

#### **TECHNICAL MEMORANDUM**

**DATE** January 19, 2024 **Project No.** 1239330906

TO Barbara K. Nielsen, Manager, Remedial Projects

Cyprus Amax Minerals Company

CC Steve Anderson

FROM Bob Ireson EMAIL bob.ireson@wsp.com

# RE: COMPLETION OF WELL DECOMMISSIONING FORMER SATRALLOY SITE (JEFFERSON COUNTY, OHIO)

This report summarizes groundwater monitoring well decommissioning activities by Cyprus Amax Minerals Company (CMAC) at the Former Satralloy Site (the Site) prior to the slag removal interim action at the Site. A letter describing the decommissioning plan was submitted to Ohio EPA and approved on May 16, 2023. These monitoring wells required decommissioning because they were located in areas that will be impacted by the interim action.

WSP USA Inc. (WSP) completed well decommissioning between August 28 and September 28, 2023. WSP subcontractor Cascade Drilling LP (Cascade) was retained to complete the drilling and sealing activities. A WSP geologist monitored and logged drilling and decommissioning activities.

As set forth in the Ohio EPA approved decommissioning plan, the work proceeded in accordance with the Ohio EPA Division of Drinking and Ground Waters Technical Guidance Manual (TGM) for Hydrogeologic Investigations and Ground Water Monitoring, Chapter 9, Sealing Boreholes and Decommissioned Monitoring Wells (September 2016) as specified in Ohio Administrative Code Rule 3475-9-03, Monitoring Wells.

Well casings were inspected and determined to be in good condition prior to decommissioning. Each well was originally drilled and constructed between 2014 and 2021. Field observations and measurements, including water levels and total depth, confirmed wells remained in their original condition.

Several wells in the former coal mine area of the Site had previously installed transducers and piezometers. WSP downloaded data and removed transducers from wells RBH-01, MW-101-S, MW-101-D and MW-111. Vibrating wire piezometers were removed and discarded from MW-106, MW-112 and MW-113. The wells did not contain any pumps or other fixtures.

The primary sealing material consisted of Quick-Grout®, a bentonite grout sealing and plugging material with standard ANSI/NSF 60 certification and mixed according to the manufacturer's instructions with fresh potable water. Cascade completed pressure grouting of boreholes and casings in a continuous operation without interruption. As anticipated, WSP observed some settling of grout following initial well removal in areas where they had been constructed in unconsolidated layers of slag, noting slag will be excavated from these locations

Two Miranova Place Columbus, Ohio, 43215

January 19, 2024

during the interim action. In these instances, generally less than three feet below grade, Cascade placed gravity fed Bentonite Holeplug® over the grout up to grade to prevent surface water infiltration.

Protective bollards and steel well casings were removed and managed as construction debris. Well decommissioning activities consisted of over-drilling and some casing sealing as specified in the TGM. Specific methodologies used were based on whether the original well screen was constructed in unconsolidated soils above bedrock in the lowland portion of the Site, or in consolidated bedrock formations in the uplands. The following summaries the methodologies used in those two areas of the Site:

#### **Lowland Monitoring Wells**

- Sixteen monitoring wells were decommissioned in the lowland (refer to Table 1 for well IDs with locations presented on Figure 1).
- This includes three lowland wells previously constructed for the Bureau of Underground Storage Tank Regulations (BUSTR) Tier Investigations, TW-01, TW-02 and TW-03. They are no longer necessary after BUSTR issued on October 3, 2023, a No Further Action status for the incident.
- Lowland monitoring well MW-2T was previously decommissioned at the Site, which is also depicted on Figure 1.
- For fourteen of the lowland wells, Cascade removed well casings to the extent practical. They over-drilled each well to the original borehole depth, resulting in the removal of well casing, sand pack, and original annular fill material. Using a tremie tube, each over-drilled borehole was filled with a grout slurry (described previously) from the bottom of the borehole to the surface.
- Two lowland area wells, MW-10 and TW-02 could not be readily accessed by the drill rig. Cascade completed decommissioning at these locations by removing the flush mount surface protector and pressure grouting the well casing with a grout slurry from the bottom using a tremie tube. Cascade removed the upper three feet of well casing and placed hydrated bentonite slurry to the surface. Cascade installed a concrete pad at the surface of TW-02 due to its proximity to a temporary retaining wall and changes in the original surface elevation. Cascade placed approximately one foot of topsoil at the surface of MW-10.

### **Upland Monitoring Wells**

- Fourteen upland monitoring well locations were decommissioned in the ridge top and former mine areas (refer to Table 1 for well IDs with locations presented on Figure 1). Two of those locations included nested well pairs (MW-101-S/D and MW-112 S/D) in the same borehole. These nested monitoring wells had one or more well screens constructed in bedrock.
- Upland monitoring well RBH-2 was previously decommissioned at the Site, which is also depicted on Figure 1.
- Five former mine area monitoring wells (MW-107-D, MW-107-S, MW-109, and MW-110) and upland well RBH-3S were over-dilled to the original borehole depth which extended into bedrock. They were decommissioned with the same methodology as the unconsolidated monitoring wells in the lowlands, as described above.



The nine other consolidated monitoring wells (MW-101-S/D, MW-102, MW-106, MW-108, MW-111, MW-112-S/D, MW-113, MW-115 and RBH-1) were decommissioned by first pressure grouting each well casing with a grout slurry pumped using a tremie tube from the well bottom to within 2-3 feet of the planned over-drill depth. Cascade then proceeded to over-drill each original borehole through the unconsolidated formation to bedrock. The over-drilled borehole was pressure grouted with a grout slurry from the bottom of the over-drilled portion of the borehole to the surface pumped using a tremie tube.

Table 1 summarizes decommissioning observations and materials used for each monitoring well. All decommissioned and retained monitoring wells are illustrated on Figure 1. Appendix A includes copies of well sealing reports prepared by Cascade for submittal by them to the Ohio Department of Natural Resources (ODNR). Information contained in the ODNR sealing reports is entered by the driller and subject to data entry limitations of the ODNR data base. Information presented in Table 1 accurately reflects sealing details observed by WSP.

In summary, thirty monitoring wells were decommissioned in 2023 at the Former Satralloy Site. If you have questions, please contact Barbara Nielsen at (602) 366-8270.

WSP USA Inc.

D. Robert Ireson

Assistant Vice President

R. Stephen Anderson

Mid-Atlantic District Leader, Earth & Environment Vice President

DRI/RSA

Attachments: Table 1 – Well Decommissioning Observations

Figure 1 – Retained and Decommissioned Monitoring Wells

Appendix A – Well Sealing Reports

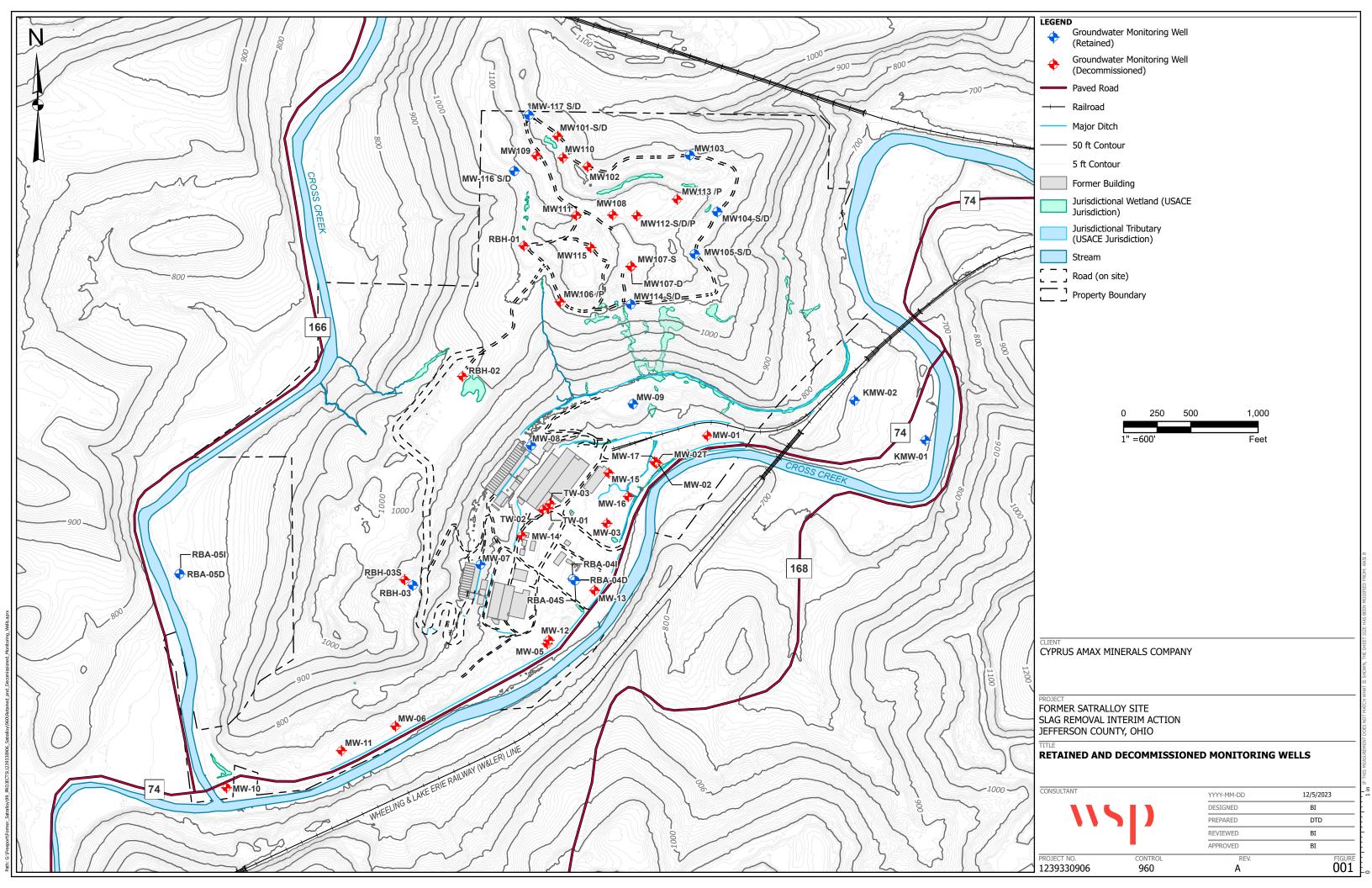


Project Number: 1239330907.960

Table 1 - Well Decommissioning Observations Completion of Well Decommissioning - Former Satralloy Site

		Original Well Construction Sealing Procedure					Casing												
								Casing Length to					Volume						
		Original ODNR	Depth of Well	<b>Water Level</b>	Borehole	Borehole	Casing	Top of Well					Calculated	Volume Used			Casing		ļ ,
Location	Area	Log No.	(from ground)	(from TOC)	Depth	Diameter	Diameter	Screen	Casing Type	From	To	Material	(gallons)	(gallons)	Method	Condition	Removed	Date Start	t Date End
MW-01	Lowland	2047719	45.59	30.84	65	6	2	35.59	PVC	0	65	Bentonite Grout	169.7	184.1	Overdrill/Tremie Tube	Good	Yes	08/31/23	09/01/23
MW-02	Lowland	2047717	48.12	29.5	48.12	6	2	38.12	PVC	0	49	Bentonite Grout	127.9	131.5	Overdrill/Tremie Tube	Good	Yes	08/31/23	
MW-03	Lowland	2047733	25.64	22.94	30	6	2	15.64	PVC	0	30	Bentonite Grout	78.3	78.9	Overdrill/Tremie Tube	Good	Yes	08/29/23	, -,
MW-05	Lowland	2047736	40.72	35.22	65	6	2	30.72	PVC	0	65	Bentonite Grout	169.4	184.1	Overdrill/Tremie Tube	Good	Yes	09/22/23	, , -
MW-06	Lowland	2047735	47.59	22.09	55	6	2	37.59	PVC	0	49	Bentonite Grout	127.6	157.8	Overdrill/Tremie Tube	Good	Yes	09/21/23	
MW-107D	Upland	2088532	47.89	43.86	48	6	2	38.89	PVC	0	48	Bentonite Grout	125.3	131.5	Overdrill/Tremie Tube	Good	Yes	09/18/23	
MW-107S	Upland	2088538	14.94	~17	27	6	2	4.94	PVC	0	15	Bentonite Grout	39.5	52.6	Overdrill/Tremie Tube	Good	Yes	09/18/23	
MW-108	Upland	2088536	37.87	39.7	57	6	2	27.87	PVC	0	10	Bentonite Grout	26.1	26.3	Overdrill/Tremie Tube	Good	Yes	09/12/23	
MW-109	Upland	2088538	31.87	16.35	67	6	2	18.87	PVC	0	32	Bentonite Grout	83.56	105.2	Overdrill/Tremie Tube	Good	Yes	09/14/23	
MW-11	Lowland	NA	14.45	16.38	14.5	6	2	11.45	PVC	0	15	Bentonite Grout	43.4	52.6	Overdrill/Tremie Tube	Good	Yes	09/21/23	
MW-110	Upland	2088539	33.59	27.74	38	6	2	23.59	PVC	0	38	Bentonite Grout	99.23	105.2	Overdrill/Tremie Tube	Good	Yes	09/15/23	, -,
MW-12	Lowland	NA	6.9	7.94	10	6	2	3.4	PVC	0	10	Bentonite Grout	26.2	26.3	Overdrill/Tremie Tube	Good	Yes	09/25/23	, -,
MW-13	Lowland	NA	14.73	Dry	15	6	2	11.73	PVC	0	15	Bentonite Grout	39.5	157.8	Overdrill/Tremie Tube	Good	Yes	09/25/23	
MW-14	Lowland	NA	17.62	9.97	20	6	2	13.62	PVC	0	20	Bentonite Grout	52.1	52.6	Overdrill/Tremie Tube	Good	Yes	09/05/23	,, -
MW-15	Lowland	NA	17.49	18.4	18	6	2	12.49	PVC	0	18	Bentonite Grout	47	52.6	Overdrill/Tremie Tube	Good	Yes	08/30/23	
MW-16	Lowland	NA	24.11	22.24	24	6	2	14.11	PVC	0	24	Bentonite Grout	62.7	78.9	Overdrill/Tremie Tube	Good	Yes	08/29/23	08/29/23
MW-17	Lowland	NA NA	14.96	11.7	16 50	6	2	9.96	PVC	0	16	Bentonite Grout	41.8	52.6	Overdrill/Tremie Tube	Good	Yes	08/31/23	08/31/23
RBH-3S	Upland	NA NA	48.41 24.7	38.01 11.31	40	6	2	28.41 14.7	PVC PVC	0	50 28	Bentonite Grout	130.6 73.1	131.5 52.6	Overdrill/Tremie Tube	Good	Yes Yes	09/20/23	09/20/23
TW-01 TW-03	Lowland	NA NA	39.75	18.02	40	6	2	29.75	PVC	0	40	Bentonite Grout	73.1 104.5	105.2	Overdrill/Tremie Tube Overdrill/Tremie Tube	Good Good		09/26/23 09/26/23	
1 W-U3	Lowland	INA	39./5	18.02	40	0		29./5	PVC	0	3	Bentonite Grout Bentonite Pellots	50 lbs	105.2	Excavated	Good	Yes	09/26/23	09/26/23
MW-10	Lowland	NA	10	5.71	10	6	2	5	PVC	3	10	Bentonite Grout	4.55	5.5	Filled Casing/Tremie Tube	Good	No	09/25/23	09/25/23
+										0	3	Bentonite Pellets	50 lbs		Excavated				+
TW-02	Lowland	NA	40	17.34	40	6	2	30	PVC	2	40	Bentonite Grout	5.5	5.5	Filled Casing/Tremie Tube	Good	No	09/26/23	09/26/23
										0	32	Bentonite Grout	83.56		Overdrill/Tremie Tube				+
MW-101-S/D	Upland	2088505	88.32	32.82	96	6	2	73.22	PVC	32	88.32	Bentonite Grout	9.19	105.2	Filled Casing/Tremie Tube	Good	Partial	09/14/23	09/14/23
										0	55	Bentonite Grout	143.3		Overdrill/Tremie Tube				+
MW-102	Upland	2088509	83.47	63.44	90	6	2	73.47	PVC	55	83.5	Bentonite Grout	4.7	157.8	Filled Casing/Tremie Tube	Good	Partial	09/15/23	09/06/23
										0	38	Bentonite Grout	97.3		Overdrill/Tremie Tube				+
MW-106	Upland	2088530	68.3	50.7	70	6	2	53.3	PVC	38	68	Bentonite Grout	4.9	105.2	Filled Casing/Tremie Tube	Good	Partial	09/06/23	09/06/23
						_	_			0	42	Bentonite Grout	171.4		Overdrill/Tremie Tube			/	
MW-111	Upland	2088541	67.69	50.32	68	8	2	58.69	PVC	42	67.7	Bentonite Grout	4.19	184.1	Filled Casing/Tremie Tube	Good	Partial	09/11/23	09/11/23
1011 442 G/D		2000547	02.22	70.05	442.6		_	00.00	D) (C	0	73.5	Bentonite Grout	187.6	1011	Overdrill/Tremie Tube		5	00/10/00	00/10/00
MW-112-S/D	Upland	2088547	92.22	78.95	142.6	6	2	82.22	PVC	73.5	92.2	Bentonite Grout	3.1	184.1	Filled Casing/Tremie Tube	Good	Partial	09/12/23	09/13/23
NAVA 443	11-1	2000552	121.44	101.21	177.4		2	444.44	D) (C	0	47	Bentonite Grout	122.5	457.0	Overdrill/Tremie Tube	6	D. Cal	00/12/22	00/12/22
MW-113	Upland	2088553	131.44	101.21	177. <del>4</del>	6	2	111.44	PVC	47	131.44	Bentonite Grout	13.78	157.8	Filled Casing/Tremie Tube	Good	Partial	09/13/23	09/13/23
M/A/ 11F	Unland	2000560	07.46	02.4	00		2	70.46	D) (C	0	76	Bentonite Grout	198.44	236.7	Overdrill/Tremie Tube	Cood	Double	00/11/22	00/11/22
MW-115	Upland	2088560	87.46	83.4	88	6	2	79.46	PVC	76	87.46	Bentonite Grout	1.87	230./	Filled Casing/Tremie Tube	Good	Partial	09/11/23	09/11/23
DDLL 1	Unland	2046554	100	101.01	100.6	8	2.5	170.7	DVC	0	25	Bentonite Grout	102	157.0	Overdrill/Tremie Tube	Cood	Double	00/07/22	00/00/22
RBH-1	Upland	2046554	198	181.01	199.6	8	2.5	178.7	PVC	25	199.6	Bentonite Grout	44.5	157.8	Filled Casing/Tremie Tube	Good	Partial	09/07/23	09/08/23





Project No. 1239330906

January 19, 2024

**APPENDIX A** 

Well Sealing Reports



## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No	Lot No
Owner CYPRUS AMAX MINERALS	S CO		
Address of Well Location 4243 CC	DUNTY RD		
City MINGO JUNCTION	Zip Co	ode <u>43983</u>	
Well Location Description OWNER (120 Characters)	? ID MW- 01		
Location of Latitude/Longitude Well:	<b>Latitude</b> 40.31173	Longitude _80.666	5726
Previous Well Use MONITOR			
Elevation of Well	+/ ft. Datum Plane: N	AD27 NAD83	
Source of Coordinates: X GPS	☐ Survey ☐ Other		
	☐ Survey ☒ Other DIGITAL M		
WELL IDENTIFICATION ODNR V	— , <del>—</del>		
MEASURED CONSTRUCTION DE	•		
Date of measurements 9/1/2023			
	<sub>ft.</sub> Stat	c Water Level 30.84	ft.
Borehole Depth 65			
Casing Diameter 2			e PVC
Casing Diameter	<sub>ft.</sub> Borehole Diameter _ <sub>in.</sub> Casing Length	in. Casing Typ	e
SEALING PROCEDURE	Sealing Material	Volume/Weight Used Units Required	Placement Method
Placement:	5 ft. CEMENT/BENTONITE MIX		PUMPED WITH TREMIE PIPE
	5 ft. CEIVIEIN I / BEIN I OIN I TE IVII X		
Fromft. To	ft. ft.		
Condition of Casing		Was Casing Remo	ved?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perfo	orated?□Yes or ⊠No Perfor (check one)	ations: From	ft. To ft.
Date Sealing Performed 9/1/2023			
Comments/Reason for Sealing NO	LONGED MEEDED		
3 140	LONGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH F	tegistration # 003506	
Address 1010 GREENE ST		registration # 300000	
City/State/Zip MARIETTA OH 45			
Signed	CHRIS BUCHANAN	Filed electronically o	on 12/19/2023
I hereby certify the information	given is accurate and correct to the best of my kno	wledae.	on 12/19/2023

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

Page \_1 \_\_ of \_1 \_\_

LOCATION			
County JEFFERSON 1	Township <u>CROSS CREEK</u> Se	ection No	Lot No
Owner CYPRUS AMAX MINERALS CO			
Address of Well Location 4243 COUNY	RD		
City MINGO JUNCTION	Zip Code _	43983	
Well Location Description OWNER ID (120 Characters)	MW- 02		
Location of Latitude/Longitude Lati	itude 40.311278	<b>Longitude</b> _80.668	194
Previous Well Use MONITOR			
Elevation of Well+/+	ft. Datum Plane: NAD2	7 NAD83	
	curvey Other curvey Other_DIGITAL MAP		
WELL IDENTIFICATION ODNR Well Lo		Project Well ID	MW-02
MEASURED CONSTRUCTION DETAILS  Date of measurements 8/31/2023  Depth of Well 48.1  Borehole Depth 48  Casing Diameter 2  Borehole Depth  Casing Diameter	<sub>ft.</sub> Static Wa <sub>ft.</sub> Borehole Diameter <u>6</u> <sub>in.</sub> Casing Length <u>40</u>	inin. Casing Type	PVC
SEALING PROCEDURE           Placement:         From		127.7 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	ed? Yes or No
If casing <b>Not Removed</b> , was it Perforated	d? ☐Yes or ☒No Perforation (check one)	s: Fromft.	Toft.
Date Sealing Performed 8/31/2023 Comments/Reason for Sealing NO LON	IGER NEEDED		
CONTRACTOR			
Address 1010 GREENE ST		tration # <u>003506</u>	
City/State/Zip MARIETTA OH 45750			
	S BUCHANAN accurate and correct to the best of my knowledge	Filed electronically or	n <u>12/19/2023</u> n <u>12/19/2023</u>

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

	` ,		
LOCATION			
County <u>JEFFERSON</u> To	ownship <u>CROSS CREEK</u> So	ection No	Lot No
Owner CYPRUS AMAX MINERALS CO			
Address of Well Location 4243 COUNTY	RD		
City MINGO JUNCTION	Zip Code	43983	
Well Location Description OWNER ID: (120 Characters)	MW-03		
Location of Latitude/Longitude Latitude/Longitude	ude 40.310194	<b>Longitude</b> _80.669!	528
Previous Well Use MONITOR			
Elevation of Well +/	ft. Datum Plane: NAD2	27 NAD83	
Source of Coordinates: GPS Su	irvey Dother		
Source of Elevation: GPS Su	rvey X Other DIGITAL MAP		
WELL IDENTIFICATION ODNR Well Log	g Number 2047733	Project Well ID	MW-03
MEASURED CONSTRUCTION DETAILS			
	<sub>ft.</sub> Static W		ft.
Borehole Depth 30			
Casing Diameter_2	<sub>in.</sub> Casing Length <u>18</u>	<sub>ft.</sub> Casing Type	PVC
Borehole Depth	ft. Borehole Diameter	:	
Casing Diameter	in. Casing Length	<sup>in.</sup> Casing Type	
SEALING PROCEDURE	Sealing Material	Volume/Weight Used	Placement Method
Placement:		Units Required	
From <u>O ft. To 25.6 ft. C</u>			PUMPED WITH TREMIE PIPE
Fromft. Toft			
Fromft. Toft			
Fromft. Toft			
Condition of Casing		Was Casing Remov	ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforated?	P Yes or ⊠No Perforation (check one)	ns: Fromft	Toft.
Date Sealing Performed 8/31/2023			
Comments/Reason for Sealing NO LONG	GER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH Regis	stration # <u>003506</u>	
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
Signed CHRIS  Thereby certify the information given is ac	BUCHANAN ccurate and correct to the best of my knowledge	Filed electronically or	n 12/19/2023
		Last revised o	n <u>12/19/2023                                   </u>

Signed

#### 1008040

### WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B

	Columbus, OH 432 Phone: (614) 265	29-6693	Page 1 of 1
LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No	Lot No
Owner <u>CYPRUS AMAX MINERALS CO</u>	)		
Address of Well Location 4243 COUN	TY RD		
City MINGO JUNCTION	Zip Co	ode <u>43983</u>	
Vell Location Description OWNER ID (120 Characters)	: MW-05		
Location of Latitude/Longitude La Well:	titude 40.307647	Longitude _80.670	893
Previous Well Use MONITOR			
Elevation of Well+/+/-	ft. Datum Plane: N	AD27 NAD83	
Source of Coordinates: GPS Source of Elevation: GPS			
WELL IDENTIFICATION ODNR Well I	_og Number 2047736	Project Well ID	MW-05
Date of measurements 9/22/2023 Depth of Well 40.7 Borehole Depth 65 Casing Diameter 2 Borehole Depth Casing Diameter	ft. Borehole Diameter <u>6</u> in. Casing Length <u>33</u>	ft. Casing Type	e <u>PVC</u>
SEALING PROCEDURE           Placement:         From	CEMENT/BENTONITE MIX		PUMPED WITH TREMIE PIPE
Condition of Casing			
f casing <b>Not Removed</b> , was it Perforate	ed?□Yes or ⊠No Perfora	ations: From	,
Date Sealing Performed 9/22/2023 Comments/Reason for Sealing NO LO	NGER NEEDED		
CONTRACTOR			
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
Signed CHR	IS BUCHANAN	Filed electronically of	on 12/19/2023

I hereby certify the information given is accurate and correct to the best of my knowledge.

Filed electronically on 12/19/2023

Last revised on <u>12/19/2023</u>

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

s, OH 43229-6693 (614) 265-6576

LOCATION			
County <u>JEFFERSON</u> To	wnship <u>CROSS CREEK</u> So	ection No	Lot No
Owner CYPRUS AMAX MINERALS CO			
Address of Well Location 4243 COUNTY	RD		
City MINGO JUNCTION	Zip Code	43983	
Well Location Description OWNER ID:   (120 Characters)	MW-06		
Location of Latitude/Longitude Latitude/Longitude	<sup>ude</sup> 40.309974	Longitude _80.6695	554
Previous Well Use MONITOR			
Elevation of Well+/+/-	ft. Datum Plane: NAD2	27 NAD83	
	rvey Otherrvey Other_DIGITAL MAP		
WELL IDENTIFICATION ODNR Well Log	g Number <u>2047735</u>	Project Well ID	MW-06
Borehole Depth <u>60</u> Casing Diameter <u>2</u>	<sub>in.</sub> Casing Length <u>38</u>	inin. Casing Type	PVC
SEALING PROCEDURE           Placement:         From		Units Required 127.6 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remove	ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforated?  Date Sealing Performed 9/21/2023  Comments/Reason for Sealing NO LONG	(check one)	ns: Fromft.	,
CONTRACTOR			
Name CASCADE DRILLING LP Address 1010 GREENE ST City/State/Zip MARIETTA OH 45750	ODH Regis		
•	BUCHANAN ccurate and correct to the best of my knowledge	Filed electronically or	12/19/2023
		∟asi revised or	า 12/19/2023

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

Page \_1 \_\_ of \_1 \_\_

LOCATION			
County JEFFERSON	Township CROSS CREEK S	ection No	Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUN	ITY RD 74		
City MINGO JUNCTION	Zip Code	43938	
Well Location Description MW-10 (120 Characters)			
Location of Latitude/Longitude L Well:	atitude 40.304718	Longitude _80.679	713
Previous Well Use MONITOR			
Elevation of Well	ft. Datum Plane: NAD2	27 NAD83	
Source of Coordinates: GPS Source of Elevation: GPS	Survey Other Other Other DIGITAL MAP		
WELL IDENTIFICATION ODNR Well		Project Well ID	MW-10
MEASURED CONSTRUCTION DETAIL	LS		
	Ctatia W	lotor Lovel E 7	
	<sub>ft.</sub> Static W		ft.
Borehole Depth	ft. Borenole Diameter	in.	DVC
Casing Diameter 2			rvc
Borehole Depth	<sub>ft.</sub> Borehole Diameter	in	
Casing Diameter	<sub>in.</sub> Casing Length	<sub>ft.</sub> Casing Type	·
SEALING PROCEDURE	Sealing Material	Volume/Weight Used	Placement Method
Placement:	_	Unite Required	
From <u>0 ft.</u> To <u>10 ft.</u>	CEMENT/BENTONITE MIX	4.55 GALLONS	PUMPED WITH TREMIE PIPE
Fromft. Toft.			
Fromft. Toft. Fromft. Toft.			
π. 10π.			
Condition of Casing		_	(check one)
If casing <b>Not Removed</b> , was it Perforate	ed? ☐Yes or ☒No Perforation (check one)	ns: Fromft	Toft.
Date Sealing Performed 9/25/2023			1
Comments/Reason for Sealing NO LC	NGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH Regis	stration # 003506	
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
SignedCHF	RIS BUCHANAN	Filed electronically of	n 12/20/2023
I hereby certify the information given	RIS BUCHANAN is accurate and correct to the best of my knowledg	e. Last revised o	n 12/20/2023

### WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693

Page 1 of 1 Phone: (614) 265-6576

LOCATION	
County <u>JEFFERSON</u> Township <u>CROSS CREEK</u> Section No Lot No	
Owner FORMER SATRALLOY SITE	
Address of Well Location 4243 COUNTY RD 74	
City MINGO JUNCTION Zip Code 43938	
Well Location Description MW-11 (120 Characters)	
Location of Latitude/Longitude Latitude 40.305427 Longitude _80.676631	
Previous Well Use MONITOR	
Elevation of Well 7 1 4 2 6 +/ ft. Datum Plane: NAD27 NAD83	
Source of Coordinates: GPS Survey Other  Source of Elevation: GPS Survey Other DIGITAL MAP	
WELL IDENTIFICATION ODNR Well Log Number Project Well ID MW-11	
Date of measurements   9/21/2023	Method
Fromft. Toft	 ⊠No
f casing <b>Not Removed</b> , was it Perforated? Yes or No (check one)  Yes or No Perforations: From ft. To ft. To ft.	ne)
Date Sealing Performed 9/22/2023  Comments/Reason for Sealing NO LONGER NEEDED	
CONTRACTOR	
Name CASCADE DRILLING LP ODH Registration # 003506 Address 1010 GREENE ST	
City/State/Zip MARIETTA OH 45750	
Signed CHRIS BUCHANAN  I hereby certify the information given is accurate and correct to the best of my knowledge.  Filed electronically on 12/20/2023  Last revised on 12/20/2023	

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1	

LOCATION	,		
County JEFFERSON	Township CROSS CREEK	Section No.	Lot No
County <u>SELFERSON</u>	, Township <u>CROSS CREEK</u>		LOUNO
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUN	ITY RD 74		
City MINGO JUCTION	Zip (	Code <u>43938</u>	
Well Location Description MW-12 (120 Characters)			
Location of Latitude/Longitude L	atitude 40.307591	Longitude _80.67	1042
Previous Well Use MONITOR			
Elevation of Well   7   2   2   .   6   6   +/	ft. Datum Plane:	NAD27 NAD83	
Source of Coordinates: X GPS	Survey Other		
Source of Elevation: GPS	Survey X Other DIGITAL N	MAP	
WELL IDENTIFICATION ODNR Well	Log Number 2088539	Project Well ID	MW-12
MEASURED CONSTRUCTION DETAIL	LS		
	ft. Sta		ft.
Borehole Depth 35			DVO
Casing Diameter 2	<sub>in.</sub> Casing Length <u>23</u>	<sub>ft.</sub> Casing Typ	be PVC
Borehole Depth	<sub>ft.</sub> Borehole Diameter	in	
Casing Diameter	<sub>in.</sub> Casing Length	<sub>ft.</sub> Casing Typ	pe
SEALING PROCEDURE	Castina Matarial	\/_\	Diagona ant Mathead
Placement:	Sealing Material	Volume/Weight Used Units Required	Placement Method
From0 ft. To6.9 ft.	CEMENT/BENTONITE MIX	26.2 GALLONS	PUMPED WITH TREMIE PIPE
Fromft. Toft.			
Fromft. Toft.			
Fromft. Toft.			
Condition of Casing		Was Casing Remo	oved? Yes or No
If casing <b>Not Removed</b> , was it Perforate	ed?□Yes or ⊠No Perfo (check one)	orations: From	ft. Toft.
Date Sealing Performed 9/25/2023			
Comments/Reason for Sealing NO LC	NGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH	Registration # 003506	
Address 1010 GREENE ST		Trogistiation #	
City/State/Zip MARIETTA OH 45750			
Ciana d	DIC DIICHAMAN	<b>-</b>	12/20/2022
Signed CHF  I hereby certify the information given	RIS BUCHANAN is accurate and correct to the best of my kr	Filed electronically	on 12/20/2023
	•	Last revised	on <u>12/20/2023</u>

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION			
County JEFFERSON	Township CPOSS CPEEK	Section No.	Lot No
County <u>SELFERSON</u>	- IOWIISHIP CROSS CREEK	_ Section No	_ LOUNO
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUN	NTY RD 74		
City MINGO JUNCTION	Zip C	Code <u>43938</u>	
Well Location Description MW-13 (120 Characters)			
Location of Latitude/Longitude L	_atitude 40.308587	<b>Longitude</b> _80.669	792
Previous Well Use MONITOR			
Elevation of Well   7   0   8 ].   8   1 ] +/	ft. Datum Plane: I	NAD27 NAD83	
Source of Coordinates: X GPS	Survey Other		
Source of Elevation: GPS	Survey X Other DIGITAL M	/IAP	
WELL IDENTIFICATION ODNR Well	Log Number	Project Well ID	MW-13
MEASURED CONSTRUCTION DETAI	LS		
		<u>-</u>	
•	<sub>ft.</sub> Sta		ft.
Borehole Depth	<sub>ft.</sub> Borehole Diameter <sub>-</sub>	in.	
Casing Diameter 2	<sub>in.</sub> Casing Length <u>10</u>	<sub>ft.</sub> Casing Type	e <u>PVC</u>
Borehole Depth	ft. Borehole Diameter _	in.	
Casing Diameter	in. Casing Length		e
SEALING PROCEDURE			
Placement:	Sealing Material	Volume/Weight Used Units Required	Placement Method
From O_ft. To 14.7 ft.	CEMENT/BENTONITE MIX	•	PUMPED WITH TREMIE PIPE
Fromft. Toft.			
Fromft. Toft.			
Fromft. Toft.			
Condition of Casing		Was Casing Remov	/ed?□Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforat	ted?□Yes or ⊠No Perfo (check one)	orations: Fromf	t. Toft.
Date Sealing Performed 9/25/2023			
Comments/Reason for Sealing NO LO	NGER NEEDED		
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH	Registration # 003506	
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
·			
Signed CHI	RIS BUCHANAN  is accurate and correct to the best of my known	Filed electronically c	n <u>12/20/2023</u>
, grvor		Last revised of	on <u>12/20/2023</u>

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

Page \_1 \_\_ of \_1 \_\_

LOCATION			
County <u>JEFFERSON</u> Tov	vnship <u>CROSS CREEK</u> S	ection No	Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUNTY	RD 74		
City MINGO JUNCTION	Zip Code	43938	
Well Location Description MW-14 (120 Characters)			
Location of Latitude/Longitude Latitude/Well:	de 40.309735	Longitude _80.6717	708
Previous Well Use MONITOR			
Elevation of Well $\boxed{727}$ , $\boxed{64}$ +/-	ft. Datum Plane: NAD2	27 NAD83	
Source of Coordinates: X GPS Sur	vev Other		
Source of Elevation: GPS Sur	-		
WELL IDENTIFICATION ODNR Well Log	Number	Project Well ID	MW-14
MEASURED CONSTRUCTION DETAILS		·	
Depth of Well 17.6			ft.
Borehole DepthCasing Diameter 2	ft. Borenole Diameter	in. Casing Type	PVC.
Borehole Depth Casing Diameter	<sub>ft.</sub> Borenole Diameter <sub>in.</sub> Casing Length	in. Casing Type	
SEALING PROCEDURE			
Placement:	Sealing Material	Volume/Weight Used Units Required	Placement Method
From O_ft. To 17.6 ft. CE			PUMPED WITH TREMIE PIPE
Fromft. Toft			
Fromft. <u>T</u> oft			
Fromft. Toft			
Condition of Casing		Was Casing Remove	ed? Yes or No
If casing <b>Not Removed</b> , was it Perforated?[	Yes or No Perforation (check one)	ns: Fromft.	,
Date Sealing Performed 9/22/2023			
Comments/Reason for Sealing NO LONG	FR NFFDFD		
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address 1010 GREENE ST	ODH Regis	stration # <u>003506</u>	
City/State/Zip MARIETTA OH 45750			
οιιγ, σιατο, Σιρ <u>του πάτε τη του που σ</u>			
	BUCHANAN	Filed electronically or	1 <u>12/20/2023</u>
i nereby certify the information given is acc	surate and correct to the best of my knowledg	Last revised or	n <u>12/20/2023</u>

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

one: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township CROSS CREEK Se	ection No	Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4242 COUN	NTY RD 74		
City MINGO JUNCTION	Zip Code .	43938	
Well Location Description MW-15 (120 Characters)			
Location of Latitude/Longitude L	atitude 40.310978	<b>Longitude</b> _80.6693	353
Previous Well Use MONITOR			
Elevation of Well	ft. Datum Plane: NAD2	7 NAD83	
Source of Coordinates: X GPS	Survey Other		
	Survey X Other DIGITAL MAP		
WELL IDENTIFICATION ODNR Well	Log Number	Project Well ID	MW-15
MEASURED CONSTRUCTION DETAIL	LS	·	
Date of measurements 8/30/2023			
Depth of Well 17.4			ft.
Borehole Depth Casing Diameter 2	ft. Boreflole Diameter	in. # Casing Type	PVC
	t. Borehole Diameter		
Casing Diameter	in. Casing Length	n. Casing Type	
SEALING PROCEDURE			
Placement:	Sealing Material	Volume/VVeight Used Units Required	Placement Method
From <u>O_ft.</u> To <u>17.4</u> ft.	CEMENT/BENTONITE MIX	47 GALLONS	PUMPED WITH TREMIE PIPE
Fromft. Toft.			
Fromft. Toft.			
Fromft. Toft.			
Condition of Casing		Was Casing Remove	ed? Yes or No (check one)
If casing <b>Not Removed</b> , was it Perforat	ed? ☐Yes or ☒No Perforation (check one)	ns: Fromft.	Toft.
Date Sealing Performed 9/22/2023			
Comments/Reason for Sealing NO LC	NGER NEEDED		
	NOLK NEEDED		
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u>	ODH Regis		
City/State/Zip MARIETTA OH 45750			
	RIS BUCHANAN is accurate and correct to the best of my knowledge	Filed electronically or	12/20/2023 12/20/2023
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# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No	_ Lot No
Owner FORMER SATRALLOY SITE	Ξ		
Address of Well Location 4243 CO	UNTY RD 74		
City MINGO JUNCTION	Zip Cod	le <u>43938</u>	
Well Location Description MW-16 (120 Characters)			
Location of Latitude/Longitude Well:	Latitude 40.310489	Longitude _80.668	843
Previous Well Use MONITOR			
Elevation of Well \[ \ \ \ \ 7 \ 0 \ 7 \]. \[ 1 \ \ 2 \] +	-/ ft. Datum Plane: NA	.D27 NAD83	
	Survey Other Survey Other DIGITAL MA	p	
WELL IDENTIFICATION ODNR W	ell Log Number	Project Well ID	MW-16
Borehole DepthCasing Diameter 2	in. Casing Length 10  Borehole Diameter	inin. Casing Type	e PVC
Fromft. To Fromft. To	Sealing Material  ft. CEMENT/SAND MIX  ft.  ft.  ft.  ft.	Units Required61 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	/ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Performed 9/22/2023 Comments/Reason for Sealing NO	(check one)	tions: Fromf	,
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 457</u>		gistration # 003506	
·	CHRIS BUCHANAN iven is accurate and correct to the best of my knowledge.	Filed electronically o	on <u>12/20/2023</u> on <u>12/20/2023</u>

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No	Lot No
Owner FORMER SATRALLOY SIT	E		
Address of Well Location 4243 CO	DUNTY RD 74		
City MINGO JUNCTION	Zip Cod	de <u>43938</u>	
Well Location Description MW-17 (120 Characters)			
Location of Latitude/Longitude Well:	Latitude 40.311184	Longitude _80.668	128
Previous Well Use MONITOR			
Elevation of Well       7   1   5   4   2	+/ ft. Datum Plane: NA	AD27 NAD83	
	Survey Other Survey Other DIGITAL MA	P	
WELL IDENTIFICATION ODNR V	Vell Log Number	Project Well ID	MW-17
Borehole Depth Casing Diameter 2 Borehole Depth	gt. Static ft. Static ft. Borehole Diameter in. Casing Length 10 ft. Borehole Diameter in. Casing Length	in. ft. Casing Type	e PVC
Fromft. To Fromft. To	Sealing Material  9 ft. CEMENT/SAND MIX  ft.  ft.  ft.	Units Required 41.7 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	/ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Performed 9/22/202 Comments/Reason for Sealing NO	(check one)	tions: From	,
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 45</u>		egistration # <u>003506</u>	
Signed I hereby certify the information	CHRIS BUCHANAN given is accurate and correct to the best of my knowl	Filed electronically c	on <u>12/20/2023</u> on <u>12/20/2023</u>

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1	
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LOCATION			
County JEFFERSON	Township CDOSS CDEEK	Section No.	Lot No
County <u>JEFFERSON</u>	_ TOWNSHIP CROSS CREEK	_ Section No	_ LOUNO
Owner FORMER SATRALLOY SITE			
Address of Well Location 43938 COL	JNTY RD 74		
City MINGO JUNCTION	Zip C	ode <u>43938</u>	
Well Location Description TW-01 (120 Characters)			
Location of Latitude/Longitude I	Latitude 40.310278	Longitude _80.670	975
Previous Well Use MONITOR			
Elevation of Well   7   2   0   .   0   6   +/-	ft. Datum Plane: N	NAD27 NAD83	
Source of Coordinates: X GPS	Survey Other		
Source of Elevation: GPS	Survey X Other DIGITAL M	AP	
WELL IDENTIFICATION ODNR Well	Log Number	Project Well ID	TW-01
MEASURED CONSTRUCTION DETAI			
	<sub>ft.</sub> Stat		ft.
Borehole Depth	<sub>ft.</sub> Borehole Diameter _	in.	
Casing Diameter 2	<sub>in.</sub> Casing Length <u>10</u>	<sub>ft.</sub> Casing Type	e <u>PVC</u>
Borehole Depth	ft. Borehole Diameter _		
Casing Diameter	in. Casing Length	n. Casing Type	e
SEALING PROCEDURE			
Placement:	Sealing Material	Volume/Weight Used Units Required	Placement Method
From 0_ft. To 24.7_ft	CEMENT/RENTONITE MIX		PUMPED WITH TREMIE PIPE
Fromfi. Tofi			
Fromft. Toft			
From			
Condition of Casing		Was Casing Remov	/ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perfora	ted? ☐Yes or ☒No Perfor (check one)	rations: Fromf	t. To ft.
Date Sealing Performed 9/26/2023			
Comments/Reason for Sealing NO LO	ONGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH F	Registration # 003506	
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
Cignod CU	DIS BUCHANAN	File Historica Co. 9	12/20/2022
Signed CH  I hereby certify the information given	RIS BUCHANAN  n is accurate and correct to the best of my kno	wledge. riied eiectronically o	12/20/2023
		Last revised o	on <u>12/20/2023</u>

Page 1 of 1

### WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693

Phone: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> S	Section No	Lot No
Owner <u>FORMER SATRALLOY SITE</u>			
Address of Well Location 4243 COL	JNTY RD 74		
City MINGO JUNCTION	Zip Code	43938	
Well Location Description TW-02 (120 Characters)			
Location of Latitude/Longitude Well:	Latitude 40.310253	Longitude _80.671	123
Previous Well Use MONITOR			
Elevation of Well 720,75+	ft. Datum Plane: NAD	27 NAD83	
	Survey Other  Survey Other_DIGITAL MAP		
	ell Log Number	Project Well ID	TW-02
Depth of Well <u>40</u> Borehole Depth  Casing Diameter <u>2</u>	ft. Static W  ft. Borehole Diameter  in. Casing Length 10  ft. Borehole Diameter  in. Casing Length	in. ft. Casing Type in. ft. Casing Type ft.	PVC
Placement:         From	ft. CEMENT/BENTONITE MIX ft ft ft		PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	ed? Yes or No
f casing <b>Not Removed</b> , was it Perfor	ated?□Yes or ⊠No Perforatio	ons: Fromft.	,
Date Sealing Performed 9/26/2023			
Comments/Reason for Sealing NO L	ONGER NEEDED		
CONTRACTOR			
Address 1010 GREENE ST	ODH Regi	stration # <u>003506</u>	
City/State/Zip_MARIETTA OH 4575	50		
	HRIS BUCHANAN ren is accurate and correct to the best of my knowledge	Filed electronically or Last revised or	n <u>12/20/2023</u> n <u>12/20/2023</u>

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1	

Well Location Description (120 Characters)  Location of Latitude/Longitude Latitude 40.310372 Longitude -80.67093  Previous Well Use MONITOR  Elevation of Well   7   1   9   8   6   4/	LOCATION			
Address of Well Location 4243 COUNTY RD 74  City MINGO_IUNCTION	County JEFFERSON	Township <u>CROSS CREEK</u>	Section No	Lot No
City MINGO JUNCTION	Owner FORMER SATRALLOY SI	TE		
Location of Latitude/Longitude   Latitude 40,310372   Longitude   80.67093	Address of Well Location 4243 C	OUNTY RD 74		
Location of   Latitude/Longitude   Latitude   40.310372   Longitude   -80.67093	City MINGO JUNCTION	Zip Co	de <u>43938</u>	
Previous Well Use MONITOR  Elevation of Well	Well Location Description TW-03 (120 Characters)			
Source of Coordinates: Service of Source of Coordinates: Service of Source of Elevation: Source of Elevation: Service of Elevation: Source o		Latitude 40.310372	<b>Longitude</b> _80.670	93
Source of Coordinates: Seps Survey Other Source of Elevation: GPS Survey Other DIGITAL MAP  WELL IDENTIFICATION ONR Well Log Number Project Well ID TW-03  MEASURED CONSTRUCTION DETAILS  Date of measurements 9/26/2023  Deeph of Well 39.7 In. Static Water Level 18 In. Casing Diameter In. Casing Length 10 In. Casing Type  SEALING PROCEDURE Placement: From 0.1. To 39.7 It. CEMENT/BENTONITE MIX 104.5 GALLONS PUMPED WITH TREMIE PIPE  From 1. To In. To In.  Condition of Casing Performed 9/26/2023  Comments/Reason for Sealing NO LONGER NEEDED  CONTRACTOR  Name CASCADE DRILLING LP ODH Registration # 003506  Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN Interesting the best of my knowledge.  Filed electronically on 12/20/2023	Previous Well Use MONITOR			
Source of Elevation: GPS Survey Other DIGITAL MAP  WELL IDENTIFICATION ODNR Well Log Number Project Well ID TW-03  MEASURED CONSTRUCTION DETAILS  Date of measurements 9/26/2023  Depth of Well 39.7 n. Static Water Level 18 n. Casing Diameter n. Casing Diameter n. Casing Length 10 n. Casing Length 10 n. Casing Type PVC  Borehole Depth n. Borehole Diameter n. Casing Length n. Casing Diameter n. Casing Diameter n. Casing Length n.	Elevation of Well 719.86	+/ ft. Datum Plane: N	AD27 NAD83	
MELL IDENTIFICATION ODNR Well Log Number Project Well ID TW-03  MEASURED CONSTRUCTION DETAILS  Date of measurements 9/26/2023  Depth of Well 39.7 n. Static Water Level 18 n. Casing Depth Graph Depth Inc. Borehole Diameter Inc. Casing Diameter 2 inc. Casing Length 10 n. Casing Type PVC  Borehole Depth Inc. Borehole Diameter Inc. Casing Type PVC  Borehole Depth Inc. Casing Length Inc. Casing Type Inc. Casing Type PVC  Borehole Depth Inc. Casing Length Inc. Casing Type Inc. Casing Type Inc. Casing Diameter Inc. Casing Material Inc. Casing Type Inc. Casing Type Inc. Casing Type Inc. Casing Diameter Inc. Casing Diameter Inc. Casing Type Inc. Casing Type Inc. Casing Diameter Inc. Casing Type Inc.	Source of Coordinates: X GPS	Survey Other		
Date of measurements 9/26/2023 Depth of Well 39.7  Borehole Depth  Gasing Diameter 2  In. Casing Length 10  In. Casing Type PVC  Borehole Depth  Gasing Diameter 2  In. Casing Length 10  In. Casing Type PVC  Borehole Depth  Gasing Diameter 2  In. Casing Length 10  In. Casing Type PVC  Borehole Depth  Gasing Diameter 3  In. Casing Type PVC  Borehole Depth  Gasing Diameter 4  In. Casing Type PVC  Borehole Depth  Gasing Diameter 5  In. Casing Type PVC  Borehole Depth  Gasing Type 9  SEALING PROCEDURE  Placement  From 0.ft. To 39.7 ft. CEMENT/BENTONITE MIX 104.5 GALLONS PUMPED WITH TREMIE PIPE  From 1.ft. To 1.ft.  From 1.ft. To 2.ft.	Source of Elevation: GPS	Survey X Other DIGITAL MA	ΛP	
Date of measurements 9/26/2023 Depth of Well 39.7  Borehole Depth  Gasing Diameter 2  In. Casing Length 10  In. Casing Type PVC  Borehole Depth  Gasing Diameter 2  In. Casing Length 10  In. Casing Type PVC  Borehole Depth  Gasing Diameter 2  In. Casing Length 10  In. Casing Type PVC  Borehole Depth  Gasing Diameter 3  In. Casing Type PVC  Borehole Depth  Gasing Diameter 4  In. Casing Type PVC  Borehole Depth  Gasing Diameter 5  In. Casing Type PVC  Borehole Depth  Gasing Type 9  SEALING PROCEDURE  Placement  From 0.ft. To 39.7 ft. CEMENT/BENTONITE MIX 104.5 GALLONS PUMPED WITH TREMIE PIPE  From 1.ft. To 1.ft.  From 1.ft. To 2.ft.	WELL IDENTIFICATION ODNR	Well Log Number	Project Well ID	TW-03
Depth of Well 39.7 ft. Static Water Level 18 ft. Borehole Depth ft. Borehole Diameter in. Casing Diameter 2 in. Casing Length 10 ft. Casing Type PVC  Borehole Depth ft. Borehole Diameter in. Casing Type PVC  Borehole Depth ft. Borehole Diameter in. Casing Type ft. Casing Type ft. Casing Diameter in. Casing Length ft. Casing Type ft. Casing Type ft. Casing Diameter in. Casing Length ft. Casing Type ft. Casing Type ft. Casing Diameter in. Casing Length ft. Casing Type ft. Cas			•	
Borehole Depth				
Casing Diameter 2 in. Casing Length 10 ft. Casing Type PVC Borehole Depth ft. Borehole Diameter in. Casing Type  SEALING PROCEDURE Placement:  From 0.ft. To 39.7.ft. CEMENT/BENTONITE MIX 104.5 GALLONS PUMPED WITH TREMIE PIPE From ft. To ft. From ft. From ft. Ft. From ft. Ft. From ft. Fr	Depth of Well 39.7	ft. Statio	Water Level 18	ft.
Casing Diameter 2 in. Casing Length 10 ft. Casing Type PVC Borehole Depth ft. Borehole Diameter in. Casing Type  SEALING PROCEDURE Placement:  From 0.ft. To 39.7.ft. CEMENT/BENTONITE MIX 104.5 GALLONS PUMPED WITH TREMIE PIPE From ft. To ft. From ft. From ft. Ft. From ft. Ft. From ft. Fr	Borehole Depth	ft. Borehole Diameter	in.	
Borehole Depth				PVC
Casing Diameter in. Casing Length ft. Casing Type  SEALING PROCEDURE Placement: From O. ft. To 39.7 ft. CEMENT/BENTONITE MIX 104.5 GALLONS From ft. To ft. From ft. From ft. To ft. From ft. From ft. To ft. From f				
SEALING PROCEDURE Placement:  From Ont. To 39.7 ft. CEMENT/BENTONITE MIX From ft. To ft. From ft. F	Casing Diameter	in. Casing Length	in. Casing Type	)
Placement:  From O. ft. To 39.7 ft. CEMENT/BENTONITE MIX 104.5 GALLONS  From ft. To ft				
FromO_ft. To39.7 ft. CEMENT/BENTONITE MIX		Sealing Material	Volume/Weight Used	Placement Method
From		_	Units Required	
From				
Condition of Casing	Fromft. 10	ft		
Condition of Casing	Fromft. 10	ft		
If casing Not Removed, was it Perforated? Yes or No (check one)  Date Sealing Performed 9/26/2023  Comments/Reason for Sealing NO LONGER NEEDED  CONTRACTOR  Name CASCADE DRILLING LP Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN  Libereby certify the information given is accurate and correct to the best of my knowledge.	Fromft. To	ft		
CONTRACTOR  Name CASCADE DRILLING LP Address 1010 GREENE ST City/State/Zip MARIETTA OH 45750  CHRIS BUCHANAN Filed electronically on 12/20/2023  Libereby certify the information given is accurate and correct to the best of my knowledge.	Condition of Casing		Was Casing Remov	
CONTRACTOR  Name CASCADE DRILLING LP Address 1010 GREENE ST City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN Filed electronically on 12/20/2023	If casing Not Removed, was it Per	forated? ☐Yes or ☒No Perfora	ations: Fromf	. Toft.
CONTRACTOR  Name CASCADE DRILLING LP  Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN  Thereby certify the information given is accurate and correct to the best of my knowledge.  Filed electronically on 12/20/2023	Date Sealing Performed 9/26/20	23	_	
CONTRACTOR  Name CASCADE DRILLING LP  Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN  Thereby certify the information given is accurate and correct to the best of my knowledge.  Filed electronically on 12/20/2023	Comments/Reason for Sealing NO	) LONGER NEEDED		
Name CASCADE DRILLING LP  Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN  I bereby certify the information given is accurate and correct to the best of my knowledge.		2 20110211 1122323		
Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN Filed electronically on 12/20/2023  Liberary certify the information given is accurate and correct to the best of my knowledge.	CONTRACTOR			
Address 1010 GREENE ST  City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN Filed electronically on 12/20/2023  Liberary certify the information given is accurate and correct to the best of my knowledge.	Name CASCADE DRILLING LP	ODH R	egistration # 003506	
City/State/Zip MARIETTA OH 45750  Signed CHRIS BUCHANAN Filed electronically on 12/20/2023  Liberary certify the information given is accurate and correct to the best of my knowledge.			-	
Signed CHRIS BUCHANAN  I hereby certify the information given is accurate and correct to the best of my knowledge.  Last revised on 12/20/2023		5750		
I hereby certify the information given is accurate and correct to the best of my knowledge.	Signed	CHRIS BUCHANAN	Filed cleatronically a	n 12/20/2022
	I hereby certify the information	n given is accurate and correct to the best of my know	ledge.	n 12/20/2023

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> S	Section No	_ Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COU	NTY RD 74		
City MINGO JUCTION	Zip Code	43938	
Well Location Description MW-101 (120 Characters)			
Location of Latitude/Longitude I	_atitude 40.317864	Longitude _80.670	524
Previous Well Use MONITOR			
Elevation of Well $\begin{bmatrix} 1 & 0 & 9 & 5 \end{bmatrix}$ , $\begin{bmatrix} 7 & 8 \end{bmatrix}$ +/-	ft. Datum Plane: NAD	27 NAD83	
Source of Coordinates: GPS Source of Elevation: GPS			
WELL IDENTIFICATION ODNR Well	•	Project Well ID	MW-101
Borehole Depth 98 Casing Diameter 2	ft. Static W ft. Borehole Diameter 8 in. Casing Length 35 ft. Borehole Diameter	inin. Casing Type	PVC
SEALING PROCEDURE           Placement:         From         0 ft. To         88.3 ft           From         ft. To         ft           From         ft. To         ft           From         ft. To         ft	CEMENT/BENTONITE MIX		PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	red?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforation  Date Sealing Performed 9/14/2023  Comments/Reason for Sealing NO LO	(check one)	ons: Fromft	'
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 45750</u>	ODH Regi		
·			
Signed CH  I hereby certify the information given	RIS BUCHANAN n is accurate and correct to the best of my knowled	Filed electronically o Last revised o	n <u>12/20/2023</u> n 12/20/2023

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1	
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LOCATION			
County <u>JEFFERSON</u>	_ Township <u>CROSS CREEK</u> S	Section No	_ Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COU	NTY RD 74		
City MINGO JUCTION	Zip Code	43938	
Well Location Description MW-102 (120 Characters)			
Location of Latitude/Longitude Well:	Latitude 40.317231	Longitude _80.669	743
Previous Well Use MONITOR			
Elevation of Well $\begin{bmatrix} 1 & 9 & 2 \end{bmatrix}$ , $\begin{bmatrix} 7 & 5 \end{bmatrix}$ +/-	ft. Datum Plane: NAE	027 NAD83	
	Survey Other  Survey Other DIGITAL MAP		
WELL IDENTIFICATION ODNR We	ll Log Number 2088530	Project Well ID	MW-102
Depth of Well 83.4 Borehole Depth 70 Casing Diameter 2	ft. Static \ ft. Borehole Diameter 6 in. Casing Length 52 ft. Borehole Diameter	inin. Casing Type	PVC PVC
SEALING PROCEDURE           Placement:         From	ft ft	Units Required	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	/ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforation  Date Sealing Performed 9/6/2023  Comments/Reason for Sealing NO Leason	(check one)	ons: Fromf	,
CONTRACTOR			
		sistration # <u>003506</u>	
Signed CH  I hereby certify the information give	HRIS BUCHANAN on is accurate and correct to the best of my knowled	Filed electronically o	on <u>12/20/2023</u> on 12/20/2023

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1	
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LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No.	Lot No
Owner FORMER SATRALLOY SITE	<u> </u>		
Address of Well Location 4243 CO	UNTY RD 74		
City MINGO JUCTION	Zip Cod	de <u>43938</u>	
Well Location Description MW-106 (120 Characters)			
Location of Latitude/Longitude Well:	Latitude 40.314487	Longitude _80.670	55
Previous Well Use MONITOR			
Elevation of Well 1059.411+	/ ft. Datum Plane: \_\NA	AD27 NAD83	
	☐ Survey ☐ Other ☐ Survey ☒ Other DIGITAL MA		
WELL IDENTIFICATION ODNR W	•	Project Well ID	MW-106
Depth of Well <u>68.3</u> Borehole Depth <u>70</u> Casing Diameter <u>2</u>	ft. Station ft. Station ft. Station ft. Borehole Diameter 6 ft. Casing Length 52 ft. Borehole Diameter	in. ft. Casing Type	PVC PVC
Fromft. To Fromft. To	Sealing Material  ft. CEMENT/BENTONITE MIX  ft.  ft.  ft.  ft.	Units Required844 LBS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	ved?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Performed 9/6/2023 Comments/Reason for Sealing NO	(check one)	tions: Fromf	,
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 457</u>		egistration # <u>003506</u>	
·	CHRIS BUCHANAN ven is accurate and correct to the best of my knowledge.	Filed electronically o	n <u>12/20/2023</u> n 12/20/2023

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	of	

LOCATION				
County	Township	Section No		Lot No
Owner				
Address of Well Location				
City		Zip Code		
Well Location Description (120 Characters)				
Location of Latitude/Longitude Well:	Latitude	Longi	tude	
Previous Well Use				
Elevation of Well	-/ ft. Datum Pl	ane: 🗆 NAD27 🗆 NAI	D83	
Source of Coordinates: ☐ GPS	☐ Survey ☐ Other			
Source of Elevation: ☐ GPS	☐ Survey ☐ Other			
WELL IDENTIFICATION ODNR W	ell Log Number	Pi	roject Well ID	
MEASURED CONSTRUCTION DET	AILS			
Date of measurements				
Depth of Well				ft.
Borehole Depth				
Casing Diameter				
Borehole Depth Casing Diameter	ft. Borehole Di	iameterin	1. o · -	
Casing Diameter	in. Casing Len	gth <sub>ft</sub>	Casing Type _	
SEALING PROCEDURE	O a l'a a Mad		1-1-1-1-1-1	Diameter (Matheul
Placement:	Sealing Mat	erial Volume/W	/eight Used Required	Placement Method
Fromft. To	_ft			
Fromft. To				
Fromft. To	_ ft			
Fromft. To	ft			
Condition of Casing		Was 0	Casing Removed?	? □Yes or □No (check one)
If casing <b>Not Removed</b> , was it Perfo	rated?□Yes or □No (check one)	Perforations: From	ft. 7	,
Date Sealing Performed				
Comments/Reason for Sealing				
CONTRACTOR				
Name		ODH Registration #		
Address				
City/State/Zip				
- y				
Signed		Filed e	lectronically on _	
I hereby certify the information gi	ven is accurate and correct to the be	est of my knowledge.	Last revised on	

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

Page \_1 \_\_ of \_1 \_\_

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> S	Section No	_ Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 CR 7	4		
City MINGO JUCTION	Zip Code	43938	
Well Location Description MW-107S (120 Characters)			
Location of Latitude/Longitude L	-atitude 40.315182	Longitude _80.6686	54
Previous Well Use MONITOR			
Elevation of Well $1083$ . $91$ +/-	<sub>ft.</sub> Datum Plane: NAD	27 NAD83	
Source of Coordinates: GPS GPS Source of Elevation: GPS			
WELL IDENTIFICATION ODNR Well	•	Project Well ID	MW-107S
Borehole Depth <u>67</u> Casing Diameter <u>2</u>	ft. Static Wft. Borehole Diameter 6in. Casing Length 19ft Borehole Diameter	in. ft. Casing Type	PVC
SEALING PROCEDURE           Placement:         From	CEMENT/BENTONITE MIX		PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforate Date Sealing Performed 9/20/2023 Comments/Reason for Sealing NO LO	(check one)	ns: Fromft	,
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 45750</u>	ODH Regi		
·			
Signed CH  I hereby certify the information given	RIS BUCHANAN is accurate and correct to the best of my knowledge	Filed electronically on Last revised o	n <u>12/19/2023</u> n 12/19/2023

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

Imbus, OH 43229-6693 Ione: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u> T	ownship <u>CROSS CREEK</u> Se	ection No	Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 CR 74			
City MINGO JUCTION	Zip Code	43938	
Well Location Description MW-108 (120 Characters)			
Location of Latitude/Longitude Latit	tude 40.316237	<b>Longitude</b> _80.6691	02
Previous Well Use MONITOR			
Elevation of Well $1124.34$ +/-	ft. Datum Plane: NAD2	7 NAD83	
Source of Coordinates: GPS Source of Elevation: GPS S			
WELL IDENTIFICATION ODNR Well Lo		Project Well ID	MW-108
MEASURED CONSTRUCTION DETAILS Date of measurements 9/12/2023 Depth of Well 37.8 Borehole Depth 58 Casing Diameter 2 Borehole Depth Casing Diameter	ft. Static Wa ft. Borehole Diameter <u>6</u> in. Casing Length <u>2</u> 7	in. ft. Casing Type	PVC
SEALING PROCEDURE           Placement:         From		136.1 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remove	ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforated	? ☐Yes or ☒No Perforation (check one)	s: Fromft.	,
Date Sealing Performed 9/12/2023 Comments/Reason for Sealing NO LON	IGER NEEDED		
CONTRACTOR			
Address 1010 GREENE ST		tration # <u>003506</u>	
City/State/Zip <u>MARIETTA OH 45750</u>			
	S BUCHANAN accurate and correct to the best of my knowledge	Filed electronically or Last revised or	12/19/2023 1 12/19/2023

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Page	1	of	1

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> Se	ection No	Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 CR 7	4		
City MINGO JUCTION	Zip Code .	43938	
Well Location Description MW-109 (120 Characters)			
Location of Latitude/Longitude U	Latitude 40.317479	Longitude _80.671	103
Previous Well Use MONITOR			
Elevation of Well 1 1 2 0 . 6 +/-	ft. Datum Plane: NAD2	7 NAD83	
	Survey Other Survey Other_DIGITAL MAP		
WELL IDENTIFICATION ODNR Well		Project Well ID	MW-109
Date of measurements 9/15/2023  Depth of Well 31.8  Borehole Depth 67  Casing Diameter 2  Borehole Depth  Casing Diameter	<sub>ft.</sub> Borehole Diameter <u>6</u> <sub>in.</sub> Casing Length <u>19</u> 	in. Casing Type	e PVC
Fromft. Toft	Sealing Material  CEMENT/BENTONITE MIX	105.2 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	red?∐Yes or ⊠No
If casing <b>Not Removed</b> , was it Perfora	ted?□Yes or ⊠No Perforation (check one)	s: Fromf	,
Date Sealing Performed 9/15/2023 Comments/Reason for Sealing NO LO	ONGER NEEDED		
CONTRACTOR			
Address 1010 GREENE ST		tration # <u>003506</u>	
City/State/Zip <u>MARIETTA OH 45750</u>	J		
	RIS BUCHANAN n is accurate and correct to the best of my knowledge	Filed electronically o	n <u>12/19/2023</u> n <u>12/19/2023</u>

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

3229-6693 265-6576 Page 1 of 1

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> S	Section No	_ Lot No
Owner FORMER SATRALLOY SITE	=		
Address of Well Location 4243 CO	UNTY RD 74		
City MINGO JUNCTION	Zip Code	43938	
Well Location Description MW-110 (120 Characters)			
Location of Latitude/Longitude Well:	Latitude 40.317421	Longitude _80.670	397
Previous Well Use MONITOR			
Elevation of Well 1081.144	-/ ft. Datum Plane: NAD	027 NAD83	
	Survey Other  Survey Other DIGITAL MAP		
WELL IDENTIFICATION ODNR W	ell Log Number	Project Well ID	MW-110
Borehole Depth Casing Diameter 2 Borehole Depth	ft. Static V  ft. Borehole Diameter  in. Casing Length 10  ft. Borehole Diameter  in. Casing Length	inin. Casing Type	PVC PVC
Fromft. To Fromft. To	Sealing Material  ft. CEMENT/BENTONITE MIX  ft ft ft	Units Required 78.9 GALLONS	PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	/ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Performed 9/22/2023 Comments/Reason for Sealing NO	(check one)	ons: Fromf	,
NO	LONGER NEEDED		
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 457</u>		jistration # <u>003506</u>	
·	CHRIS BUCHANAN iven is accurate and correct to the best of my knowled	Filed electronically o	on 12/20/2023

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> S	Section No	_ Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUN	NTY RD 74		
City MINGO JUCTION	Zip Code	43938	
Well Location Description MW-111 (120 Characters)			
Location of Latitude/Longitude L	atitude 40.316245	Longitude _80.6700	074
Previous Well Use MONITOR			
Elevation of Well $\begin{bmatrix} 1 & 1 & 1 & 2 \end{bmatrix}$ , $\begin{bmatrix} 8 & 4 \end{bmatrix}$ +/-	ft. Datum Plane: NAD	27 NAD83	
Source of Coordinates: GPS Source of Elevation: GPS			
WELL IDENTIFICATION ODNR Well	· ·	Project Well ID	MW-111
MEASURED CONSTRUCTION DETAI  Date of measurements 9/11/2023  Depth of Well 67.6  Borehole Depth 68  Casing Diameter 2  Borehole Depth Casing Diameter	ft. Static W  ft. Borehole Diameter 6  in. Casing Length 59  ft. Borehole Diameter	inin. Casing Type	PVC
SEALING PROCEDURE           Placement:         From	CEMENT/BENTONITE MIX		PUMPED WITH TREMIE PIPE
Condition of Casing		Was Casing Remov	ed?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perforate Date Sealing Performed 9/11/2023 Comments/Reason for Sealing NO LO	(check one)	ons: Fromft	. Toft.
CONTRACTOR			
Name <u>CASCADE DRILLING LP</u> Address <u>1010 GREENE ST</u> City/State/Zip <u>MARIETTA OH 45750</u>	ODH Regi		
·	RIS BUCHANAN is accurate and correct to the best of my knowled	Filed electronically or	

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u> S	ection No	_ Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUN	ITY RD 74		
City MINGO JUCTION	Zip Code	43938	
Well Location Description MW-112 (120 Characters)			
Location of Latitude/Longitude L	atitude 40.31621	Longitude _80.668	457
Previous Well Use MONITOR			
Elevation of Well $1   1   3   1   4   4 + -$	ft. Datum Plane: NAD	27 NAD83	
Source of Coordinates: GPS Source of Elevation: GPS			
WELL IDENTIFICATION ODNR Well	Log Number 2088547	Project Well ID	MW-112
MEASURED CONSTRUCTION DETAIL	_S		
Date of measurements 9/13/2023			
Depth of Well 92.2	ft. Static W	ater Level <u>78.9</u>	ft.
Borehole Depth 142	<sub>ft.</sub> Borehole Diameter <u>8</u>	in.	DVC
Casing Diameter_2			PVC
Borehole Depth	<sub>ft.</sub> Borehole Diameter	in	
Casing Diameter	<sub>in.</sub> Casing Length	<sub>ft.</sub> Casing Type	9
SEALING PROCEDURE	Sealing Material	Volume/Weight Used	Placement Method
Placement:	-	Units Required	
From0 ft. To92.2 ft.			
Fromft. Toft.			
Fromft. Toft.			
Fromft. Toft.			
Condition of Casing		Was Casing Remov	red? Yes or No (check one)
If casing <b>Not Removed</b> , was it Perforate	ed?□Yes or ⊠No Perforatio (check one)	ns: Fromft	Toft.
Date Sealing Performed 9/13/2023			
Comments/Reason for Sealing NO LC	NGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH Regi	stration # 003506	
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
SignedCHF	RIS BUCHANAN	Filad electronically o	n 12/20/2023
I hereby certify the information given	RIS BUCHANAN is accurate and correct to the best of my knowledge	Last revised o	n 12/20/2023

## WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

	` '		
LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No	_ Lot No
Owner FORMER SATRALLOY SITE			
Address of Well Location 4243 COUNT	ΓΥ RD 74		
City MINGO JUCTION	Zip Co	de <u>43938</u>	
Well Location Description MW-113 (120 Characters)			
Location of Latitude/Longitude Latitude/Longitude Latitude/Longitude	titude 40.316529	Longitude _80.667	374
Previous Well Use MONITOR			
Elevation of Well 1 1 2 6 . 7 7 +/-	ft. Datum Plane: N	AD27 NAD83	
Source of Coordinates: GPS	Survey Dother		
Source of Elevation: GPS	Survey X Other DIGITAL MA	<b>√</b> P	
WELL IDENTIFICATION ODNR Well L	og Number 2088553	Project Well ID	MW-113
MEASURED CONSTRUCTION DETAILS	S		
	<sub>ft.</sub> Statio		ft.
Borehole Depth 177	<sub>ft.</sub> Borehole Diameter <u>6</u>	in.	
Casing Diameter 2	<sub>in.</sub> Casing Length <u>110</u>	<sub>ft.</sub> Casing Type	e <u>PVC</u>
Borehole Depth	ft. Borehole Diameter	in	
Casing Diameter	in. Casing Length	ft. Casing Type	e
SEALING PROCEDURE			
Placement:	Sealing Material	Volume/Weight Used Units Required	Placement Method
From0 ft. To131.4 ft.	CEMENT/BENTONITE MIX	·	PUMPED WITH TREMIE PIPE
Fromft. Toft.			
Fromft. Toft.			
Fromft. Toft.			
Condition of Casing		Was Casing Remov	/ed?∐Yes or ⊠No (check one)
If casing Not Removed, was it Perforate	d?□Yes or ⊠No Perfora (check one)	ations: Fromf	t. Toft.
Date Sealing Performed 9/13/2023			
Comments/Reason for Sealing NO LOI	NGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP	ODH R	egistration # 003506	
Address 1010 GREENE ST			
City/State/Zip MARIETTA OH 45750			
Signed CHR    I hereby certify the information given is	IS BUCHANAN s accurate and correct to the best of my know	Filed electronically o	n <u>12/20/2023</u>
, 35, 1 1	and the same services and book of my know	Last revised of	on <u>12/20/2023</u>

# WATER WELL SEALING REPORT OHIO DEPARTMENT OF NATURAL RESOURCES

Division of Geological Survey 2045 Morse Road, Bldg B Columbus, OH 43229-6693 Phone: (614) 265-6576

LOCATION							
County JEFFERSON Township CROSS CREEK Section No. Lot No.							
Owner FORMER SATRALLOY SITE							
Address of Well Location 4243 COUNTY RD 7	4						
City MINGO JUCTION	Zip Code 4	43938					
Well Location Description MW-115 (120 Characters)							
Location of Latitude/Longitude Latitude 40.	31558	<b>Longitude</b> _80.6697	707				
Previous Well Use MONITOR							
Elevation of Well 1 1 2 5 5 5 +/ ft.	Datum Plane: NAD2	7 NAD83					
	Other OIGITAL MAP						
WELL IDENTIFICATION ODNR Well Log Numl	ber 2088560	Project Well ID	MW-115				
MEASURED CONSTRUCTION DETAILS  Date of measurements 9/11/2023  Depth of Well 87.4  Borehole Depth 88 ft.  Casing Diameter 2 in.  Borehole Depth ft.  Casing Diameter in.	ft. Static War Borehole Diameter <u>6</u> Casing Length <u>79</u>	in. ft. Casing Type	PVC				
SEALING PROCEDURE           Placement:         From		1081 LBS	PUMPED WITH TREMIE PIPE				
Condition of Casing		Was Casing Remove	ed?∐Yes or ⊠No (check one)				
If casing <b>Not Removed</b> , was it Perforated?□Yes (ch	or ⊠No Perforations eck one)	s: Fromft.	Toft.				
Date Sealing Performed 9/11/2023  Comments/Reason for Sealing NO LONGER	NEEDED						
CONTRACTOR							
Address 1010 GREENE ST	ODH Regist	tration # <u>003506</u>					
City/State/Zip MARIETTA OH 45750							
Signed CHRIS BUCH  Thereby certify the information given is accurate an		Filed electronically or Last revised or	12/20/2023 1 12/20/2023				

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nbus, OH 43229-6693 one: (614) 265-6576

LOCATION			
County <u>JEFFERSON</u>	Township <u>CROSS CREEK</u>	Section No	Lot No
Owner <u>CYPRUS AMAX MINERAL</u>	S CO		
Address of Well Location 4243 Co	OUNTY RD 74		
City MINGO JUNCTION	Zip (	Code <u>43938</u>	
Well Location Description LOCATI (120 Characters) RBH-1		THE FORMER SATALL	OY SITE
Location of Latitude/Longitude Well:	Latitude 40.315548	Longitude80.67	1395
Previous Well Use MONITOR			
Elevation of Well	+/ ft. Datum Plane:	NAD27 NAD83	
Source of Coordinates: GPS  Source of Elevation: GPS	Survey Other MAP-OTH Other DIGITAL N		
WELL IDENTIFICATION ODNR \ MEASURED CONSTRUCTION DE		Project Well II	RBH-1
Depth of Well 181 Borehole Depth 200 Casing Diameter 2 Borehole Depth Casing Diameter  SEALING PROCEDURE Placement: From 0 ft. To 18	ft. Staft. Borehole Diameter for Casing Length 178 ft. Borehole Diameter for Casing Length ft. Casing Length for Casing Material state. CEMENT/BENTONITE MIX	6inft. Casing Tyininin. Casing Tyin. Volume/Weight Used Units Required 2238 LBS	pe PVC  pe Placement Method  PUMPED WITH TREMIE PIPE
Fromft. To	ft ft ft		
Condition of Casing		Was Casing Rem	oved?∐Yes or ⊠No (check one)
If casing <b>Not Removed</b> , was it Perf	orated? ☐Yes or ☒No Perfo	orations: From	_ ft. To ft.
Date Sealing Performed 9/8/2023 Comments/Reason for Sealing NC	LONGER NEEDED		
CONTRACTOR			
Name CASCADE DRILLING LP Address 1010 GREENE ST		Registration # 003506	
	CHRIS BUCHANAN given is accurate and correct to the best of my kr	Filed electronically Last revised	on <u>12/20/2023</u> I on <u>12/20/2023</u>

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Page 1 of 1

LOCATION					
County <u>JEF</u>	FERSON	Township <u>CROSS CREEK</u>	Section No	Lot No	
Owner <u>FOR</u>	MER SATRALLOY SITE				
Address of V	Well Location 4243 COL	INTY RD 74			
City MINGO	) JUNCTION	Zi	p Code <u>43938</u>		
	n Description RBH-3S aracters)				
Location of Well:	Latitude/Longitude	Latitude 40.308886	Longitud	de _80.674851	
Previous W	ell Use MONITOR		_		
Elevation of	Well 9 1 1 . 3 5 +/	ft. Datum Plane:	NAD27 NAD8	3	
		Survey Other  Survey Other DIGITA			
	TIFICATION ODNR WE	ell Log Number	Proj	ect Well ID RBH-3S	
Date of meas Depth of We Borehole De Casing Diam	surements 9/20/2023    48.4  pth neter 2	ft. Borehole Diamet in. Casing Length 10 ft. Borehole Diamet in. Casing Length	erin. Oft. (	Casing Type PVC	
Placement: From From	ft. To ft. To	Sealing Material  ft. CEMENT/BENTONITE M ft ft ft		S PUMPED WIT	ent Method H TREMIE PIPE
Condition of	Casing		Was Cas	sing Removed?∐Yes_c (check	
If casing <b>Not</b>	: <b>Removed</b> , was it Perfor	ated?□Yes or ⊠No Pe (check one)	erforations: From	ft. To	ft.
Date Sealing Comments/F	Reason for Sealing NO L	ONGER NEEDED			
CONTRACT	OR				
Address 10	CADE DRILLING LP D10 GREENE ST p_MARIETTA OH 4575	OE	OH Registration # 003!		
Signed _	CI	HRIS BUCHANAN en is accurate and correct to the best of m	Filed elec	etronically on <u>12/20/20</u> st revised on <u>12/20/20</u>	