

WASKADA UNIT NO. 5

WATERFLOOD PROGRESS REPORT

January 1, through December 31, 2011

PennWest Exploration

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INTRODUCTION

The WASKADA NO.5 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, Jan.1, 1985 Board Order; Voluntary

First Enlargement March 1, 1986 Voluntary

POOL: Waskada Lower Amaranth A (03 29A)

This report documents the performance of the Waskada Unit # 5 pressure maintenance project for the period of January 1 to December 31, 2011.

Unit # 5 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 #5 (Unit History)

Abbreviated Well ID	Date Well Spudded	On Prod YYYY/MM	Org Operator Name	Ground Elevation (m)	TVD (m)
00/03-34-001-26W1/0	1/31/1981	1981/06	Omega Hydcbns Ltd	460.9	969
00/04-34-001-26W1/0	6/21/1984	1984/07	Omega Hydcbns Ltd	460.5	958
00/05-34-001-26W1/0	6/24/1984	1984/07	Omega Hydcbns Ltd	462.1	960
00/06-34-001-26W1/0	11/26/1983	1984/02	Omega Hydcbns Ltd	460.6	937
02/10-34-001-26W1/0	9/9/1983	1983/12	Omega Hydcbns Ltd	461.3	949
00/12-34-001-26W1/2	3/13/1984	1984/06	NCE Petrofund Corp	463.3	961
00/13-34-001-26W1/0	9/8/1983	1983/10	Omega Hydcbns Ltd	460.4	951
00/14-34-001-26W1/2	6/25/1983	1983/08	NCE Petrofund Corp	460.6	957
00/15-34-001-26W1/0	10/26/1983	1984/02	Omega Hydcbns Ltd	460.3	950
00/16-34-001-26W1/0	10/22/1983	1984/01	Omega Hydcbns Ltd	462	951
00/13-35-001-26W1/0	9/21/1983	1983/10	Omega Hydcbns Ltd	463.3	956.5
00/14-35-001-26W1/2	9/18/1983	1983/10	NCE Petrofund Corp	465.1	956
00/15-35-001-26W1/0	9/14/1983	1983/10	Omega Hydcbns Ltd	465	943
02/15-35-001-26W1/0	10/7/2011			466	912.9
03/15-35-001-26W1/0	10/1/2011			465.8	910.7
00/16-35-001-26W1/0	9/13/1983	1983/10	Omega Hydcbns Ltd	465.8	948
00/01-02-002-26W1/0	10/13/1983	1983/11	Omega Hydcbns Ltd	465.2	952
02/01-02-002-26W1/0	2/4/2010	2010/07		467.2	913
03/01-02-002-26W1/0	2/10/2010	2010/07		467.3	912.6
00/02-02-002-26W1/0	10/17/1983	1983/11	Omega Hydcbns Ltd	463.5	954
02/02-02-002-26W1/0	1/8/2011	2011/03		467	914.3
00/03-02-002-26W1/0	12/1/1983	1984/02	Omega Hydcbns Ltd	465.6	950
02/03-02-002-26W1/0	2/18/2011			462.5	909.4
00/04-02-002-26W1/0	10/17/1983	1983/11	Omega Hydcbns Ltd	462.8	955
02/04-02-002-26W1/0	9/4/2009	2009/11		465	907.9

Abbreviated Well ID	Date Well Spudded	On Prod YYYY/MM	Org Operator Name	Ground Elevation (m)	TVD (m)
03/04-02-002-26W1/0	8/27/2009	2009/11		465.4	913.4
00/05-02-002-26W1/0	11/27/1983	1984/01	Omega Hydcbns Ltd	461.6	945
02/05-02-002-26W1/0	1/14/2011	2011/03		467.3	910.5
00/06-02-002-26W1/0	7/15/1983	1983/08	Omega Hydcbns Ltd	464.2	950
02/06-02-002-26W1/0	2/25/2011			462.4	907.1
00/07-02-002-26W1/0	10/13/1983	1983/11	Omega Hydcbns Ltd	464.3	948
02/07-02-002-26W1/0	2/13/2011			465.5	907.7
03/07-02-002-26W1/0	1/16/2011			466.8	912
00/08-02-002-26W1/0	10/9/1983	1983/11	Omega Hydcbns Ltd	462.2	948
00/09-02-002-26W1/0	11/20/1983	1984/01	Omega Hydcbns Ltd	464.8	950
00/10-02-002-26W1/0	11/22/1983	1984/01	Omega Hydcbns Ltd	464.9	941
02/10-02-002-26W1/0	2/7/2011	2011/03		466.3	906.2
00/11-02-002-26W1/0	11/20/1983	1984/01	Omega Hydcbns Ltd	463.1	950
00/12-02-002-26W1/0	8/30/1983	1983/09	Omega Hydcbns Ltd	465.2	950
02/12-02-002-26W1/0	1/26/2010	2010/03		465.5	908
03/12-02-002-26W1/0	1/6/2011	2011/03		467.2	912.1
00/15-02-002-26W1/0	9/24/1982	1982/11	Omega Hydcbns Ltd	464.7	948
00/01-03-002-26W1/0	3/11/1984	1984/05	Omega Hydcbns Ltd	462	950
02/01-03-002-26W1/2	6/22/1994	2010/11		461.7	909
00/02-03-002-26W1/0	2/23/1984	1984/03	Omega Hydcbns Ltd	462.7	950
02/02-03-002-26W1/0	2/16/2010	2010/07		463.9	911.7
00/03-03-002-26W1/0	2/29/1984	1984/03	Omega Hydcbns Ltd	461.1	950
02/03-03-002-26W1/0	2/25/2010	2010/07		464.3	908.9
00/07-03-002-26W1/0	8/20/1983	1983/09	Omega Hydcbns Ltd	465	948
00/08-03-002-26W1/0	3/21/1984	1984/06	Omega Hydcbns Ltd	463.6	950

Waskada Unit #5 (Production & Injection History)

Abbreviated Well ID	First Prod YYYY/MM	On Inject. YYYY/MM	Last Prod. YYYY/MM	Cumulative OIL Prod. (m3)	Cumulative WTR Prod. (m3)	First 12 mo. Ave WC%	Last Inject. YYYY/MM
00/03-34-001-26W1/0	1981/06		1989/12	1535	5835	92.9	
00/04-34-001-26W1/0	1984/07		1988/02	353	10302	92.7	
00/05-34-001-26W1/0	1984/07	1986/03	1986/02	822	4442	82.8	1998/04
00/06-34-001-26W1/0	1984/02		2008/09	5050	32844	70.5	
02/10-34-001-26W1/0	1983/12		1990/01	652	7152	92.7	
00/12-34-001-26W1/2	1984/06		1996/04	2757	11032	66.6	
00/13-34-001-26W1/0	1983/10	1986/03	1986/02	807	2738	75.1	2000/05
00/14-34-001-26W1/2	1983/08		2011/11	2191	4043	49.7	
00/15-34-001-26W1/0	1984/02	1986/03	1986/02	455	1769	78.9	1998/04
00/16-34-001-26W1/0	1984/01		1989/04	256	1996	89.6	
00/13-35-001-26W1/0	1983/10	1985/01	1984/12	802	1402	64.2	2003/10
00/14-35-001-26W1/2	1983/10		2011/11	5972	6225	65.9	
00/15-35-001-26W1/0	1983/10	1985/01	1984/12	1240	280	18.9	2006/02
02/15-35-001-26W1/0							
03/15-35-001-26W1/0							
00/16-35-001-26W1/0	1983/10		2011/11	13202	2097	11.5	
00/01-02-002-26W1/0	1983/11		2010/11	10118	3110	15.1	
02/01-02-002-26W1/0	2010/07		2011/11	3498	2355	42.8	
03/01-02-002-26W1/0	2010/07		2011/11	2912	1570	35.3	
00/02-02-002-26W1/0	1983/11		2011/02	6743	1264	26.9	
02/02-02-002-26W1/0	2011/03		2011/11	1049	2136	67.1	
00/03-02-002-26W1/0	1984/02		2011/03	4761	1643	40.9	
02/03-02-002-26W1/0							
00/04-02-002-26W1/0	1983/11		2011/08	6025	1250	31	
02/04-02-002-26W1/0	2009/11		2011/10	4703	2756	38.4	
03/04-02-002-26W1/0	2009/11		2011/11	3038	2996	50.8	
00/05-02-002-26W1/0	1984/01	1985/01	1984/12	894	322	26.5	2003/10
02/05-02-002-26W1/0	2011/03		2011/11	2075	1636	44.1	
00/06-02-002-26W1/0	1983/08		2011/11	5603	1326	25	
02/06-02-002-26W1/0							
00/07-02-002-26W1/0	1983/11	1985/01	1984/12	722	299	30.4	2004/06
02/07-02-002-26W1/0							
03/07-02-002-26W1/0							
00/08-02-002-26W1/0	1983/11		2008/06	4609	1444	35.1	
00/09-02-002-26W1/0	1984/01		1991/03	2108	569	28.4	
00/10-02-002-26W1/0	1984/01		2008/05	3206	920	31.2	
02/10-02-002-26W1/0	2011/03		2011/11	1671	2643	61.3	
00/11-02-002-26W1/0	1984/01		2011/06	7296	9129	28.7	
00/12-02-002-26W1/0	1983/09		2011/07	5700	1735	28.4	
02/12-02-002-26W1/0	2010/03		2011/11	3926	2696	36.8	

Abbreviated Well ID	First Prod YYYY/MM	On Inject. YYYY/MM	Last Prod. YYYY/MM	Cumulative OIL Prod. (m3)	Cumulative WTR Prod. (m3)	First 12 mo. Ave WC%	Last Inject. YYYY/MM
03/12-02-002-26W1/0	2011/03		2011/11	2653	1420	34.9	
00/15-02-002-26W1/0	1982/11	1986/03	1986/01	1039	637	44	1998/04
00/01-03-002-26W1/0	1984/05		1996/10	2717	1437	56.5	
02/01-03-002-26W1/2	2010/11		2011/11	2180	2312	51.5	
00/02-03-002-26W1/0	1984/03		1990/04	1650	896	34.9	
02/02-03-002-26W1/0	2010/07		2011/11	1673	1481	49.6	
00/03-03-002-26W1/0	1984/03		1986/07	1442	2968	37.1	
02/03-03-002-26W1/0	2010/07		2011/11	5919	2290	26	
00/07-03-002-26W1/0	1983/09	1986/03	1986/02	1406	716	30.7	1998/04
00/08-03-002-26W1/0	1984/06		2011/11	4896	2360	47.9	

Discussion:

Production Performance

Production Response versus Injection: Since injection began, mid 1985, 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 2005.

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 0.89 (under injected) and the current monthly VRR is zero. All of the injectors are shut in currently. PennWest has no plans to re-activate 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 is to:

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. 00/14-35-001-26W1/2
2. 00/16-35-001-26W1/0
3. 00/01-02-002-26W1/0
4. 02/01-02-002-26W1/0
5. 03/01-02-002-26W1/0
6. 02/02-02-002-26W1/0
7. 02/04-02-002-26W1/0
8. 03/04-02-002-26W1/0
9. 02/05-02-002-26W1/0
10. 00/06-02-002-26W1/0

11. 02/10-02-002-26W1/0
12. 02/12-02-002-26W1/0
13. 03/12-02-002-26W1/0
14. 02/01-03-002-26W1/2
15. 02/03-03-002-26W1/0
16. 00/08-03-002-26W1/0

Current Suspended Wells

1. 00/06-34-001-26W1/0 (since 2008/09)
2. 00/02-02-002-26W1/0 (since 2011/02)
3. 00/03-02-002-26W1/0 (since 2011/03)
4. 00/04-02-002-26W1/0 since (2011/08)
5. 00/08-02-002-26W1/0 (since 2008/06)
6. 00/10-02-002-26W1/0 (since 2008/05)
7. 00/11-02-002-26W1/0 (since 2011/06)
8. 00/12-02-002-26W1/0 (since 2011/07)

Abandoned Wells

1. 00/03-34-001-26W1/0(since 1990/01)
2. 00/04-34-001-26W1/0(since 1988/03)
3. 02/10-34-001-26W1/0(since 1990/02)
4. 00/12-34-001-26W1/2(since 1996/05)
5. 00/16-34-001-26W1/0(since 1989/05)
6. 00/09-02-002-26W1/0(since 1991/04)
7. 00/01-03-002-26W1/0(since 1996/11)
8. 00/02-03-002-26W1/0(since 1990/05)
9. 00/03-03-002-26W1/0(since 1986/08)

[Injectors]

Current Injecting Wells

None

Current Suspended Wells

1. 00/05-02-002-26W1/0 (since 2003/11)
2. 00/05-34-001-26W1/0 (since 1998/05)
3. 00/07-02-002-26W1/0 (since 2004/07)
4. 00/07-03-002-26W1/0 (since 1998/05)
5. 00/13-34-001-26W1/0 (since 2000/06)
6. 00/13-35-001-26W1/0 (since 2003/11)
7. 00/15-02-002-26W1/0 (since 1998/05)
8. 00/15-34-001-26W1/0 (since 1998/05)
9. 00/15-35-001-26W1/0 (since 2006/03)

Abandoned Wells

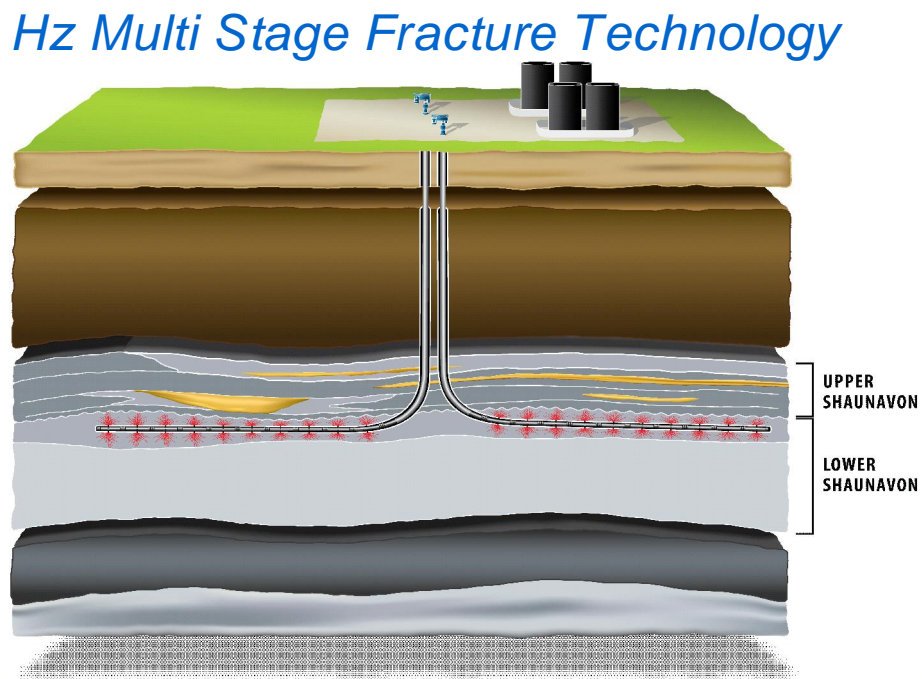
None

The behavior of a Waskada Unit 5 producers are indicated by examining the oil rate versus time plots (see Appendix B). Unit 5 exhibited relatively high initial oil productivity (most of the wells drilled in the past are verticals), 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 Lower Amaranth is becoming a non-conventional tight oil resource 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. PennWest drilled six horizontal wells, to increase the Recovery Factor (RF), in year 2010, 102/01-02-002-26W1, 103/01-02-002-26W1, 102/12-02-002-26W1, 102/01-03-002-26W1/02, 102/02-03-002-26W1, and 102/03-03-002-26W1. PennWest’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 incorporating:-



TABLES

Waskada Unit #5

Table 1: Rates History

Date	OIL		Water		Inj Water	
Year	m3/year	m3/day	m3/year	m3/day	m3/year	m3/day
1981	15	0.04	197	0.54	0	0.00
1982	311	0.85	758	2.08	0	0.00
1983	6,802	18.64	5,551	15.21	0	0.00
1984	18,806	51.52	22,874	62.67	0	0.00
1985	9,418	25.80	18,212	49.90	38,316	104.97
1986	6,226	17.06	12,759	34.96	75,812	207.70
1987	5,464	14.97	7,974	21.85	25,875	70.89
1988	4,450	12.19	6,636	18.18	17,778	48.71
1989	3,362	9.21	4,542	12.44	7,984	21.87
1990	4,526	12.40	2,268	6.21	9,757	26.73
1991	4,439	12.16	2,155	5.90	10,083	27.62
1992	4,824	13.22	5,584	15.30	6,146	16.84
1993	4,717	12.92	4,984	13.66	8,476	23.22
1994	3,346	9.17	4,039	11.06	3,292	9.02
1995	4,084	11.19	7,705	21.11	10,010	27.42
1996	3,455	9.47	3,653	10.01	10,941	29.97
1997	2,461	6.74	2,678	7.34	11,485	31.46
1998	1,786	4.89	2,161	5.92	2,491	6.82
1999	1,192	3.26	539	1.48	921	2.52
2000	1,685	4.62	632	1.73	985	2.70
2001	955	2.62	593	1.63	900	2.47
2002	1,284	3.52	540	1.48	367	1.00
2003	1,229	3.37	555	1.52	328	0.90
2004	1,162	3.18	399	1.09	2	0.00
2005	939	2.57	234	0.64	25	0.07
2006	1,553	4.25	1,129	3.09	1	0.00
2007	1,515	4.15	1,824	5.00	0	0.00
2008	1,866	5.11	997	2.73	0	0.00
2009	3,106	8.51	2,078	5.69	0	0.00
2010	18,022	67.22	11,614	40.15	0	0.00
2011	22,121	84.47	18,654	78.45	0	0.00

Waskada Unit #5

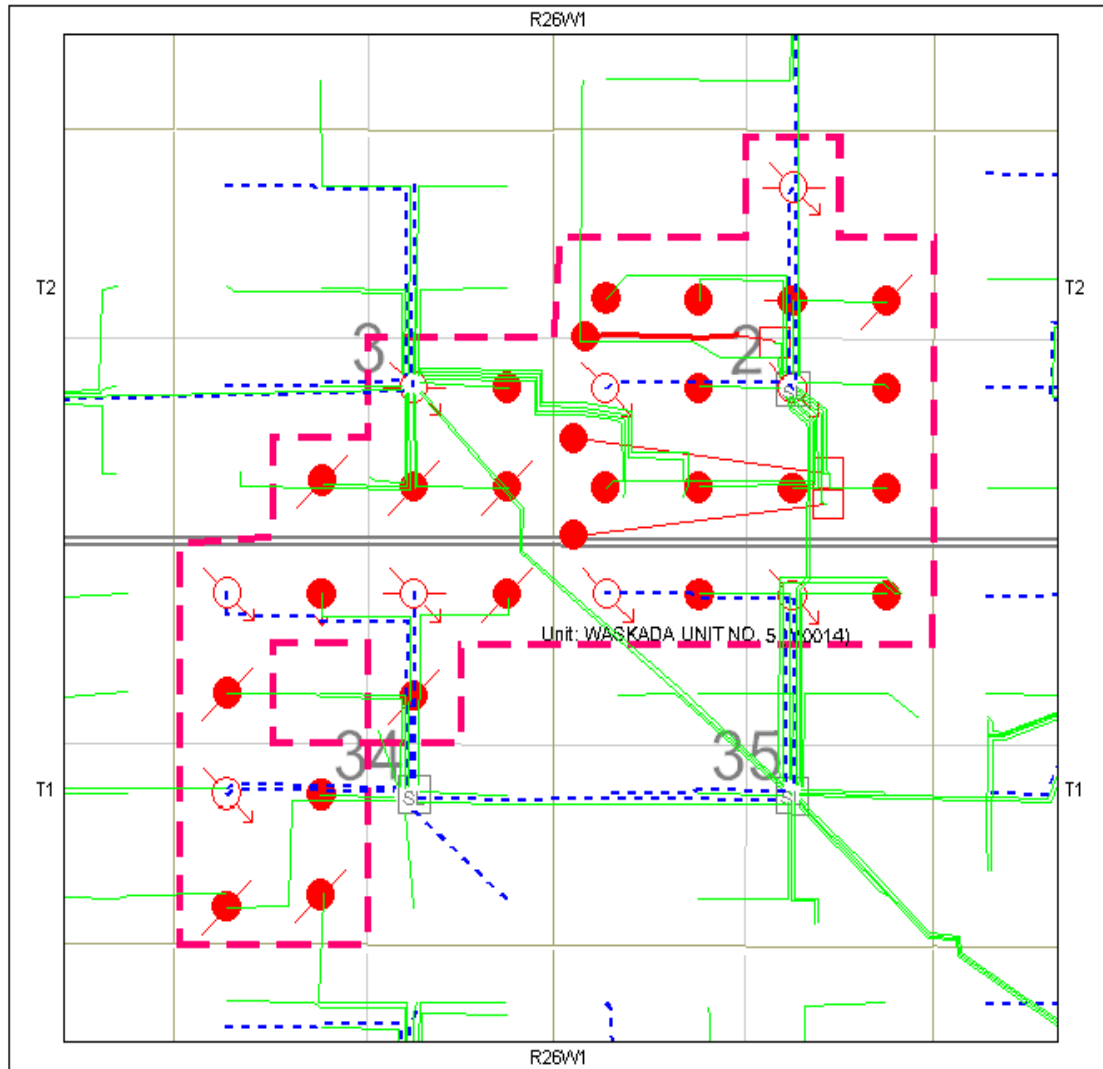
Table 2: Pressure Survey

Location	Shut In Date	Date of Survey	Type of Survey	Pressure @ Datum Depth (kPa)
00/06-34-001-26W1/0		10-Jan-10	BHP, Assuming WC from Last Prod'n	4166
00/13-35-001-26W1/0	Jan-90	(42 days)	Static Gradient	14888
00/14-35-001-26W1/2		2008	BHP, Assuming WC from Last Prod'n	9757
02/04-02-002-26W1/0	17-Oct-10	24-Oct-10	BHP Build Up	2089
03/04-02-002-26W1/0	17-Oct-10	24-Oct-10	BHP Build Up	1901
00/06-02-002-26W1/0		2008	BHP, Assuming WC from Last Prod'n	5335
00/08-02-002-26W1/0		10-Jan-10	BHP, Assuming WC from Last Prod'n	4013
00/09-02-002-26W1/0		10-Jan-10	BHP, Assuming WC from Last Prod'n	9101
02/12-02-002-26W1/0	17-Oct-10	24-Oct-10	BHP Build Up	2762
00/08-03-002-26W1/0		2008	BHP, Assuming WC from Last Prod'n	4766
102/03-03-002-26W1/0		Aug 2011	Results of the test are attached to the report	
103/01-02-002-26W1/0		July 2011	Results of the test are attached to the report	


Recent pressure tests were performed on 102/03-03 and 103/01-02-002-26W1 on August 2011 and the results of the tests are attached to the report

APPENDIX A

Appendix A – Area Map

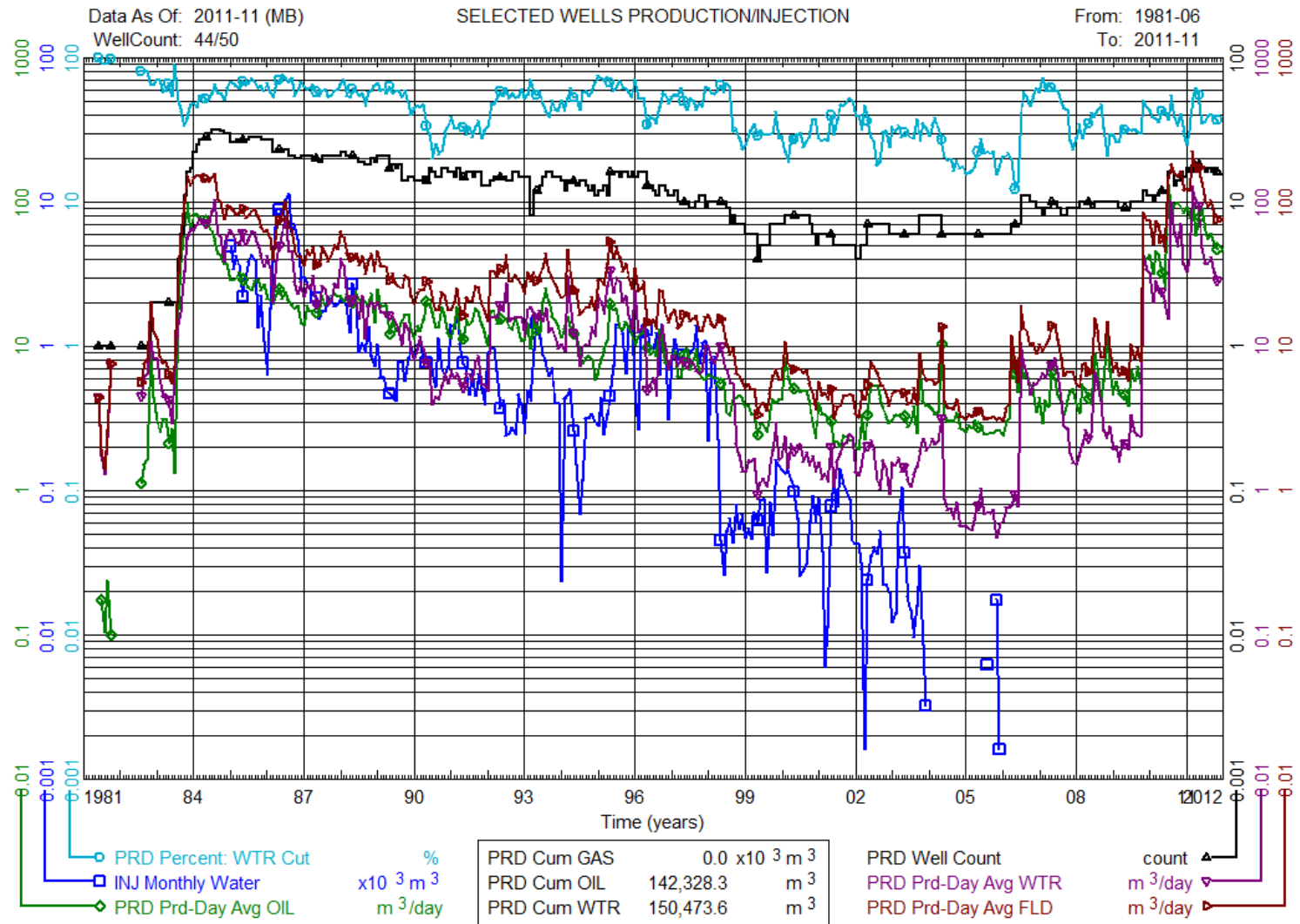


WELL SYMBOLS					
• OIL	✂ AO	⊕ PTN	⊕ D&A	⊕ WI	
○ LCT	✂ AWI	⊕ STN	⊕ CMM	⊕ DRL	
⊕ RDR	⊕ WD	⊕ AWS	⊕ AWD	⊕ SWI	
⊕ SO	⊕ WSC	⊕ J&A	⊕ SL		

PennWest Exploration		
Waskada Unit #5		
	By :	Date : 2011/04/14
	Scale = 1:22983	Project : Waskada

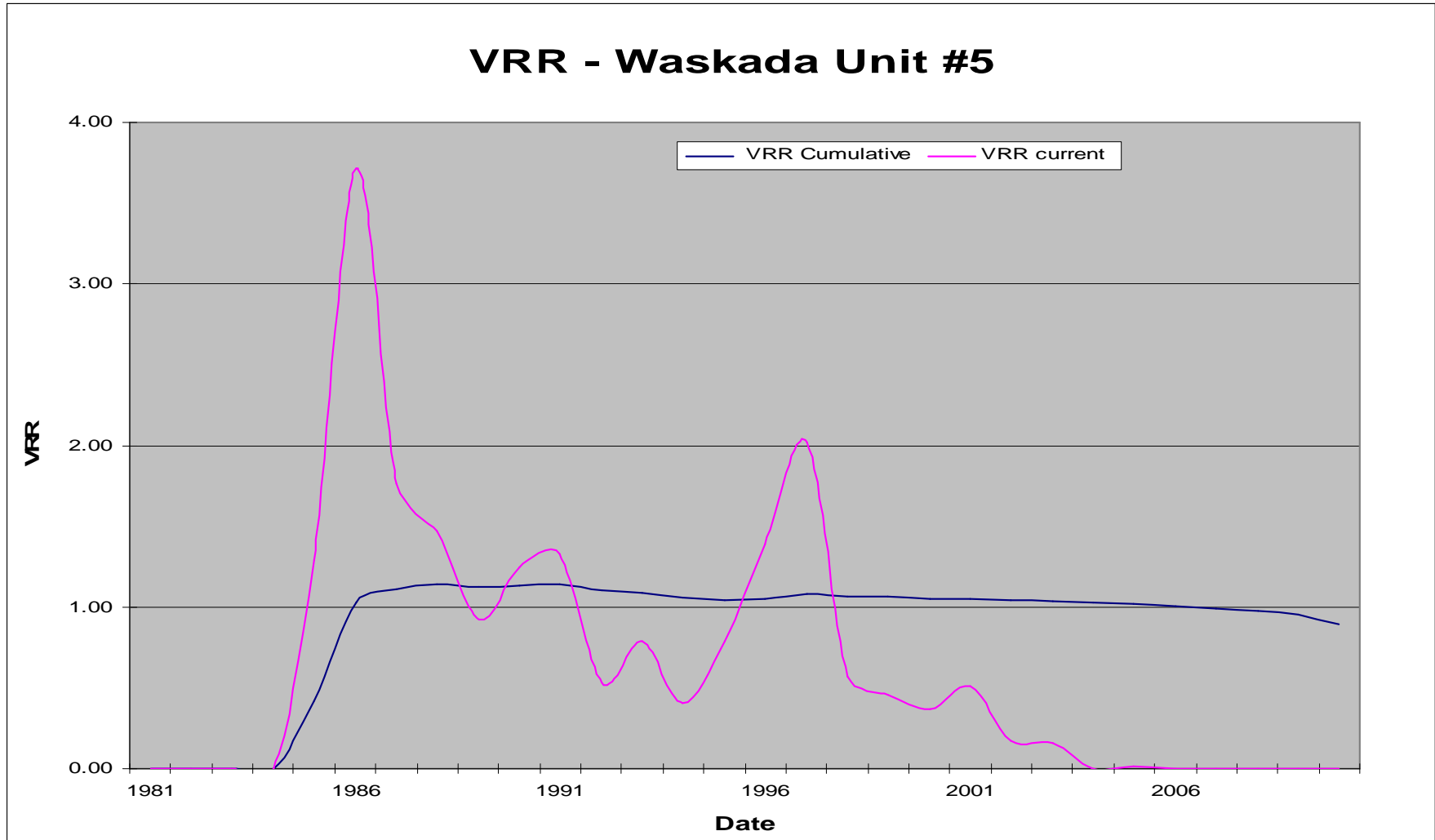
APPENDIX B

Appendix B – Production and Injection History plot



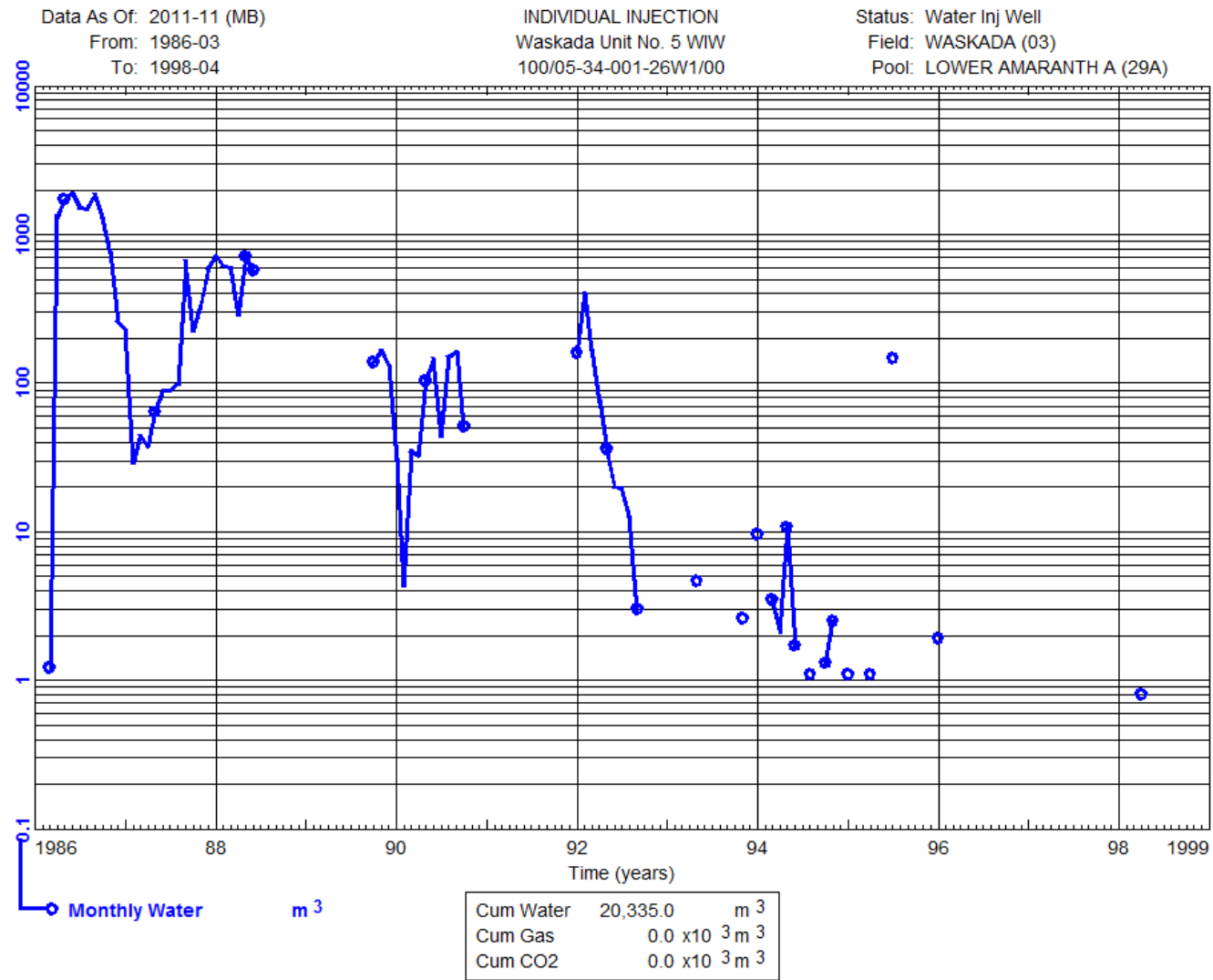
APPENDIX C

Appendix C – Voidage Replacement Ratio VRR



APPENDIX D

Appendix D – Production and Injection Profiles



Data As Of: 2011-11 (MB)

From: 1986-03

To: 2000-05

INDIVIDUAL INJECTION

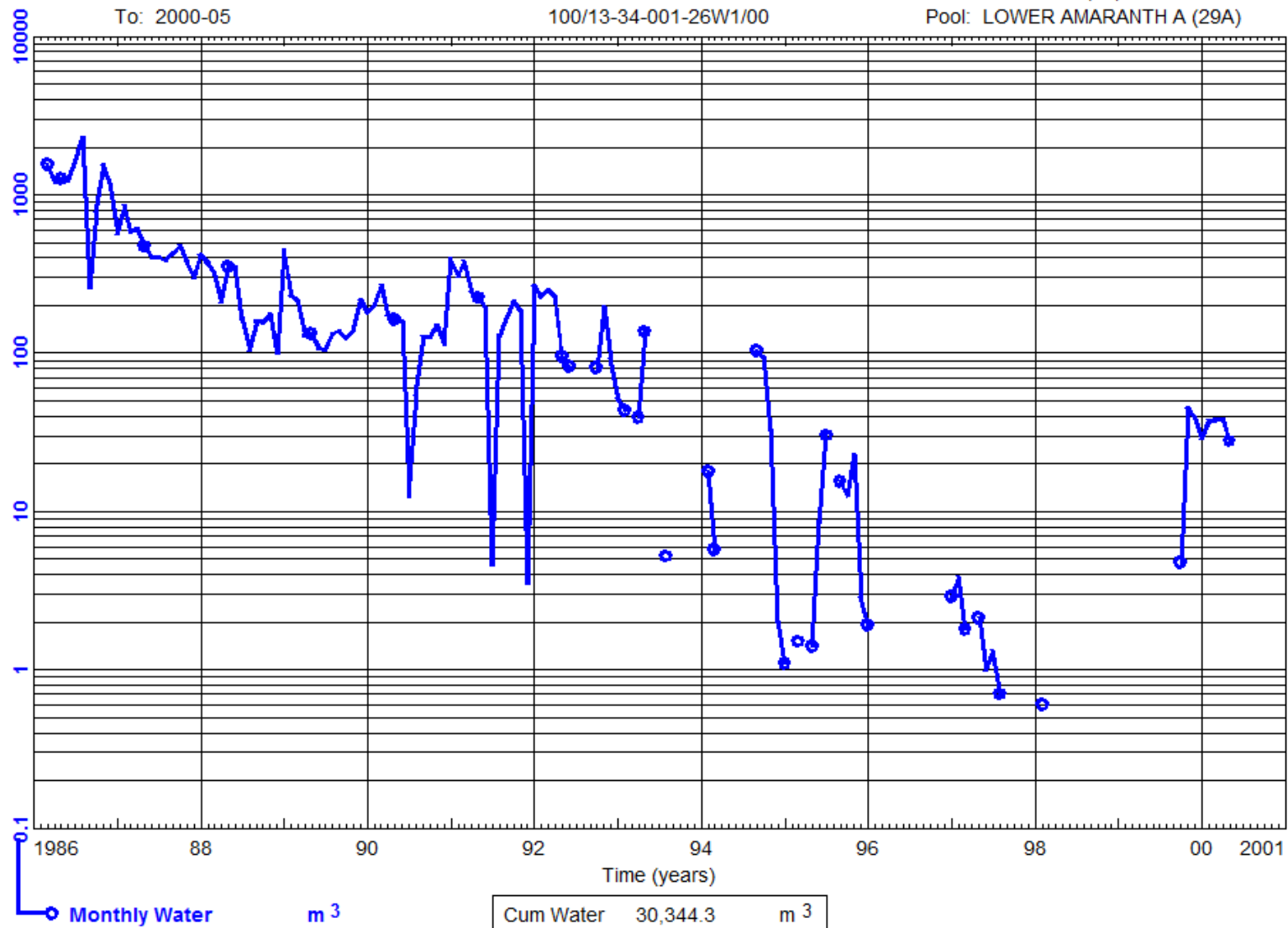
Waskada Unit No. 5 WIW

100/13-34-001-26W1/00

Status: Water Inj Well

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)

From: 1986-03

To: 1998-04

INDIVIDUAL INJECTION

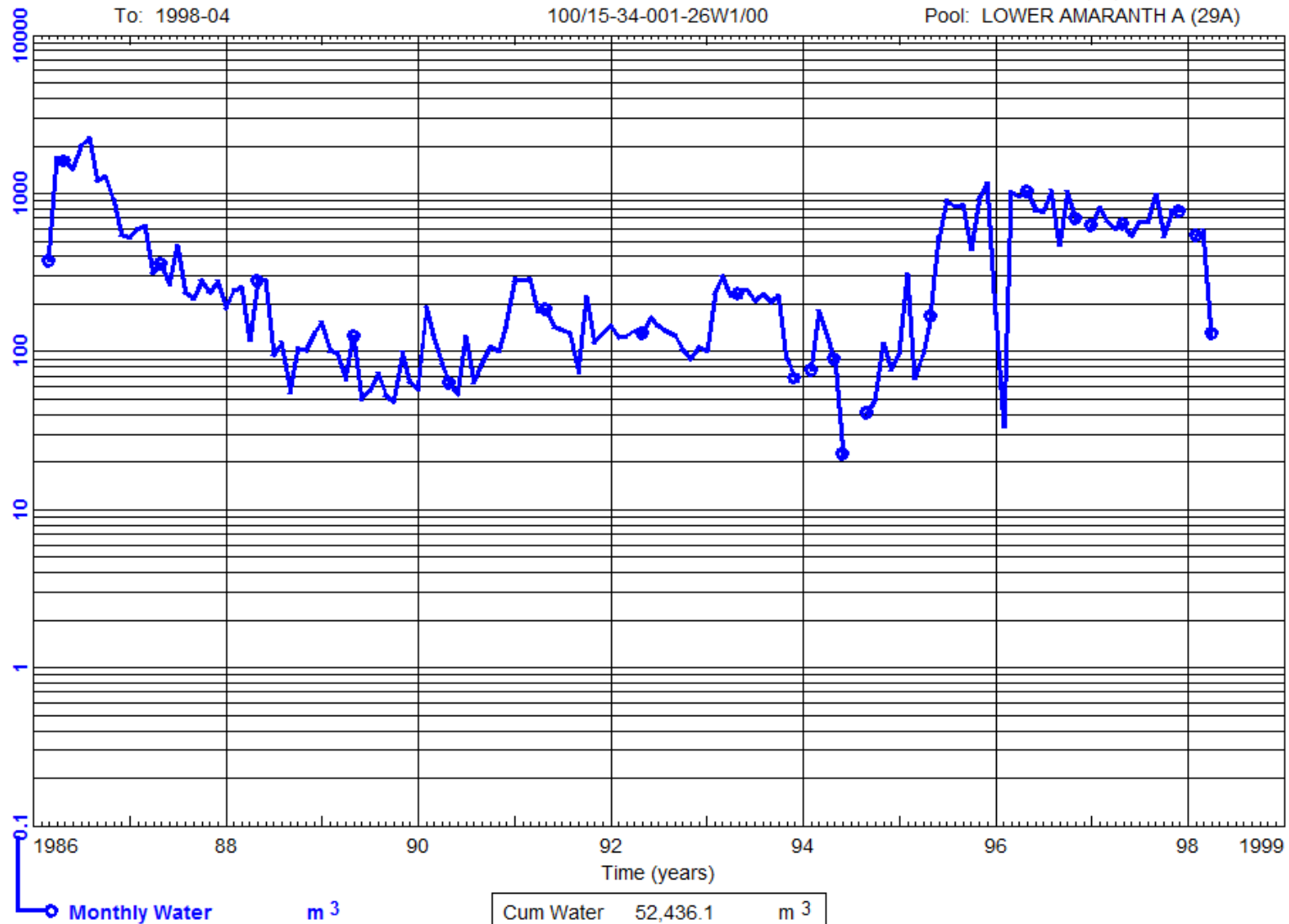
Waskada Unit No. 5 WIW

100/15-34-001-26W1/00

Status: WIW - Suspended

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)



Cum Water	52,436.1	m^3
Cum Gas	0.0 x10 ³	m^3
Cum CO2	0.0 x10 ³	m^3

Data As Of: 2011-11 (MB)

From: 1985-01

To: 2003-10

INDIVIDUAL INJECTION

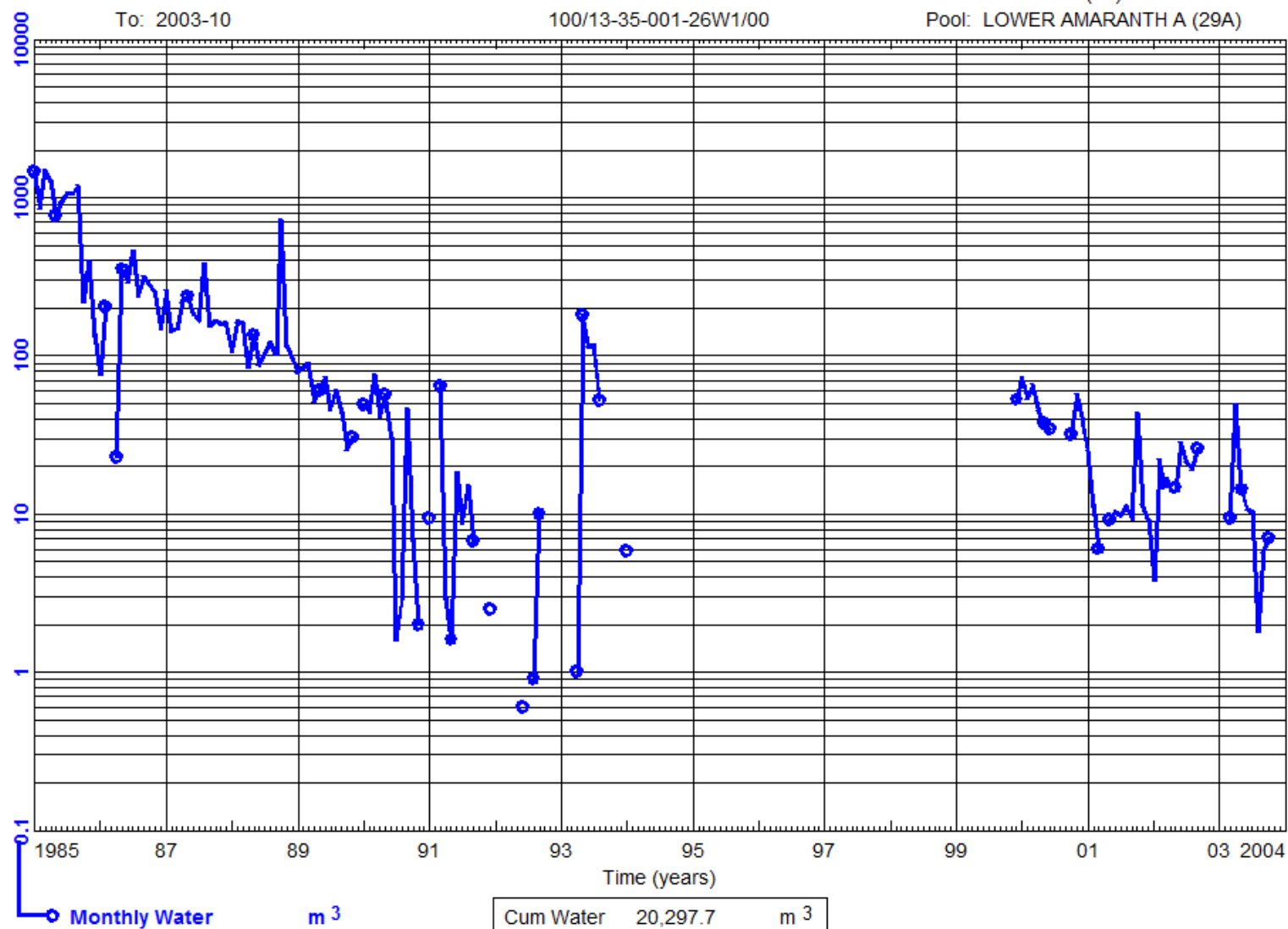
Waskada Unit No. 5 WIW

100/13-35-001-26W1/00

Status: Water Inj Well

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)

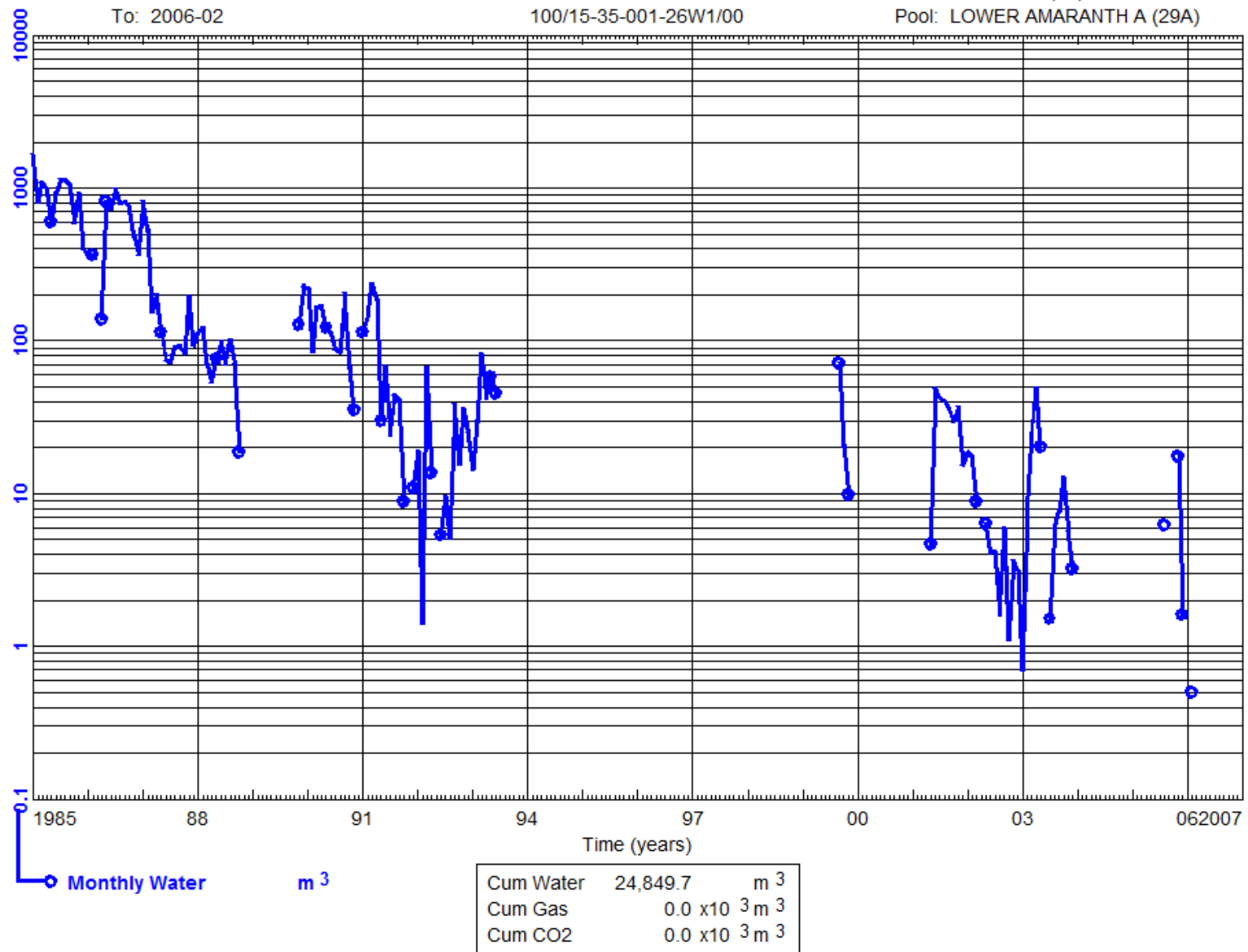


Cum Water	20,297.7	m^3
Cum Gas	0.0 x10 ³	m^3
Cum CO2	0.0 x10 ³	m^3

Data As Of: 2011-11 (MB)
 From: 1985-01
 To: 2006-02

INDIVIDUAL INJECTION
 Waskada Unit No. 5 WIW
 100/15-35-001-26W1/00

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



Data As Of: 2011-11 (MB)

From: 1985-01

To: 2003-10

INDIVIDUAL INJECTION

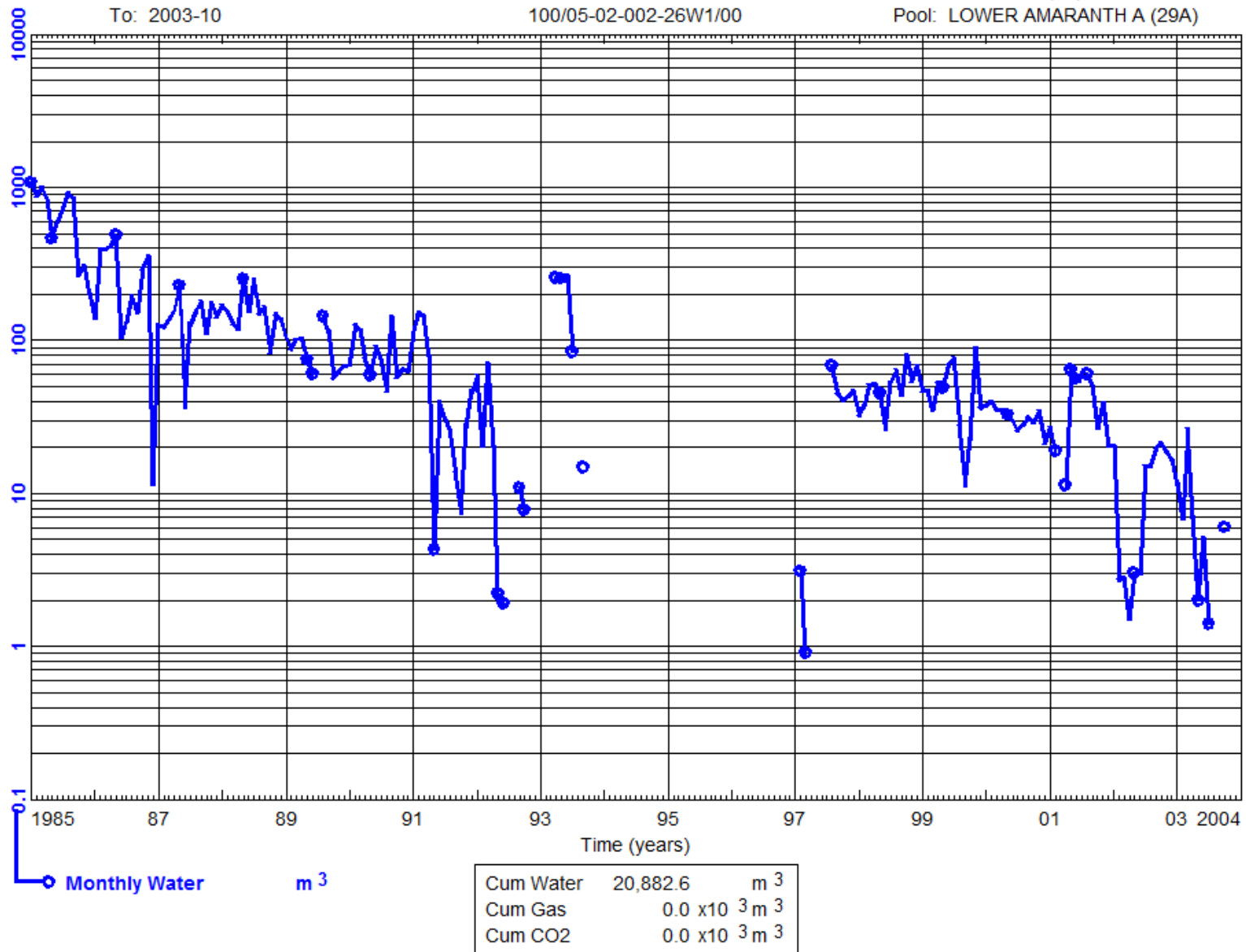
Waskada Unit No. 5 WIW

100/05-02-002-26W1/00

Status: Water Inj Well

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)

From: 1985-01

To: 2004-06

INDIVIDUAL INJECTION

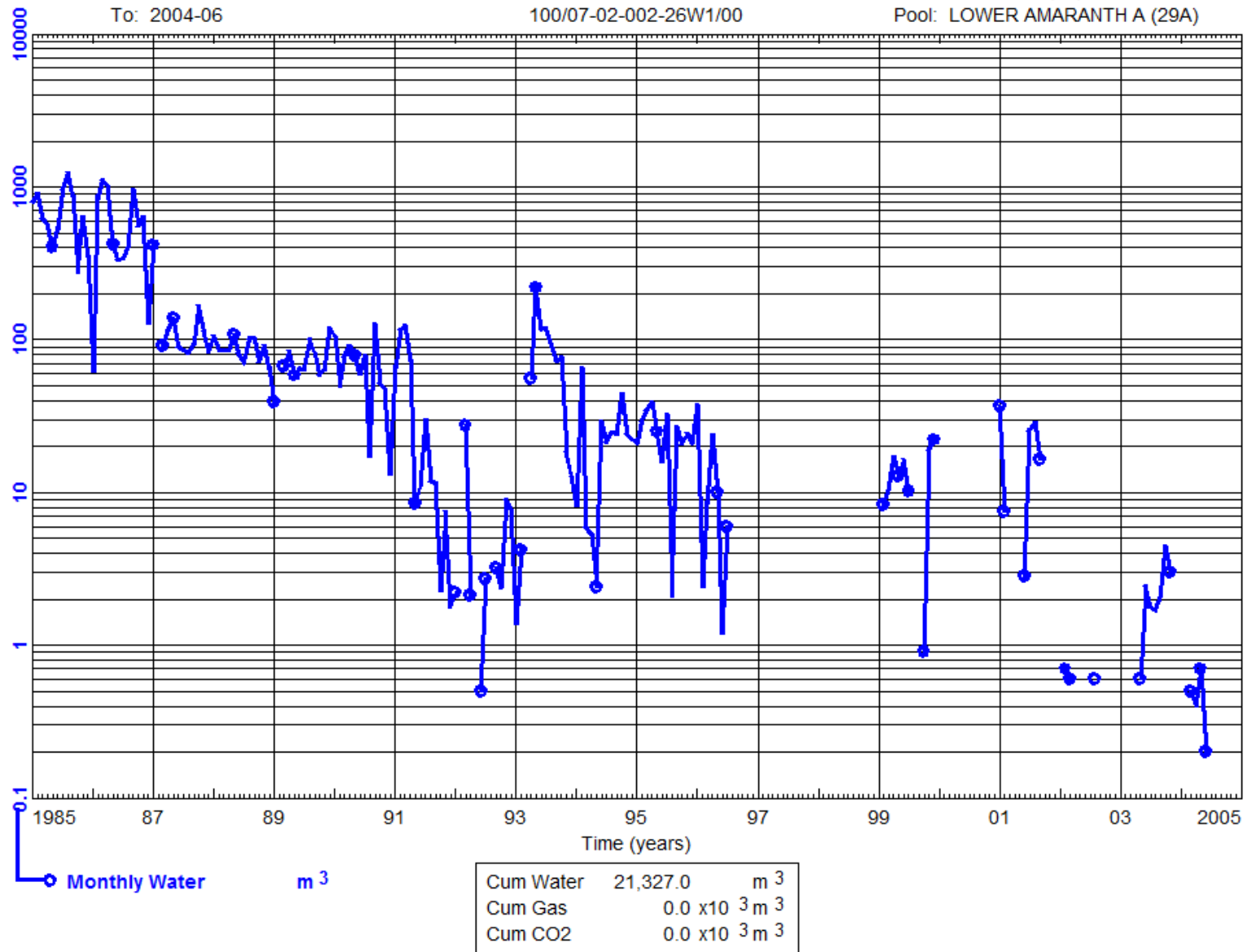
Waskada Unit No. 5 WIW

100/07-02-002-26W1/00

Status: Water Inj Well

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)

From: 1986-03

To: 1998-04

INDIVIDUAL INJECTION

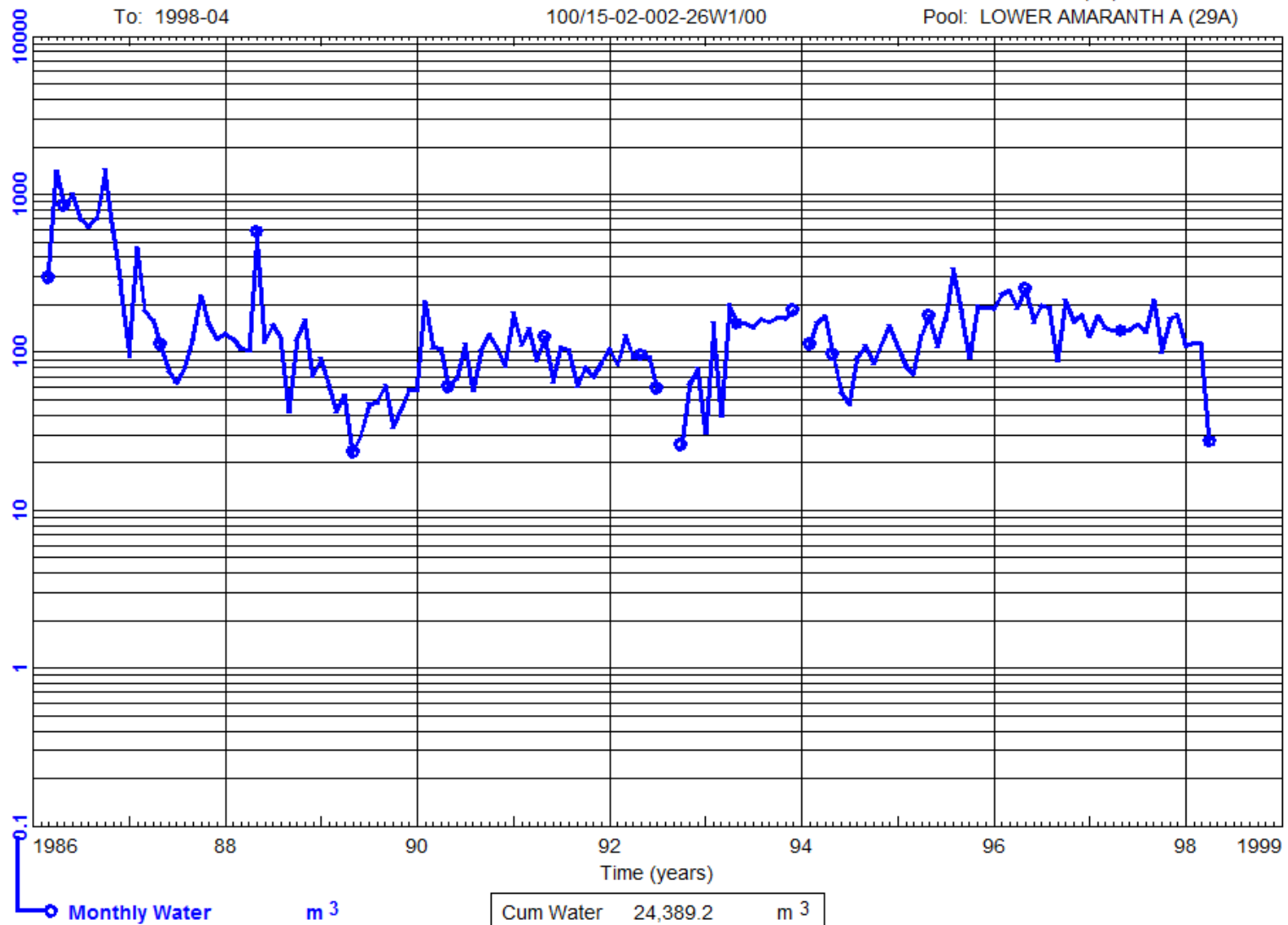
Waskada Unit No. 5 Prov. WW

100/15-02-002-26W1/00

Status: WW - Suspended

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)

From: 1986-03

To: 1998-04

INDIVIDUAL INJECTION

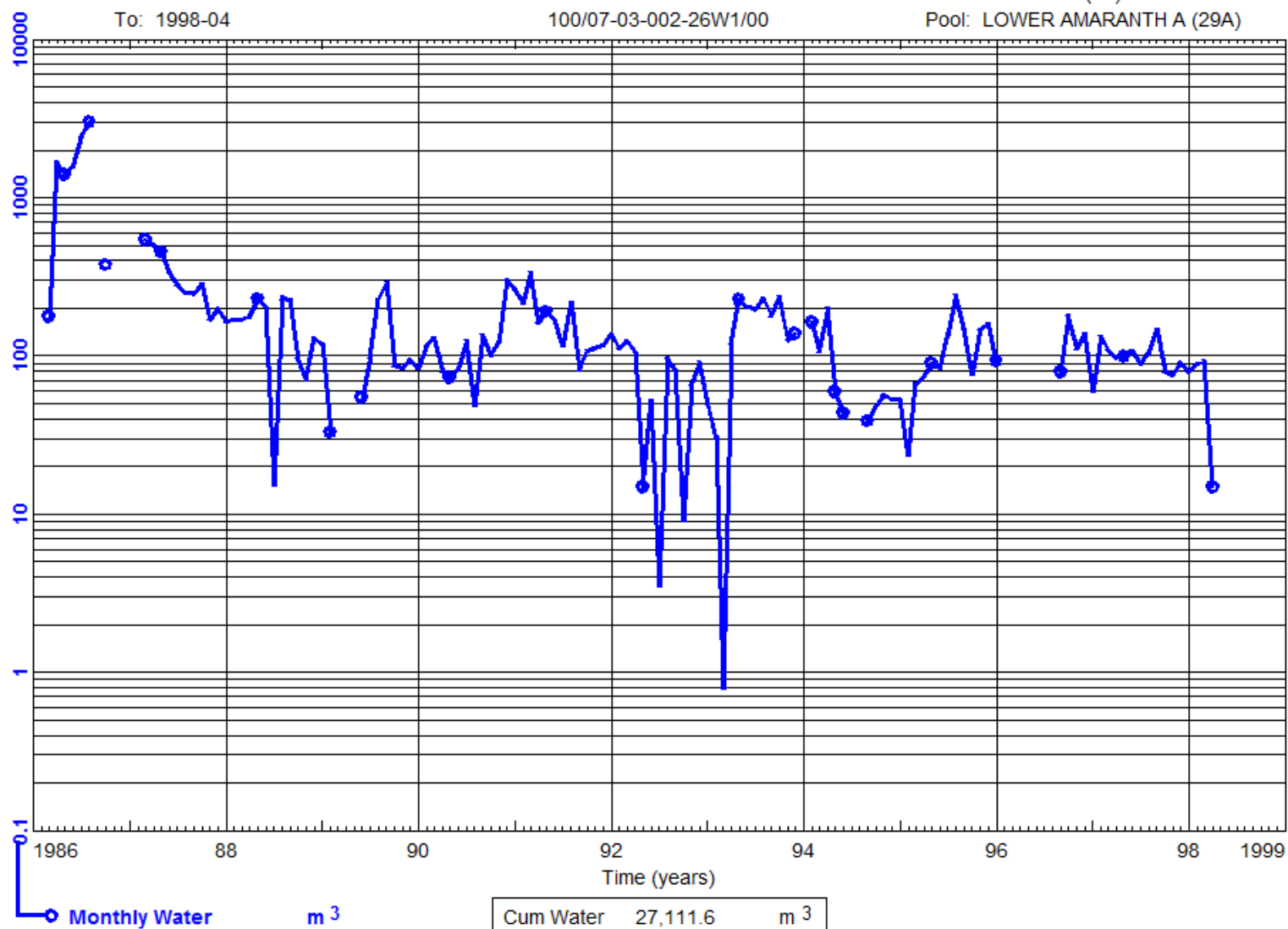
Waskada Unit No. 5 WIW

100/07-03-002-26W1/00

Status: WIW - Suspended

Field: WASKADA (03)

Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)

From: 1981-06

To: 1989-12

INDIVIDUAL PRODUCTION

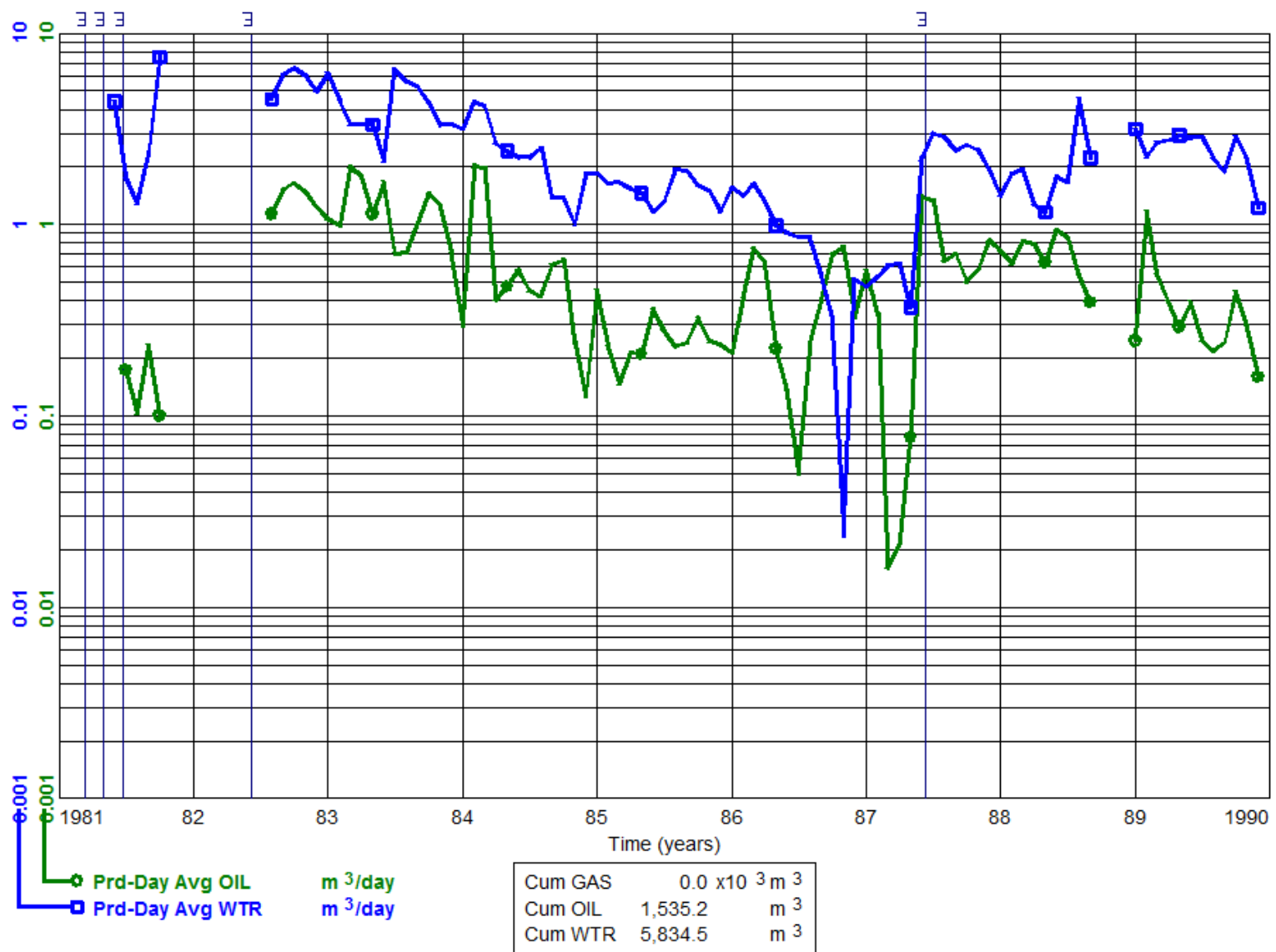
Omega Dalny

100/03-34-001-26W1/00

Status: Abandoned Producer

Field: WASKADA (03)

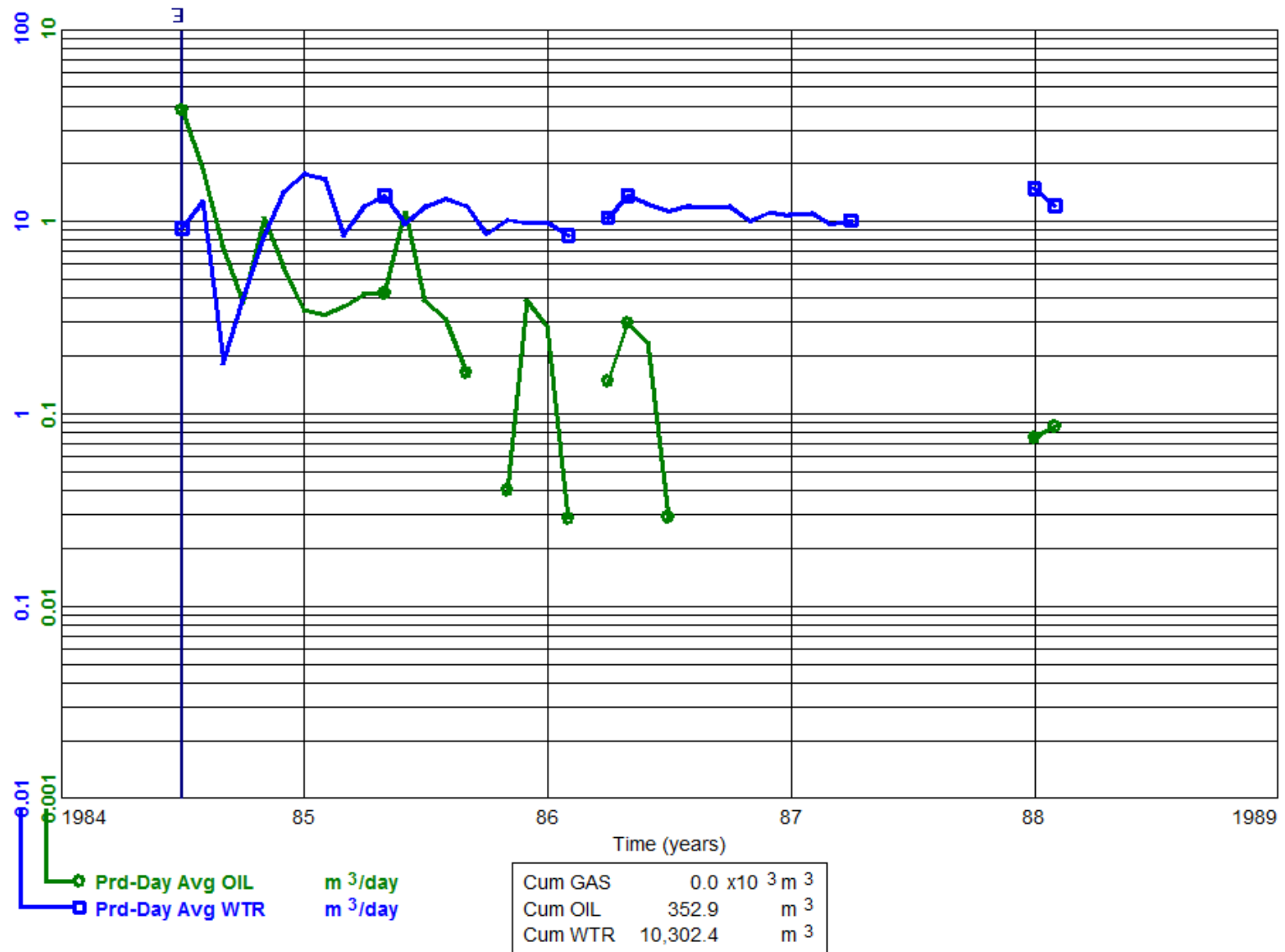
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-07
 To: 1988-02

INDIVIDUAL PRODUCTION
 Omega Waskada
 100/04-34-001-26W1/00

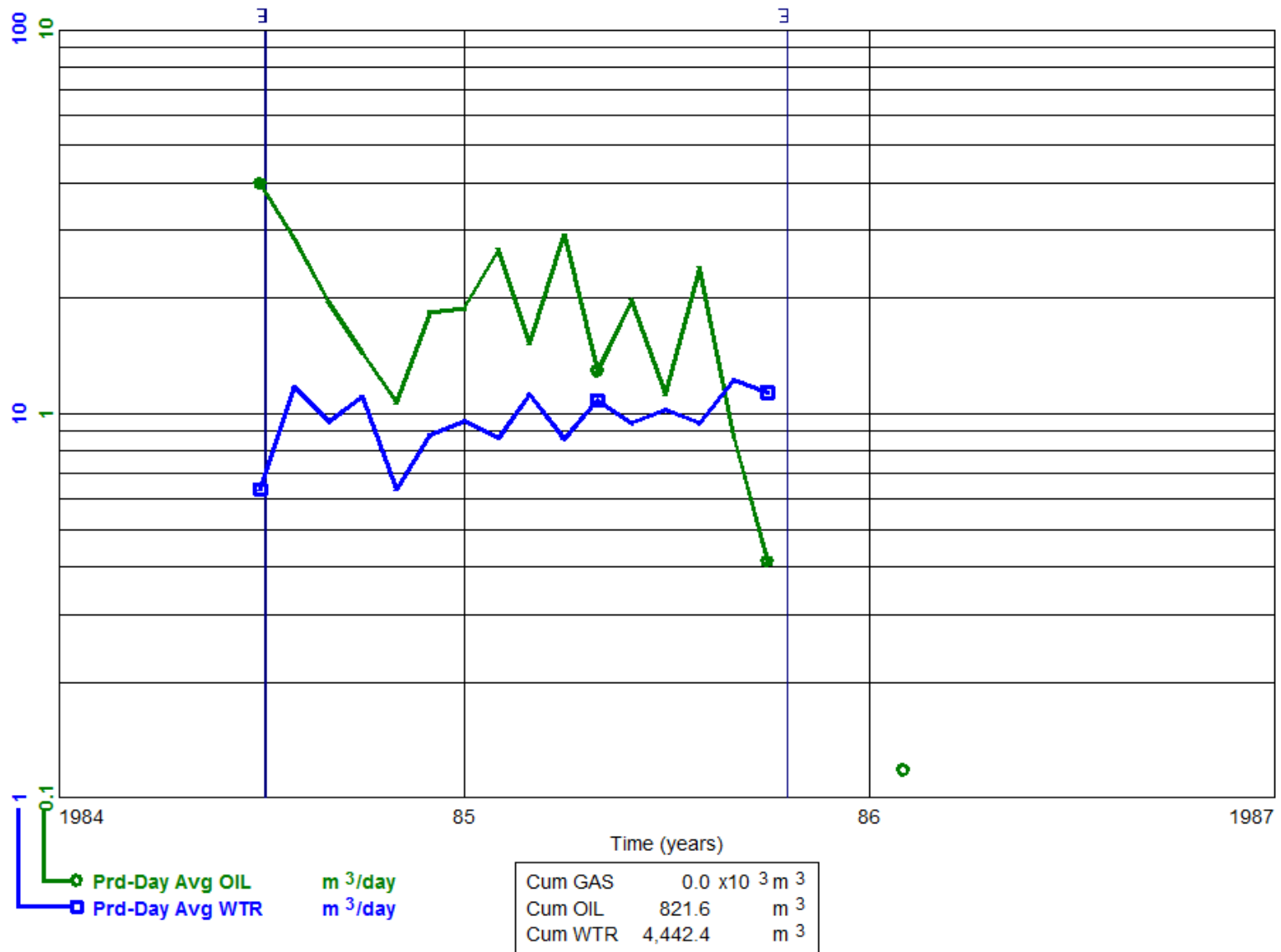
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-07
 To: 1986-02

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/05-34-001-26W1/00

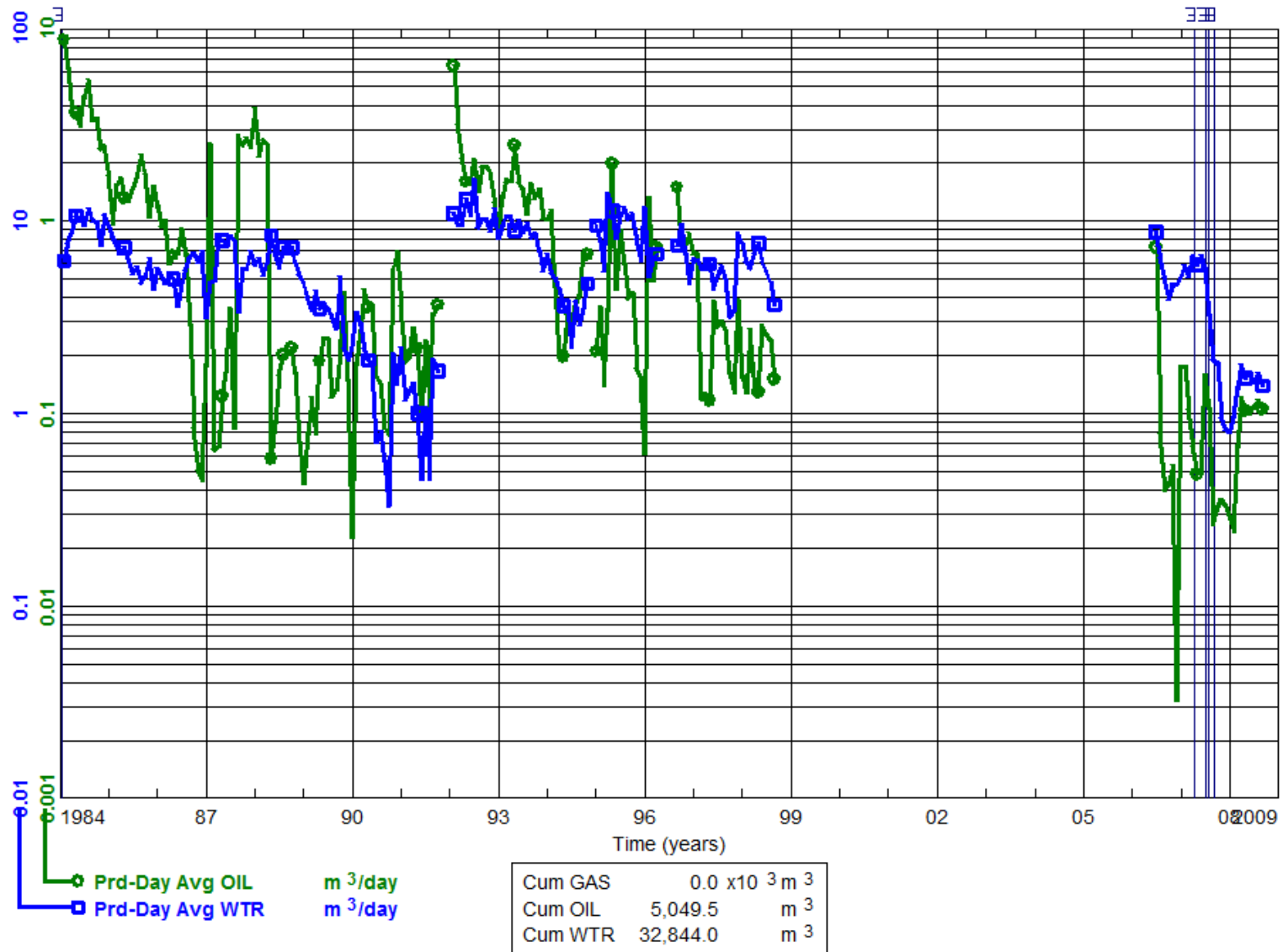
Status: Water Inj Well
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-02
 To: 2008-09

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/06-34-001-26W1/00

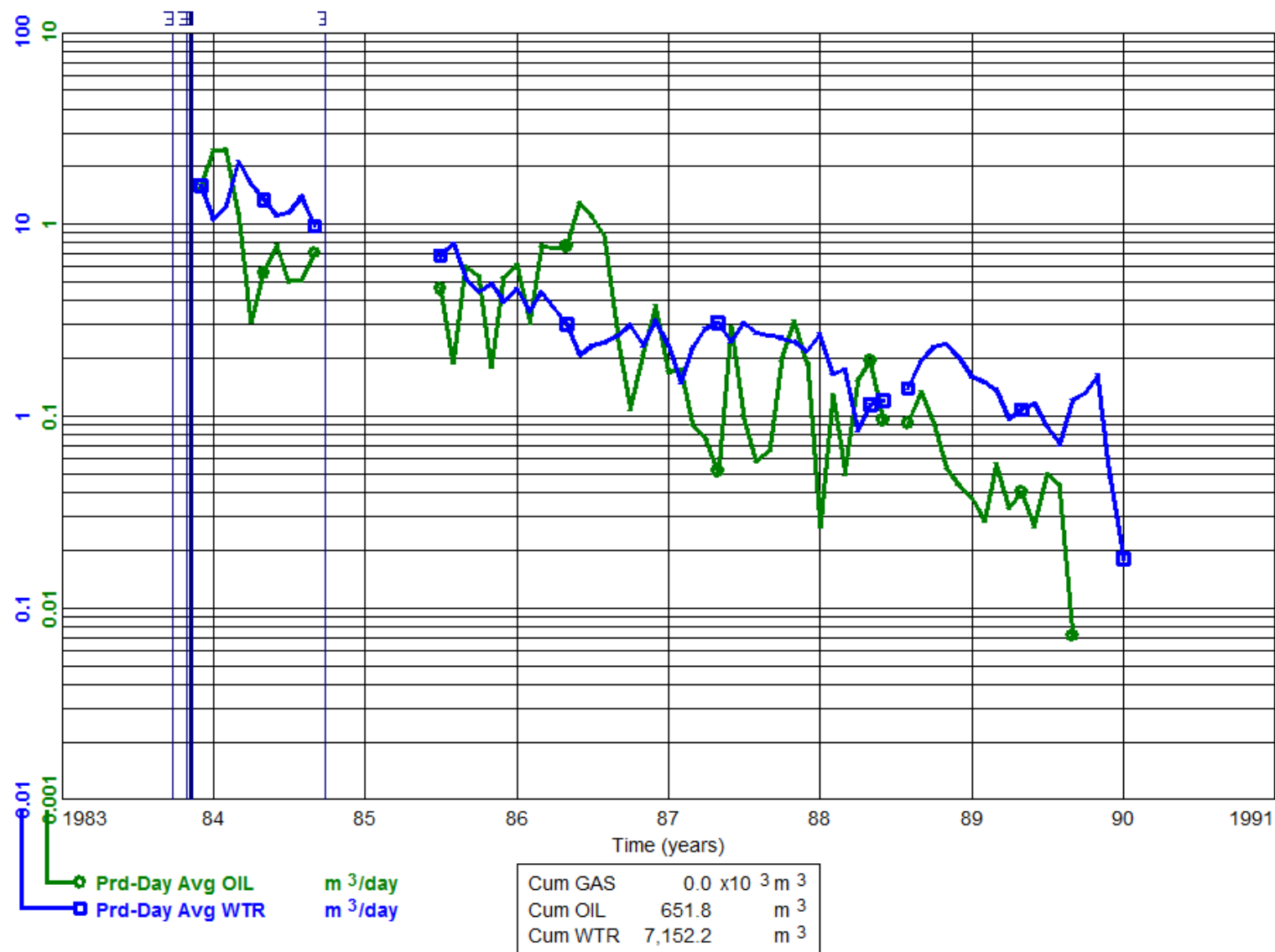
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-12
 To: 1990-01

INDIVIDUAL PRODUCTION
 Omega Chevron Waskada
 102/10-34-001-26W1/00

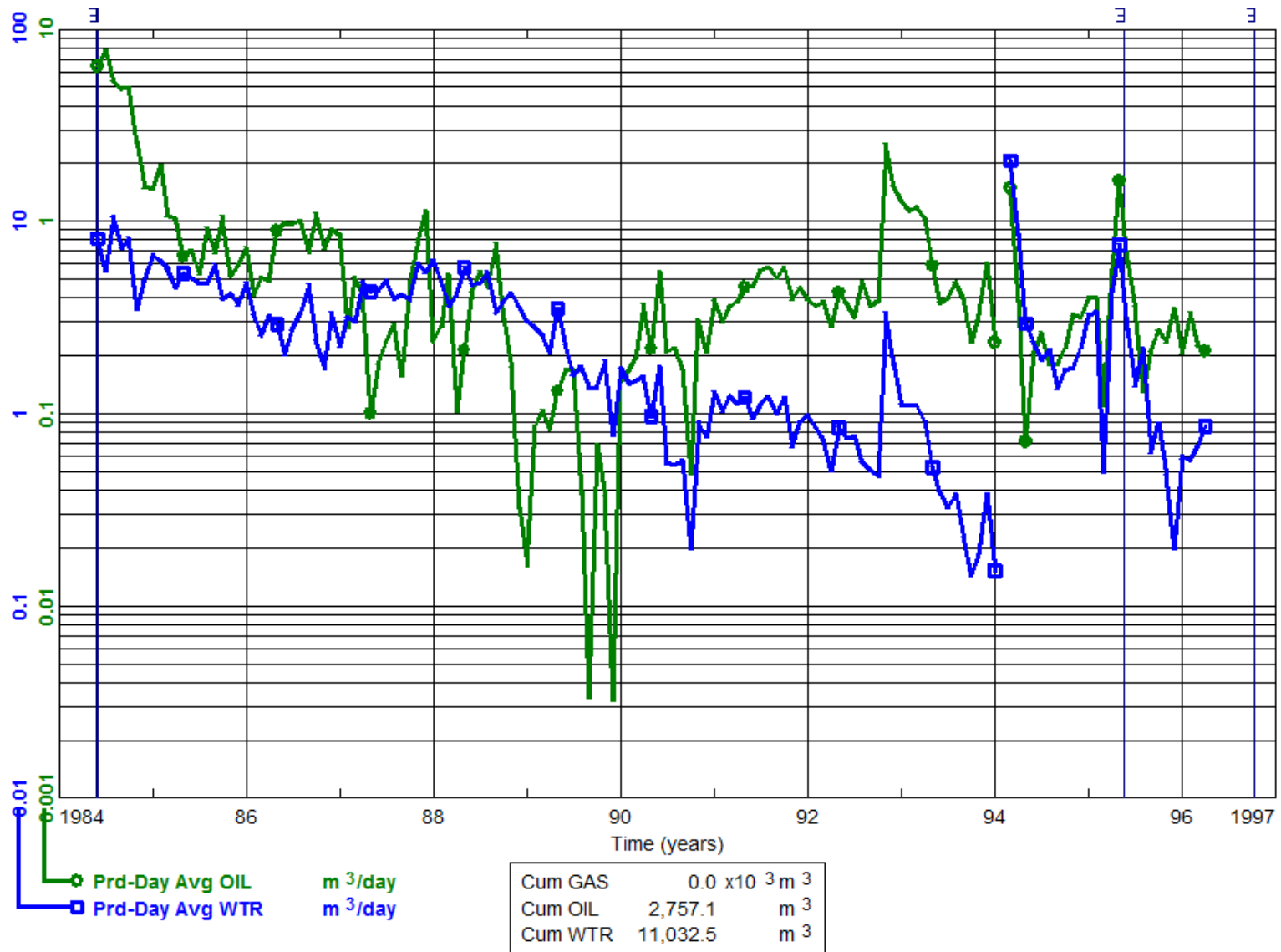
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-06
 To: 1996-04

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/12-34-001-26W1/02

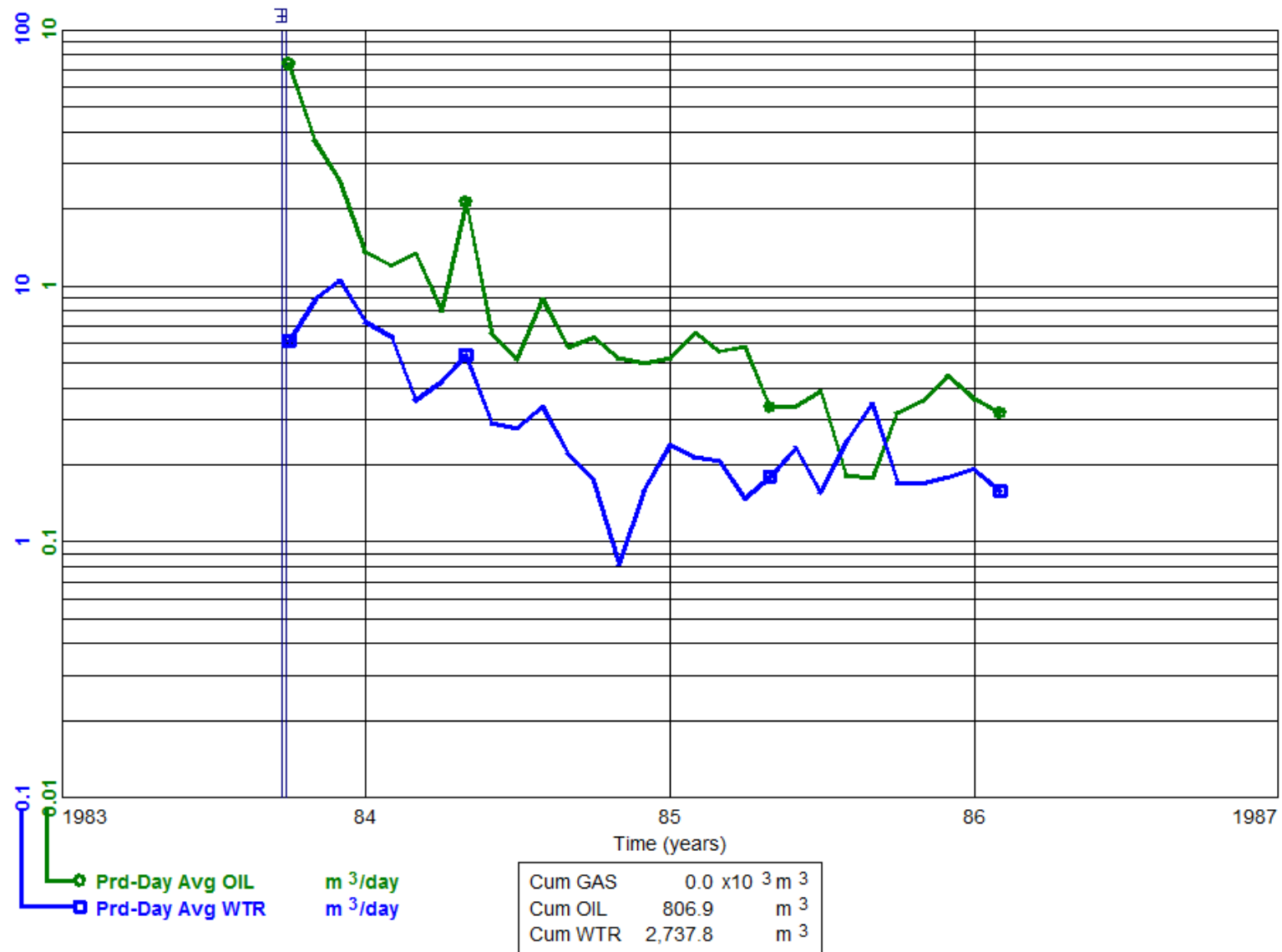
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-10
 To: 1986-02

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/13-34-001-26W1/00

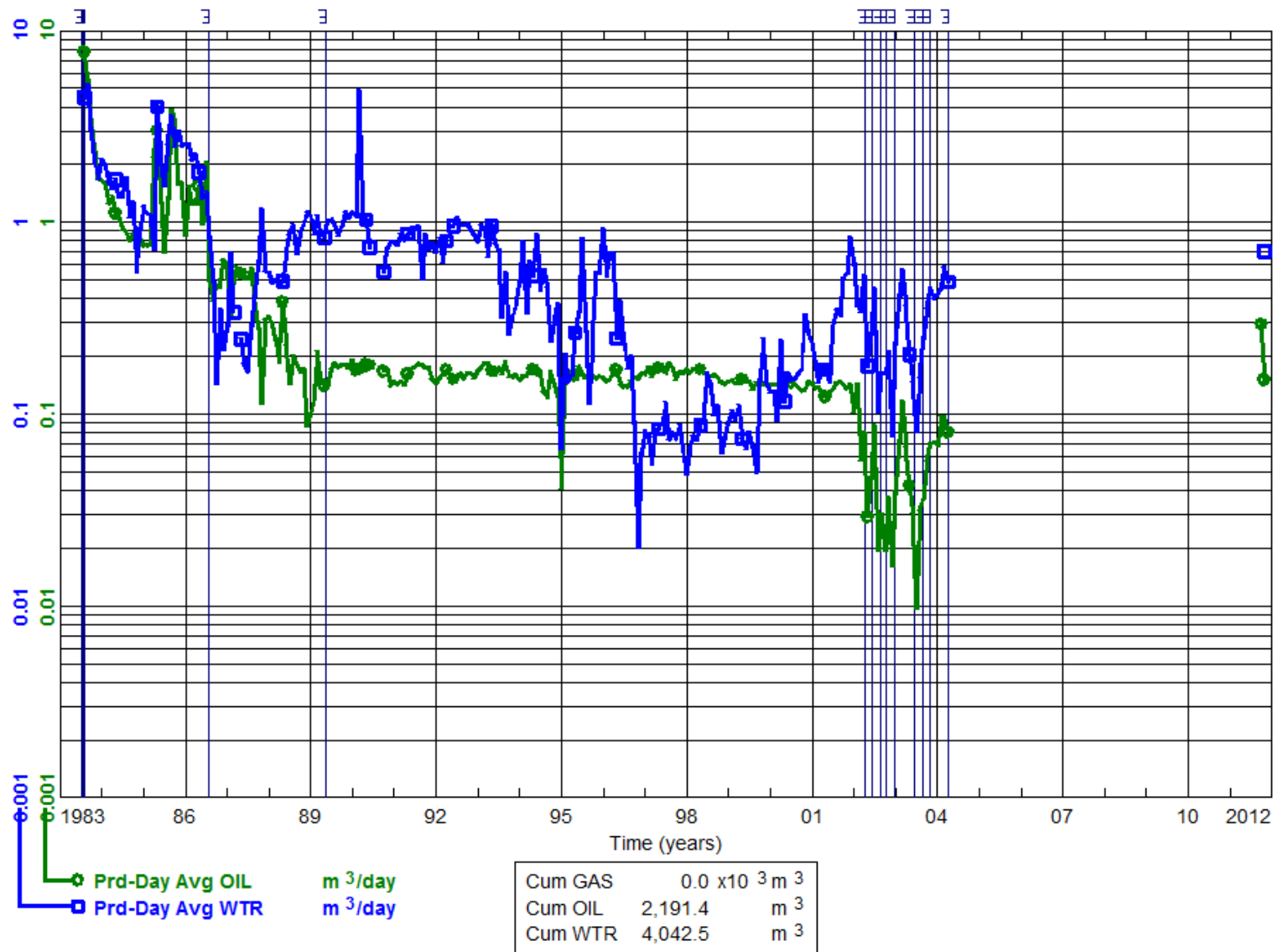
Status: Water Inj Well
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
From: 1983-08
To: 2011-11

INDIVIDUAL PRODUCTION
Waskada Unit No. 5 COM
100/14-34-001-26W1/02

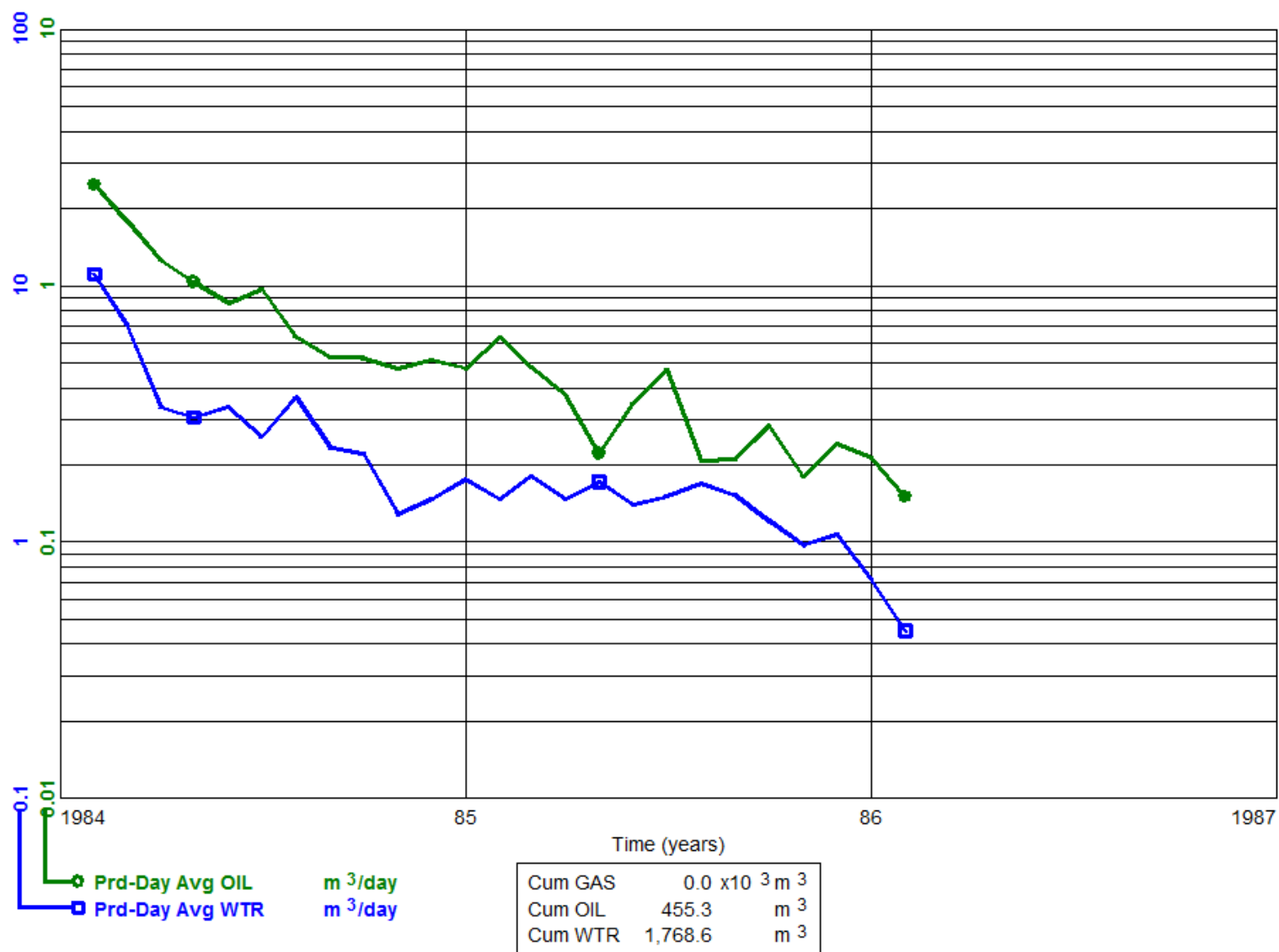
Status: Comingled
Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-02
 To: 1986-02

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/15-34-001-26W1/00

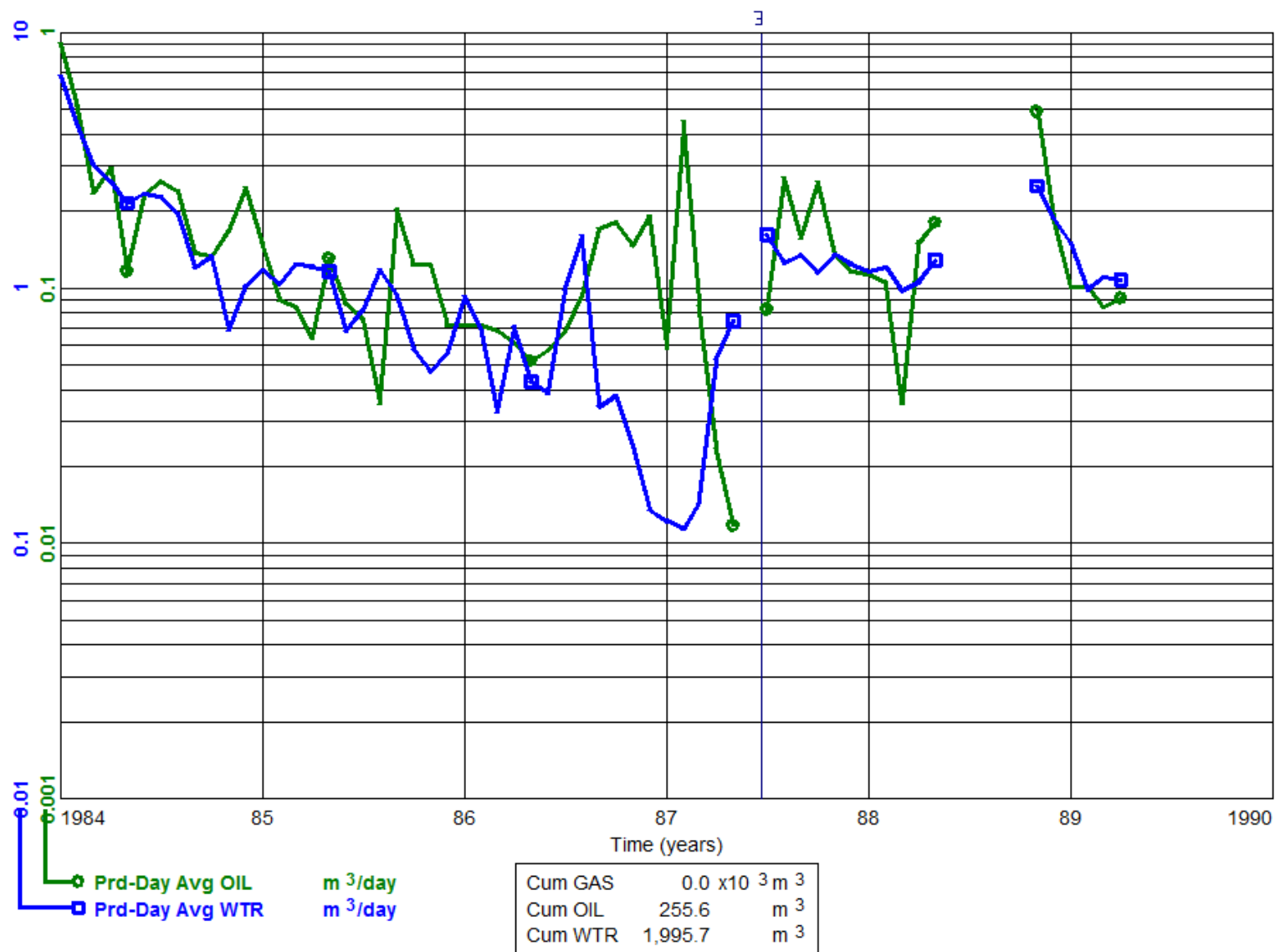
Status: WIW - Suspended
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-01
 To: 1989-04

INDIVIDUAL PRODUCTION
 Omega Chevron Waskada
 100/16-34-001-26W1/00

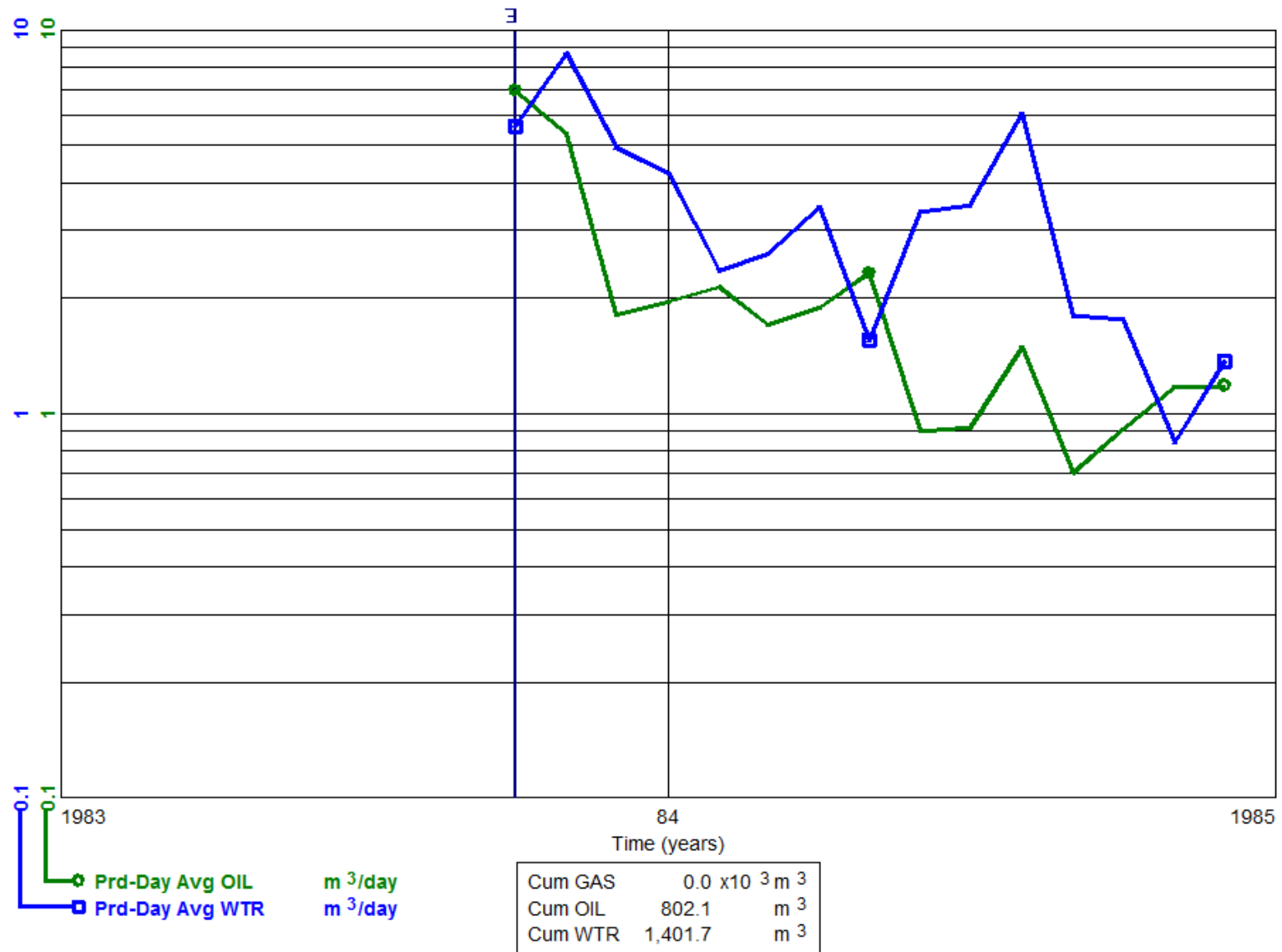
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-10
 To: 1984-12

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/13-35-001-26W1/00

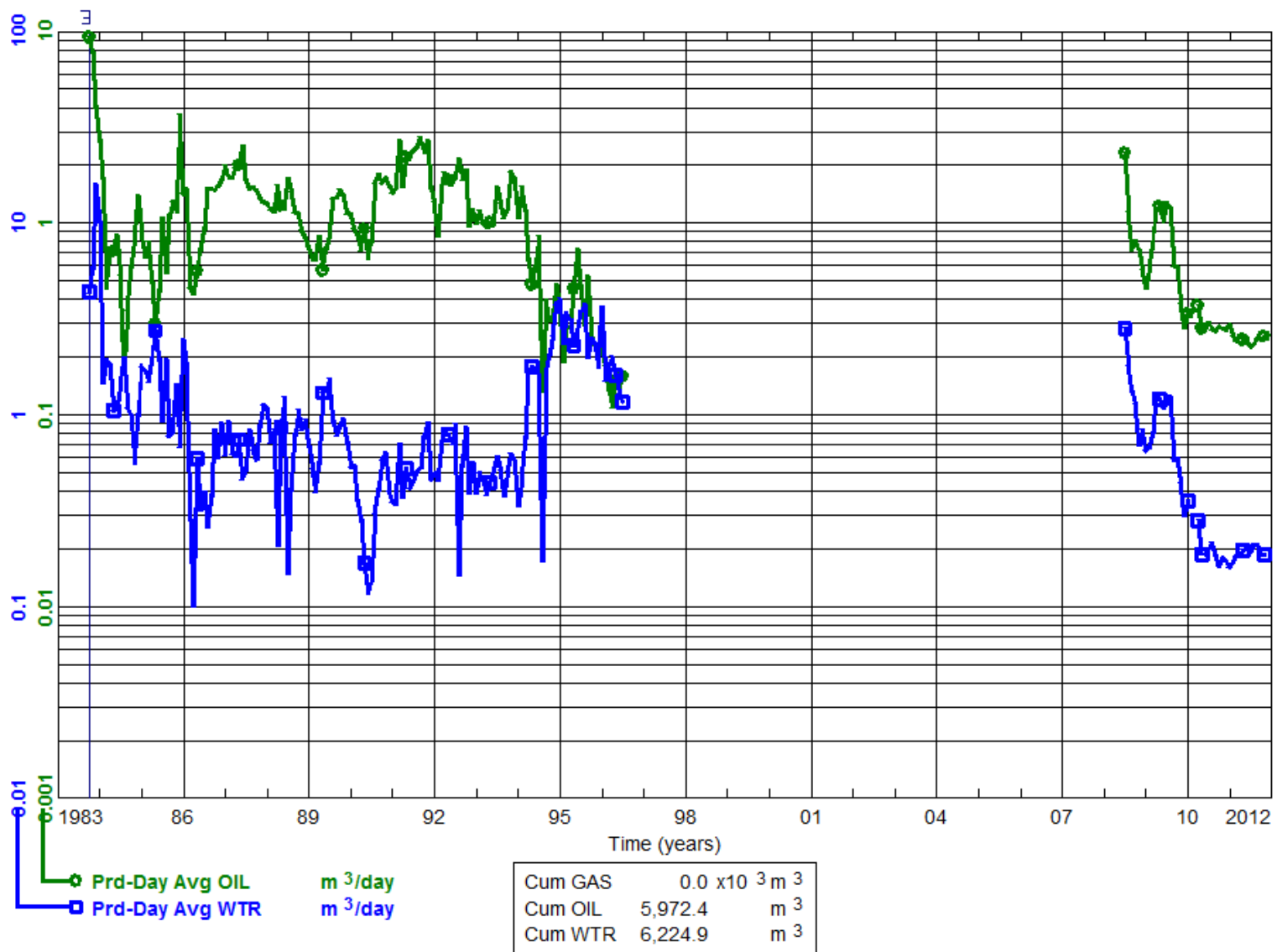
Status: Water Inj Well
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-10
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/14-35-001-26W1/02

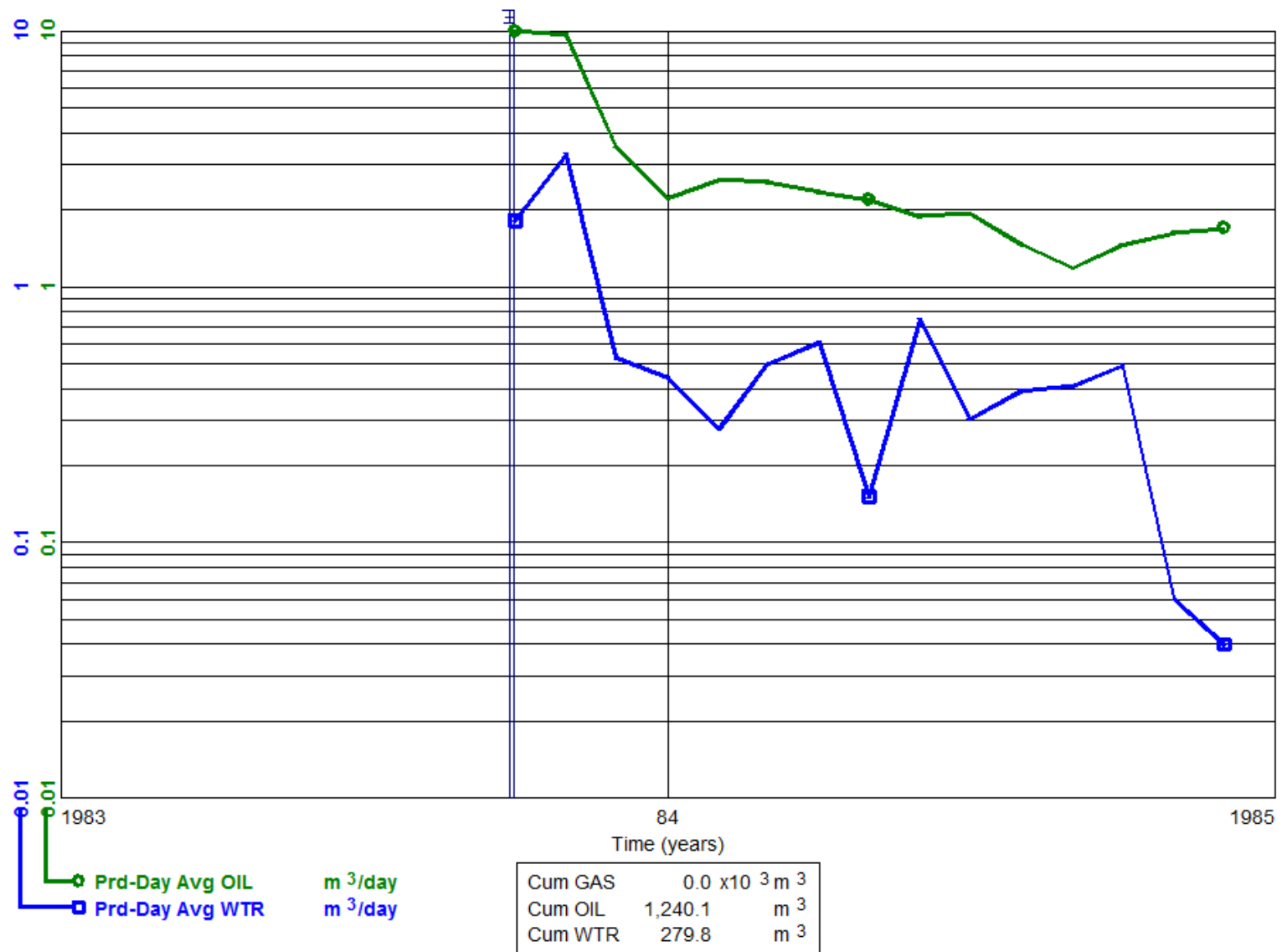
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-10
 To: 1984-12

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/15-35-001-26W1/00

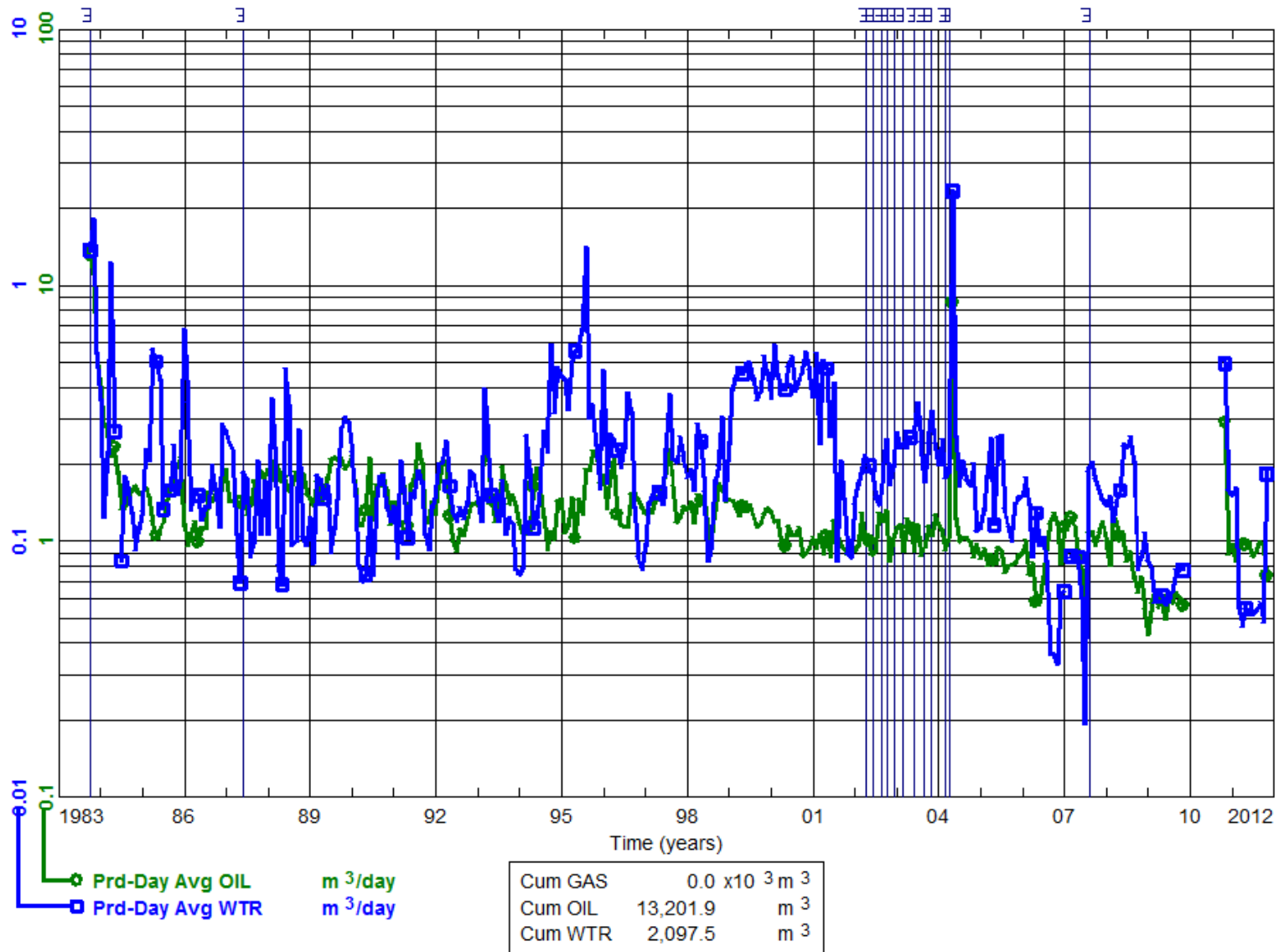
Status: Water Inj Well
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
From: 1983-10
To: 2011-11

INDIVIDUAL PRODUCTION
Waskada Unit No. 5
100/16-35-001-26W1/00

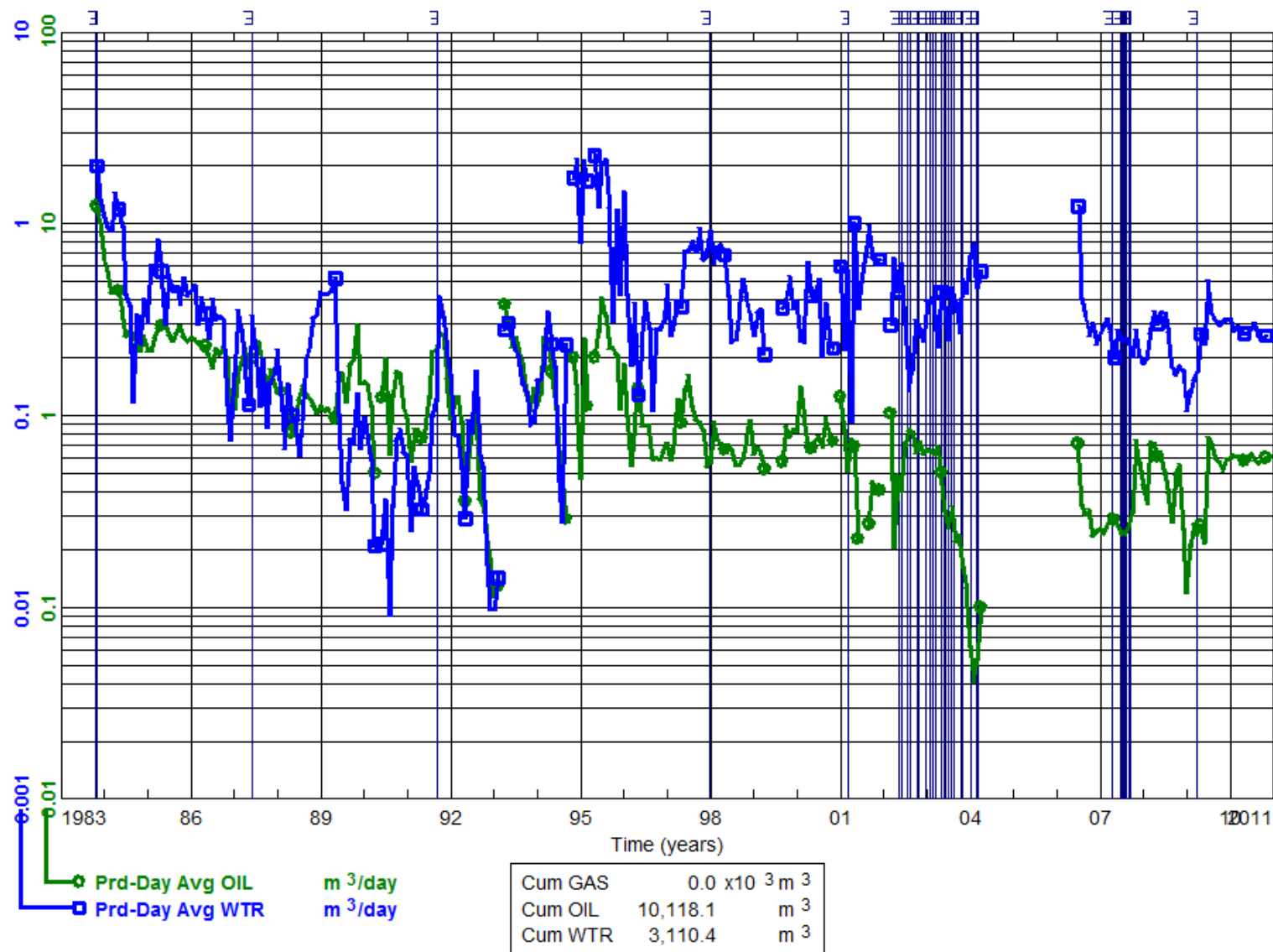
Status: Capable Of Oil Prod
Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-11
 To: 2010-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/01-02-002-26W1/00

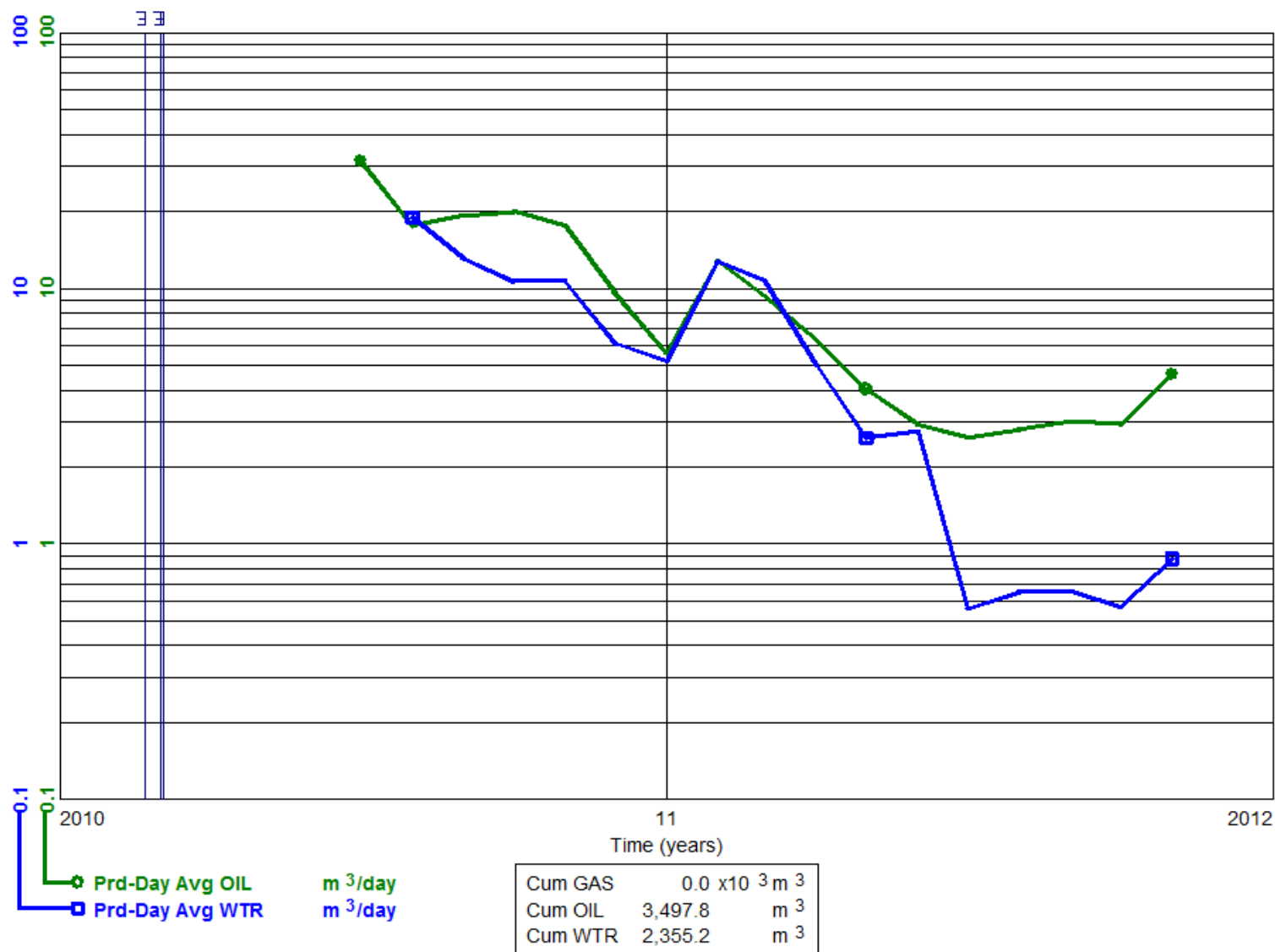
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2010-07
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 102/01-02-002-26W1/00

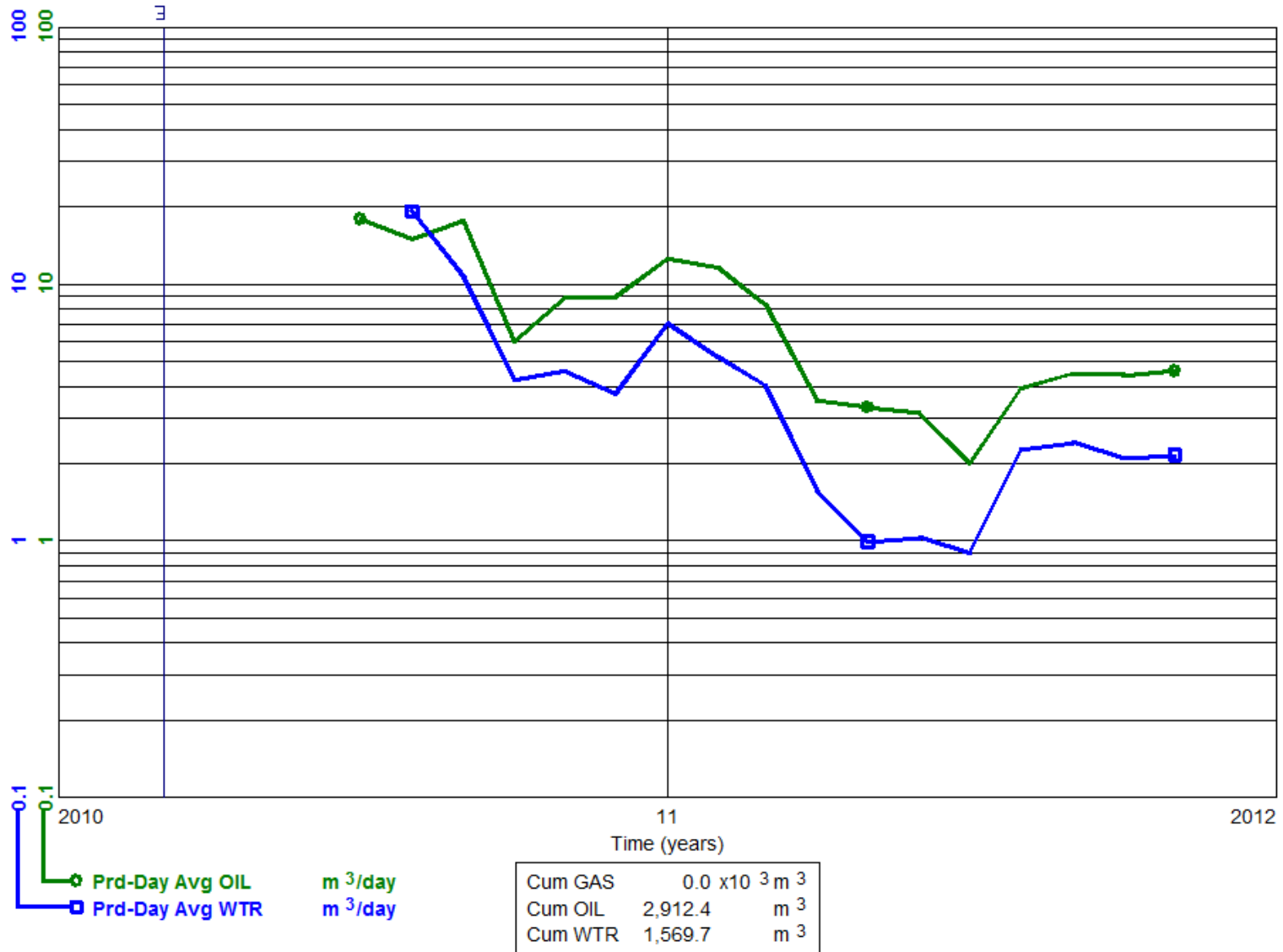
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2010-07
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 103/01-02-002-26W1/00

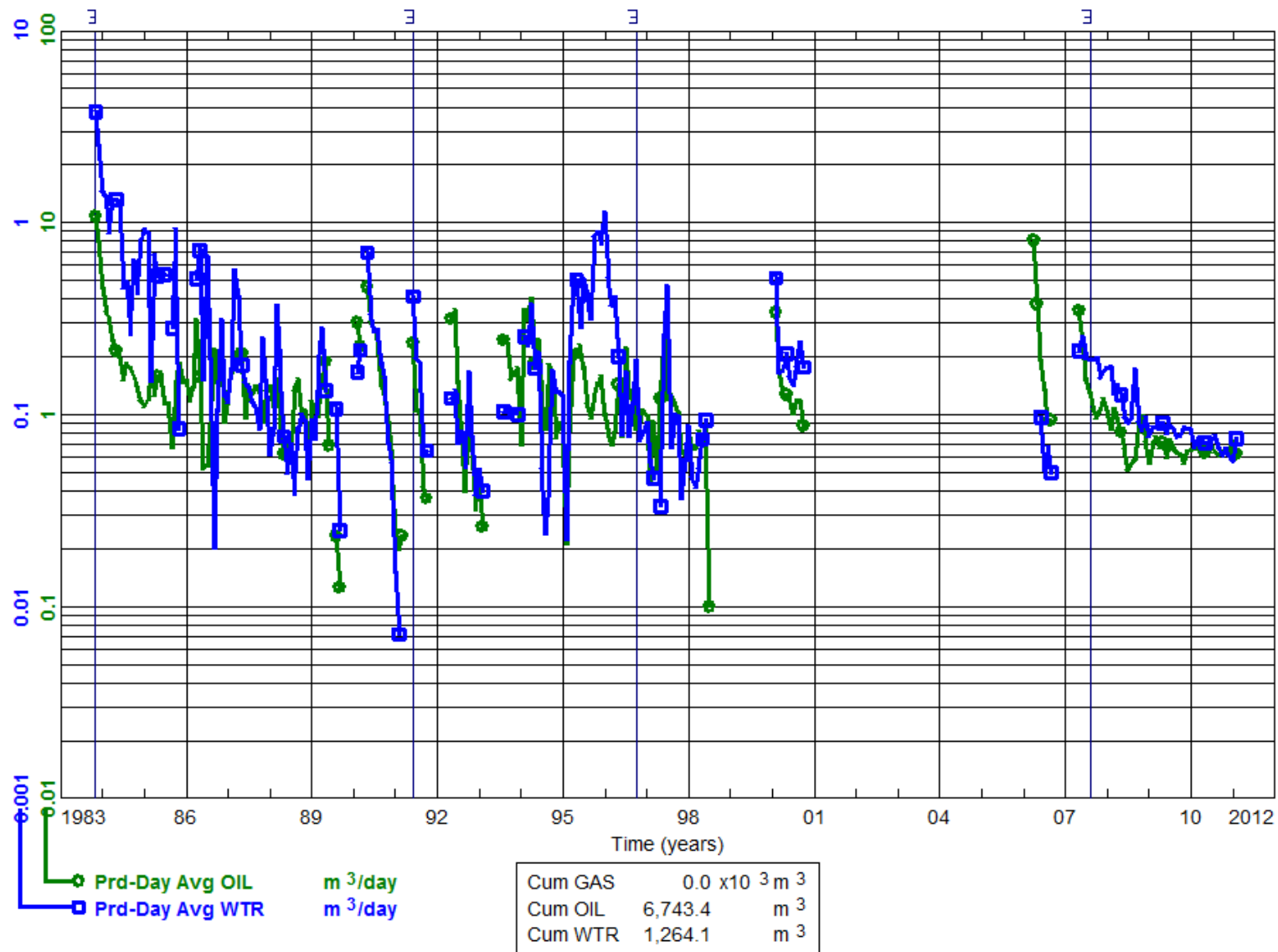
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-11
 To: 2011-02

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/02-02-002-26W1/00

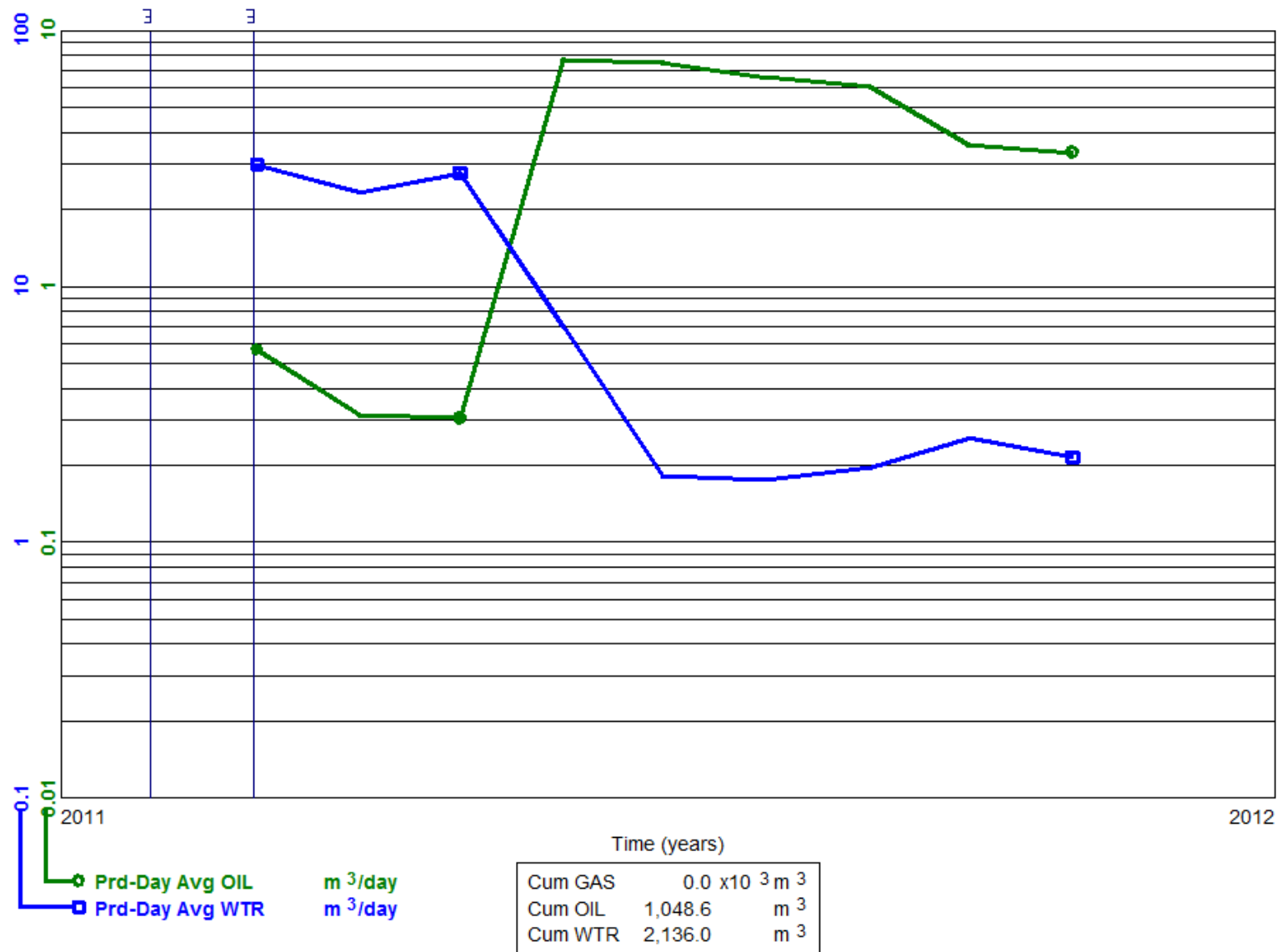
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2011-03
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 102/02-02-002-26W1/00

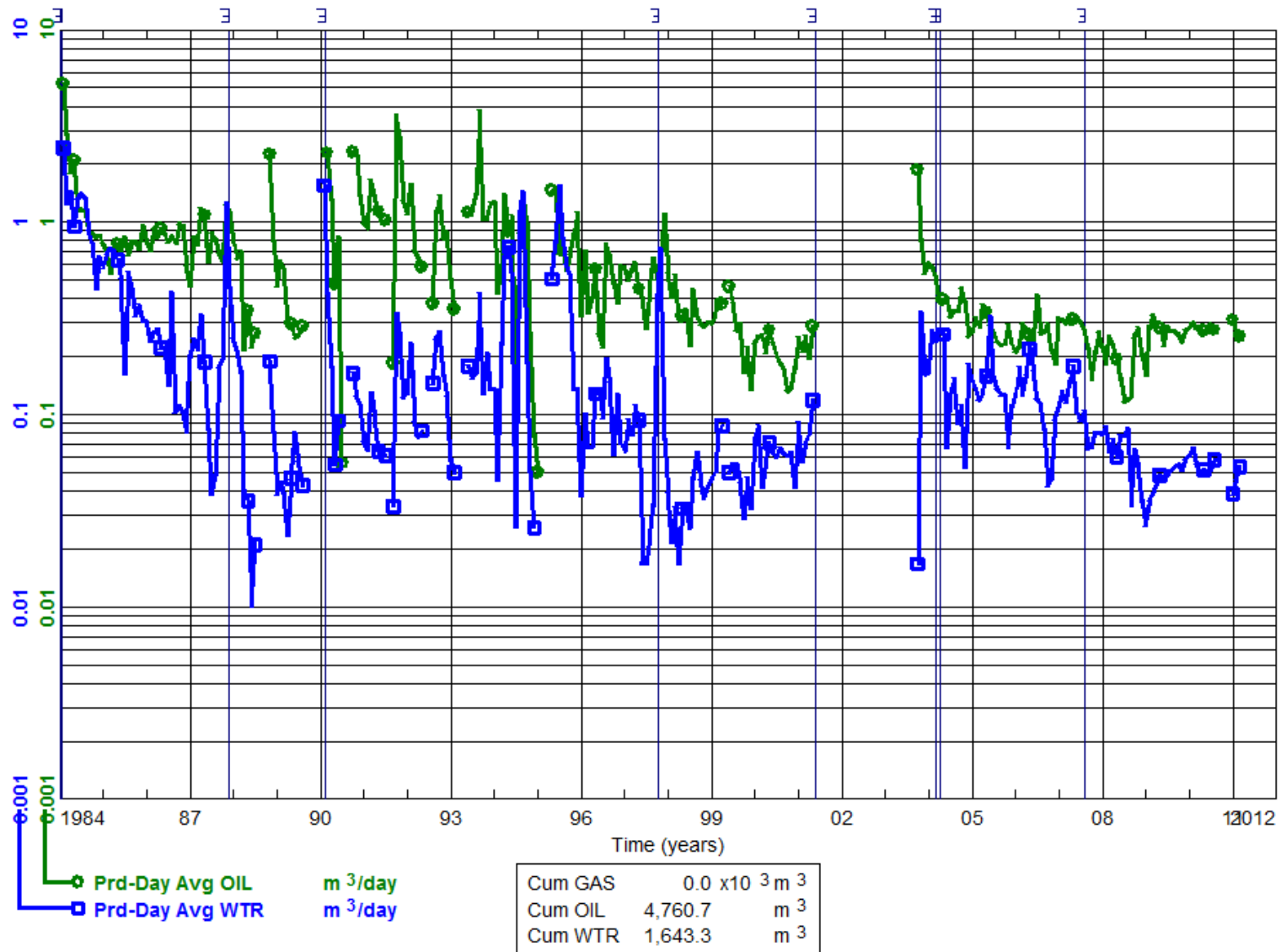
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
From: 1984-02
To: 2011-03

INDIVIDUAL PRODUCTION
Waskada Unit No. 5
100/03-02-002-26W1/00

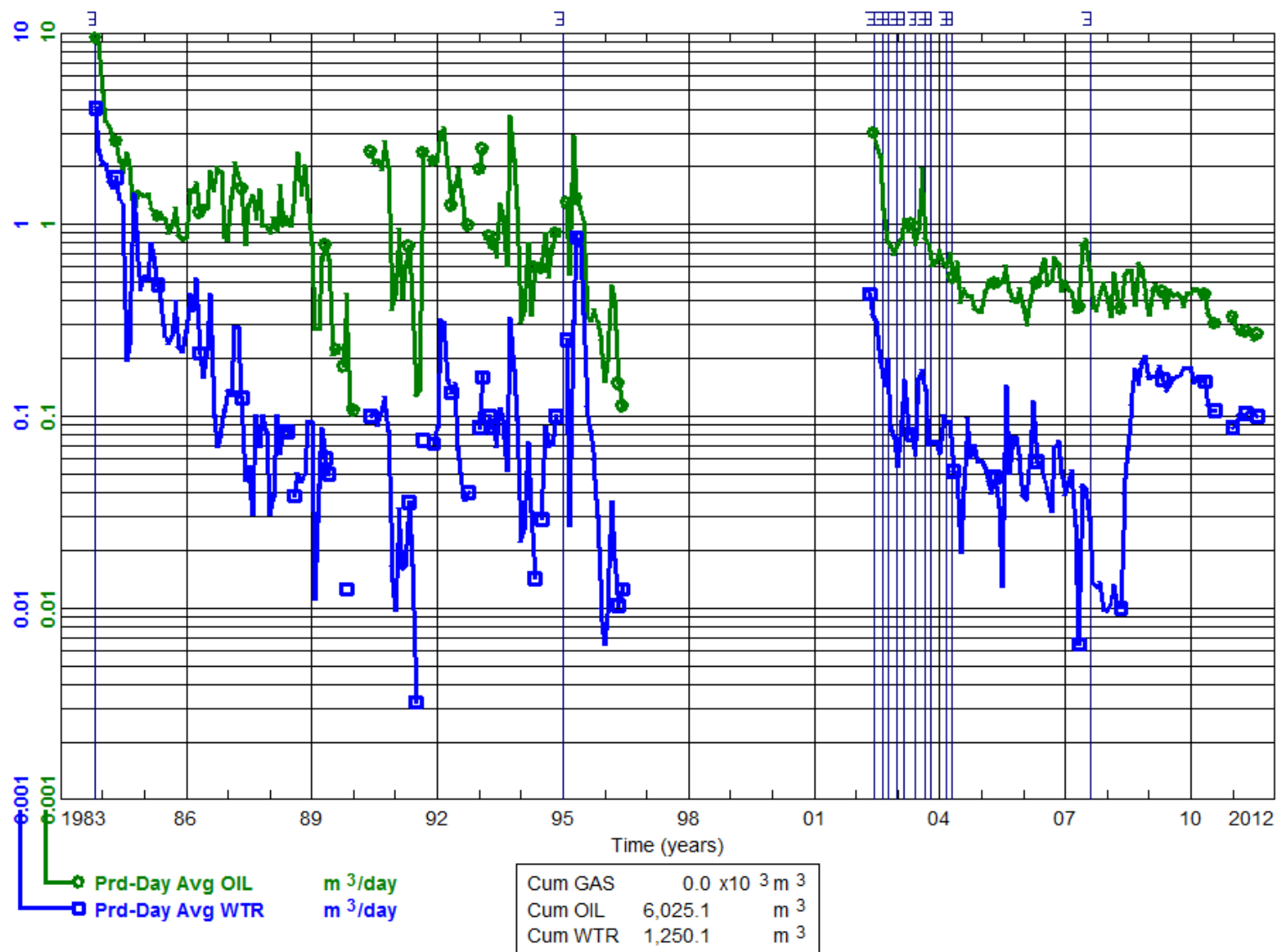
Status: Capable Of Oil Prod
Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-11
 To: 2011-08

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/04-02-002-26W1/00

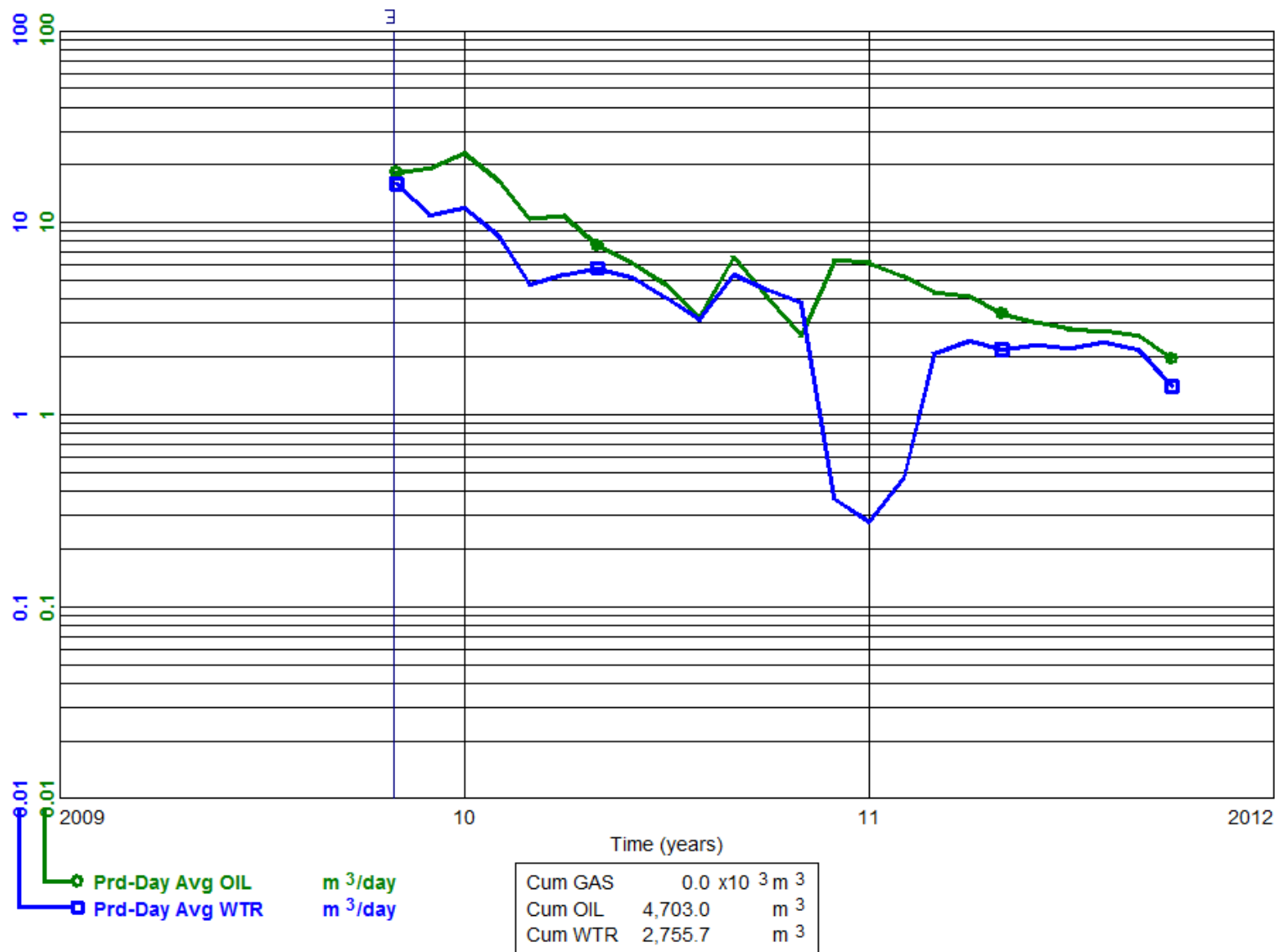
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2009-11
 To: 2011-10

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 102/04-02-002-26W1/00

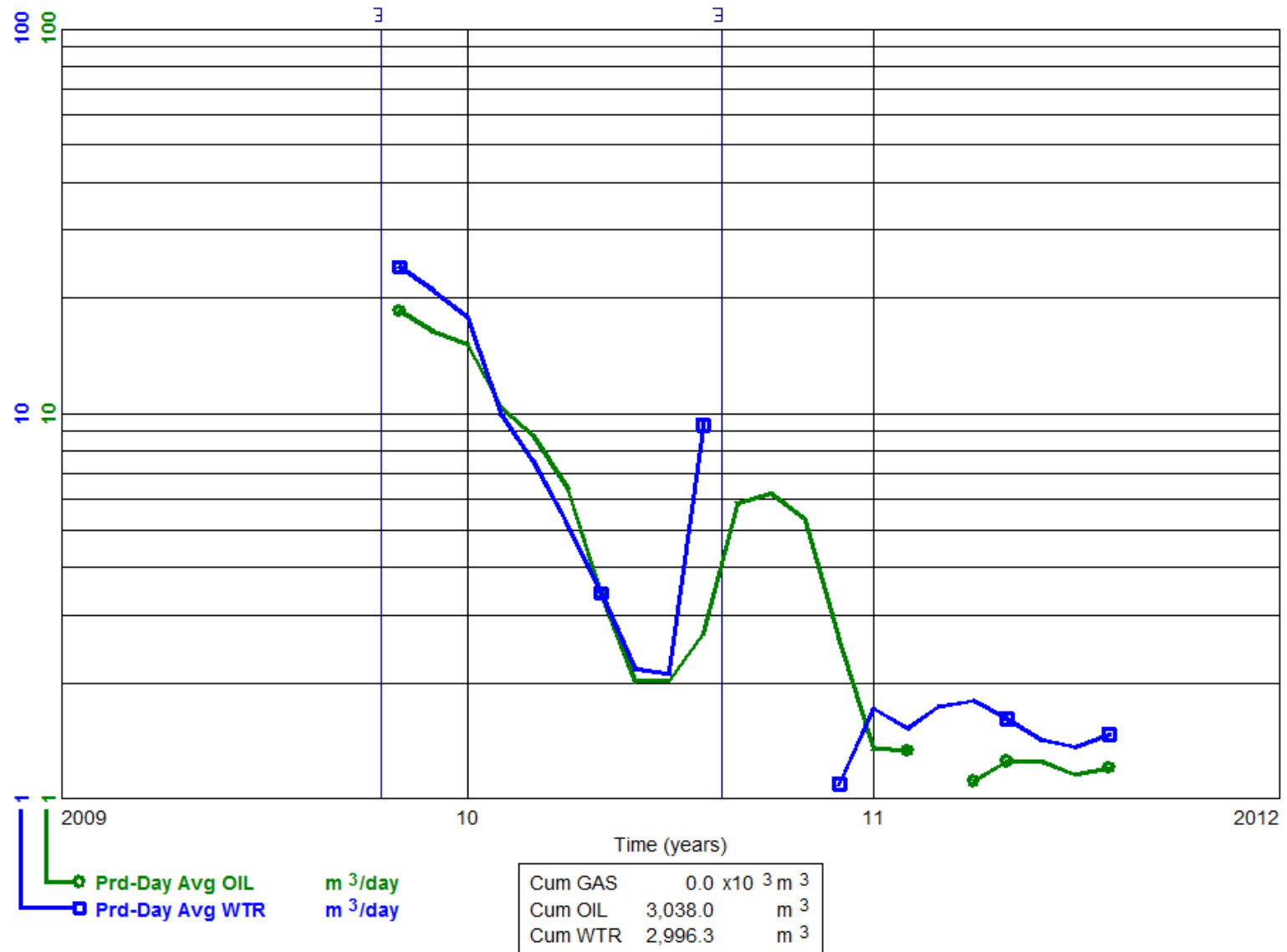
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2009-11
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 103/04-02-002-26W1/00

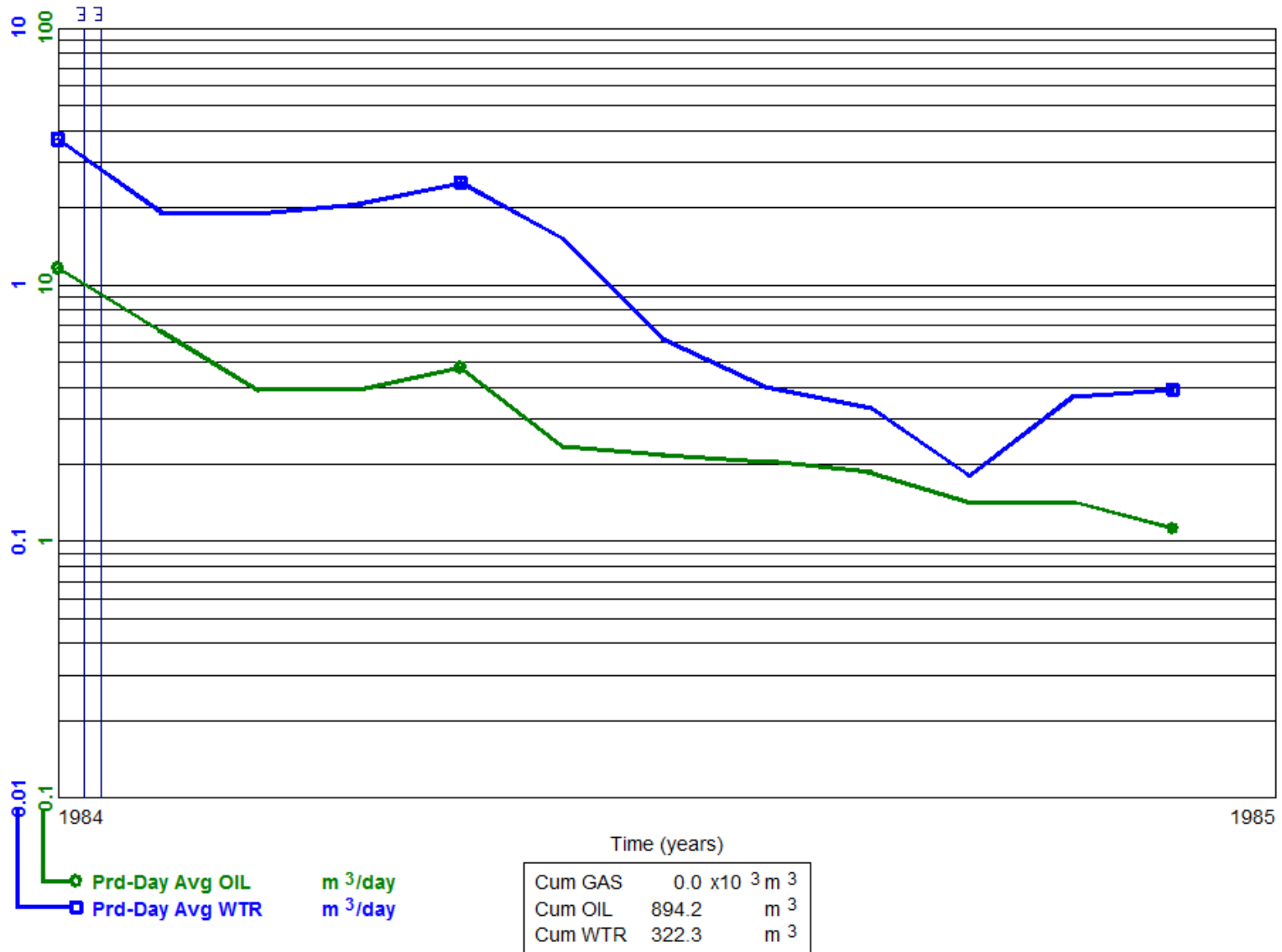
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



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

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/05-02-002-26W1/00

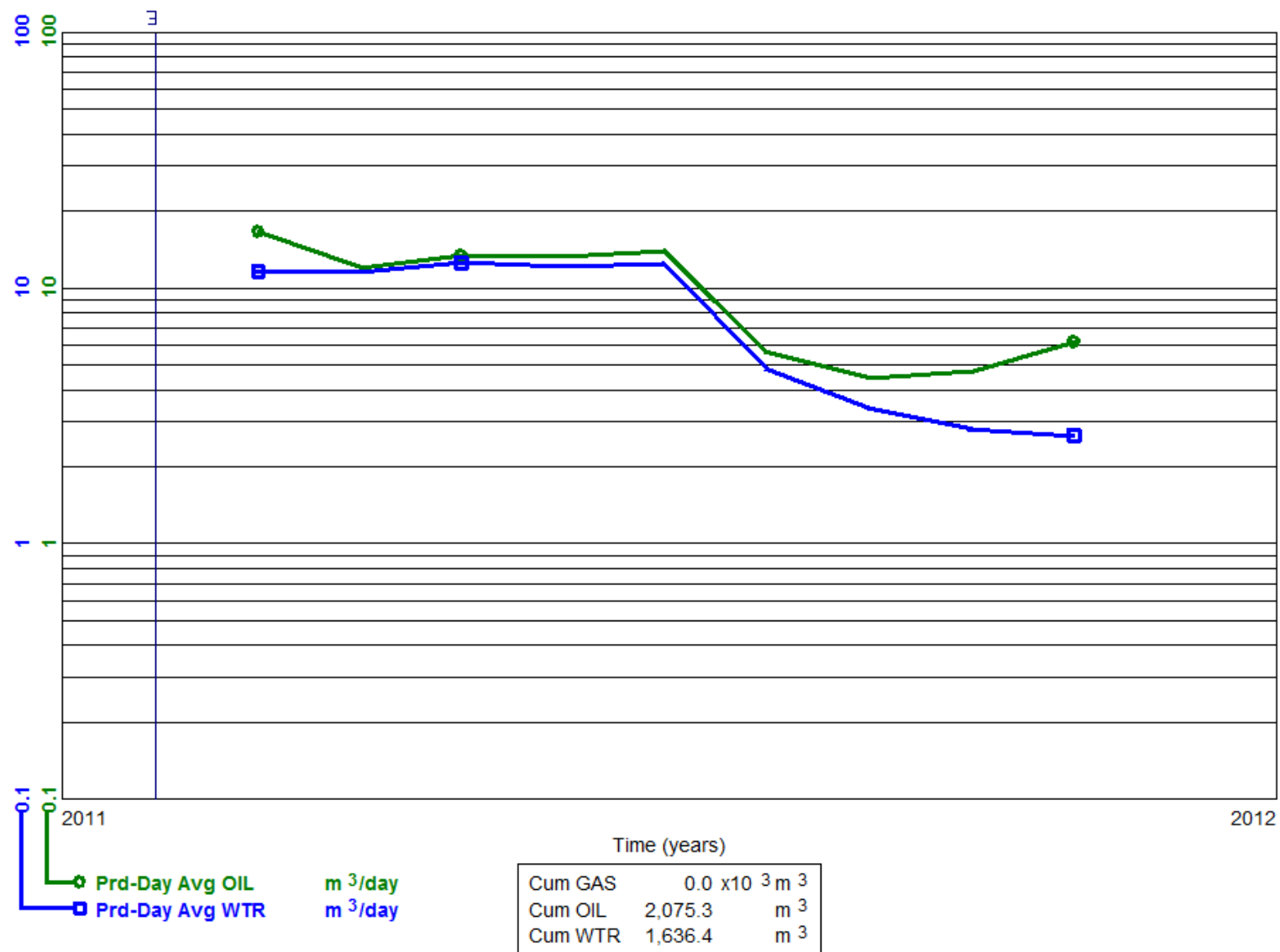
Status: Water Inj Well
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2011-03
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 102/05-02-002-26W1/00

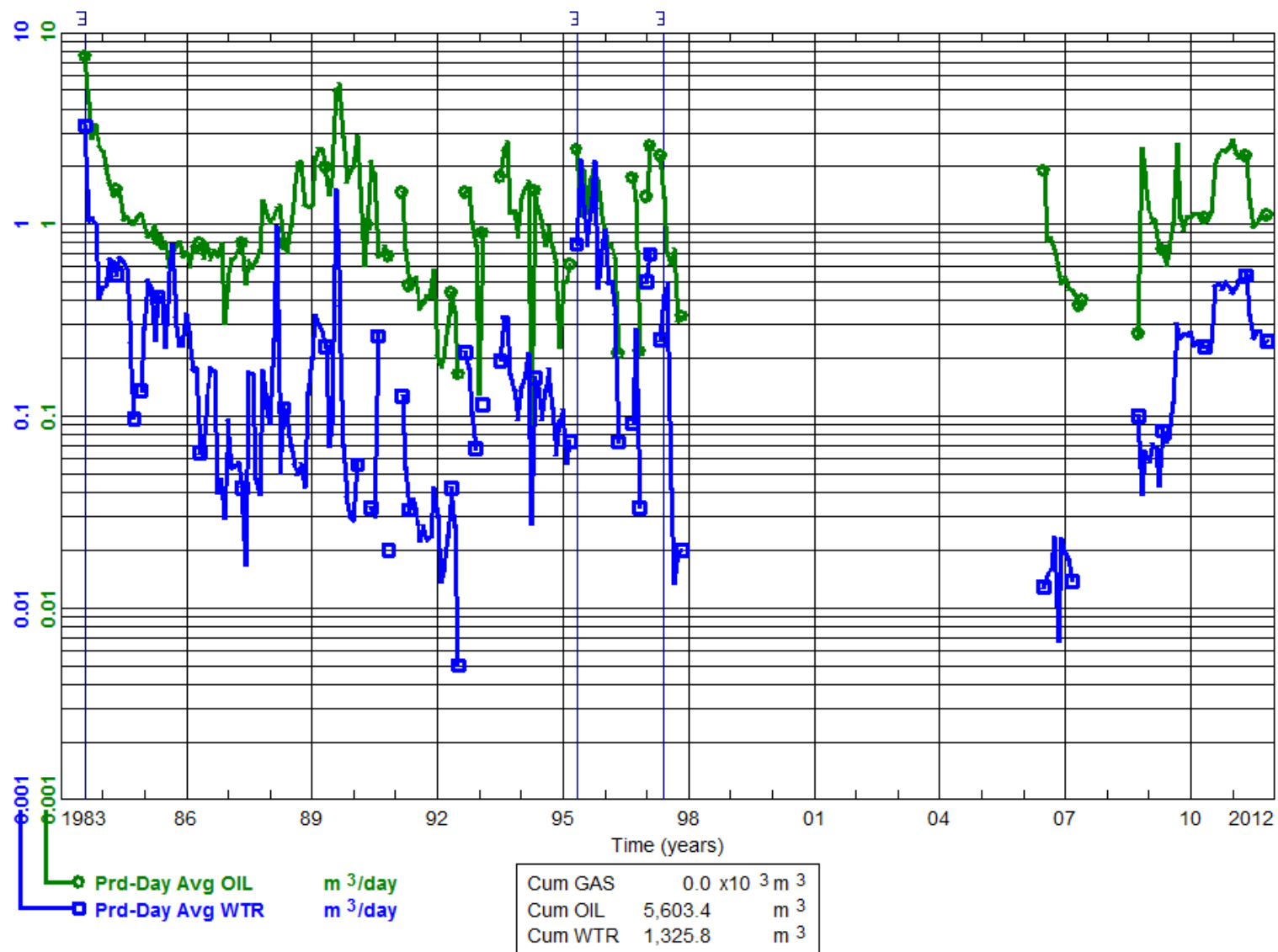
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
From: 1983-08
To: 2011-11

INDIVIDUAL PRODUCTION
Waskada Unit No. 5
100/06-02-002-26W1/00

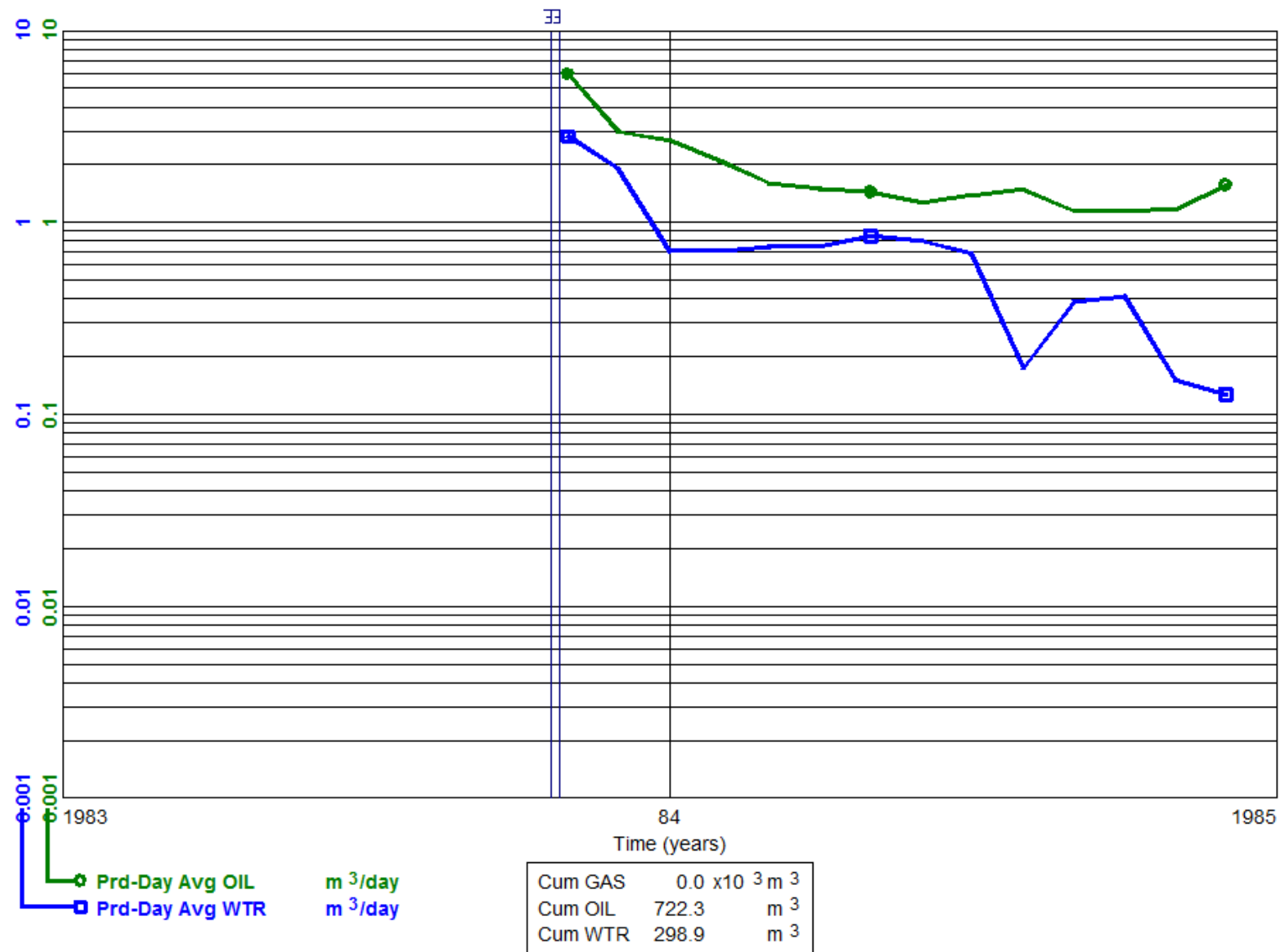
Status: Capable Of Oil Prod
Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-11
 To: 1984-12

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/07-02-002-26W1/00

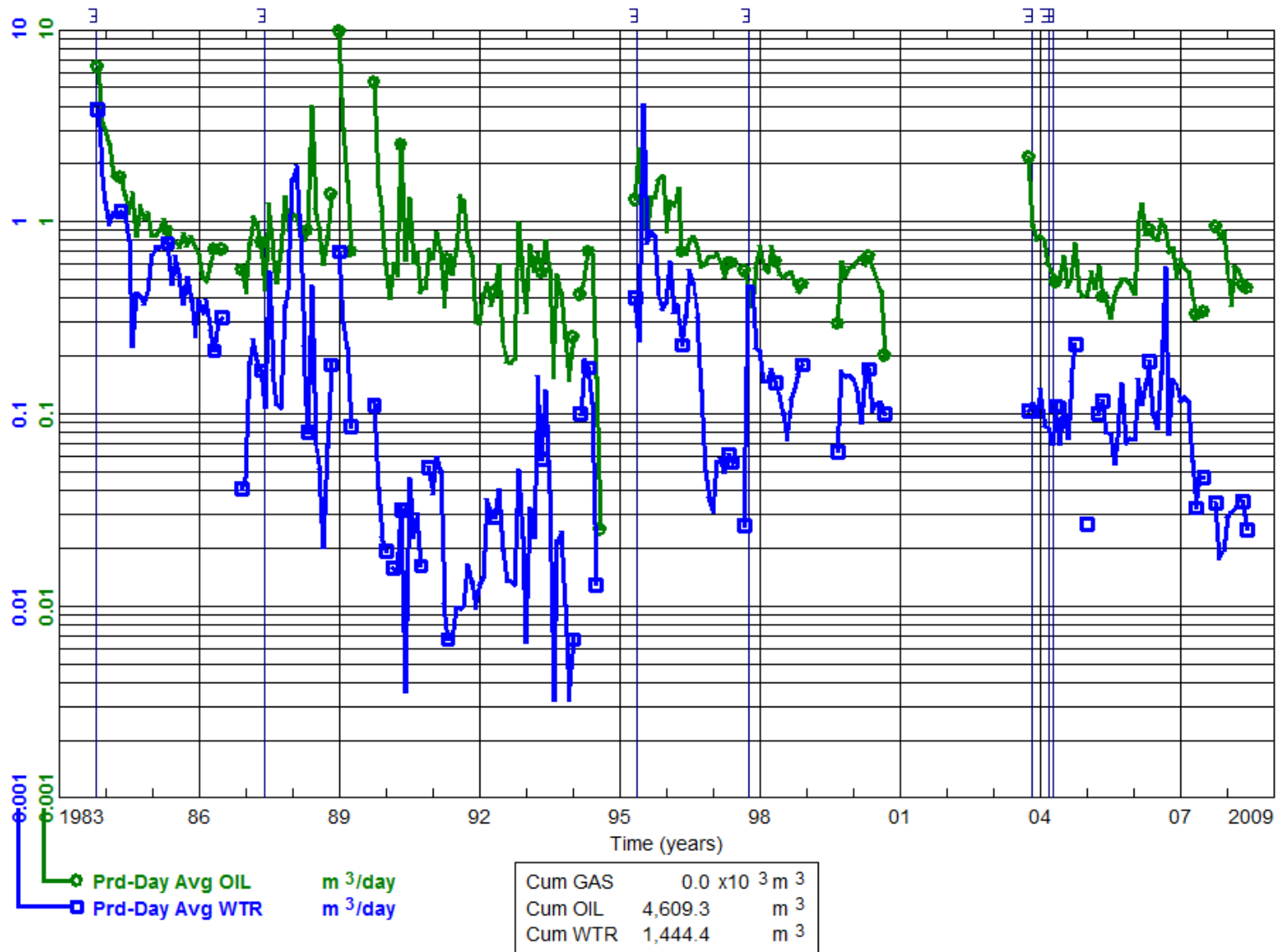
Status: Water Inj Well
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-11
 To: 2008-06

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/08-02-002-26W1/00

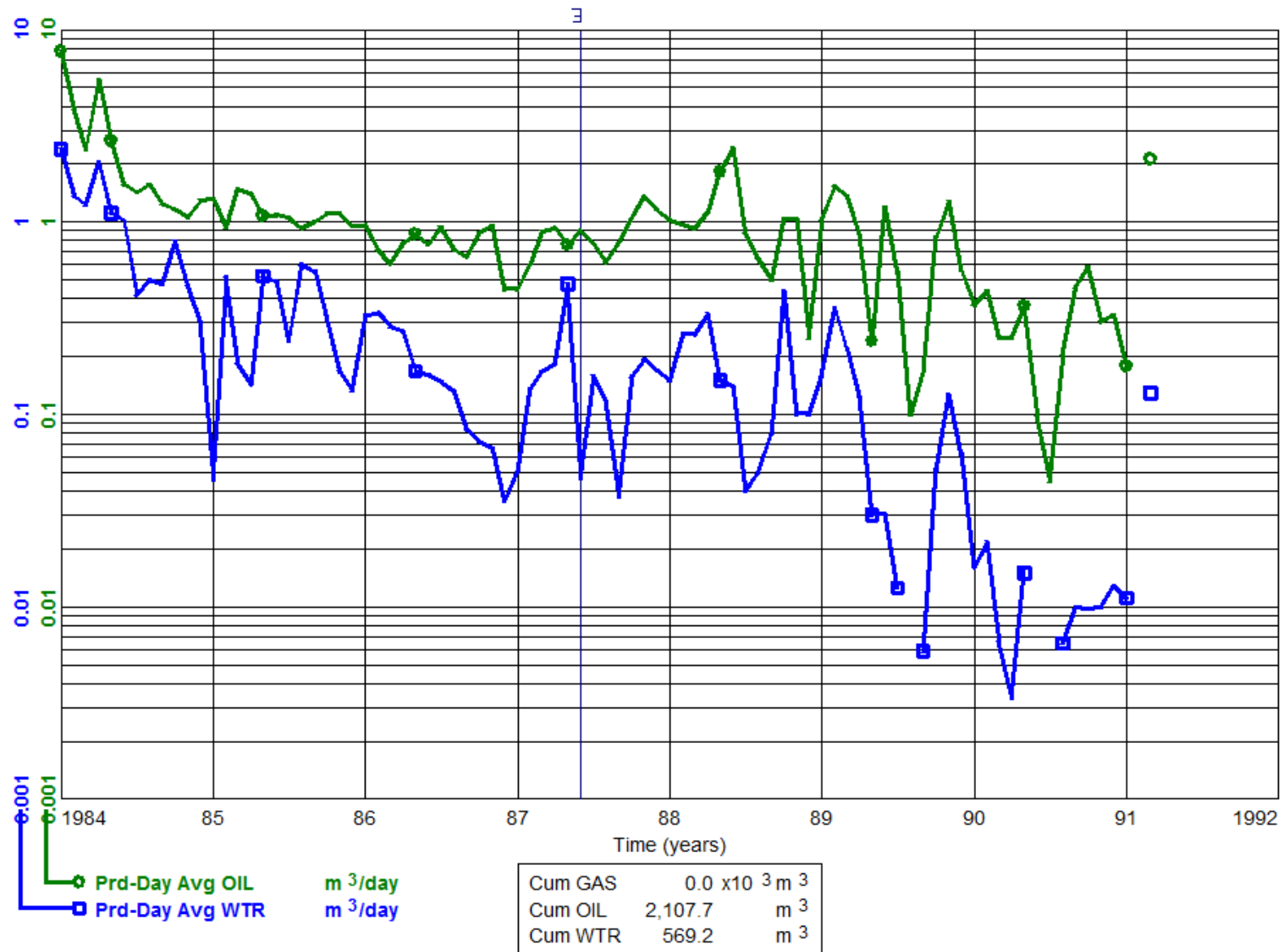
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-01
 To: 1991-03

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 Prov.
 100/09-02-002-26W1/00

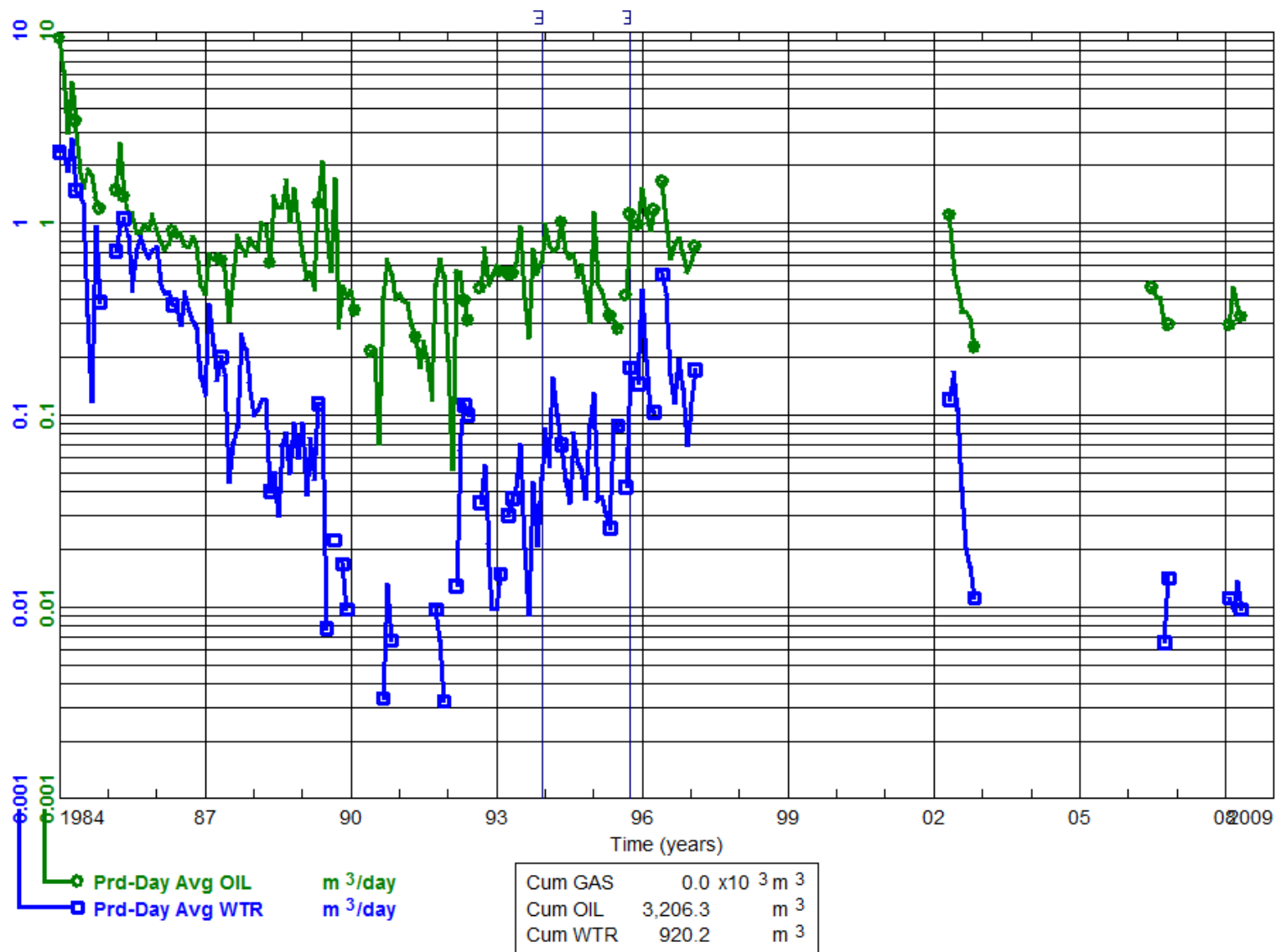
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-01
 To: 2008-05

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 Prov.
 100/10-02-002-26W1/00

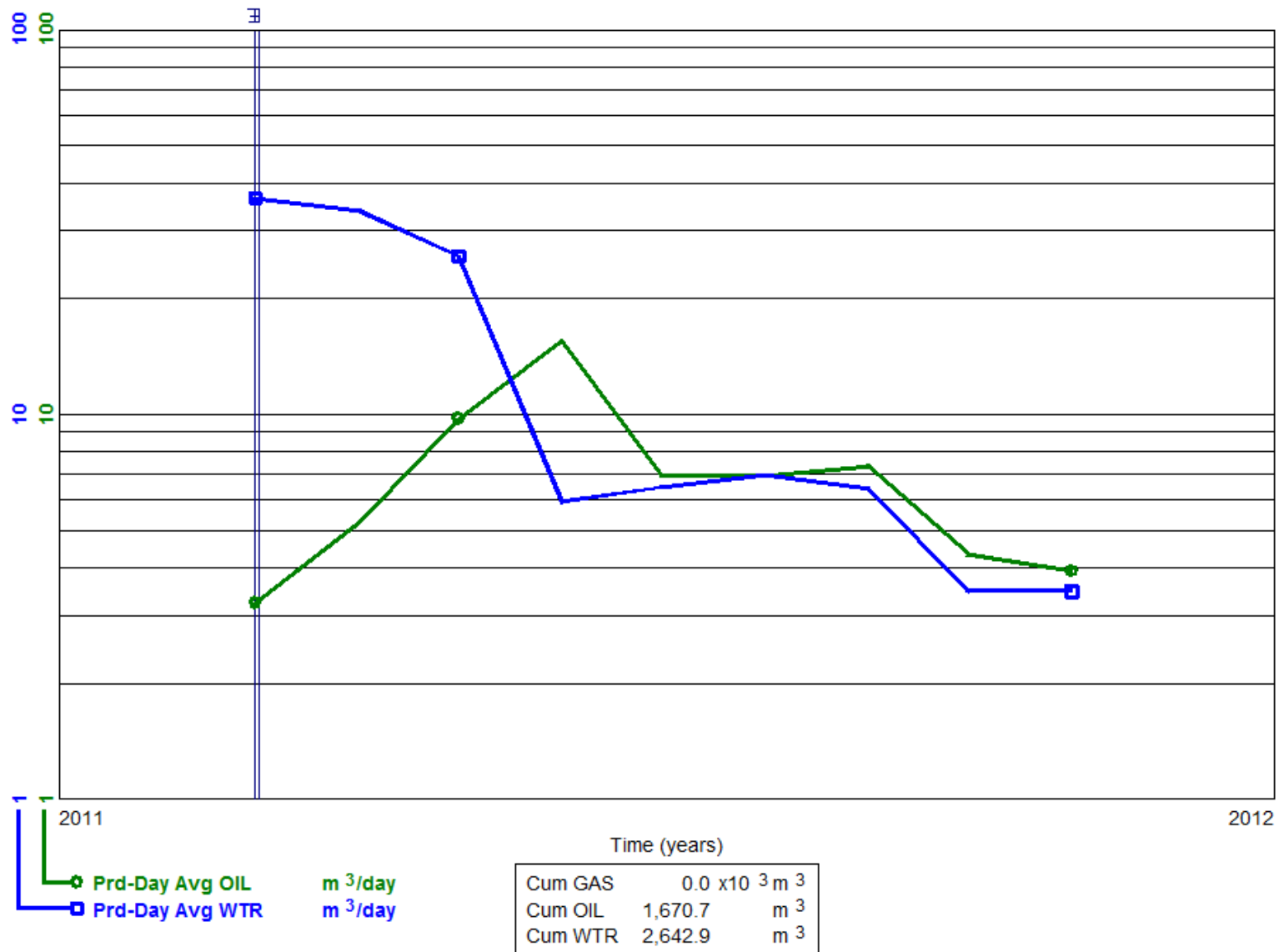
Status: COOP - Suspended
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2011-03
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 Prov. HZNTL
 102/10-02-002-26W1/00

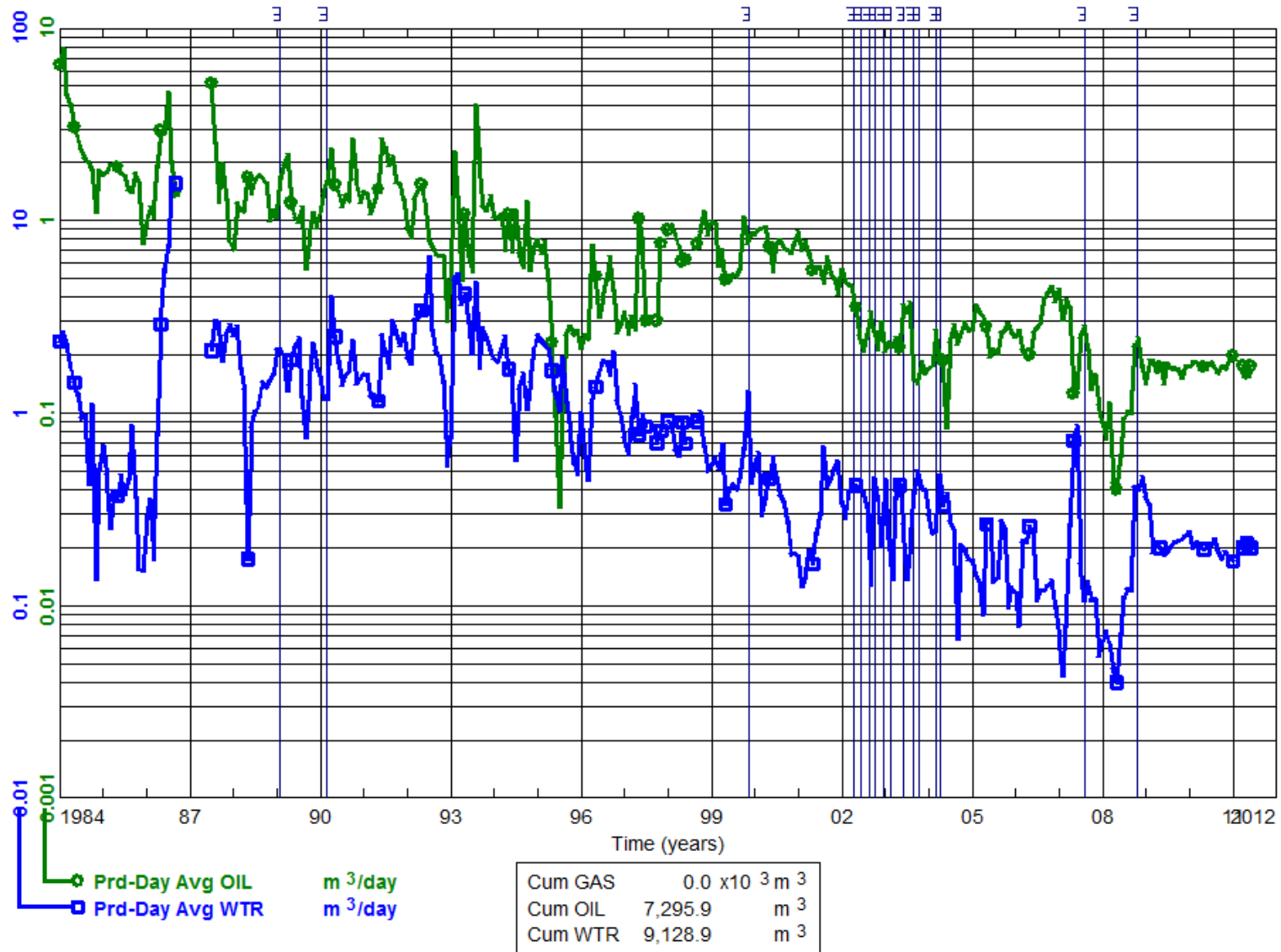
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



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

INDIVIDUAL PRODUCTION
Waskada Unit No. 5 Prov.
100/11-02-002-26W1/00

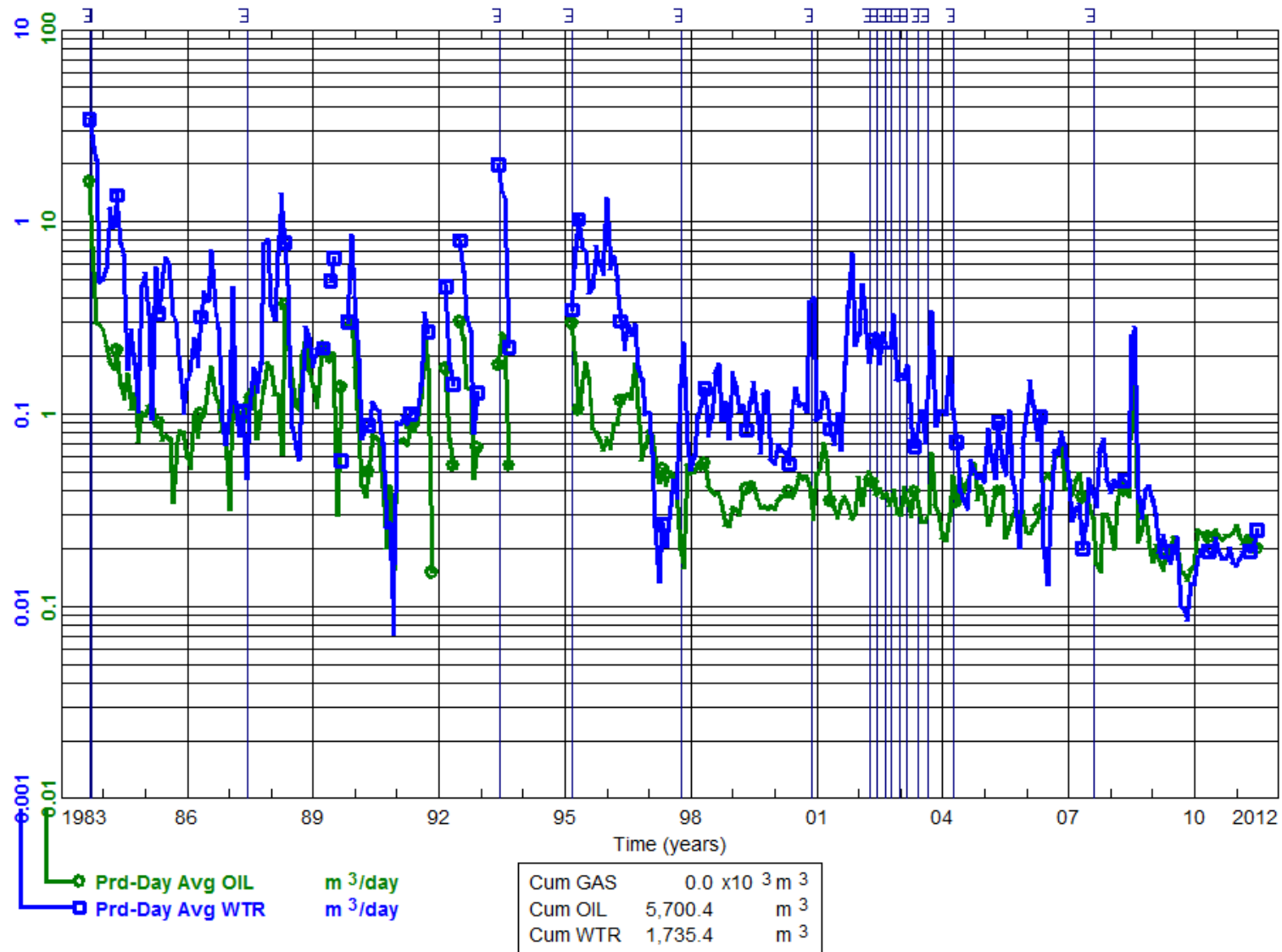
Status: Capable Of Oil Prod
Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
From: 1983-09
To: 2011-07

INDIVIDUAL PRODUCTION
Waskada Unit No. 5 Prov.
100/12-02-002-26W1/00

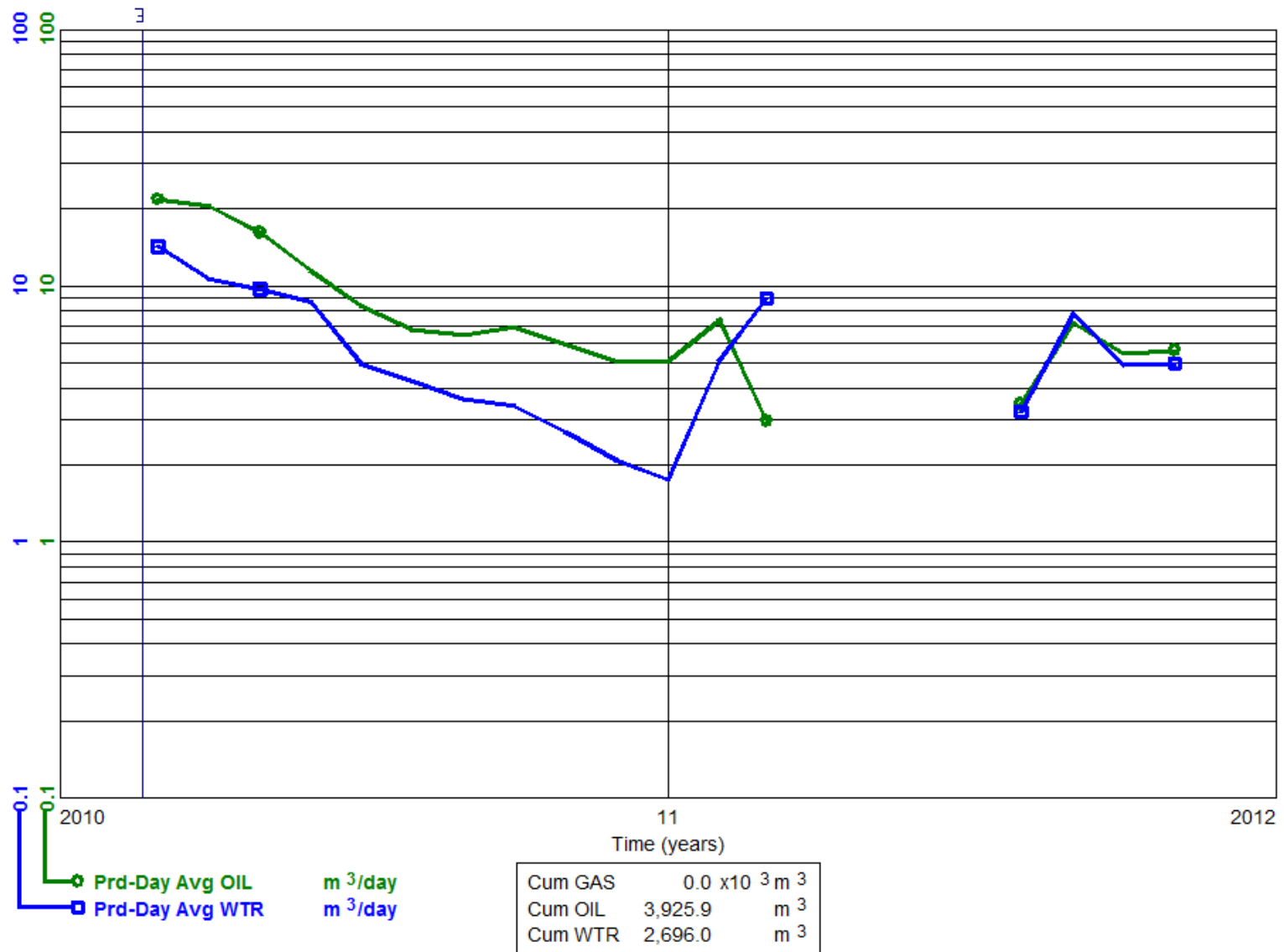
Status: Capable Of Oil Prod
Field: WASKADA (03)
Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2010-03
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 Prov. HZNTL
 102/12-02-002-26W1/00

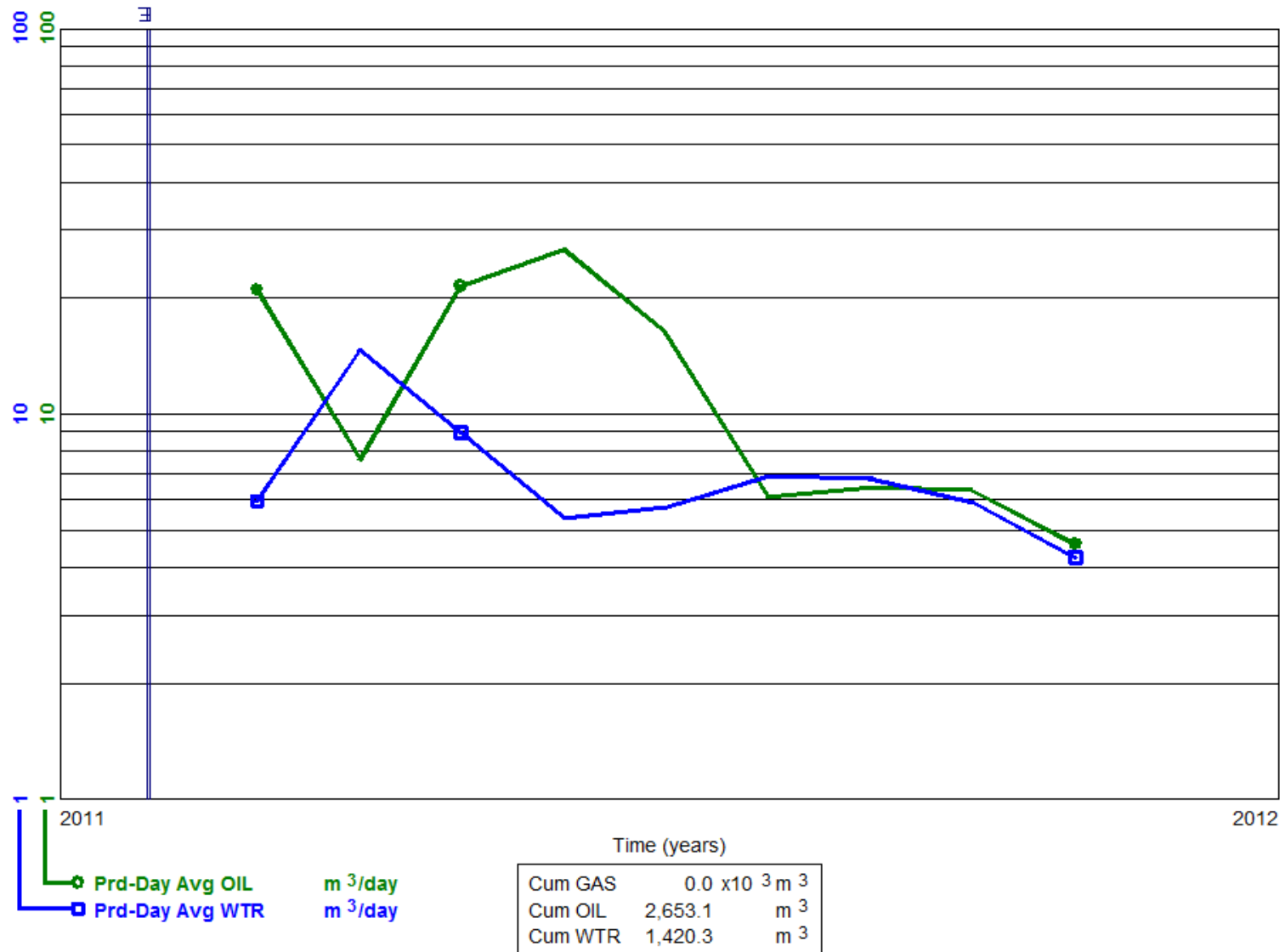
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2011-03
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 Prov. HZNTL
 103/12-02-002-26W1/00

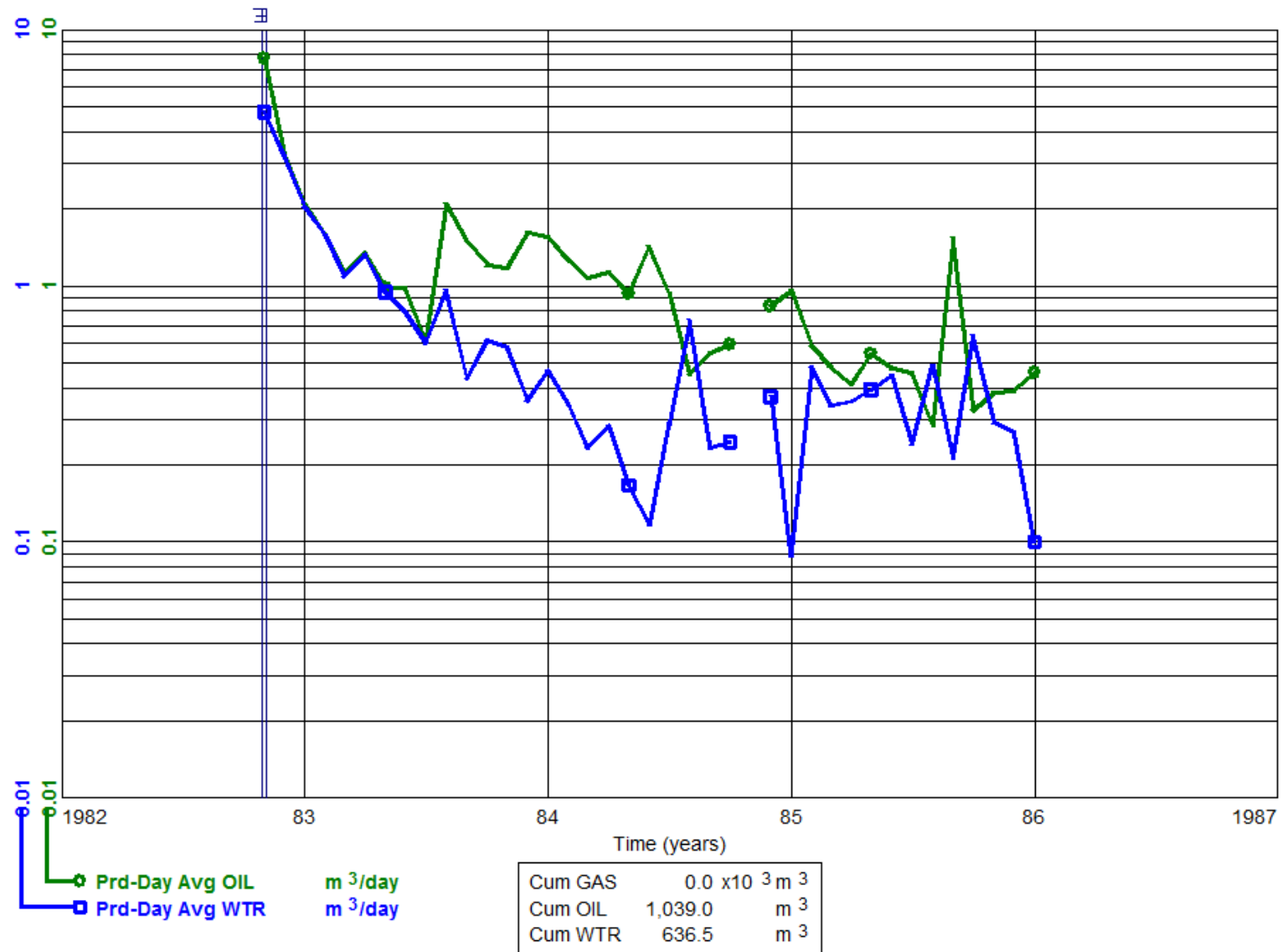
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1982-11
 To: 1986-01

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 Prov. WIW
 100/15-02-002-26W1/00

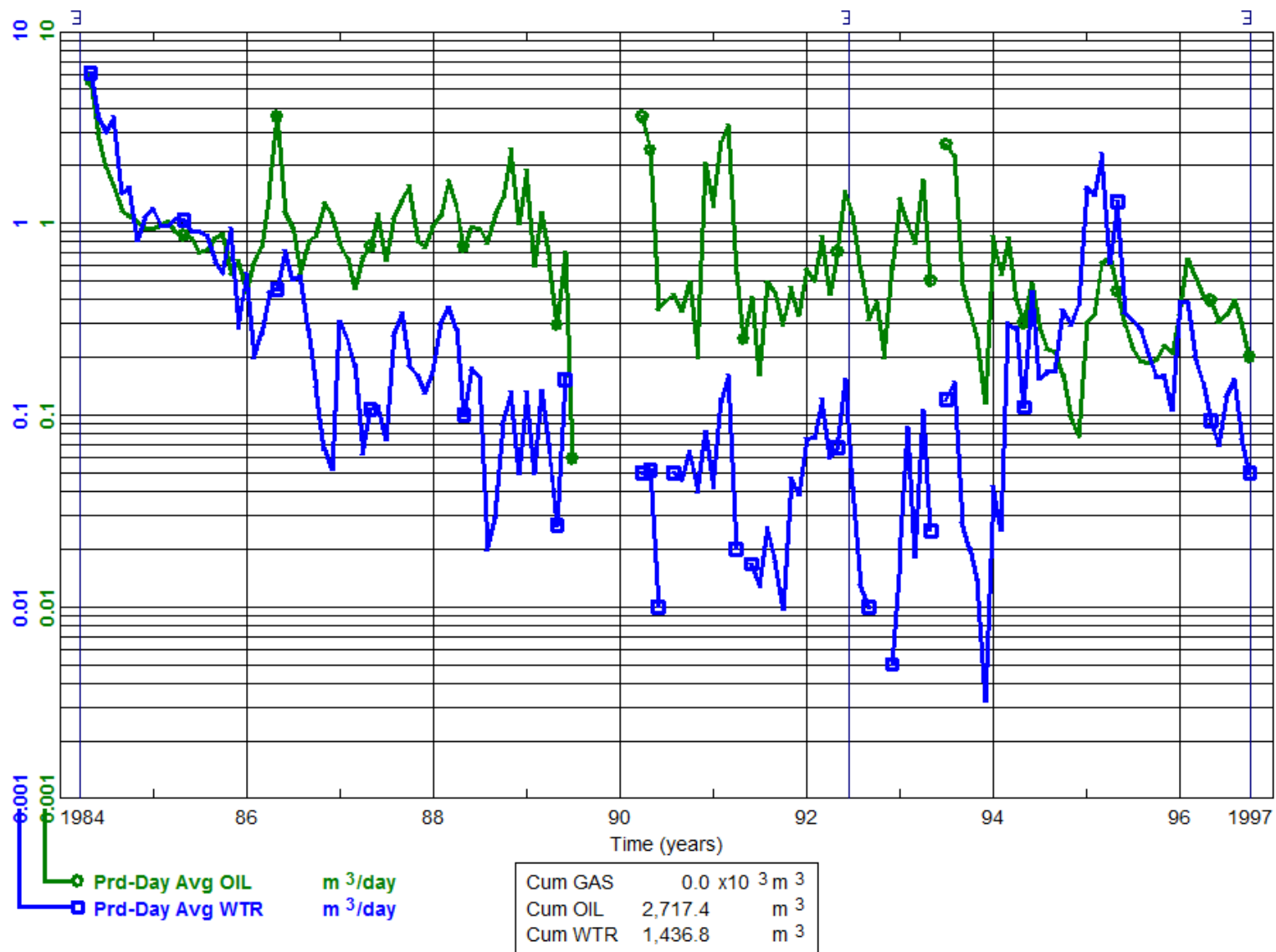
Status: WIW - Suspended
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-05
 To: 1996-10

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/01-03-002-26W1/00

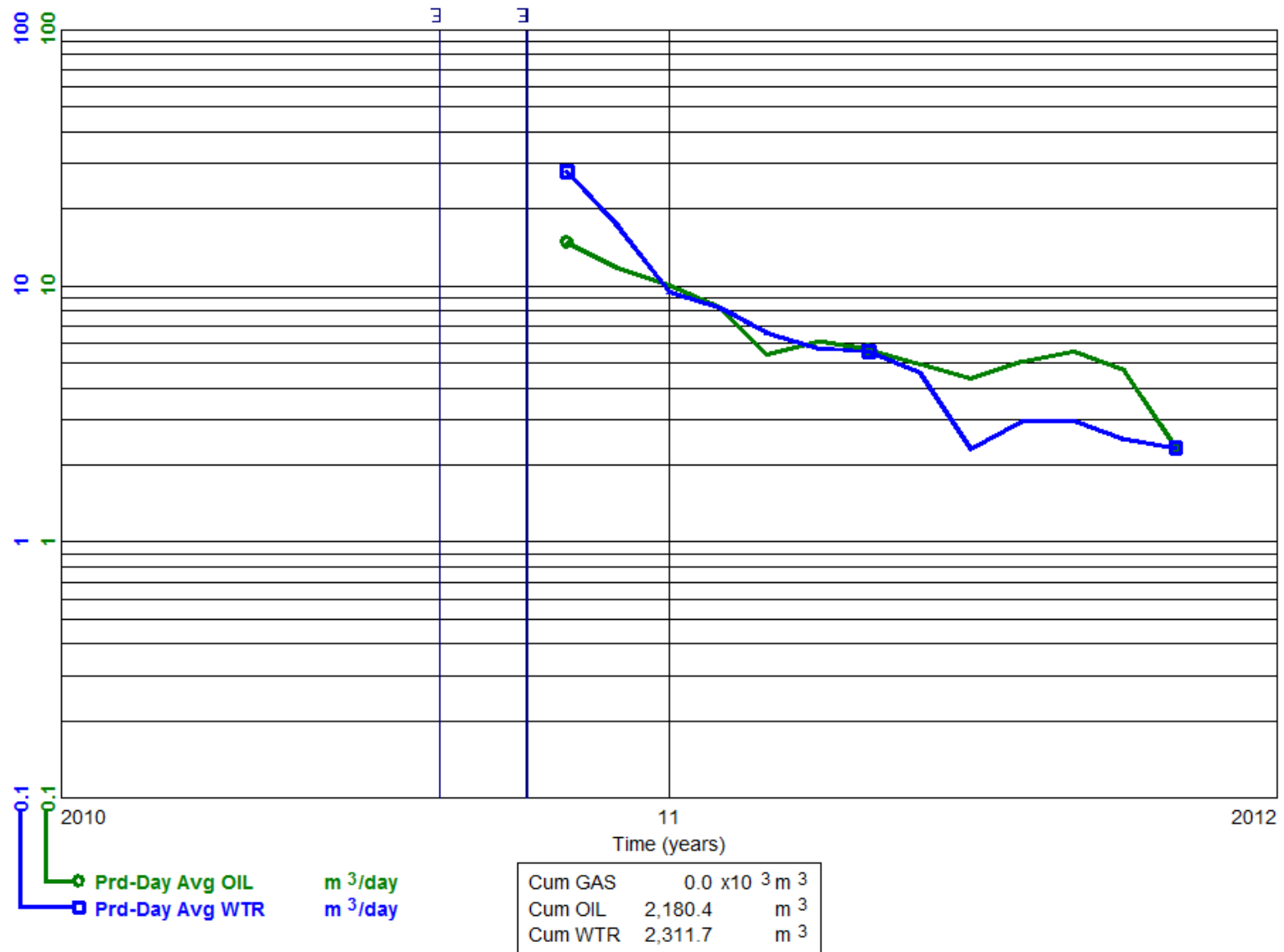
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



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

INDIVIDUAL PRODUCTION
 Penn West Waskada HZNTL
 102/01-03-002-26W1/02

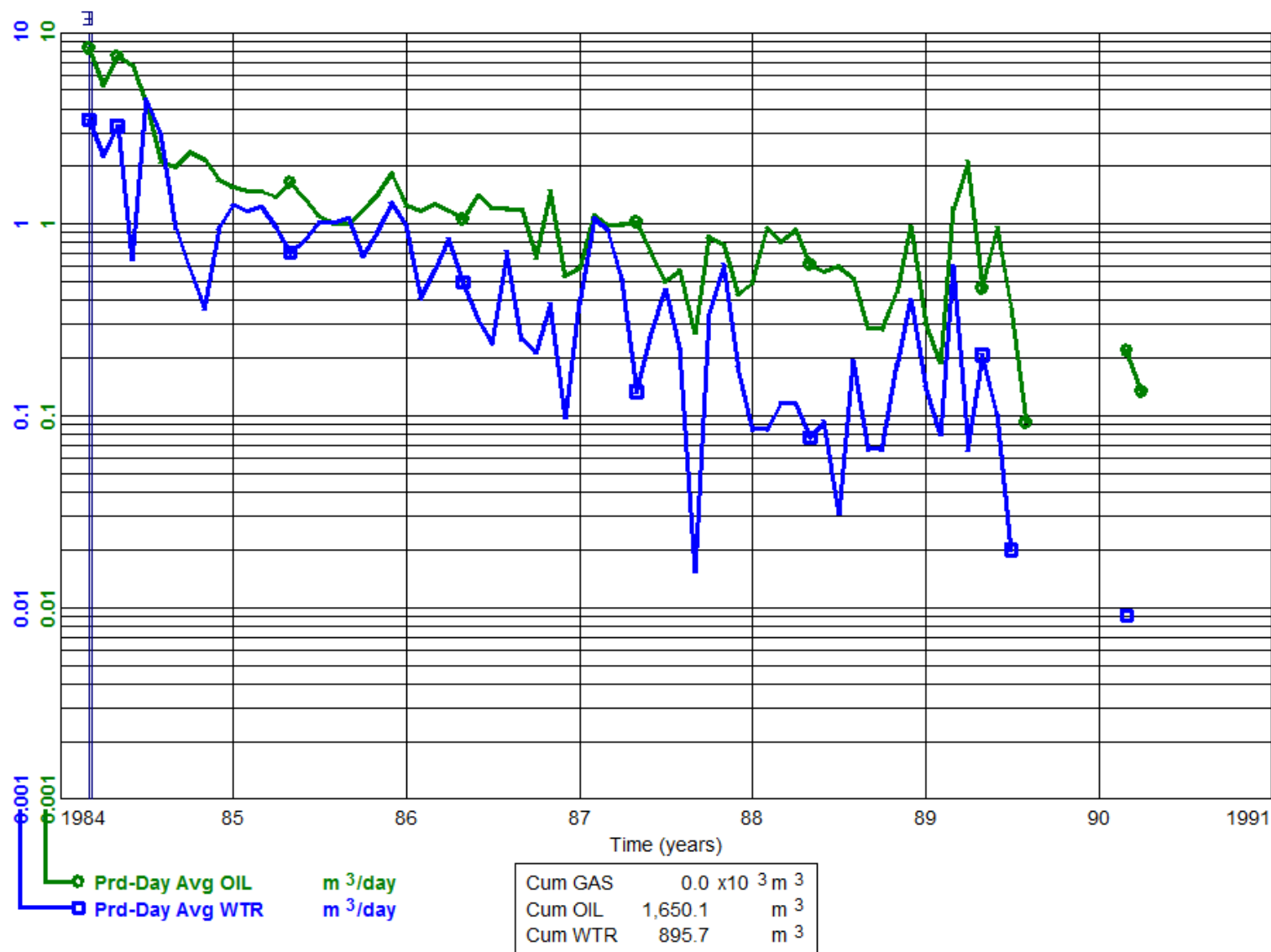
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-03
 To: 1990-04

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/02-03-002-26W1/00

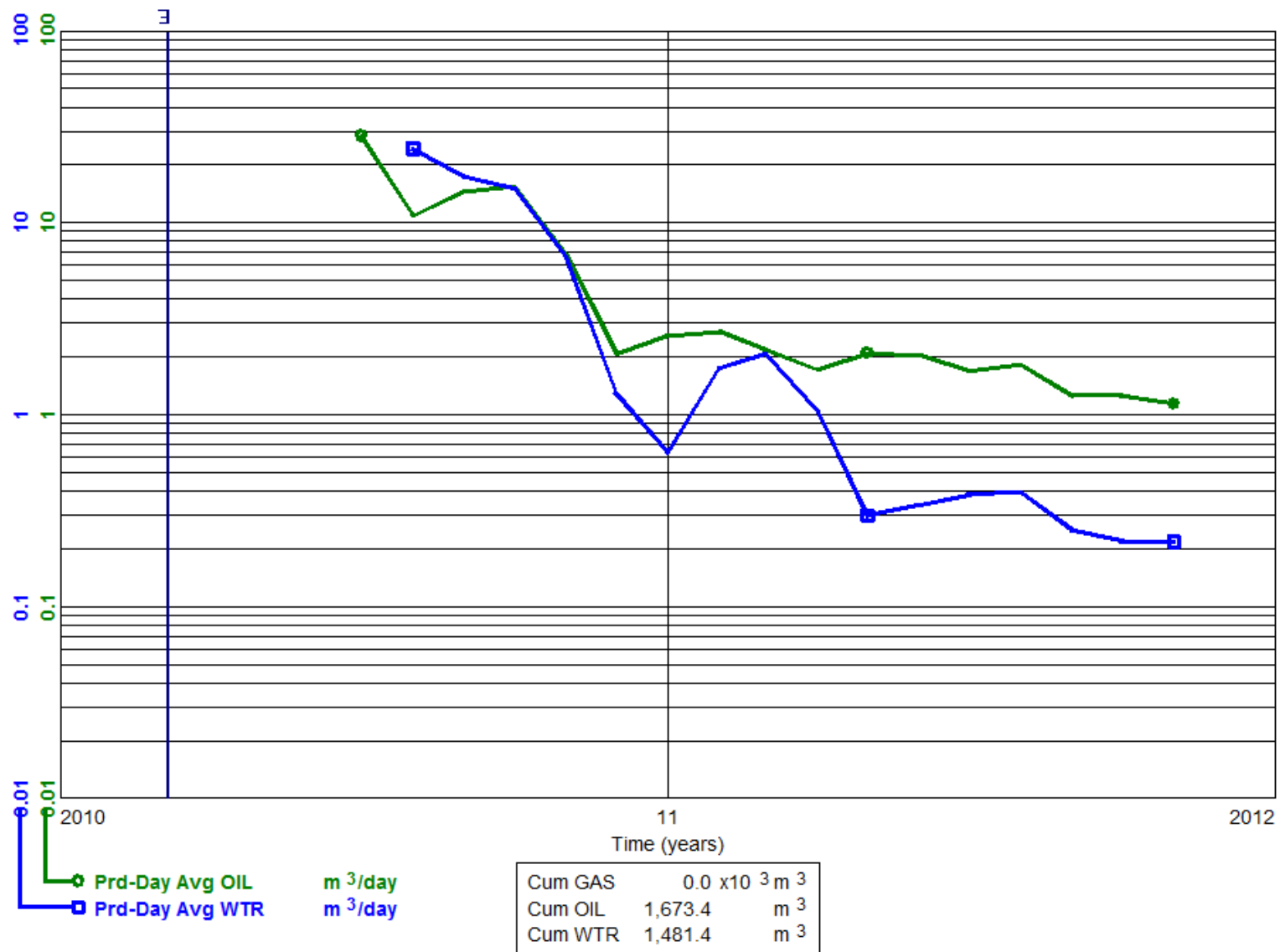
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2010-07
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 102/02-03-002-26W1/00

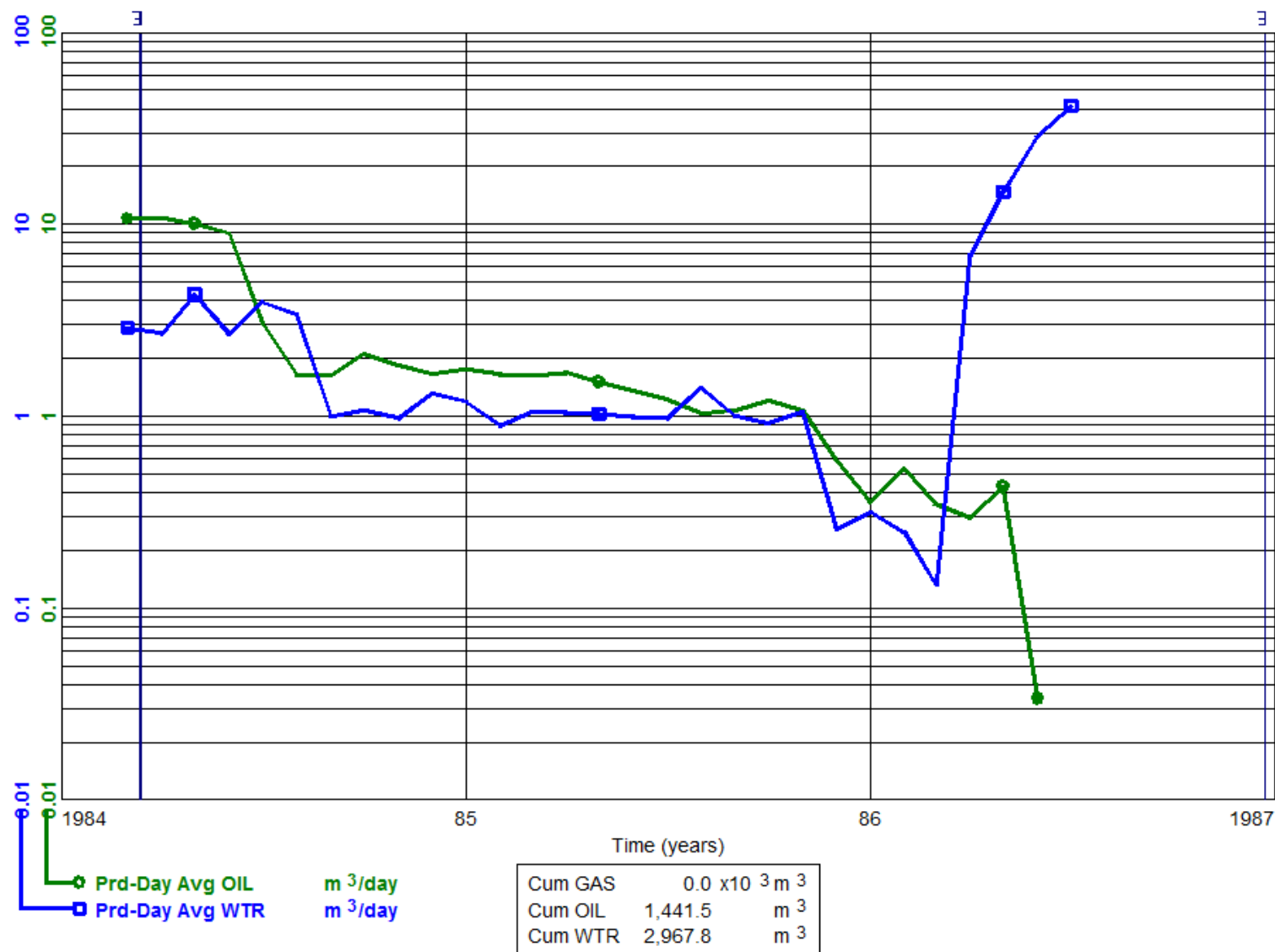
Status: Completing
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1984-03
 To: 1986-07

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/03-03-002-26W1/00

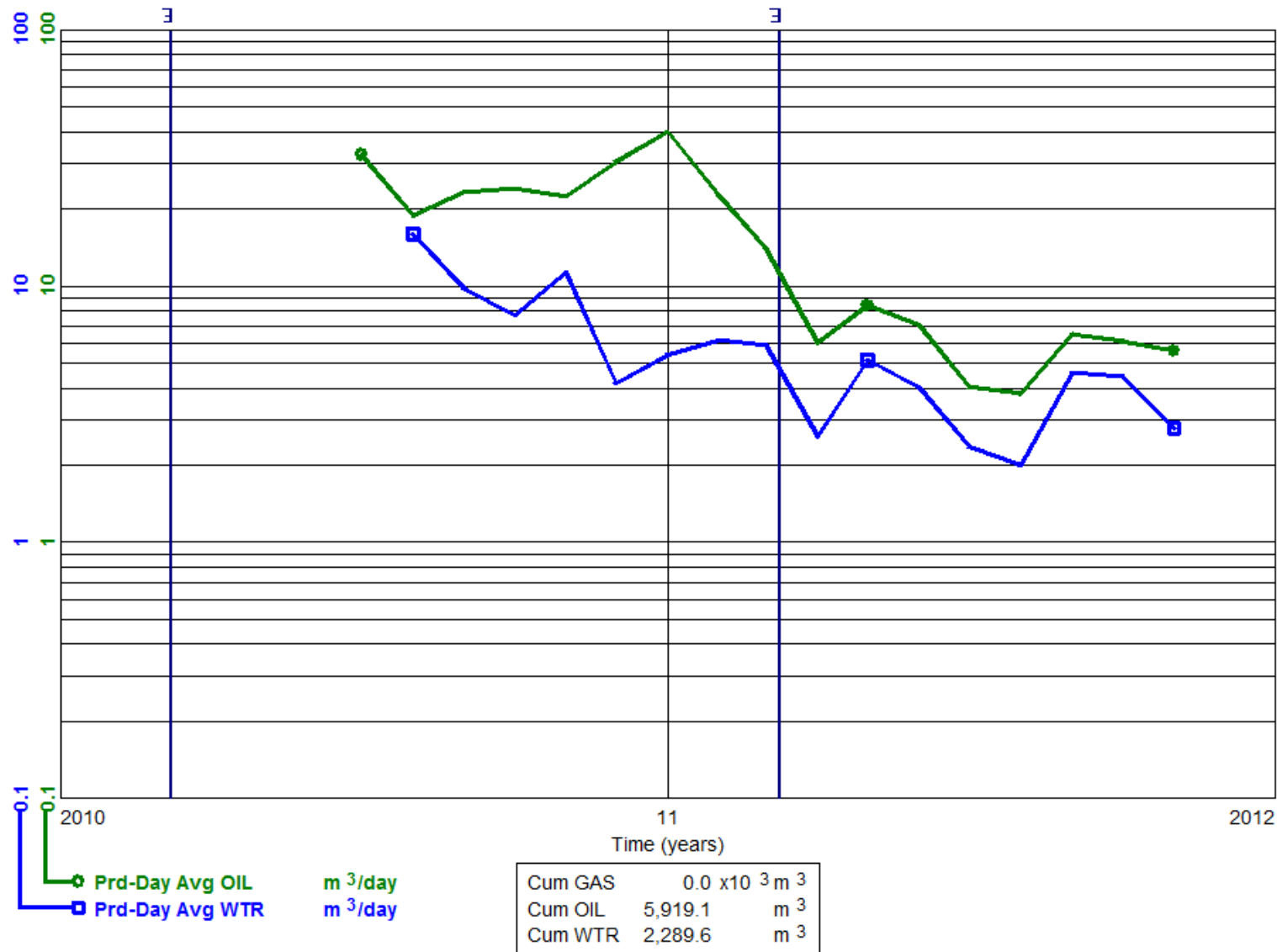
Status: Abandoned Producer
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 2010-07
 To: 2011-11

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 HZNTL
 102/03-03-002-26W1/00

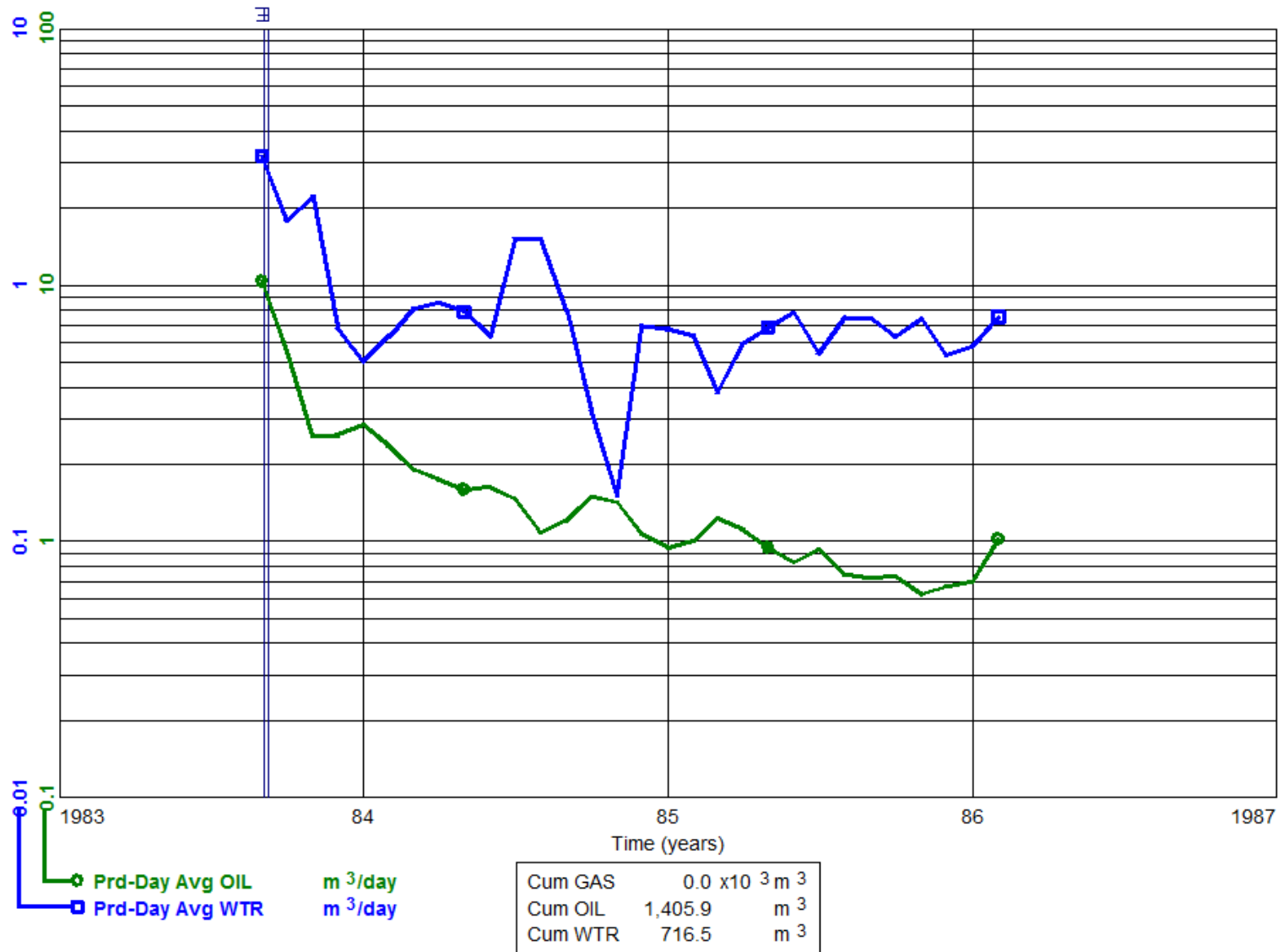
Status: Capable Of Oil Prod
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



Data As Of: 2011-11 (MB)
 From: 1983-09
 To: 1986-02

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5 WIW
 100/07-03-002-26W1/00

Status: WIW - Suspended
 Field: WASKADA (03)
 Pool: LOWER AMARANTH A (29A)



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

INDIVIDUAL PRODUCTION
 Waskada Unit No. 5
 100/08-03-002-26W1/00

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

