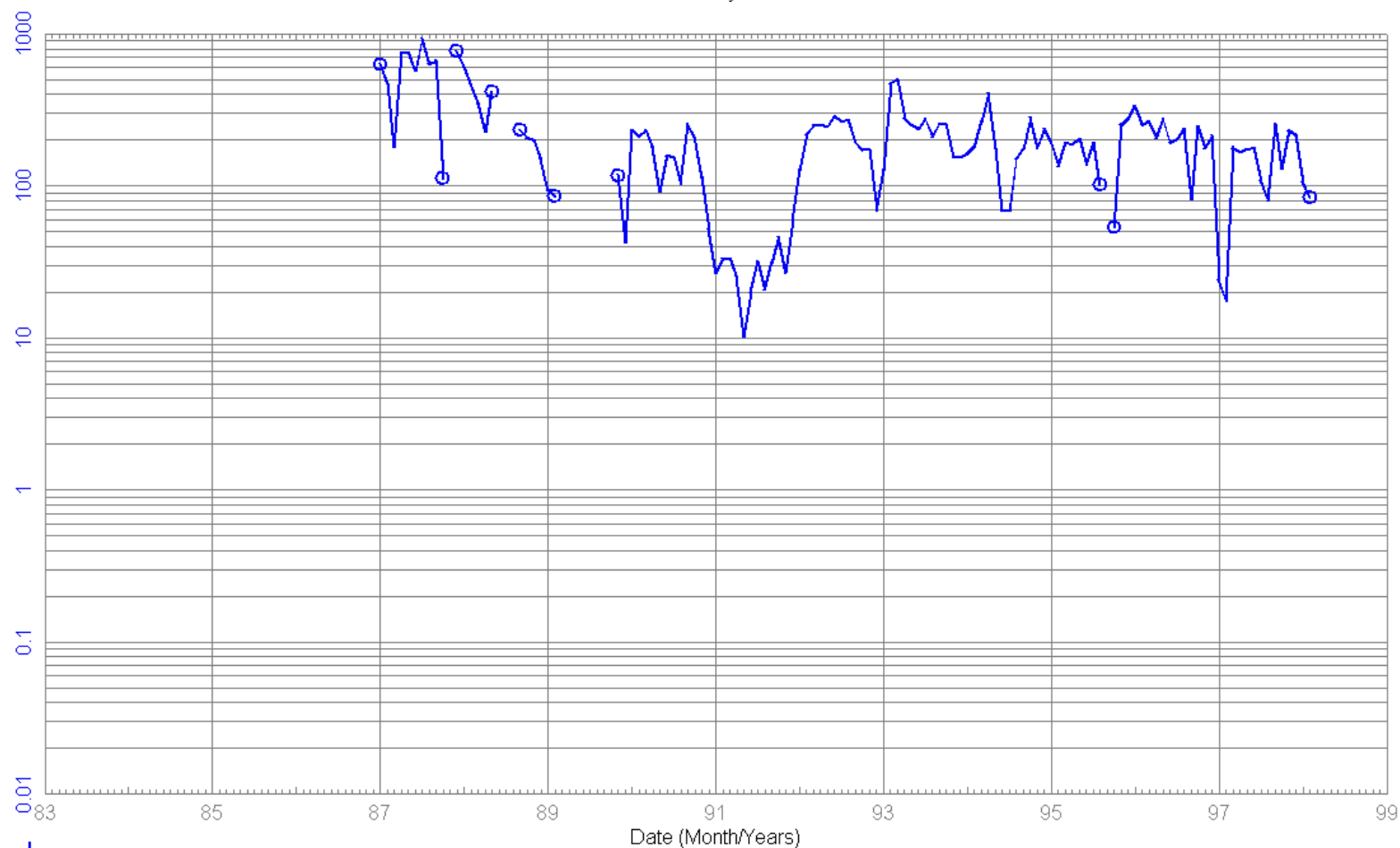
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Pool: LOWER AMARANTH A (29A)
Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
From: 1983-12
To: 1986-11

100/13-20-001-25W1/02
Waskada Unit No. 7 WW
Abandoned Water Inj Well

Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)
Unit: WASKADA UNIT NO. 7



INJ Monthly Water

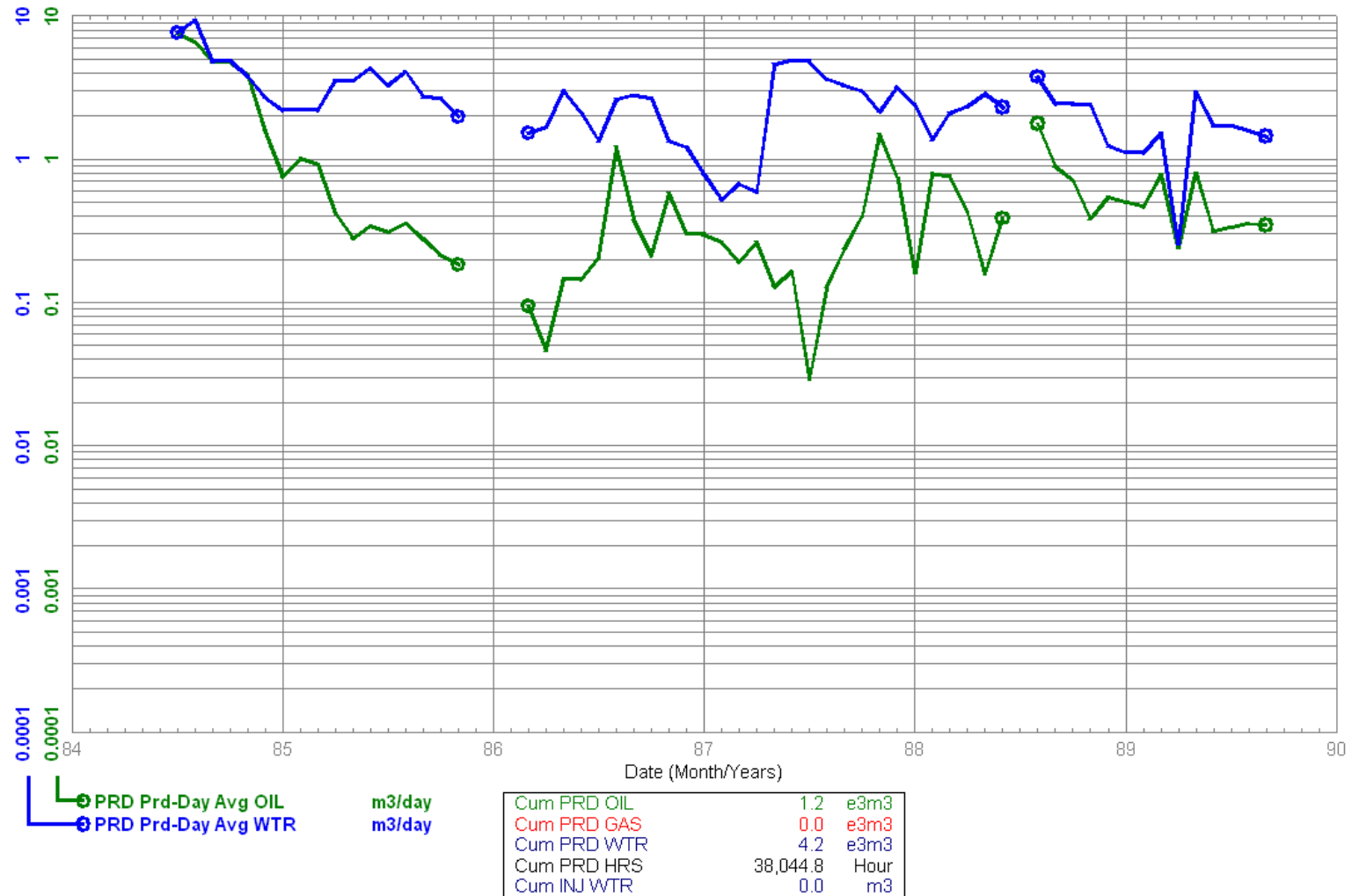
m3

Cum PRD WTR	3.2	e3m3
Cum PRD GAS	0.0	e3m3
Cum INJ CO2	0.0	e3m3

Data As Of: 2012-10 (MB)
 From: 1984-07
 To: 1989-09

100/01-18-001-25W1/00
 Omega Waskada
 Abandoned Producer

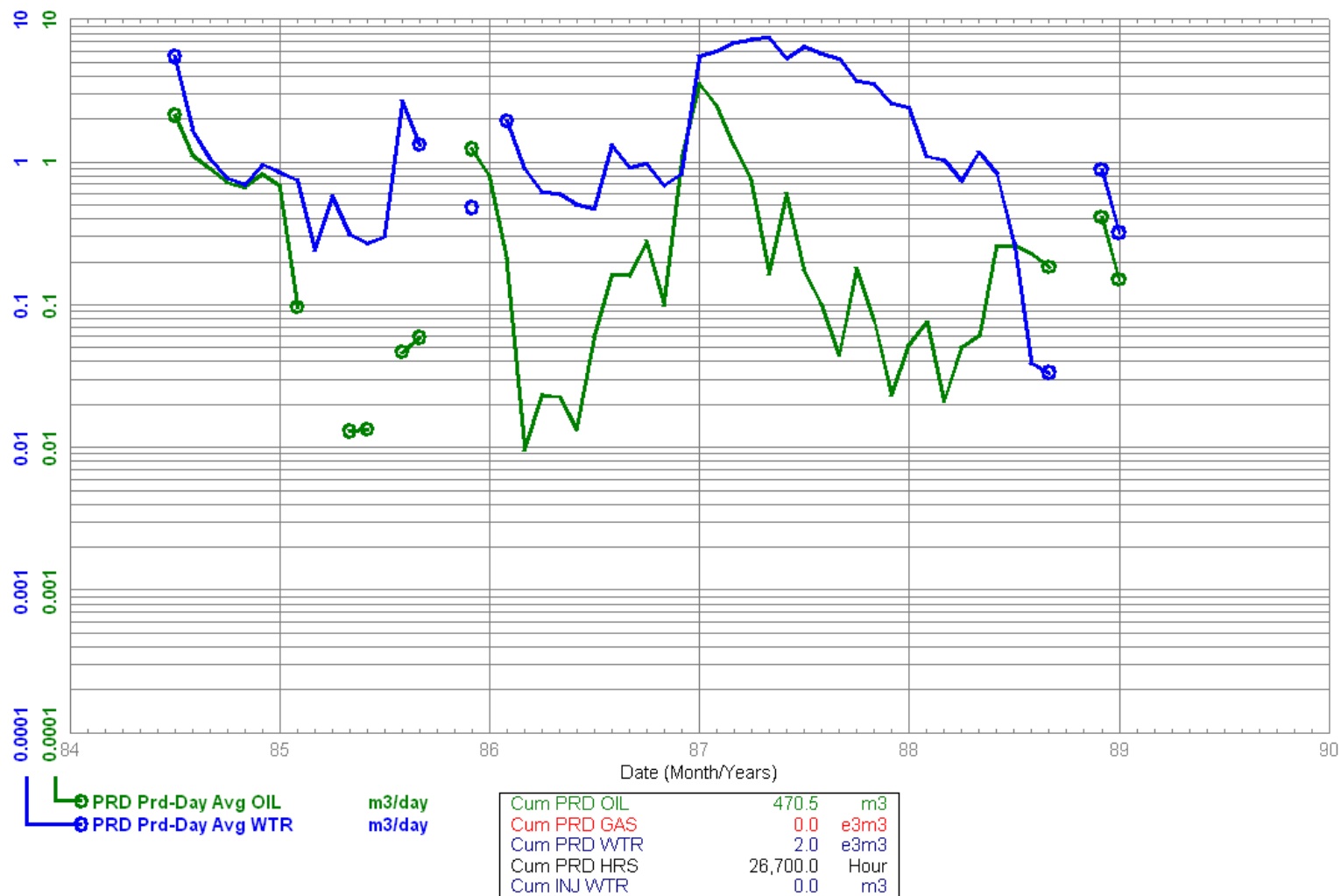
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 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1984-07
 To: 1989-01

100/02-18-001-25W1/00
 Omega Waskada
 Abandoned Producer

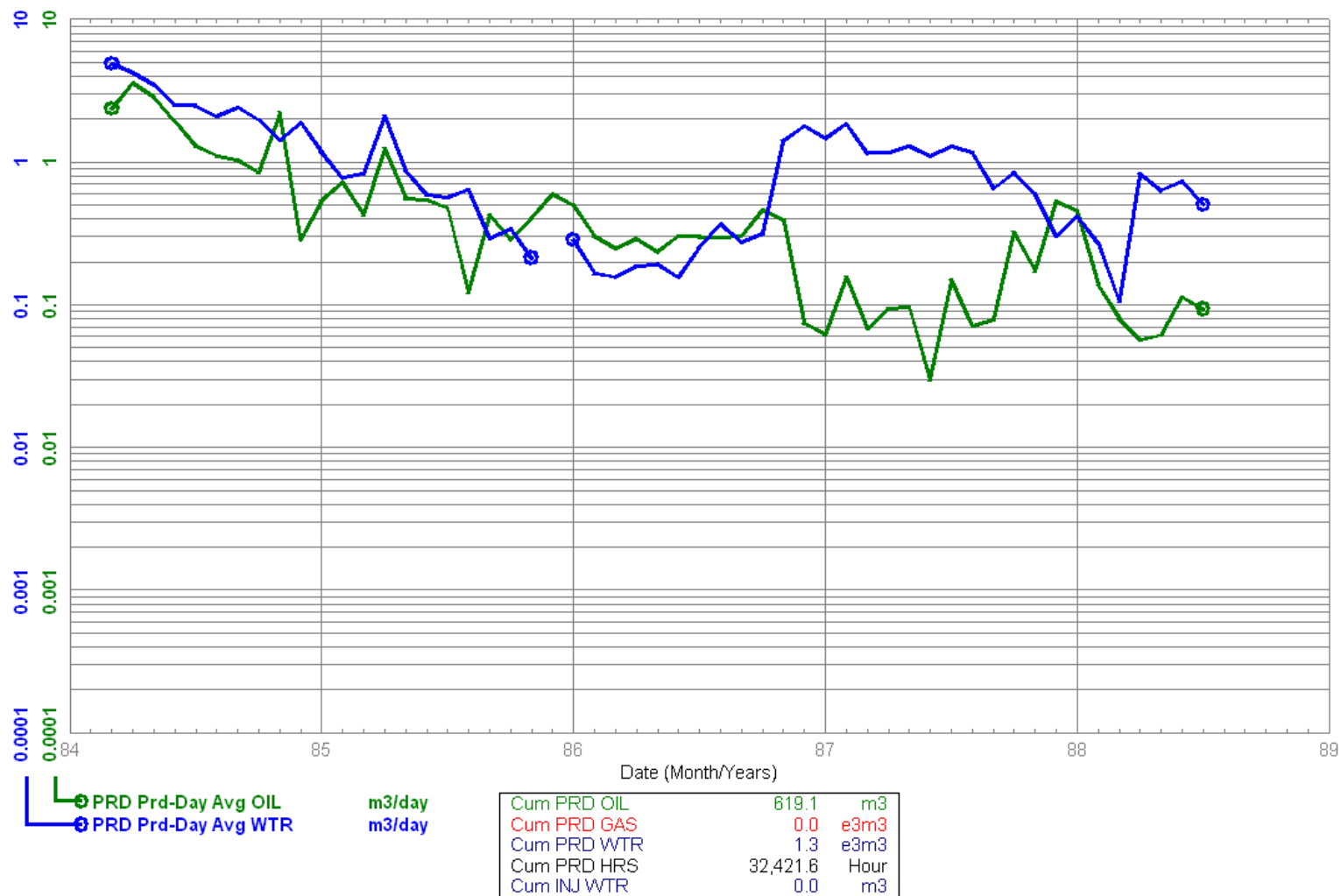
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 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1984-03
 To: 1988-07

100/03-20-001-25W1/00
 Waskada Unit No. 7 Prov.
 Abandoned Producer

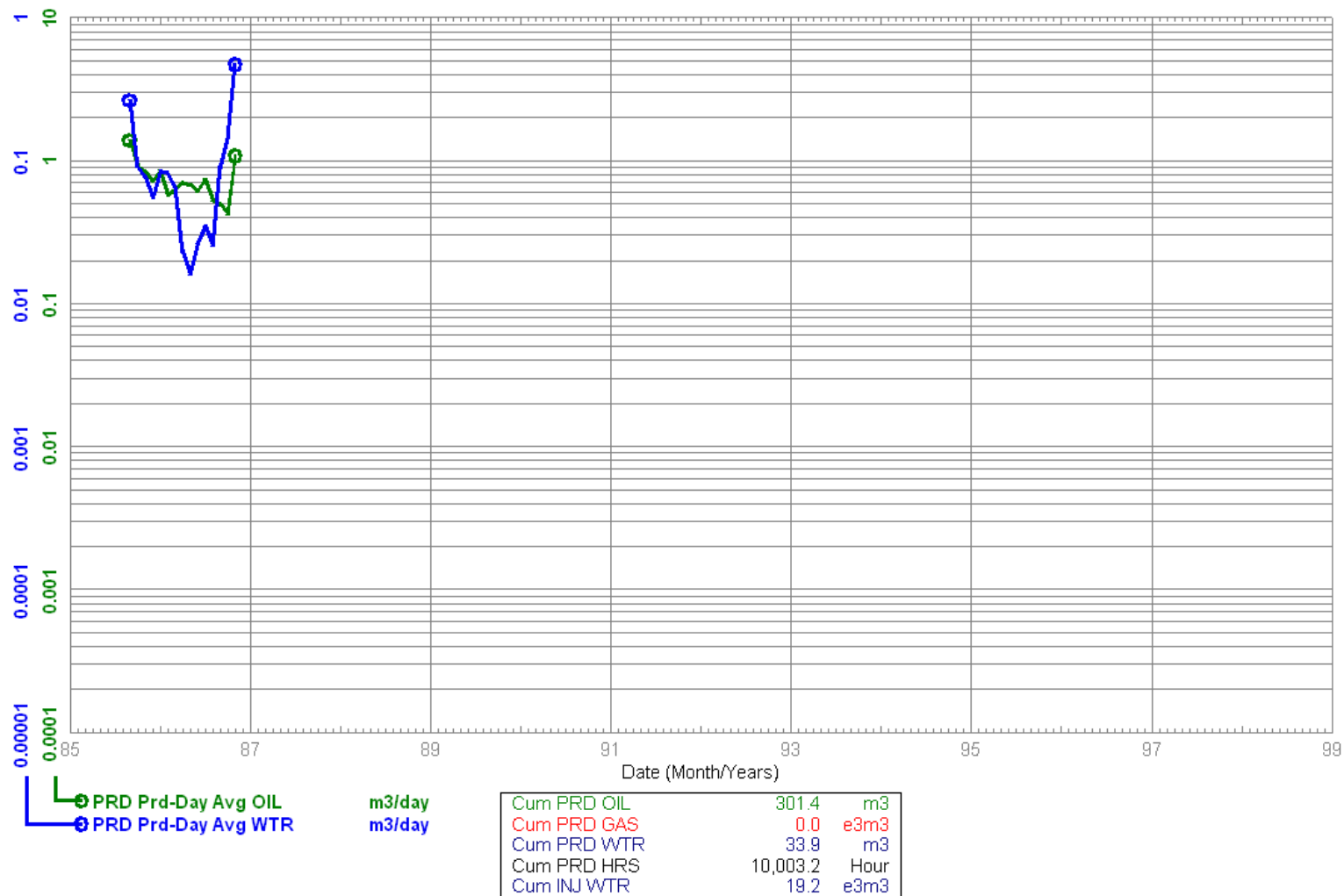
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1985-09
 To: 1986-11

100/05-20-001-25W1/00
 Waskada Unit No. 7 Prov. WIW
 Abandoned Water Inj Well

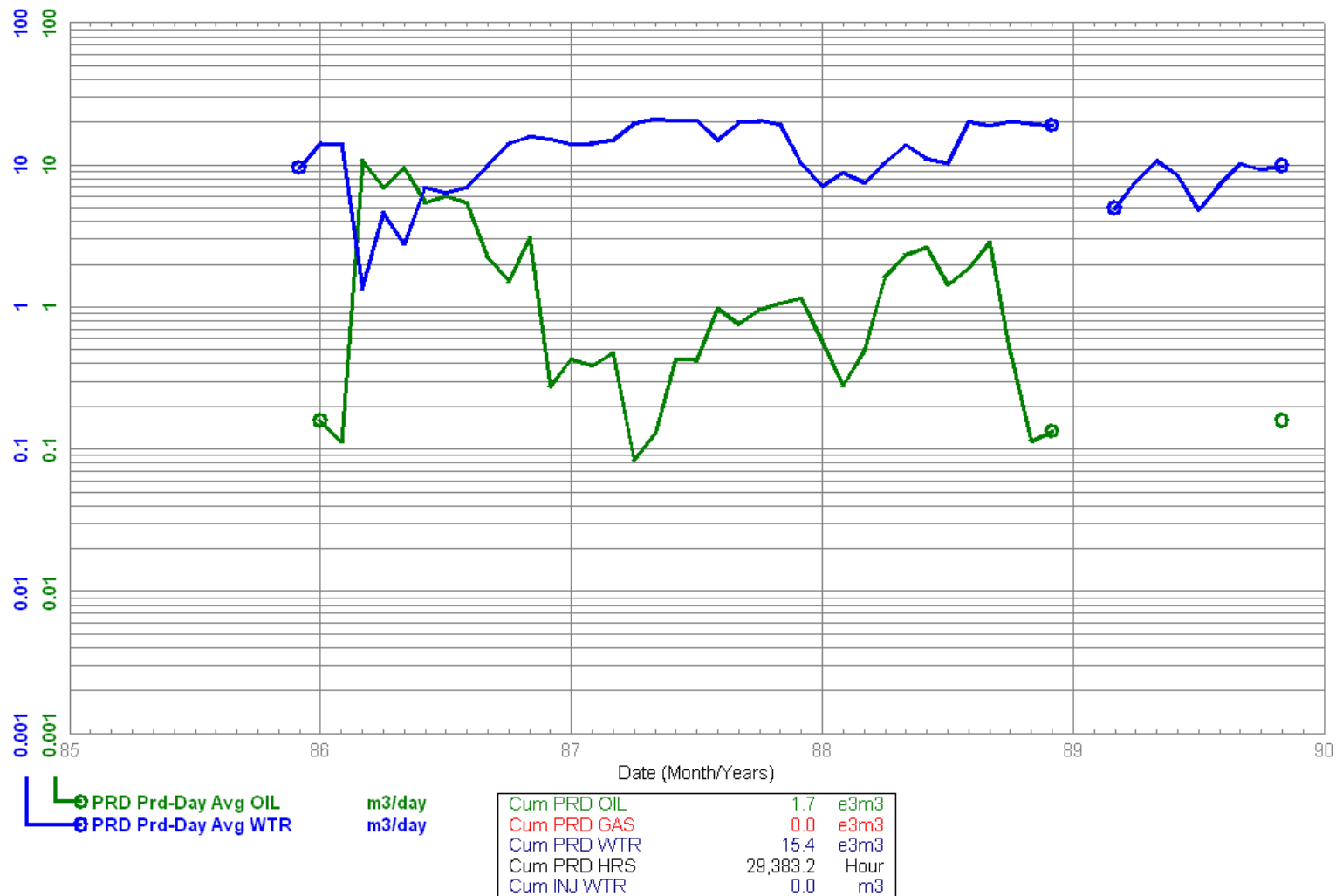
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1985-12
 To: 1989-11

100/06-20-001-25W1/00
 Waskada Unit No. 7 Prov.
 Abandoned Producer

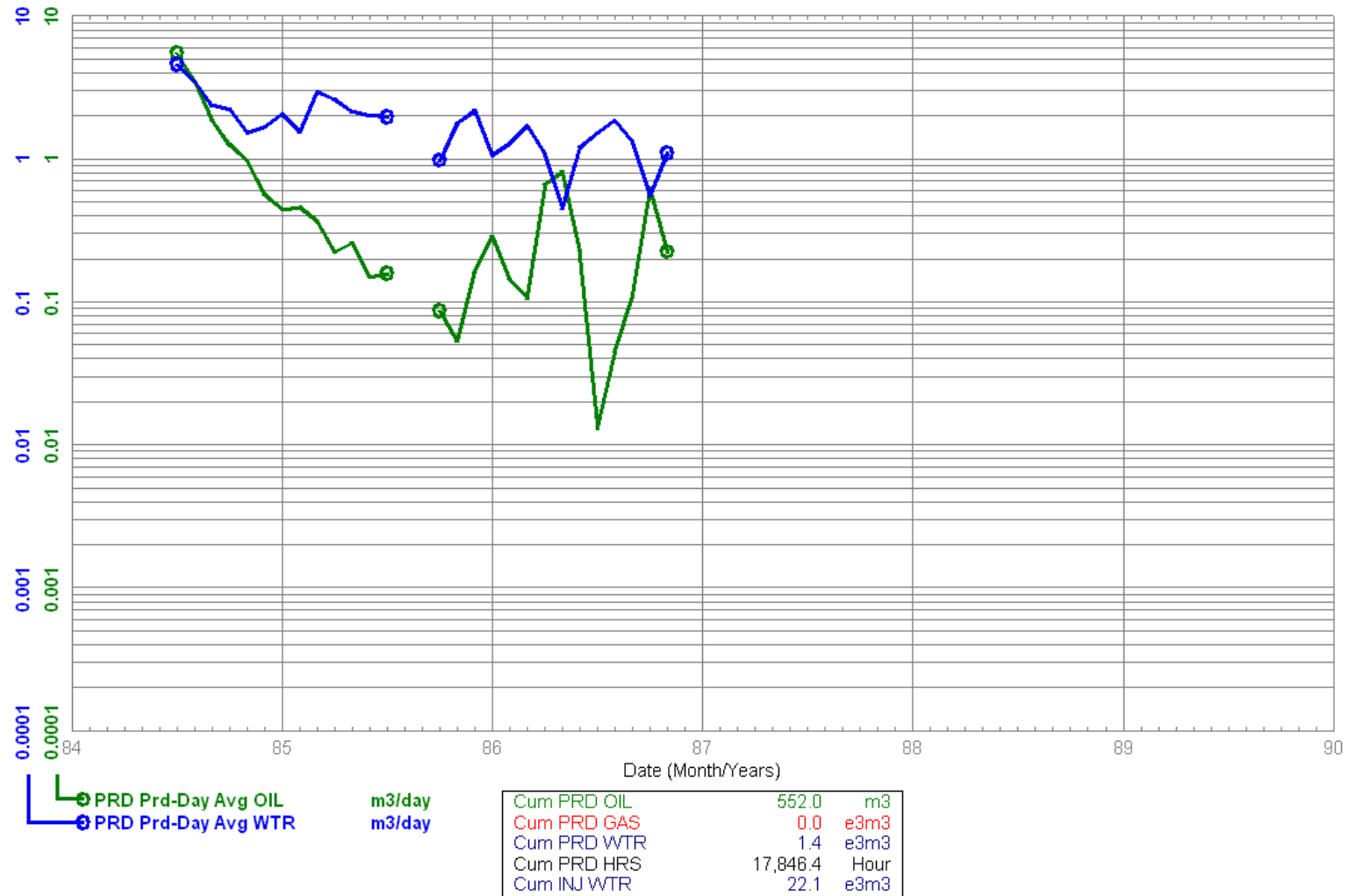
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1984-07
 To: 1986-11

100/07-18-001-25W1/02
 Waskada Unit No. 7 SWD
 Abandoned Water Inj Well

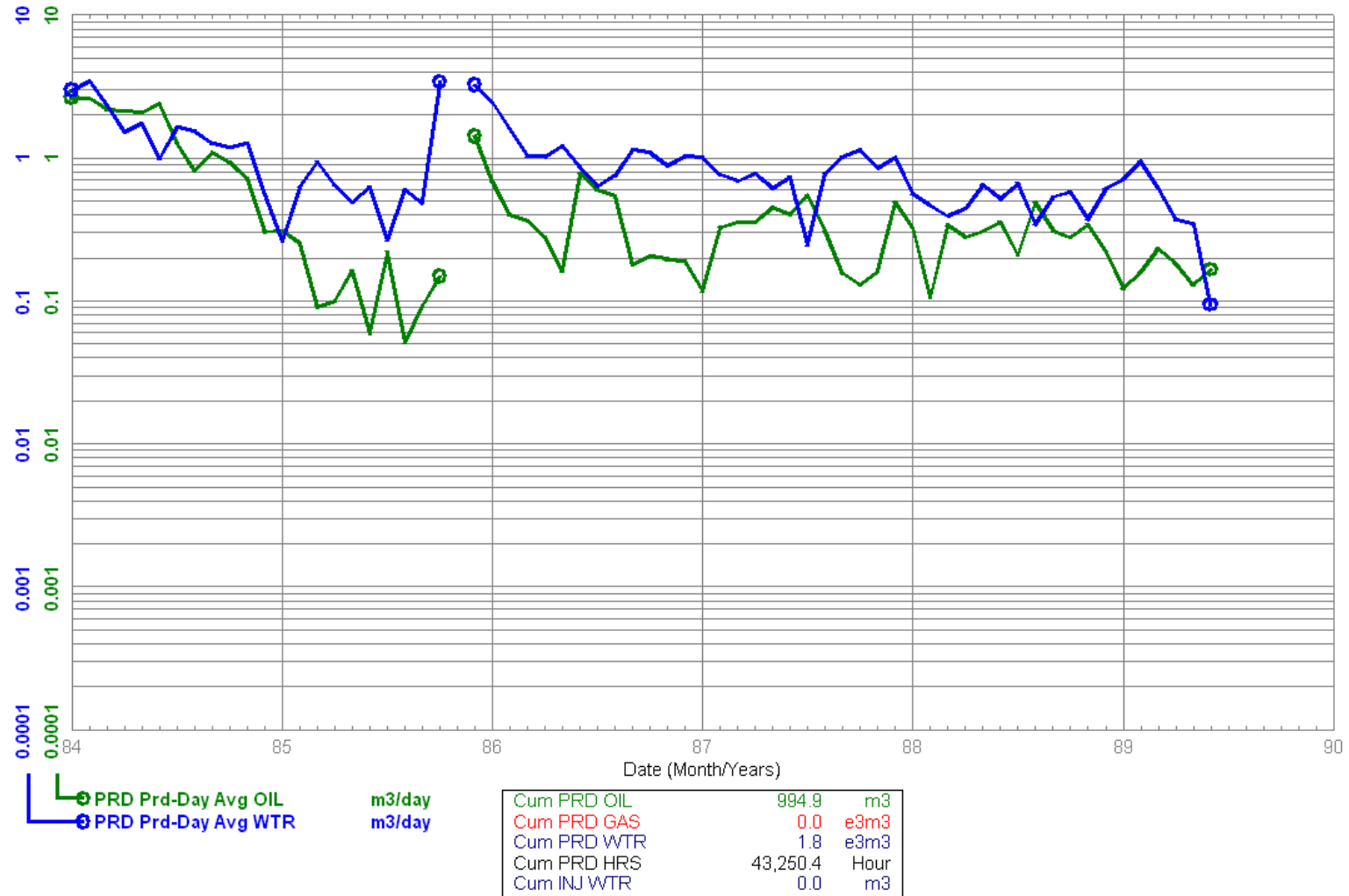
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1984-01
 To: 1989-06

100/08-18-001-25W1/00
 Omega Waskada
 Abandoned Producer

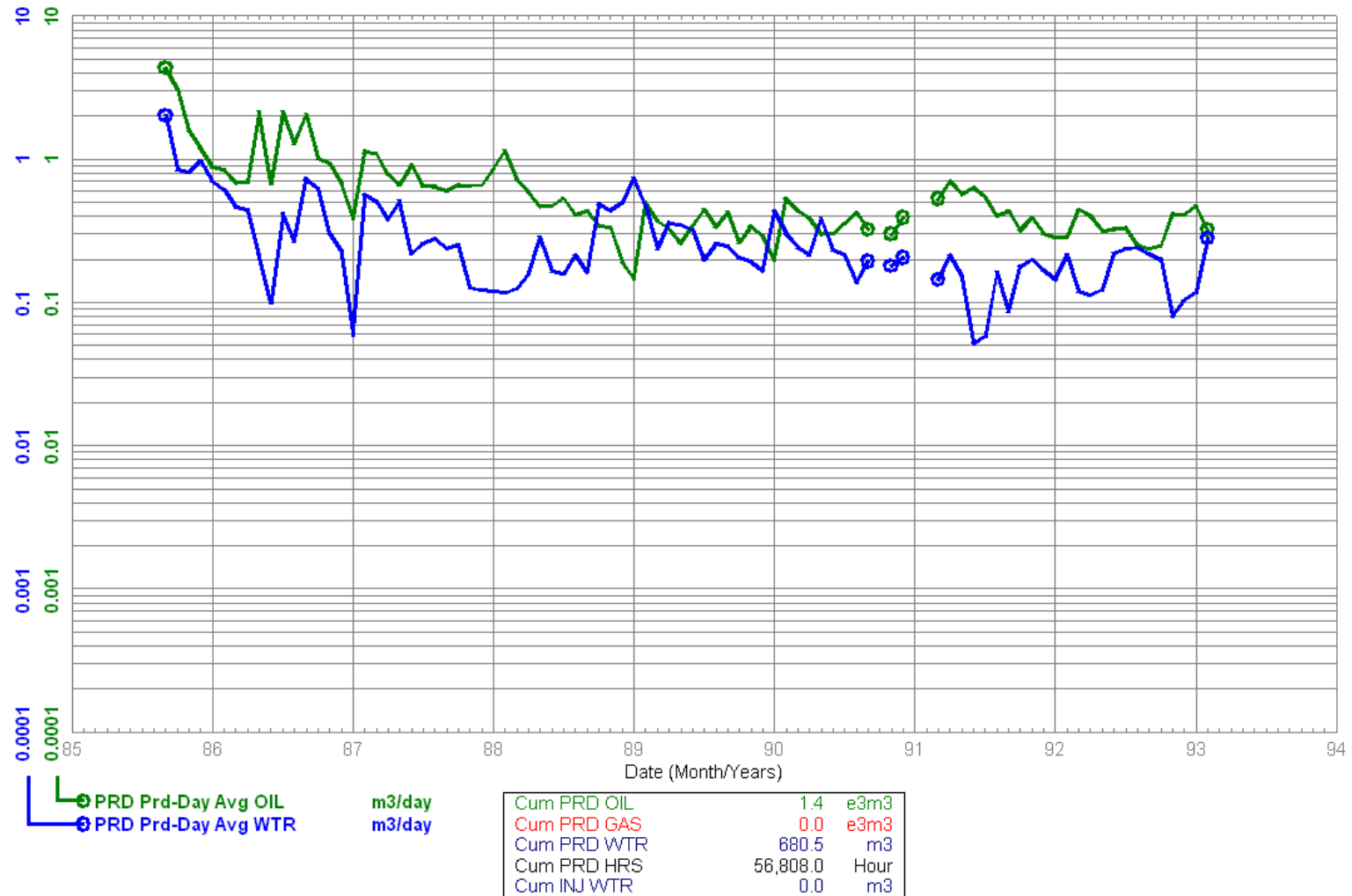
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1985-09
 To: 1993-02

100/08-19-001-25W1/02
 Waskada Unit No. 7
 Abandoned Producer

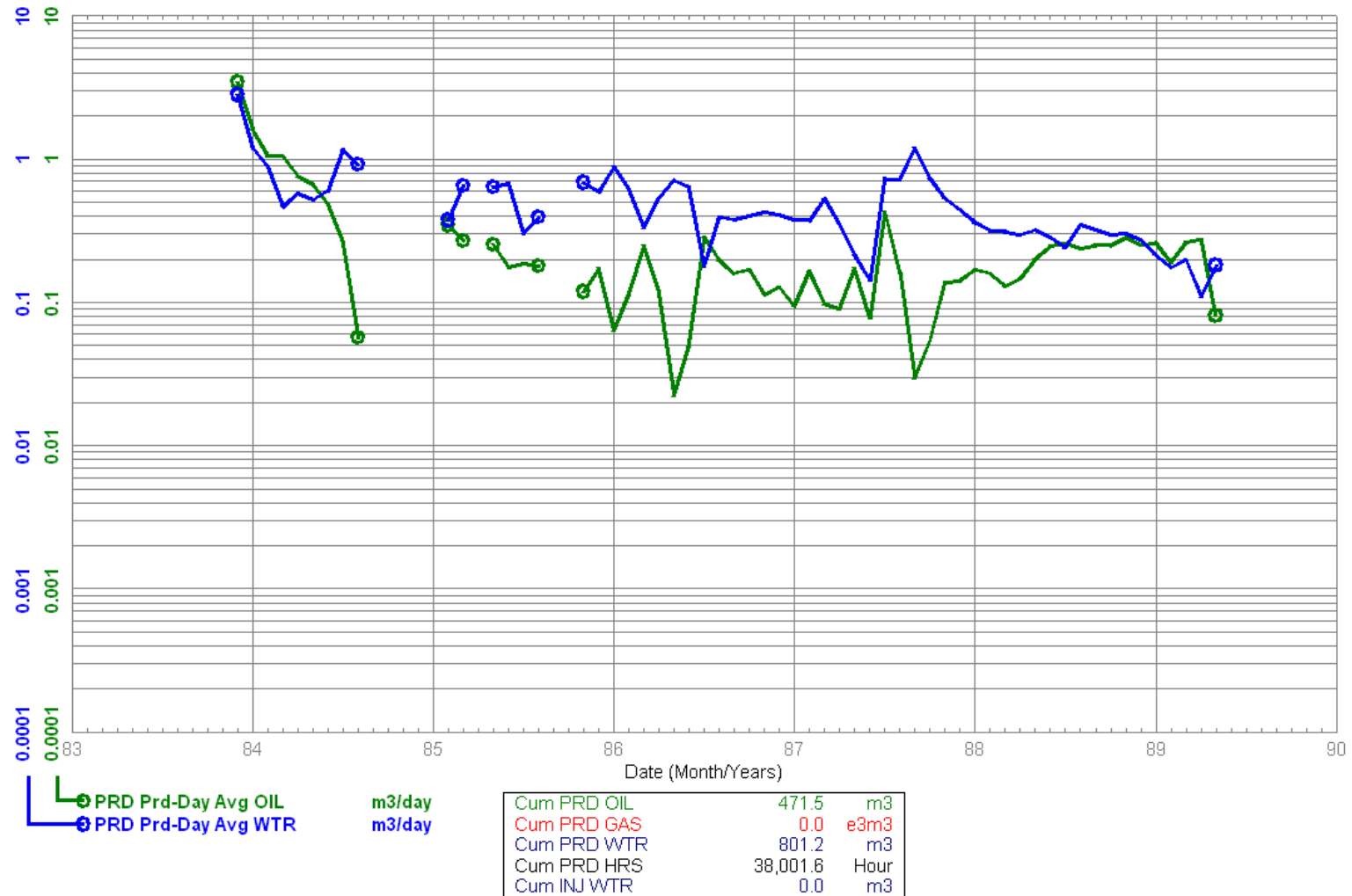
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-12
 To: 1989-05

100/09-18-001-25W1/00
 Omega Waskada
 Abandoned Producer

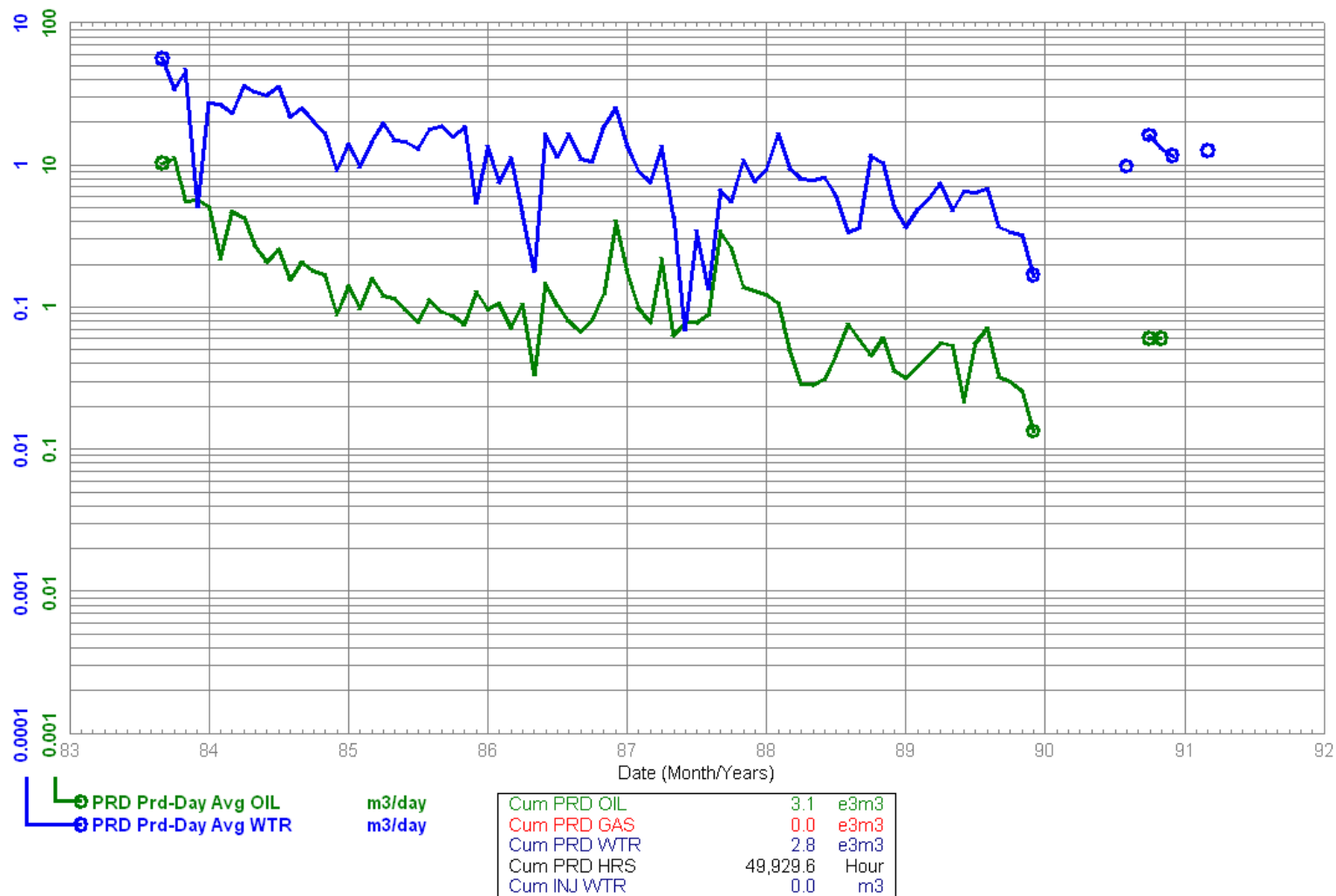
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-09
 To: 1991-03

100/11-17-001-25W1/00
 Omega Chevron Waskada
 Abandoned Producer

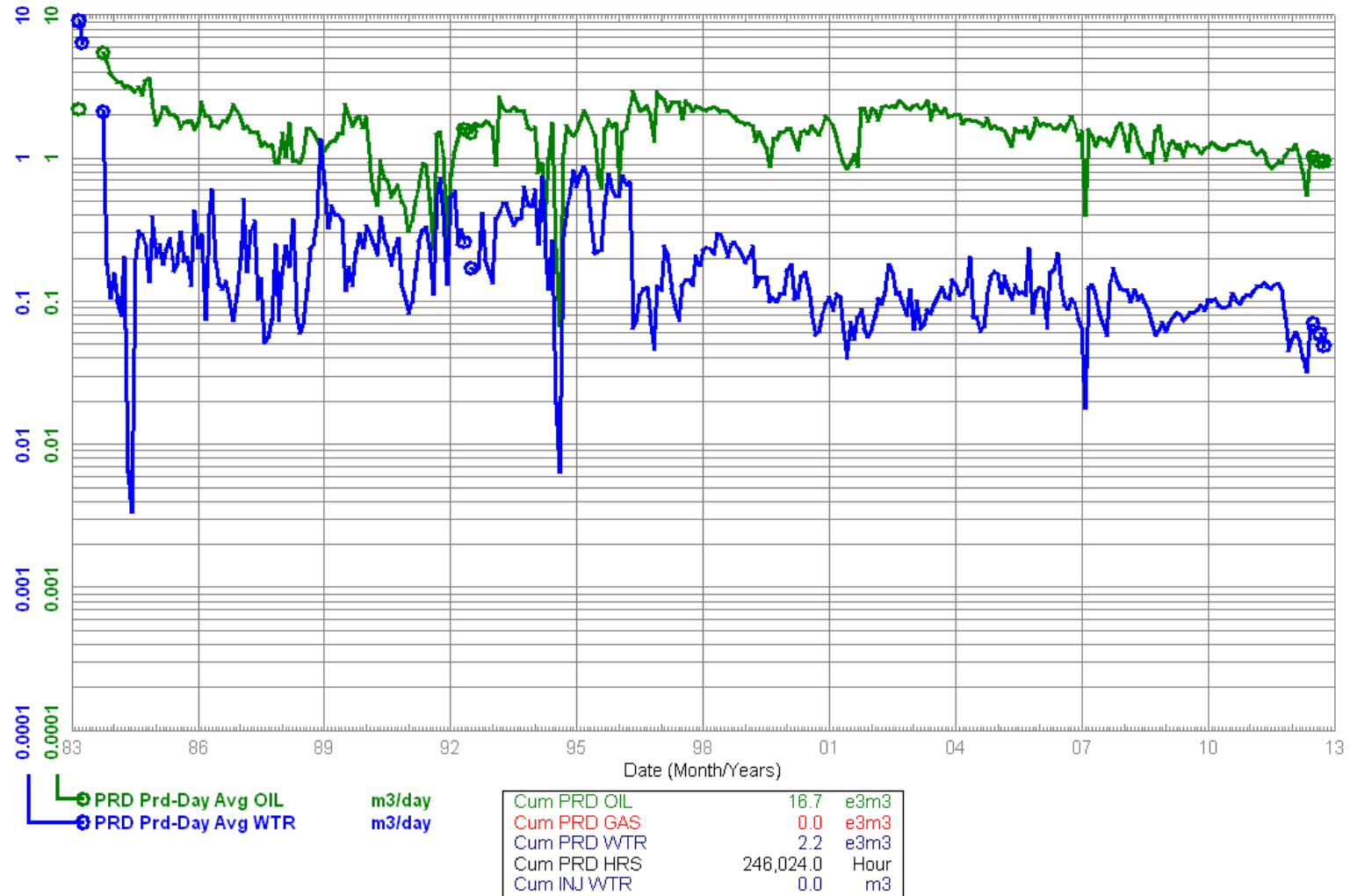
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-03
 To: 2012-10

100/11-20-001-25W1/00
 Waskada Unit No. 7
 Capable Of Oil Prod

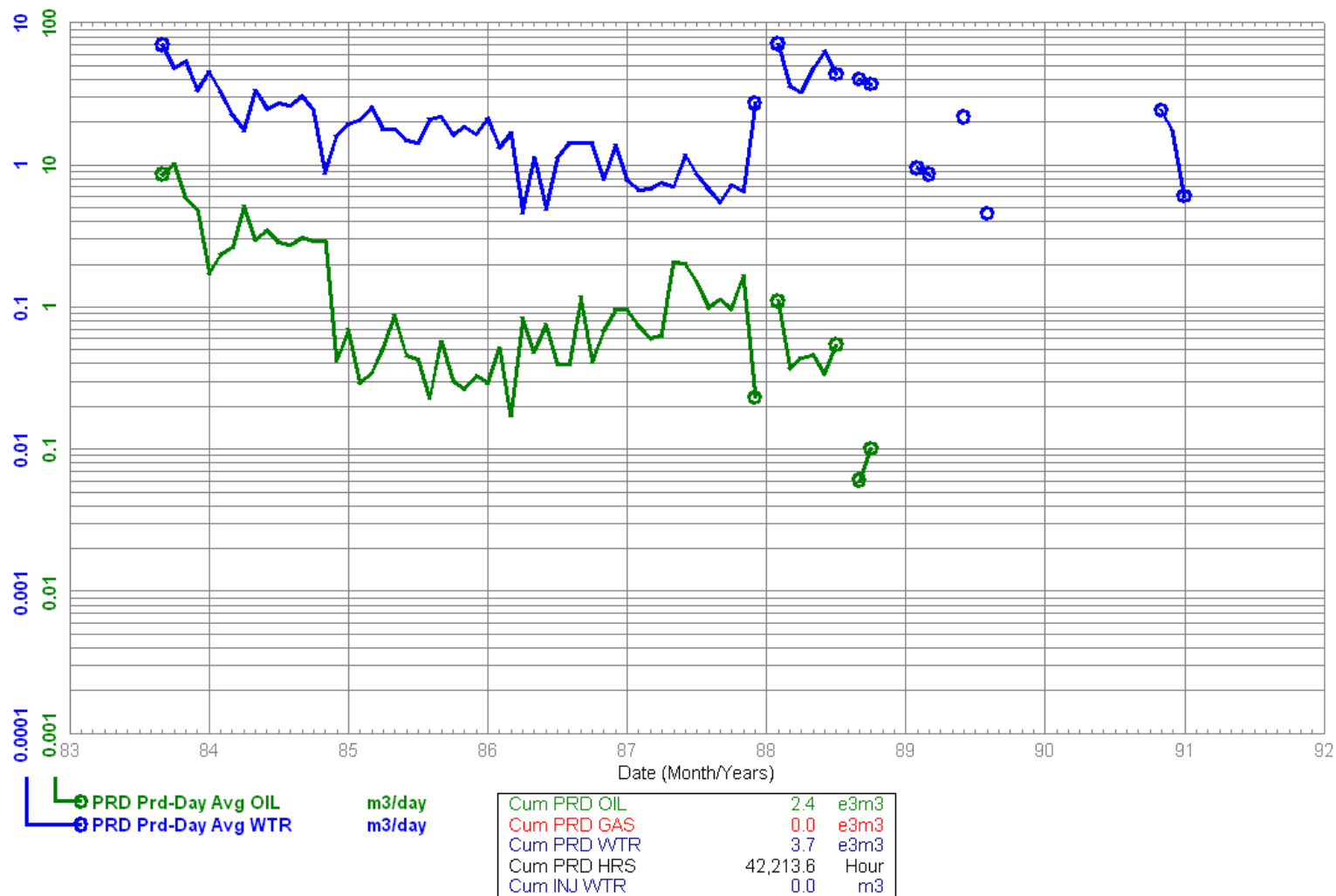
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-09
 To: 1991-01

100/12-17-001-25W1/00
 Waskada Unit No. 7
 Abandoned Producer

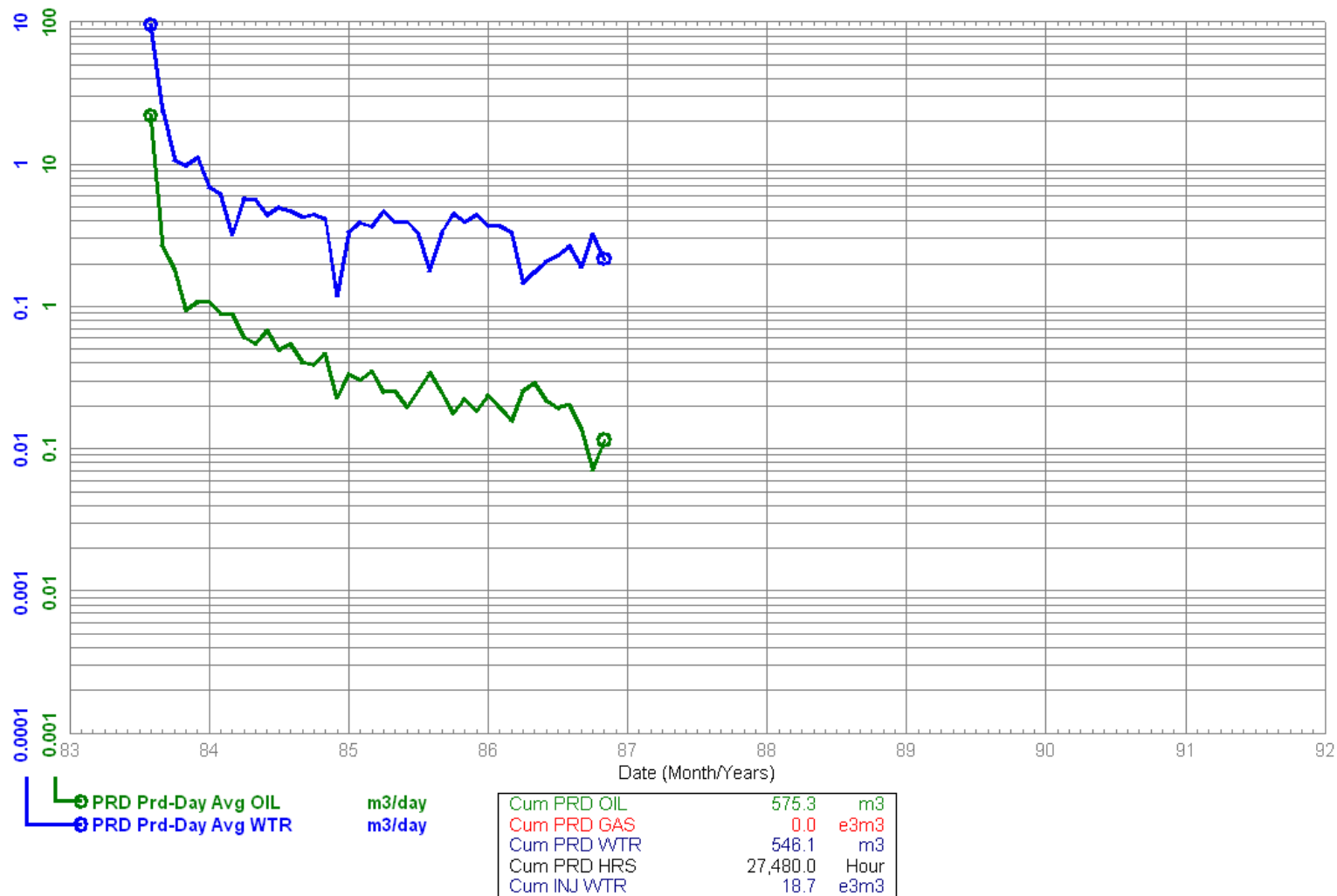
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-08
 To: 1986-11

100/13-17-001-25W1/00
 Waskada Unit No. 7 WIW
 Abandoned Water Inj Well

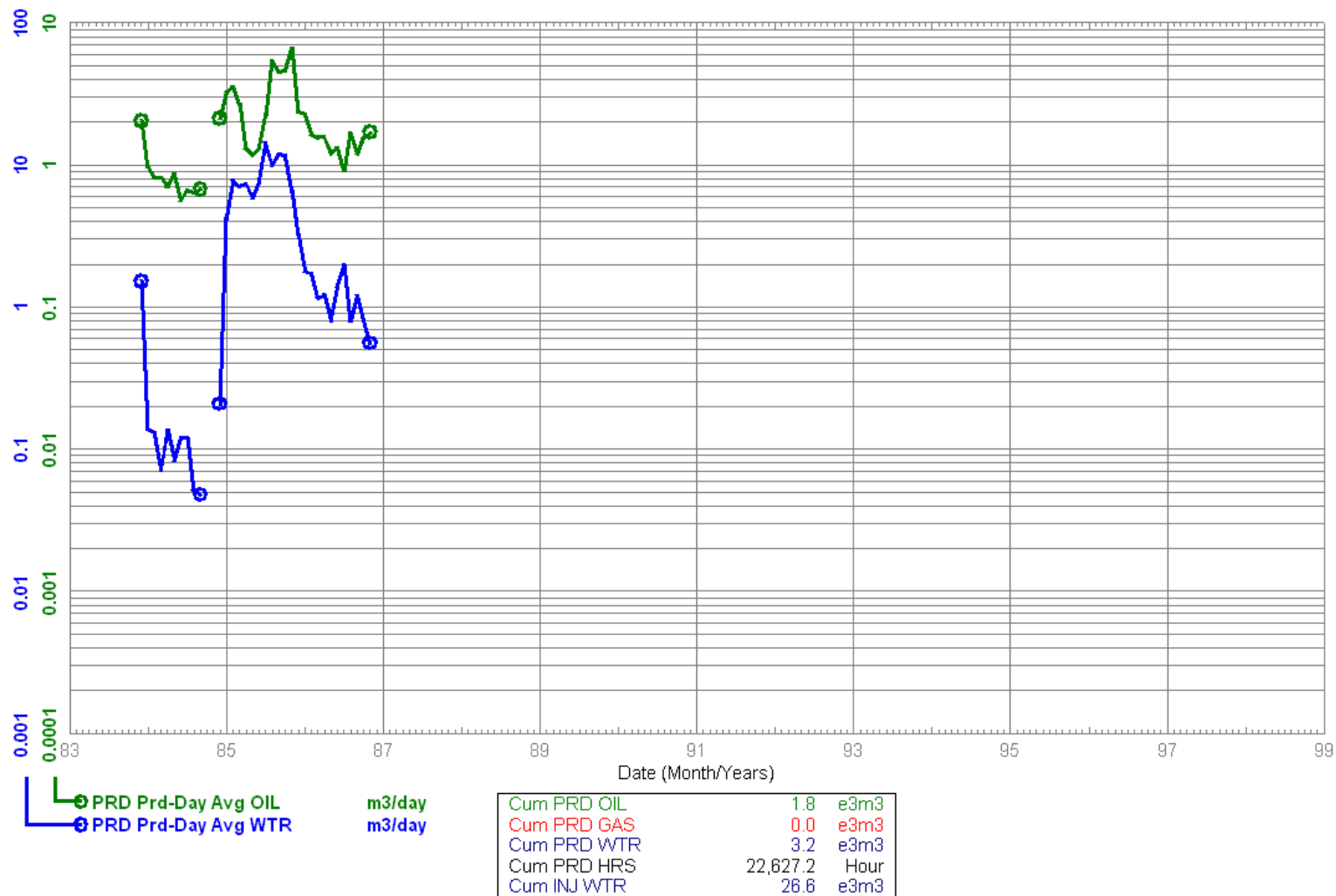
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-12
 To: 1986-11

100/13-20-001-25W1/02
 Waskada Unit No. 7 WIW
 Abandoned Water Inj Well

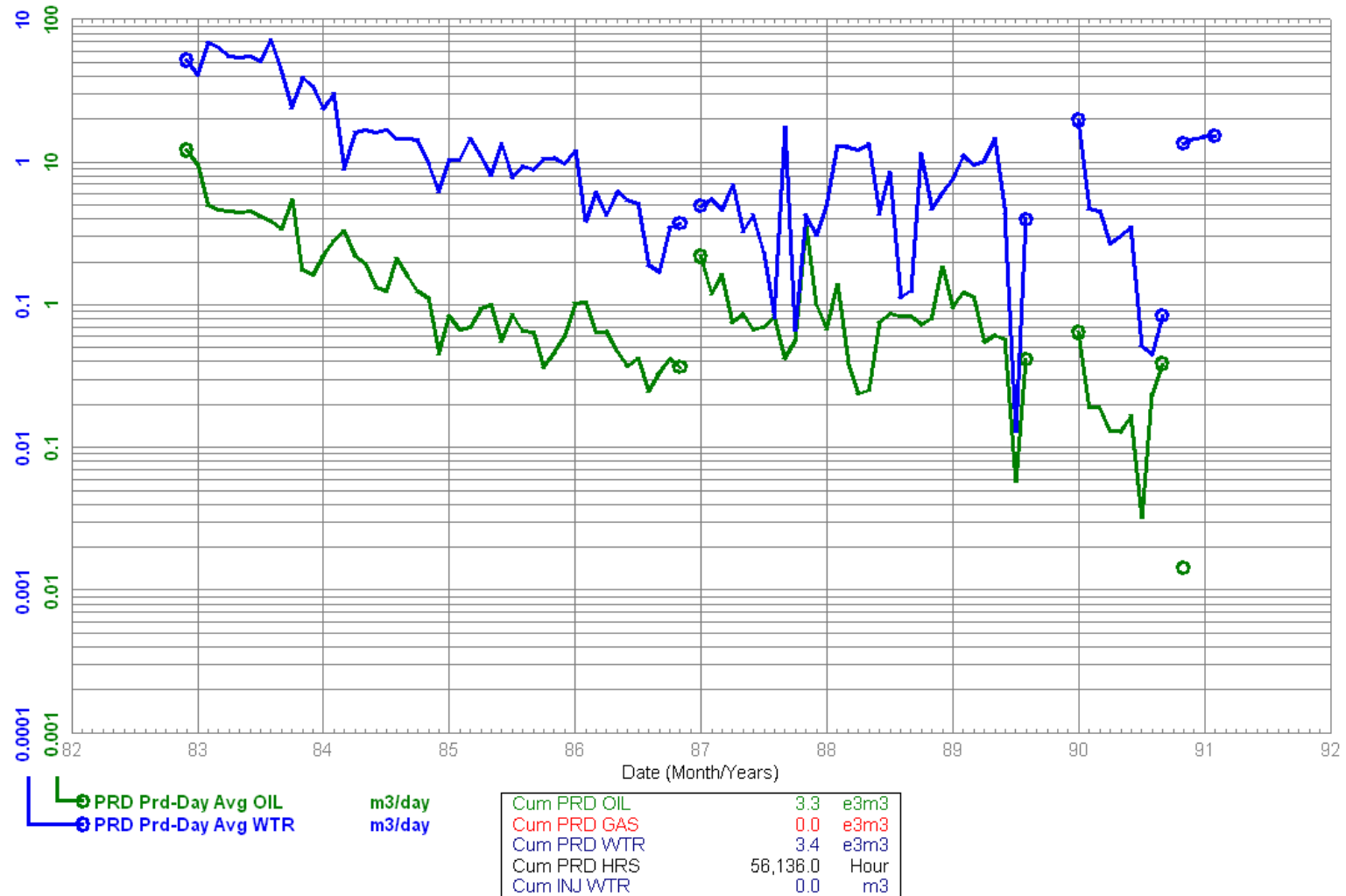
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1982-12
 To: 1991-02

100/14-17-001-25W1/00
 Waskada Unit No. 7
 Abandoned Producer

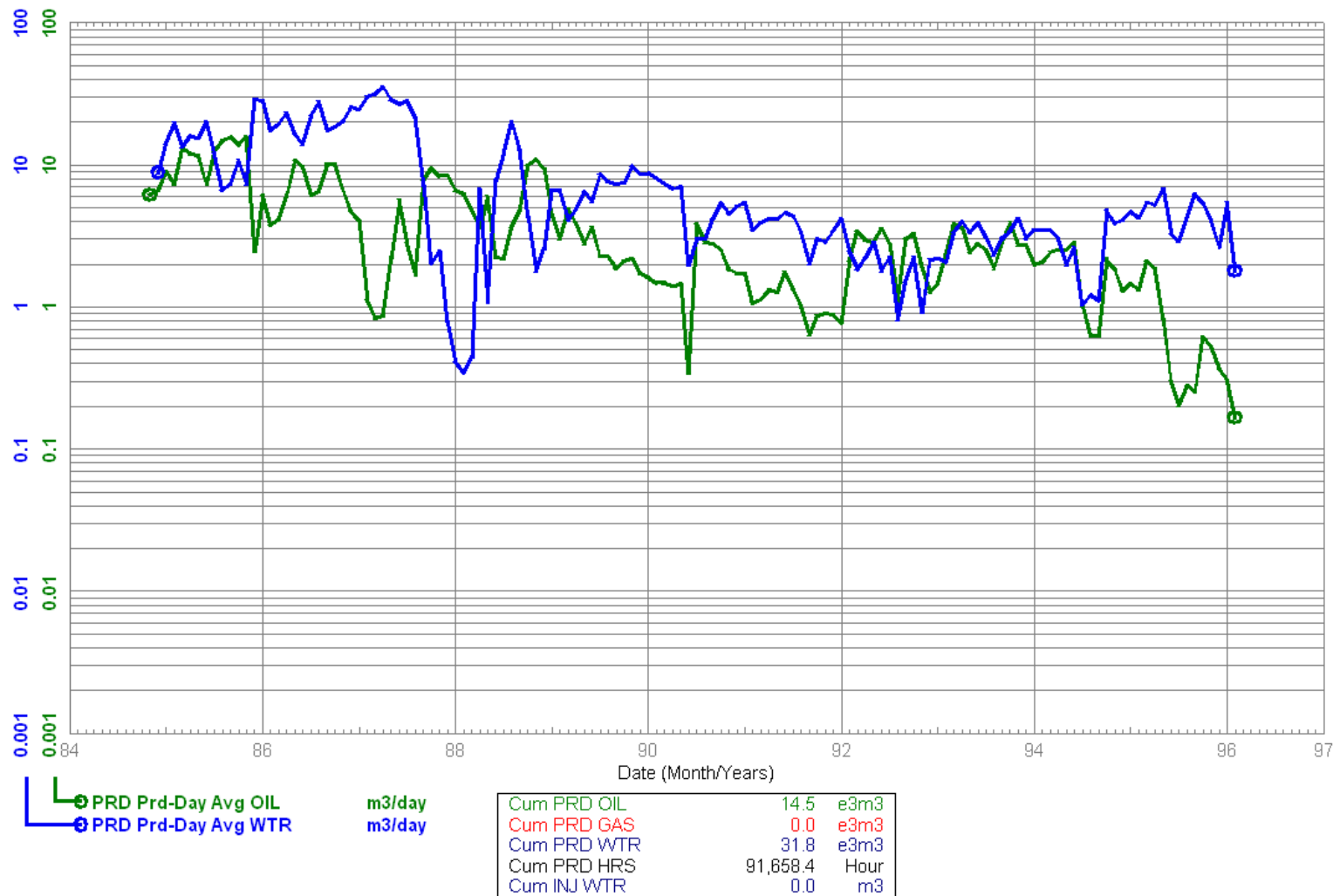
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1984-11
 To: 1996-02

100/14-20-001-25W1/00
 Waskada Unit No. 7
 Abandoned Producer

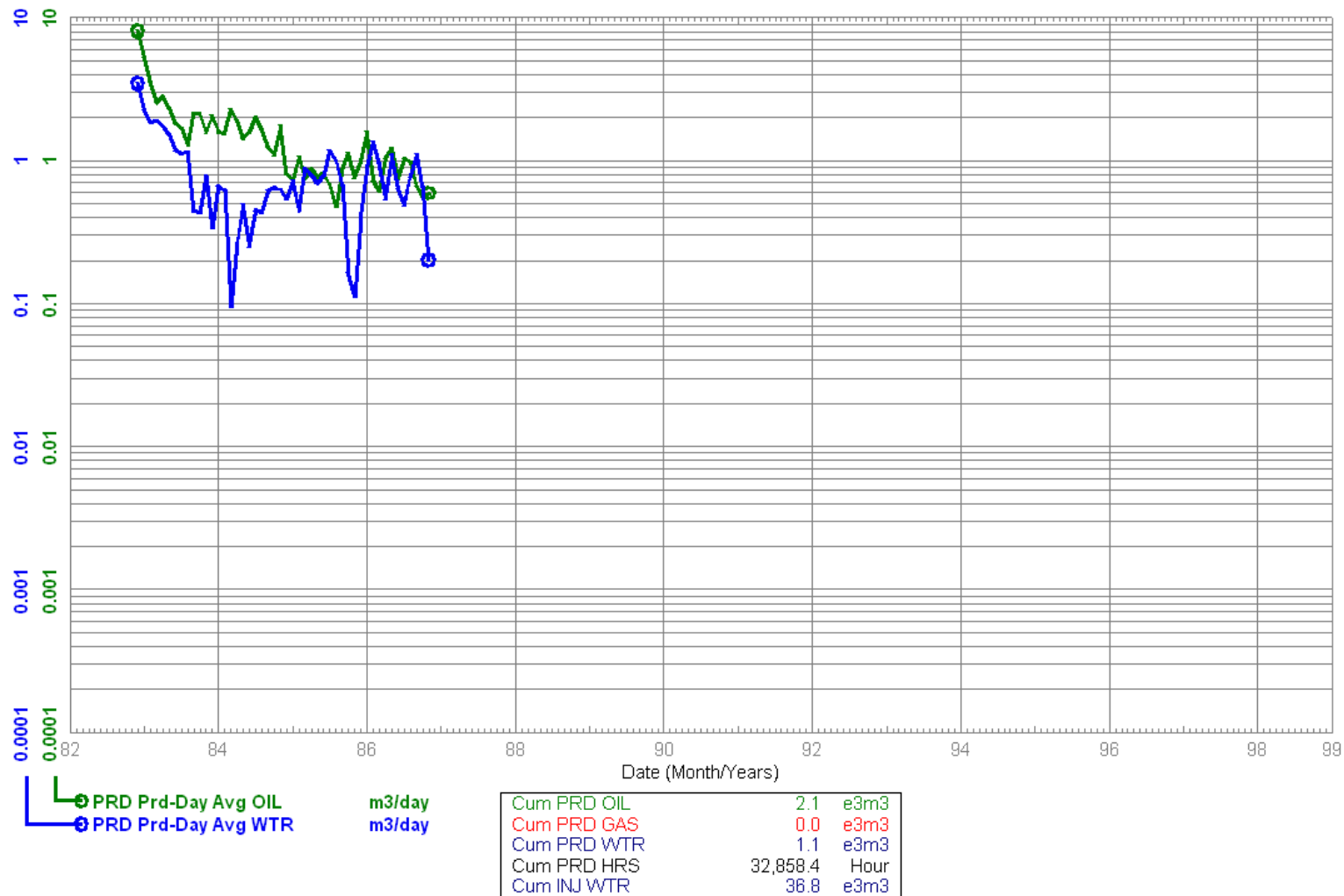
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1982-12
 To: 1986-11

100/15-20-001-25W1/00
 Waskada Unit No. 7 WIW
 Abandoned Water Inj Well

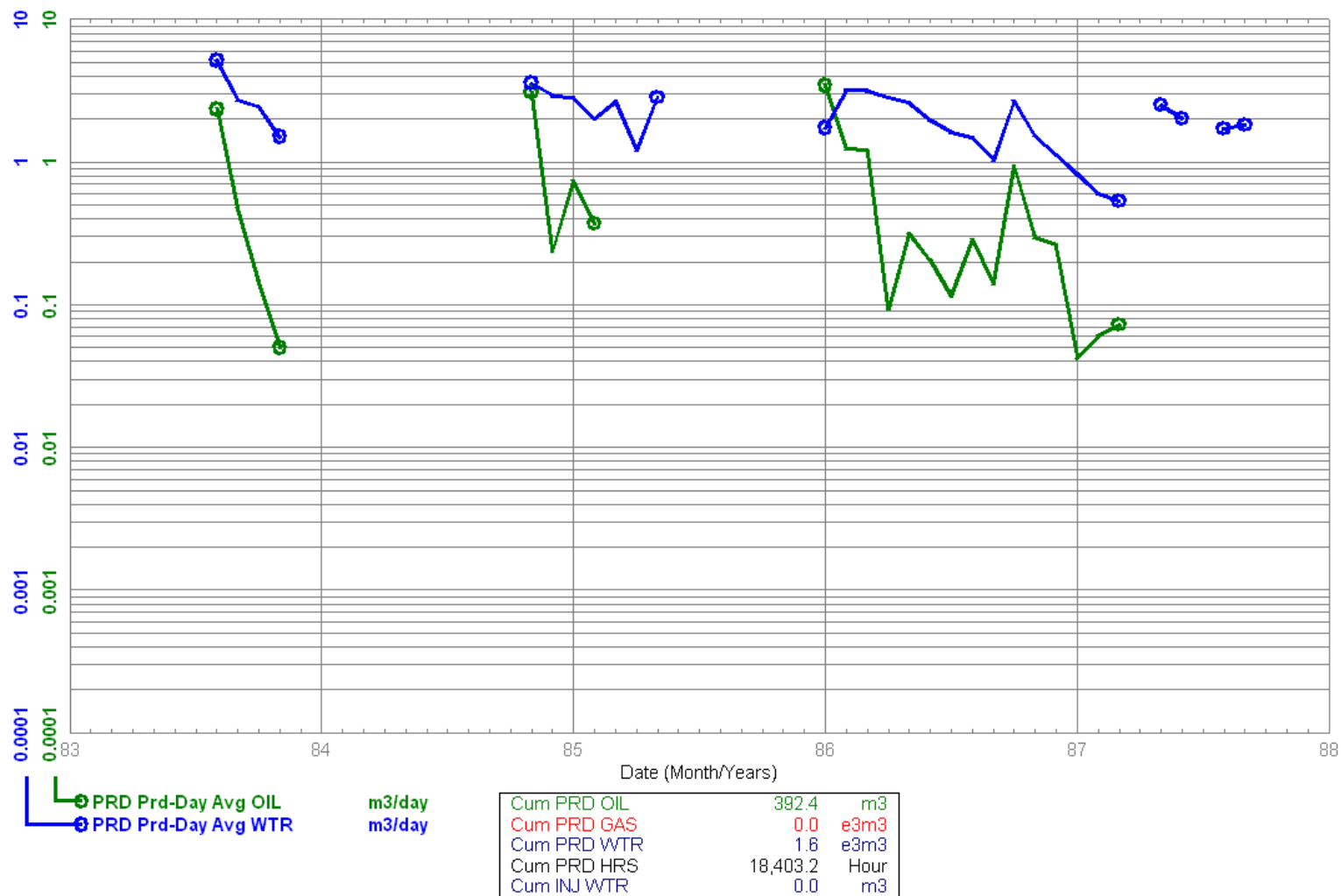
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1983-08
 To: 1987-09

100/16-18-001-25W1/00
 Omega Waskada
 Abandoned Producer

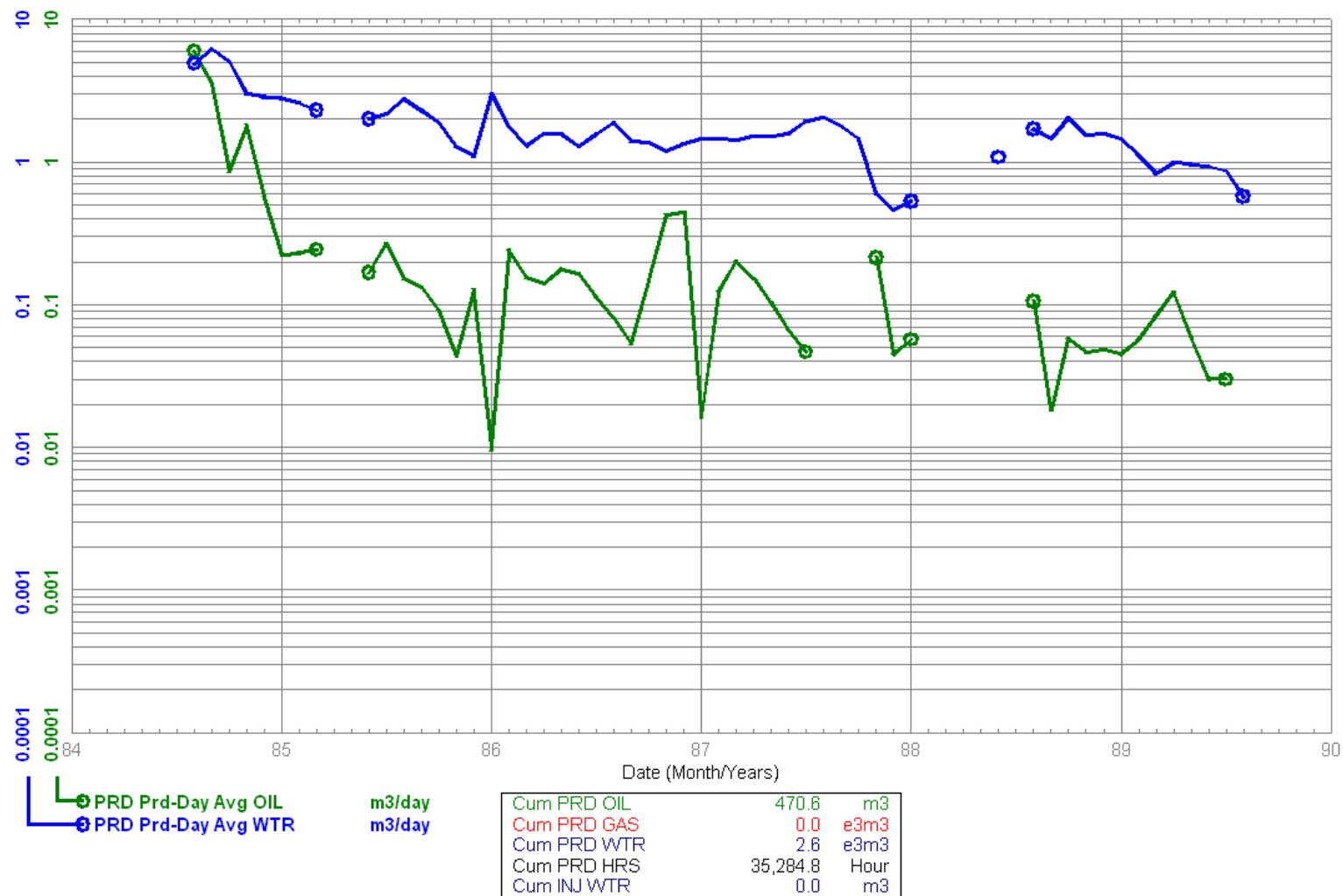
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 1984-08
 To: 1989-08

100/16-20-001-25W1/00
 Waskada Unit No. 7
 Abandoned Producer

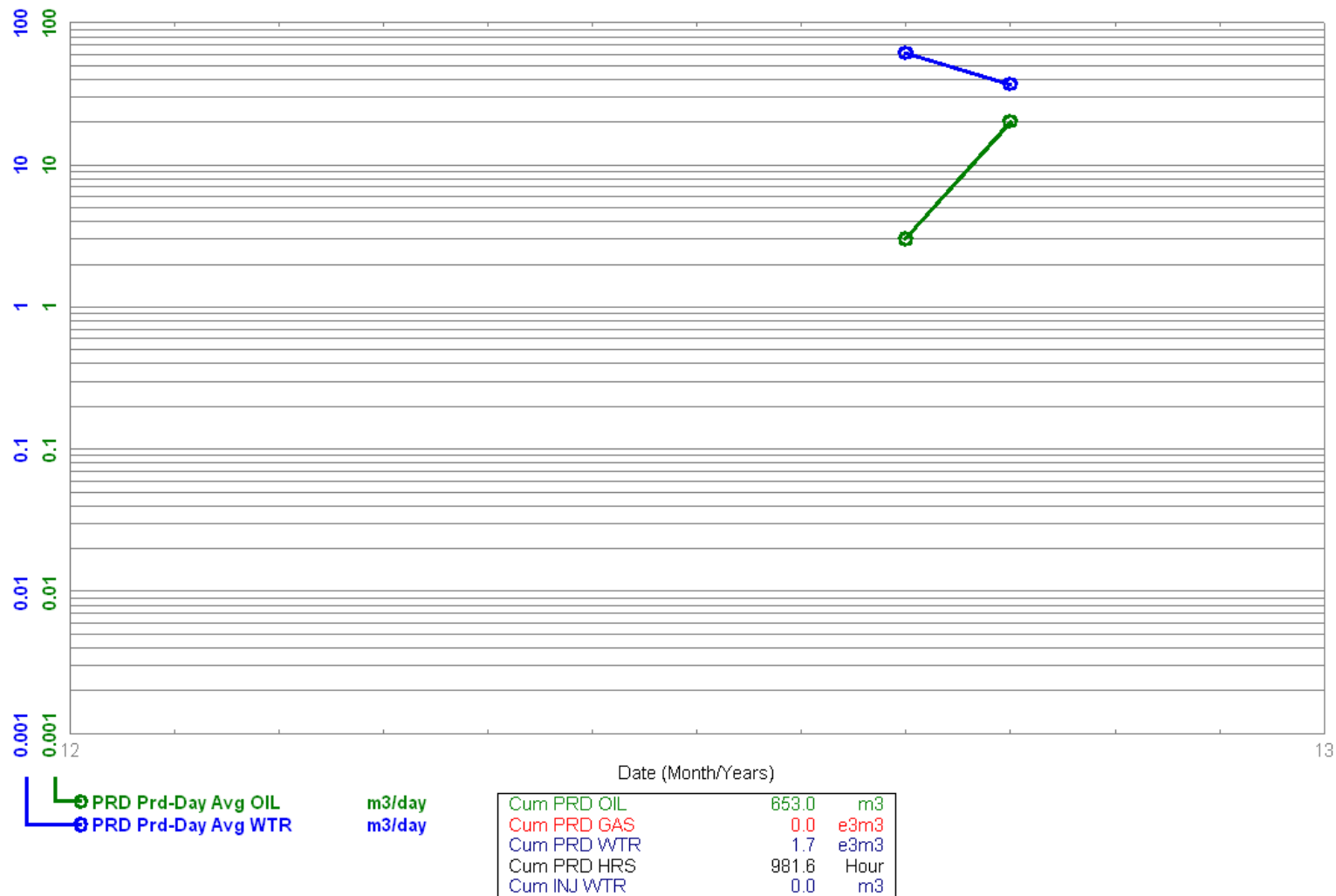
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-09
 To: 2012-10

102/05-20-001-25W1/00
 Waskada Unit No. 7 Prov. HZNTL
 Capable Of Oil Prod

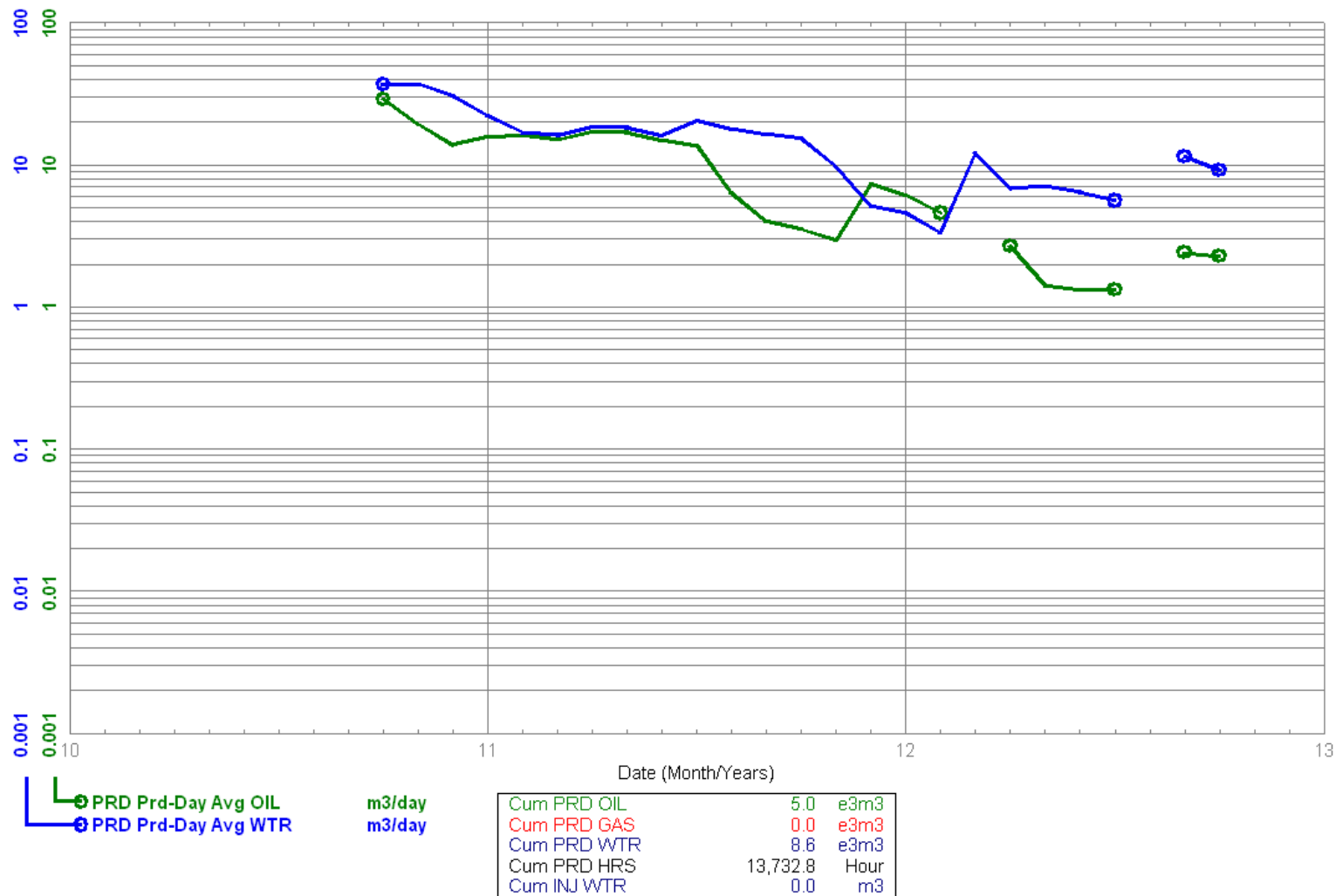
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2010-10
 To: 2012-10

102/09-18-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

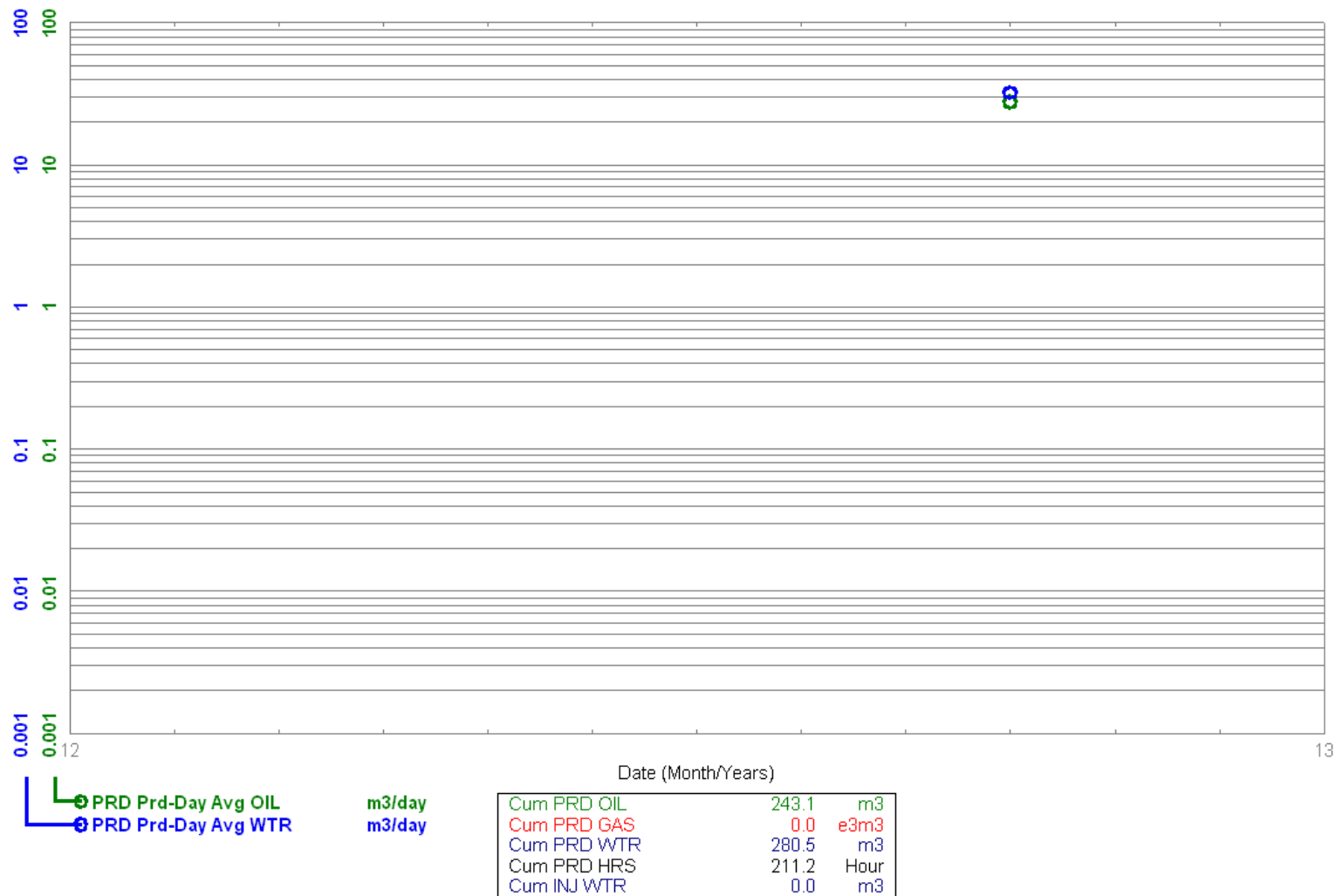
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-10
 To: 2012-10

102/11-17-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

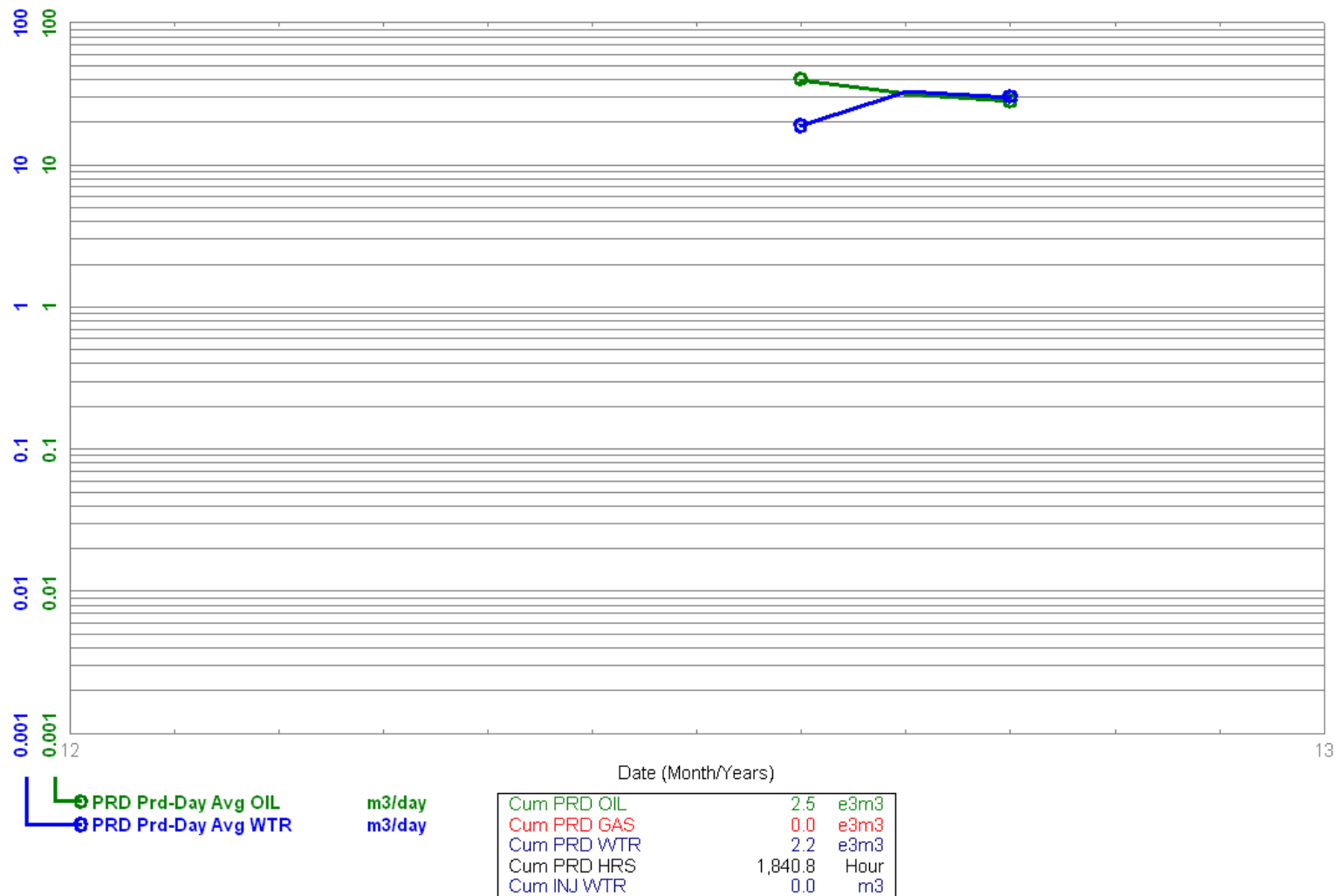
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-08
 To: 2012-10

102/12-20-001-25W1/00
 Penn West Waskada HZNTL
 Capable Of Oil Prod

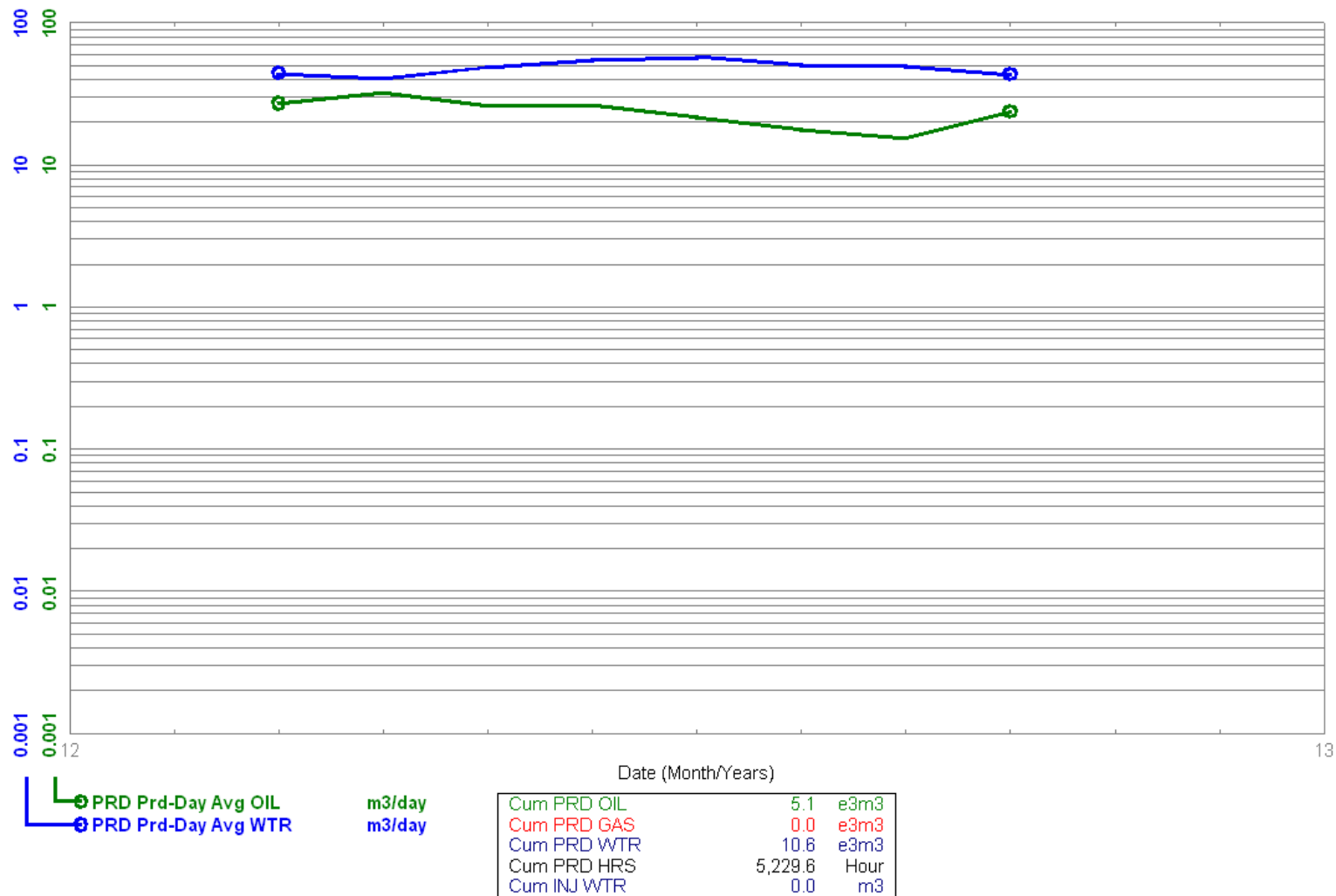
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit:



Data As Of: 2012-10 (MB)
 From: 2012-03
 To: 2012-10

102/13-20-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

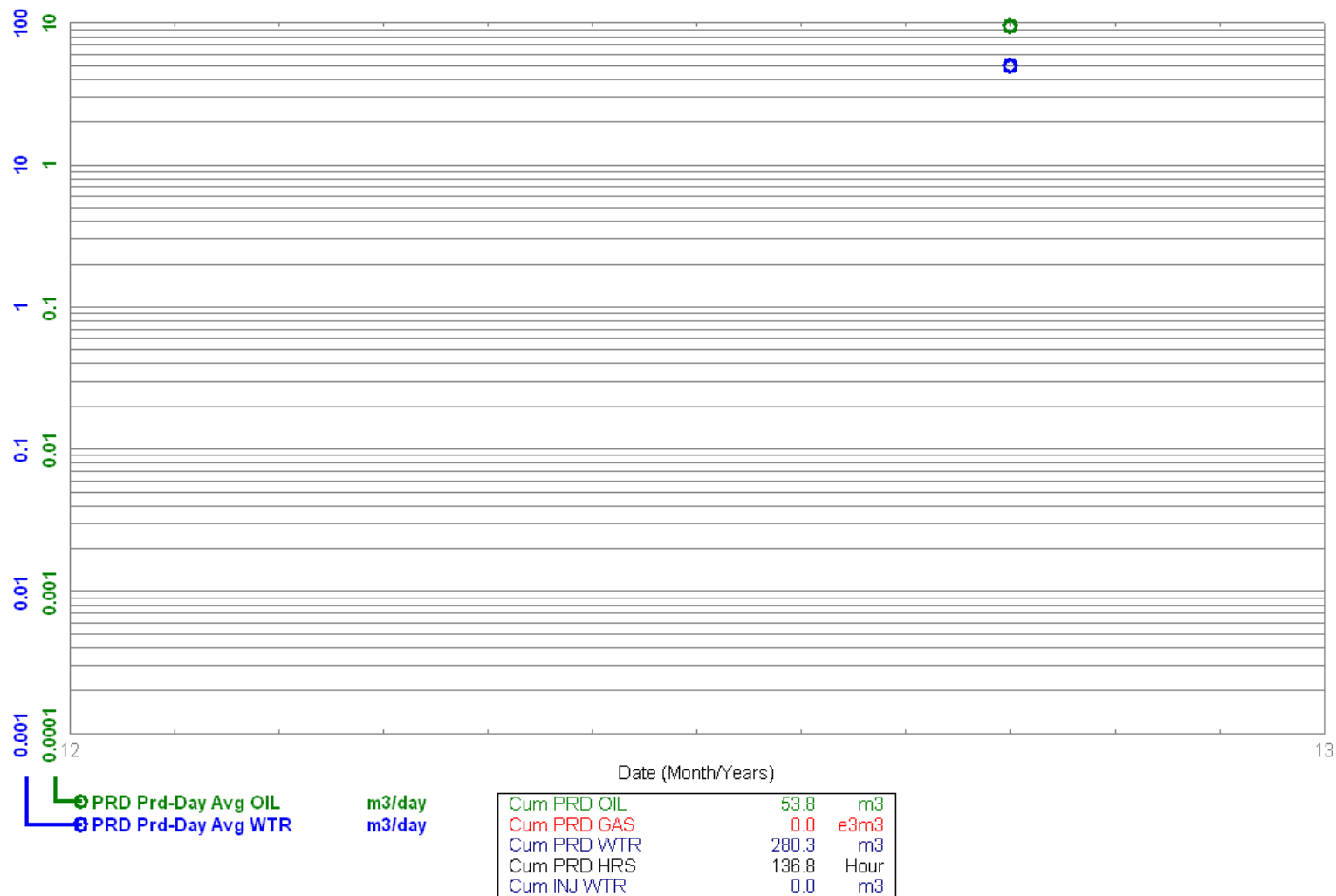
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-10
 To: 2012-10

102/14-17-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

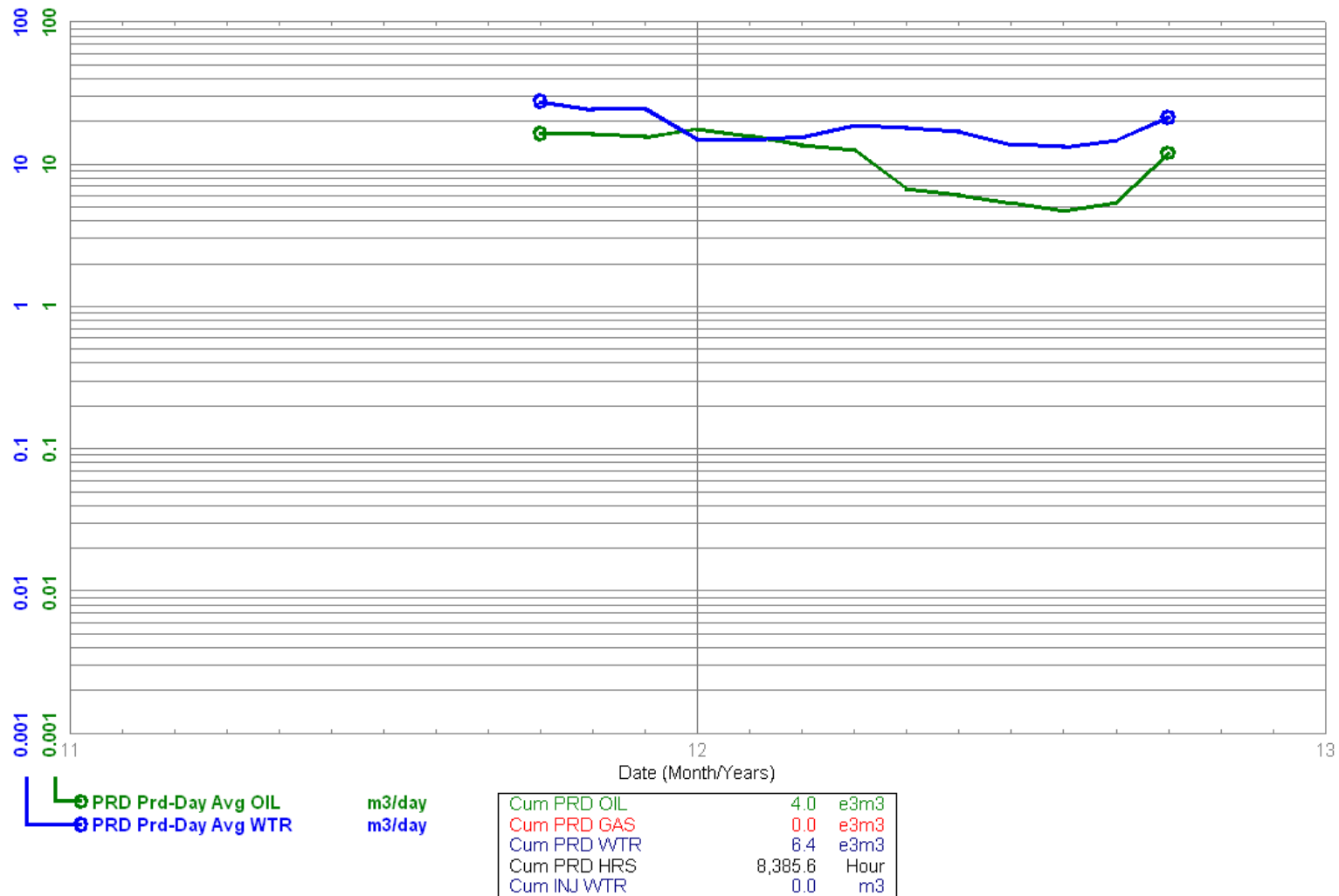
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2011-10
 To: 2012-10

102/16-20-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

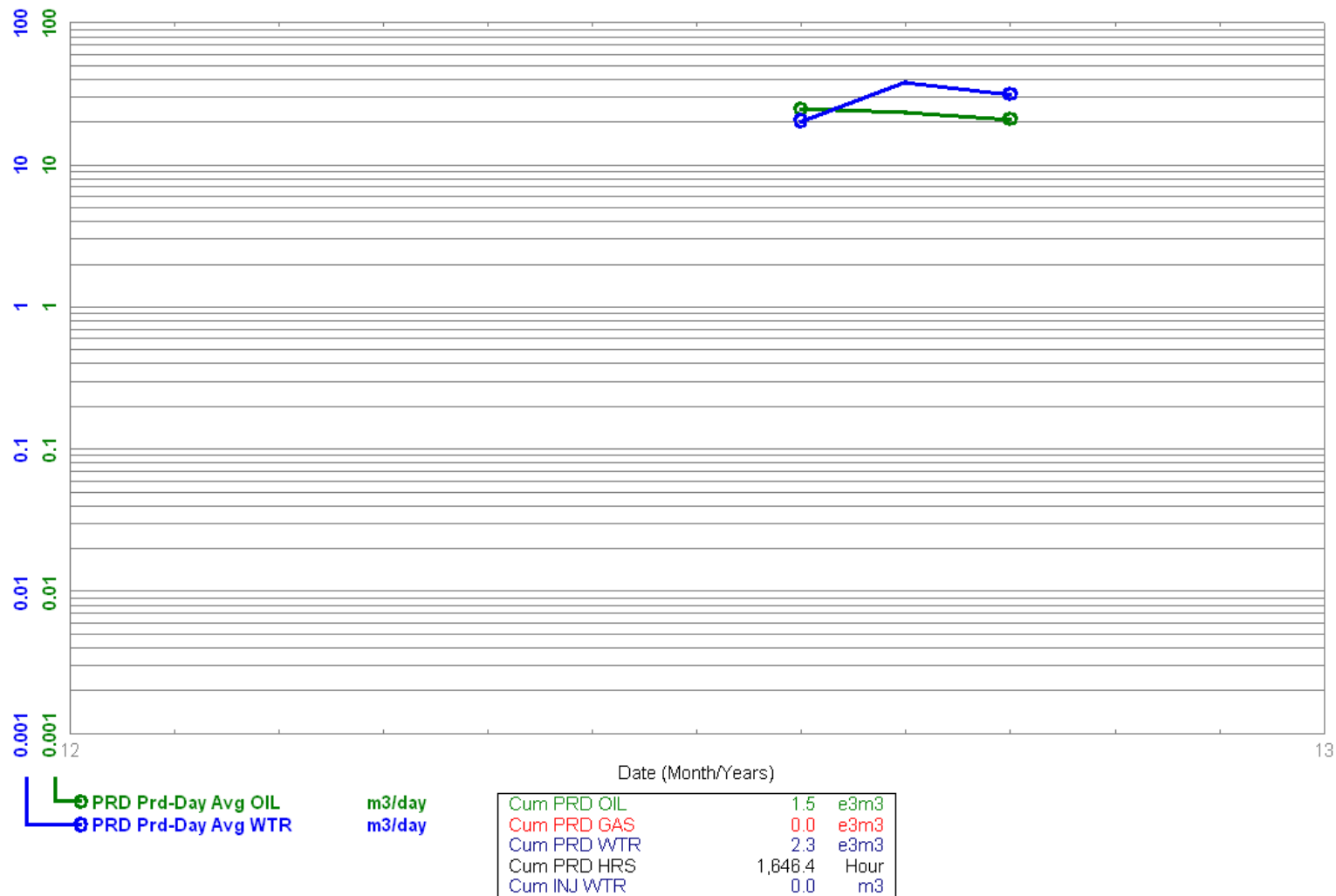
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-08
 To: 2012-10

103/04-20-001-25W1/00
 Penn West Waskada Prov. HZNTL
 Capable Of Oil Prod

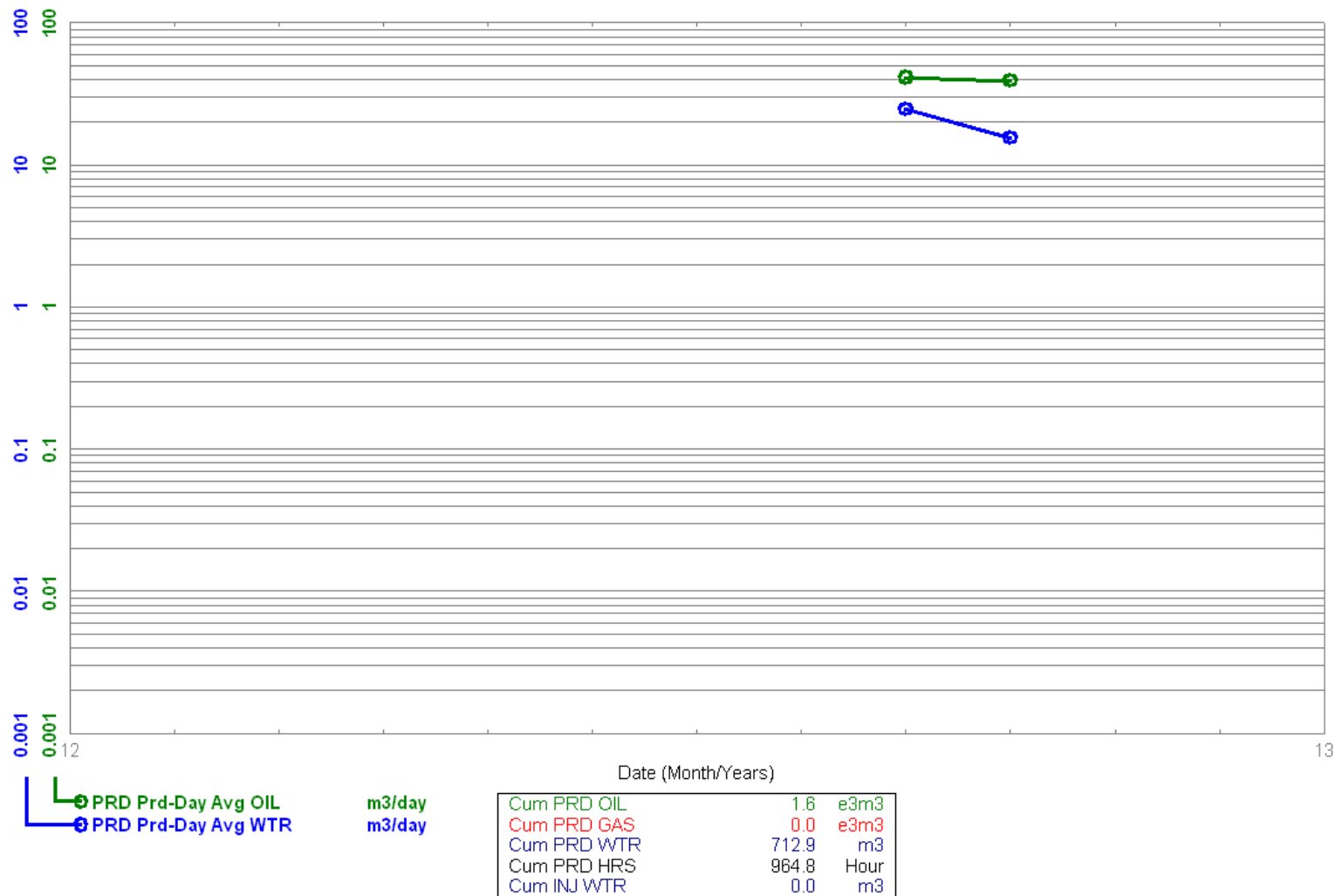
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit:



Data As Of: 2012-10 (MB)
 From: 2012-09
 To: 2012-10

103/05-20-001-25W1/00
 Waskada Unit No. 7 Prov. HZNTL
 Capable Of Oil Prod

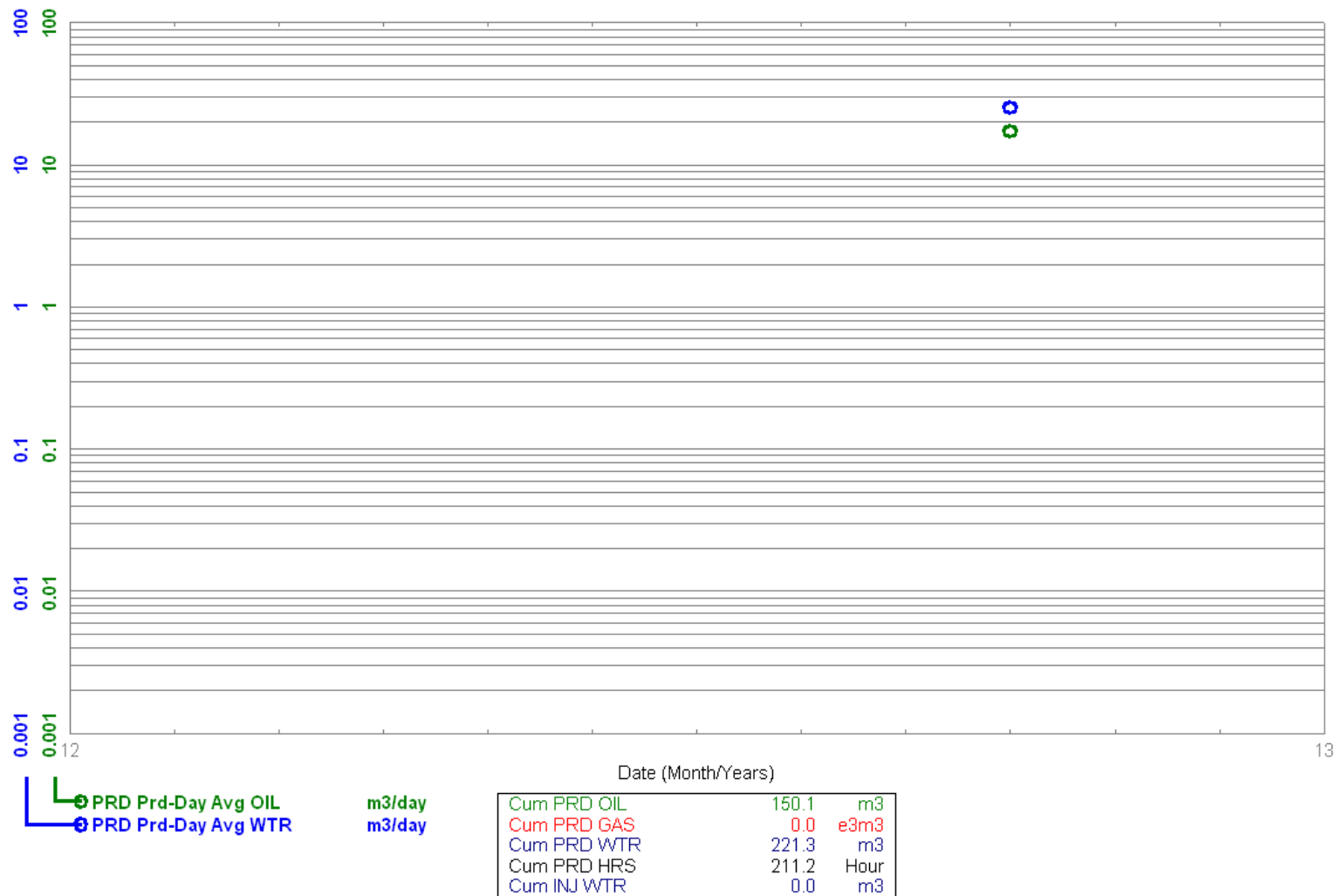
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-10
 To: 2012-10

103/11-17-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

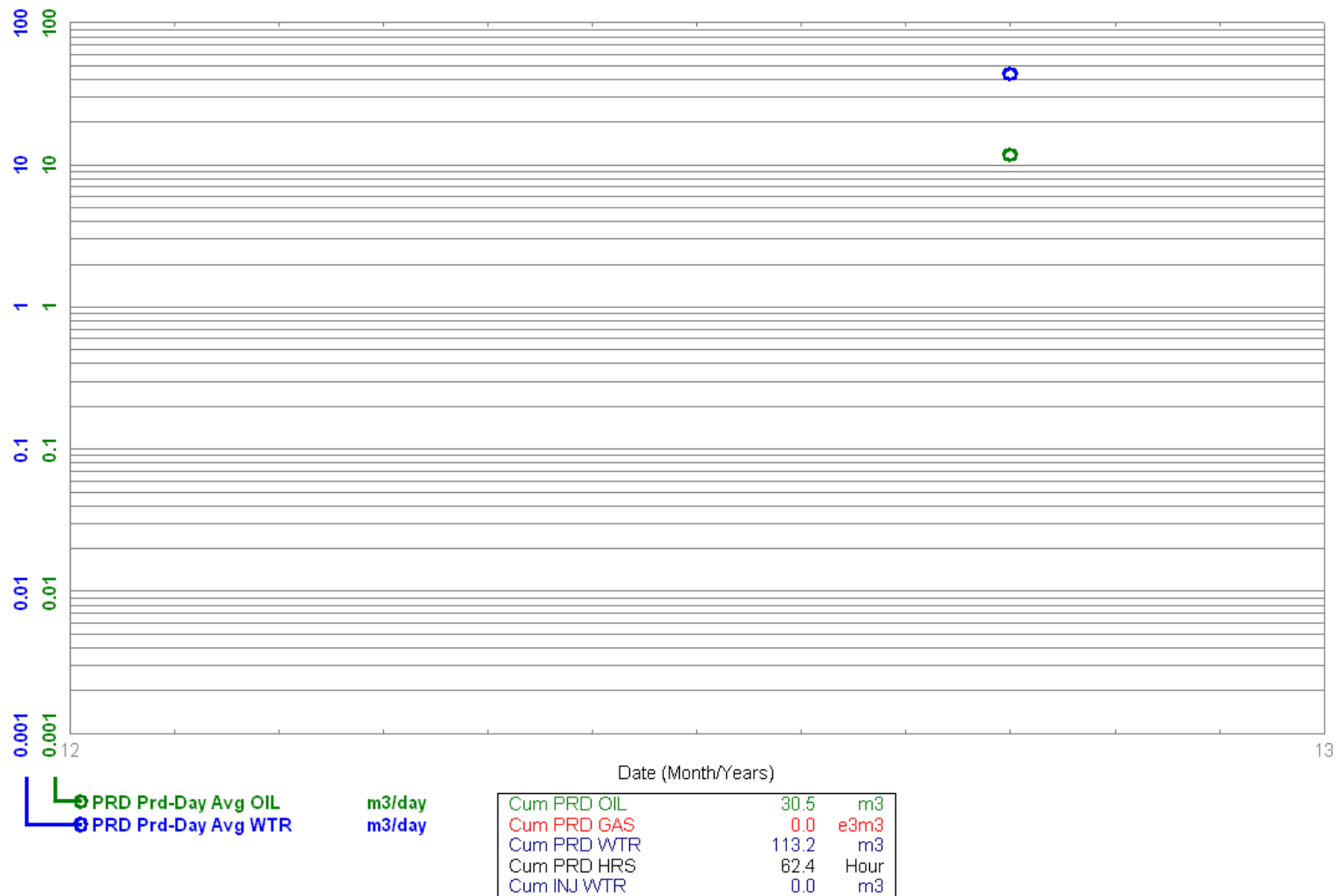
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-10
 To: 2012-10

103/14-17-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

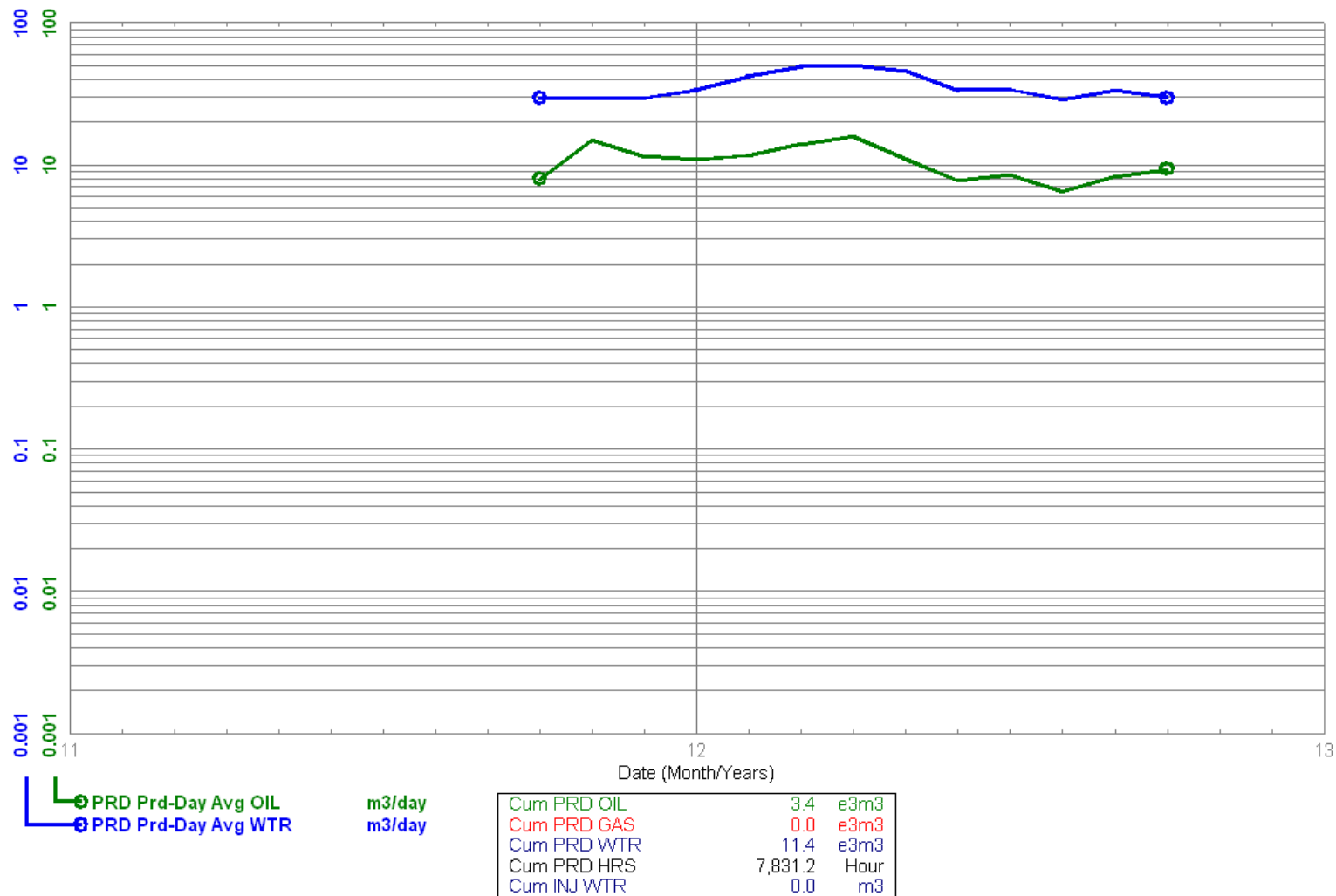
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2011-10
 To: 2012-10

103/16-20-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

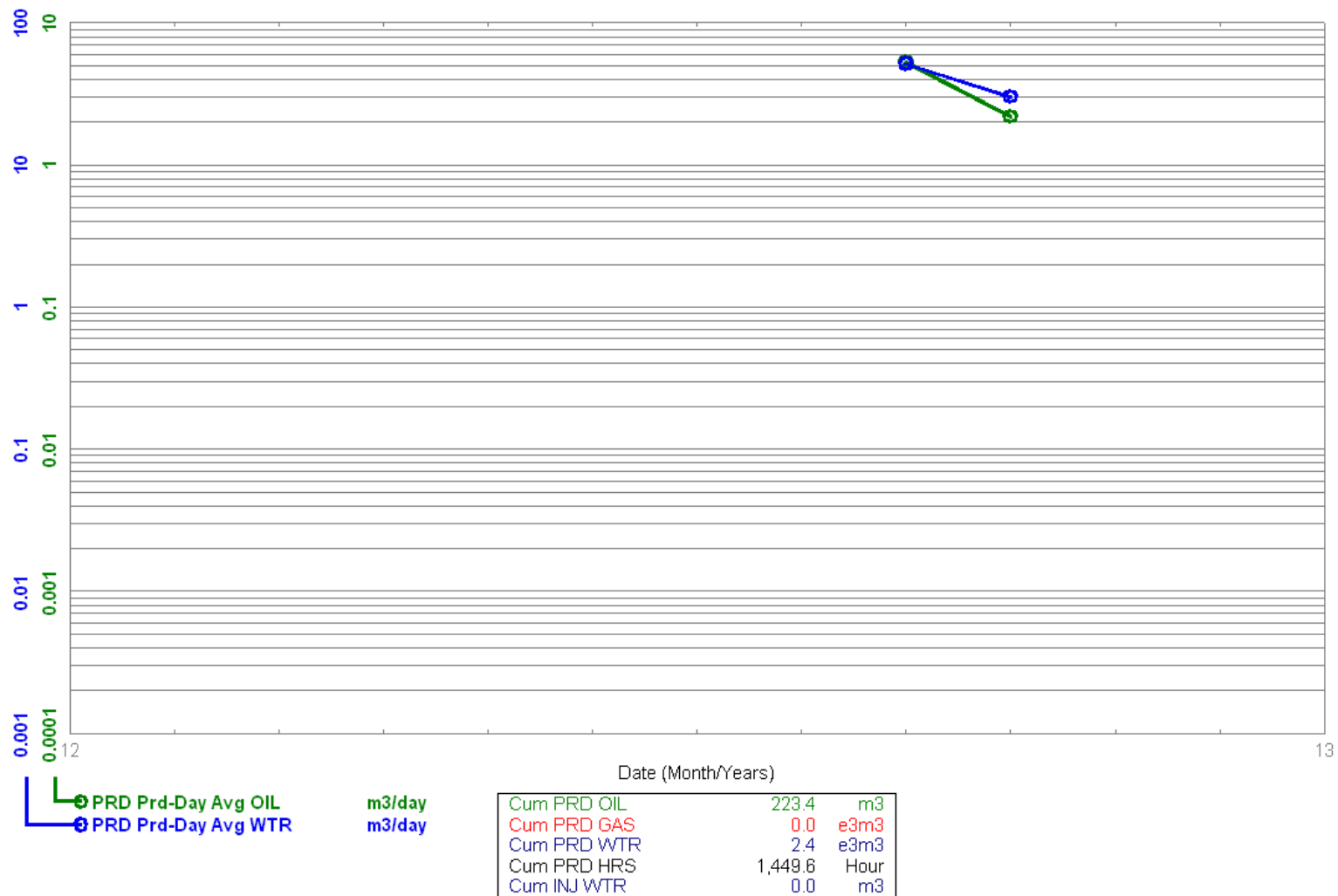
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-09
 To: 2012-10

104/12-20-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

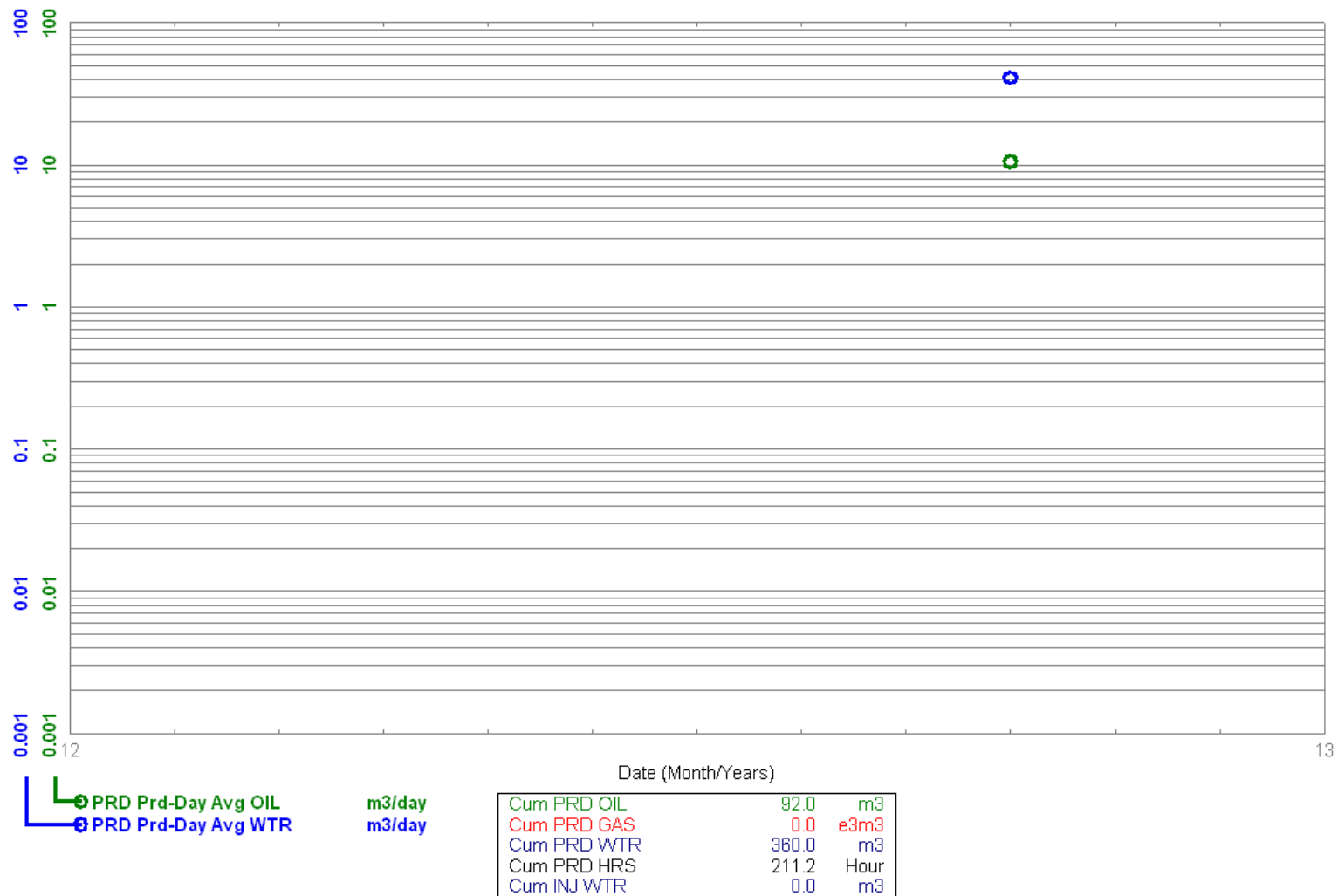
Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-10
 To: 2012-10

104/14-17-001-25W1/00
 Waskada Unit No. 7 HZNTL
 Capable Of Oil Prod

Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit: WASKADA UNIT NO. 7



Data As Of: 2012-10 (MB)
 From: 2012-09
 To: 2012-10

106/04-20-001-25W1/00
 Penn West Waskada Prov. HZNTL
 Capable Of Oil Prod

Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)
 Unit:

