



Freeport-McMoRan Chino Mines Company
P.O. Box 10.
Bayard, NM 88023

Sherry Burt-Kested
Manager, Environmental Services
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October 30, 2020

Certified Mail #70182290000160738686

Mr. Kurt Vollbrecht, Manager
New Mexico Environment Department
Ground Water Quality Bureau
Mining Environmental Compliance Section
P. O. Box 5624
Santa Fe, New Mexico 87502

Dear Mr. Vollbrecht:

**Re: Annual Monitoring Report, Groundhog Mine Site IRA
Hanover-Whitewater Creeks Investigation Unit, Chino AOC**

Freeport-McMoRan Chino Mines Company (Chino) submits the attached Annual Monitoring Report for the completed Groundhog Mine Site Interim Remedial Action (IRA) for the monitoring period ending September 30, 2020. The Groundhog Mine Site IRA was completed by Chino pursuant to requirements of the Administrative Order on Consent between the New Mexico Environment Department (NMED) and Chino.

As per Section 6.0 of both the IRA Completion Report and of the Completion Report for the Osceolla, CG Bell, and Tenderfoot B Stockpiles IRA dated June 10, 2009, this annual monitoring report includes the bulleted information listed below.

- Data tabulation sheet of analytical results screened against NM Groundwater Quality Standards from monitoring well and surface water samples collected at the Groundhog Mine Site;
- Copies of the original laboratory data sheets;
- Figure 1 illustrates locations for all of the IRA sites.

The annual vegetation monitoring for both IRAs has been completed and documented along with the five year quantitative vegetation survey in a report submitted September 30, 2016. NMED approved the *Vegetation Monitoring Report for the Groundhog Mine Site and Small Historic Stockpile Sites Interim Remedial Action* in a letter dated August 31, 2017 and no further annual vegetation surveys are required as provided in the IRA Completion Reports.

The attached ground water quality data are for monitor wells GH-2004-2S and GH-2004-2D. See Figure 1 for well locations. Beginning in 2009 shallow ground water quality began to increase in concentrations for cadmium, manganese, sulfate, TDS, and zinc. This is being addressed as part of the Discharge Permit (DP) 1340 Site Wide Abatement (SWA) process. A *Draft Revised Final Site Investigation Report* under, Site Wide Stage 1 Abatement dated March 30, 2016 is under review by NMED.

Water quality data in the table for the existing surface impoundment system are also provided. The surface impoundment sampling locations include the Lower Stormwater Sump "GH-Sump" and the Lower Stormwater Pond "GH-Lower Pond" which make up the Groundhog Mine seepage collection system located up gradient of, and including, the headwall. See Figure 1. Surface water from this collection system when present is pumped to Reservoir 17 for use as process water.

Chino has continued monitoring surface water quality for improvements from remediation at this seepage collection system for thirteen years as it is the downstream drainage endpoint for the Groundhog Mine Site. Sample results are provided in this annual report, as per the Groundhog IRA Completion Report, to document improving water quality. Upon reaching water quality standards, and following the Record Of Decision, the watershed surface water from the remediated mine site runoff, as per the completion report, would flow into Whitewater Creek. Currently the operational pipelines for the Chino mill divide the IRA site and the Groundhog Mine seepage collection system. Thus, the Groundhog Lower Stormwater Pond is now utilized by mine operations as a containment for upset conditions in the event of a pipeline break as part of the "pipeline spill containment system" under Discharge Permit 213. The Groundhog Lower Pond, and the upstream natural drainage comprising the collection system, will no longer be included in the Groundhog Mine IRA as the remedial objectives are not in alignment with the active operation of the site. See Figure 2.

In alignment with comments made by NMED in a letter dated March 21, 2018, Chino has requested the Groundhog Lower Pond collection system be removed from the oversight of the AOC and placed under Discharge Permit (DP) 213. The request is documented in the additional information submitted August 7, 2020, in support of the renewal discharge permit application for DP-213. To address this portion of the IRA site that is part of active operations, the Groundhog Lower Pond collection system will be explicitly included in the pending renewal for DP-213.

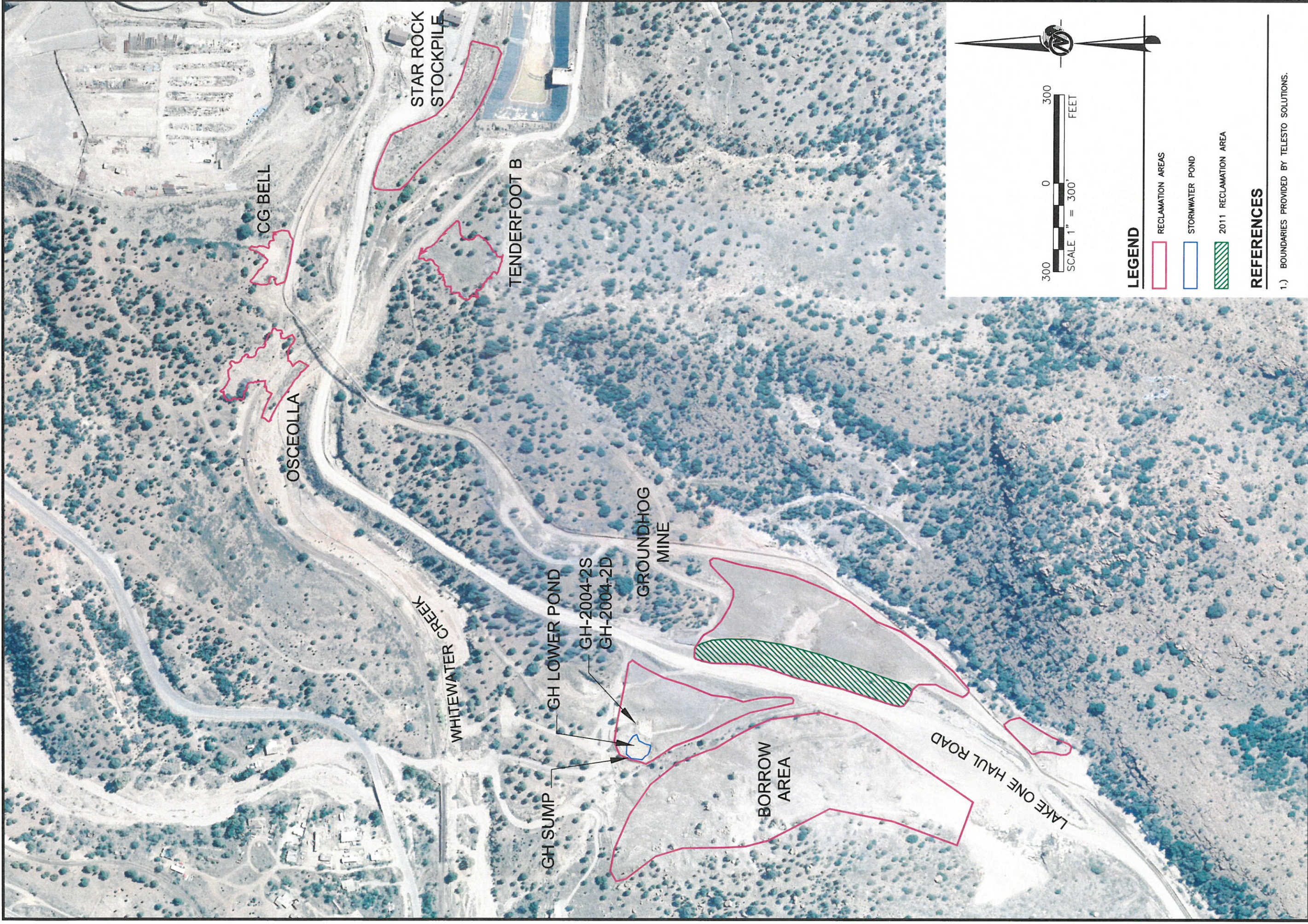
If you require additional information regarding this submittal, please contact Ms. Pam Pinson at (575) 912-5213.

Sincerely,


Sherry Burt-Kested, Manager

SBK:pp
Attachments
20201016-001

xc: David Mercer, NMED (4 copies)
Joseph Fox, NMED (via email)
D.J. Ennis, Mining & Minerals Division, NMEMNRD (via email)
Petra Sanchez, Environmental Protection Agency (via email)
Christian Krueger, Chino (via email)
Steward, Mike, FMI (via email)



LEGEND

- RECLAMATION AREAS
- STORMWATER POND
- 2011 RECLAMATION AREA

REFERENCES

1.) BOUNDARIES PROVIDED BY TELESTO SOLUTIONS.

TITLE

**ANNUAL MONITORING OF INTERIM
REMEDIAL ACTION SITES
LOCATION MAP**

PROJECT No.	141-1160
FILE No.	Figure01.dwg
REV. 0	SCALE AS SHOWN
DESIGN	DR 10/28/10
CADD	CM 10/20/14
CHECK	EC 10/20/14
REVIEW	DR 10/20/14

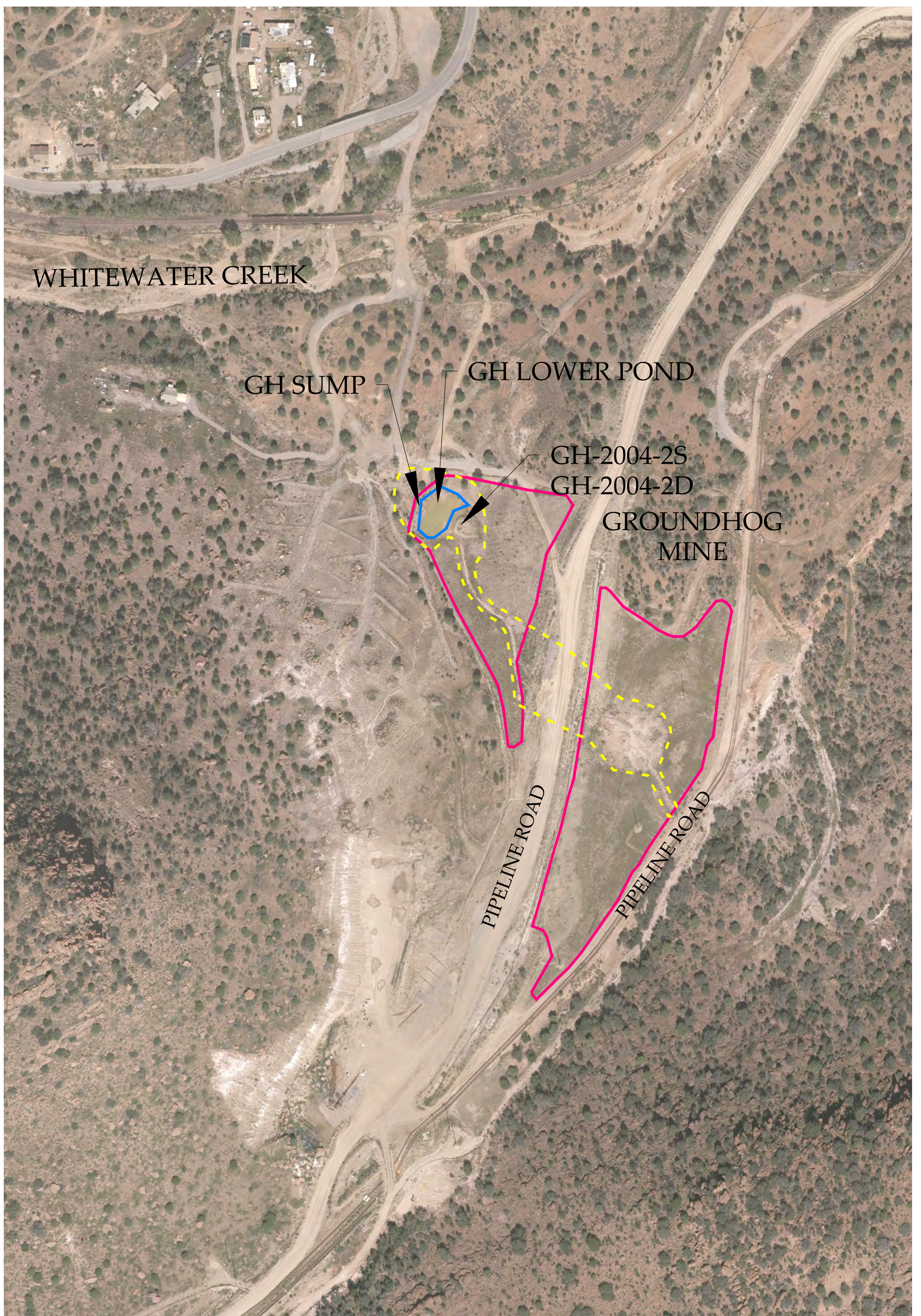
FIGURE 1

PROJECT



GROUNDHOG MINE AND SMALL
HISTORIC STOCKPILES IRAS
GRANT COUNTY, NEW MEXICO





Legend

- - - Proposed Operations Area/Pipeline Spill Containment System
- Reclaimed Area
- Pond

Fm FREPORT-McMORAN		Notes:
CHINO MINES COMPANY		
Figure 2		
Scale: As Noted	Date: 10-31-2017	Notes:
Dept.: Environmental Services		
Drawn By: SMG	Checked By: PDP	

Freeport-McMoRan Chino Mines Company
Groundhog Mine IRA Annual Report
October 30, 2020

Site Number	Sample ID	Sample Date	Comments	Ca, Diss (mg/L)	Cd, Diss (mg/l)	Co, Diss (mg/l)	Cu, Diss (mg/l)	F, Tot (mg/l)	Fe, Diss (mg/l)	Mg, Diss (mg/L)	Mn, Diss (mg/l)	Ni, Diss (mg/l)	Pb, Diss (mg/l)	Zn, Diss (mg/l)	pH, Field (su)	SO4, Tot (mg/l)	TDS (mg/l)	Cond, Fld (micromho)	Water Temp (Cent)	Well Collar Level (ft msl)	Well Depth (ft)	Depth to Water (ft)
WQCC Water Quality Standard					0.01	0.05	1	1.6	1		0.2	0.2	0.05	10	6-9	600	1000					
GH-2004-2S	347289	06/01/2017		535	0.338	<0.006	0.0189	1.85	0.155	195	30.3	0.0646	<0.0075	74.5	6.31	2,400	3,320	3,022	18.6	6003.74	83	39.06
GH-2004-2S	349337	09/12/2017		512	0.33	<0.006	0.0155	0.996	<0.1	201	31.4	0.0594	<0.0075	69.1	6.4	2,220	3,350	3,136	19.3	6003.74	83	39.06
GH-2004-2S	343007	03/03/2016		458	0.291	<0.006	0.0189	1.66	<0.06	167	16.9	0.0563	<0.0075	61.8	6.26	2,370	3,420	3,292	19	6003.74	83	40.36
GH-2004-2S	345112	09/06/2016		509	0.221	<0.006	0.0103	1.86	<0.1	180	7.83	0.0426	<0.0075	61.7	6.31	2,220	3,310	3,156	17.8	6003.74	83	44.61
GH-2004-2S	351228	03/21/2018		499	0.385	<0.006	0.391	1.49	<0.1	168	17.4	0.0803	<0.0075	102	6.09	2,180	3,130	2,879	17.3	6003.74	83	40.91
GH-2004-2S	352967	09/24/2018		510	0.187	<0.006	0.0108	1.11	<0.1	179	43.7	0.0696	0.0121	71.1	6.61	2,150	3,500	3,055	17.6	6003.74	83	39.77
GH-2004-2S	354774	03/15/2019		541	0.0999	<0.006	<0.01	0.815	<0.1	182	38.4	0.0597	<0.0075	59.1	6.47	2,140	3,220	3,460	16.3	6003.74	83	39.91
GH-2004-2S	356620	09/17/2019		509	0.0599	<0.006	<0.01	0.569	<0.1	172	20.9	0.0491	<0.0075	53.8	6.28	2,190	3,220	3,546	18.1	6003.74	83	40.48
GH-2004-2S	358231	03/27/2020		557	0.119	<0.006	0.0104	0.947	<0.1	199	17.3	0.0404	<0.0075	59.5	6.49	2,180	3,160	2,937	16.1	6003.74	83	31.58
GH-2004-2S	359911	09/26/2020		512	0.0472	<0.006	<0.01	1.1	<0.1	178	10.3	0.0441	0.0093	52.6	6.74	2,030	3,060	2,840	17.6	6003.74	83	39.17
Lower GH-Sump*	250151	4/14/2005		NA	2.31	1.11	95.1	6.04	0.28	NA	333	0.846	1.24	844	3.92	5530	9220	5550	17.7	surface	surface	surface
Lower GH-Sump*	267561	9/26/2005		NA	0.749	0.307	20.2	1.32	<0.3	NA	95.3	0.178	0.289	224	4.05	2870	4450	3643	23.6	surface	surface	surface
Lower GH-Sump*	283021	8/4/2006		NA	0.35	0.147	9.11	1.08	0.15	NA	44	0.086	0.0815	92	5.27	1530	2390	2298	22.6	surface	surface	surface
Lower GH-Sump*	305948	7/23/2007		NA	0.299	0.15	7.19	1.15	<0.06	NA	52.8	0.097	0.078	76.8	5.64	1600	2600	2314	22.8	surface	surface	surface
Lower GH-Sump*	316509	3/25/2008	Dry	NS	NS	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
Lower GH-Sump*	320091	10/28/2008		NA	0.0725	<0.006	0.227	0.825	<0.06	NA	6.43	0.019	<0.0075	18	6.93	1890	2400	1970	15.8	surface	surface	surface
Lower GH-Sump*	321238	03/23/2009	Dry	NS	NS	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
Lower GH-Sump*	322691	09/30/2009		111	0.0028	<0.006	0.03	1.02	<0.06	18.1	0.124	<0.01	<0.0075	0.55	7.35	329	536	645	18	surface	surface	surface
GH-Sump ¹	323315	03/10/2010		279	0.0149	<0.0061	0.04	1.08	<0.061	44.5	0.67	<0.01	<0.0076	1.69	6.88	837	1360	1130	8.8	surface	surface	surface
GH-Sump ¹	324883	09/20/2010	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	326364	03/02/2011	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	327875	09/02/2011		126	0.0074	<0.006	0.049	0.87	<0.06	20.6	1.02	<0.01	<0.0075	1.07	6.65	378	626	838	24.5	surface	surface	surface
GH-Sump ¹	329328	03/22/2012	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	330953	09/06/2012	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	332601	03/11/2013	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	334167	08/05/2013		119	0.0046	<0.006	0.027	0.98	<0.06	17.7	0.0281	<0.01	<0.0075	0.737	6.82	379	570	758	24.2	surface	surface	surface
GH-Sump ¹	334324	09/18/2013		155	0.0069	<0.006	0.031	1.06	<0.06	24.6	0.203	<0.01	<0.0075	0.907	6.83	409	699	837	20.6	surface	surface	surface
GH-Sump ¹	335941	03/06/2014	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	337696	09/09/2014		162	0.0029	<0.006	0.019	1.04	<0.06	23.8	<0.004	<0.01	<0.0075	0.461	7.06	475	748	906	21.4	surface	surface	surface
GH-Sump ¹	339363	03/12/2015		310	0.0274	<0.006	0.407	0.828	<0.06	48.3	0.0865	<0.01	<0.0075	7.91	6.66	912	1,370	1,245	14.4	surface	surface	surface
GH-Sump ¹	341189	09/01/2015		130	0.0082	<0.006	0.126	1.27	0.559	21.5	0.235	<0.01	0.0854	1.51	6.8	419	653	851	24.7	surface	surface	surface
GH-Sump ¹	343009	03/04/2016		186	0.0065	<0.006	0.02	0.928	<0.06	29.2	<0.004	<0.01	<0.0075	1.54	7.17	554	884	849	12.2	surface	surface	surface
GH-Sump ¹	345114	09/14/2016		159	0.0046	<0.006	0.0279	0.639	<0.1	23.4	0.0197	<0.01	<0.0075	0.72	7.04	404	691	809	21.5	surface	surface	surface
GH-Sump ¹	347291	06/01/2017	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump ¹	349339	09/12/2017		107	0.0039	<0.006	0.0134	0.697	<0.1	18.9	0.316	<0.01	<0.0075	0.834	7.08	348	552	758	22.1	surface	surface	surface
GH-Sump ¹	351230	03/21/2018		107	0.0088	<0.006	0.0347	0.627	<0.1	16.1	0.0335	<0.01	<0.0075	3.38	7.01	350	522	566	10.6	surface	surface	surface
GH-Sump ¹	352970	09/24/2018		61.4	0.0022	<0.006	0.0166	1.18	0.121	9.56	0.284	<0.01	0.0211	0.501	6.92	148	326	426	19.6	surface	surface	surface
GH-Sump	354776	03/15/2019		142	0.0066	<0.006	0.0276	0.714	<0.1	18.8	0.129	<0.01	0.0079	1.91	6.79	387	608	928	8.2	surface	surface	surface
GH-Sump	356623	09/17/2019	No surface water	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Sump	358233	03/27/2020		97.1	0.003	<0.006	0.0291	1	<0.1	14.2	0.0418	<0.01	<0.0075	0.913	6.95	235	429	519	10.5	surface	surface	surface
GH-Sump	359914	09/26/2020	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
Lower GH-Sump Pond*		3/14/2006		NA	0.701	0.284	20.2	5.34	<0.06	NA	116	0.184	0.16	232	4.88	3160	5100	3293	13.1	surface	surface	surface
Lower GH-Sump Pond*	299169	2/6/2007		NA	0.273	0.117	6.41	2.22	<0.06	NA	45	0.073	0.053	72.6	4.8	1870	2900	2047	10.5	surface	surface	surface
GH-Lower Pond ²	322690	09/30/2009		85.3	<0.002	<0.006	0.017	0.991	<0.06	15.3	0.0159	<0.01	<0.0075	0.0108	7.72	254	438	524	17.1	surface	surface	surface
GH-Lower Pond ²	323314	03/10/2010		261	0.0048	<0.0061	0.016	1.21	<0.061	49.7	0.225	<0.01	<0.0076	0.496	7.49	849	1360	1140	9.5	surface	surface	surface
GH-Lower Pond ²	324882	09/20/2010		151	<0.002	<0.006	0.013	0.847	<0.06	25.9	0.183	<0.01	<0.0075	0.0204	8.58	430	740	874	23.5	surface	surface	surface
GH-Lower Pond ²	326363	03/02/2011	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Lower Pond ²	327874	09/02/2011		130	<0.002	<0.006	0.018	0.86	<0.06	20.7	0.119	<0.01	<0.0075	<0.01	7.94	415	656	821	23.8	surface	surface	surface
GH-Lower Pond ²	329327	03/22/2012	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Lower Pond ²	330952	09/06/2012	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Lower Pond ²	332600	03/11/2013	Dry	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Lower Pond ²	GH-Lower Pond	07/22/2013		62.3	0.0059	<0.006	0.061	0.52</														

Freeport-McMoRan Chino Mines Company Groundhog Mine IRA Annual Report October 30, 2020

Site Number	Sample ID	Sample Date	Comments	Ca, Diss (mg/L)	Cd, Diss (mg/l)	Co, Diss (mg/l)	Cu, Diss (mg/l)	F, Tot_ (mg/l)	Fe, Diss (mg/l)	Mg, Diss (mg/L)	Mn, Diss (mg/l)	Ni, Diss (mg/l)	Pb, Diss (mg/l)	Zn, Diss (mg/l)	pH, Field (su)	SO4, Tot_ (mg/l)	TDS (mg/l)	Cond, Fld (micromho)	Water Temp (Cent)	Well Collar Level (ft msl)	Well Depth (ft)	Depth to Water (ft)
WQCC Water Quality Standard					0.01	0.05	1	1.6	1		0.2	0.2	0.05	10	6-9	600	1000					
GH-Lower Pond ²	334166	08/05/2013		98.1	0.0061	<0.006	0.039	0.7	<0.06	16	1.71	<0.01	<0.0075	0.447	7.52	330	494	682	26.5	surface	surface	surface
GH-Lower Pond ²	334323	09/18/2013		123	0.018	0.0061	0.131	0.62	<0.06	24.1	2.84	<0.01	0.0077	3.53	7.09	411	634	745	21.2	surface	surface	surface
GH-Lower Pond ²	335940	03/06/2014		333	0.0055	<0.006	0.051	1.52	<0.06	59.6	0.0924	<0.01	<0.0075	0.554	8.03	1,090	1,650	1,574	16.5	surface	surface	surface
GH-Lower Pond ²	337695	09/09/2014		127	0.0055	<0.006	0.045	0.95	<0.06	19.5	0.812	<0.01	<0.0075	0.35	7.79	406	607	772	22.7	surface	surface	surface
GH-Lower Pond ²	339362	03/12/2015		251	0.0377	0.0069	0.0354	1	<0.06	50.9	4.88	<0.01	<0.0075	3.66	7.18	873	1,260	1,157	13.6	surface	surface	surface
GH-Lower Pond ²	341188	09/01/2015		83.2	0.0047	<0.006	0.0282	0.67	<0.06	13	0.92	<0.01	<0.0075	0.266	8.58	269	406	585	26.3	surface	surface	surface
GH-Lower Pond ²	343008	03/04/2016		191	0.0043	<0.006	0.0199	0.936	<0.06	32	0.292	<0.01	<0.0075	0.216	8.27	622	956	911	13.1	surface	surface	surface
GH-Lower Pond ²	345113	09/13/2016		108	0.0028	<0.006	0.0207	0.555	<0.1	16.3	0.467	<0.01	<0.0075	0.067	7.78	310	486	606	19.7	surface	surface	surface
GH-Lower Pond ²	347290	04/28/2017	Dry		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface
GH-Lower Pond ²	349338	09/12/2017		109	<0.002	<0.006	0.0137	0.621	<0.1	17.4	0.144	<0.01	<0.0075	0.056	7.2	339	507	761	24.2	surface	surface	surface
GH-Lower Pond ²	351229	03/21/2018		150	0.0056	<0.006	0.012	0.818	<0.1	23.3	1.22	<0.01	<0.0075	0.5	7.54	480	722	793	13.4	surface	surface	surface
GH-Lower Pond ²	352969	09/24/2018		144	0.0086	<0.006	0.0225	0.685	<0.1	23.3	2.22	<0.01	<0.0075	0.361	7.19	423	695	898	21.2	surface	surface	surface
GH-Lower Pond ²	354775	03/15/2019		328	0.0429	0.0124	0.115	0.623	<0.1	57.9	5.32	0.0138	0.0103	8.84	6.77	1,040	1,610	1,920	8.1	surface	surface	surface
GH-Lower Pond ²	356622	09/17/2019		101	0.0149	0.0083	0.0547	0.576	<0.1	14.7	2.62	<0.01	<0.0075	2.67	6.23	322	509	744	22.9	surface	surface	surface
GH-Lower Pond ²	358232	03/19/2020		225	0.0642	0.024	0.284	0.708	<0.1	47.4	9.41	0.0189	0.0166	16.9	7.74	842	1,240	1,242	14.6	surface	surface	surface
GH-Lower Pond ²	359913	09/26/2020	Too low to grab sample		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	surface	surface	surface

*Water in sump at this time was from the construction phase of the stockpile removal.

**Well depth on record is incorrect.

NS - Not sampled, sump and/or sump pond are dry.

NS - Not analysed.

² "GH-Lower Pond" is the same monitoring site and location as "Lower GH-Sump" (the site was renamed)

GH-526



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

(208) 784-1258

www.svl.net

Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X0C0427**
Reported: 08-Apr-20 10:50

ANALYTICAL REPORT FOR SAMPLES

COC Number: 8544

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
358232 / GH-Lower Pond	X0C0427-01	Water	19-Mar-20 10:40	NL	24-Mar-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of SVL Analytical, Inc.

Case Narrative: X0C0427

The state of origin only accredits for drinking water analyses.



GH

Freeport McMoRan - Chino Mines
 PO Box 10
 Bayard, NM 88023

Project Name: Chino Routine
 Work Order: **X0C0537**
 Reported: 14-Apr-20 15:58

ANALYTICAL REPORT FOR SAMPLES

COC Number: 8552

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
358230 / GH-2004-2D	X0C0537-01	Water	27-Mar-20 12:52	LS	31-Mar-2020	
358231 / GH-2004-2S	X0C0537-02	Water	27-Mar-20 13:20	LS	31-Mar-2020	
358233 / GH-Sump	X0C0537-03	Water	27-Mar-20 13:45	LS	31-Mar-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.
 Sample preparation is defined by the client as per their Data Quality Objectives.
 This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.
 Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.
 The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.
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Case Narrative: X0C0537

The state of origin only accredits for drinking water analyses.



Freeport McMoRan - Chino Mines PO Box 10 Bayard, NM 88023	Project Name: Chino Routine Work Order: X0C0537 Reported: 14-Apr-20 15:58
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Client Sample ID: **358230 : GH-2004-2D**
SVL Sample ID: **X0C0537-01 (Water)**

Sampled: 27-Mar-20 12:52
Received: 31-Mar-20
Sampled By: LS

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0016		X014109	JFB	04/13/20 19:27	
EPA 200.7	Calcium	473	mg/L	0.100	0.069		X014109	JFB	04/13/20 19:27	
EPA 200.7	Cobalt	< 0.0060	mg/L	0.0060	0.0016		X014109	JFB	04/13/20 19:27	
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X014109	JFB	04/13/20 19:27	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X014109	JFB	04/13/20 19:27	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0049		X014109	KH	04/14/20 08:50	
EPA 200.7	Magnesium	116	mg/L	0.50	0.08		X014109	JFB	04/13/20 19:27	
EPA 200.7	Manganese	0.0952	mg/L	0.0080	0.0034		X014109	JFB	04/13/20 19:27	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X014109	JFB	04/13/20 19:27	
EPA 200.7	Zinc	0.504	mg/L	0.010	0.005		X014109	JFB	04/13/20 19:27	
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	2370	mg/L	40			X014099	TL	04/01/20 13:40	D2
Anions by Ion Chromatography										
EPA 300.0	Fluoride	0.243	mg/L	0.100	0.062		X014128	RS	04/02/20 12:11	E12
EPA 300.0	Sulfate as SO4	1490	mg/L	15.0	9.00	50	X014128	RS	04/02/20 12:29	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

 **Connor Williams**
Project Manager



One Government Gulch - PO Box 929

Kellogg, ID 83837-0929

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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X0C0537**
Reported: 14-Apr-20 15:58

Client Sample ID: **358230 : GH-2004-2D**

SVL Sample ID: **X0C0537-01 (Water)**

Sample Report Page 1 of 1

Sampled: 27-Mar-20 12:52

Received: 31-Mar-20

Sampled By: LS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0016		X014109	JFB	04/13/20 19:27	
EPA 200.7	Calcium	473	mg/L	0.100	0.069		X014109	JFB	04/13/20 19:27	
EPA 200.7	Cobalt	< 0.0060	mg/L	0.0060	0.0016		X014109	JFB	04/13/20 19:27	
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X014109	JFB	04/13/20 19:27	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X014109	JFB	04/13/20 19:27	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0049		X014109	KH	04/14/20 08:50	
EPA 200.7	Magnesium	116	mg/L	0.50	0.08		X014109	JFB	04/13/20 19:27	
EPA 200.7	Manganese	0.0952	mg/L	0.0080	0.0034		X014109	JFB	04/13/20 19:27	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X014109	JFB	04/13/20 19:27	
EPA 200.7	Zinc	0.504	mg/L	0.010	0.005		X014109	JFB	04/13/20 19:27	
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	2370	mg/L	40			X014099	TL	04/01/20 13:40	D2
Anions by Ion Chromatography										
EPA 300.0	Fluoride	0.243	mg/L	0.100	0.062		X014128	RS	04/02/20 12:11	E12
EPA 300.0	Sulfate as SO4	1490	mg/L	15.0	9.00	50	X014128	RS	04/02/20 12:29	D2

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Connor Williams
Project Manager



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Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X0C0537**
Reported: 14-Apr-20 15:58

Client Sample ID: **358231 : GH-2004-2S**

Sampled: 27-Mar-20 13:20

SVL Sample ID: **X0C0537-02 (Water)**

Received: 31-Mar-20

Sample Report Page 1 of 1

Sampled By: LS

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	0.119	mg/L	0.0020	0.0016		X014109	JFB	04/13/20 19:30	
EPA 200.7	Calcium	557	mg/L	0.100	0.069		X014109	JFB	04/13/20 19:30	
EPA 200.7	Cobalt	< 0.0060	mg/L	0.0060	0.0016		X014109	JFB	04/13/20 19:30	
EPA 200.7	Copper	0.0104	mg/L	0.0100	0.0027		X014109	JFB	04/13/20 19:30	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X014109	JFB	04/13/20 19:30	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0049		X014109	KH	04/14/20 08:53	
EPA 200.7	Magnesium	199	mg/L	0.50	0.08		X014109	JFB	04/13/20 19:30	
EPA 200.7	Manganese	17.3	mg/L	0.0080	0.0034		X014109	JFB	04/13/20 19:30	
EPA 200.7	Nickel	0.0404	mg/L	0.0100	0.0023		X014109	JFB	04/13/20 19:30	
EPA 200.7	Zinc	59.5	mg/L	0.100	0.054	10	X014109	KH	04/14/20 09:37	D2
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	3160	mg/L	40			X014099	TL	04/01/20 13:40	D2
Anions by Ion Chromatography										
EPA 300.0	Fluoride	0.947	mg/L	0.100	0.062		X014128	RS	04/02/20 12:48	E12
EPA 300.0	Sulfate as SO4	2180	mg/L	15.0	9.00	50	X014128	RS	04/02/20 13:06	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Connor Williams
Project Manager



Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X0C0427**
Reported: 08-Apr-20 10:50

Client Sample ID: **358232 : GH-Lower Pond**
SVL Sample ID: **X0C0427-01 (Water)**

Sampled: 19-Mar-20 10:40
Received: 24-Mar-20
Sampled By: NL

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	0.0642	mg/L	0.0020	0.0016		X013097	KH	04/07/20 10:20	
EPA 200.7	Calcium	225	mg/L	0.100	0.069		X013097	KH	04/07/20 10:20	
EPA 200.7	Cobalt	0.0240	mg/L	0.0060	0.0016		X013097	KH	04/07/20 16:35	
EPA 200.7	Copper	0.284	mg/L	0.0100	0.0027		X013097	KH	04/07/20 10:20	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X013097	KH	04/07/20 16:35	
EPA 200.7	Lead	0.0166	mg/L	0.0075	0.0049		X013097	KH	04/07/20 16:35	
EPA 200.7	Magnesium	47.4	mg/L	0.50	0.08		X013097	KH	04/07/20 10:20	
EPA 200.7	Manganese	9.41	mg/L	0.0080	0.0034		X013097	KH	04/07/20 10:20	
EPA 200.7	Nickel	0.0189	mg/L	0.0100	0.0023		X013097	KH	04/07/20 16:35	
EPA 200.7	Zinc	16.9	mg/L	0.010	0.005		X013097	KH	04/07/20 10:20	
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	1240	mg/L	10			X013076	dks	03/25/20 12:25	
Anions by Ion Chromatography										
EPA 300.0	Fluoride	0.708	mg/L	0.100	0.062		X013087	RS	03/28/20 01:28	
EPA 300.0	Sulfate as SO4	842	mg/L	7.50	4.50	25	X013087	RS	03/28/20 01:47	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Dave Tryon
Project Manager



Freeport McMoRan - Chino Mines PO Box 10 Bayard, NM 88023	Project Name: Chino Routine Work Order: X0C0537 Reported: 14-Apr-20 15:58
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Client Sample ID: **358233 : GH-Sump**
SVL Sample ID: **X0C0537-03 (Water)**

Sampled: 27-Mar-20 13:45
Received: 31-Mar-20
Sampled By: LS

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	0.0030	mg/L	0.0020	0.0016		X014109	JFB	04/13/20 19:34	
EPA 200.7	Calcium	97.1	mg/L	0.100	0.069		X014109	JFB	04/13/20 19:34	
EPA 200.7	Cobalt	< 0.0060	mg/L	0.0060	0.0016		X014109	JFB	04/13/20 19:34	
EPA 200.7	Copper	0.0291	mg/L	0.0100	0.0027		X014109	JFB	04/13/20 19:34	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X014109	JFB	04/13/20 19:34	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0049		X014109	KH	04/14/20 08:56	
EPA 200.7	Magnesium	14.2	mg/L	0.50	0.08		X014109	JFB	04/13/20 19:34	
EPA 200.7	Manganese	0.0418	mg/L	0.0080	0.0034		X014109	JFB	04/13/20 19:34	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0023		X014109	JFB	04/13/20 19:34	
EPA 200.7	Zinc	0.913	mg/L	0.010	0.005		X014109	JFB	04/13/20 19:34	
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	429	mg/L	10			X014099	TL	04/01/20 13:40	
Anions by Ion Chromatography										
EPA 300.0	Fluoride	1.00	mg/L	0.100	0.062		X014128	RS	04/02/20 14:02	
EPA 300.0	Sulfate as SO4	235	mg/L	3.00	1.80	10	X014128	RS	04/02/20 14:21	D2,M4

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

 **Connor Williams**
Project Manager



Freeport McMoRan - Chino Mines
 PO Box 10
 Bayard, NM 88023

Project Name: Chino Routine
 Work Order: **X0C0427**
 Reported: 08-Apr-20 10:50

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Cadmium	mg/L	<0.0020	0.0016	0.0020	X013097	07-Apr-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X013097	07-Apr-20	
EPA 200.7	Cobalt	mg/L	<0.0060	0.0016	0.0060	X013097	07-Apr-20	
EPA 200.7	Copper	mg/L	<0.0100	0.0027	0.0100	X013097	07-Apr-20	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X013097	07-Apr-20	
EPA 200.7	Lead	mg/L	<0.0075	0.0049	0.0075	X013097	07-Apr-20	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X013097	07-Apr-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X013097	07-Apr-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X013097	07-Apr-20	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X013097	07-Apr-20	
Classical Chemistry Parameters								
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X013076	25-Mar-20	
Anions by Ion Chromatography								
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X013087	27-Mar-20	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X013087	27-Mar-20	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Cadmium	mg/L	0.936	1.00	93.6	85 - 115	X013097	07-Apr-20	
EPA 200.7	Calcium	mg/L	19.3	20.0	96.4	85 - 115	X013097	07-Apr-20	
EPA 200.7	Cobalt	mg/L	0.934	1.00	93.4	85 - 115	X013097	07-Apr-20	
EPA 200.7	Copper	mg/L	0.955	1.00	95.5	85 - 115	X013097	07-Apr-20	
EPA 200.7	Iron	mg/L	9.73	10.0	97.3	85 - 115	X013097	07-Apr-20	
EPA 200.7	Lead	mg/L	0.967	1.00	96.7	85 - 115	X013097	07-Apr-20	
EPA 200.7	Magnesium	mg/L	18.7	20.0	93.6	85 - 115	X013097	07-Apr-20	
EPA 200.7	Manganese	mg/L	0.956	1.00	95.6	85 - 115	X013097	07-Apr-20	
EPA 200.7	Nickel	mg/L	0.936	1.00	93.6	85 - 115	X013097	07-Apr-20	
EPA 200.7	Zinc	mg/L	0.941	1.00	94.1	85 - 115	X013097	07-Apr-20	
Anions by Ion Chromatography									
EPA 300.0	Fluoride	mg/L	2.05	2.00	103	90 - 110	X013087	27-Mar-20	
EPA 300.0	Sulfate as SO4	mg/L	10.5	10.0	105	90 - 110	X013087	27-Mar-20	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
Classical Chemistry Parameters									
SM 2540 C	Total Diss. Solids	mg/L	610	618	1.3	10	X013076 - X0C0364-02	25-Mar-20	
SM 2540 C	Total Diss. Solids	mg/L	993	997	0.4	10	X013076 - X0C0418-05	25-Mar-20	



Freeport McMoRan - Chino Mines PO Box 10 Bayard, NM 88023	Project Name: Chino Routine Work Order: X0C0427 Reported: 08-Apr-20 10:50
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Quality Control - MATRIX SPIKE Data										
Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes

Metals (Dissolved)										
EPA 200.7	Cadmium	mg/L	0.911	0.0025	1.00	90.9	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Cadmium	mg/L	1.11	0.155	1.00	95.6	70 - 130	X013097 - X0C0422-01	07-Apr-20	
EPA 200.7	Calcium	mg/L	221	204	20.0	82.6	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Calcium	mg/L	443	412	20.0	0.30R>S	70 - 130	X013097 - X0C0422-01	07-Apr-20	M3
EPA 200.7	Cobalt	mg/L	0.921	<0.0060	1.00	92.1	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Cobalt	mg/L	3.32	2.31	1.00	101	70 - 130	X013097 - X0C0422-01	07-Apr-20	
EPA 200.7	Copper	mg/L	0.942	<0.0100	1.00	93.6	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Copper	mg/L	81.2	77.1	1.00	0.30R>S	70 - 130	X013097 - X0C0422-01	07-Apr-20	D2,M4
EPA 200.7	Iron	mg/L	9.79	<0.100	10.0	97.9	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Iron	mg/L	10.4	0.837	10.0	96.0	70 - 130	X013097 - X0C0422-01	07-Apr-20	
EPA 200.7	Lead	mg/L	0.979	<0.0075	1.00	97.9	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Lead	mg/L	0.992	<0.0075	1.00	99.2	70 - 130	X013097 - X0C0422-01	07-Apr-20	
EPA 200.7	Magnesium	mg/L	112	95.5	20.0	83.7	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Magnesium	mg/L	495	461	20.0	0.30R>S	70 - 130	X013097 - X0C0422-01	07-Apr-20	M3
EPA 200.7	Manganese	mg/L	0.956	0.0501	1.00	90.6	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Manganese	mg/L	170	168	1.00	0.30R>S	70 - 130	X013097 - X0C0422-01	07-Apr-20	M4
EPA 200.7	Nickel	mg/L	0.932	<0.0100	1.00	92.8	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Nickel	mg/L	2.63	1.64	1.00	99.2	70 - 130	X013097 - X0C0422-01	07-Apr-20	
EPA 200.7	Zinc	mg/L	0.966	0.070	1.00	89.6	70 - 130	X013097 - X0C0420-03	07-Apr-20	
EPA 200.7	Zinc	mg/L	37.8	36.6	1.00	124	70 - 130	X013097 - X0C0422-01	07-Apr-20	
Anions by Ion Chromatography										
EPA 300.0	Fluoride	mg/L	1.90	0.210	2.00	84.5	90 - 110	X013087 - X0C0420-02	27-Mar-20	M2
EPA 300.0	Fluoride	mg/L	2.04	0.178	2.00	93.2	90 - 110	X013087 - X0C0425-01	28-Mar-20	
EPA 300.0	Sulfate as SO4	mg/L	1570	1600	10.0	0.30R>S	90 - 110	X013087 - X0C0420-02	27-Mar-20	D2,M4
EPA 300.0	Sulfate as SO4	mg/L	190	185	10.0	0.30R>S	90 - 110	X013087 - X0C0425-01	28-Mar-20	D2,M4

Quality Control - MATRIX SPIKE DUPLICATE Data										
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes

Metals (Dissolved)										
EPA 200.7	Cadmium	mg/L	0.904	0.911	1.00	0.8	20	90.2	X013097 - X0C0420-03	
EPA 200.7	Calcium	mg/L	221	221	20.0	0.3	20	85.8	X013097 - X0C0420-03	
EPA 200.7	Cobalt	mg/L	0.903	0.921	1.00	2.0	20	90.3	X013097 - X0C0420-03	
EPA 200.7	Copper	mg/L	0.933	0.942	1.00	0.9	20	92.8	X013097 - X0C0420-03	
EPA 200.7	Iron	mg/L	9.51	9.79	10.0	2.9	20	95.1	X013097 - X0C0420-03	
EPA 200.7	Lead	mg/L	0.955	0.979	1.00	2.5	20	95.5	X013097 - X0C0420-03	
EPA 200.7	Magnesium	mg/L	112	112	20.0	0.3	20	81.8	X013097 - X0C0420-03	
EPA 200.7	Manganese	mg/L	0.958	0.956	1.00	0.2	20	90.8	X013097 - X0C0420-03	
EPA 200.7	Nickel	mg/L	0.914	0.932	1.00	2.0	20	91.0	X013097 - X0C0420-03	
EPA 200.7	Zinc	mg/L	0.975	0.966	1.00	0.8	20	90.4	X013097 - X0C0420-03	
Anions by Ion Chromatography										
EPA 300.0	Fluoride	mg/L	1.86	1.90	2.00	2.3	20	82.4	X013087 - X0C0420-02	M2
EPA 300.0	Sulfate as SO4	mg/L	1570	1570	10.0	0.4	20	0.30R>S	X013087 - X0C0420-02	D2,M4



Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X0C0427**
Reported: 08-Apr-20 10:50

Notes and Definitions

- D2 Sample required dilution due to high concentration of target analyte.
 - M2 Matrix spike recovery was low, but the LCS recovery was acceptable.
 - M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
 - M4 The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
 - LCS Laboratory Control Sample (Blank Spike)
 - RPD Relative Percent Difference
 - UDL A result is less than the detection limit
 - 0.30R>S % recovery not applicable; spike level is less than 30% of the sample concentration
 - <RL A result is less than the reporting limit
 - MRL Method Reporting Limit
 - MDL Method Detection Limit
 - N/A Not Applicable
-



Freeport McMoRan - Chino Mines PO Box 10 Bayard, NM 88023	Project Name: Chino Routine Work Order: X0C0537 Reported: 14-Apr-20 15:58
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Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
Metals (Dissolved)								
EPA 200.7	Cadmium	mg/L	<0.0020	0.0016	0.0020	X014109	13-Apr-20	
EPA 200.7	Cadmium	mg/L	<0.0020	0.0016	0.0020	X014109	13-Apr-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X014109	13-Apr-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X014109	13-Apr-20	
EPA 200.7	Cobalt	mg/L	<0.0060	0.0016	0.0060	X014109	13-Apr-20	
EPA 200.7	Cobalt	mg/L	<0.0060	0.0016	0.0060	X014109	13-Apr-20	
EPA 200.7	Copper	mg/L	<0.0100	0.0027	0.0100	X014109	13-Apr-20	
EPA 200.7	Copper	mg/L	<0.0100	0.0027	0.0100	X014109	13-Apr-20	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X014109	13-Apr-20	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X014109	13-Apr-20	
EPA 200.7	Lead	mg/L	<0.0075	0.0049	0.0075	X014109	14-Apr-20	
EPA 200.7	Lead	mg/L	<0.0075	0.0049	0.0075	X014109	14-Apr-20	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X014109	13-Apr-20	
EPA 200.7	Magnesium	mg/L	<0.50	0.08	0.50	X014109	13-Apr-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X014109	13-Apr-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X014109	13-Apr-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X014109	13-Apr-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0023	0.0100	X014109	13-Apr-20	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X014109	13-Apr-20	
EPA 200.7	Zinc	mg/L	<0.010	0.005	0.010	X014109	13-Apr-20	
Classical Chemistry Parameters								
SM 2540 C	Total Diss. Solids	mg/L	<10		10	X014099	01-Apr-20	
Anions by Ion Chromatography								
EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X014128	02-Apr-20	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X014128	02-Apr-20	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
Metals (Dissolved)									
EPA 200.7	Cadmium	mg/L	0.997	1.00	99.7	85 - 115	X014109	13-Apr-20	
EPA 200.7	Calcium	mg/L	19.7	20.0	98.4	85 - 115	X014109	13-Apr-20	
EPA 200.7	Cobalt	mg/L	0.960	1.00	96.0	85 - 115	X014109	13-Apr-20	
EPA 200.7	Copper	mg/L	0.953	1.00	95.3	85 - 115	X014109	13-Apr-20	
EPA 200.7	Iron	mg/L	9.97	10.0	99.7	85 - 115	X014109	13-Apr-20	
EPA 200.7	Lead	mg/L	1.03	1.00	103	85 - 115	X014109	14-Apr-20	
EPA 200.7	Magnesium	mg/L	21.4	20.0	107	85 - 115	X014109	13-Apr-20	
EPA 200.7	Manganese	mg/L	0.975	1.00	97.5	85 - 115	X014109	13-Apr-20	
EPA 200.7	Nickel	mg/L	0.962	1.00	96.2	85 - 115	X014109	13-Apr-20	
EPA 200.7	Zinc	mg/L	0.995	1.00	99.5	85 - 115	X014109	13-Apr-20	
Anions by Ion Chromatography									
EPA 300.0	Fluoride	mg/L	2.00	2.00	100	90 - 110	X014128	02-Apr-20	
EPA 300.0	Sulfate as SO4	mg/L	10.2	10.0	102	90 - 110	X014128	02-Apr-20	



Freeport McMoRan - Chino Mines PO Box 10 Bayard, NM 88023	Project Name: Chino Routine Work Order: X0C0537 Reported: 14-Apr-20 15:58
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Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
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Classical Chemistry Parameters

SM 2540 C	Total Diss. Solids	mg/L	1170	1180	0.2	10	X014099 - X0C0536-01	01-Apr-20	
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Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	mg/L	0.986	0.0089	1.00	97.7	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Cadmium	mg/L	1.03	0.0277	1.00	100	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Calcium	mg/L	292	271	20.0	106	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Calcium	mg/L	40.2	20.8	20.0	96.9	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Cobalt	mg/L	0.925	<0.0060	1.00	92.0	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Cobalt	mg/L	0.946	<0.0060	1.00	94.6	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Copper	mg/L	1.00	<0.0100	1.00	100	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Copper	mg/L	0.961	<0.0100	1.00	96.1	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Iron	mg/L	10.2	0.488	10.0	97.4	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Iron	mg/L	9.86	<0.100	10.0	98.6	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Lead	mg/L	1.02	0.0189	1.00	99.6	70 - 130	X014109 - X0C0536-01	14-Apr-20	
EPA 200.7	Lead	mg/L	1.04	<0.0075	1.00	104	70 - 130	X014109 - X0C0542-05	14-Apr-20	
EPA 200.7	Magnesium	mg/L	63.4	42.1	20.0	107	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Magnesium	mg/L	29.1	8.00	20.0	106	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Manganese	mg/L	6.49	5.56	1.00	93.6	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Manganese	mg/L	0.986	<0.0080	1.00	98.6	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Nickel	mg/L	0.930	<0.0100	1.00	93.0	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Nickel	mg/L	0.951	<0.0100	1.00	94.8	70 - 130	X014109 - X0C0542-05	13-Apr-20	
EPA 200.7	Zinc	mg/L	7.05	6.21	1.00	83.4	70 - 130	X014109 - X0C0536-01	13-Apr-20	
EPA 200.7	Zinc	mg/L	4.21	3.25	1.00	95.2	70 - 130	X014109 - X0C0542-05	13-Apr-20	

Anions by Ion Chromatography

EPA 300.0	Fluoride	mg/L	2.93	1.00	2.00	96.2	90 - 110	X014128 - X0C0537-03	02-Apr-20	
EPA 300.0	Fluoride	mg/L	2.22	0.404	2.00	90.9	90 - 110	X014128 - X0D0035-03	02-Apr-20	
EPA 300.0	Sulfate as SO4	mg/L	244	235	10.0	0.30R>S	90 - 110	X014128 - X0C0537-03	02-Apr-20	D2,M4
EPA 300.0	Sulfate as SO4	mg/L	15.2	4.82	10.0	103	90 - 110	X014128 - X0D0035-03	02-Apr-20	

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	mg/L	0.981	0.986	1.00	0.5	20	97.2	X014109 - X0C0536-01	
EPA 200.7	Calcium	mg/L	291	292	20.0	0.5	20	99.5	X014109 - X0C0536-01	
EPA 200.7	Cobalt	mg/L	0.919	0.925	1.00	0.7	20	91.3	X014109 - X0C0536-01	
EPA 200.7	Copper	mg/L	0.999	1.00	1.00	0.0	20	99.9	X014109 - X0C0536-01	
EPA 200.7	Iron	mg/L	10.2	10.2	10.0	0.3	20	97.1	X014109 - X0C0536-01	
EPA 200.7	Lead	mg/L	1.01	1.02	1.00	0.4	20	99.3	X014109 - X0C0536-01	
EPA 200.7	Magnesium	mg/L	62.9	63.4	20.0	0.8	20	104	X014109 - X0C0536-01	
EPA 200.7	Manganese	mg/L	6.47	6.49	1.00	0.3	20	91.9	X014109 - X0C0536-01	
EPA 200.7	Nickel	mg/L	0.925	0.930	1.00	0.6	20	92.5	X014109 - X0C0536-01	
EPA 200.7	Zinc	mg/L	6.97	7.05	1.00	1.1	20	76.0	X014109 - X0C0536-01	



Freeport McMoRan - Chino Mines PO Box 10 Bayard, NM 88023	Project Name: Chino Routine Work Order: X0C0537 Reported: 14-Apr-20 15:58
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Quality Control - MATRIX SPIKE DUPLICATE Data (Continued)										
Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes

Anions by Ion Chromatography										
EPA 300.0	Fluoride	mg/L	2.94	2.93	2.00	0.5	20	97.0	X014128 - X0C0537-03	
EPA 300.0	Sulfate as SO4	mg/L	244	244	10.0	0.0	20	0.30R>S	X014128 - X0C0537-03	D2,M4

Notes and Definitions

- D2 Sample required dilution due to high concentration of target analyte.
- E12 The reported value is estimated due to the presence of interferents.
- M4 The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
- LCS Laboratory Control Sample (Blank Spike)
- RPD Relative Percent Difference
- UDL A result is less than the detection limit
- 0.30R>S % recovery not applicable; spike level is less than 30% of the sample concentration
- <RL A result is less than the reporting limit
- MRL Method Reporting Limit
- MDL Method Detection Limit
- N/A Not Applicable



Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X010656**
Reported: 13-Oct-20 17:19

ANALYTICAL REPORT FOR SAMPLES

COC Number: 8738

Sample ID	Laboratory ID	Matrix	Date Sampled	Sampled By	Date Received	Notes
359910 / GH-2004-2D	X010656-01	Water	26-Sep-20 11:57	LS	29-Sep-2020	
359911 / GH-2004-2S	X010656-02	Water	26-Sep-20 12:23	LS	29-Sep-2020	

Solid samples are analyzed on an as-received, wet-weight basis, unless otherwise requested.

Sample preparation is defined by the client as per their Data Quality Objectives.

This report supercedes any previous reports for this Work Order. The complete report includes pages for each sample, a full QC report, and a notes section.

Analyses were performed in accordance with SVL standard operating procedures and calibrations were performed and met SVL internal QC criteria.

The results presented in this report relate only to the samples, and meet all requirements of the NELAC Standards unless otherwise noted.

This report shall not be reproduced except in full, without the written approval of SVL Analytical, Inc.

Case Narrative: X010656

The state of origin only accredits for drinking water analyses.



Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X010656**
Reported: 13-Oct-20 17:19

Client Sample ID: **359910 : GH-2004-2D**
SVL Sample ID: **X010656-01 (Water)**

Sampled: 26-Sep-20 11:57
Received: 29-Sep-20
Sampled By: LS

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	< 0.0020	mg/L	0.0020	0.0016		X040231	MH	10/12/20 11:51	
EPA 200.7	Calcium	417	mg/L	0.100	0.069		X040231	MH	10/13/20 09:54	M3
EPA 200.7	Cobalt	< 0.0060	mg/L	0.0060	0.0046		X040231	MH	10/13/20 09:54	
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X040231	MH	10/12/20 11:51	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X040231	MH	10/12/20 11:51	
EPA 200.7	Lead	< 0.0075	mg/L	0.0075	0.0049		X040231	MH	10/12/20 11:51	
EPA 200.7	Magnesium	105	mg/L	0.500	0.090		X040231	MH	10/12/20 11:51	
EPA 200.7	Manganese	0.0773	mg/L	0.0080	0.0034		X040231	MH	10/12/20 11:51	
EPA 200.7	Nickel	< 0.0100	mg/L	0.0100	0.0048		X040231	MH	10/12/20 11:51	
EPA 200.7	Zinc	0.546	mg/L	0.0100	0.0054		X040231	MH	10/12/20 11:51	
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	3050	mg/L	40			X040230	TL	10/02/20 15:10	D2
Anions by Ion Chromatography										
EPA 300.0	Fluoride	0.321	mg/L	0.100	0.062		X040284	RS	10/10/20 04:44	E12
EPA 300.0	Sulfate as SO4	1340	mg/L	15.0	9.00	50	X040284	RS	10/10/20 05:01	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Connor Williams
Project Manager



Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X010656**
Reported: 13-Oct-20 17:19

Client Sample ID: **359911 : GH-2004-2S**
SVL Sample ID: **X010656-02 (Water)**

Sampled: 26-Sep-20 12:23
Received: 29-Sep-20
Sampled By: LS

Sample Report Page 1 of 1

Method	Analyte	Result	Units	RL	MDL	Dilution	Batch	Analyst	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	0.0472	mg/L	0.0020	0.0016		X040231	MH	10/12/20 12:01	
EPA 200.7	Calcium	512	mg/L	0.100	0.069		X040231	MH	10/13/20 10:05	
EPA 200.7	Cobalt	< 0.0060	mg/L	0.0060	0.0046		X040231	MH	10/13/20 10:05	
EPA 200.7	Copper	< 0.0100	mg/L	0.0100	0.0027		X040231	MH	10/12/20 12:01	
EPA 200.7	Iron	< 0.100	mg/L	0.100	0.056		X040231	MH	10/12/20 12:01	
EPA 200.7	Lead	0.0093	mg/L	0.0075	0.0049		X040231	MH	10/12/20 12:01	
EPA 200.7	Magnesium	178	mg/L	0.500	0.090		X040231	MH	10/12/20 12:01	
EPA 200.7	Manganese	10.3	mg/L	0.0080	0.0034		X040231	MH	10/12/20 12:01	
EPA 200.7	Nickel	0.0441	mg/L	0.0100	0.0048		X040231	MH	10/12/20 12:01	
EPA 200.7	Zinc	52.6	mg/L	0.100	0.0540	10	X040231	MH	10/12/20 13:17	D2
Classical Chemistry Parameters										
SM 2540 C	Total Diss. Solids	3060	mg/L	40			X040230	TL	10/02/20 15:10	D2
Anions by Ion Chromatography										
EPA 300.0	Fluoride	1.10	mg/L	0.100	0.062		X040284	RS	10/10/20 05:19	E12
EPA 300.0	Sulfate as SO4	2030	mg/L	15.0	9.00	50	X040284	RS	10/10/20 05:37	D2

This data has been reviewed for accuracy and has been authorized for release by the Laboratory Director or designee.

Connor Williams
Project Manager



Freeport McMoRan - Chino Mines
 PO Box 10
 Bayard, NM 88023

Project Name: Chino Routine
 Work Order: **X010656**
 Reported: 13-Oct-20 17:19

Quality Control - BLANK Data

Method	Analyte	Units	Result	MDL	MRL	Batch ID	Analyzed	Notes
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Metals (Dissolved)

EPA 200.7	Cadmium	mg/L	<0.0020	0.0016	0.0020	X040231	12-Oct-20	
EPA 200.7	Calcium	mg/L	<0.100	0.069	0.100	X040231	13-Oct-20	
EPA 200.7	Cobalt	mg/L	<0.0060	0.0046	0.0060	X040231	13-Oct-20	
EPA 200.7	Copper	mg/L	<0.0100	0.0027	0.0100	X040231	12-Oct-20	
EPA 200.7	Iron	mg/L	<0.100	0.056	0.100	X040231	12-Oct-20	
EPA 200.7	Lead	mg/L	<0.0075	0.0049	0.0075	X040231	12-Oct-20	
EPA 200.7	Magnesium	mg/L	<0.500	0.090	0.500	X040231	12-Oct-20	
EPA 200.7	Manganese	mg/L	<0.0080	0.0034	0.0080	X040231	12-Oct-20	
EPA 200.7	Nickel	mg/L	<0.0100	0.0048	0.0100	X040231	12-Oct-20	
EPA 200.7	Zinc	mg/L	<0.0100	0.0054	0.0100	X040231	12-Oct-20	

Classical Chemistry Parameters

SM 2540 C	Total Diss. Solids	mg/L	<10		10	X040230	02-Oct-20	
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Anions by Ion Chromatography

EPA 300.0	Fluoride	mg/L	<0.100	0.062	0.100	X040284	09-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	<0.30	0.18	0.30	X040284	09-Oct-20	

Quality Control - LABORATORY CONTROL SAMPLE Data

Method	Analyte	Units	LCS Result	LCS True	% Rec.	Acceptance Limits	Batch ID	Analyzed	Notes
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Metals (Dissolved)

EPA 200.7	Cadmium	mg/L	0.968	1.00	96.8	85 - 115	X040231	12-Oct-20	
EPA 200.7	Calcium	mg/L	18.1	20.0	90.6	85 - 115	X040231	13-Oct-20	
EPA 200.7	Cobalt	mg/L	0.916	1.00	91.6	85 - 115	X040231	13-Oct-20	
EPA 200.7	Copper	mg/L	0.967	1.00	96.7	85 - 115	X040231	12-Oct-20	
EPA 200.7	Iron	mg/L	9.97	10.0	99.7	85 - 115	X040231	12-Oct-20	
EPA 200.7	Lead	mg/L	0.961	1.00	96.1	85 - 115	X040231	12-Oct-20	
EPA 200.7	Magnesium	mg/L	19.8	20.0	98.9	85 - 115	X040231	12-Oct-20	
EPA 200.7	Manganese	mg/L	0.986	1.00	98.6	85 - 115	X040231	12-Oct-20	
EPA 200.7	Nickel	mg/L	0.946	1.00	94.6	85 - 115	X040231	12-Oct-20	
EPA 200.7	Zinc	mg/L	0.949	1.00	94.9	85 - 115	X040231	12-Oct-20	

Anions by Ion Chromatography

EPA 300.0	Fluoride	mg/L	2.01	2.00	100	90 - 110	X040284	09-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	10.5	10.0	105	90 - 110	X040284	09-Oct-20	

Quality Control - DUPLICATE Data

Method	Analyte	Units	Duplicate Result	Sample Result	RPD	RPD Limit	Batch and Source ID	Analyzed	Notes
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Classical Chemistry Parameters

SM 2540 C	Total Diss. Solids	mg/L	1290	1290	0.2	10	X040230 - X010664-04	02-Oct-20	
SM 2540 C	Total Diss. Solids	mg/L	539	533	1.1	10	X040230 - X010664-07	02-Oct-20	



Freeport McMoRan - Chino Mines
 PO Box 10
 Bayard, NM 88023

Project Name: Chino Routine
 Work Order: **X010656**
 Reported: 13-Oct-20 17:19

Quality Control - MATRIX SPIKE Data

Method	Analyte	Units	Spike Result	Sample Result (R)	Spike Level (S)	% Rec.	Acceptance Limits	Batch and Source ID	Analyzed	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	mg/L	0.922	<0.0020	1.00	92.2	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Cadmium	mg/L	0.988	<0.0020	1.00	98.8	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Calcium	mg/L	458	417	20.0	0.30R>S	70 - 130	X040231 - X010656-01	13-Oct-20	M3
EPA 200.7	Calcium	mg/L	241	221	20.0	99.6	70 - 130	X040231 - X010657-09	13-Oct-20	
EPA 200.7	Cobalt	mg/L	0.903	<0.0060	1.00	90.3	70 - 130	X040231 - X010656-01	13-Oct-20	
EPA 200.7	Cobalt	mg/L	0.932	<0.0060	1.00	93.2	70 - 130	X040231 - X010657-09	13-Oct-20	
EPA 200.7	Copper	mg/L	0.985	<0.0100	1.00	98.5	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Copper	mg/L	1.03	<0.0100	1.00	103	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Iron	mg/L	9.86	<0.100	10.0	98.6	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Iron	mg/L	10.1	<0.100	10.0	101	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Lead	mg/L	0.933	<0.0075	1.00	92.7	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Lead	mg/L	0.978	<0.0075	1.00	97.1	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Magnesium	mg/L	122	105	20.0	86.7	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Magnesium	mg/L	33.0	11.9	20.0	105	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Manganese	mg/L	1.03	0.0773	1.00	95.7	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Manganese	mg/L	1.10	0.104	1.00	99.9	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Nickel	mg/L	0.904	<0.0100	1.00	90.4	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Nickel	mg/L	0.939	<0.0100	1.00	93.9	70 - 130	X040231 - X010657-09	12-Oct-20	
EPA 200.7	Zinc	mg/L	1.47	0.546	1.00	92.4	70 - 130	X040231 - X010656-01	12-Oct-20	
EPA 200.7	Zinc	mg/L	0.979	<0.0100	1.00	97.9	70 - 130	X040231 - X010657-09	12-Oct-20	

Anions by Ion Chromatography

EPA 300.0	Fluoride	mg/L	2.30	0.484	2.00	90.9	90 - 110	X040284 - X010664-03	09-Oct-20	
EPA 300.0	Fluoride	mg/L	4.49	2.50	2.00	99.5	90 - 110	X040284 - X010664-05	10-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	19.7	9.61	10.0	101	90 - 110	X040284 - X010664-03	09-Oct-20	
EPA 300.0	Sulfate as SO4	mg/L	64.9	57.5	10.0	0.30R>S	90 - 110	X040284 - X010664-05	10-Oct-20	D2,M4

Quality Control - MATRIX SPIKE DUPLICATE Data

Method	Analyte	Units	MSD Result	Spike Result	Spike Level	RPD	RPD Limit	% Recovery	Batch and Source ID	Notes
Metals (Dissolved)										
EPA 200.7	Cadmium	mg/L	0.936	0.922	1.00	1.5	20	93.6	X040231 - X010656-01	
EPA 200.7	Calcium	mg/L	443	458	20.0	3.4	20	0.30R>S	X040231 - X010656-01	M3
EPA 200.7	Cobalt	mg/L	0.910	0.903	1.00	0.7	20	91.0	X040231 - X010656-01	
EPA 200.7	Copper	mg/L	1.01	0.985	1.00	2.3	20	101	X040231 - X010656-01	
EPA 200.7	Iron	mg/L	10.1	9.86	10.0	2.7	20	101	X040231 - X010656-01	
EPA 200.7	Lead	mg/L	0.948	0.933	1.00	1.6	20	94.2	X040231 - X010656-01	
EPA 200.7	Magnesium	mg/L	125	122	20.0	2.6	20	103	X040231 - X010656-01	
EPA 200.7	Manganese	mg/L	1.05	1.03	1.00	1.5	20	97.2	X040231 - X010656-01	
EPA 200.7	Nickel	mg/L	0.920	0.904	1.00	1.7	20	92.0	X040231 - X010656-01	
EPA 200.7	Zinc	mg/L	1.50	1.47	1.00	1.8	20	95.0	X040231 - X010656-01	
Anions by Ion Chromatography										
EPA 300.0	Fluoride	mg/L	2.33	2.30	2.00	1.3	20	92.3	X040284 - X010664-03	
EPA 300.0	Sulfate as SO4	mg/L	19.6	19.7	10.0	0.5	20	100	X040284 - X010664-03	



Freeport McMoRan - Chino Mines
PO Box 10
Bayard, NM 88023

Project Name: Chino Routine
Work Order: **X010656**
Reported: 13-Oct-20 17:19

Notes and Definitions

D2	Sample required dilution due to high concentration of target analyte.
E12	The reported value is estimated due to the presence of interferences.
M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The LCS was acceptable.
M4	The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful information. The LCS recovery was acceptable.
LCS	Laboratory Control Sample (Blank Spike)
RPD	Relative Percent Difference
UDL	A result is less than the detection limit
0.30R>S	% recovery not applicable; spike level is less than 30% of the sample concentration
<RL	A result is less than the reporting limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
N/A	Not Applicable
