

EGT

Environmental GEO Technologies

28470 Citrin Drive, Romulus, Michigan 48174 | Phone 734-946-1000 | Fax 734-946-1002

January 31, 2013

Mr. Allan Batka
United States Environmental Protection Agency
Region 5 (WU-16J)
77 West Jackson Blvd.
Chicago, Illinois 60604

Re: EGT Monthly Report (in conformance with MI-163-1W-C010 & MI-163-1W-C011)

Dear Mr. Batka:

Environmental Geo-Technologies, LLC ("EGT") hereby timely submits its second Monthly Report in conformance with the requirements of its two EPA UIC permits (#s MI-163-1W-C010 & MI-163-1W-C011).

EGT is providing all of the attached information in the same sequence as required by both subject permits, i.e. Part II.D.1 (a – i), Part III, Attachment A, and Part III, Attachment E.G.2 & E.I.

We trust that you find this report satisfactory, however, if you have any questions or comments, please feel free to contact us.

Sincerely,



Richard J. Powals, P.E.

cc: J. Frost (EGT), T. Athans (HH)

att.

013114/rjpEGTEPAMonthlyReport-December,2013

AVERAGE INJECTION RATE

Calculation of Average Injection Rate

CURRENT REPORTING YEAR 2013

CURRENT REPORTING MONTH DECEMBER

Date (month, year) of the first injection into either well at the Citrin Road Facility, ie EGT
NOVEMBER 2013

CURRENT MONTH (all volumes in gallons)

	Injected Waste	Injected Non-Waste	Total injected
MI-163-1W-C010, Well #1-12			
Current Month	7,547 gal	0	7,547 gal
Since facility first injected			7,743 gal
MI-163-1W-C011, Well #2-12			
Current Month	153,247 gal	0	153,247 gal
Since facility first injected			213,271 gal
		Lifetime Combined	221,014 gal

Conversion factors

365.25 days per year ÷ 12 months per year = 30.4375 days per month

30.4375 days per month × 1440 minutes per day = 43,830 minutes per month

Calculations

Whole number of months of injection 2

2 lifetime number of months of injection × 43,830 minutes/month
= 87,660 minutes of injection

Lifetime combined injected volume 221,014 ÷ 87,660 minutes of injection
≈ 2.5 gpm average injection rate

WELL 1 DATA

**SUMMARY OF OPERATING, MONITORING AND REPORTING REQUIREMENTS
Injection Well I**

Month: December

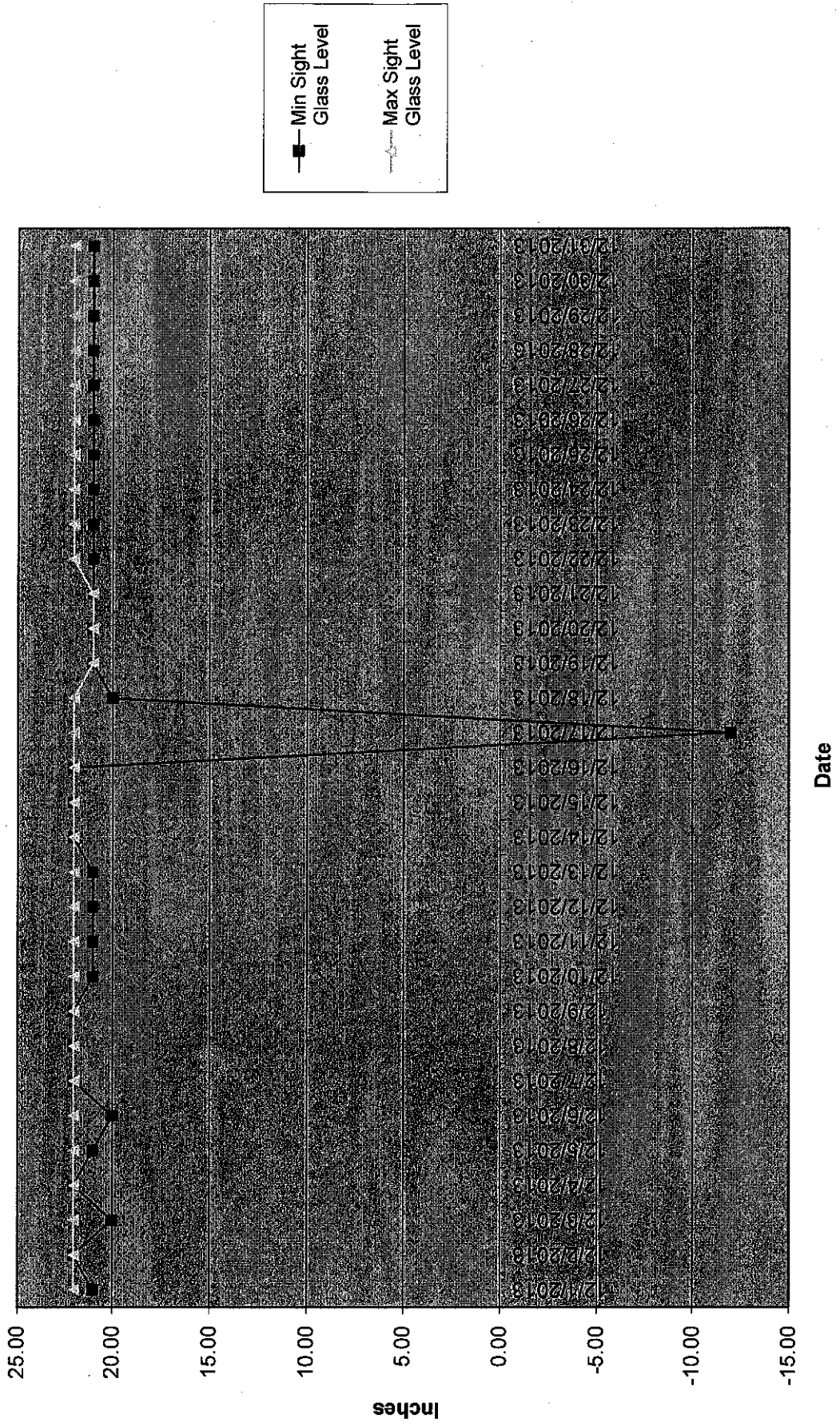
Year: 2013

CHARACTERISTIC	LIMITATION	MINIMUM MONITORING FREQUENCY	MINIMUM REPORTING FREQUENCY	STATUS
Injection Pressure	765 psig maximum	continuous	monthly	698 psig
Annulus Injection Pressure	100 psig minimum	continuous	monthly	922 psig
Annulus/Tubing Diff	100 psig minimum above injection pressure	continuous	monthly	144 psig
Injection Rate (Average both wells)	166 gpm	continuous	monthly	2.5 gpm
Injection Rate (Maximum instantaneous)	270 gpm	continuous	monthly	35 gpm
Sight Glass Level		continuous	monthly	Graph attached
Annulus Fluid Loss		monthly	monthly	0.0 gal
Cumulative Volume		daily	monthly	7,547 gal
Temperature		6-hour intervals	monthly	Graph attached
Corrosion Monitoring		monthly	monthly	Report attached
Repair and Maintenance		NA	monthly	Log attached
Toxicity Characteristic List		annually	monthly	NA
Fingerprint Analysis Chemical Composition and Physical Characteristics of Injected Oilfield Brine		per load	monthly	Sheets attached
pH of Injected Fluids		annually	annually	NA
		continuous	monthly	Graph attached

Well 01 Monthly Data

Date	Min Injection Pressure (PSIG)	Max Injection Pressure (PSIG)	Min Sight Glass Level (in)	Max Sight Glass Level (in)	Min Annulus Pressure (PSIG)	Max Annulus Pressure (PSIG)	Min Injectate pH	Max Injectate pH	Min Flow Rate (GPM)	Max Flow Rate (GPM)	Avg Flow Rate (GPM)	Min Differential Pressure (PSIG)	Max Differential Pressure (PSIG)
12/1/2013	68.96	69.48	21.00	22.00	246.66	251.23	4.88	4.99	0.00	0.00	0.00	177.48	181.99
12/2/2013	68.72	80.16	22.00	22.00	243.92	296.66	4.83	4.93	0.00	0.00	0.00	175.05	222.89
12/3/2013	63.86	698.04	20.00	22.00	264.63	922.15	1.33	4.85	0.00	35.23	0.56	155.88	248.23
12/4/2013	72.68	85.65	22.00	22.00	270.56	274.44	2.00	5.37	0.00	0.00	0.00	189.11	197.87
12/5/2013	41.04	85.18	21.00	22.00	259.26	274.99	3.03	5.38	0.00	0.00	0.00	187.22	218.21
12/6/2013	16.60	644.72	20.00	22.00	225.46	861.96	1.73	3.61	0.00	35.10	1.73	144.42	235.44
12/7/2013	15.49	16.63	22.00	22.00	218.70	225.48	1.82	1.92	0.00	0.00	0.00	203.03	208.91
12/8/2013	15.54	16.07	22.00	22.00	216.04	218.80	1.88	2.02	0.00	0.00	0.00	200.00	203.16
12/9/2013	15.87	16.52	22.00	22.00	214.02	216.13	1.93	3.67	0.00	0.00	0.00	197.71	200.12
12/10/2013	15.97	501.29	21.00	22.00	212.66	721.92	1.81	3.65	0.00	21.00	0.78	144.21	231.65
12/11/2013	54.72	400.92	21.00	22.00	261.36	604.52	2.35	3.99	0.00	14.25	0.73	166.60	229.96
12/12/2013	87.23	88.03	21.00	22.00	271.85	276.69	0.80	3.87	0.00	0.00	0.00	184.17	188.75
12/13/2013	87.38	90.07	21.00	22.00	270.67	271.93	1.87	5.08	0.00	0.00	0.00	181.29	184.27
12/14/2013	88.41	89.57	22.00	22.00	267.96	270.91	4.30	4.54	0.00	0.00	0.00	179.46	181.43
12/15/2013	87.66	88.55	22.00	22.00	265.52	268.04	4.43	4.58	0.00	0.00	0.00	177.72	179.61
12/16/2013	87.64	88.20	22.00	22.00	263.20	265.56	2.84	4.72	0.00	0.00	0.00	175.27	177.80
12/17/2013	87.73	99.99	-12.00	22.00	262.84	317.35	3.21	5.17	0.00	0.00	0.00	175.01	222.67
12/18/2013	83.77	562.30	20.00	22.00	308.03	853.72	4.41	4.96	0.00	27.41	1.00	184.97	349.96
12/19/2013	106.21	108.09	21.00	21.00	355.94	357.76	4.71	5.19	0.00	0.00	0.00	248.42	250.66
12/20/2013	75.07	358.93	21.00	21.00	336.54	587.00	4.84	5.16	0.00	14.23	0.04	208.33	349.74
12/21/2013	105.70	106.41	21.00	21.00	341.18	343.87	4.88	5.06	0.00	0.00	0.00	235.39	237.52
12/22/2013	105.02	105.82	21.00	22.00	338.85	341.26	5.03	5.12	0.00	0.00	0.00	233.76	235.50
12/23/2013	104.49	105.21	21.00	22.00	336.58	338.97	4.79	5.13	0.00	0.00	0.00	231.63	233.91
12/24/2013	104.20	104.99	21.00	22.00	333.39	336.67	4.88	5.06	0.00	0.00	0.00	229.10	231.76
12/25/2013	104.23	104.47	21.00	22.00	331.68	333.48	4.79	4.99	0.00	0.00	0.00	227.30	229.20
12/26/2013	104.19	105.73	21.00	22.00	331.14	331.82	4.80	5.35	0.00	0.00	0.00	225.61	227.46
12/27/2013	105.06	107.74	21.00	22.00	330.41	332.05	5.22	5.62	0.00	0.00	0.00	223.91	225.80
12/28/2013	105.66	107.24	21.00	22.00	329.82	331.20	5.00	5.48	0.00	0.00	0.00	223.67	224.75
12/29/2013	104.81	105.76	21.00	22.00	327.72	329.91	4.99	5.25	0.00	0.00	0.00	222.87	224.22
12/30/2013	104.56	107.13	21.00	22.00	326.30	327.83	3.73	5.42	0.00	0.00	0.00	219.42	222.97
12/31/2013	105.31	106.89	21.00	22.00	323.62	326.37	4.58	4.91	0.00	0.00	0.00	218.26	219.54

Well 1 Min/Max Sight Glass Level Chart



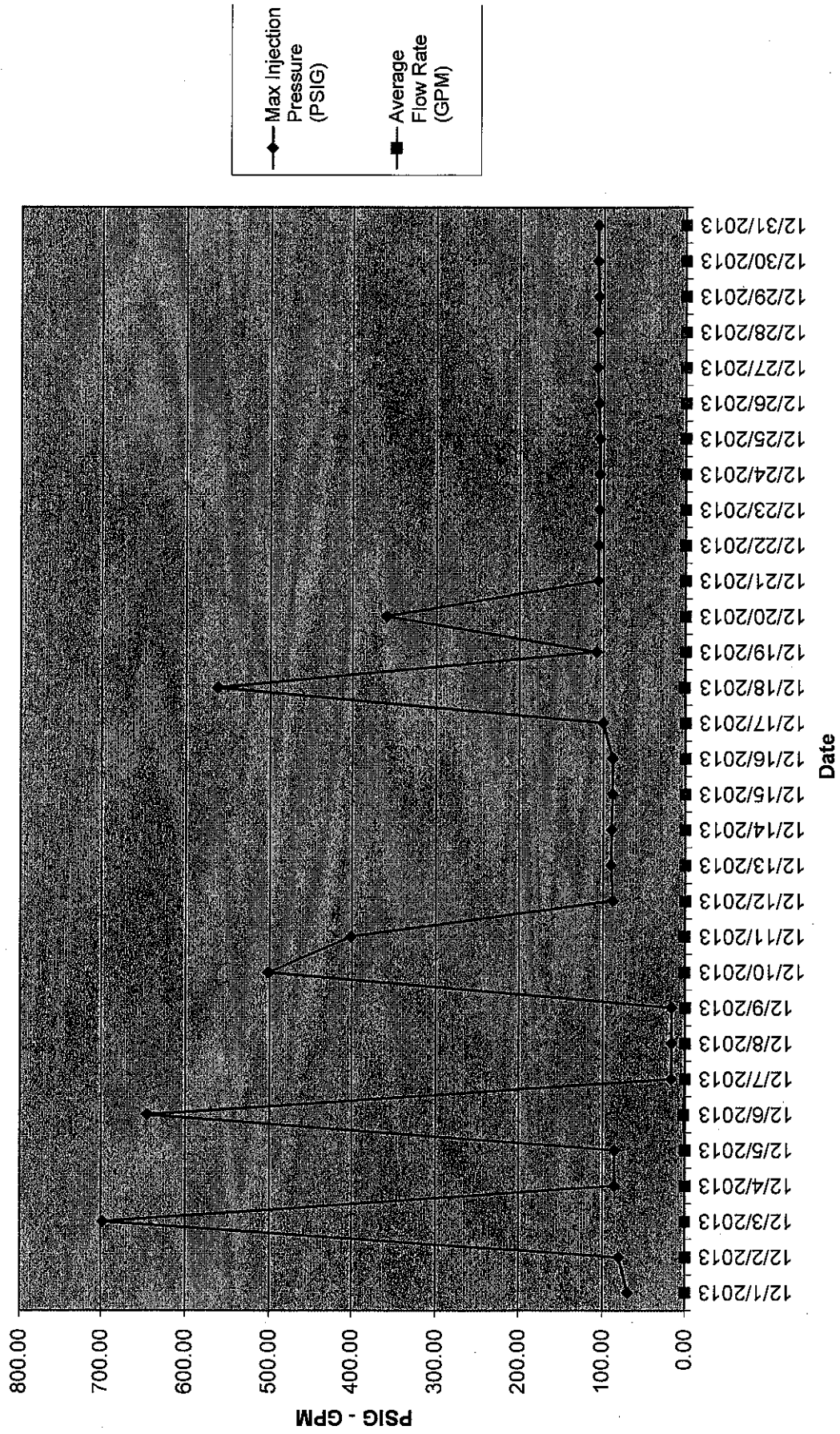
Min Sight Glass Level

Max Sight Glass Level

Inches

Date

Well 1 Max Injection Pressure and Avg. Flow Rate



Circle Chart Index

Environmental Geo-Technologies, LLC 28470 Citrin Drive Romulus, MI 48174

Chart Recorder #1

Channel #1

Blue Pen - Well 1 Injection Pressure

Channel #2

Red Pen - Well 1 Annulus Pressure

Channel #3

Green Pen - Well 1 Flow Rate

Channel #4

Black Pen - Well 1 Annulus Tank Level

Chart Recorder #2

Channel #1

Blue Pen - Well 2 Injection Pressure

Channel #2

Red Pen - Well 2 Annulus Pressure

Channel #3

Green Pen - Well 2 Flow Rate

Channel #4

Black Pen - Well 2 Annulus Tank Level

Chart Recorder #3

Channel #1

Blue Pen - Injection pH Well 1 & 2

Channel #2

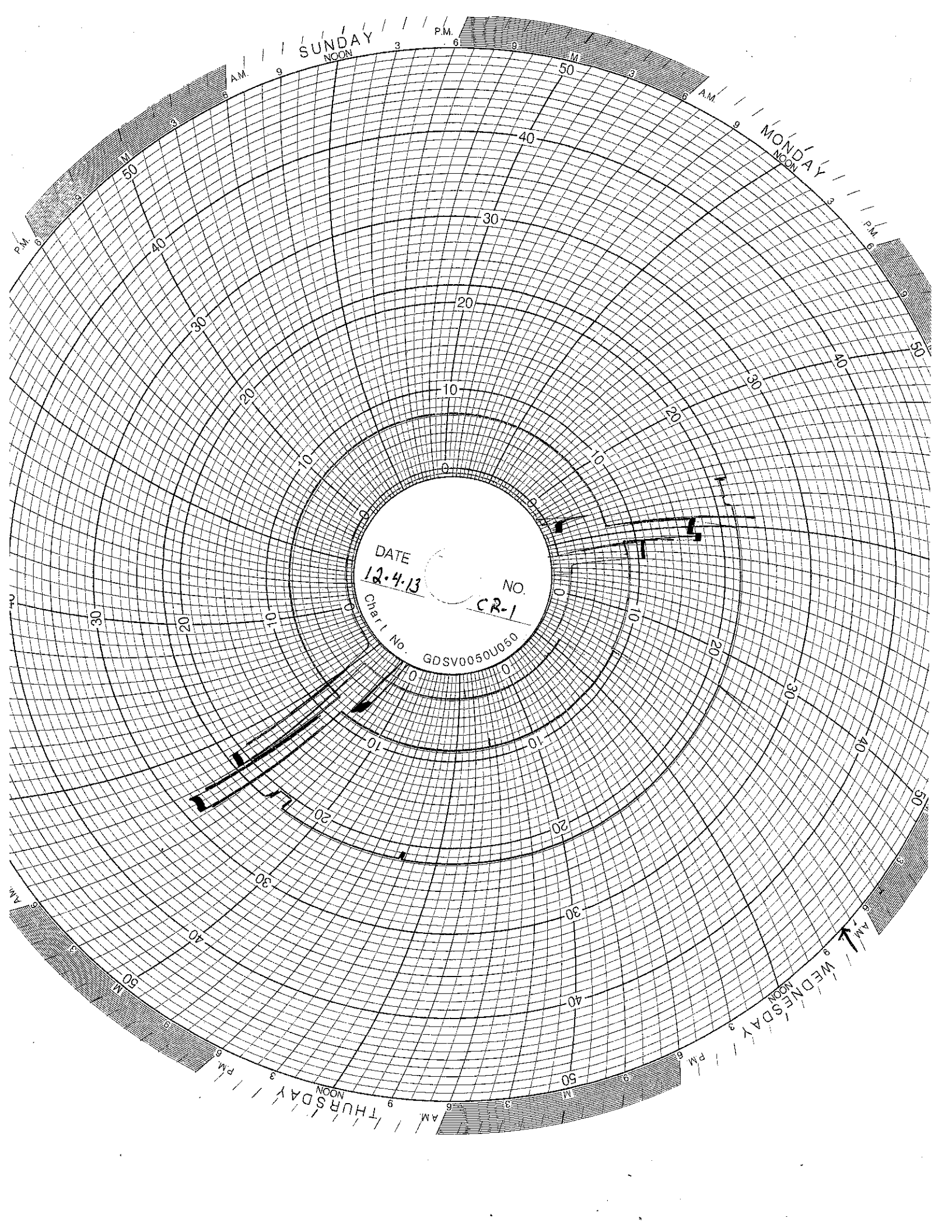
Red Pen - Well 1 Monthly Volume

Channel #3

Green Pen - Well 2 Monthly Volume

Channel #4

Black Pen - Temperature



SUNDAY
NOON

MONDAY
NOON

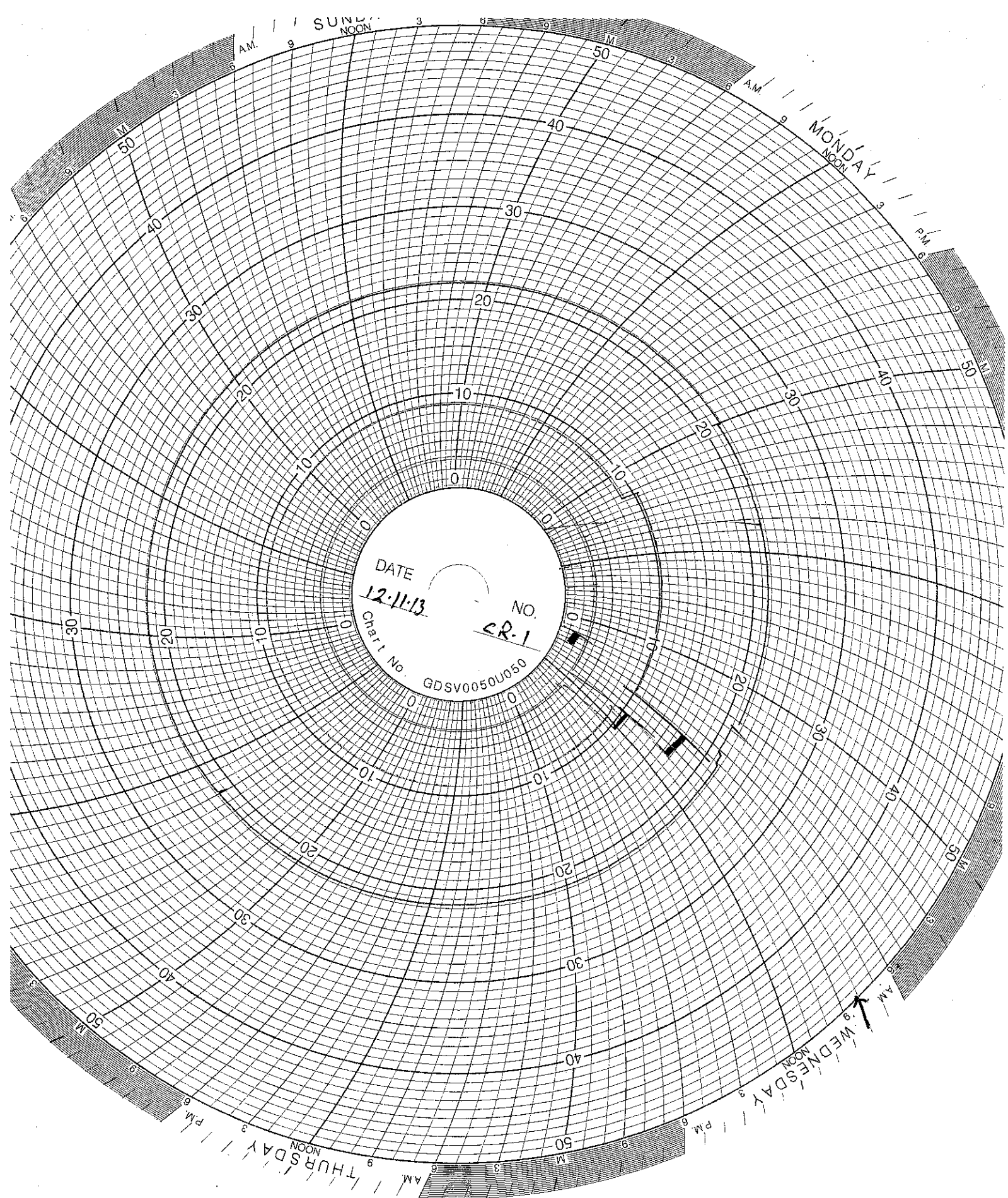
WEDNESDAY
NOON

THURSDAY
NOON

DATE
12.4.13

NO.
CR-1

Char. No.
GDSV0050U060



DATE
12-11-13

NO.
CR-1

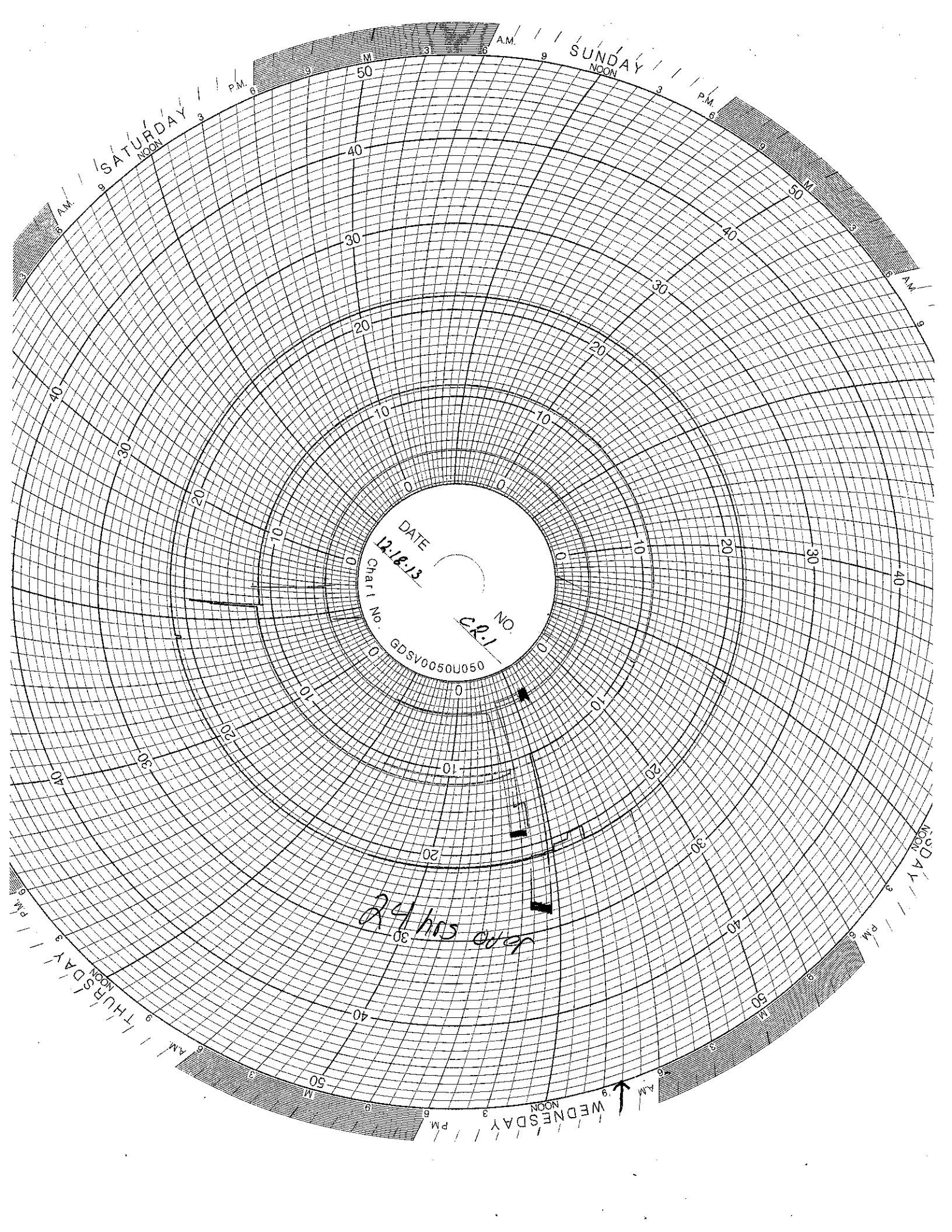
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SUN
NOON

MONDAY
NOON

WEDNESDAY
NOON

THURSDAY
NOON



SATURDAY
NOON

SUNDAY
NOON

WEDNESDAY
NOON

THURSDAY
NOON

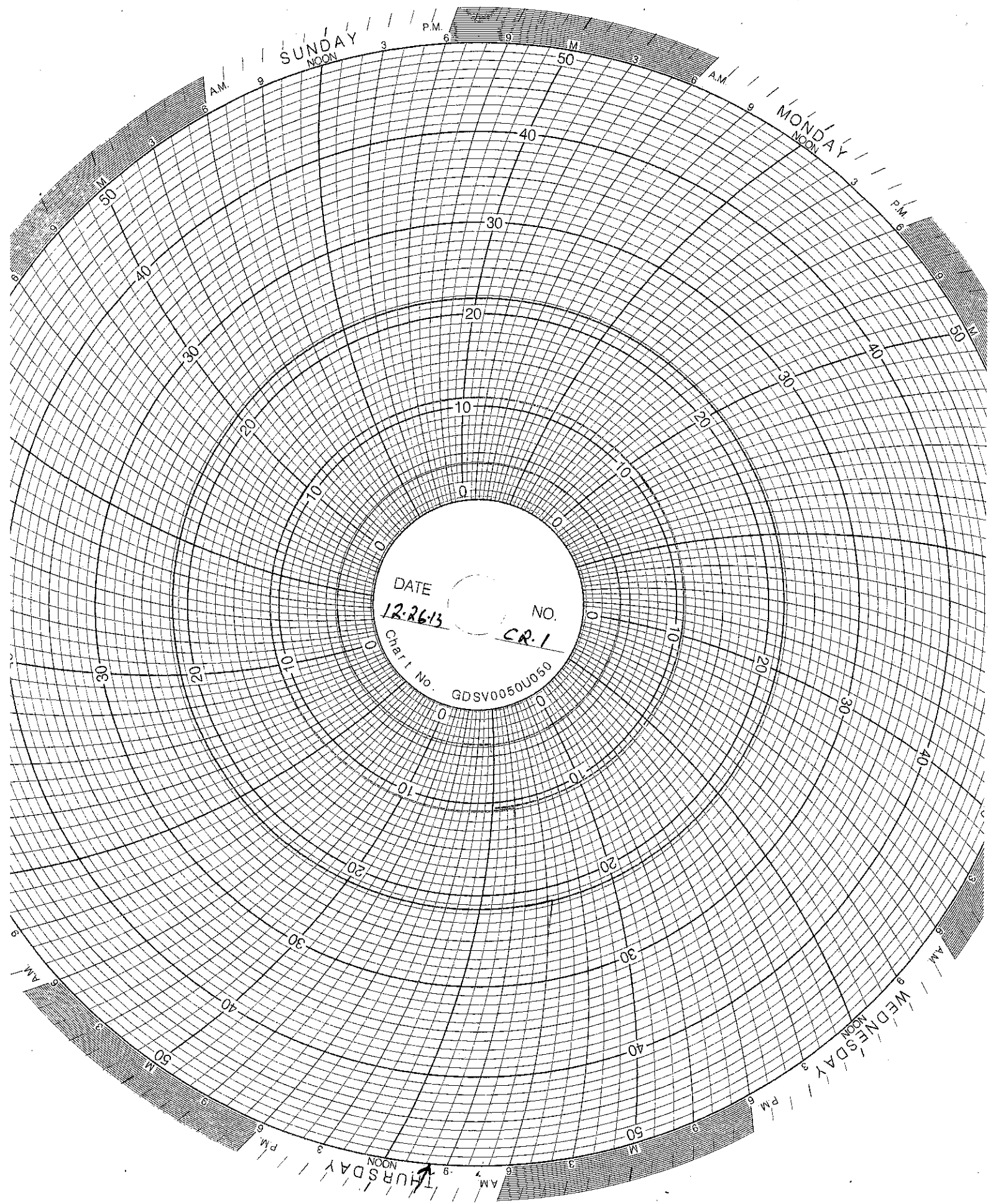
DATE
12-18-13

Chart No. GDSV0050U050

NO
CR-1

24 hrs over





SUNDAY
NOON

MONDAY
NOON

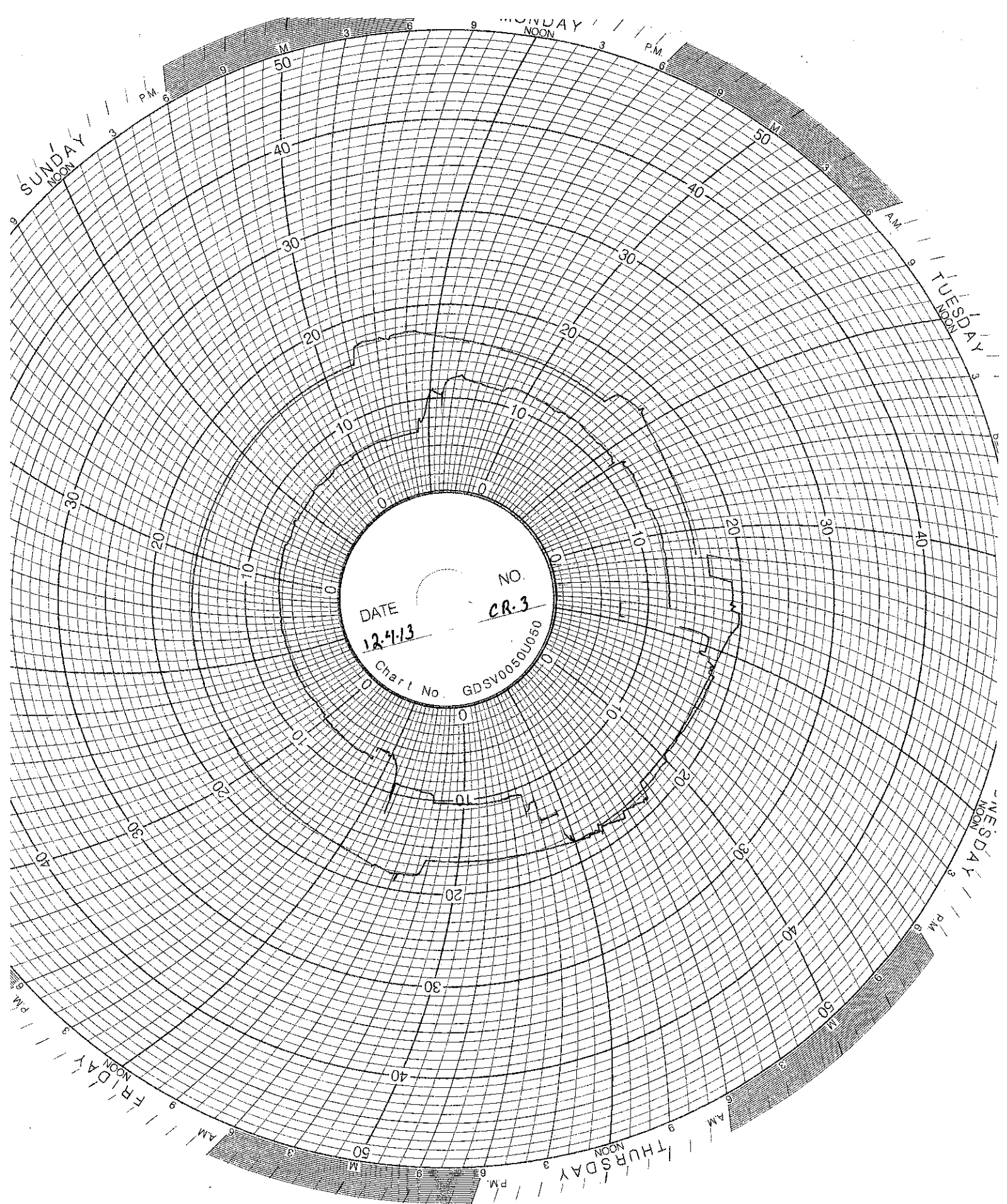
WEDNESDAY
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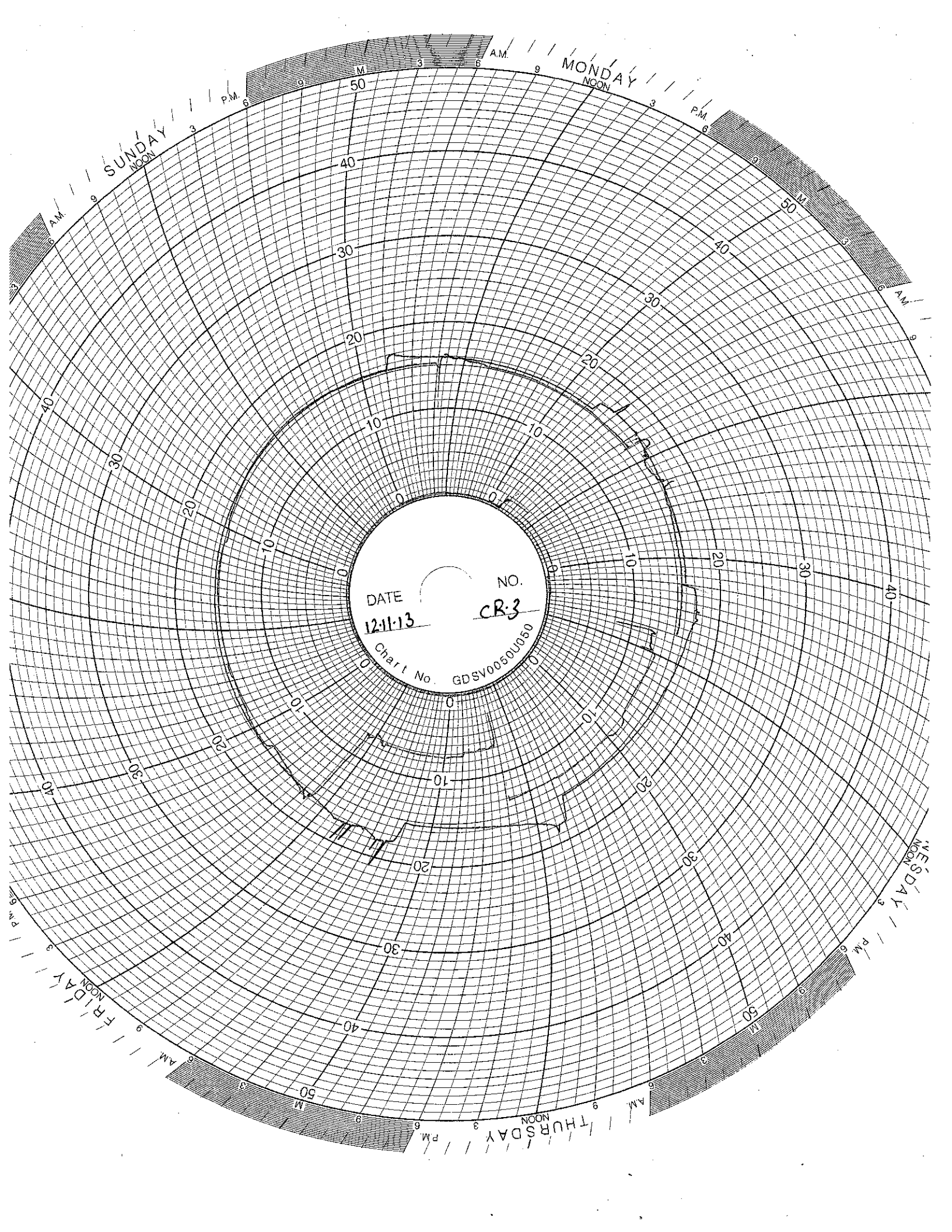
THURSDAY
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DATE
12-26-13

NO.
CR-1

Chart No. GDSV0050U060

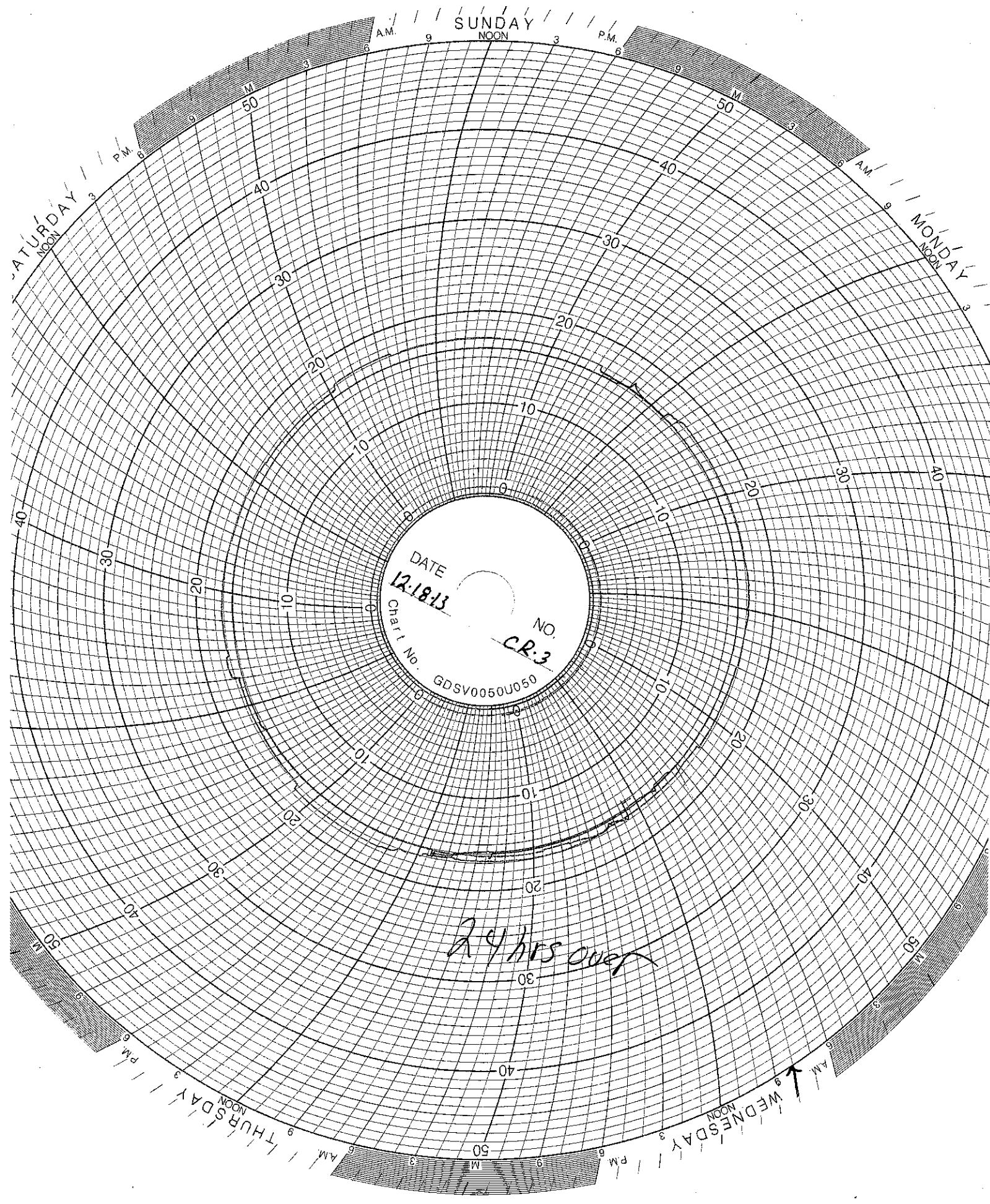




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12-11-13

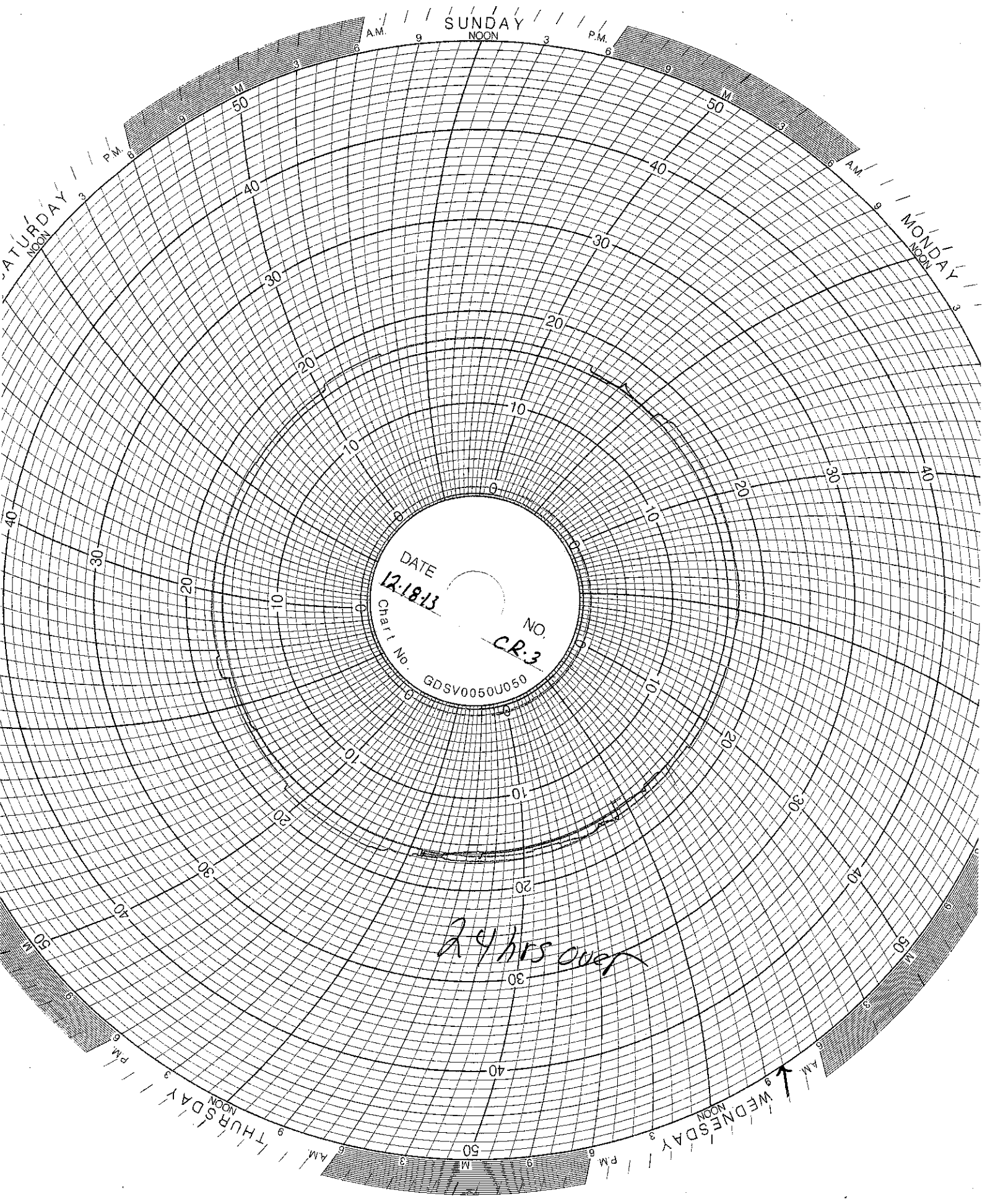
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CR-3

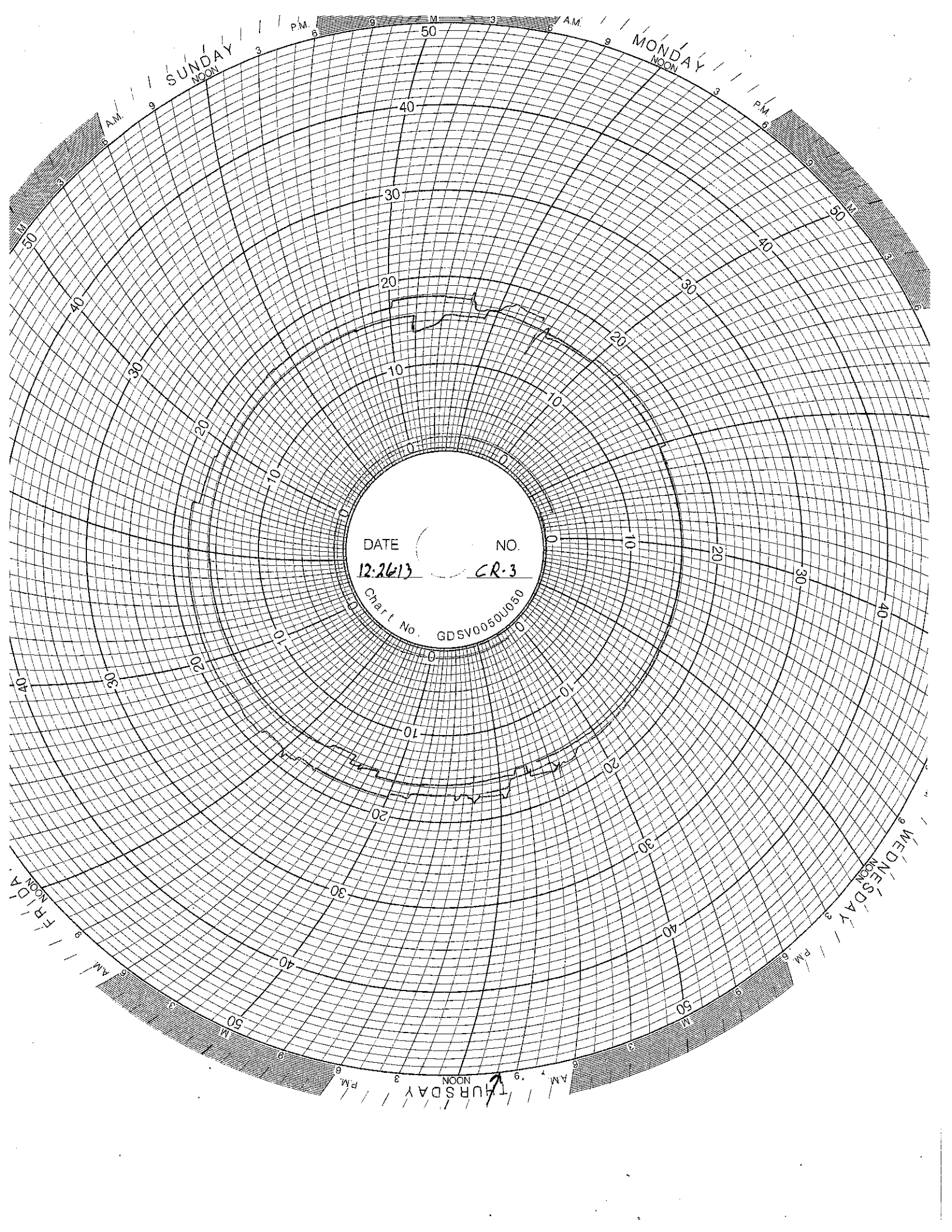
Chart No. GDSV0050U050



DATE 12-18-13
Chart No. GDSV0050U050
NO. CR-3

24 hrs over





SUNDAY
NOON

MONDAY
NOON

WEDNESDAY
NOON

THURSDAY
NOON

DATE 12.26.13 NO. CR-3
Char L No. GDSV005011050

WELL 2 DATA

**SUMMARY OF OPERATING, MONITORING AND REPORTING REQUIREMENTS
Injection Well II**

Month: December

Year: 2013

CHARACTERISTIC	LIMITATION	MINIMUM MONITORING FREQUENCY	MINIMUM REPORTING FREQUENCY	STATUS
Injection Pressure	765 psig maximum	continuous	monthly	733 psig
Annulus Injection Pressure	100 psig minimum	continuous	monthly	995 psig
Annulus/Tubing Diff	100 psig minimum above injection pressure	continuous	monthly	114 psig
Injection Rate (Average both wells)	166 gpm	continuous	monthly	2.5 gpm
Injection Rate (Maximum instantaneous)	270 gpm	continuous	monthly	151 gpm
Sight Glass Level		continuous	monthly	Graph attached
Annulus Fluid Loss		monthly	monthly	0.0 gal
Cumulative Volume		daily	monthly	153,247 gal
Temperature		6-hour intervals	monthly	Graph attached
Corrosion Monitoring		monthly	monthly	Report attached
Repair and Maintenance		NA	monthly	Log attached
Toxicity Characteristic List		annually	monthly	NA
Fingerprint Analysis Chemical Composition and Physical Characteristics of Injected Oilfield Brine		per load	monthly	Sheets attached
pH of Injected Fluids		annually	annually	NA
		continuous	monthly	Graph attached

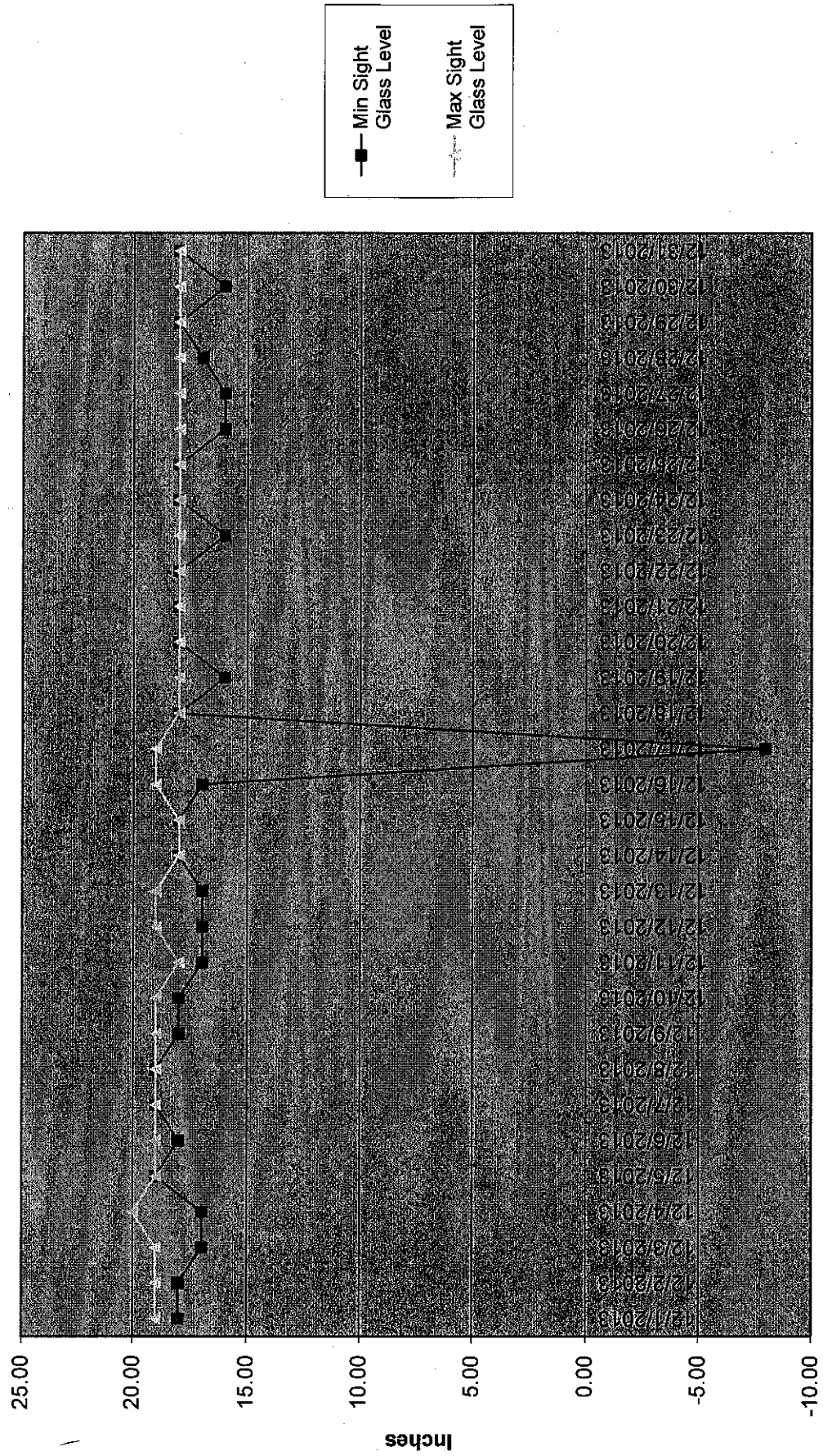
Well 02 Monthly Data

Date	Min Injection Pressure (PSIG)	Max Injection Pressure (PSIG)	Min Sight Glass Level (in)	Max Sight Glass Level (in)	Min Annulus Pressure (PSIG)	Max Annulus Pressure (PSIG)	Min Injectate pH	Max Injectate pH	Min Flow Rate (GPM)	Max Flow Rate (GPM)	Avg Flow Rate (GPM)	Min Differential Pressure (PSIG)	Max Differential Pressure (PSIG)
12/1/2013	110.33	110.72	18.00	19.00	326.86	327.82	4.88	4.99	0.00	0.00	0.00	216.42	217.24
12/2/2013	110.15	110.50	18.00	19.00	325.36	326.91	4.83	4.93	0.00	0.00	0.00	215.12	216.57
12/3/2013	42.27	714.31	17.00	19.00	230.69	927.43	1.33	4.85	0.00	114.68	4.13	132.48	230.38
12/4/2013	0.00	733.30	17.00	20.00	128.68	947.19	2.00	5.37	0.00	150.58	11.94	113.67	235.95
12/5/2013	0.01	196.98	19.00	19.00	122.97	386.18	3.03	5.38	0.00	103.58	1.04	122.67	231.25
12/6/2013	0.00	350.78	18.00	19.00	183.18	562.66	1.73	3.61	0.00	71.28	1.12	145.81	230.13
12/7/2013	0.02	0.02	19.00	19.00	219.94	223.96	1.82	1.92	0.00	0.00	0.00	219.92	223.95
12/8/2013	0.02	0.02	19.00	19.00	218.80	220.04	1.88	2.02	0.00	0.00	0.00	218.78	220.03
12/9/2013	0.02	259.80	18.00	19.00	218.63	472.55	1.93	3.67	0.00	54.67	3.81	161.92	230.07
12/10/2013	110.66	112.03	18.00	19.00	331.56	337.92	1.81	3.65	0.00	0.00	0.00	220.60	225.93
12/11/2013	109.15	444.42	17.00	18.00	280.47	657.48	2.35	3.99	0.00	57.07	1.18	160.48	229.97
12/12/2013	35.71	715.24	17.00	19.00	212.94	943.96	0.80	3.87	0.00	95.77	1.86	164.29	231.05
12/13/2013	34.49	691.39	17.00	19.00	219.99	917.44	1.87	5.08	0.00	113.80	13.91	143.34	280.10
12/14/2013	114.41	117.84	18.00	18.00	310.07	326.06	4.30	4.54	0.00	0.00	0.00	195.56	208.25
12/15/2013	113.41	114.52	18.00	18.00	306.26	310.18	4.43	4.58	0.00	0.00	0.00	192.79	195.73
12/16/2013	107.31	587.66	17.00	19.00	276.37	801.24	2.84	4.72	0.00	80.83	2.03	158.63	230.02
12/17/2013	0.00	532.95	-8.00	19.00	178.82	831.00	3.21	5.17	0.00	95.70	9.70	63.69	476.17
12/18/2013	113.76	120.00	18.00	18.00	406.62	426.25	4.41	4.96	0.00	0.00	0.00	286.62	308.85
12/19/2013	113.48	606.41	16.00	18.00	340.39	913.32	4.71	5.19	0.00	93.92	8.75	199.61	355.80
12/20/2013	115.58	117.77	18.00	18.00	457.37	460.11	4.84	5.16	0.00	0.00	0.00	341.70	343.50
12/21/2013	114.95	115.69	18.00	18.00	454.27	457.45	4.88	5.06	0.00	0.00	0.00	339.20	341.84
12/22/2013	114.57	115.09	18.00	18.00	451.77	454.31	5.03	5.12	0.00	0.00	0.00	337.13	339.31
12/23/2013	111.91	660.97	16.00	18.00	332.07	924.71	4.79	5.13	0.00	99.16	2.95	199.50	364.23
12/24/2013	114.32	115.50	18.00	18.00	430.85	435.76	4.88	5.06	0.00	0.00	0.00	316.45	320.34
12/25/2013	114.20	114.44	18.00	18.00	428.99	430.90	4.79	4.99	0.00	0.00	0.00	314.71	316.55
12/26/2013	109.06	701.27	16.00	18.00	304.20	943.91	4.80	5.35	0.00	106.58	7.86	191.43	349.99
12/27/2013	113.75	682.75	16.00	18.00	322.21	984.19	5.22	5.62	0.00	126.54	15.60	187.52	360.91
12/28/2013	105.87	120.99	17.00	18.00	333.40	468.48	5.00	5.48	0.00	0.00	0.00	216.34	349.98
12/29/2013	115.35	116.44	18.00	18.00	431.33	432.55	4.99	5.25	0.00	0.00	0.00	315.71	316.58
12/30/2013	78.16	694.30	16.00	18.00	318.41	995.37	3.73	5.42	0.00	123.26	14.77	200.67	350.08
12/31/2013	74.22	78.20	18.00	18.00	422.10	423.87	4.58	4.91	0.00	0.00	0.00	345.35	348.11

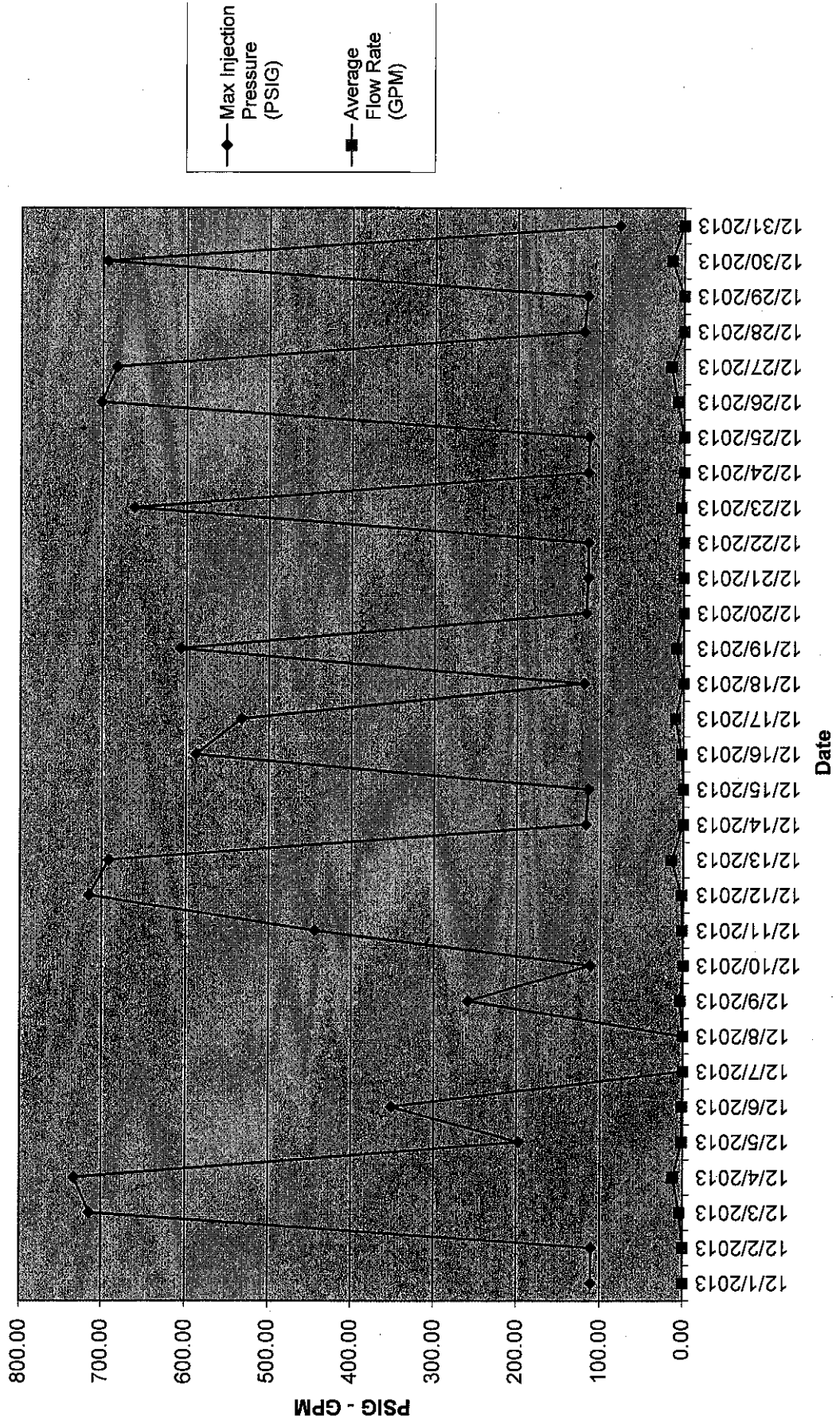
Well 02 Monthly Data Description

On 12/17/13 the data recorded is a result of programming performed by Utilities Instrumentations Services (UIS). Changes were made to operational set points that allow operations to occur closer to permit limits without allowing exceedances. No injection was taking place during the programming and shut down alarms were not triggered, however erratic data was recorded.

Well 2 Min/Max Sight Glass Level Chart



Well 2 Max Injection Pressure and Avg. Flow Rate



Circle Chart Index

Environmental Geo-Technologies, LLC 28470 Citrin Drive Romulus, MI 48174

Chart Recorder #1

Channel #1

Blue Pen - Well 1 Injection Pressure

Channel #2

Red Pen – Well 1 Annulus Pressure

Channel #3

Green Pen – Well 1 Flow Rate

Channel #4

Black Pen – Well 1 Annulus Tank Level

Chart Recorder #2

Channel #1

Blue Pen – Well 2 Injection Pressure

Channel #2

Red Pen – Well 2 Annulus Pressure

Channel #3

Green Pen – Well 2 Flow Rate

Channel #4

Black Pen – Well 2 Annulus Tank Level

Chart Recorder #3

Channel #1

Blue Pen – Injection pH Well 1 & 2

Channel #2

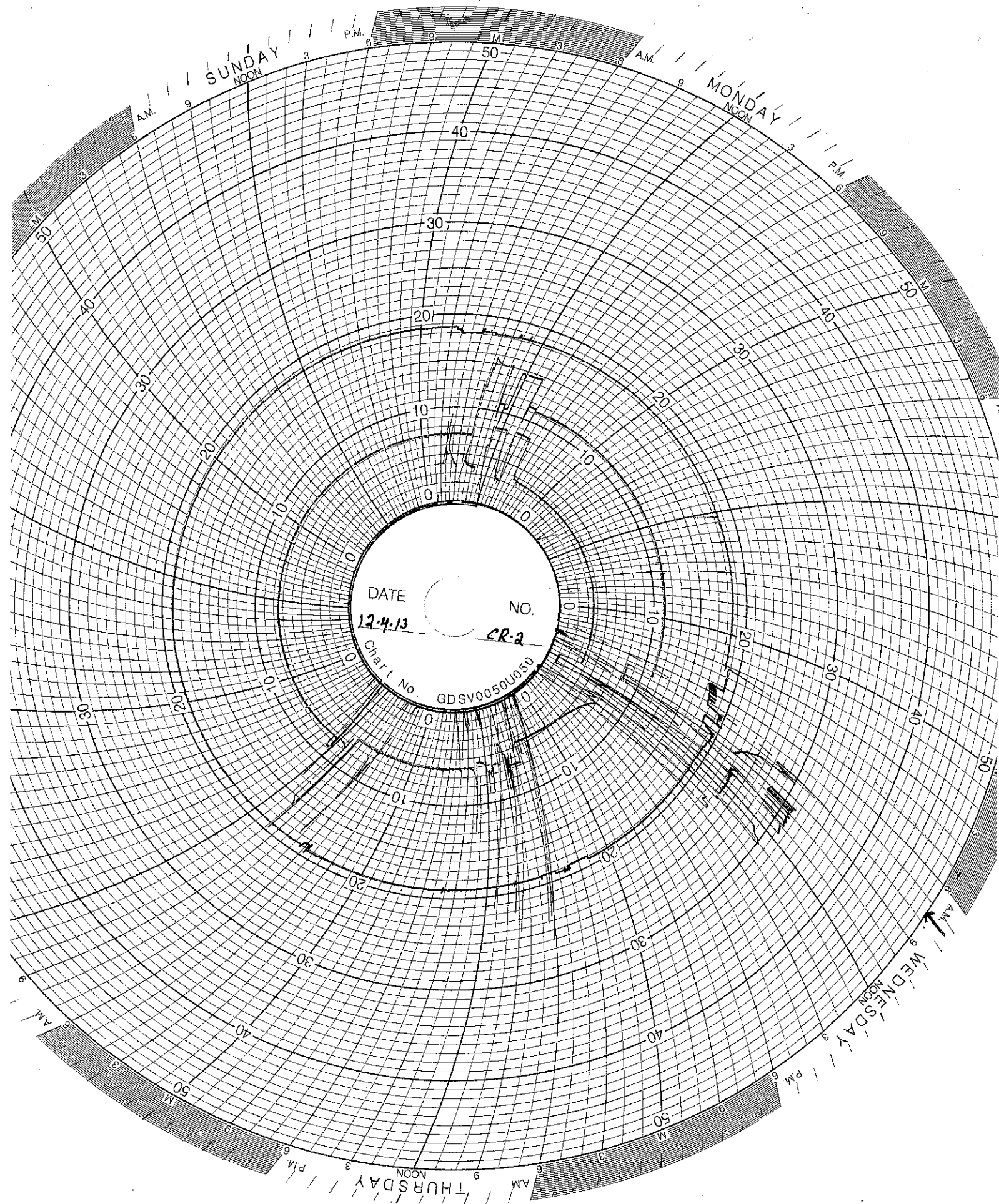
Red Pen – Well 1 Monthly Volume

Channel #3

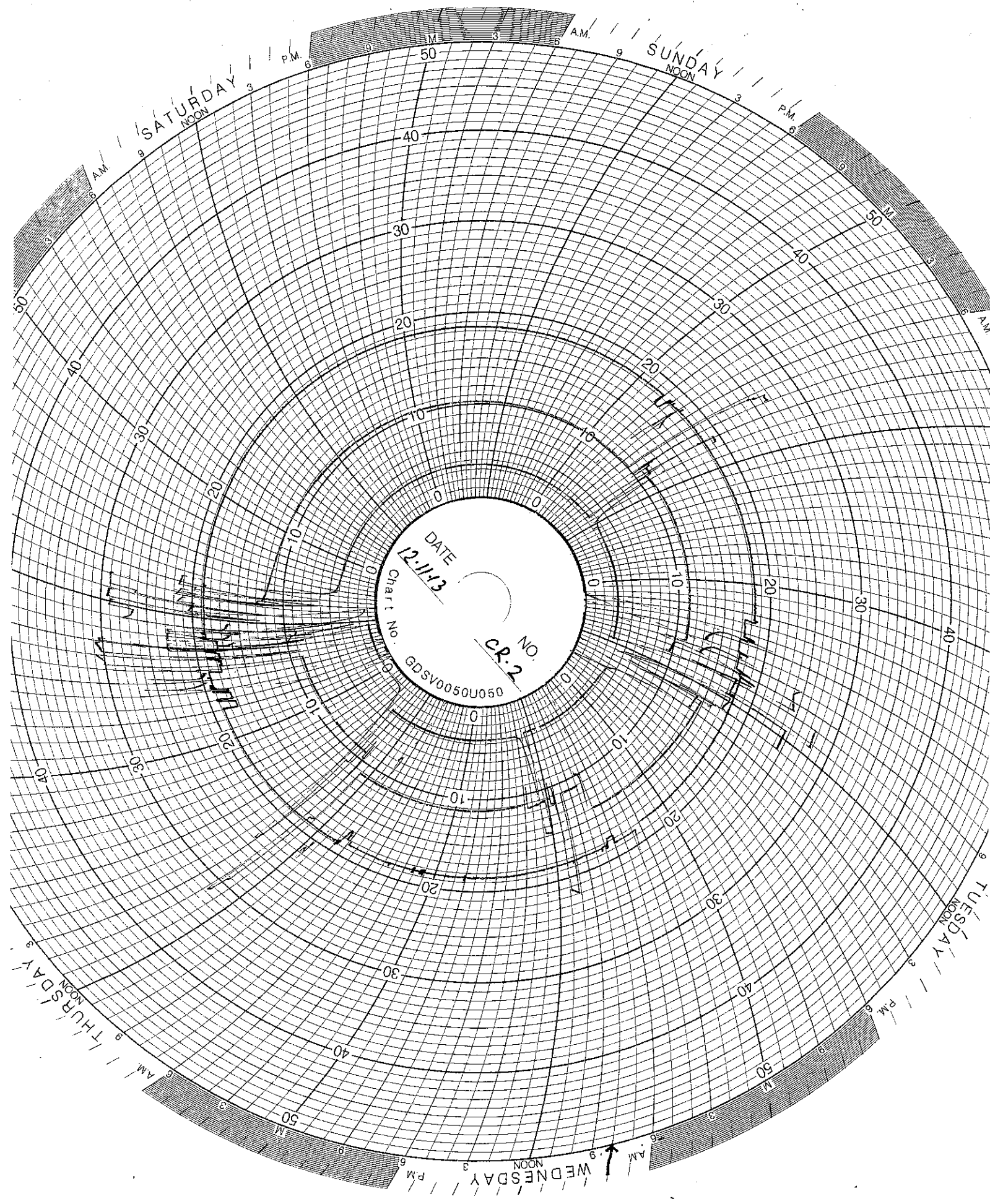
Green Pen – Well 2 Monthly Volume

Channel #4

Black Pen - Temperature



DATE 12-4-13
NO. CR-2
Chart No. GDSV00501050



SATURDAY
NOON

SUNDAY
NOON

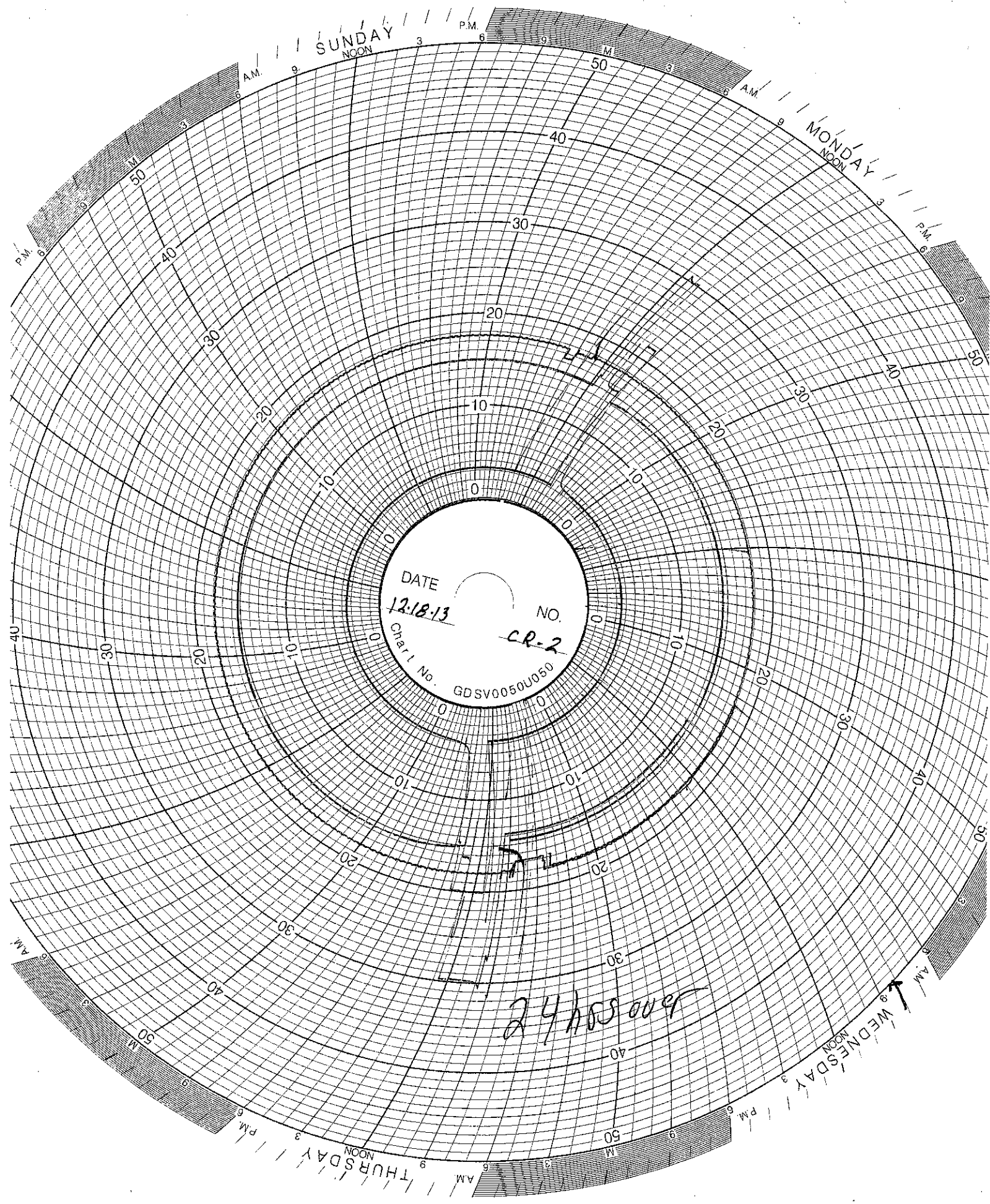
TUESDAY
NOON

WEDNESDAY
NOON

DATE
12-11-13

CHART NO
GD SV 0050U050

NO
CR-2



SUNDAY
NOON

MONDAY
NOON

WEDNESDAY
NOON

THURSDAY
NOON

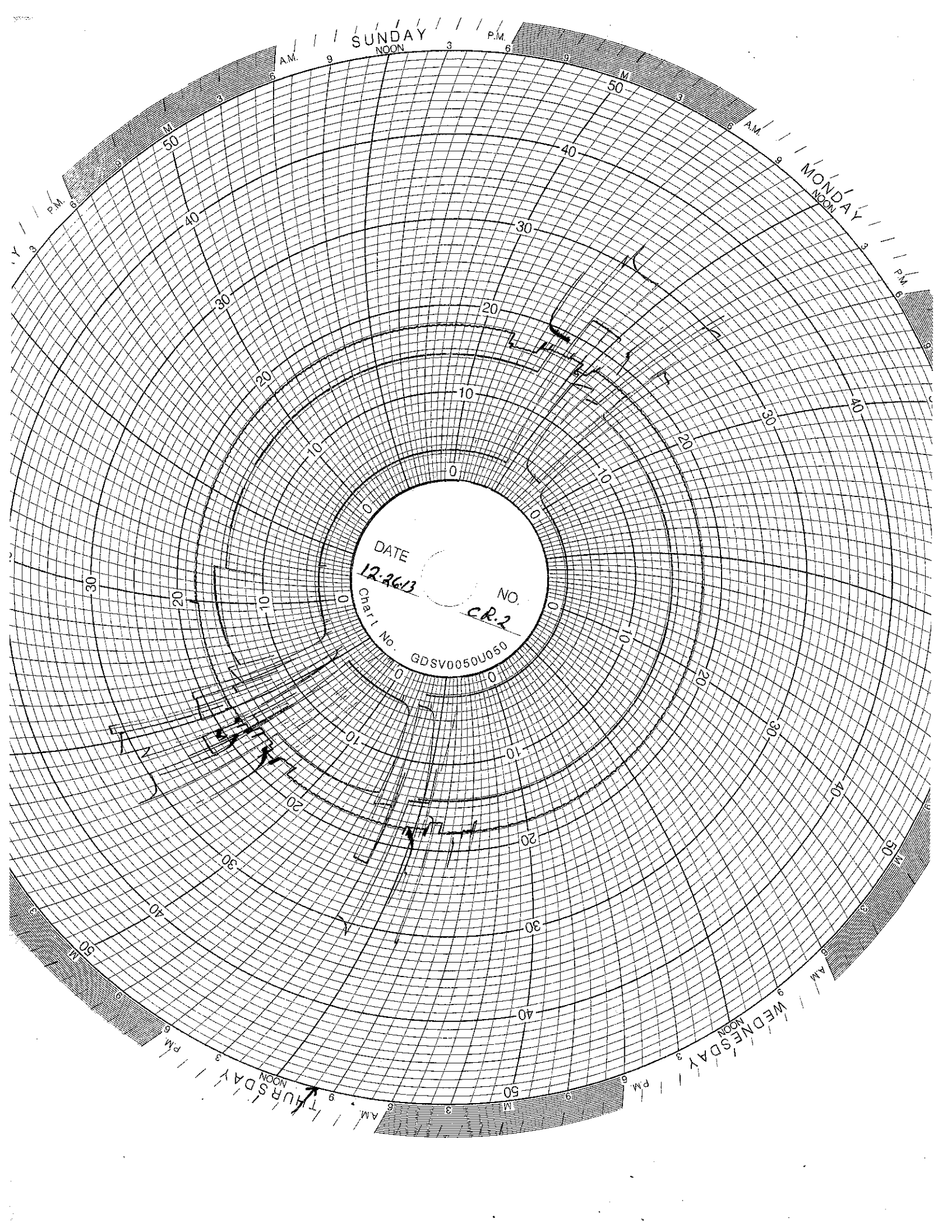
DATE
12-18-13

NO.
CR-2

Chart No.
GDSV0050U050

24 has over

24 has over



MAINTENANCE LOG

UIC Monthly Maintenance Log

12/5/2013	Injection Pump 2 Pressure Switch	Utilities Instrumentation Services (UIS) is on site to trouble shoot Injection pump 2 and determined that the pump suction pressure switch was not functional. The switch was replaced within the hour.
12/17/2013	Operational Set Points	Utilities Instrumentation Services (UIS) is on site to change operational set points for the annulus differential pressure so that warning alarms (not shut off alarms) are not triggered during normal operating conditions.
12/17/2013	Noise Filters LCP-5	Two noise filters were installed on the power lines coming into the LCP-5 power and control panel. These noise filters have shielded the power lines so that the flow controllers do not fluctuate erratically.
12/17/2013	Foundation Fieldbus	Mark Controls was used to reprogram of the foundation fieldbus. The power was disconnected from the foundation fieldbus so that noise filters could be installed on the power lines for well 1 and 2 flowmeters. Once power was removed the fieldbus had to be
12/18/2013	Pump House Heater	A new radiant heater was installed in the pump house where the large Roto-Jet injection pumps are housed. The old heater was just keeping the building above freezing in the extreme cold temperatures of this year.

CORROSION MONITORING

CORROSION MONITORING COUPONS BASELINE VISUAL DESCRIPTION

November 4, 2013

Fiberglass

The fiberglass coupon is Red Box 2000 type and is 2-1/2 inches long by 1/2 inch wide and 1/4 inches thick. It is a dark orange (rust) in color with a glossy shine on one side a polished look on the opposite side and the cut edges look sanded.

Hastelloy

The hastelloy coupon is identified as C276 with serial number 1. The dimensions of the coupon are 3 inches long by 1/2 inch wide and 1/4 inch thick. The coupon is silver in color with a lightly sandblasted surface.

Stainless Steel

The stainless steel coupon is identified as 316L with serial number C1562. The dimensions of the coupon are 3 inches long by 1/2 inch wide and 1/4 inch thick. The coupon is silver in color with a lightly sandblasted surface.

9/18/13

Transcribed from coupons weighed
on 8/6/13

#1 Fiberglass Coupon Prior to
Waste Exposure
wt. = 7.309 grams

#2 Hastelloy Coupon Prior to
Waste Exposure / ID: C267(1)
wt. = 13.330 grams

#3 Stainless Steel Coupon Prior to
Waste Exposure / ID: 316L/C 1562
wt. = 10.848 grams

Ghesquiere Plastic Testing, Inc.

20450 HARPER AVENUE
HARPER WOODS, MI 48225
PHONE (313) 885-3535
FAX (313) 885-1771

Report Date: November 15, 2013
Test Date: October 15 - November 14, 2013

Report #1310-77651
Performed for:
Environmental Geo-Technologies
28470 Citrin Drive
Romulus, MI 48174

Attention: Mr. Don Anderson

WORK REQUESTED:

Perform Barcol Hardness test on sample submitted.

DESCRIPTION OF SAMPLE:

Sample submitted was identified as a fiberglass test coupon.

(P. O. #Credit Card).

WORK PERFORMED:

Test specimen was prepared as necessary and conditioned for a minimum of 24 hours at standard laboratory conditions prior to testing.

Barcol Hardness test was performed in accordance with the procedures of ASTM D2583-13. One specimen was tested.

RESULTS:

The following determination was made based upon the above test:

BARCOL HARDNESS

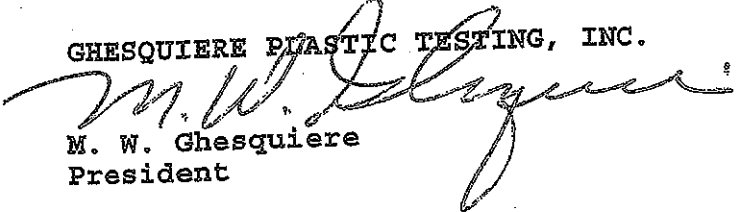
Hardness

Specimen 1

90

Specimen is being returned with this report for further evaluation.

Ghesquiere Plastic Testing, Inc.


M. W. Ghesquiere
President

MWG/kni

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Our letters and reports apply only to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar products.
The letters and reports and the name of Ghesquiere Plastic Testing, Inc., are not to be used under any circumstances in advertising to the general public.
Samples, extra and related test materials will be destroyed 30 days after the date of the final report unless the client indicates otherwise in writing.

TOTAL 1 PAGES

Fiberglass Coupon

Date: 08/06/2013

Wt.: 7.309 Grams

Prior to Waste Exposure

Q2710

Hastelloy Coupon

ID: C267 (1)

Date: 08/06/2013

Wt.: 13.330 Grams

Prior to Waste Exposure

316L
C1562

Stainless Steel Coupon

ID: 316L / C1562

Date: 08/06/2013

Wt: 10.848 grams

Prior to Waste Exposure

**INJECTION
FINGERPRINTS**

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/03/13
Receiving ID#	I 12031301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	D.A.

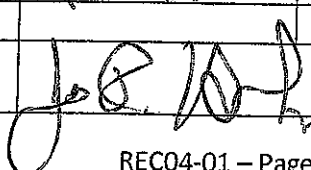
LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:		Barium	
Compatible? (RT#)	(Yes) No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	> 140	Sodium Chloride	
pH (S.U.)	2.4	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	< 0.1%
Specific Gravity	1.03	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	68°F		
Conductivity	58.2 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/03/13
Receiving ID#	I 12031302
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	D.H.

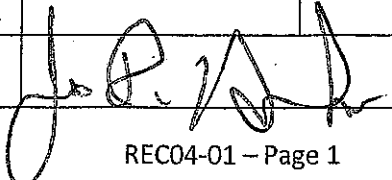
LAB INFORMATION		Oilfield Brines Only:	
All Waste Shipments:			
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	2.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	2.77
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	69°F		
Conductivity	51.2 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/04/13
Receiving ID#	I 12041301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	D.H.

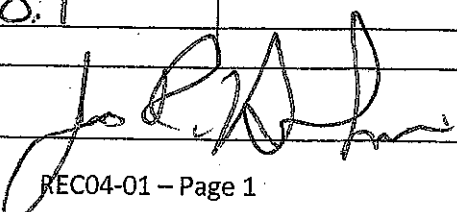
LAB INFORMATION		Oilfield Brines Only	
All Waste Shipments:		Barium	
Compatible? (RT#)	(Yes) No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	> 140	Sodium Chloride	
pH (S.U.)	4.8	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	4.5%
Specific Gravity	1.11	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	71°F		
Conductivity	90.4 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/04/13
Receiving ID#	I 12041302
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	DM

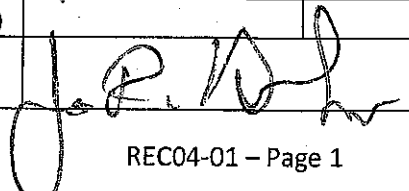
LAB INFORMATION: All Waste Shipments:		Oilfield Brines Only:	
Compatible? (RT#)	<input checked="" type="radio"/> Yes <input type="radio"/> No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	5.1	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.13	TDS	4.77
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	73°F		
Conductivity	93.7 µS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/06/13
Receiving ID#	I 12061301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	J.H.

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:			
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.05	TDS	< 0.1%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	66°F		
Conductivity	63.8 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/06/13
Receiving ID#	I 12061302
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:		Barium	
Compatible? (RT#)	<input checked="" type="radio"/> Yes No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	> 140	Sodium Chloride	
pH (S.U.)	3.4	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	< 0.1%
Specific Gravity	1.00	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	65°F		
Conductivity	5.1 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/12/13
Receiving ID#	12121301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	<i>[Signature]</i>

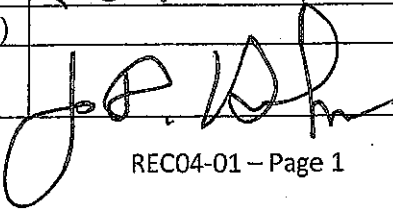
LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:			
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	1.8	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.05	TDS	3.17
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	66°F		
Conductivity	2.9 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature	<i>[Signature]</i>		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/13/13
Receiving ID#	I 12131301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	D.H.

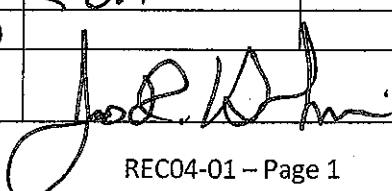
LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:			
Compatible? (RT#)	<input checked="" type="radio"/> Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	3.6	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	0.3%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	64 °F		
Conductivity	6.6 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/17/13
Receiving ID#	12171301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	RVA

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:		Barium	
Compatible? (RT#)	Yes No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	> 140	Sodium Chloride	
pH (S.U.)	6.6	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	< 0.1%
Specific Gravity	1.00	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	63°F		
Conductivity	0.9 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/18/13
Receiving ID#	I 12181301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	J.H.

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:			
Compatible? (RT#)	<input checked="" type="radio"/> Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	140	Magnesium	
pH (S.U.)	6.7	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.02	TDS	< 0.19
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	60°F		
Conductivity	0.6 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/20/13
Receiving ID#	I 12201301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JRH
Sampled by	JRH

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:			
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	6.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	< 0.1 %
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	61 °F		
Conductivity	0.6 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature	J. R. H.		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/30/13
Receiving ID#	12301302
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	JH
Sampled by	JH

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:		Barium	
Compatible? (RT#)	Yes No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	> 140	Sodium Chloride	
pH (S.U.)	5.5	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	1.9%
Specific Gravity	1.03	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	62°F		
Conductivity	36.9 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature	J.P. [Signature]		

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC

RECEIVING & APPROVAL FORM

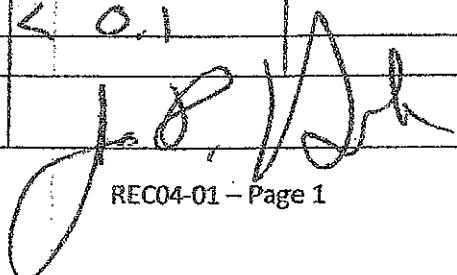
RECEIVING INFORMATION

Date	12/26/13
Receiving ID#	I 12261301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	D.H.

LAB INFORMATION:

All Waste Shipments:

Oilfield Brines Only:

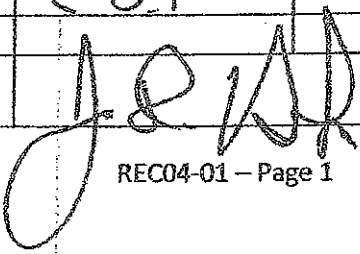
Compatible? (RT#)	Yes No	Barium	
PCBs (ppm)(Oily Waste Only)?		Calcium	
TOC (ppm)(CC Waste Only)?		Total Iron	
Flash Point (°F)	> 140	Magnesium	
pH (S.U.)	6.5	Sodium Chloride	
Cyanides? (mg/L)		Bicarbonate	
Sulfides? (ppm)		Carbonate	
Specific Gravity	1.00	TDS	< 0.1%
Physical Description		Resistivity	
Stream Consistency	Yes No	Sulfate	
Oil in Sample	Yes No		
Temperature	58°F		
Conductivity	0.5-5		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/27/13
Receiving ID#	I 1227130
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	A
Generator	EGT
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	DAK

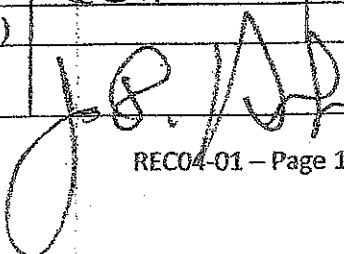
LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:		Barium	
Compatible? (RT#)	<input checked="" type="checkbox"/> Yes No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	> 140	Sodium Chloride	
pH (S.U.)	7.01	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	< 0.1
Specific Gravity	1.01	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	58°F		
Conductivity	0.5 mS		
% Solids	< 0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	< 0.1		
Radiation Screen (as needed)			
Lab Signature			

FINGERPRINT FORM

ENVIRONMENTAL GEO-TECHNOLOGIES, LLC.

RECEIVING & APPROVAL FORM

RECEIVING INFORMATION	
Date	12/30/13
Receiving ID#	12309301
Manifest# Line:	
Land Ban Cert included	Yes No
EGT Approval #	
Generator	
Client	
Transporter	
Time in	
Time out	
Received by	J.H.
Sampled by	QAA

LAB INFORMATION:		Oilfield Brines Only:	
All Waste Shipments:		Barium	
Compatible? (RT#)	<input checked="" type="radio"/> Yes No	Calcium	
PCBs (ppm)(Oily Waste Only)?		Total Iron	
TOC (ppm)(CC Waste Only)?		Magnesium	
Flash Point (°F)	140	Sodium Chloride	
pH (S.U.)	7.5	Bicarbonate	
Cyanides? (mg/L)		Carbonate	
Sulfides? (ppm)		TDS	<0.1%
Specific Gravity	1.00	Resistivity	
Physical Description		Sulfate	
Stream Consistency	Yes No		
Oil in Sample	Yes No		
Temperature	52°F		
Conductivity	0.6 mS		
% Solids	<0.1		
Turbidity	Yes No		
Color (visual)			
TSS (%)	<0.1		
Radiation Screen (as needed)			
Lab Signature			

**WASTE STREAMS
CHARACTERIZATIONS**