



June 23, 2009

Mr. Chris Hoidal  
Director, Western Region  
Pipeline and Hazardous Materials Safety Administration  
12300 W. Dakota Ave., Suite 110  
Lakewood, CO 80228

**Re: CPF 5-2009-5001**

**Via Overnight Mail**

Dear Mr. Hoidal:

Your office conducted an inspection of our Sidney, Montana pipeline system in July, 2008. As a result of this inspection you issued a Notice of Probable Violation and Proposed Compliance Order for three items which required remedial action. On February 9, 2009, SemStream, L.P. sent you a letter outlining actions SemStream had either taken or planned to take to remedy the alleged violations. The purpose of this letter is to provide follow-up information as indicated in our February 9, 2009 letter. The remaining two open items and SemStream's remedy are as follows:

**195.230 Welds: Repair or removal of defects.**

- (a) Each weld that is unacceptable under 195.228 must be removed or repaired. Except for welds on an offshore pipeline being installed from a pipe lay vessel, a weld must be removed if it has a crack that is more than 8 percent of the weld length.

SemStream failed to repair weld numbers 999 and 960 during construction of their Sidney HVL Pipeline System when these welds were found to be unacceptable.

SemStream construction records for their HVL Pipeline System reveal that two (2) butt welds (numbers 999 and 960) were rejected because of low caps. SemStream had no record of the repair of these two welds.

**RESPONSE:**

As per the plan outlined in our response dated February 9, 2009, SemStream has excavated welds 999 and 960, inspected them and documented the condition of the welds. Based on the inspection made by TK Inspection Services, neither weld required additional repair. Photographs of the welds as well as the inspection report from TK Inspection Services is attached.

**195.577 What must I do to alleviate interference currents?**

- (a) For pipelines exposed to stray currents, you must have a program to identify, test for, and minimize the detrimental effects of such currents.**

SemStream appears to have stray current on their HVL Pipeline system.

SemStream performed a native CP survey shortly after construction of their Sidney HVL pipeline. Data for that survey shows native potentials for all but the facilities to be around -700 mV.

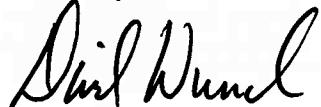
**RESPONSE:**

**As outlined in our February 9, 2009 letter, SemStream has conducted a close interval survey of the pipeline system. As indicated on the attached report, no additional cathodic work is required.**

Based on the information provided in this follow-up, SemStream respectfully requests that these two probable violations be withdrawn.

Should you need additional information please contact Edith Coen, DOT Compliance Manager at 918-640-3384.

Sincerely,



David Wunch  
Executive Vice-President  
SemStream, LP

Cc:     John Fansher                  Dave Scherrman                  Edith Coen  
          John Christensen



### Terms and Abbreviations

IP	Inadequate Penetration	IC	Internal Concavity	CRK	Crack
IPD	Inadequate Penetration Due to Hi Lo	ESI	Elongated Slag Inclusions	ACD	Accumulation of Discontinuities
IFR	Incomplete Fusion at the Root	ISI	Isolated Slag Inclusions	UCR	Undercut - Reel
IFC	Incomplete Fusion at the Cap-Exposed Bevel	BT	Burn-Through	UCC	Undercut - Cap
IFD	Incomplete Fusion Due to Cold Lap	GP	Individual Gas Pocket	CGK	Crater Cracks
		SP	Spherical Porosity	VIR	Visual Inspection Required
		CP	Cluster Porosity - Cap	PH	Pinhole
		WHP	Worm Hole Porosity		
		HB	Hollow Bead		

100%  
**CODE**

CUSTOMER NAME

ADDRESS

STATION  PIPELINE

WELD			WELD ACCEPTABLE		EXPOSURES		No. of Exp.	Pipe Size (Dia.)	Wall to Wall Thickness	X Ray	GAM Ray	Location and Type of Defects in Rejectable Welds
X-Ray Number	By	Location	Yes	No	In	Out						
1	VECR	Vertical	X									
2												
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4												
5												
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DATE	CUSTOMER'S JOB NO.	PER DIEM	JOB LOCATION	REPORT NO.	UNIT NO.	NO. MEN ON JOB	NO. WELDS RADIOPGRAPHED	TOTAL HOURS
5-20-09	YES ( ) NO ( )							4 M 00

ELIGIBLE HOURS MILES HOURS WORKED TO AM AND TO PM

SIGNATURE OF RADIOGRAPHER

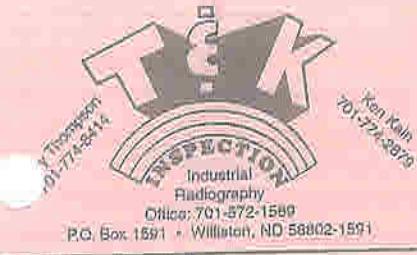
ASSISTANT

SIGNATURE OF CUSTOMER'S REPRESENTATIVE CERTIFIES TIME AND MATERIAL IS CORRECT  
I am (as indicated by my signature above) a tested and certified level II or III radiographer in accordance with the SNT-TC-1A and have accomplished the radiography recorded above in accordance with the specified code designated above.

Dex







#### Terms and Abbreviations

IP	Inadequate Penetration	IC	Internal Concavity	CRK	Crack
IPD	Inadequate Penetration Due to HI Lo	ESI	Elongated Slag Inclusions	ACD	Accumulation of Discontinuities
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		SP	Spherical Porosity	VIR	Visual Inspection Required
		CP	Cluster Porosity - Csp	PH	Pinhole
		WHP	Worm Hole Porosity		
		HB	Hollow Bead		

ASTM  
CODE

CUSTOMER NAME			ADDRESS						STATION	Pipeline		
WELD			WELD ACCEPTABLE		EXPOSURES		No. of Exp.	Pipe Size (Dia.)	Wall to Wall Thickness	X Ray	GAM Ray	Location and Type of Defects in Rejectable Welds
X-Ray Number	By	Location	Yes	No	In	Out						
1												
2												
3												
4												
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DATE	CUSTOMER'S JOB NO.	PER DIEM YEAR (NO.)	JOB LOCATION	REPORT NO.	UNIT NO.	NO. MEN ON JOB	NO. WELDS RADIOPGRAPHED
11/14/04							

ELIGIBLE HOURS MILES HOURS WORKED TO AM AND TO PM TOTAL HOURS

SIGNATURE OF CUSTOMER'S REPRESENTATIVE CERTIFIES TIME AND MATERIAL IS CORRECT

SIGNATURE OF RADIOGRAPHER

ASSISTANT

I am (as indicated by my signature above) a tested and certified level II or III radiographer in accordance with the SNT-TC-1A and have accomplished the radiography recorded above in accordance with the specified code designated above.





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**Appendix B – Influencing Rectifier Interrupt Table**  
– Trailing Wire Reconnect (IR) Table

**Appendix C – Pipe-to-Soil Potential Data Charts**

## **Initial Status and General Information**

Total Corrosion Solutions, Inc. was contracted to perform a close interval On/Off cathodic protection survey on the 4-inch Bakken Lines, as part of SemStream, LP ongoing pipeline integrity program.

Total Corrosion Solutions technicians Derrick Raprager was survey operator and was on site for the duration of the project. Soil Conditions were good for the duration of the surveys. The close interval survey was run in April 22, 2009.

SemStream inspectors were on site for the surveys to oversee testing and provide information and assistance to the survey crew.

Appendix A of this report contains the -850 mV and -1300 mV Criterion exception tables. Appendix B details the influencing rectifiers that were interrupted during the survey. Appendix C contains potential profile graphs of all data collected during the close interval survey including On and Instant-off data.

## **Survey Procedures**

### **Close Interval Survey**

Total Corrosion personnel installed Radiodetection GPS synchronized current-interrupters at all SemStream and foreign cathodic protection rectifiers influencing the test area.

The interrupted close interval CP survey was performed to obtain continuous "on" and "instant off" pipe-to-soil potentials every 2.5-feet. An Allegro field computer was used to measure and record pipeline potentials. On and Off potentials were obtained in two channels of data resulting in individual data lines for each set of data. Williams provided station numbers for test stations that was used for the survey stationing.

GPS Coordinates were obtained using a Trimble DGPS unit and were taken at all aboveground features and every 100 feet. Heavy tree cover in areas resulted in failure to record GPS Coordinates at all designated footages and aboveground features.

Copper/copper sulfate reference electrodes used during the survey were re-charged at the beginning of each survey day.

## **Discussion of Data**

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### **Potential Survey**

The pipe-to-soil potentials obtained during the survey indicate the following:

- All the "current on" potentials meet the -850mV criterion.
- All the "instant off" potentials meet the -850mV criterion
- All the "instant off" potentials meet the -1300mV criteria..

A summary of exceptions to criteria follows:

#### **4-inch Bakken Line**

Criteria	% Not Meeting Criterion	Pipeline Not Meeting Criterion
-850mV Current On	0%	0-feet
-850mV Instant Off	0%	0-feet
-1300mV Instant Off	0%	0-feet

### **Recommendations**

Based upon the results of the survey data, there are no recommendations at this time.

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It has been a pleasure being of service in your cathodic protection program. Please contact us if you have any questions concerning this report, or if we can be of further service.

Sincerely,  
**Total Corrosion Solutions, Inc.**

Derrick Raprager  
NACE CP Technician #7960

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## **Appendix A**

### **Criterion Exception Tables**

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Table I A

**SemStream, LP Pipeline  
4-inch Bakken Line  
Bakken Plant NW to Sidney Terminal  
Exception table below -0.850 on criteria**

Criteria  
Reads <= -0.850

**Sections which meet the criteria:**

Start	End	Distance
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0+00	446+14	44614
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Distance meeting the criteria 44614.0 feet

**Sections which fail the criteria:**

Start	End	Distance
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Distance failing the criteria 0.0 feet
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**Summary Report**

Total survey distance: 44614.0 feet

Total length meeting criteria: 44614.0 feet

Percentage meeting criteria: 100.00%

Total length failing criteria: 0.0 feet

Percentage failing criteria: 0.00%

Table I B

**SemStream, LP Pipeline  
4-inch Bakken Line  
Bakken Plant NW to Sidney Terminal  
Exception table below -0.850 off criteria**

Criteria  
Reads <= -0.850

**Sections which meet the criteria:**

Start	End	Distance
0+00	446+14	44614

Distance meeting the criteria 44614.0 feet

**Sections which fail the criteria:**

Start	End	Distance

Distance failing the criteria 0.0 feet

**Summary Report**

Total survey distance: 44614.0 feet

Total length meeting criteria: 44614.0 feet  
Percentage meeting criteria: 100.00%

Total length failing criteria: 0.0 feet  
Percentage failing criteria: 0.00%

Table I C

**SemStream, LP Pipeline  
4-inch Bakken Line  
Bakken Plant NW to Sidney Terminal  
Exception table above -1.300 off criteria**

Criteria  
Reads  $\geq$  -1.300

**Sections which meet the criteria:**

Start	End	Distance
0+00	446+14	44614

Distance meeting the criteria 44614.0 feet

**Sections which fail the criteria:**

Start	End	Distance

Distance failing the criteria 0.0 feet

**Summary Report**

Total survey distance: 44614.0 feet

Total length meeting criteria: 44614.0 feet  
Percentage meeting criteria: 100.00%

Total length failing criteria: 0.0 feet  
Percentage failing criteria: 0.00%

## **Appendix B**

### **Influencing Rectifier Interrupt Table Trailing Wire Reconnect(IR) Table**

Operator	Rectifier Number / Location	Volts	Amps	Taps
Semstream	MP 6	2.02	0.13	C-1,F-2
Hyland Enterprises	Bakken Plant	2.94	0.20	Reostat

**Table II**  
**Semstream Pipeline**  
**Trailing Wire Reconnection (IR) Data**

**4" BAKKEN LINE**

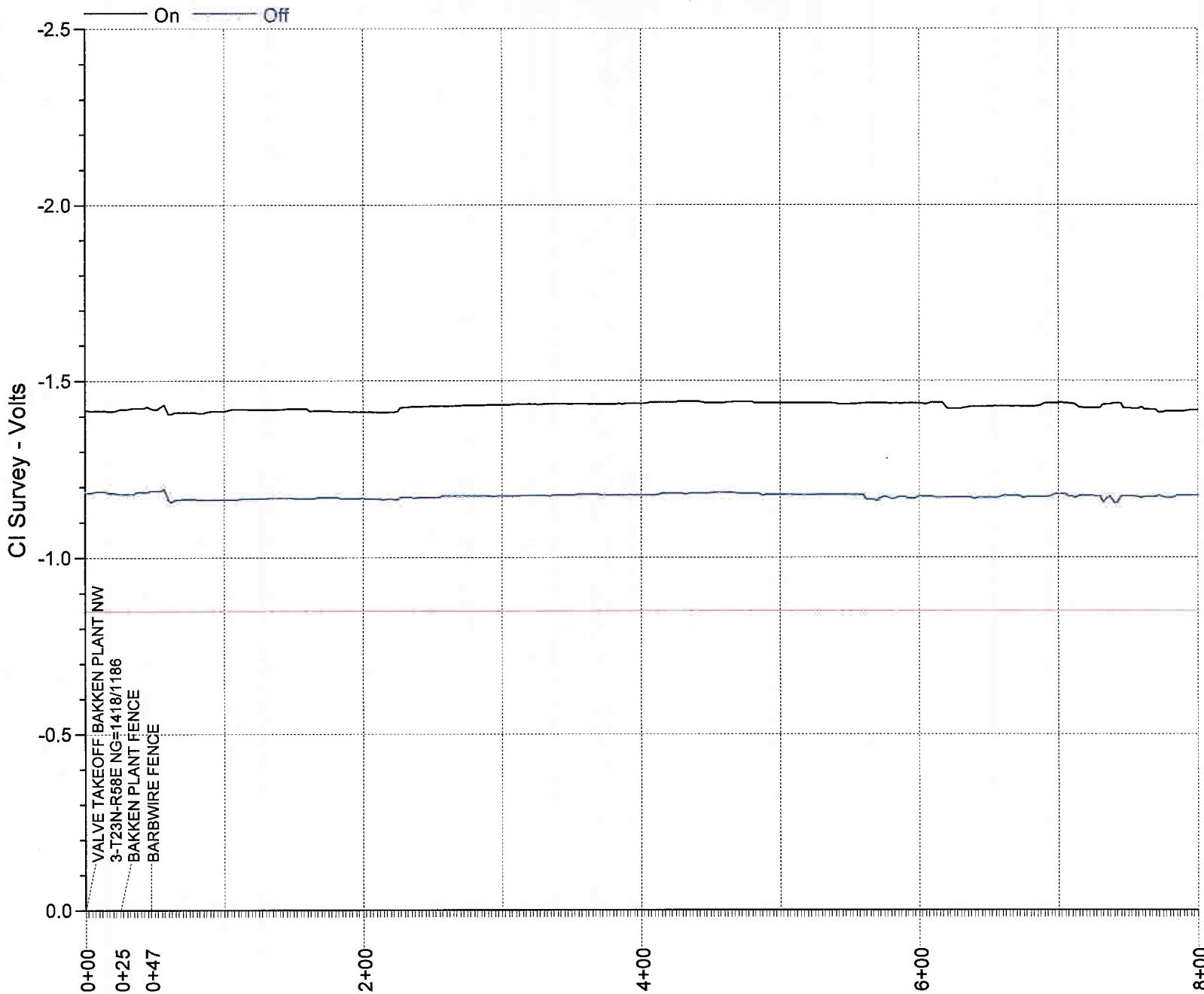
Pipe Diameter (In) 4  
 Pipe Wall Thickness(in) 0.168  
 Pipe Weight (lb/ft) 25.16  
 Polarity

Meter negative to test station - Meter positive to trailing wire

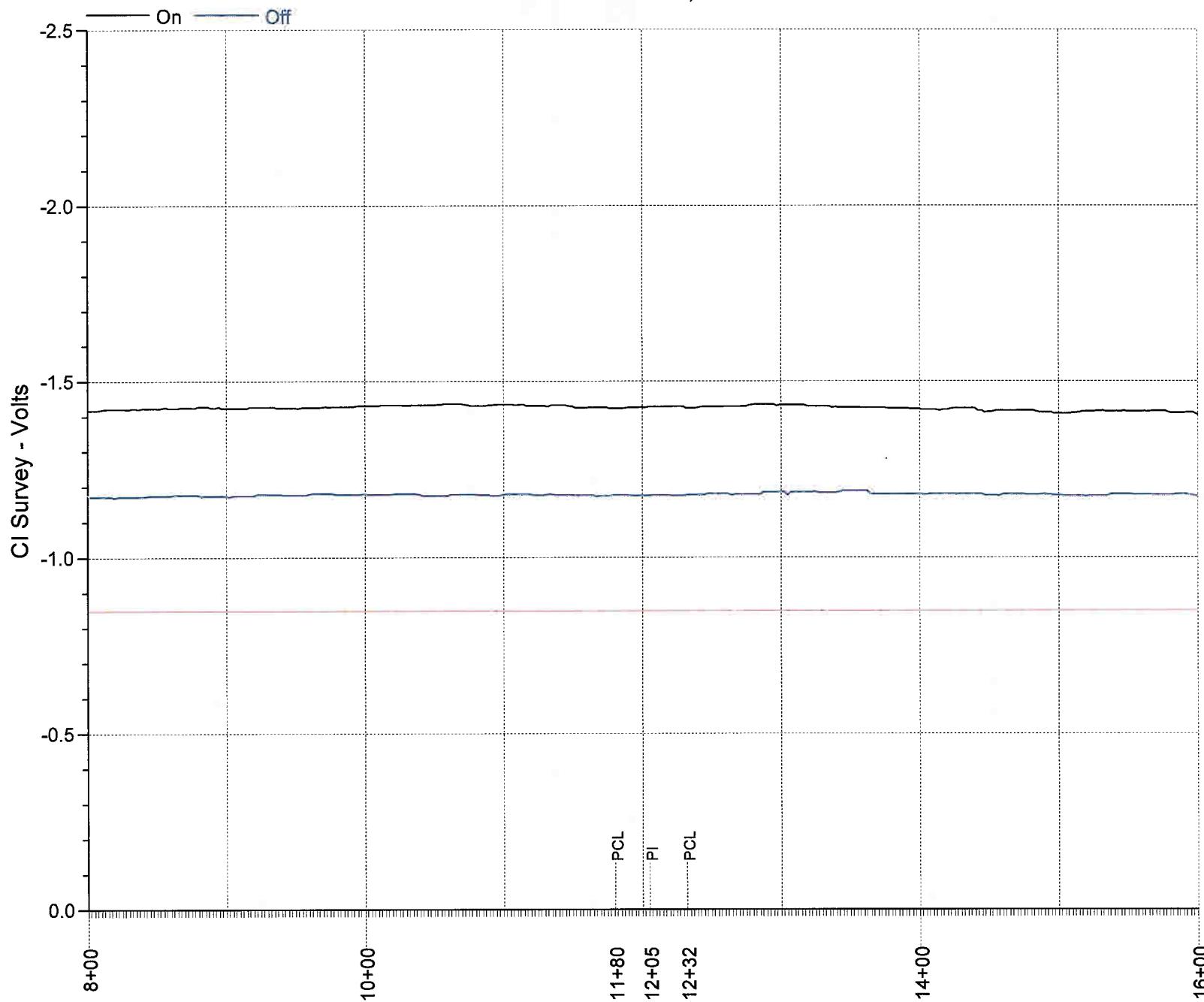
Reconnect Location	Location	Far Ground (mV)		Measured IR (mV)		Near Ground (mV)		Calculated IR (mV) from NG/FG PS		Current Flow In Pipe Section (Amps)		Comments
		On	Off	On	Off	On	Off	On	Off	On	Off	
TS NW 3-T23N-R58E	0	-1279	-1059	-2.00	3.00	-1277	-1052	-2	3	-0.03	0.05	BAKKEN PLANT
TS NW 7-T23N-R58E	5437	-1279	-1059	-2.00	3.00	-1277	-1052	-2	3	-0.03	0.05	CR-346
TS NW 8-T23N-R58E	12423	-1390	-1184			-1404	-1182					
TS	16987	-1381	-1164	1.00	1.00	-1381	-1164	0	0	0.02	0.02	
TS	22045	-1418	-1197	4.00	1.00	-1422	-1198	4	1	0.07	0.02	
TS	28382	-1381	-1151	-9.00	-5.00	-1372	-1146	-9	-5	-0.18	-0.10	
TS	34661	-1408	-1163	-28.00	-1.00	-1382	-1182	-26	-1			
TS SW 10-T23N-R59E	39371	-1357	-1156	1.00	4.00	-1358	-1160	1	4	0.02	0.07	HIGHWAY 200
VALVE SE 11-T23N-R59E	44616	-1356	-1161	-10.00	0.00	-1345	-1161	-11	0	-0.17	0.00	SEMSTREAM TERMINAL

# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line

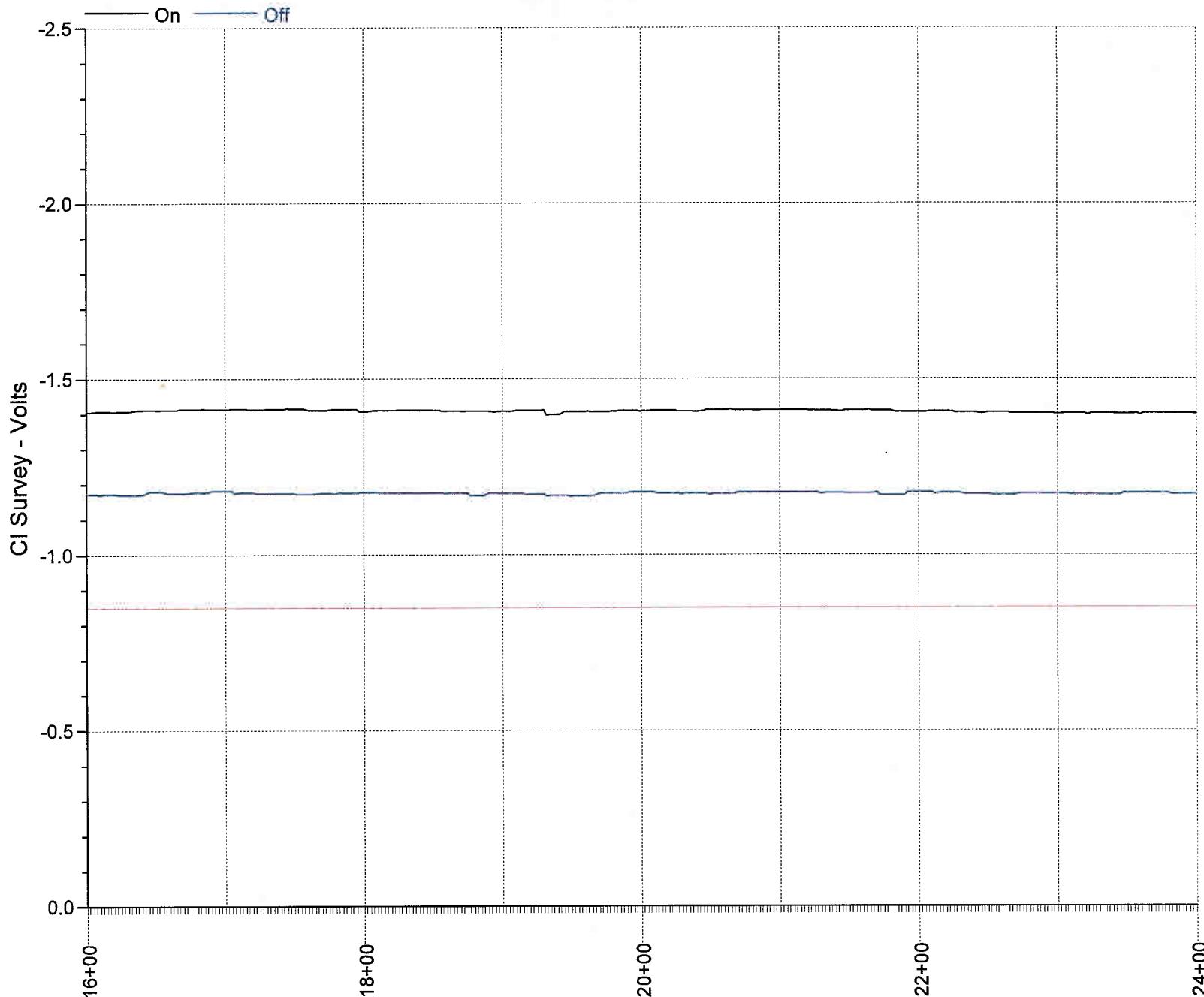


SemStream, LP  
ROW: 4-INCH BAKKEN; bakken line



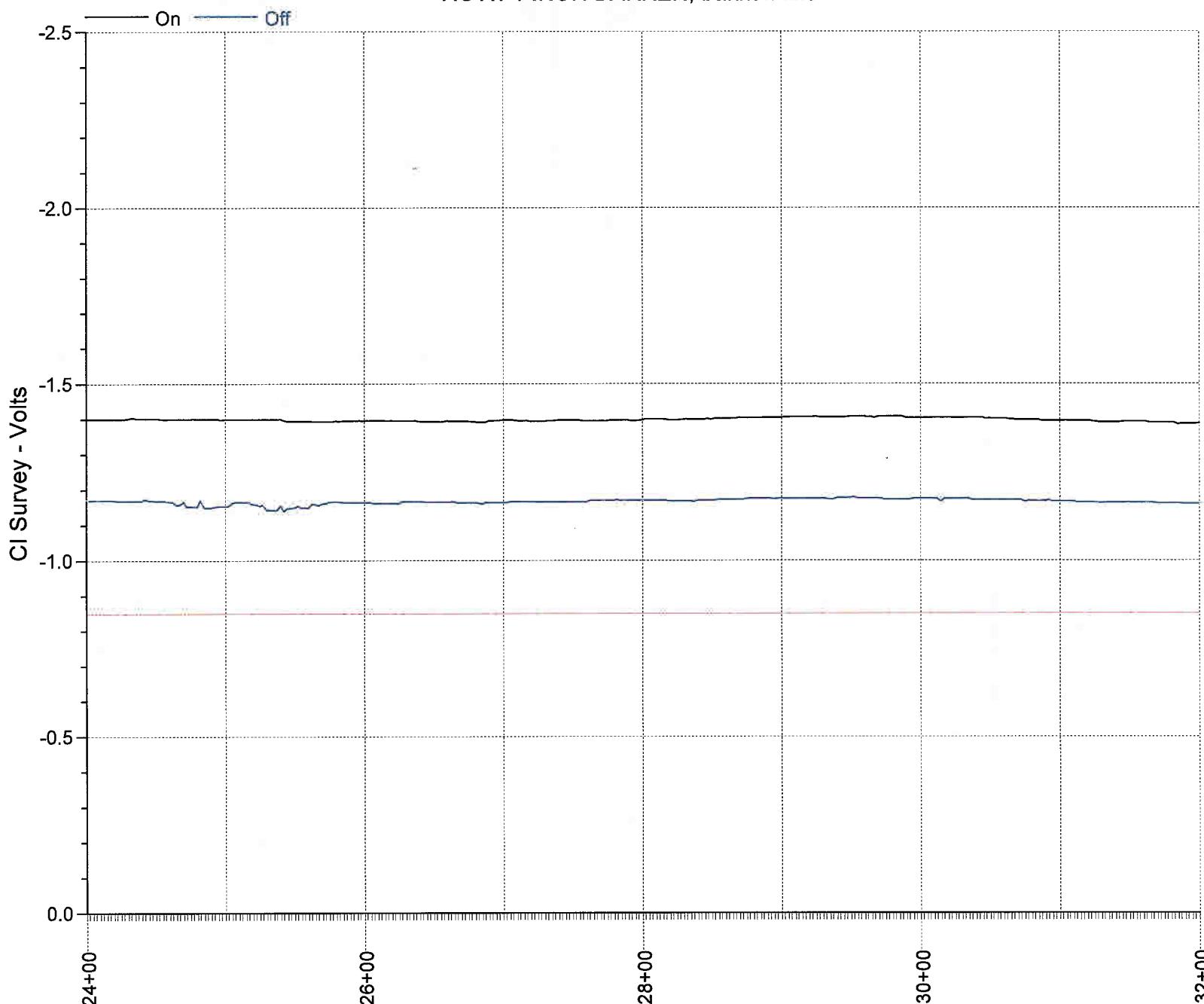
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



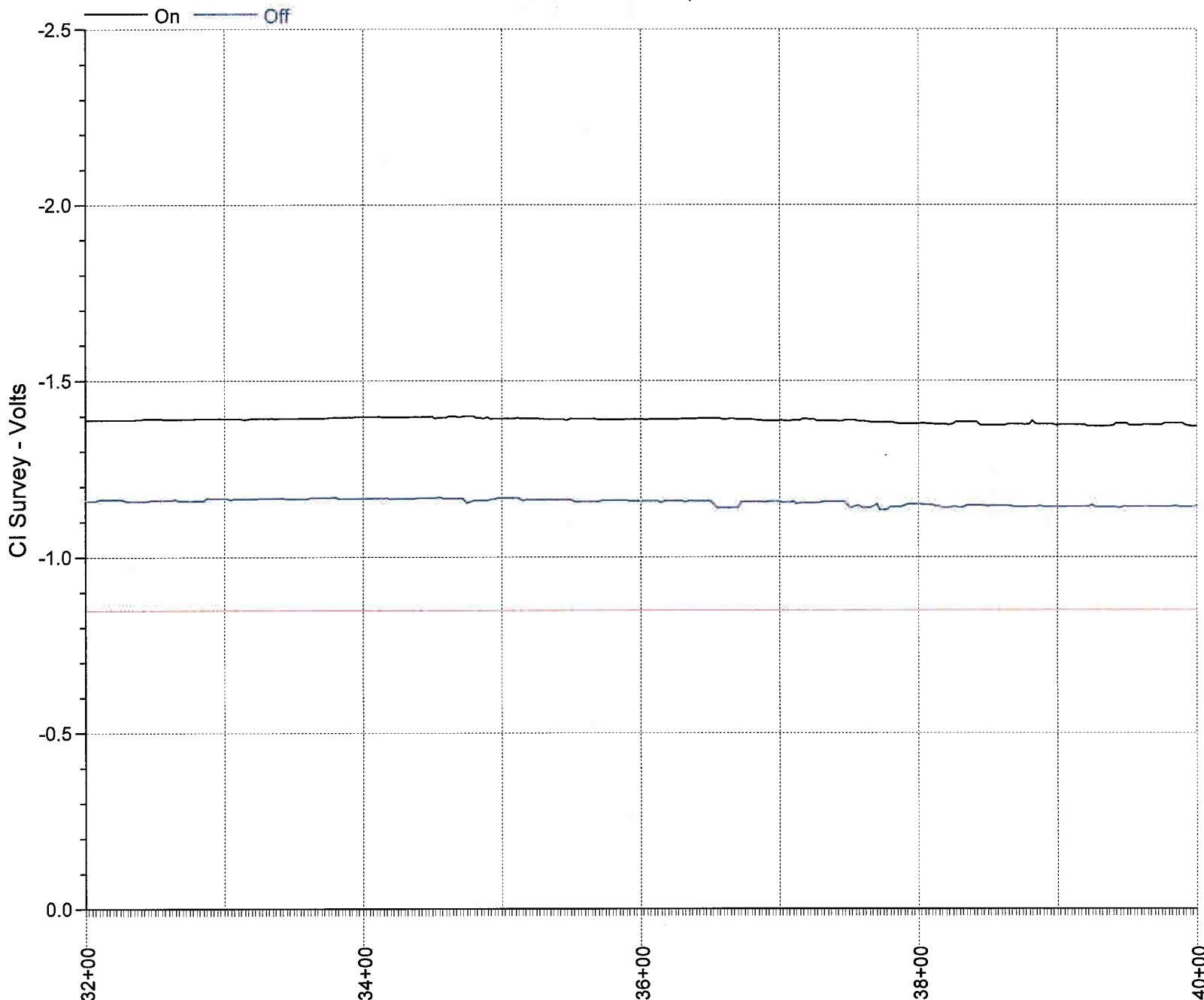
# SemStream, LP

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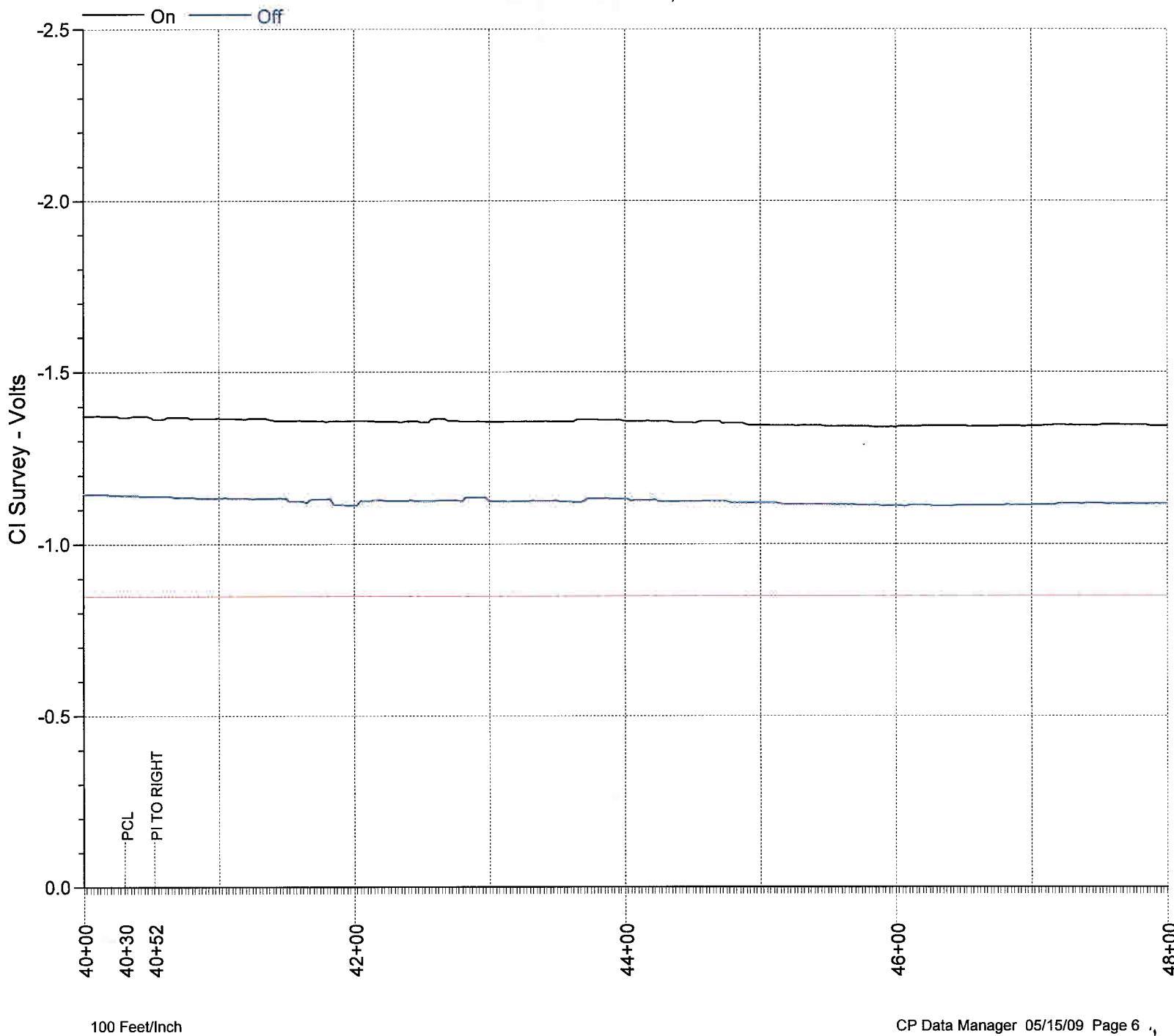


# SemStream, LP

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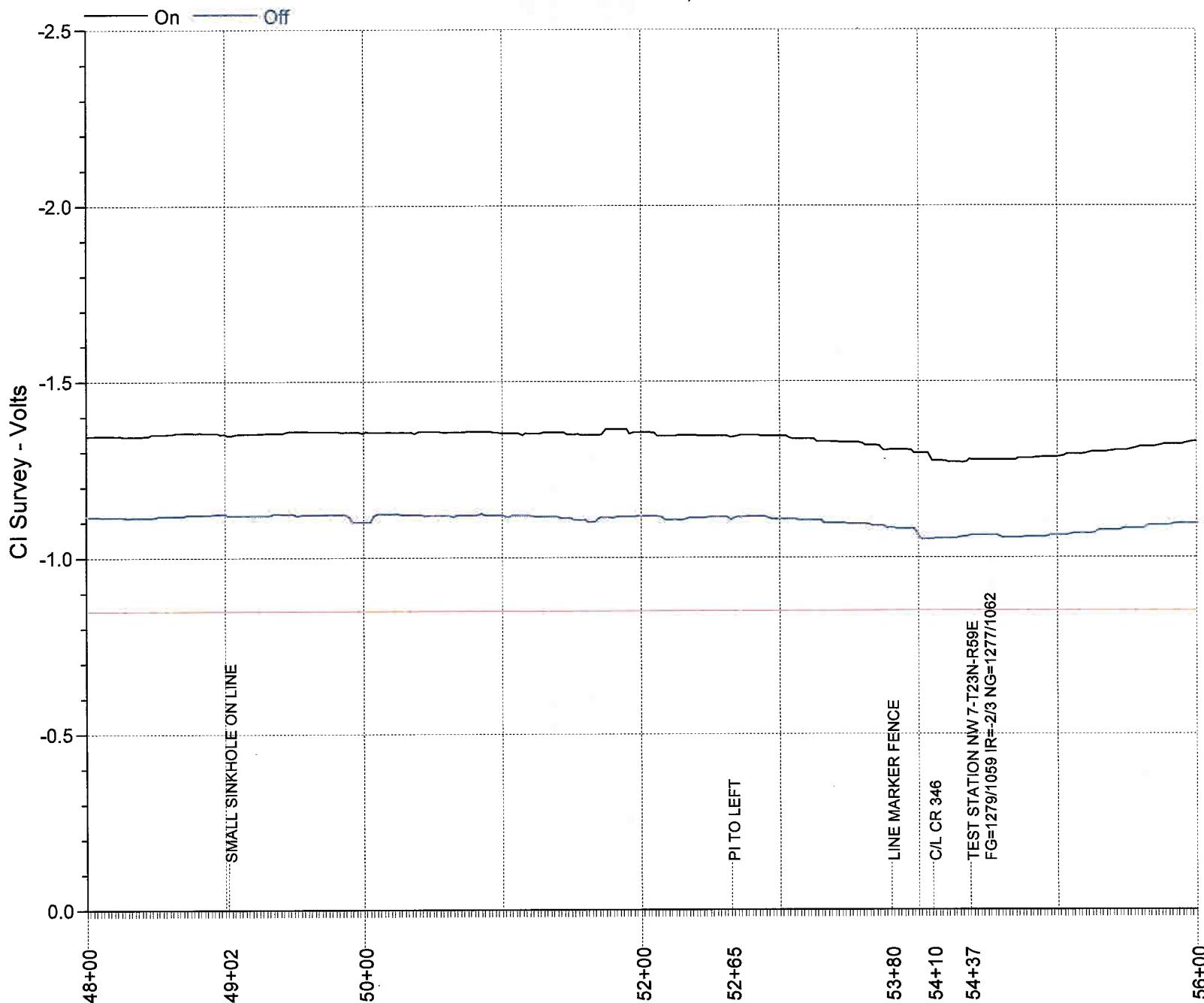


SemStream, LP  
ROW: 4-INCH BAKKEN; bakken line

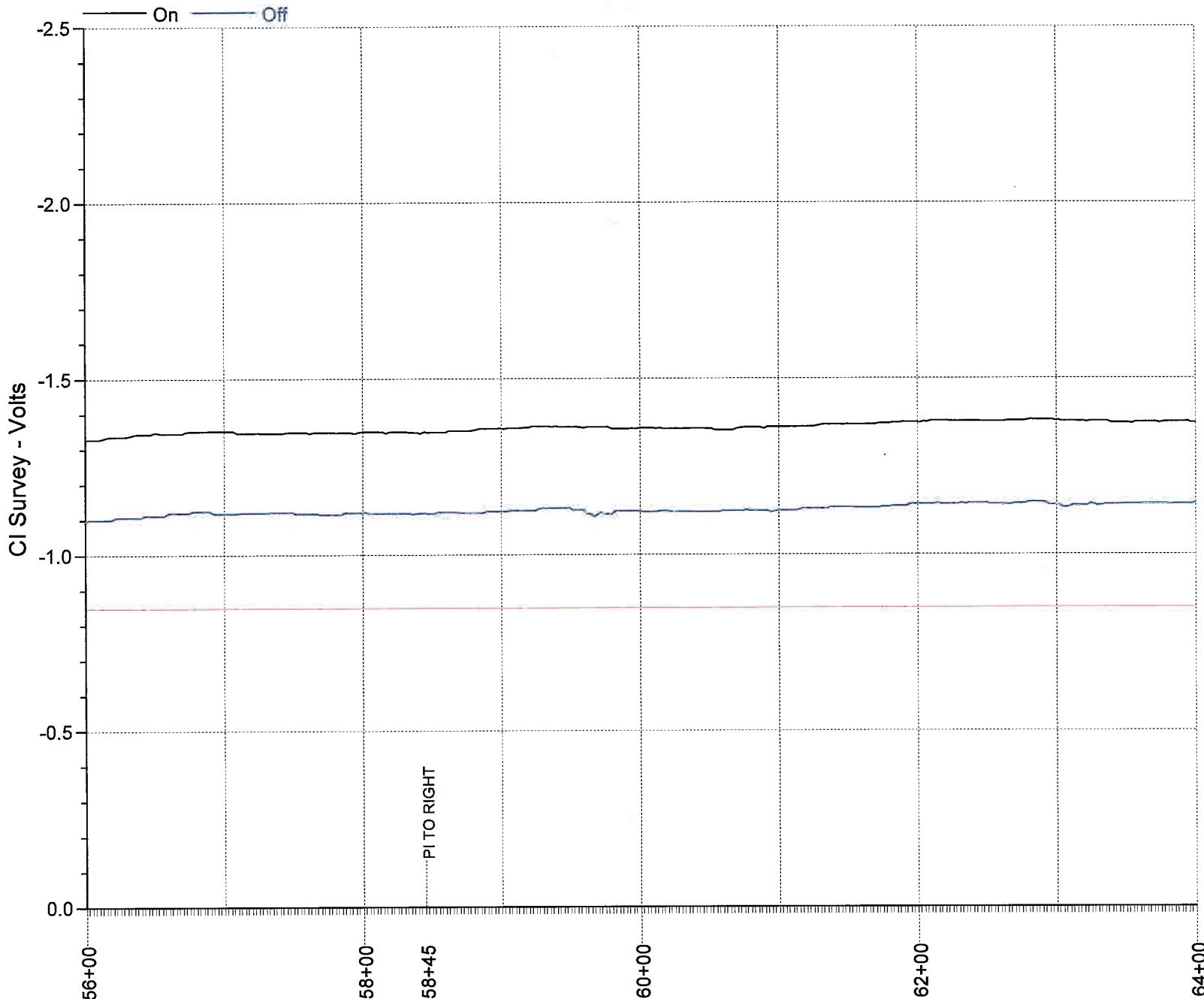


# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line

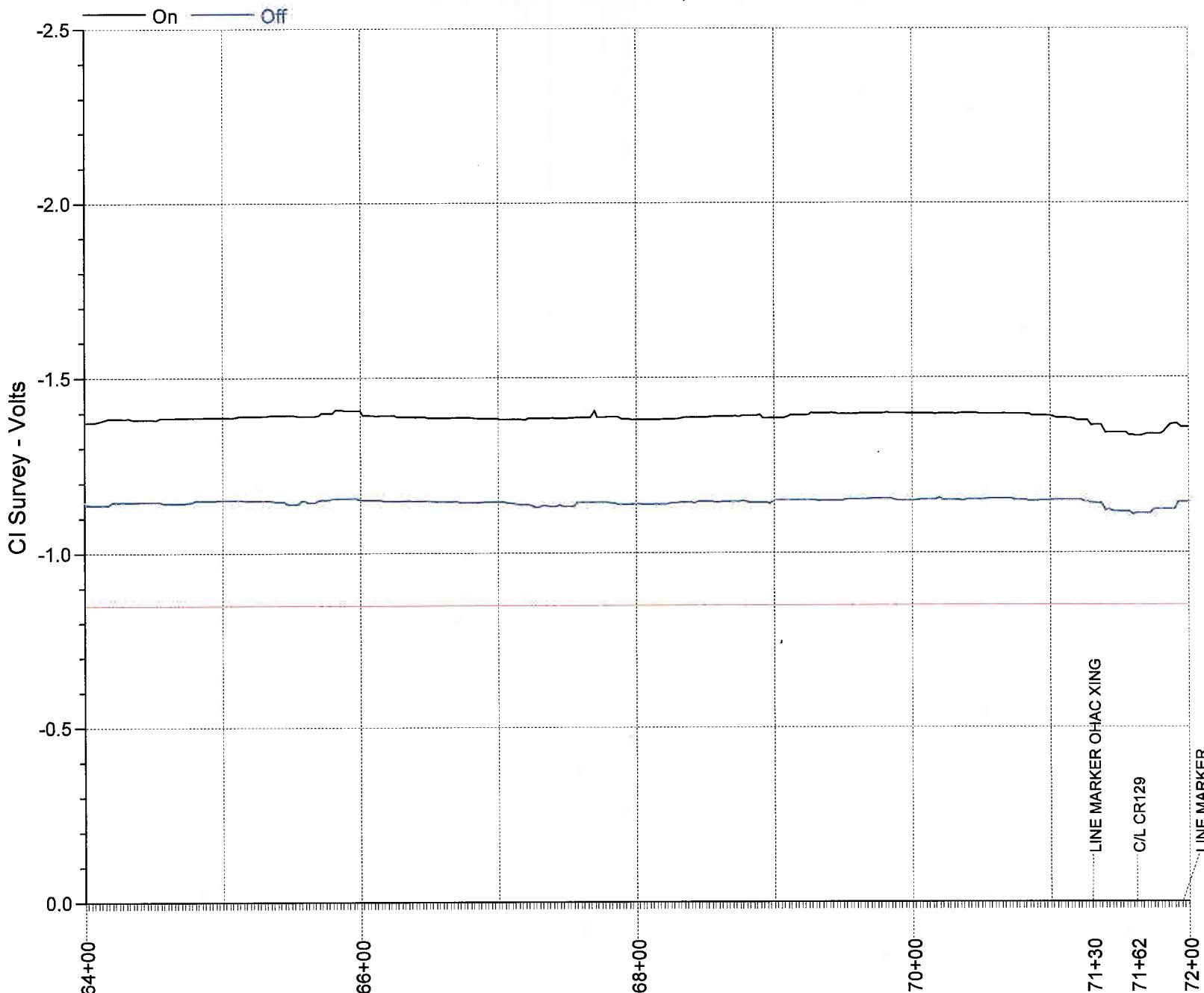


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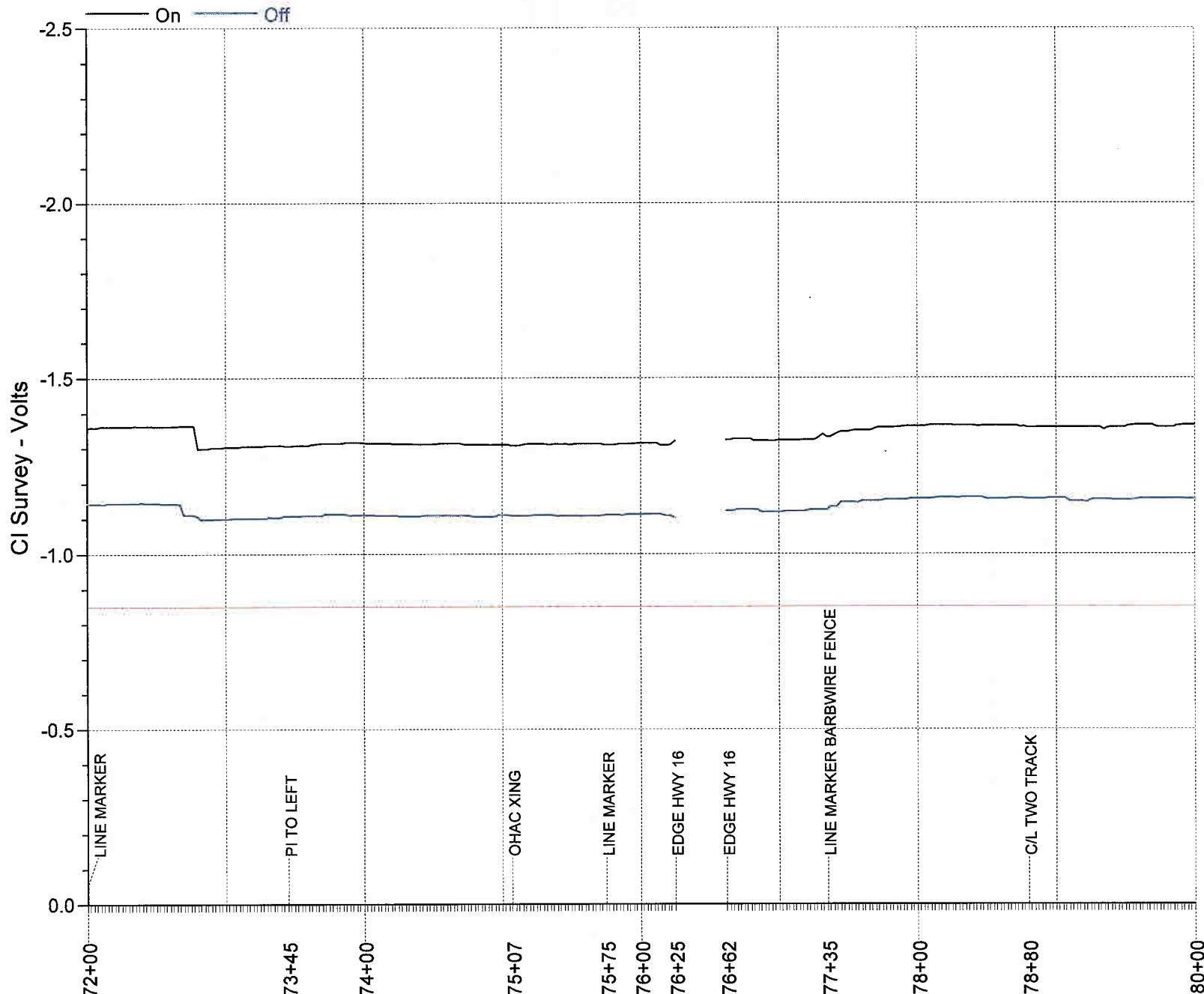
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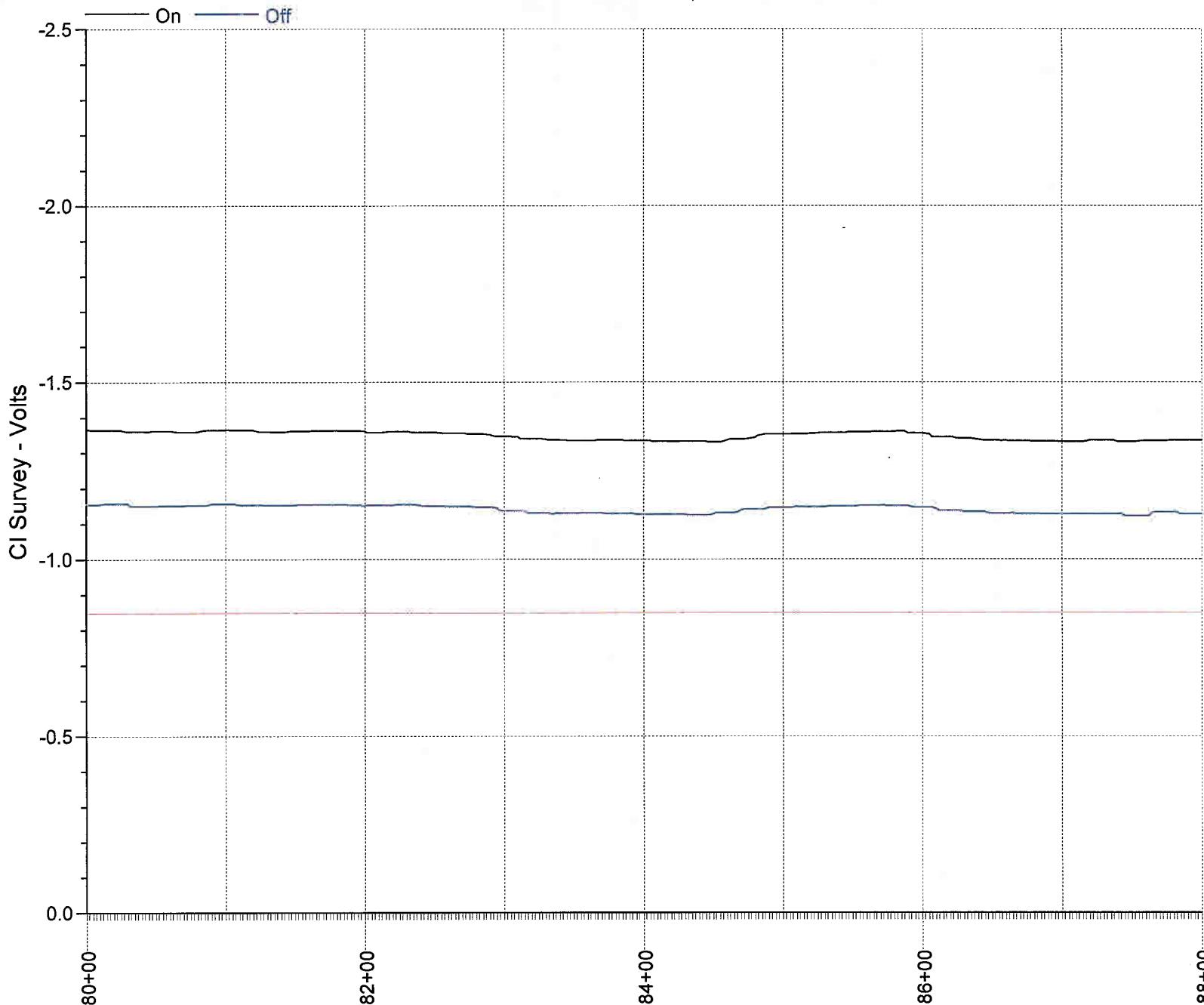


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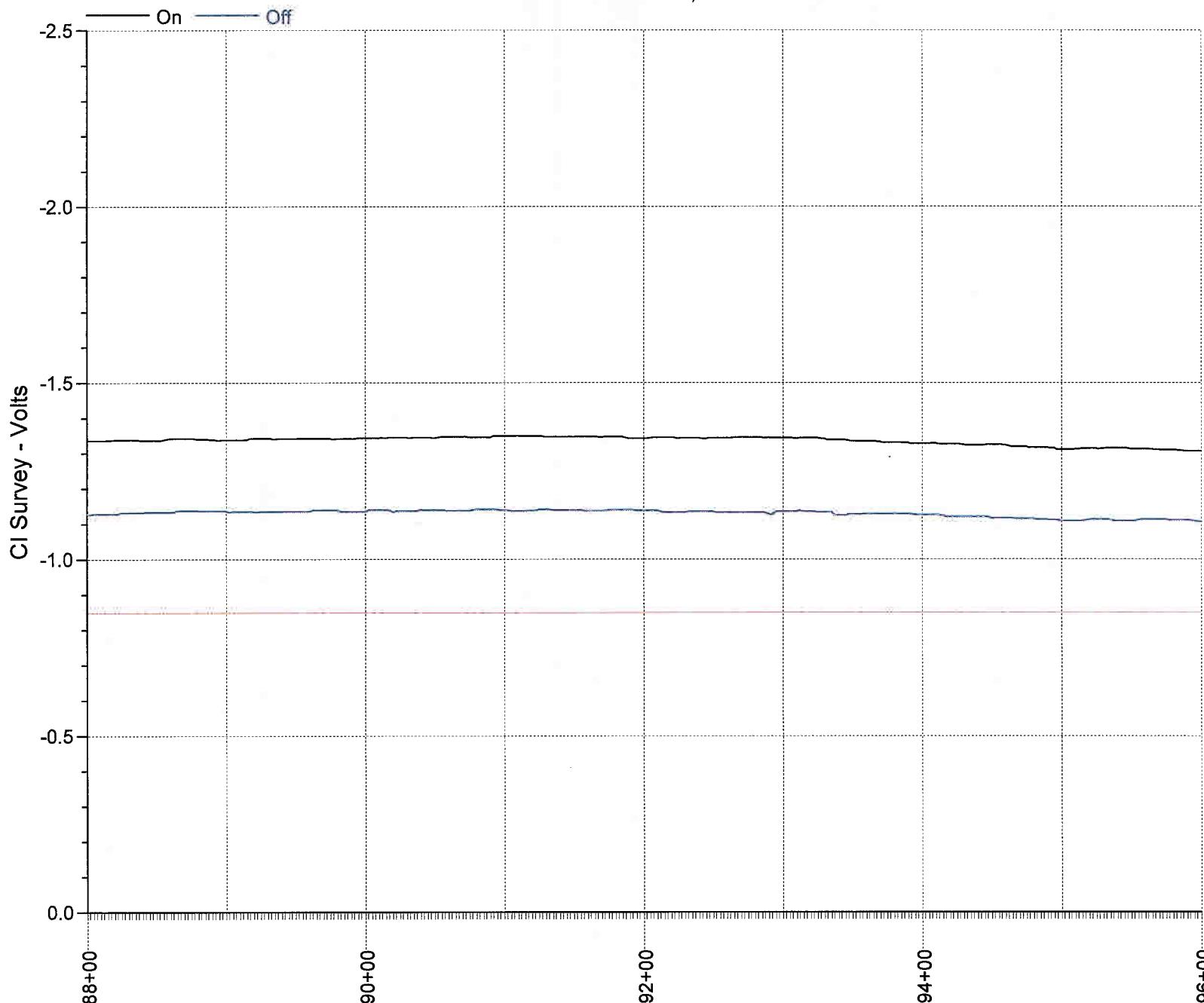


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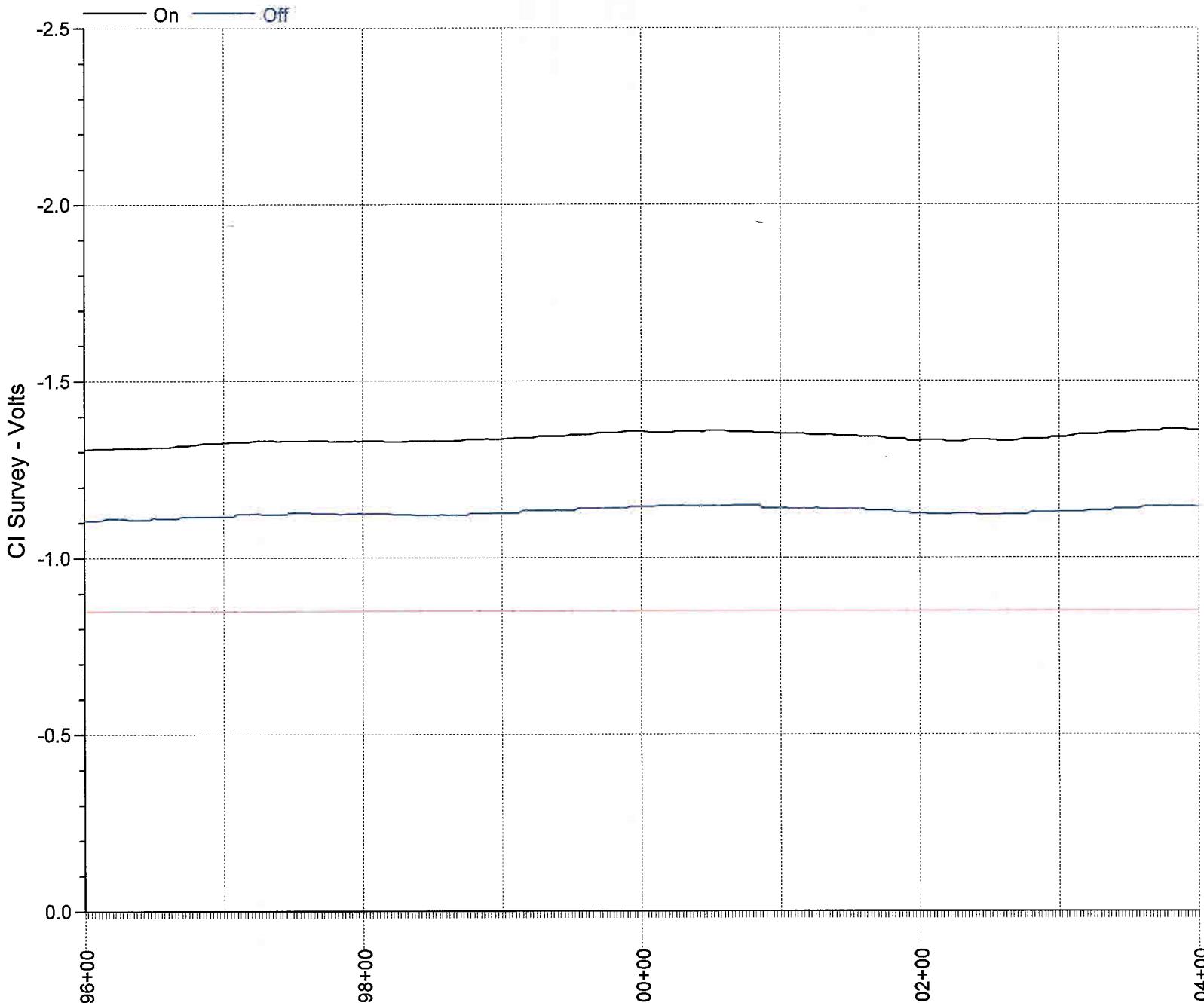
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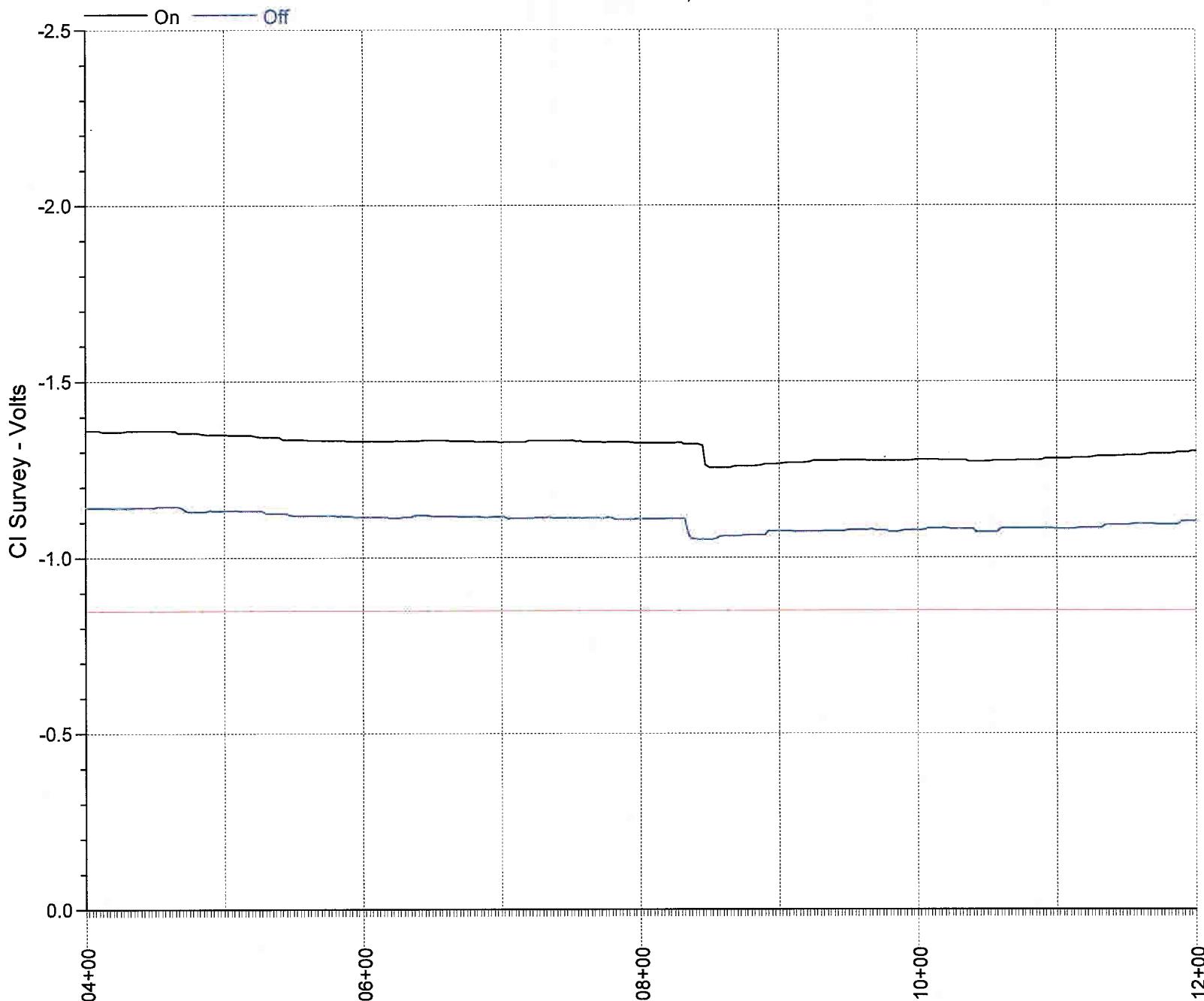
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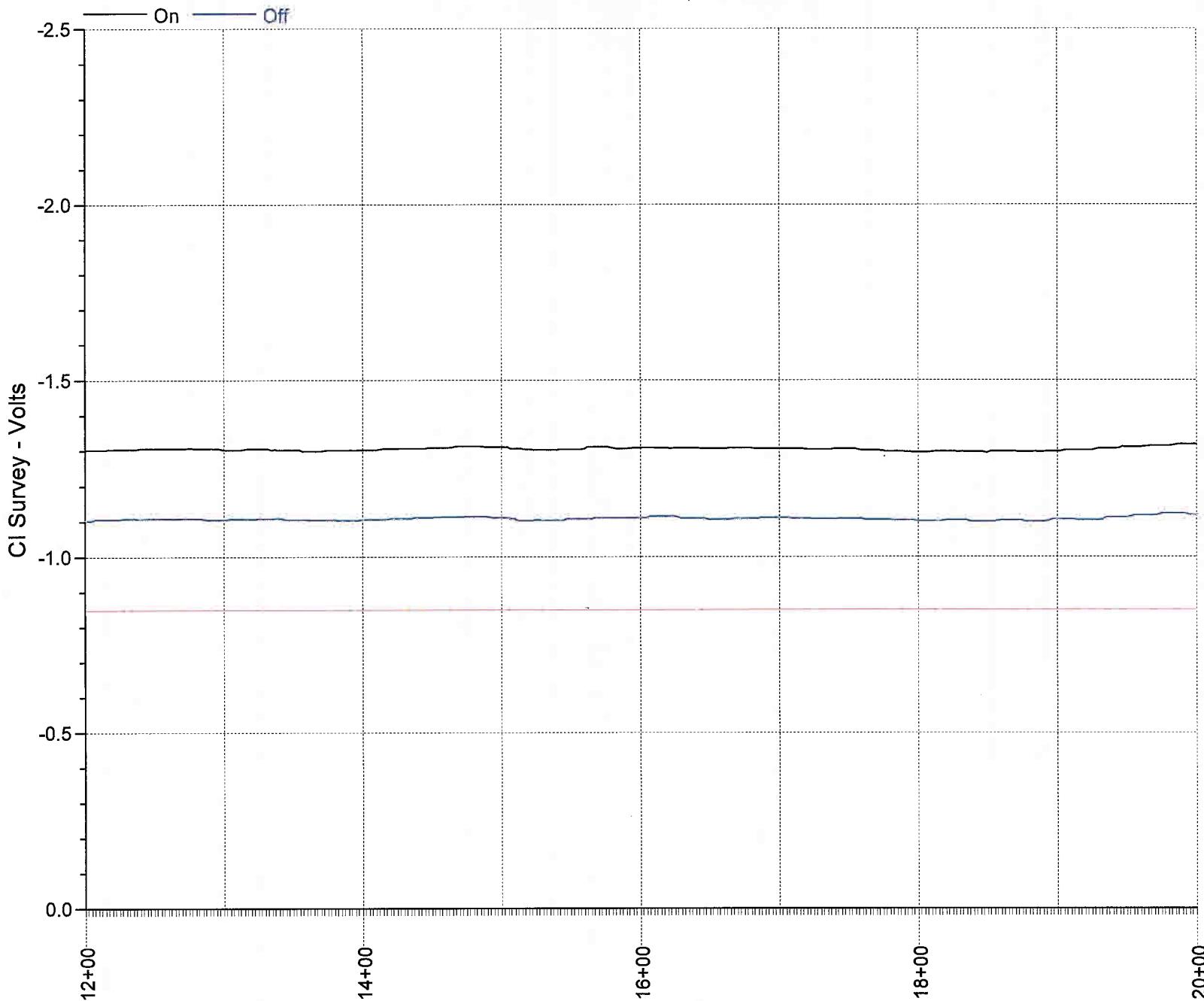
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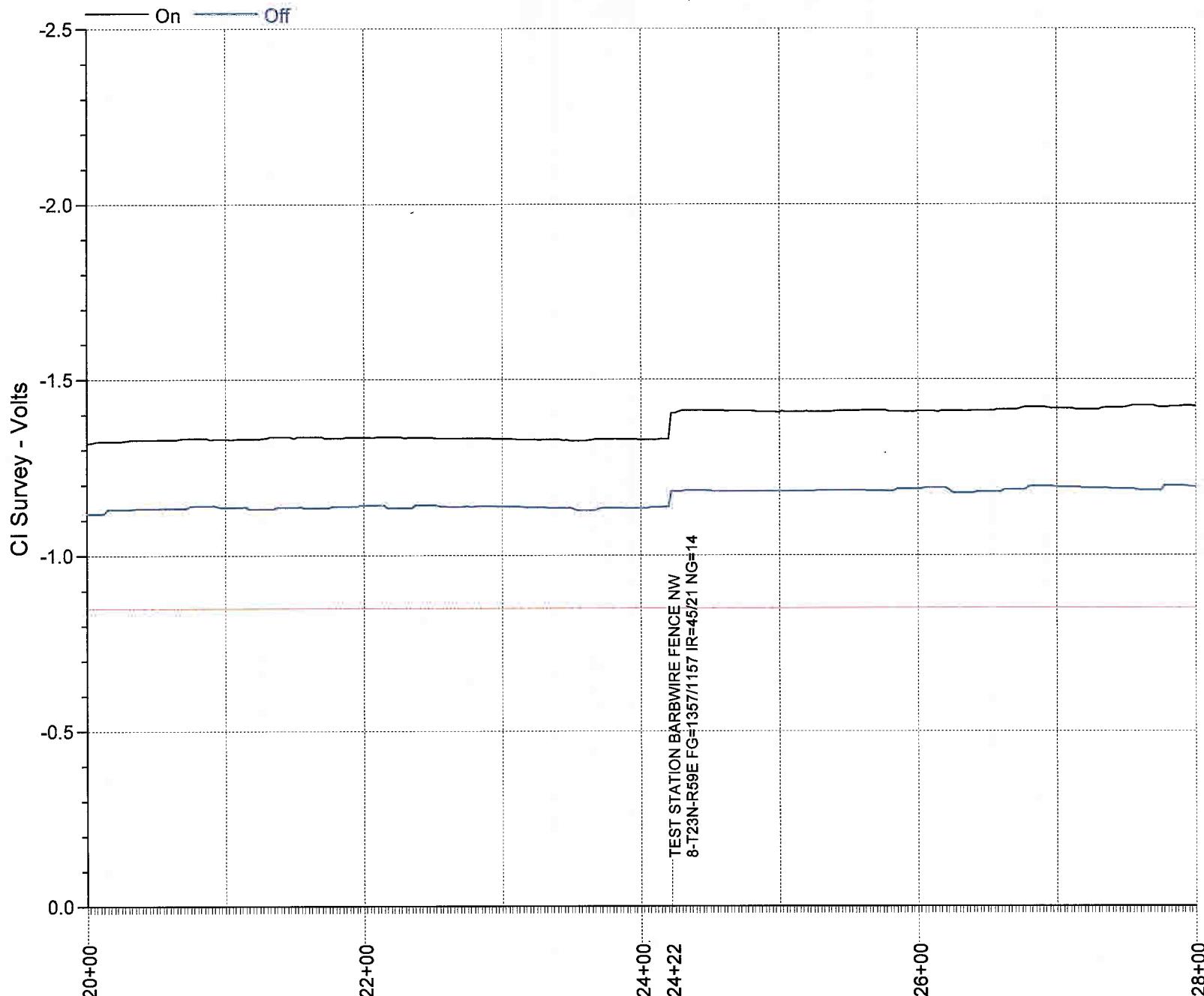
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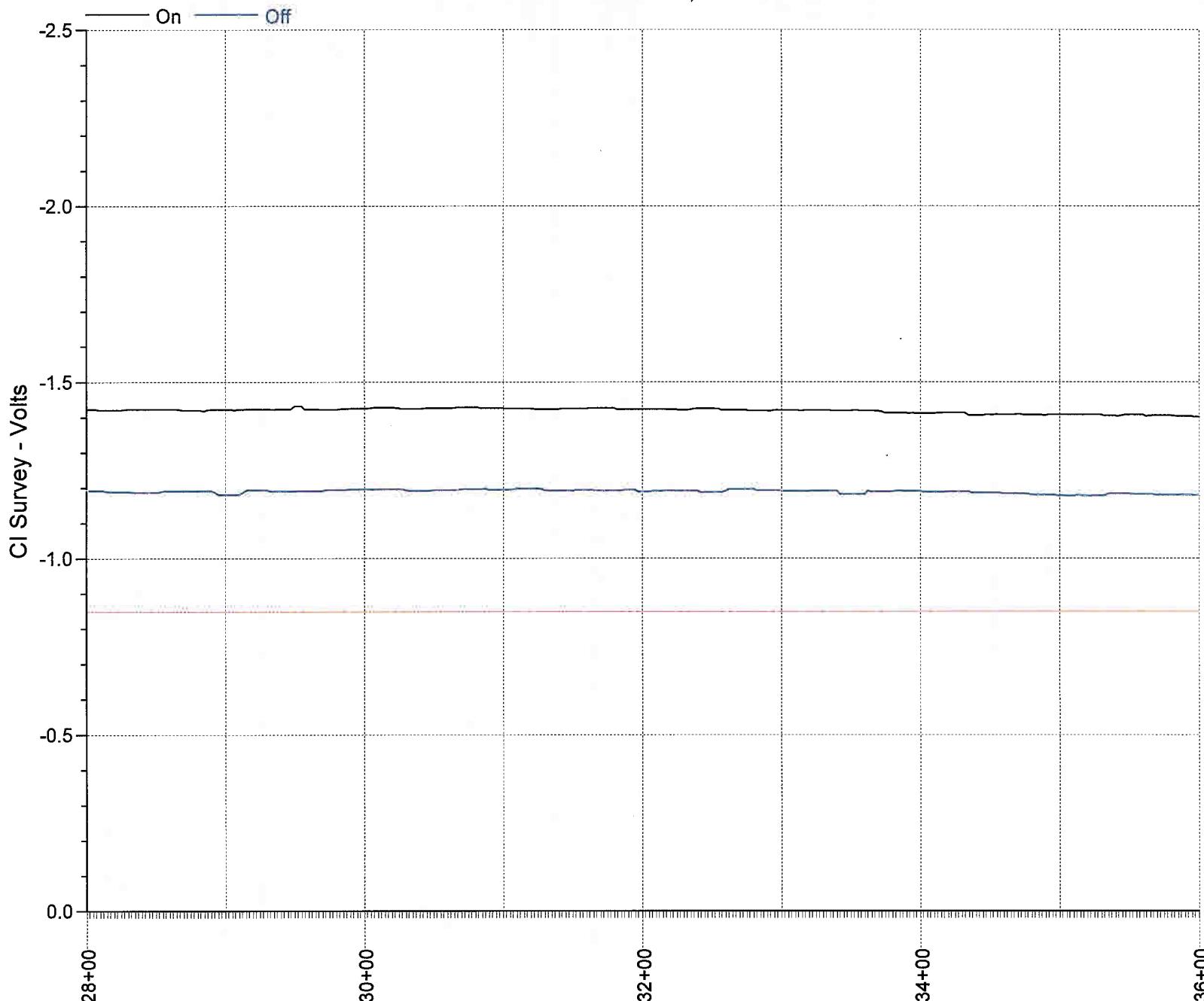
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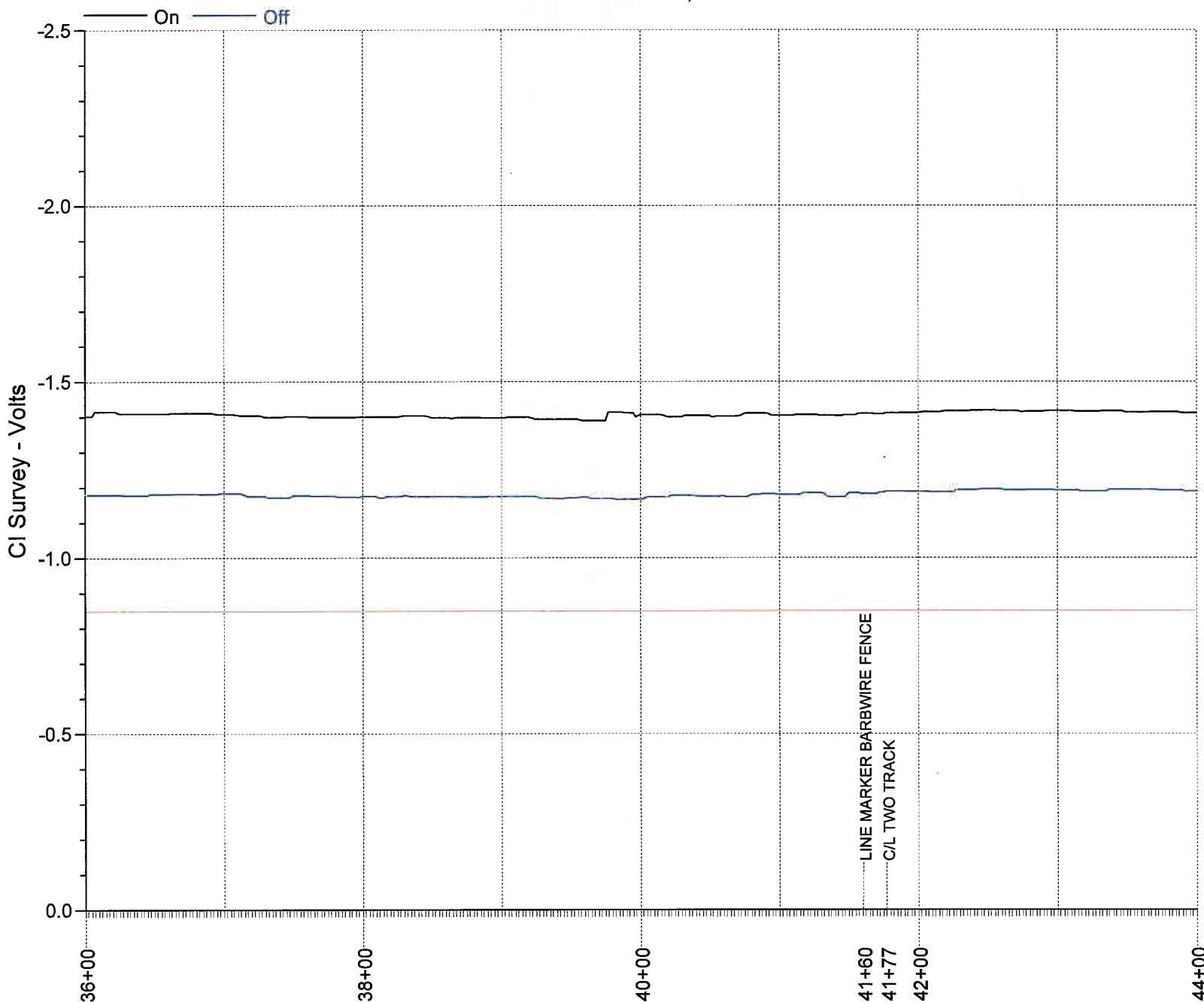
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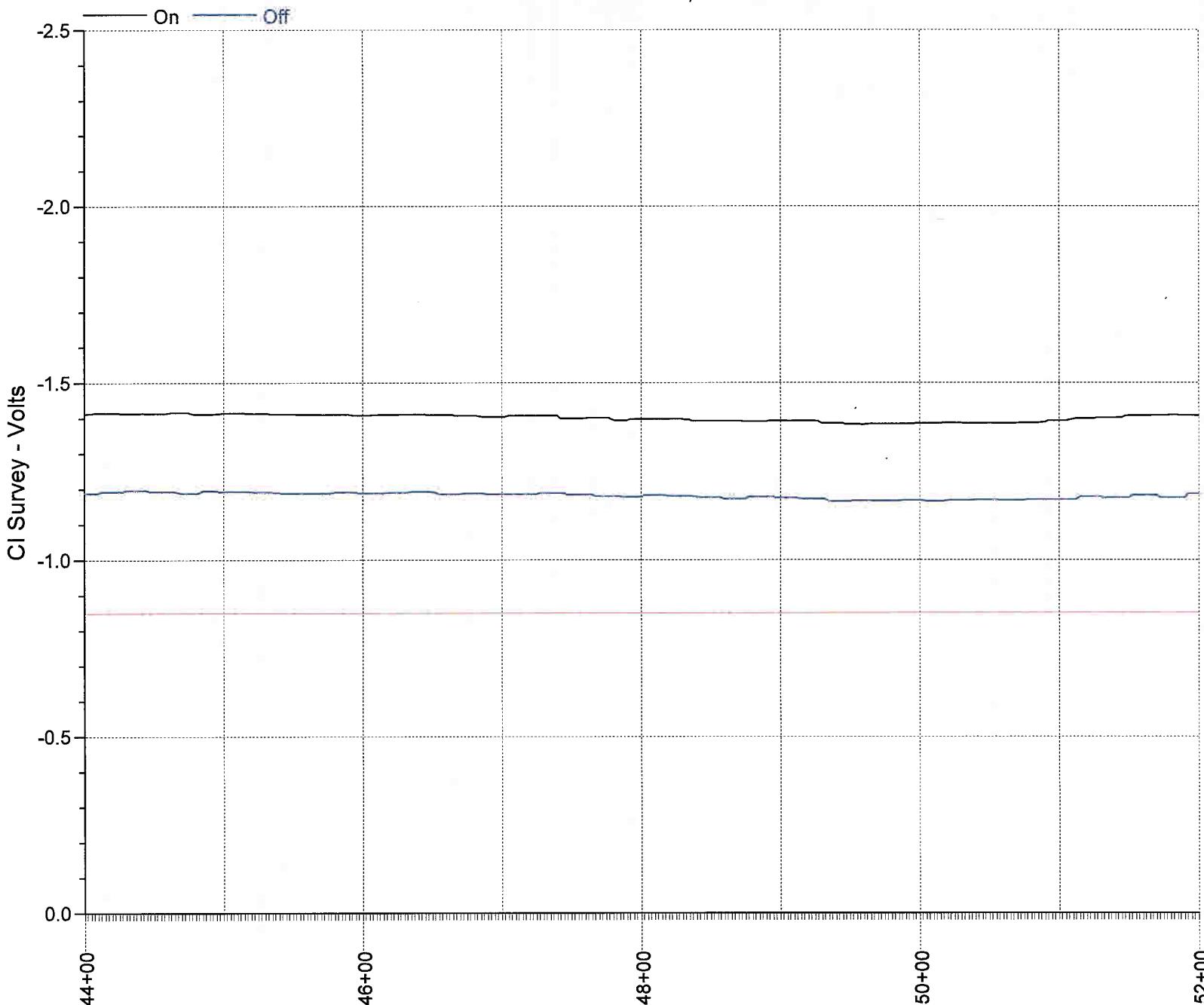
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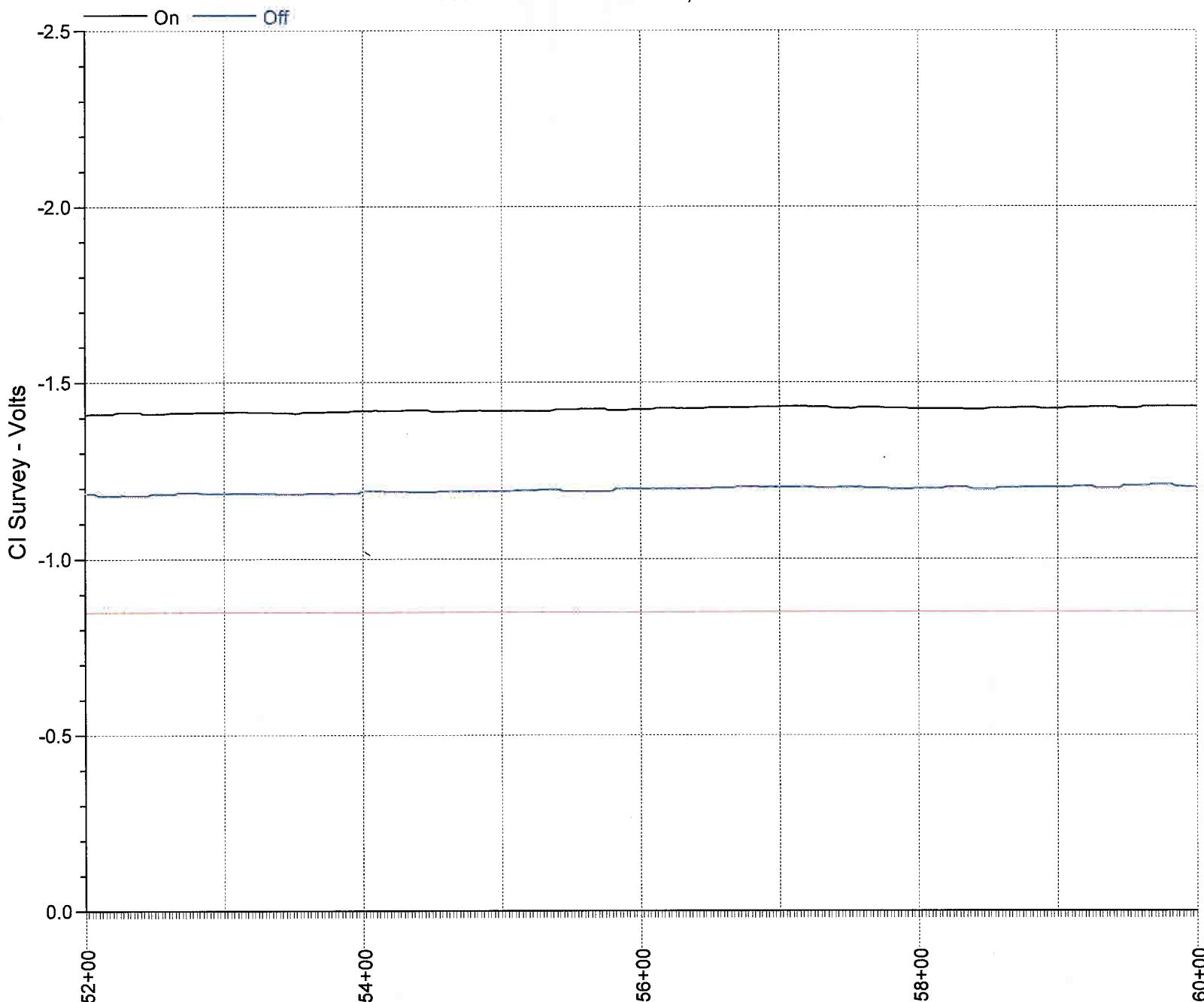
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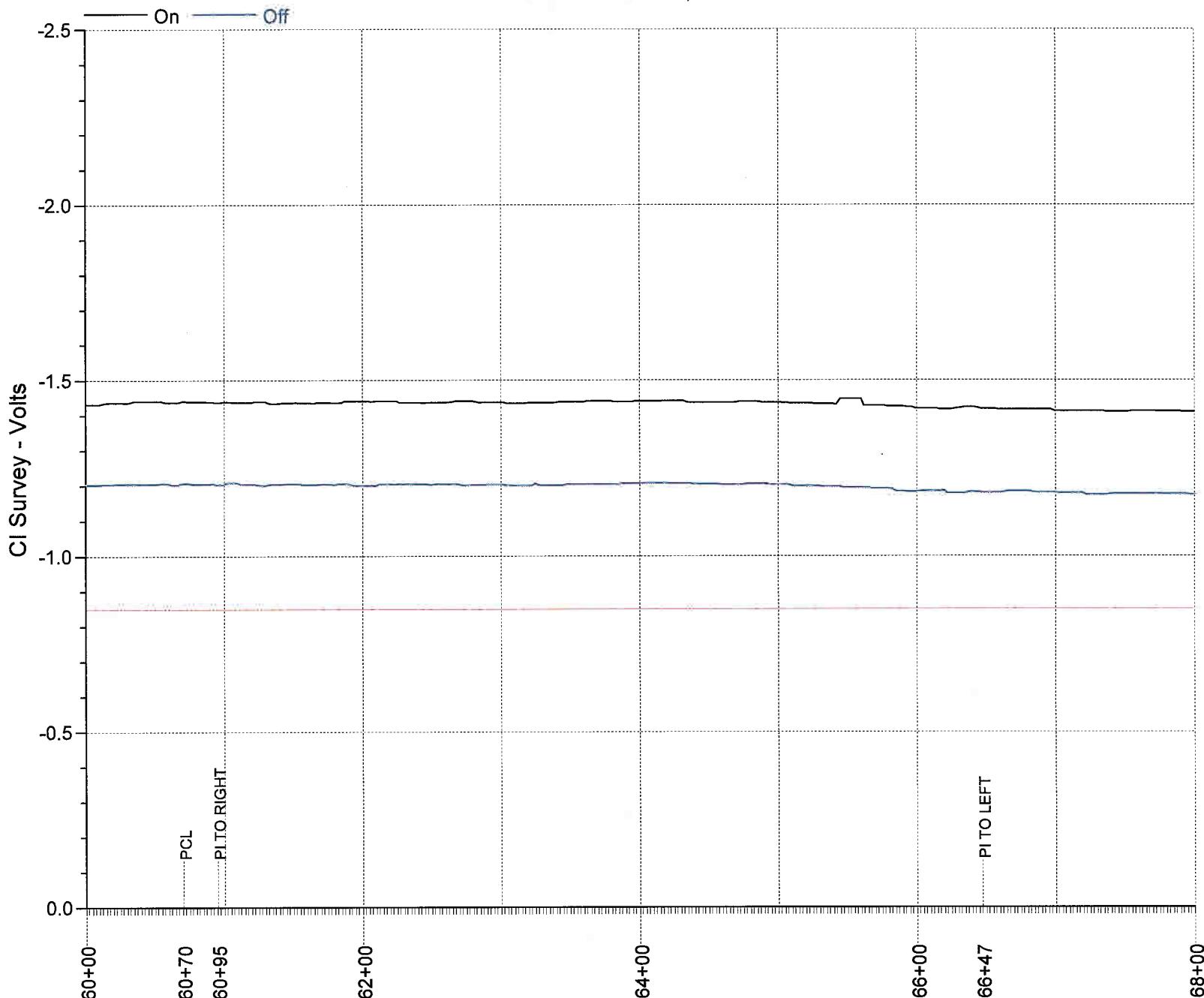
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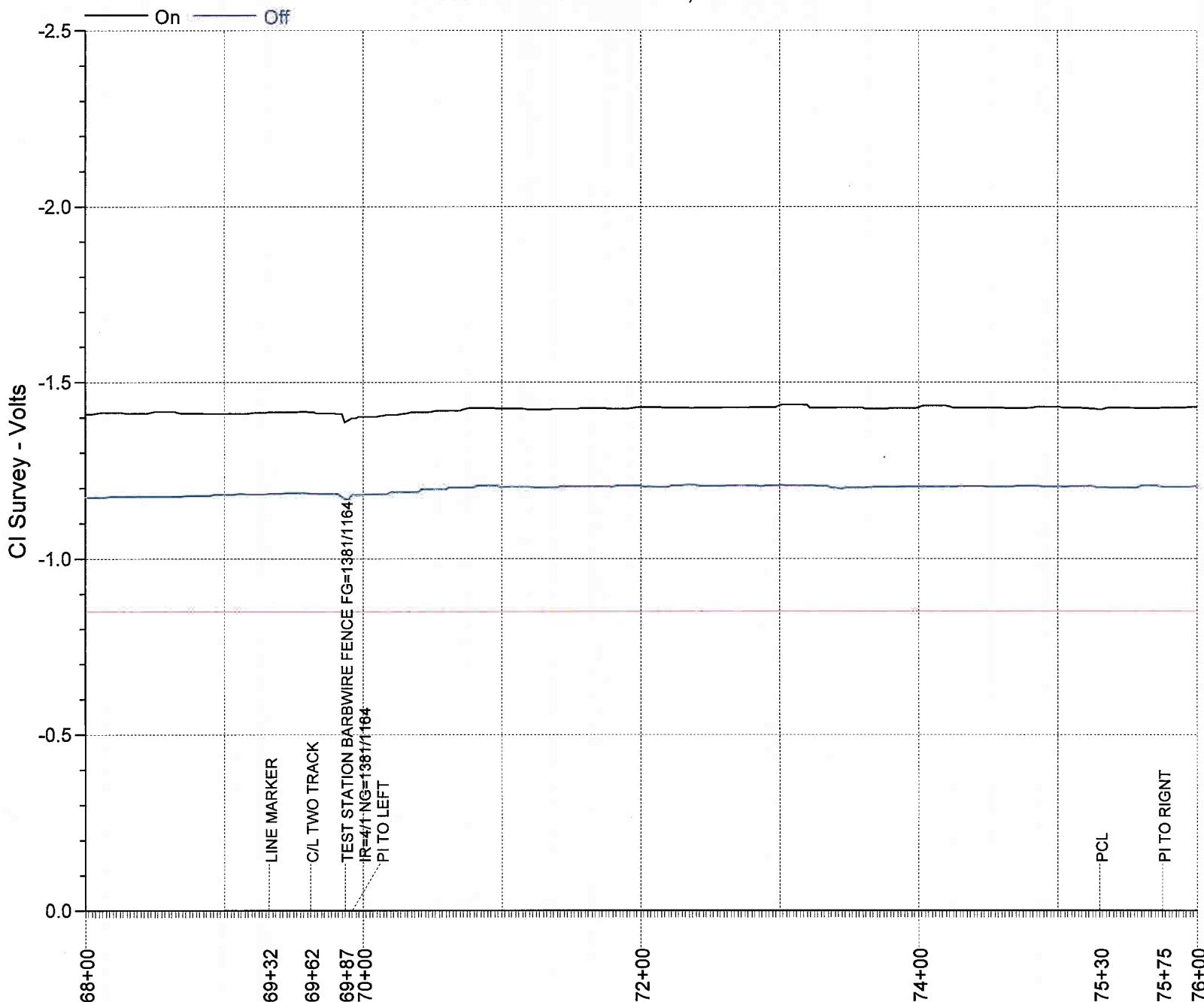
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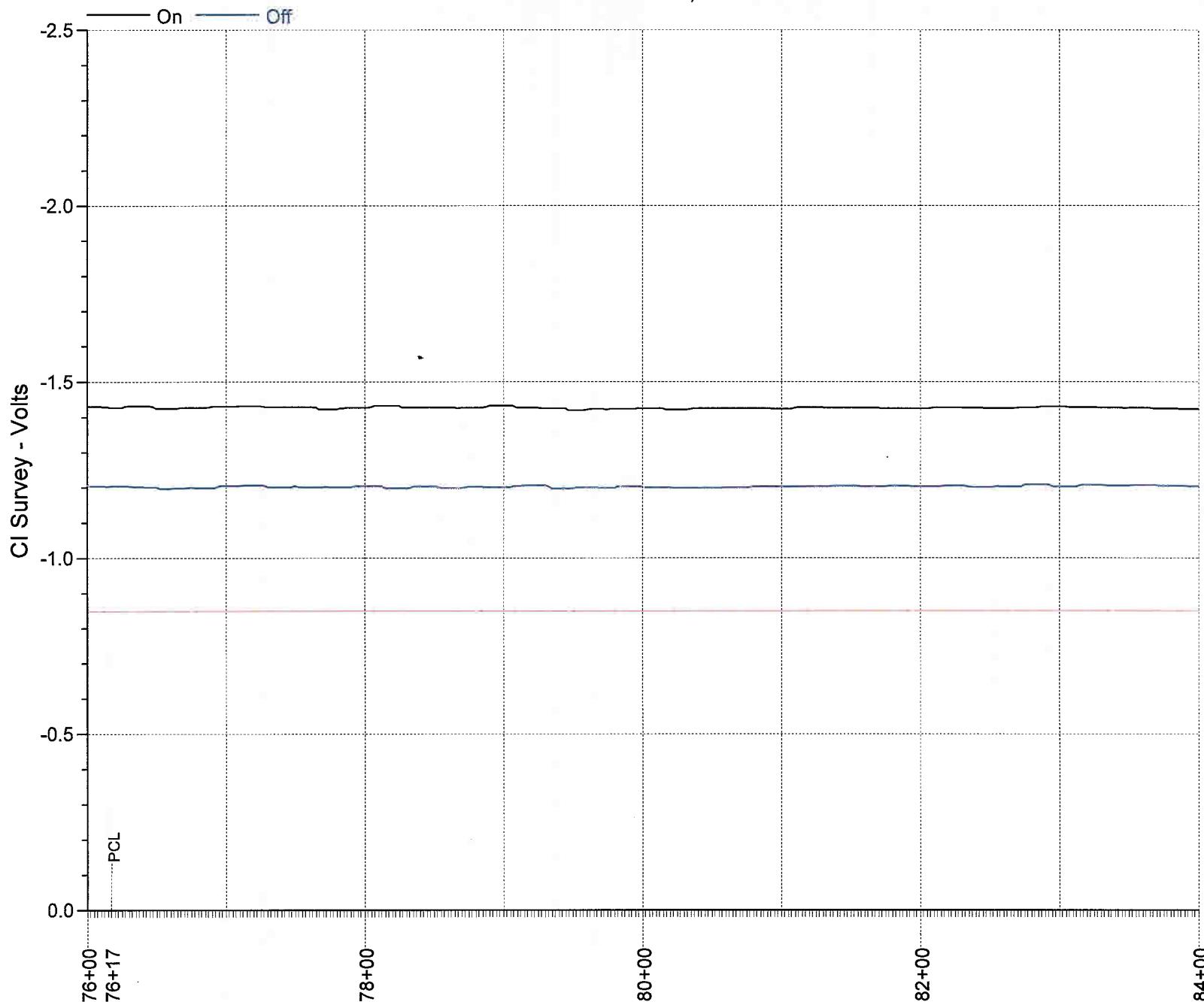
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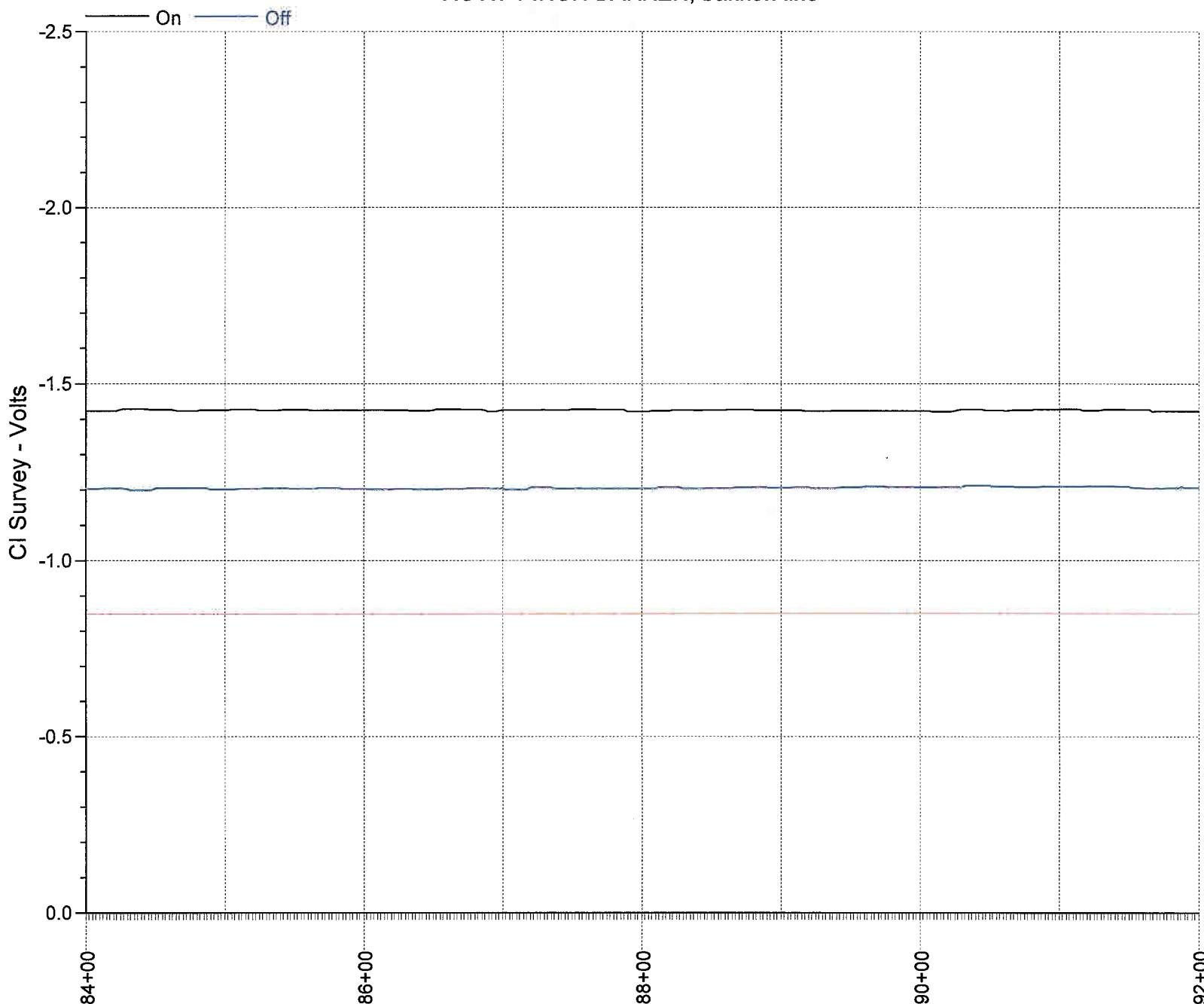
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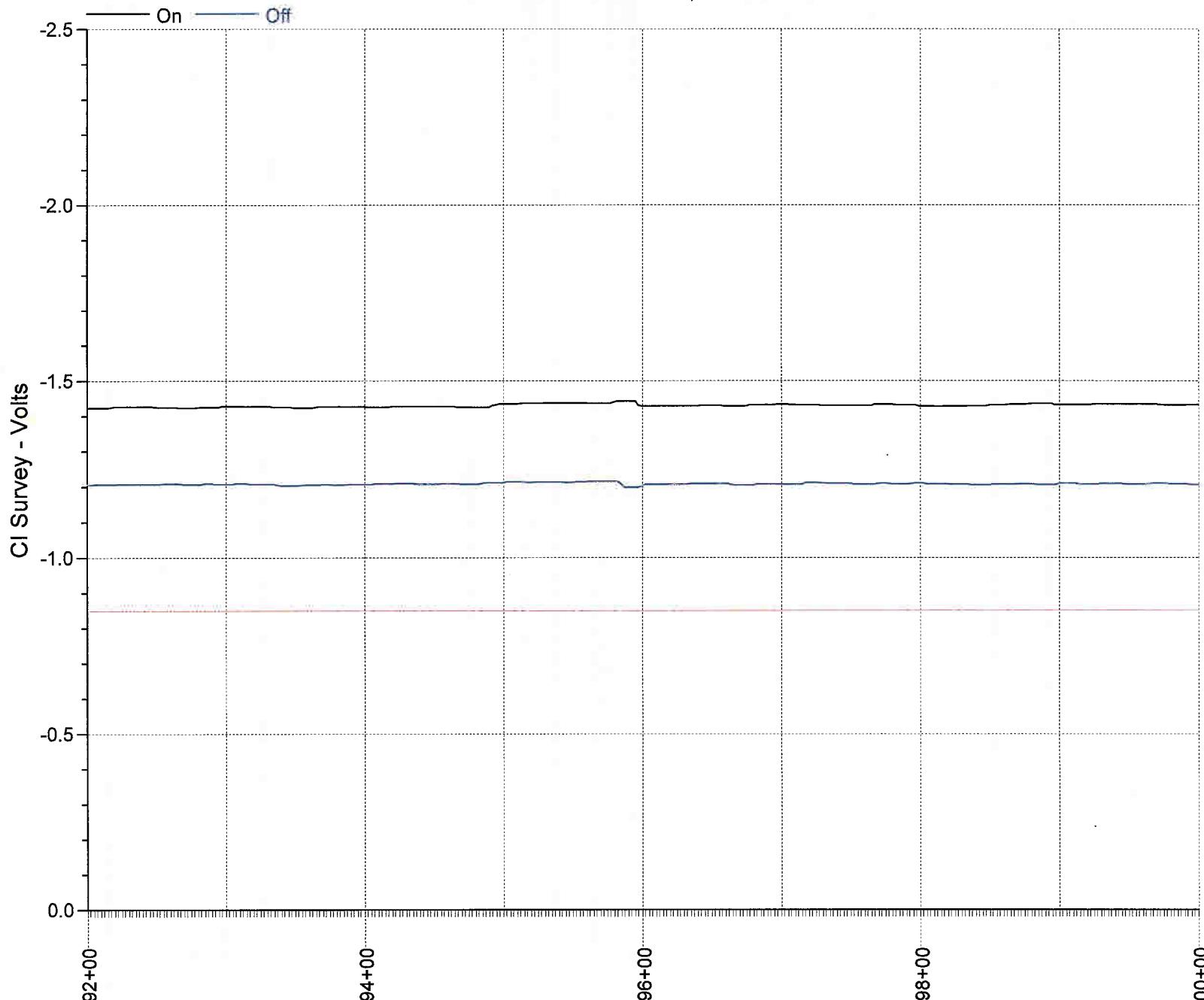
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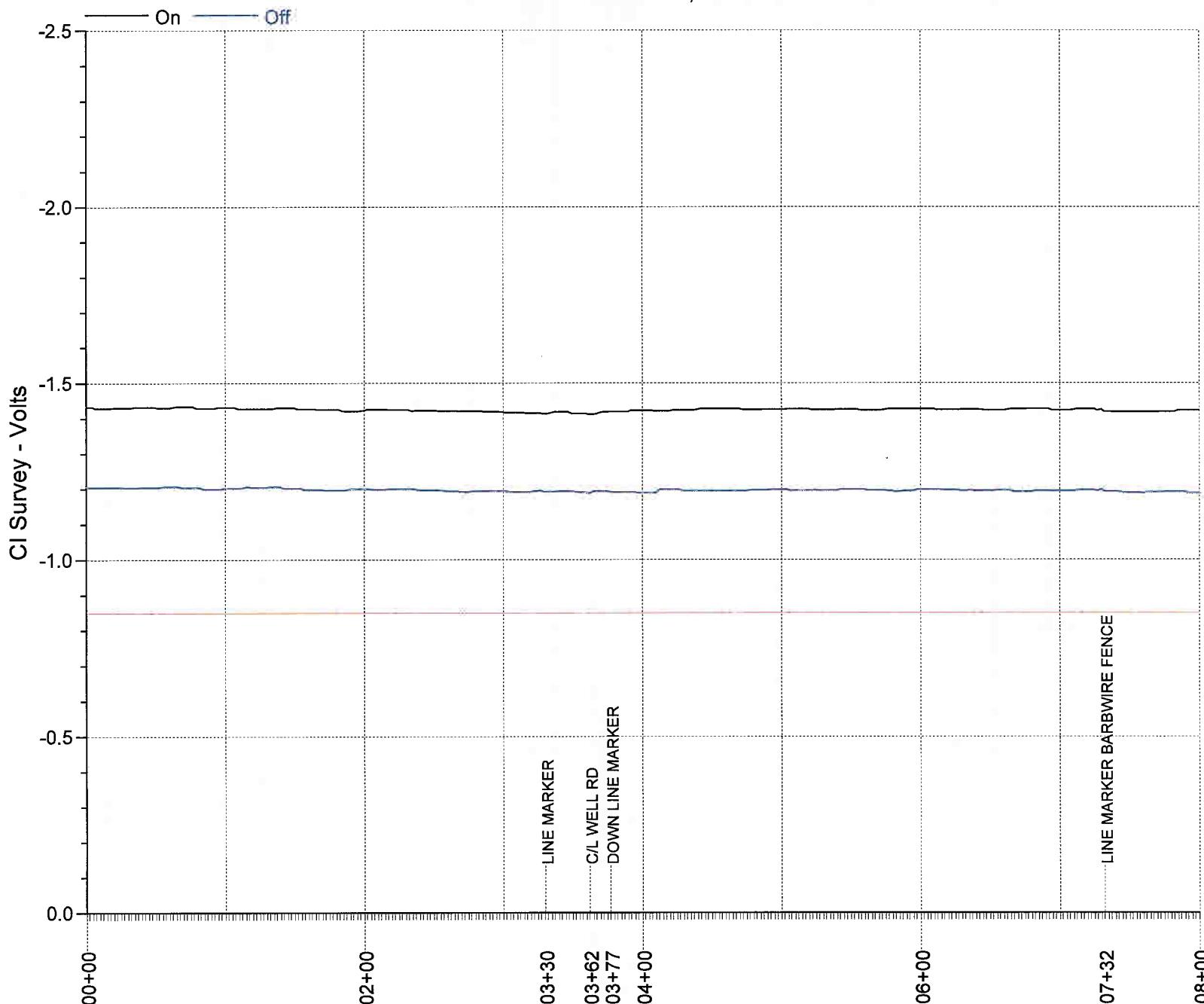
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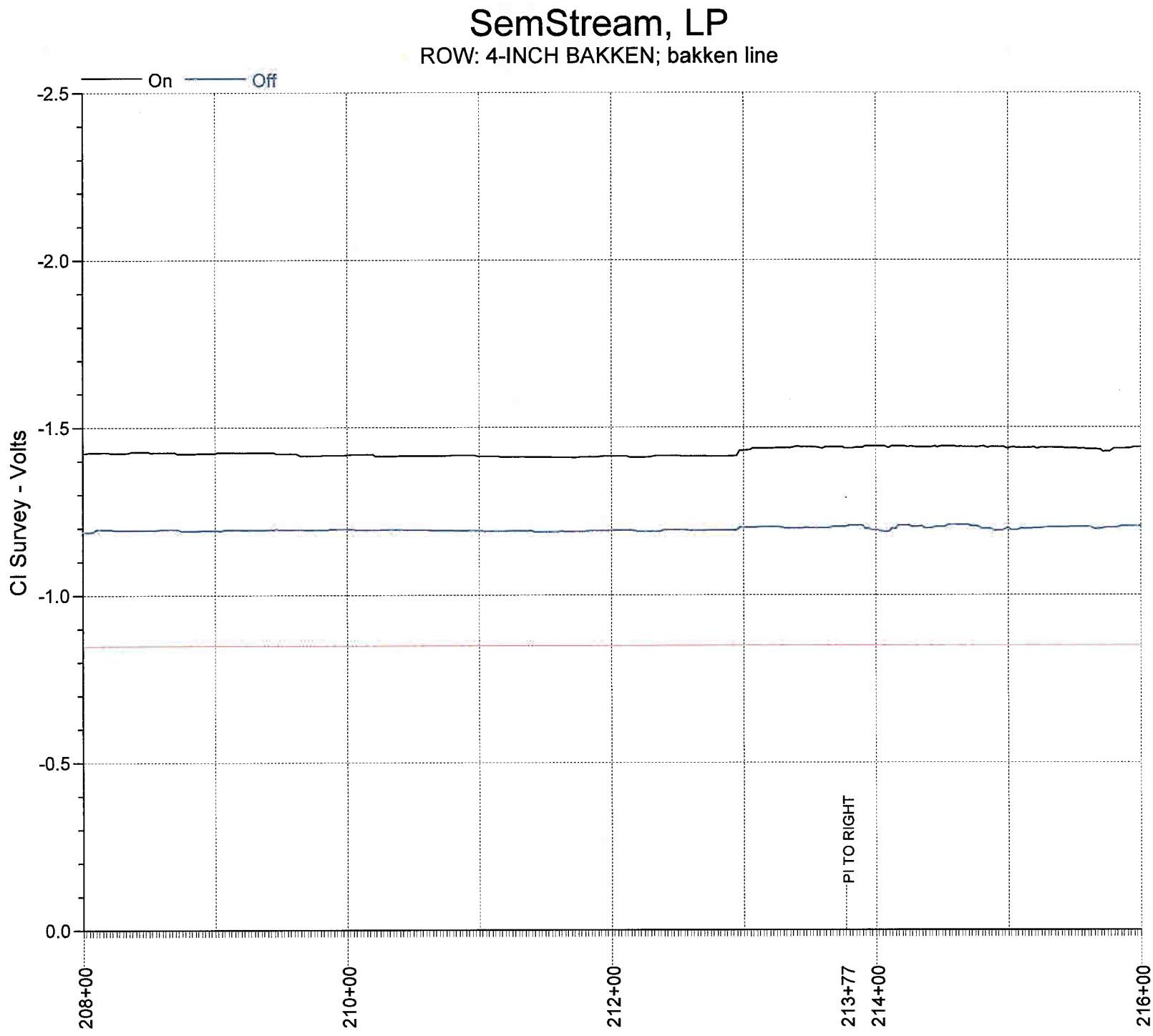
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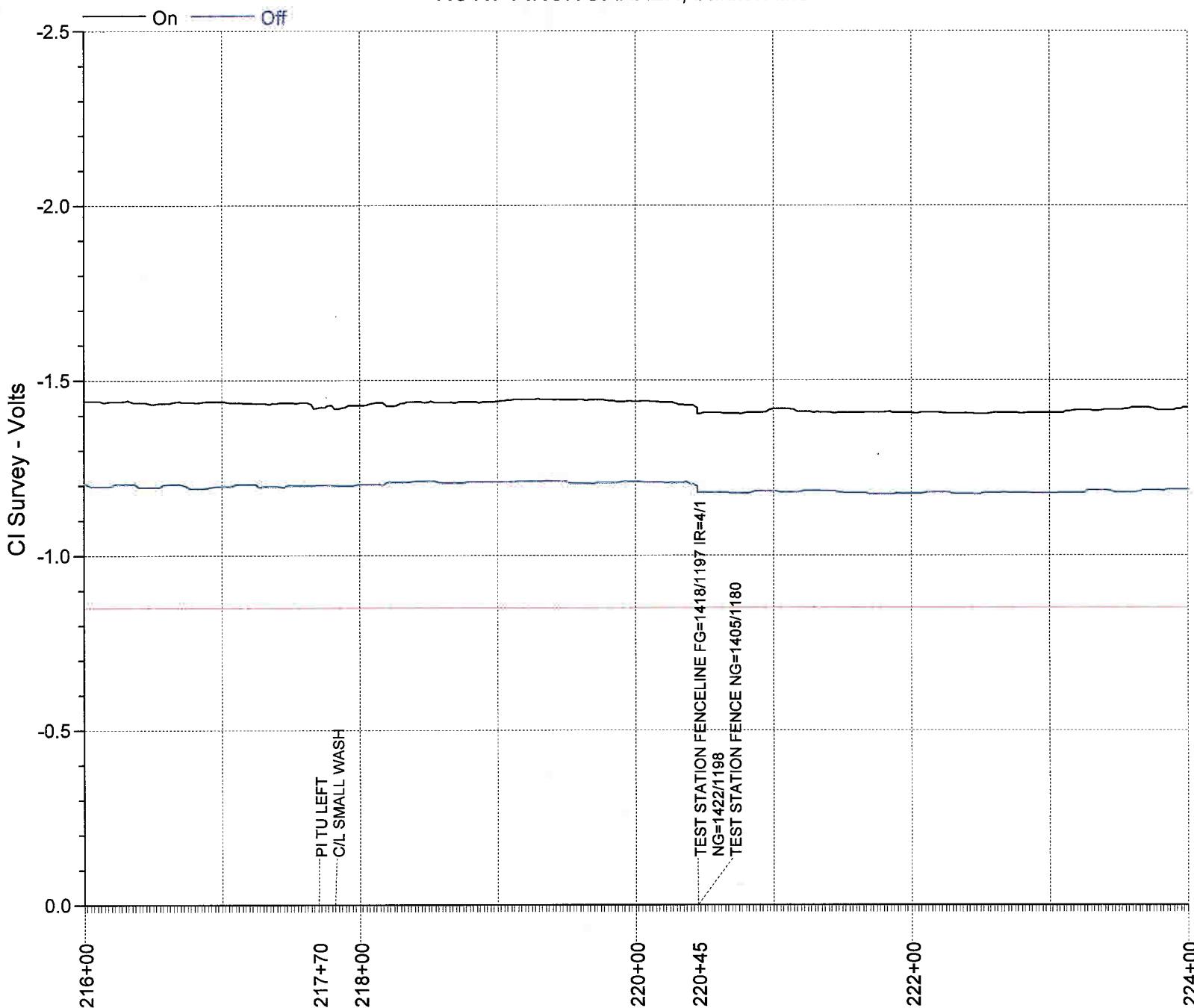
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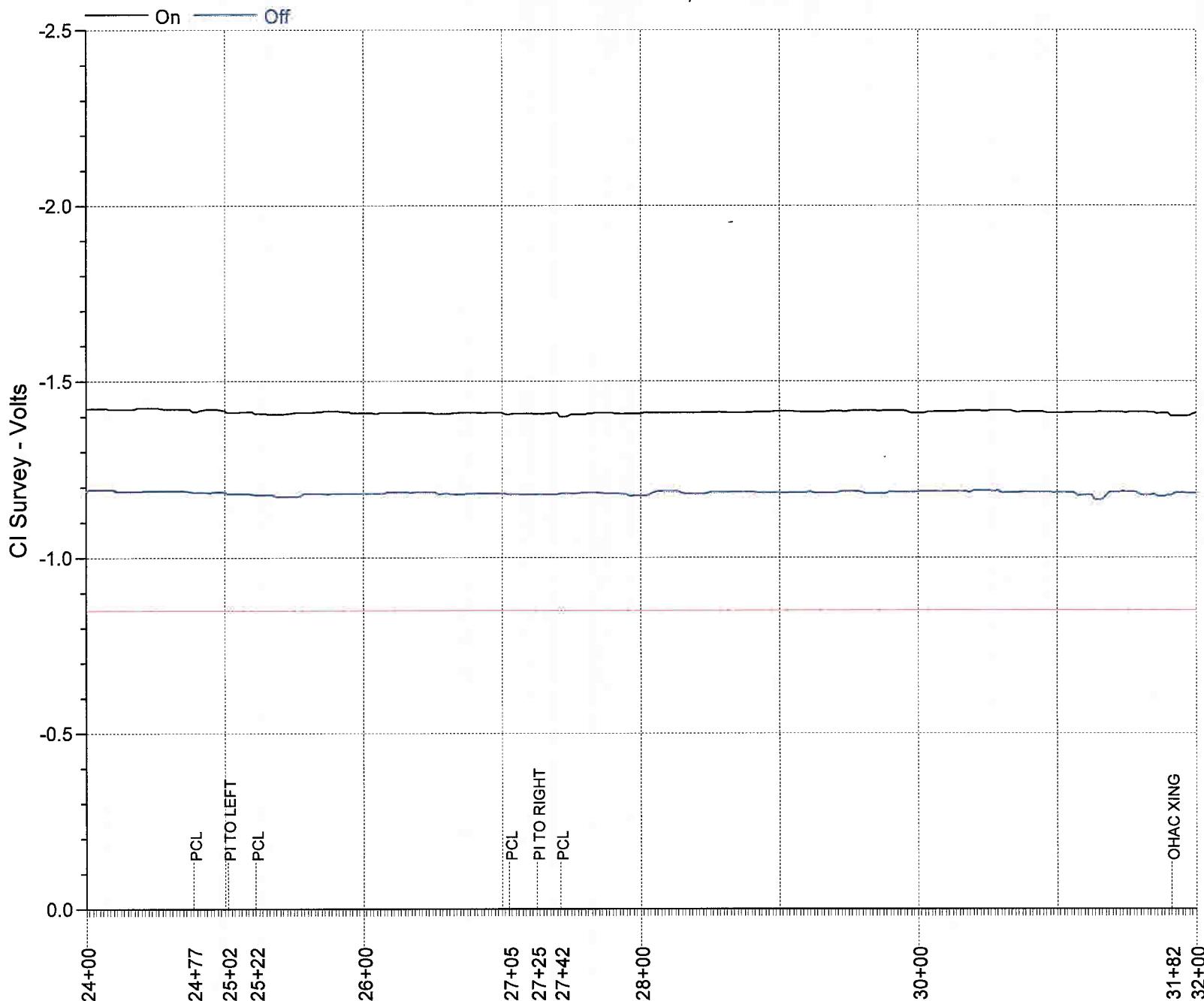
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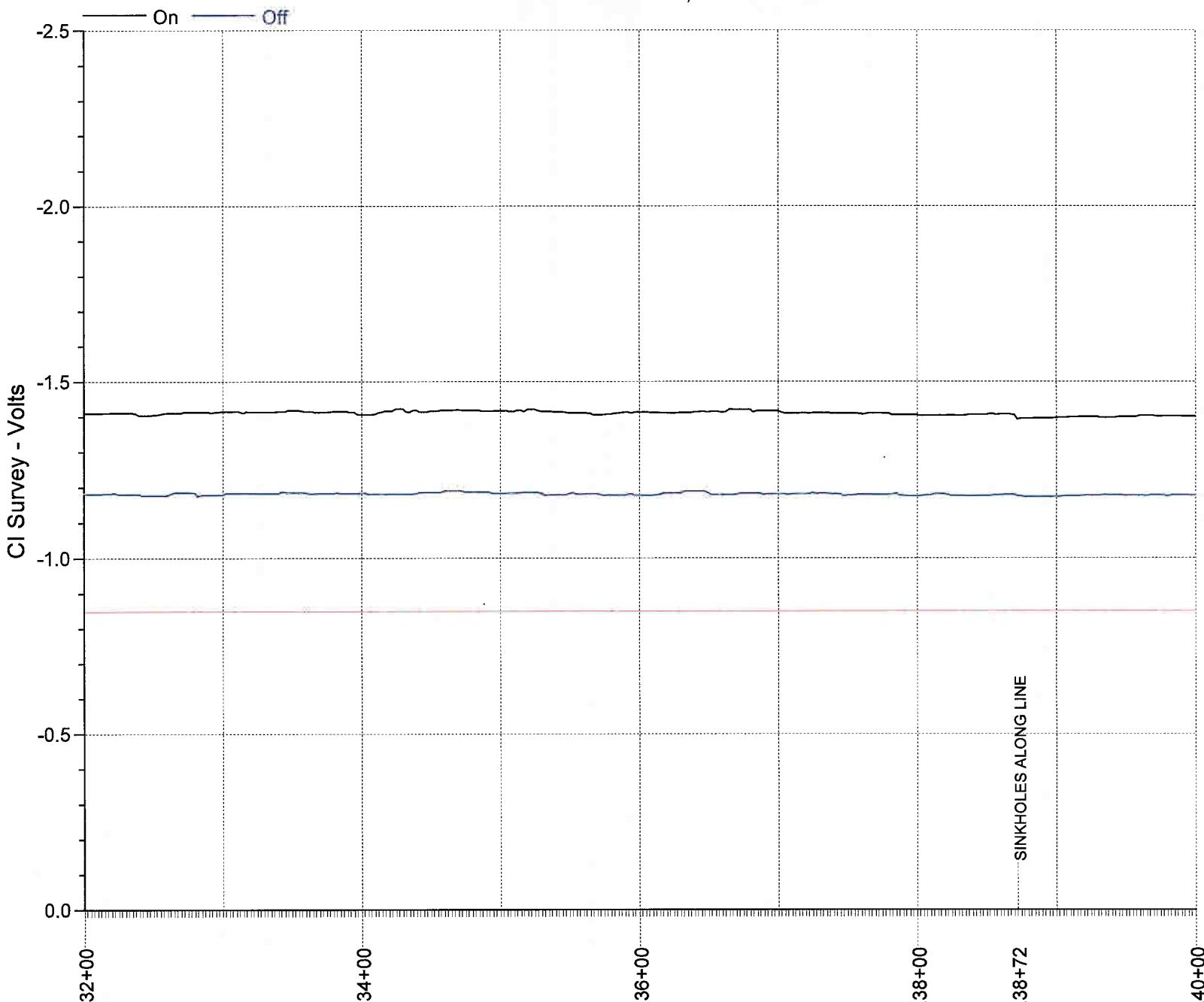
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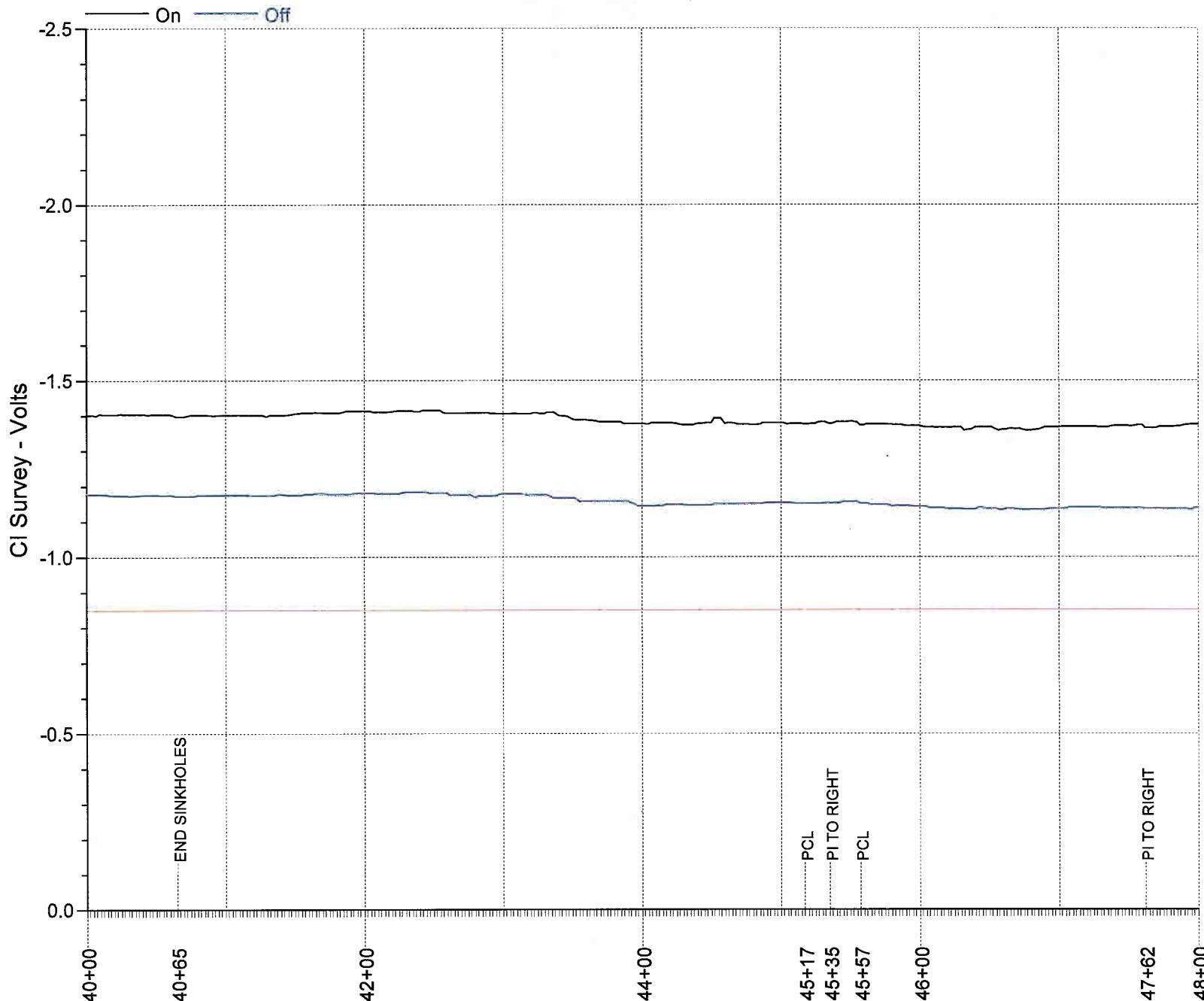
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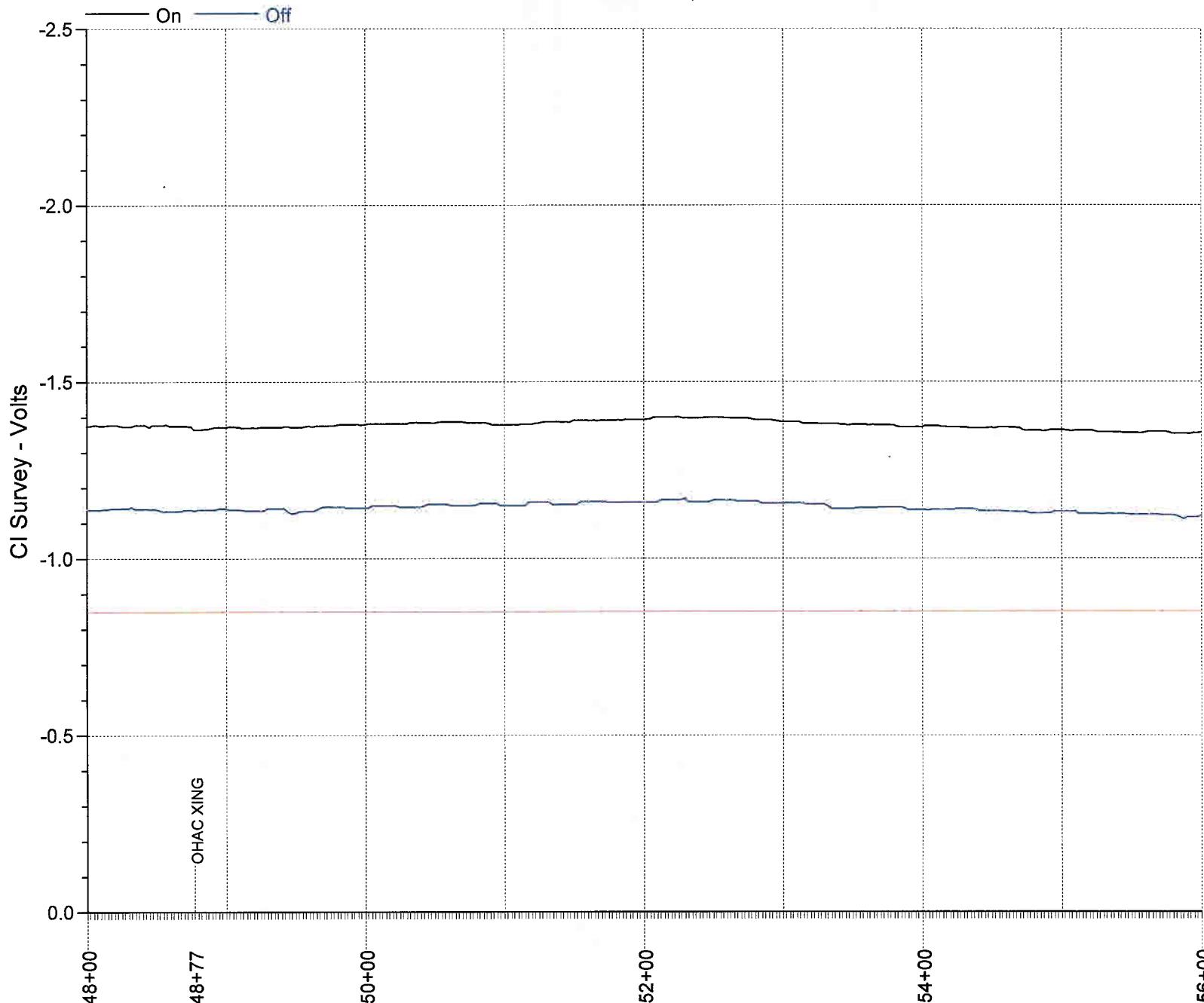
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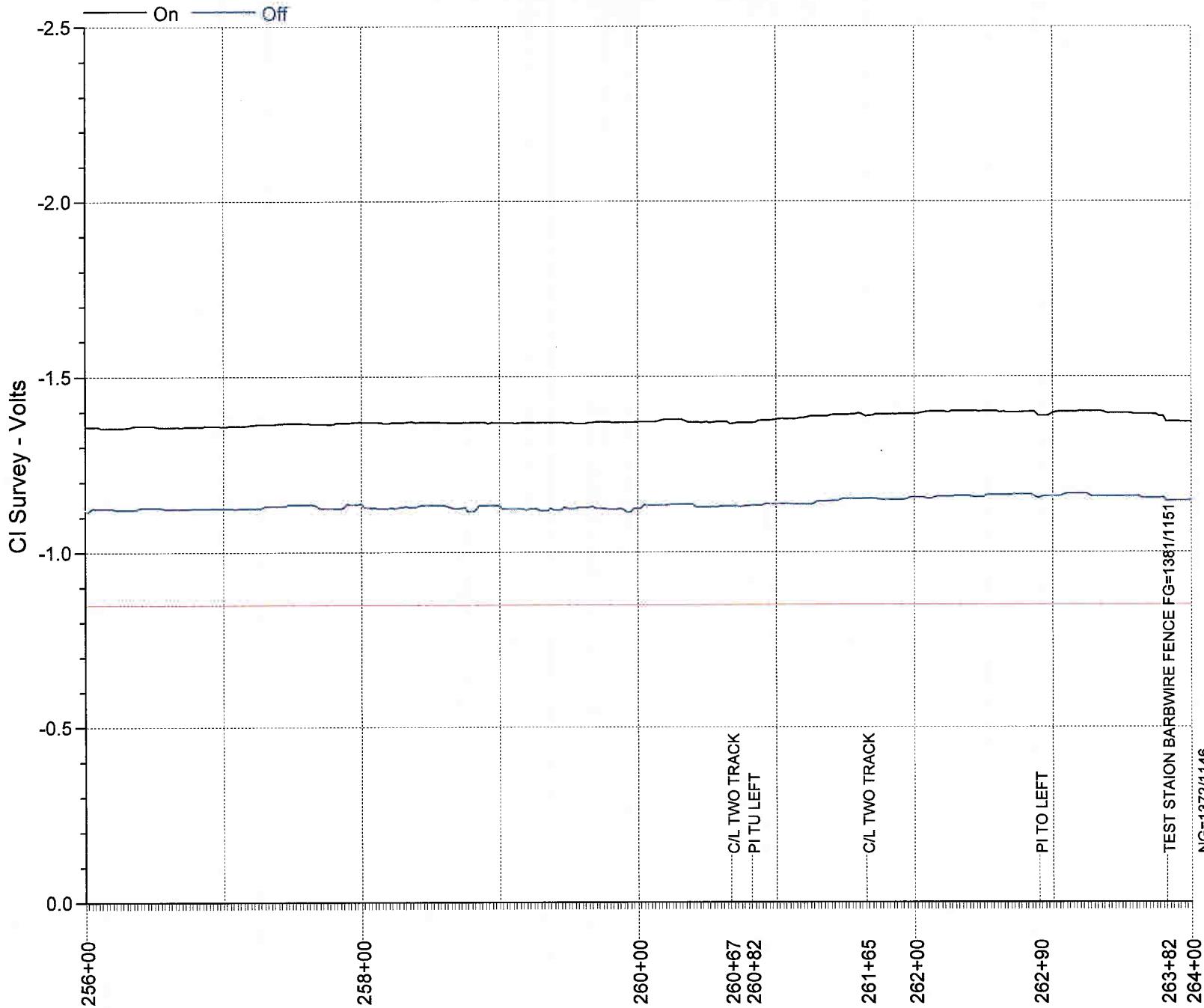
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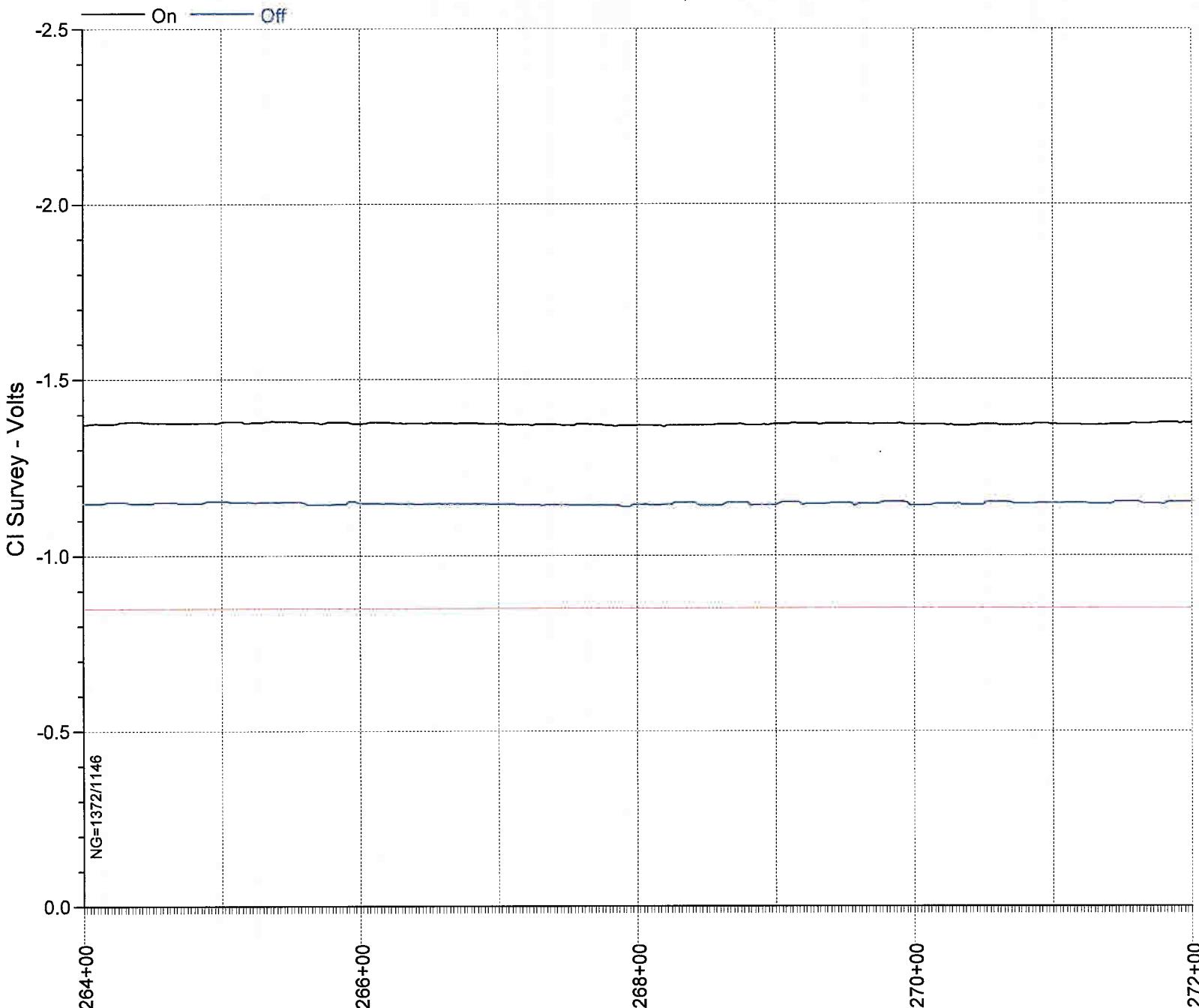
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



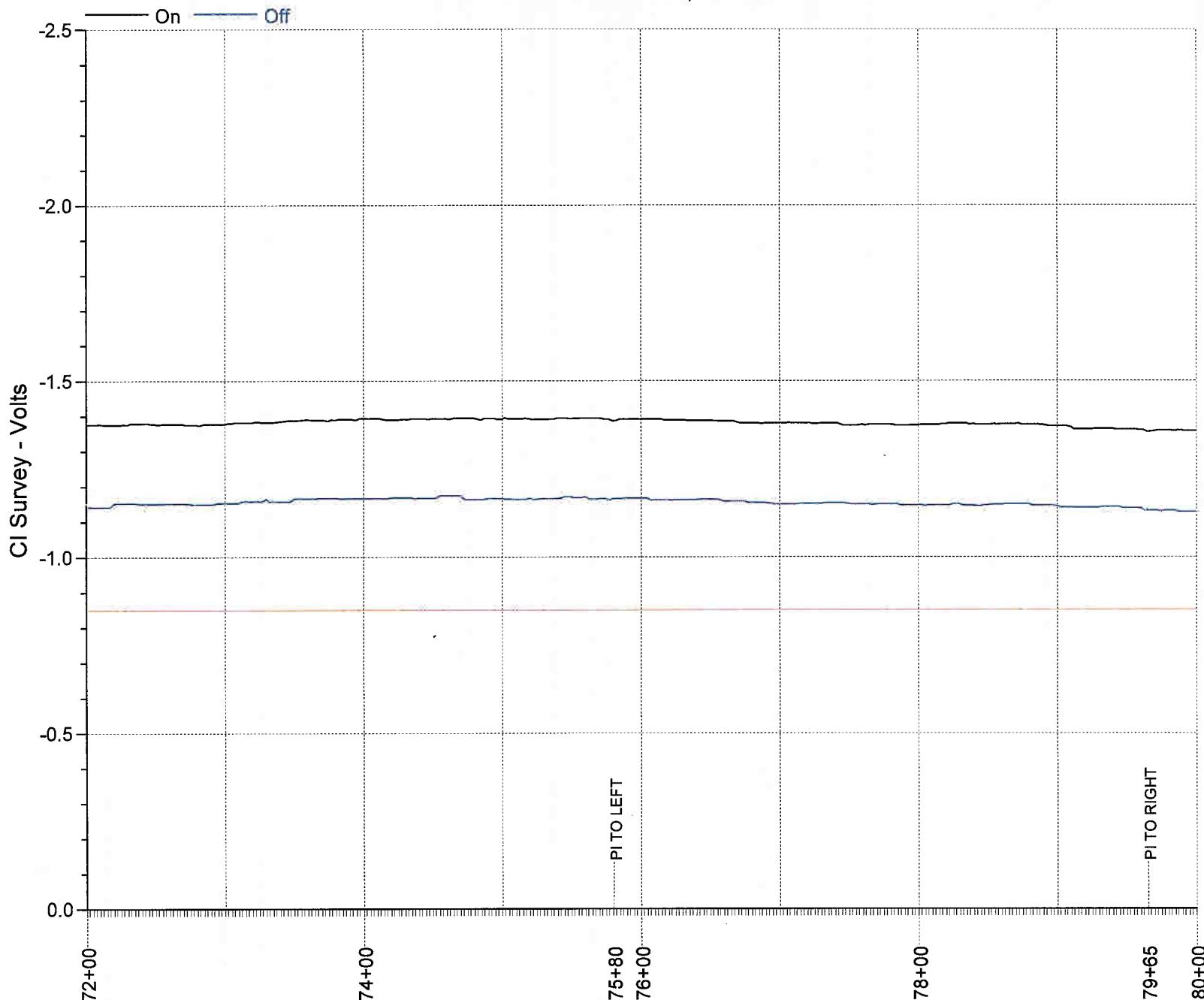
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



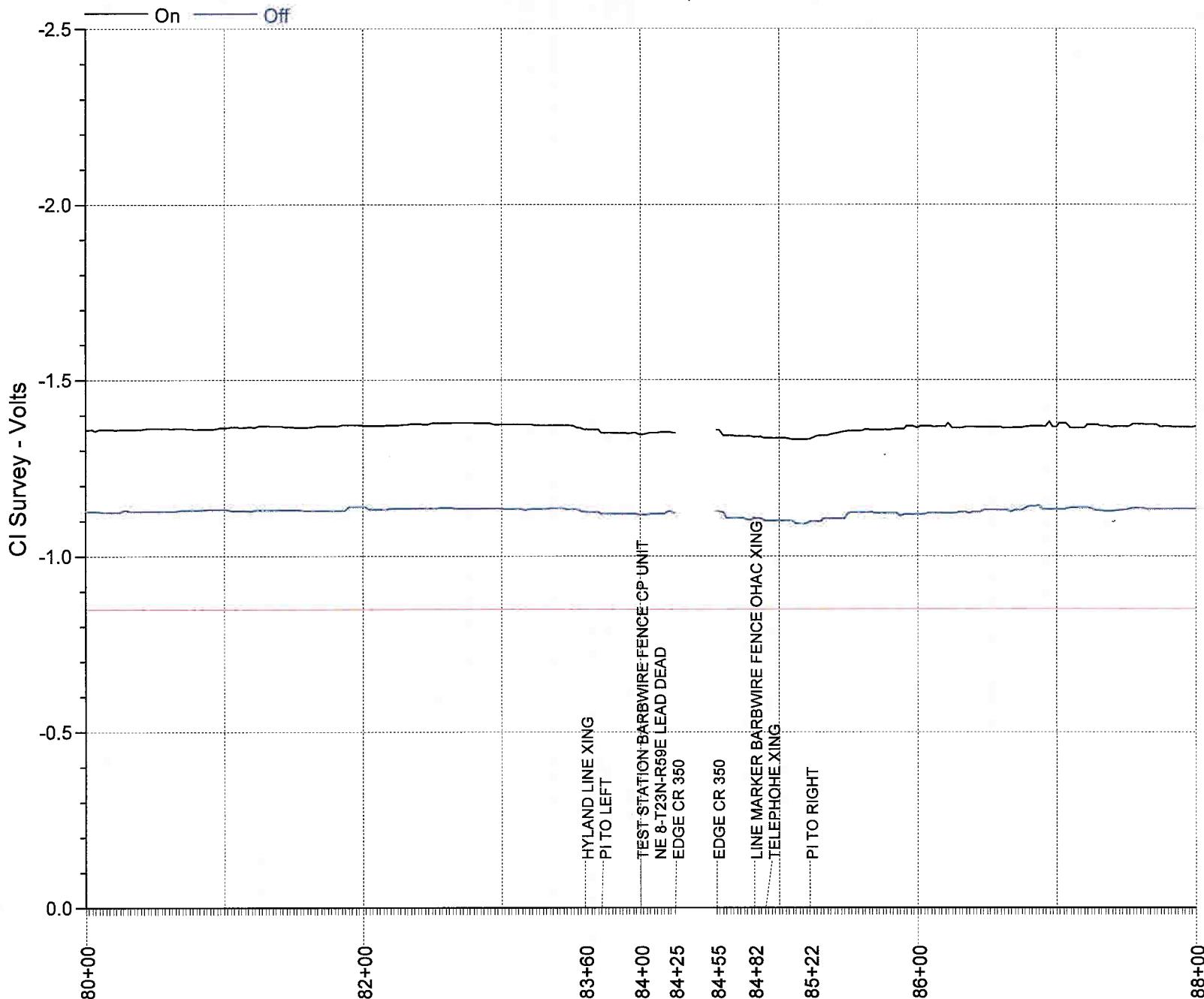
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



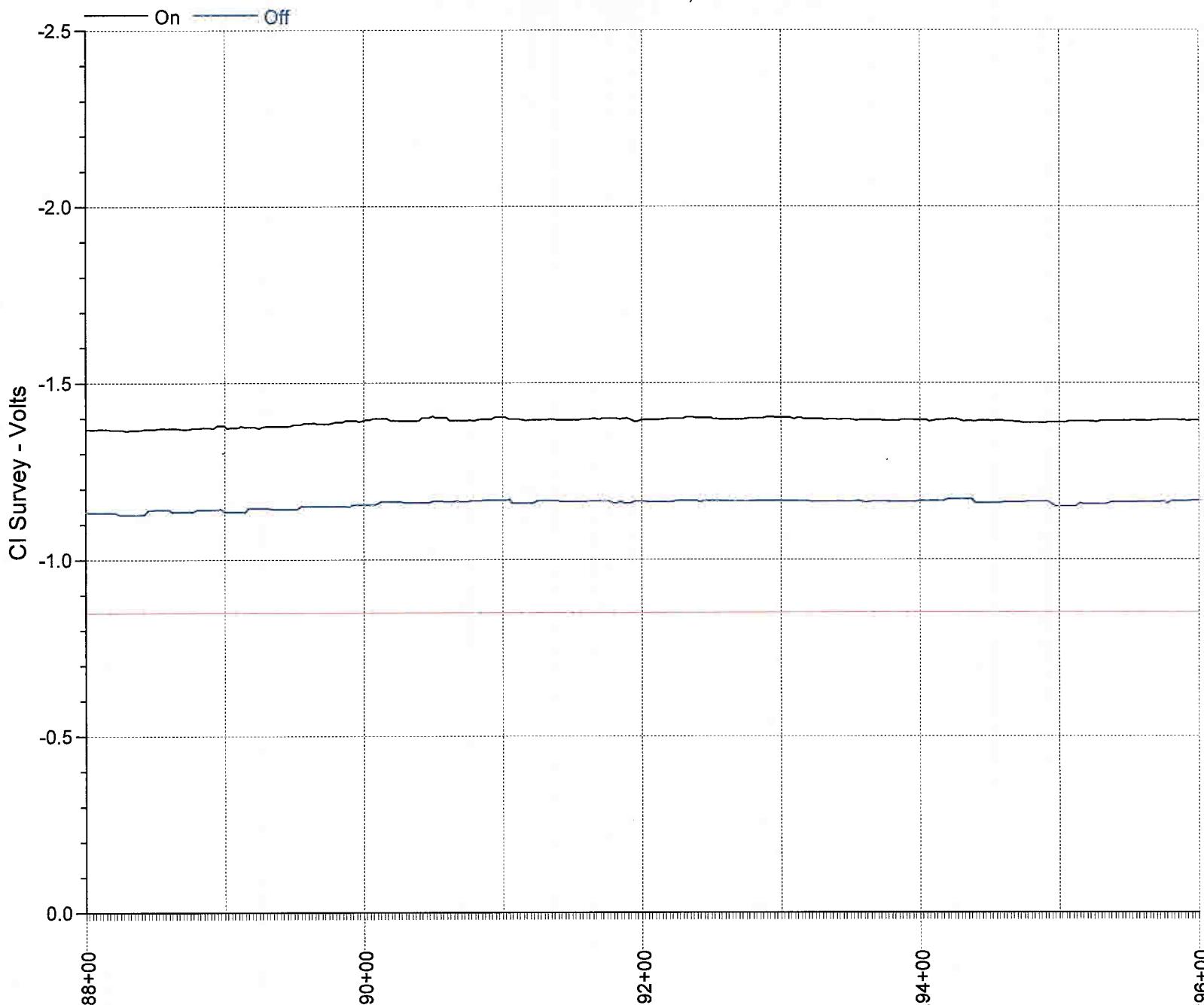
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



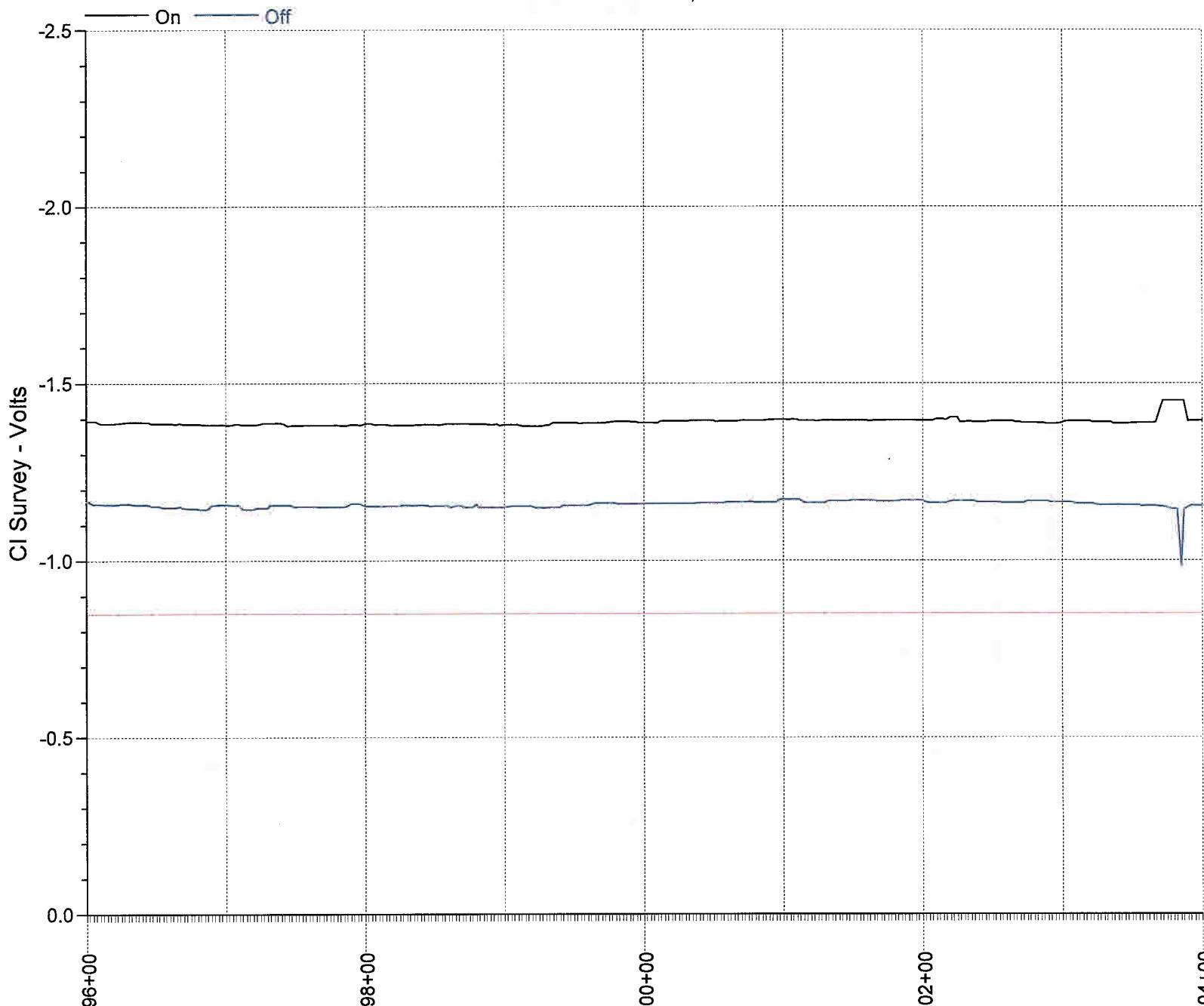
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



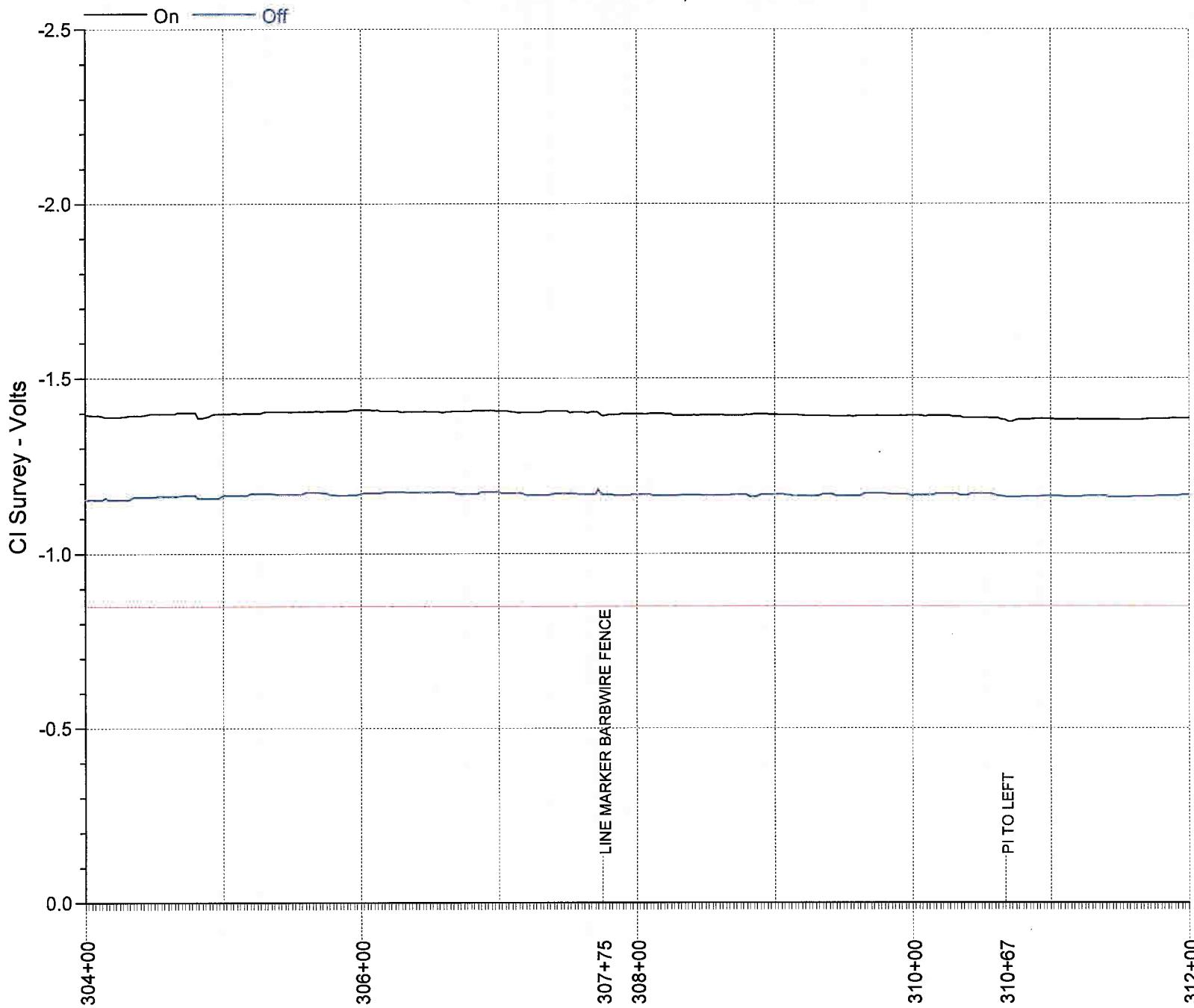
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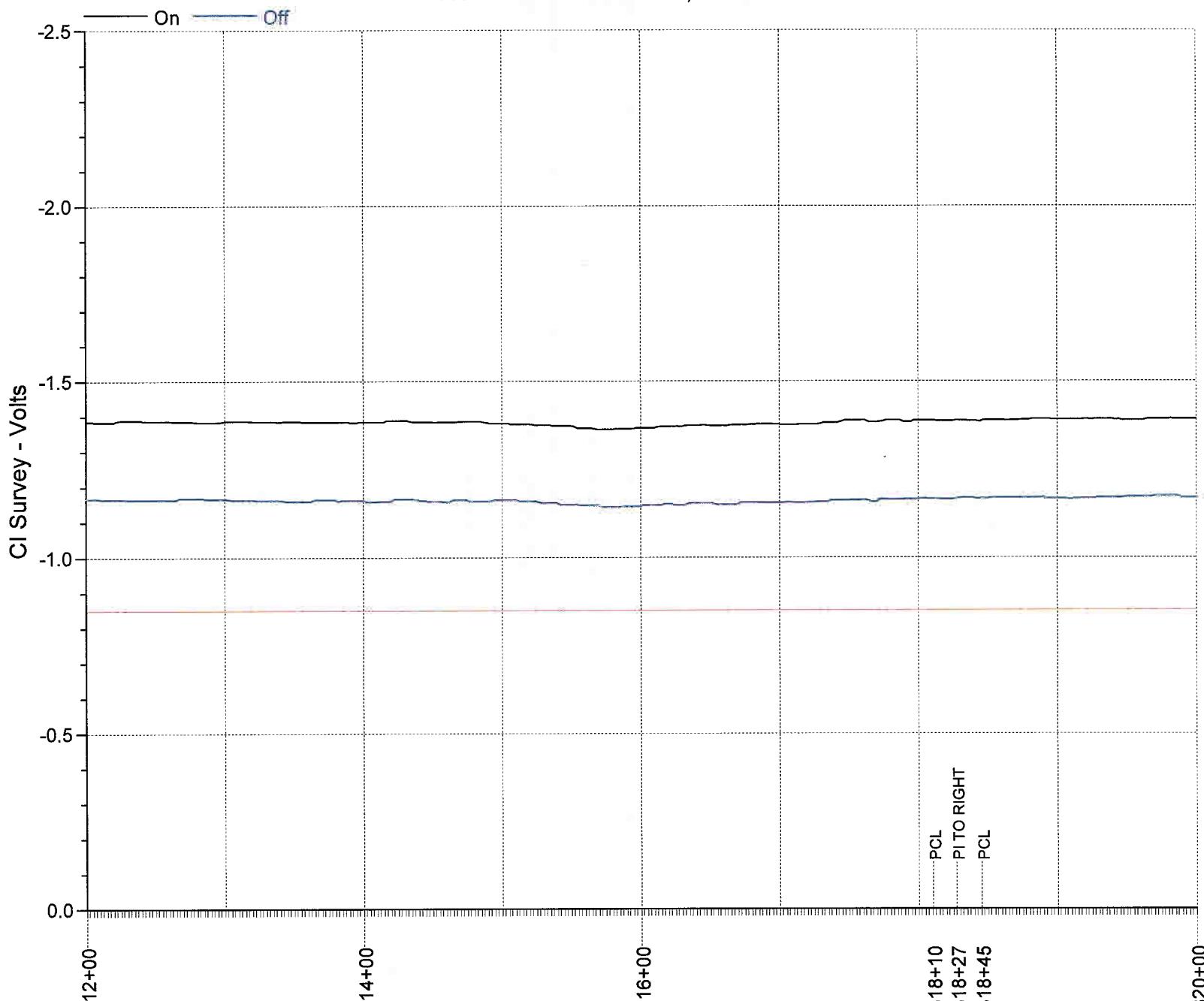
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ROW: 4-INCH BAKKEN; bakken line



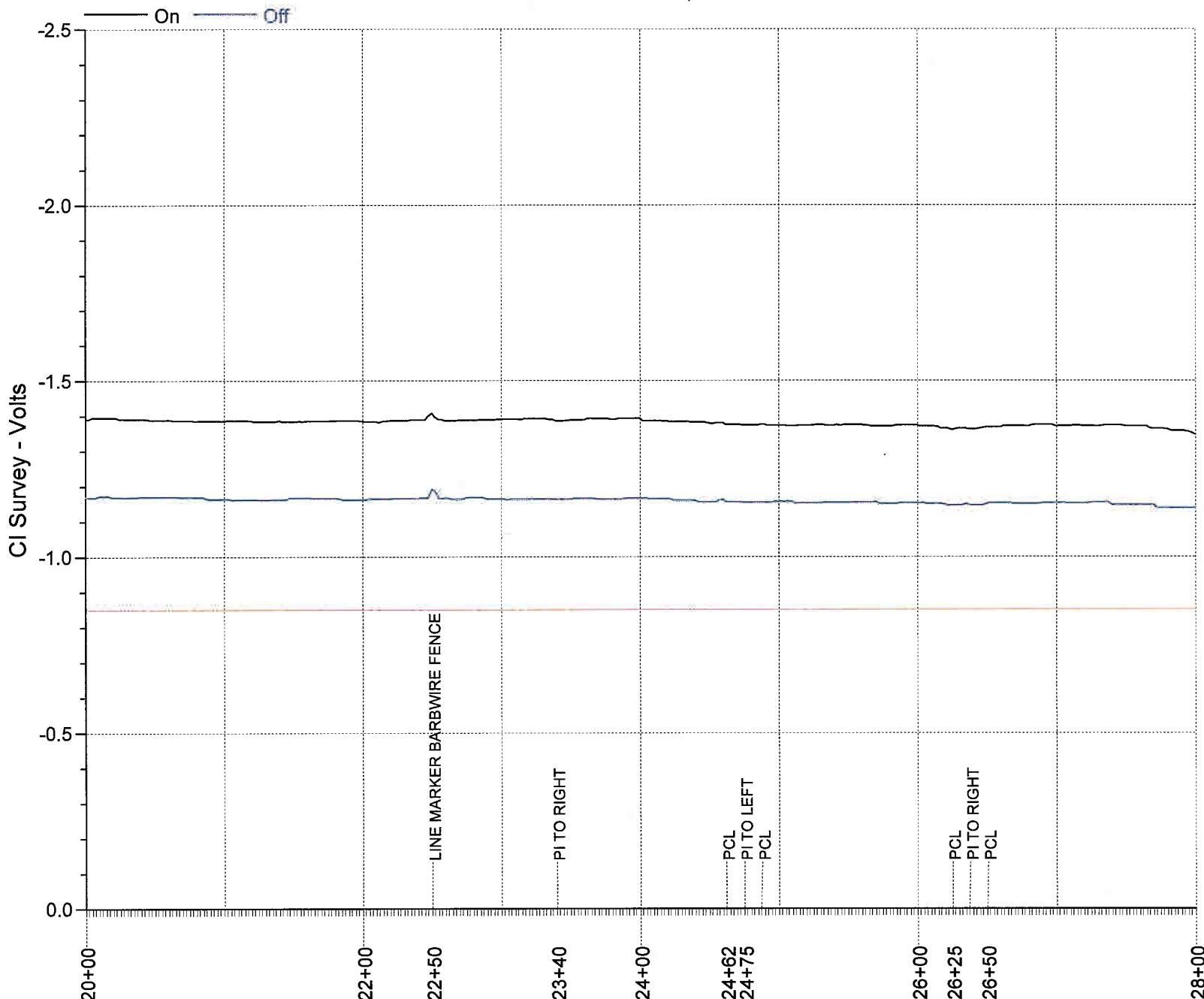
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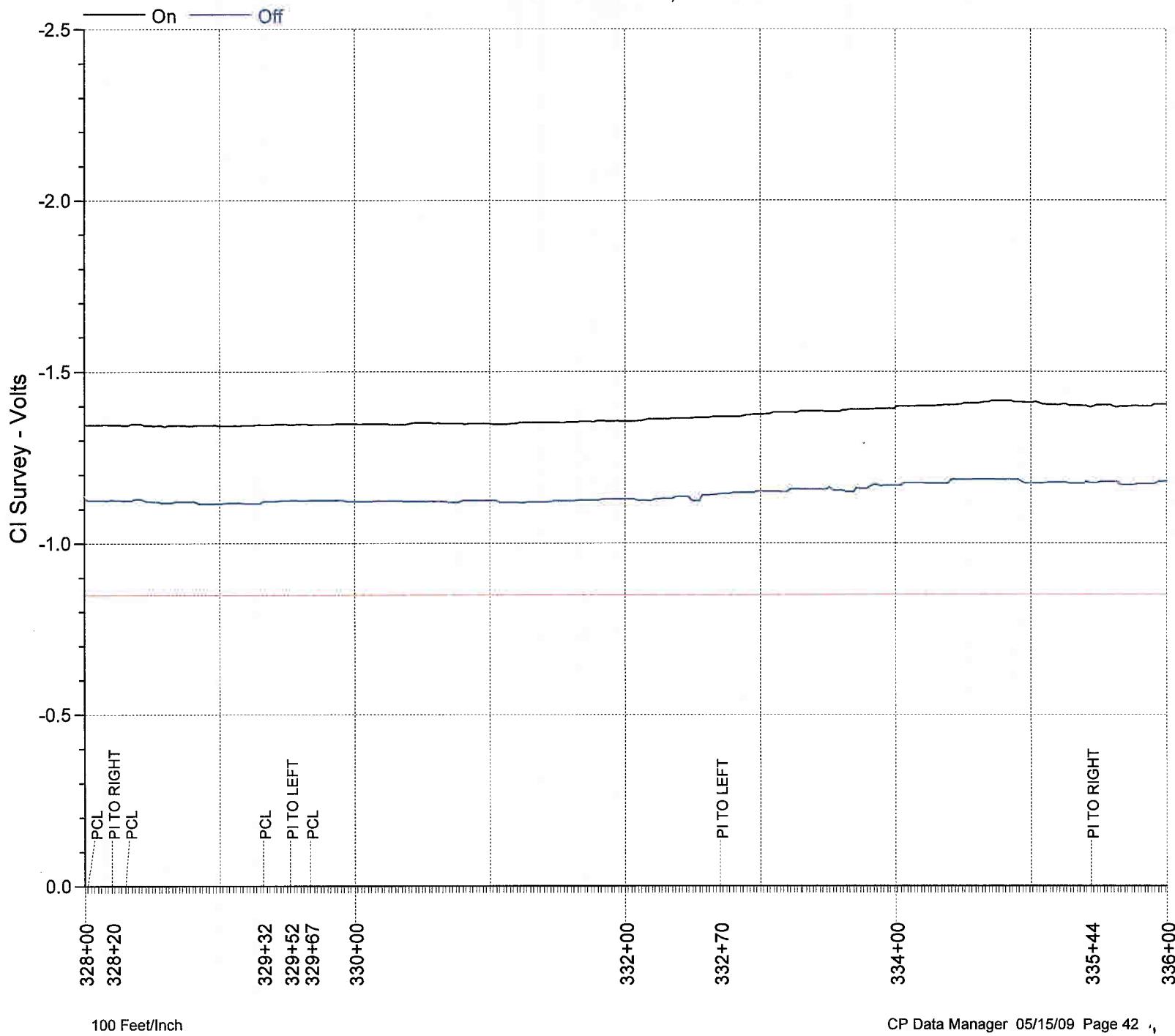
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



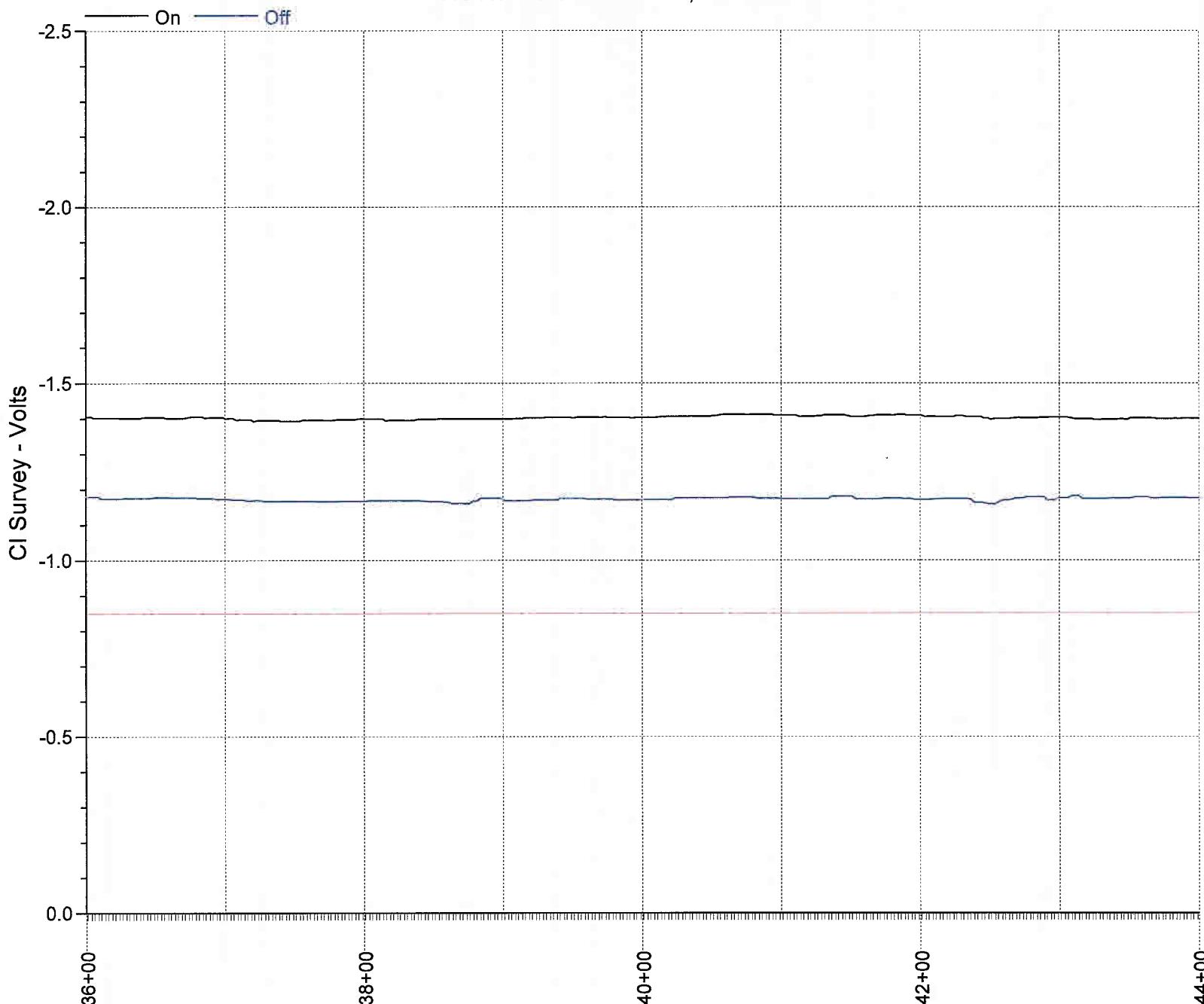
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



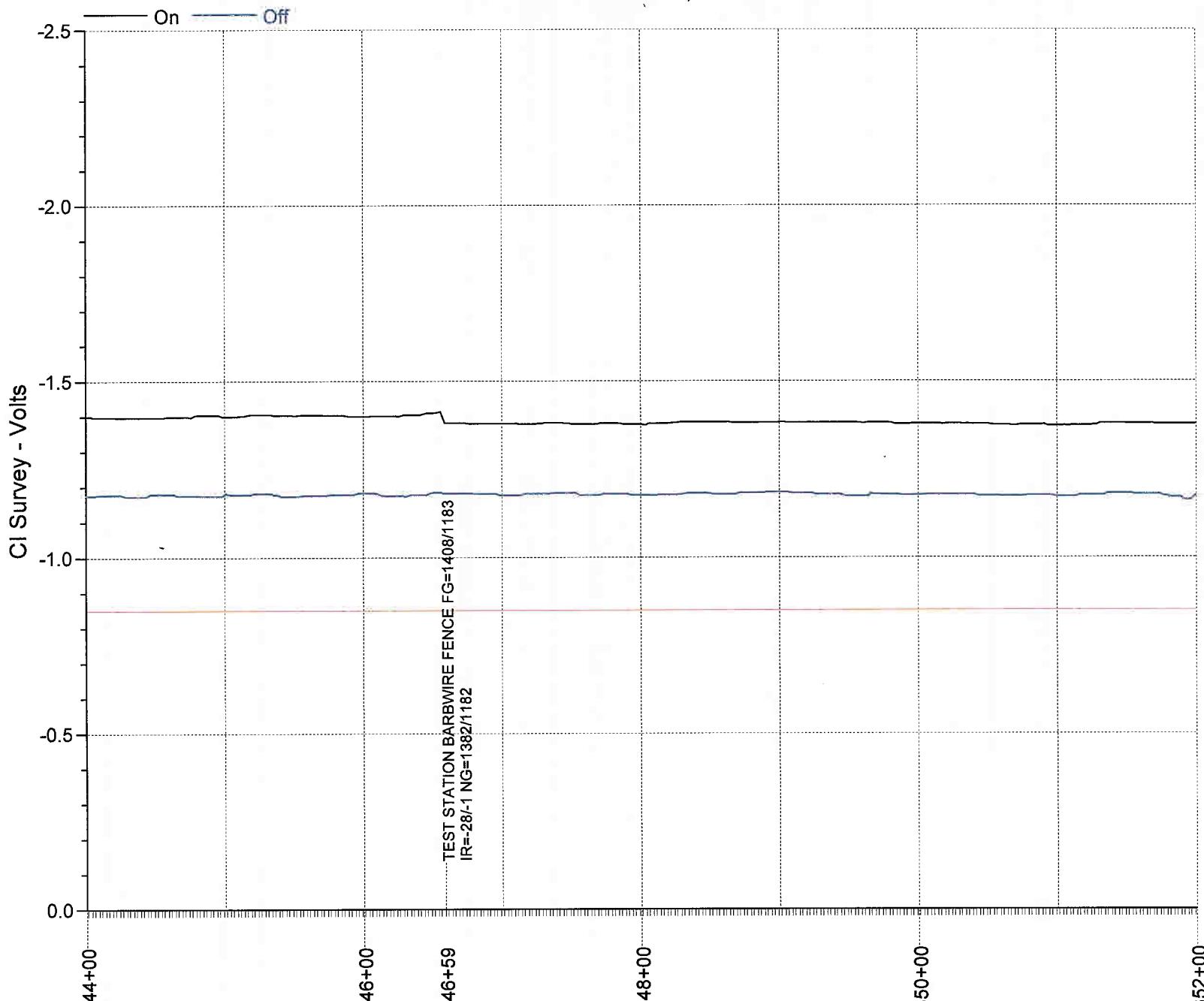
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



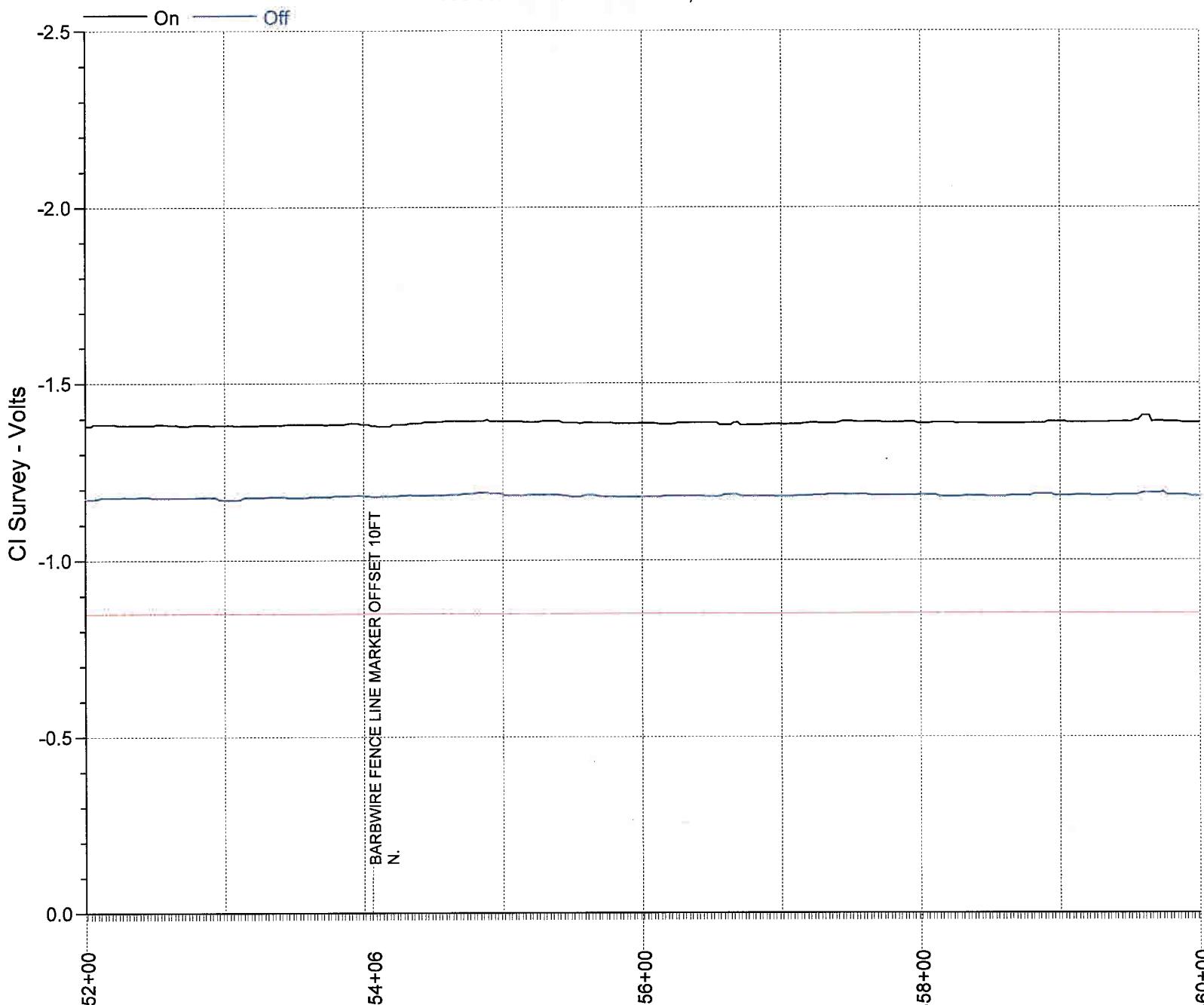
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



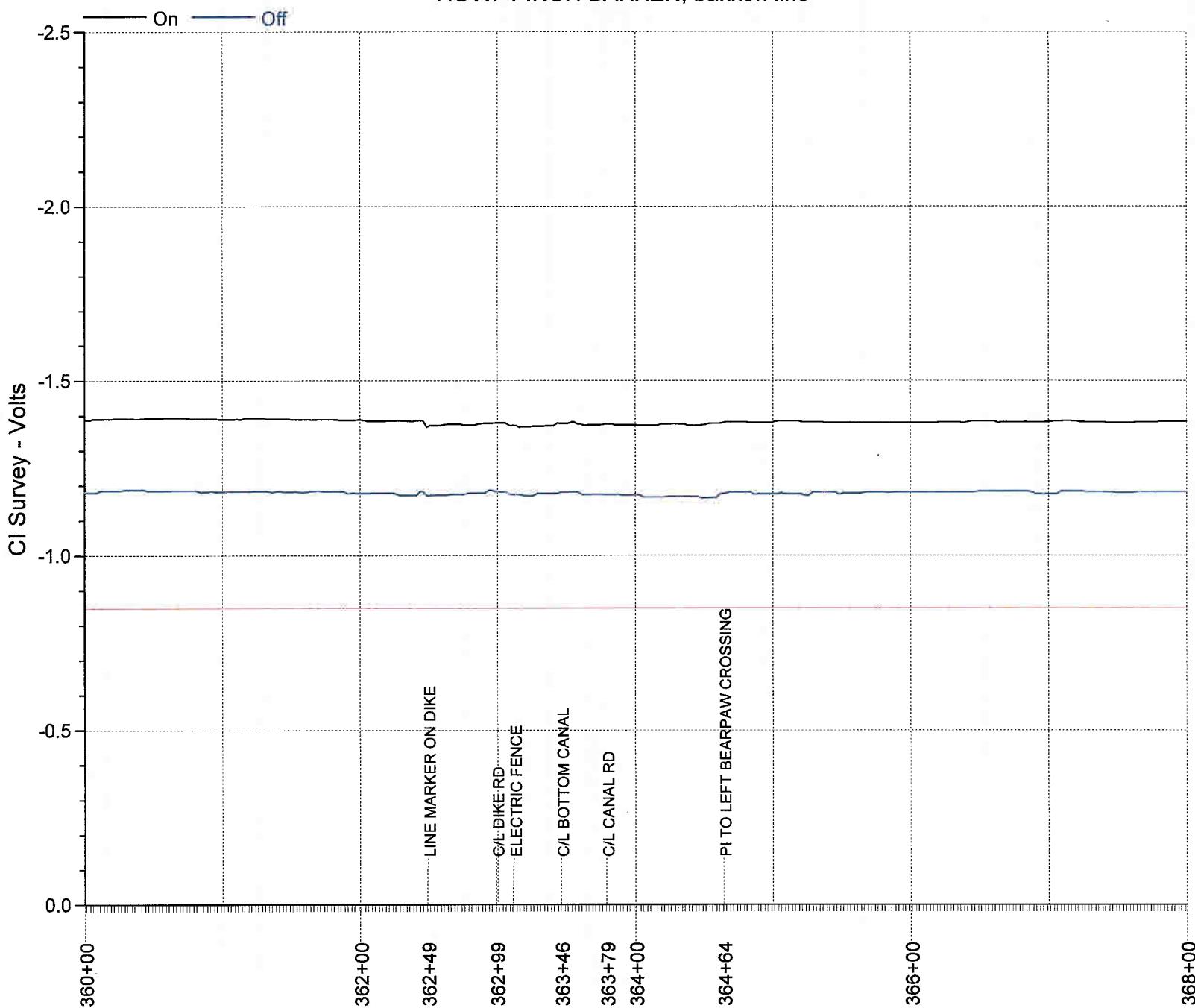
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



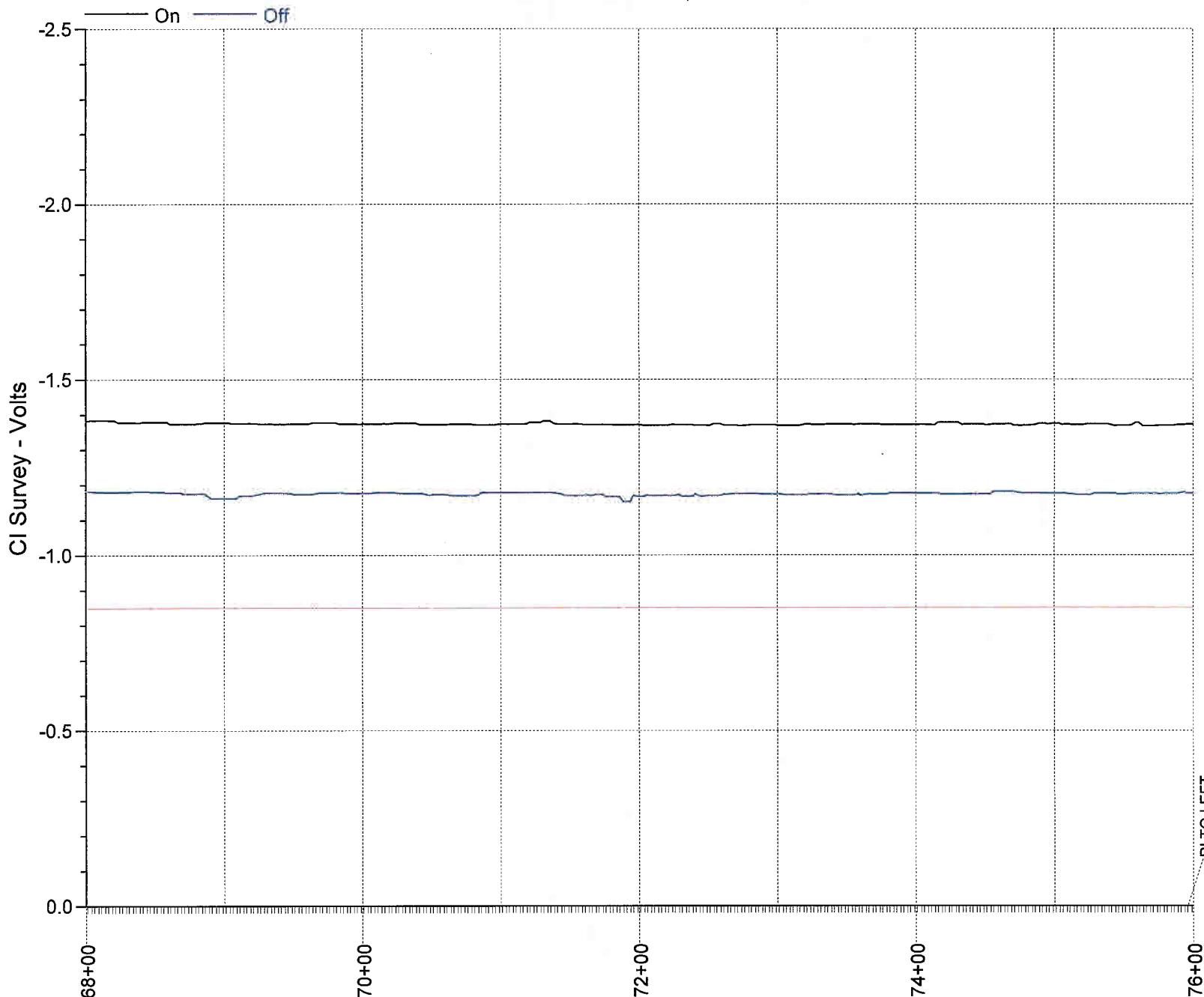
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



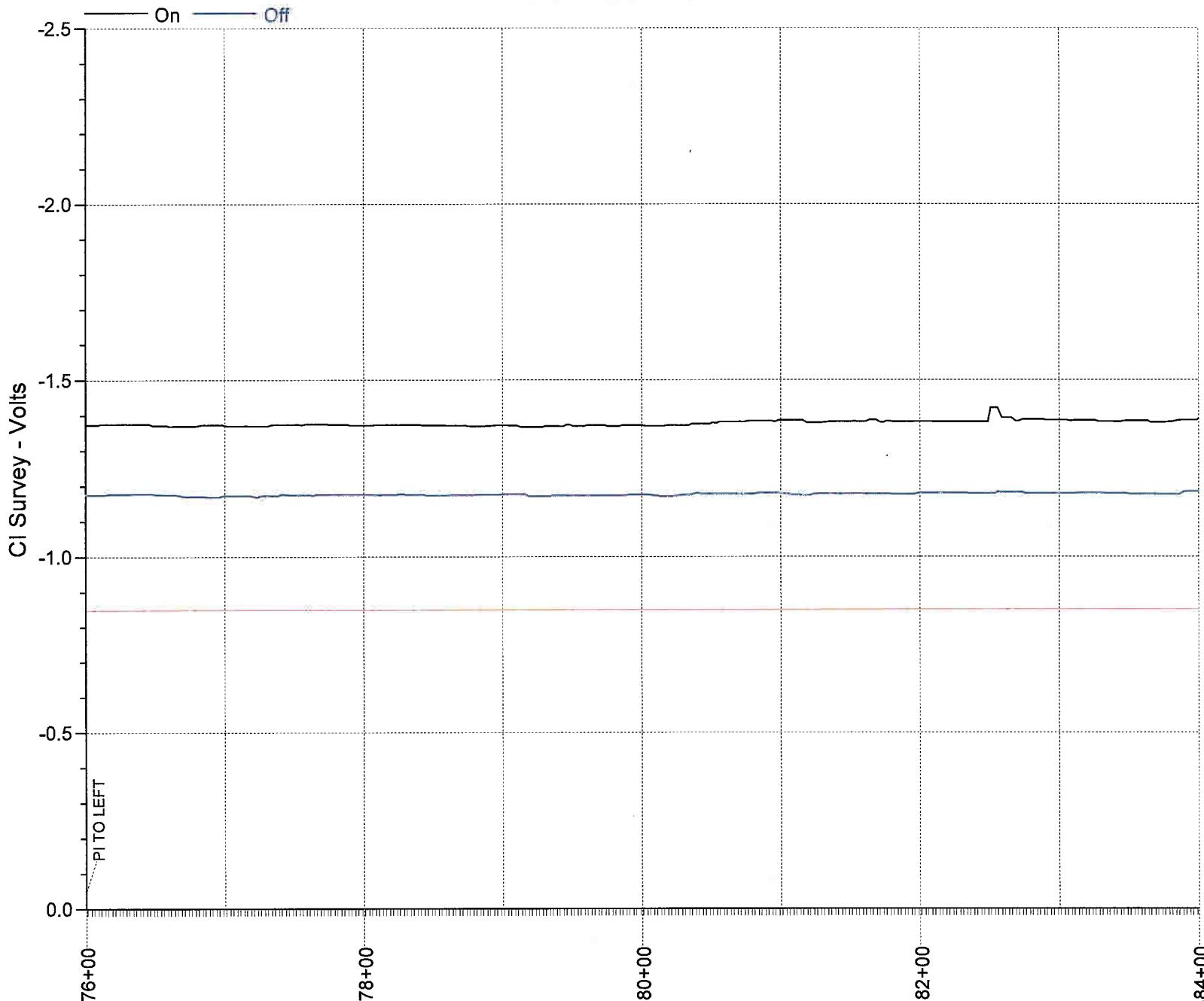
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



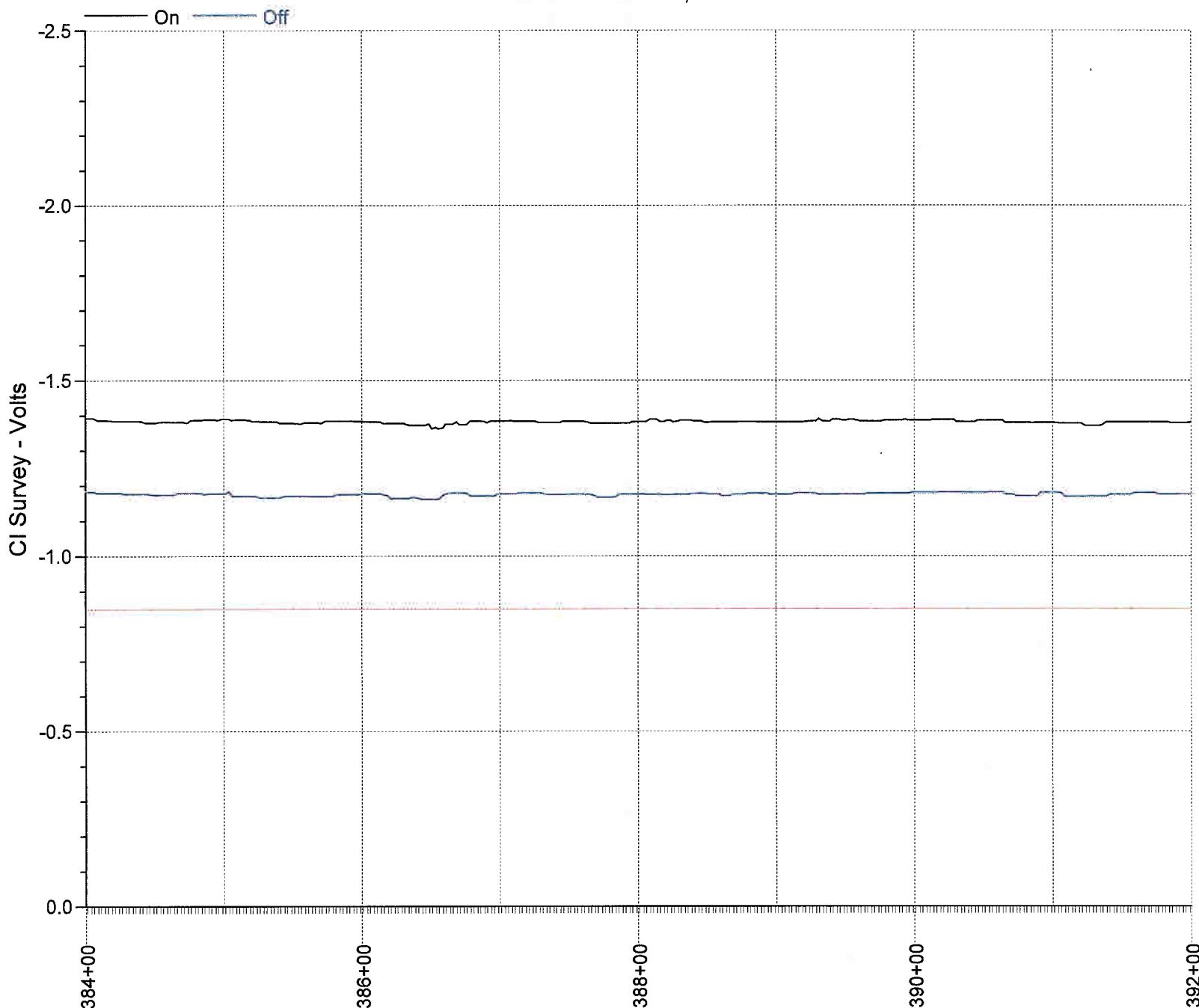
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



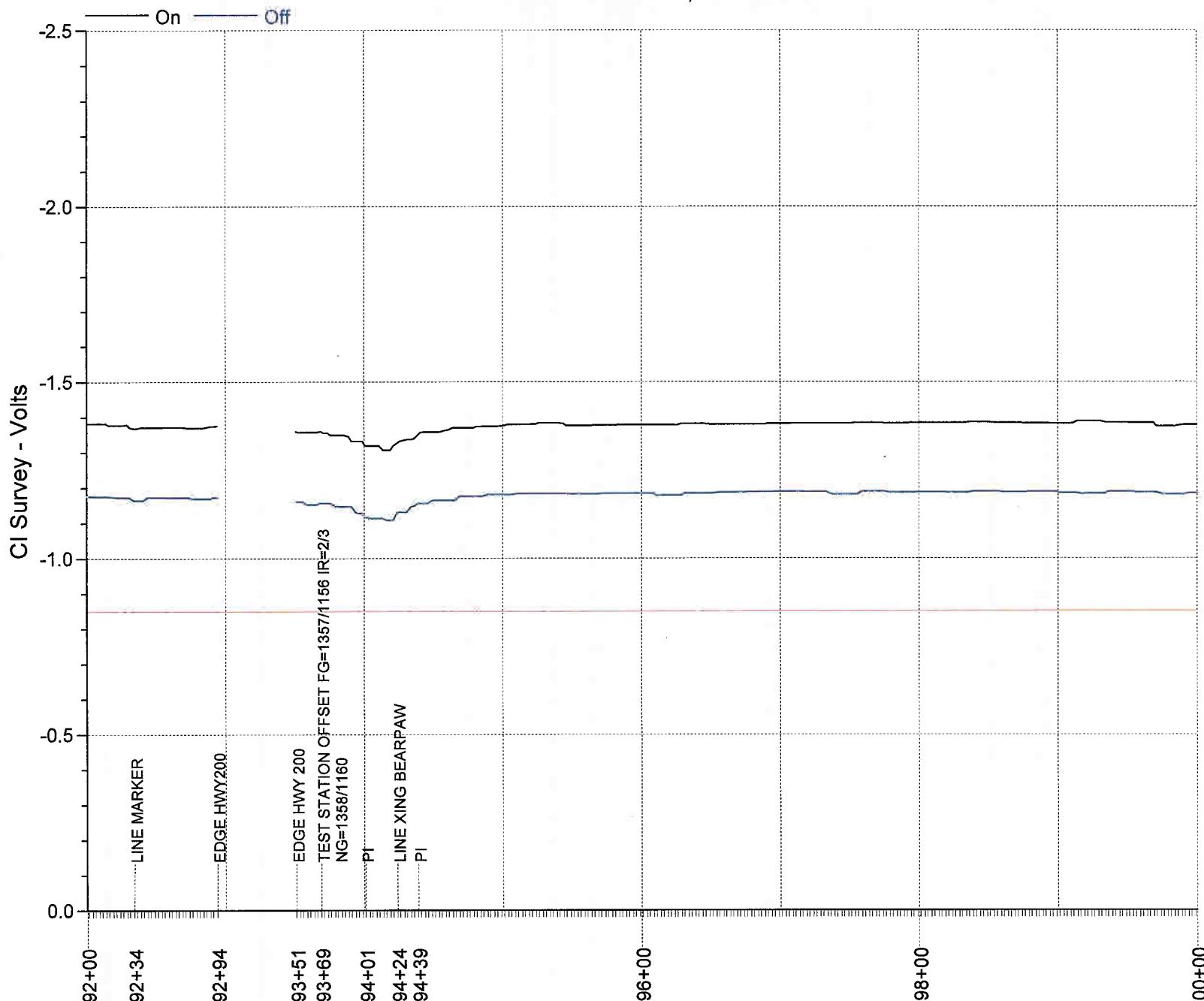
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



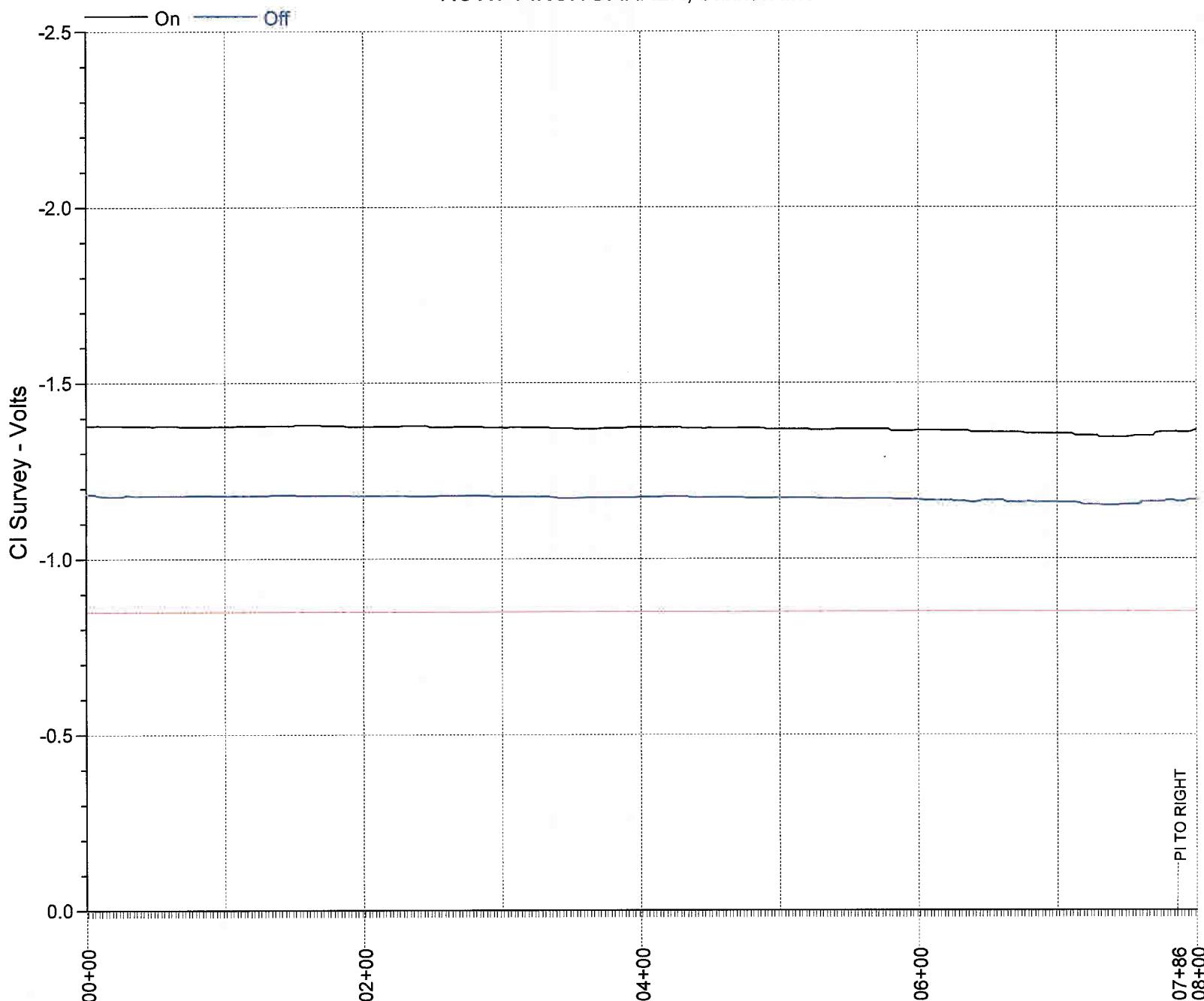
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



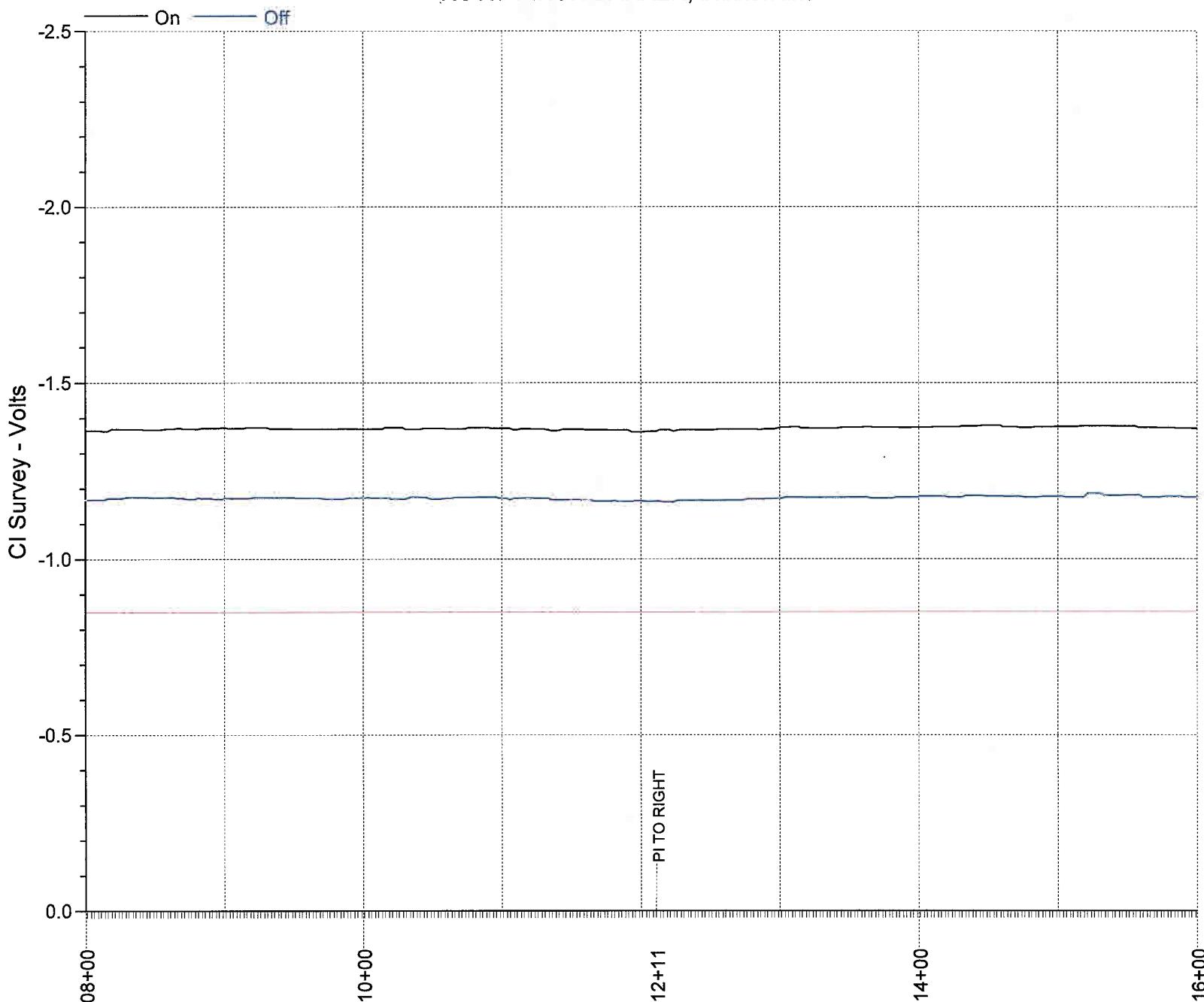
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



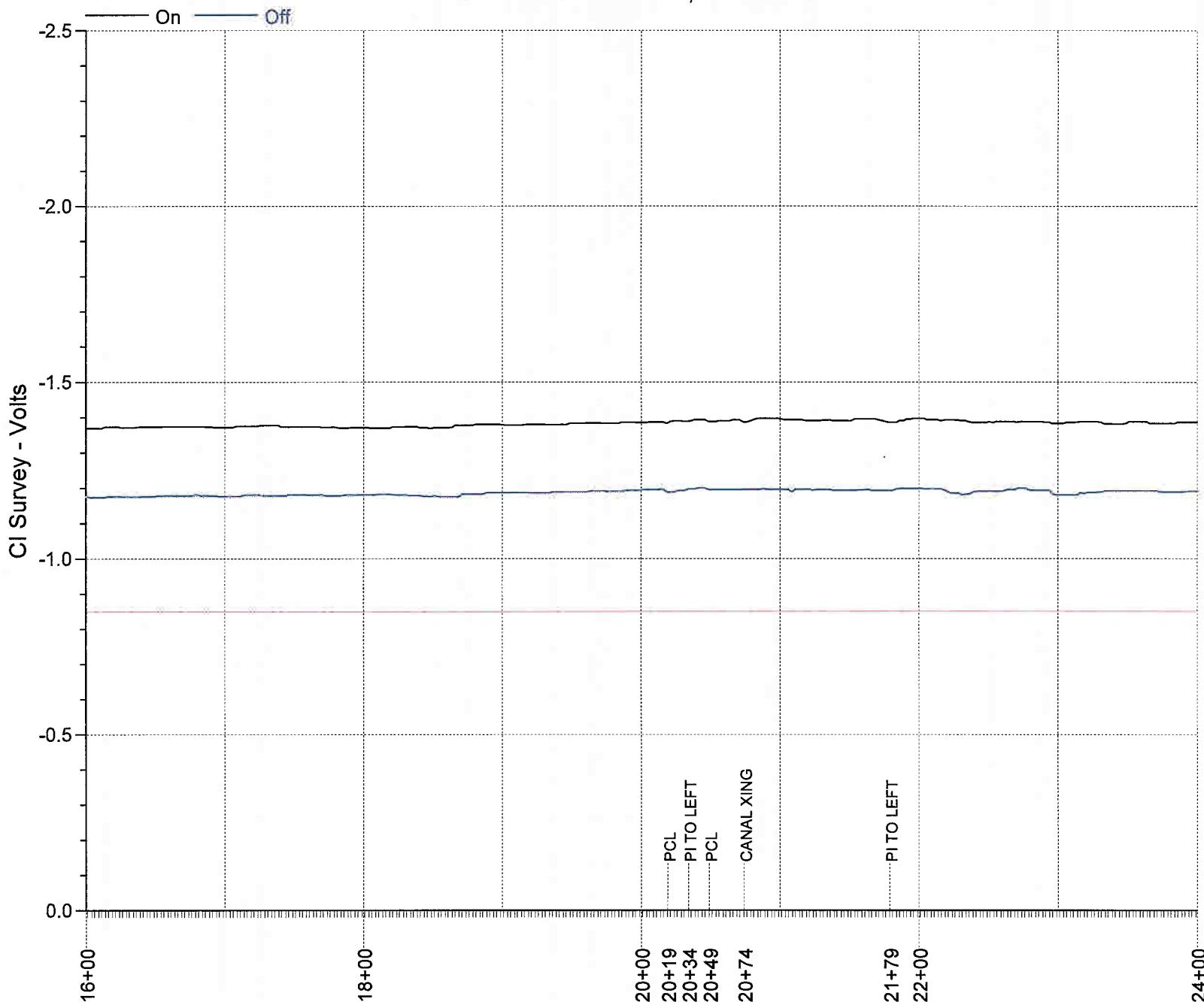
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



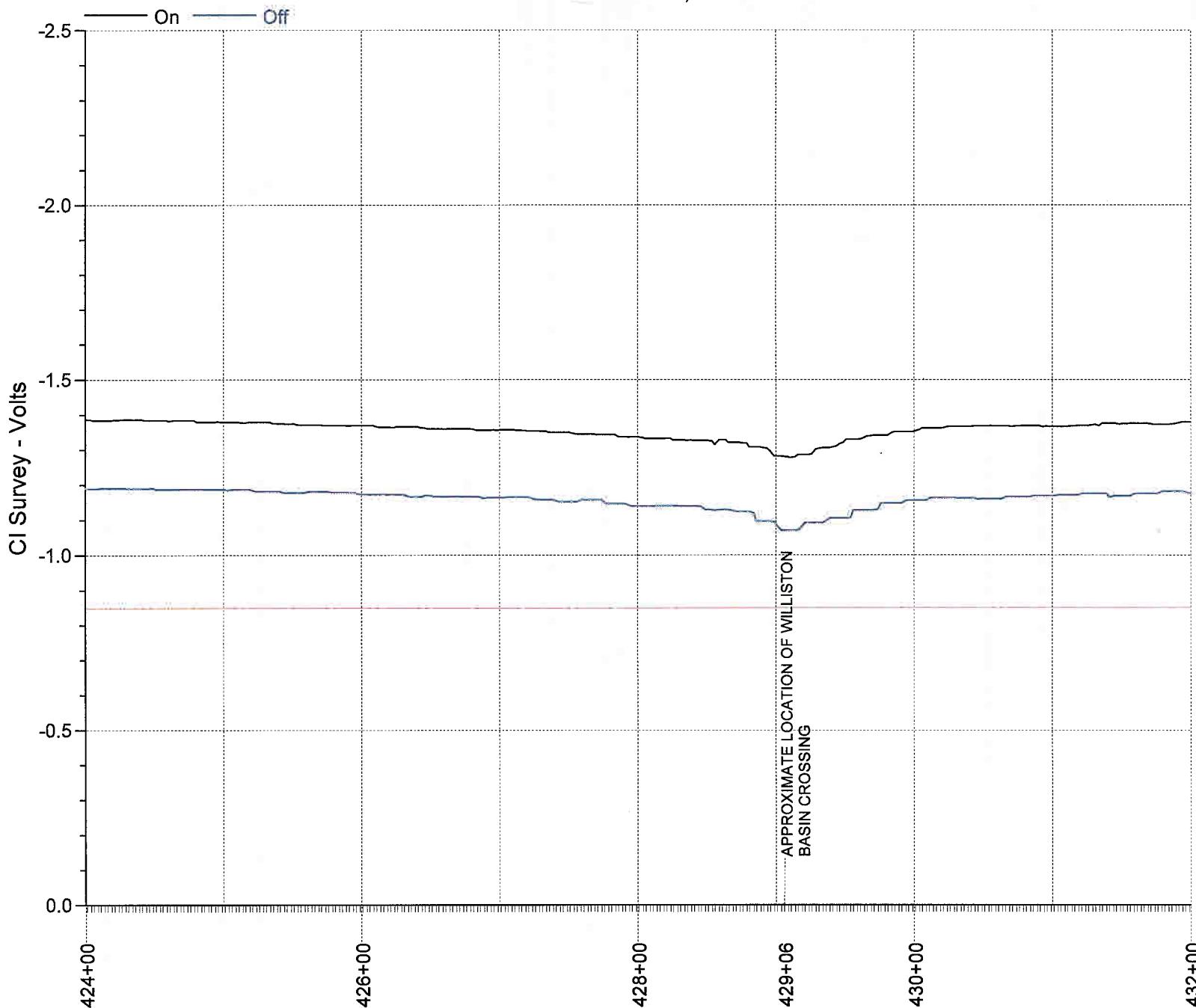
# SemStream, LP

ROW: 4-INCH BAKKEN; bakken line



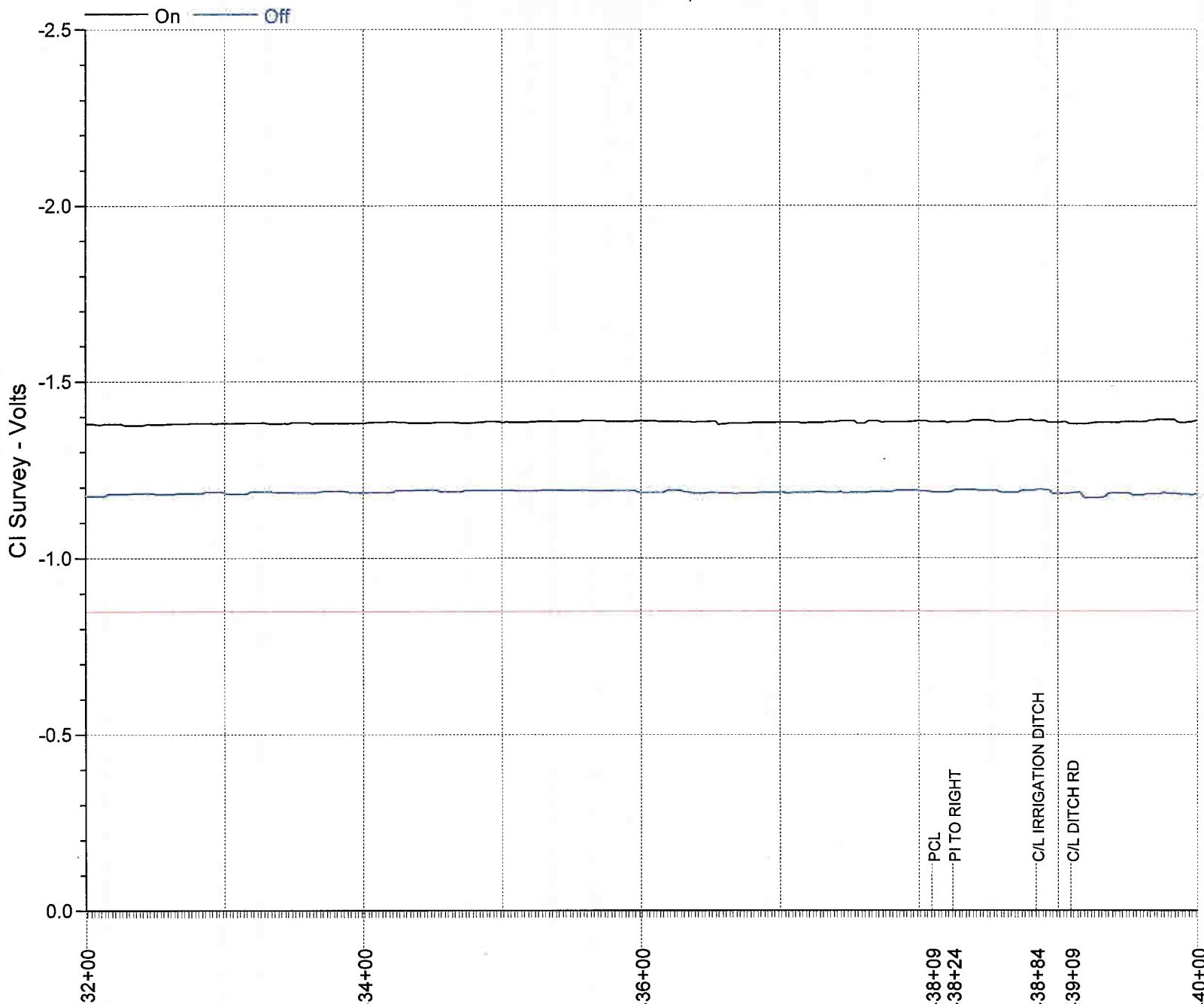
# SemStream, LP

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