NI 43-101 Technical Report Waterloo Project California, USA

Prepared for: Stronghold Silver Corp. Suite 3002 - 277 Thurlow Street Vancouver, BC V6C 0C1



Effective Date: May 12, 2021 Prepared by



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This Technical Report on the Waterloo Property is submitted to and is effective May 6, 2021.

The Qualified Persons and Responsible Report Sections follow:

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1.0 EXECUTIVE SUMMARY

1.1 Overview

The Waterloo Property ("the Project" or "the Property") is located in San Bernardino County, California, USA., in the Calico Mountains. The Property is situated approximately 145 miles (230 km) northeast of Los Angeles, approximately halfway between Los Angeles and Las Vegas, Nevada along the I-15 interstate highway. The Project comprises 21 unpatented lode claims and 27 fee land parcels, totaling approximately 1,770 gross acres (715 hectares).

Global Resource Engineering ("GRE") was engaged by Stronghold Silver Corp. ("Stronghold Silver") to complete a National Instrument (NI) 43-101 Technical Report ("the Report") summarizing the geology, exploration history and acquisition of the Waterloo Property. The Technical Report includes a summary of exploration activities and historical mining conducted on the Property to date and recommendations for future work. The Report has been written on behalf of Stronghold Silver and was prepared in accordance with the guidelines set out by the Canadian Securities Association and NI 43-101 Standards of Disclosure for Mineral Projects (2011).

1.2 Property Ownership and Description

The Property comprises 21 unpatented lode mining claims and 27 fee land parcels located in Sections 16, 17, 19, 20, 21 and 22 Township 010N, Range 001E, SBB&M, in San Bernardino County, CA. The claims comprising the Waterloo Property are included in an Asset Purchase Agreement between Stronghold Silver and Pan American Minerals Inc. (Pan American) signed on January 22, 2021 and amended April 1, 2021. Stronghold Silver can acquire a 100% interest in the Waterloo Property with an initial non-refundable deposit of US\$250,000 on signing (completed), a second non-refundable deposit of US\$250,000 within 3 business days of March 1, 2021 (completed), a payment of US\$25,000,000 less the deposits on or before the Effective date and a payment of US\$6,000,000 on or before the 18-month anniversary of the Closing Date. Pan American retains a 2% Net Smelter Royalty (NSR).

1.3 Geology and Mineralization

The Waterloo Property is located along the southwestern edge of the Calico Mountains in the Basin and Range province of California. The oldest rocks in the Calico area are the Paleozoic Waterman Gneiss in the Mitchell Range to the west of the Property. The oldest rocks in the Calico Mountains are the Mesozoic metamorphics of the Coyote Group located to the northeast of the Property. These are composed of marble, schist, conglomerate, quartzite, hornfels, meta-andesite, and meta-basalt.

Tertiary units include the Jackhammer Formation, the Pickhandle Formation, the Barstow Formation, and the Yermo Formation. The Oligocene Jackhammer Formation is separated from the underlying Coyote Group by an unconformity. The Jackhammer Formation consist of tuff, tuff breccia, and volcanogenic sedimentary rocks, arkosic conglomerate, and basalt. The Early Miocene Pickhandle Formation overlies the Jackhammer Formation and consists of intercalated pyroclastic rocks and volcanic flows of rhyodacitic to dacitic composition. Later studies have combined the Jackhammer and the Pickhandle Formation.



Unconformably overlying the Pickhandle Formation, is the mid-Miocene Barstow Formation which is composed of fossiliferous limestones, calcareous mudstones, siltstones, sandstones, and conglomerates. Overlying the Barstow Formation, the Plio-Pleistocene Yermo Formation comprises conglomerates and sandstones.

Intrusive rocks in the area consist of middle Mesozoic gabbro, quartz diorite, diorite, and granodiorite. The nearest large intrusive bodies are located northeast of the Waterloo Property. Local geology on the Property includes exposures of the Barstow and Pickhandle Formations which are cut by the Calico fault.

The geologic structure of the area is complex, and this structure had a strong impact on mineralization. Understanding of the regional geologic structure has only recently been developed with the identification of two Tertiary-age large-scale crustal deformation events: extensive detachment faulting dating to 23 million years ago, followed and displaced by a strike-slip fault dominant regime occurring about 18 million years ago and continuing to the present.

Numerous folds have been mapped in the Calico Mountains and the general structure of the bedded rocks is that of an anticlinorium plunging northward. The transpressional folding and faulting in the Calico Mountains postdate the ca. 17 Ma dacite intrusions, and they appear to be largely restricted to the area along the Calico fault restraining bend. Because of this activity, deformation by faulting, with rotation and warping, is the major structural feature of the region. The most prominent feature is the northwest trending Calico fault, with right lateral movement. Extension faulting may have triggered volcanic activity during placement of the Pickhandle Formation, culminating in a major episode during the upper flows. Movement on the faults is much larger in the Pickhandle formation than the Calico (Barstow formation).

The Calico Mountains are a prolific silver and barite mining and exploration district responsible for most of the silver production in the Mojave. Mineralization on the Property is found as discrete veins in the Pickhandle Formation striking generally northwest and as veinlet stockworks and disseminations in the Barstow Formation. Veins are composed of similar minerals including barite, jasperoid/chalcedony, oxides, and sulphides. Near surface vein exposures are often oxidized, enriching the silver grade with embolite, chlorargyrite, cerargyrite, and native silver. Alteration dominantly consists of silicification (chalcedony and jasperoid) and patchy propylitic alteration. Potassium feldspar alteration has been observed in the Barstow Formation associated with mineralization. Acid sulphate/steam heated leeching, not directly related to mineralization, has been mapped on the Property.

Mineralization on the Property is interpreted to be epithermal precious metal vein-type and stockwork type. Fluids were focused along detachment faults and bedding planes of the Barstow Formation. The timing of mineralization approximated to be around 15-20 Ma aligns with a period of subduction and extension in the region.

1.4 Exploration History

The Calico Mining District has a lengthy history of exploration and mining, with silver rich ore discovered in the Calico Mountains in 1881. Several past-producing mines and historical workings are situated in the vicinity of the Waterloo Property, with most of the historical mining operations situated over a 12 square



mile (19.3 km²) area northeast of Calico. Four historical past-producing mines are located in the northeast portion of the Waterloo Property, including Waterloo Mine, Voca Mine, Union Mine and Burcham Mine.

Modern exploration on the Property commenced in 1964 and has consisted of geological mapping, geochemical sampling, trenching and drilling. Modern exploration on the Property was completed by two exploration companies: American Smelting and Refining Company ("Asarco") and Pan American Silver Corp. ("Pan American"). Exploration by Asarco from 1964 to 1994 consisted of geological mapping, geochemical sampling, surface trenching and drilling. Pan American acquired an interest in Waterloo in 1994–1995 and acquired 100 per cent of the Property in 1996. Pan American completed two geological mapping programs, conducted by Dr. Warren Pratt, in 2008 and 2012, as well as RC and diamond drilling on the Property in 2012-2013.

Historical drilling on the Property includes a total of 58,365.78 ft (17,789.62 m) in 255 reverse circulation (RC) and diamond drillholes. The historical drilling identified high-grade silver mineralization within the Barstow Formation and provided valuable geological information on the Property. The drilling indicated the importance of faults and lithological contacts as conduits for mineralized hydrothermal fluids on the Property, with historical high-grade intercepts associated with fault structures.

A historical reserve estimate was calculated based on the historical drilling, yielding a silver-barite mineral reserve of 37.2 million (M) tons (33.9 M tonnes) grading 2.71 opt (92.9 g/t) Ag for a total of 100.9 M ounces (oz) of contained silver. The initial historical reserve estimate was calculated by Asarco in 1968, followed by a computer-calculated reserve estimate in the late 1970's. The reader is cautioned that this reserve estimate is historical in nature and the authors of this Technical Report are not treating it, or any part of it, as a current mineral reserve, therefore it should not be relied upon.

Subsequently, Pan American calculated and internal resource based on the results of their 2012 drilling program, along with validated historical data from Asarco. The historical inferred resource table is presented in Table 1.1. The reader is cautioned that this inferred mineral resource estimate is historical in nature and the authors of this Technical Report are not treating it, or any part of it, as a current mineral resource, therefore it should not be relied upon.

Two historical studies were completed for the Waterloo Property by Asarco in 1969 and by Fluor Mining and Metals Inc., on behalf of Asarco, in 1980. Additionally, an economic study summary was completed by Pan American in 2008 to update the values for capital costs and operational costs of the historical economic studies and to provide an estimation of the profitability of the Waterloo Project in 2008. The historical economic studies cannot be used to give an accurate estimation of the Project in 2008, or at the Effective Date of this Technical Report, as the level of technology and metal prices have changed significantly from the dates of these historical studies.



Ag ppm cut-						
off grade	Volume (m ³)	Tonnes (metric)	Mt	Ag ppm	Ounces Ag	Moz Ag
20	15,579,558	37,079,349	37.1	86	102,953,457	103.0
30	15,568,496	37,053,020	37.1	86	102,929,502	102.9
40	15,277,190	36,359,712	36.4	87	102,108,428	102.1
50	14,095,305	33,546,825	33.5	91	97,961,473	98.0
60	12,052,515	28,684,986	28.7	97	89,338,336	89.3
70	10,002,180	23,805,188	23.8	103	79,116,287	79.1
80	7,682,389	18,284,085	18.3	112	65,812,521	65.8
90	5,648,306	13,442,968	13.4	122	52,590,519	52.6
100	3,961,948	9,429,437	9.4	133	40,339,174	40.3
110	2,719,335	6,472,017	6.5	146	30,393,281	30.4
120	1,955,245	4,653,482	4.7	158	23,673,264	23.7
130	1,379,059	3,282,161	3.3	172	18,177,563	18.2
140	1,020,220	2,428,123	2.4	185	14,477,810	14.5
150	745,584	1,774,490	1.8	200	11,426,567	11.4
160	569,349	1,355,050	1.4	214	9,334,251	9.3
170	447,393	1,064,795	1.1	228	7,807,439	7.8
180	341,860	813,626	0.8	245	6,399,380	6.4
190	261,691	622,825	0.6	263	5,257,361	5.3
200	208,716	496,744	0.5	280	4,470,539	4.5

Table 1.1. Historical inferred mineral resource estimate by Pan American Silver, Waterloo deposit

1.5 Author's Site Visit

Mr. L. Breckenridge and Dr. H. Samari conducted an on-site inspection of the project on February 9, 2021. During the site visit the QPs conducted a general geological inspection of the Waterloo area, including checking the formations, lithologies, and mineralization. The site visit was constrained to a six-hour duration, and many areas of the Property were inaccessible due to road blockages created by Pan American as part of their effort to secure the site against trespassers.

However, the QPs did hike through the site for several hours collecting non-representative samples of mineralized outcrops and historical mine spoil piles. Eight surface samples were collected on the Property from the Barstow and Pickhandle formations and mineralized zones. Samples were submitted for assay to Hazen Research Inc. in Golden, Colorado, USA. The samples confirmed that silver mineralization is present at several locations around the site, but the samples are not considered a scientific validation of prior exploration results (see Section 12.1).

1.5.1 Recommendation Budget

Phase 1



Activity Type	Cost	
Airborne Geophysics (Magnetics and Lidar)	\$500,000	
Airborne Interpretation, quality control and Inversion	ons \$50,000	
Mapping and Sampling	\$350,000	
Data Compilation	\$50,000	
Delineation Drilling – 7,500m @ \$240/meter	\$1,800,000	
Geological Studies	\$50,000	
Analytical (10,000 samples @ \$40/sample)	\$400,000	
Earthworks	\$100,000	
Environmental	\$150,000	
Permitting	\$100,000	
Metallurgical Studies	\$200,000	
Updated 43-101 Report & Resource	\$150,000	
Pha	se 1 Activities Subtotal	\$4,000,000

Phase II				
Activity Type	Cost			
Follow Up Drilling – 5000m @ \$240/meter	– 5000m @ \$240/meter \$1,200,000			
Geological Studies	\$60,000			
Analytical	Analytical \$240,000			
Earthworks \$50,000				
Environmental \$150,000				
Permitting \$100,000				
Metallurgical Studies	\$250,000			
Updated 43-101 Report & Resource	\$150,000			
	Phase 2	\$2,200,000		
	Phase 1 & 2	\$6,200,000		
	Contingency	\$300,000		
	Grand Total	\$6,500,000		



1.6 RECOMMENDATIONS

Historical exploration has identified significant silver mineralization within the Property. Therefore, an aggressive exploration program is warranted. The Property is high priority for follow-up exploration.

The exploration should include but not be limited to the following phased recommendations:

Phase 1: The publication of a revised Waterloo resource statement based on the historical data. This effort would rely heavily on the Pan American Silver unpublished resource (see Section 6.5.1) but would be validated by the new Qualified Person and re-modeled based on the requirements of NI 43-101. This effort will include re-assay of stored samples, core inspection of prior core, field verification of drilling monuments, review of prior sample QA/QC methods, and hole twinning with new drilling. An NI 43-101 compliant resource reporting 100M plus ounces would be a firm foundation for Stronghold Silver's resource base going forward.

Meanwhile, it will be necessary to acquire the necessary claim transfers, land acquisitions, permits, and approvals for an exploration and development program. It is essential to start the permitting effort immediately upon intent to develop. Due to the mix of patented and unpatented mine claims, and due to the size of the project, the project will require a full Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).

Drilling should prioritize the validation and advancement of the Waterloo resource. In-fill drilling to convert inferred to measured and indicated resources and twinning holes to validate the data should be high priority.

Historical drilling at Waterloo is valuable data with respect to a mineral resource estimation moving forward. More specifically, the recommended program should include but not be limited to:

- Verification of previous holes locations.
- Checking existing core and RC samples.
- Airborne Lidar and Magnetics.
- Taking random duplicate samples from existing core and RC samples.
- Checking assay from existing hole samples (RC and DH).
- Verification of existing assay database.
- Twinning historical drill holes to confirm analytical data (16 holes or ~ 1,600 m; Figure 18.1).
- Deep drilling to test mineralization where historic drill holes ended in mineralization (19 drill holes or approx. 1,900 m; Figure 18.1).
- Infill drilling along sections, utilizing existing access (40 drill holes or approx. 4,000 m; Figure 18.1). Including earthworks.
- Metallurgical test work.

Phase 2 (Contingent on Phase 1):

- New additional drillings at the areas which have no data.
- Metallurgical test work.

The total recommended Phase 1 and 2 exploration is \$6,500,000 Cnd.



Additional drilling contingent on the results of Phase 1 and 2.

2.0 INTRODUCTION

This Technical Report has been completed on behalf of Stronghold Silver Corporation ("Stronghold Silver" or "the Company"). Stronghold Silver is a Vancouver based mineral exploration company exploring for precious metals in the United States. The Company's Waterloo Property (the "Property" or the "Project") totals approximately 1,770 gross acres (715 hectares (ha)) in the Calico Mining District of the Mojave Desert in San Bernardino County, Southern California (CA). The location of the Property is shown in Figure 2.1. The Property comprises 21 unpatented lode mining claims, including 2 unpatented dependent mill site claims, and 27 fee land parcels.

The Waterloo Property is being assessed by Stronghold Silver for its epithermal precious metal mineralization potential. The Property is situated in the Calico Mining District, a historically-prolific mining district with 15-20 million troy ounces of silver (Ag), with minor barite, gold, lead and copper, produced from silver mines in the district between 1881 and 1896 (Weber, 1966). The reader is cautioned that the historical mineralization produced from deposits within Calico Mining District may not be necessarily indicative of mineralization at the Waterloo Property.

This report is a Technical Report for the Property and has been prepared by Global Resource Engineering ("GRE") on behalf of Stronghold Silver. The intent and purpose of this Technical Report is to provide a geological introduction to the Property, to summarize historical work completed on the Property from 1964 to 2013, and to provide recommendations for future exploration work programs. This Technical Report has been prepared in accordance with the Canadian Securities Administration's (CSA's) National Instrument 43-101 (NI 43-101) Standards of Disclosure for Mineral Projects and guidelines for technical reporting Canadian Institute of Mining, Metallurgy and Petroleum (CIM) "Best Practices and Reporting Guidelines" for disclosing mineral exploration. The effective date of this Technical Report is May 5, 2021.

2.1 Authors and Site Inspection

The authors of this Technical Report include Dr. Hamid Samari, Ph.D., MMSA 01519QP and Mr. Larry Breckenridge, PE, CO -- No. 38048 of Global Resource Engineering. Both authors are independent of the Company and are Qualified Persons (QPs) as defined by the CSA's NI 43-101. The CIM defines a Qualified Person as "an individual who is a geoscientist with at least five years of experience in mineral exploration, mine development or operation or mineral project assessment, or any combination of these; has experience relevant to the subject matter of the mineral project and the technical report; and is a member or licensee in good standing of a professional association." Both Dr. Samari and Mr. Breckenridge have worked on epithermal precious metals mining development projects in the United States, Mexico, Peru and elsewhere in Latin America including Gold Springs and Pinson in Nevada, Topia, and Santa Elena in Mexico, and the Corani silver project in Southern Peru.

Dr. Hamid Samari is a Senior Geologist with GRE and a member of the Mining and Metallurgical Society of America (MMSA 01519QP) with a special expertise in geology. Dr. Samari has worked in the geology, mining and civil industry for more than 20 years since his graduation from University.

Mr. Larry Breckenridge is a Principal Mine Water Engineer (Environmental Engineer) with GRE and is a Professional Engineer CO -- No. 38048. Mr. Breckenridge has over 25 years of experience as an









environmental engineer for precious metals mines in the Western Hemisphere. Mr. Breckenridge was a critical member of the team that permitted and developed the Santa Elena Silver-Gold deposit in Sonora, Mexico, for SilverCrest Mines (now owned by First Majestic Silver). Dr. Samari and Mr. Breckenridge conducted a QP inspection of the Waterloo Property on February 9th, 2021. The visit included a geological inspection of the Property, including the observation of geological formations and lithologies, and mineralization. A total of 8 surface samples were collected by the QPs during the site inspection; analytical work completed on these samples at an independent laboratory confirmed the presence of silver mineralization at the Property.

2.2 Sources of Information

This Technical Report is a compilation of proprietary and publicly available information. The information, opinions, conclusions and estimates presented in this Technical Report are based on the following:

- Information provided by Stronghold Silver;
- historical information and data from previous owners of the Waterloo Property, including ASARCO and Pan American Minerals Inc.;
- data, reports, and opinions from third-party entities such as the USGS or academic research; and
- information gathered during the authors' site visit to the Property.

The background information in the history section was derived from historical reports and studies by Dibblee (1970), Kirwan (2005), Matson (2008), Rodger (1994), Weber (1966) and Wright et al. (1953), as well as public news releases by Pan American Silver Corp. Information on the regional geology of the Waterloo Property area is largely derived from previously reports completed by Tarman and Jessey (1989), Rodger (1994), Matson (2008), and Moran et al. (2012). All sources of information are listed in Section 19, References.

2.3 Units of Measure

With respect to units of measure, unless otherwise stated, this Technical Report uses:

- Abbreviated shorthand consistent with the International System of Units (International Bureau of Weights and Measures, 2006);
- 'Bulk' weight is presented in both United States short tons (tons; 2,000 lbs or 907.2 kg) and metric tonnes (tonnes; 1,000 kg or 2,204.6 lbs.);
- Geographic coordinates are projected in the Universal Transverse Mercator (UTM) system relative to Zone 11 of the North American Datum (NAD) 1983;
- Currency in United States dollars (US\$), unless otherwise specified (e.g., Canadian dollars, CDN\$; Euros, €);
- Assay and analytical results for precious metals are quoted in parts per million (ppm), parts per billion (ppb), ounces per short ton (opt or oz/st), where "ounces" refers to "troy ounces" and "ton" means "short ton", which is equivalent to 2,000 lbs. Where ppm (also commonly



referred to as grams per metric tonne [g/t]) have been converted to opt (or oz/st), a conversion factor of 0.029166 (or 34.2857) was used;

- Temperature readings are reported in degrees Fahrenheit (°F) and Celsius (°C);
- Lengths are quoted in feet (ft), kilometers (km), meters (m) or millimeters (mm).



3.0 RELIANCE ON OTHER EXPERTS

The authors are not qualified to provide an opinion or comment on issues related to legal agreements, royalties, permitting and environmental matters. Accordingly, the authors of this Technical Report disclaims portions of the Technical Report particularly in Section 4, Property Description and Location. This limited disclaimer of responsibility includes the following:

- The QP's relied entirely on background information and details regarding the nature and extent of Mineral and Land Titles (in Section 4.2) provided by Stronghold Silver. The legal and survey validation of the claims are not in the author's expertise and the QP's are relying on Title Reports by Stoel Rives LLP dated December 14, 2012: Title Review for the Waterloo Project (Henry and Sherman, 2012); and by Old Republic Title Company dated December 4, 2020: Preliminary Report Order number 2676018733-52 (LaBorico, 2020).
- The QP's relied entirely on information regarding royalties that was provided by the title reports listed above and the Asset Purchase Agreement between Pan American Minerals Inc and Stronghold Silver dated January 22, 2021 and are summarized to the best of the author's knowledge in Section 4.3.
- The QP relied entirely on information regarding permitting and environmental status of the Project that was provided by Stronghold Silver and is summarized to the best of the author's knowledge in Section 4.4.
- The Property contains a number of historical workings, numerous workings have been secured and/or filled as described in the report by Frontier Environmental Solutions (2012) and Murphy, (2020).



4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Description and Location

The Waterloo Project is located in the Mojave Desert in Southern California (CA), within the Calico Mountains. The Property is located in the Calico Mining District. It is situated ~145 miles (230 km) northeast of Los Angeles, CA, approximately halfway between Los Angeles and Las Vegas, Nevada along interstate highway I-15. The nearest population center is Barstow, CA (population: 22,000) which lies approximately 10 miles (16 km) to the southwest of the Property. The Daggett Naval Air Station and Marine Corps Supply Center at Yermo are located 6 and 8 miles (10 and 13 km) south of Barstow, respectively.

4.2 Mineral Tenure

The Property consists of 21 unpatented lode mining claims, and 27 fee land parcels (Figure 4.1; Tables 4.1 and 4.2). The claims are located in the County of San Bernardino, CA, in Sections 16, 17, 19, 20, 21 and 22 Township 010N, Range 001E, SBB&M. Two unpatented lode mining claims, DFS58-a and DFS 59-A (area 20 and 21 on Figure 4.1), meet the requirements for classification as unpatented dependent mill site claims (Henry and Sherman, 2012). These claims are not contiguous with the main claims package and are located 0.8 miles (1.3 km) west of the main claim block. The remainder of the unpatented claims and fee land parcels are contiguous. The total area of the unpatented claims is 418.2 acres (169.2 ha). The total area encompassed by the fee land parcels is 1351.8 acres (547.1 ha). The total gross area of the Property is approximately 1,770 gross acres (715 hectares (ha)). Minor portions of the fee land parcels and the unpatented claims overlap; excluding the overlapping areas the Property encompasses approximately 1623.5 acres (657 ha).

A preliminary title opinion was completed by Old Republic Title Company on December 4, 2020 with respect to the Fee Land Parcels of the Waterloo Property (LaBorico, 2020). Title to the 27 Fee Land Parcels is vested in Pan American Minerals, Inc., a Nevada corporation by Grant Deed dated November 1, 1994.

The owner of record of the unpatented mining claims is Pan American Minerals Inc. Unpatented lode mining claims grant the mineral rights and access to the surface for exploration activities which cause insignificant surface disturbance. The mineral rights are maintained by paying a maintenance fee of \$165 per claim to the Department of Interior, Bureau of Land Management ("BLM") prior to the end of the business day on September 1st every year. The federal BLM maintenance fees and the filing fees and taxes for the Waterloo Property have been paid in full for 2020-2021. A complete listing of all claims on file with the BLM and San Bernardino County is presented in Table 4.1. All of the unpatented (BLM) claims are valid until August 31st, 2021.



Map Area	Claim Name	Claim Type	BLM Serial No.
1	Virginia-A	Lode	CAMC 291827
2	Wisconsin-A	Lode	CAMC 291828
3	Tennessee-A	Lode	CAMC 291829
4	Kentucky-A	Lode	CAMC 291830
5	Indiana-A	Lode	CAMC 291831
6	AG 42-A	Lode	CAMC 291832
7	Nebraska-A	Lode	CAMC 291833
8	Dakota-A	Lode	CAMC 291834
9	Nevada FracA	Lode	CAMC 291835
10	Utah-A	Lode	CAMC 291836
11	Montana-A	Lode	CAMC 291837
12	Pan 1	Lode	CAMC 291838
13	Pan 2	Lode	CAMC 291839
14	Pan 3	Lode	CAMC 291840
15	Pan 4	Lode	CAMC 291841
16	Pan 5	Lode	CAMC 291842
17	Pan 6	Lode	CAMC 291843
18	Pan 7	Lode	CAMC 291844
19	Pan 8	Lode	CAMC 291845
20	DFS 58-A (Mill Site)	Lode	CAMC 291846
21	DFS 59-A (Mill Site)	Lode	CAMC 291847

Table 4.1 Waterloo Property Unpatented Claims



Мар	Deveel No	Township 10 North		
Area	Parcel No.	Kange I East, SBBM		
22	517-121-02	Section 21	S½NW¼, (mineral rights)	
23	517-121-04	Section 21	SE¼	
24	517-121-05	Section 21	SW¼ (except mineral rights and except portion to highway)	
25	517-121-06	Section 20	N½ (except mineral rights)	
26	517-121-07	Section 20	S½ (except mineral rights)	
27	517-121-08	Sections 1	6, 21 Mineral survey 6771 Nevada Quartz Mine	
28	517-120-10	Sections 1	6, 21 Portion mineral survey 6768 Idaho Quartz	
29	517-121-11	Section 21	Portion mineral survey 6768 New Mexico Quartz	
30	517-121-12	Sections 1	6, 21 Portion mineral survey 6768 Colorado Quartz	
31	517-121-13	Sections 1	6, 21 Portion mineral survey 6768 Wyoming Quartz	
			Government Lot 11 (fraction) (except portion in mineral survey	
32	517-151-03	Section 17	2765, except mineral rights)	
33	517-151-05	Sections 16, 17	Mineral survey 6770 Lamar Claim	
34	517-161-06	Section 17	Mineral survey 2406, Waterloo Quartz Mine, Lot 46	
35	517-161-07	Section 18	Mineral survey 2772 Harmonial No. 1 Quartz Mine, SW¼, Lot 76	
			Mineral survey 2770 Compass Lot 74 [described as Campass in	
36	517-161-08	Section 16	the Deed]	
37	517-161-09	Sections 16, 17, 21	Mineral survey 2765, Daggett Quartz	
38	517-161-11	Section 16	Lot 10	
39	517-161-12	Sections 16, 17	Mineral survey 2759, Illinois Quartz	
40	517-161-14	Section 16	Mineral survey 2796, Gem Silver Mine, Lot 80	
41	517-161-15	Section 16	Mineral survey 2773, Zephyr Quartz Mine, Lot 77	
12	547 464 40	6 - 11 - 16 - 17	Portion mineral survey 6770, Harmonial No. 2 (except portion in Zephyr Quartz Mine, mineral survey Nos. 2558 and 2773, Illinois Quartz Mine mineral survey 2795 and Gem Silver Mine mineral	
42	517-161-18	Sections 16, 17	survey 2796)	
43	517-161-19	Section 16	Portion mineral survey 6769	
44	517-161-20	Section 16	Portion Government Lots lying northwesterly of mineral survey 6768 and northeasterly of mineral survey 2406 (except mineral rights)	
15	517-161-01	Section 16	Portion Government Lot 5 lying northeasterly of mineral survey	
45	517-161-22	Section 16	Portion mineral survey 6768 Washington	
40	517 161 22	Sections 16 21	Portion mineral survey 6768 California Quarta	
47	517-101-23	Sections 10, 21		
48	51/-1/1-02	Sections 16, 17	wineral survey 2795 Grant Quartz	

Table 4.2 Waterloo Property Fee Land Parcels

Figure 4.1 Waterloo Property claims map





4.3 Royalties and Agreements

Stronghold Silver Corp. and its wholly owned subsidiary Stronghold Silver USA Corp., entered into an Asset Purchase Agreement with Pan American Minerals Inc. to acquire the Waterloo Property. The terms of the purchase are quoted below:

Stronghold USA, as Purchaser, and Pan American Minerals Inc (a wholly owned subsidiary of Pan American Silver Corp) ("Pan American"), as Vendor, entered into an asset purchase agreement dated January 22, 2021 (the "**Waterloo Purchase Agreement**") which gave Stronghold the right to purchase 100% interest in the Waterloo Project for a consideration of US\$25,000,000. Stronghold USA and Pan American have entered into subsequent amendments extending the closing of the transaction to May 31, 2021 in consideration of a non-creditable payment by the Purchaser to the Vendor of US\$1,000,000 (paid) with a further extension to June 30, 2021 for consideration of a non-creditable payment by the Purchaser to the Vendor of an additional US\$1,000,000 (unpaid). Pan American will retain a 2% Net Smelter Royalty on any future production of minerals from the project. To date, a total of US\$2,750,000 in deposits have been paid to Pan American and will be credited against the total consideration.

Portions of the Idaho, Colorado, Wyoming, Washington, and California fee land parcels (green hatched area in Figure 4.1) and Government Lot 5 (area 44 and 45 in Figure 4.1) are subject to a royalty agreement dated August 26, 1970 with the State of California that lists a 1/16th royalty of net profits from ore mined on these lands (Henry and Sherman, 2012).

Additionally, mineral reservations apply to certain fee land parcels on the Property as follows (LaBorico, 2020; Henry and Sherman 2012):

- Section 20 and Government Lot 11 (red hatch in Figure 4.1): mineral reservation in favour of the United States, mineral extraction is prohibited
- Government Lot 10 (area 38 on Figure 4.1): mineral reservation that assigns 1/16th royalty to State of California (as described above)
- The Southwest Quarter of Section 21, and the South Half of the Northwest Quarter of Section 21 Township 10 North, Range 1 East, S.B.B.M. (area 22 and 24 on Figure 4.1): a one-half interest in all gas, oil, hydrocarbons and minerals is reserved in the deed from Catherine Yrissarri

4.4 Environmental Liabilities, Permitting and Significant Factors

4.4.1 Exploration Permits

Permits to conduct exploration drilling on BLM lands require a Notice of Intent or a Plan of Operations (POO), depending upon the amount of new surface disturbance that is planned. A Notice of Intent is appropriate for planned surface activities that anticipate <5.0 acres of surface disturbance, and usually can be obtained within 30-60 days.



A Plan of Operations is required if >5.0 acres of new surface disturbance are planned during the exploration program. Approvals for a Plan of Operations can take several months, depending on the nature of the intended work, the level of reclamation bonding required, the need for archeological surveys, and other factors as may be determined by the BLM. No other permits are required for exploration drilling.

4.4.2 Environmental Studies

Environmental studies were undertaken for the Waterloo project by Asarco during the early 1980's. A Final Focused Environmental Impact report commissioned by San Bernardino County in 1981 identified no significant environmental liabilities on the Property at that time (Lilburn et al., 1981). A recent preliminary inspection and review of the site conditions at the Waterloo Property completed in December 2020 indicates that environmental concerns at the Waterloo Property are minor (Murphy, 2020).

4.4.3 Hazards

Hazards relating to historical mine workings are present at the Burcham and Waterloo areas and open drill holes located on Striped Butte. These hazards will require some level of mitigation and hazard abatement such as adit gates, fences around open shafts, rocks/berms to preclude vehicle access, etc. Hazards observed within the Waterloo property include:

- Open Unsecured Shafts Three (3) open shafts were observed in the Waterloo area.
- Subsidence There is evidence of subsidence on the back-side of the mountain in the area of the Waterloo Mine. The subsidence is likely related to collapsed underground workings. There also were signs of subsidence above the Burcham Mine.
- Open Adits Numerous open adits were observed around the Burcham and Waterloo Mine areas.
- Historical Exploration Drill Holes Numerous open drill holes are located throughout the Stripped Butte area. These holes are a result of Asarco's exploration program.

Numerous shafts and adits have been secured with closures, back fill and/or foam plugs (Frontier Environmental Solutions, 2012). Vandalism on the Property is an issue with vandals breaking and entering the closures to gain access to the historical workings and/or to collect scrap metal. Pan American hired Frontier Environmental Solutions to monitor the site with surveillance cameras, repair damage as it occurred as well as expand berms and trenches to prevent access to the site. Observations from the preliminary site inspection in December 2020 confirmed that a mine shaft was secured by a welded steel cover, numerous bore hole locations had been sealed and berms and locked gates have been used to limit access to the Property. However, a more complete assessment of physical hazards that may exists on the property is recommended (Murphy, 2020).



5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Waterloo Property is located in the Calico Mining District of the Mojave Desert in San Bernardino County in Southern California (CA). The Property is situated on the southwest facing slope of the Calico Mountains, approximately 10 miles (16.1 km) east of Barstow, CA, and 4 miles (6.4 km) northwest of Yermo, CA. The Property can be accessed from Los Angeles, CA, by travelling east on Interstate 10 for 42 miles (67.6 km) and continuing northeast on Interstate 15 for 79 miles (127.1 km) to Daggett-Yermo Road/Ghost Town Road. Access to the Property is located approximately 2.8 miles (4.5 km) north on Ghost Town Road. Alternately, the Property can be accessed from Las Vegas, Nevada, by travelling southwest on Interstate 15 for 102 miles (164 km) to Yermo, CA, and north on Calico Road for approximately 3 miles (4.8 km) to Ghost Town Road. Access roads that lead directly onto the Property have been bermed and/or gated to prevent unauthorized access. Primary access within the Property area is a series of gravel roads (as shown in Figure 5.1).

5.2 Site Topography, Elevation and Vegetation

The topography of the Mojave Desert generally is of low relief with broad alluvial valleys separated by steep mountain ranges. The Waterloo Property is situated along the steeply to gently dipping southwestern pediment of the Calico Mountains. The elevation on the Property varies from approximately 2000 to 2980 ft (610 to 900 m) above mean sea level. Dry alluvial channels that drain the mountain front create low-lying, flat-topped ridges separated by the narrow drainages.

Vegetation, although sparse, is typical of the Mojave Desert region. Characteristic trees are the pinyon pine, mesquite, California juniper and California fan palm oases. Predominant shrubs include the Creosote bush, white bursage, allscale, saltbush, iodine bush and black bush. Arrow weed black willow, Fremont cottonwood, narrowleaf willow and red willow are a few of the species restricted to riparian settings of the Property (Stronghold Silver Corp., 2021).

5.3 Climate

The climate is arid, typical of the low desert climate of southern California with hot summers, cold winters and low levels of annual precipitation. Weather records indicate maximum temperatures of 110 degrees Fahrenheit (°F) (37 degrees Celsius (°C)) may be expected in summer months with relatively cool nights averaging 70°F (21°C). Winter temperatures are mild, averaging between 50 and 60°F (10 and 15°C) during the day and 32°F (0°C) at night. Rainfall averages about 8 inches (20 cm) per year (Matson, 2008).



Figure 5.1 Waterloo Property access





5.4 Local Resources and Infrastructure

The Waterloo Property is well-suited in terms of infrastructure and is in close proximity to road, rail, electrical energy, natural gas and telephone services. The city of Barstow is located 10 miles (16.1 km) west of the Property. Barstow has a population of 22,639, according to 2010 United States Census data, and is a full-service community. Field personnel and resources for exploration and potential operations are expected to be available from Barstow and the surrounding communities, as well as Los Angeles and Las Vegas.

A 33 kilovolt (kV) electrical transmission line runs within 3 miles (4.8 km) to the southwest of the Property and a natural gas transmission line runs within 6 miles (9.6 km) to the southwest of the Property. In addition, a telephone line is located 4 miles (6.4 km) to the southwest of the Property. The Property has excellent cellular phone service and data coverage. The Union Pacific Railroad main transcontinental line lies along interstate highway I-15.

There are no perennial rivers, streams, or springs in the vicinity of the Property. The Mojave River is the nearest watercourse, and it is highly ephemeral, running only during spring runoff or during storm events. Surface water is scarce in the Mojave Desert, meaning that groundwater will be required to meet the needs of the Project. Groundwater on the Property is poorly explored, but it is likely that the hard-rock formations in the Calico district do not produce groundwater. Potential sources for groundwater on the Property include locally available groundwater from fractured bedrock and/or groundwater produced from an alluvial or regional aquifer. Previous mining and crushing operations at the Leviathon mine were reported to be supplied through local wells. These water rights would have likely expired, and the wells closed. Purchase of water rights for milling and mining dust control will need to be pursued but in the opinion of the author, the rights to water of slightly brackish quality that is suitable for the purpose of exploration may be available in the area.



6.0 HISTORY

The Waterloo Property is located in the Calico Mining District. The Calico Mining District is part of the north-west trending belt of precious metal districts associated with Tertiary volcanic centers in the Western Mojave Block of Southern California. The Calico Mining District has a lengthy history of exploration and mining, with silver rich ore discovered in the Calico Mountains in 1881.

6.1 History of the Calico Mining District

The following history of the Calico Mining District has been reproduced or summarized from Dibblee (1970), Kirwan (2005), Matson (2008), Rodger (1994) and Weber (1966). The authors of this Technical Report have not verified the information in this sub-section regarding historical exploration and mining in the Calico Mining District, outside of the Waterloo Property, and where references are made to past production and/or historical mineral resources, the authors have not verified the information. Accordingly, this information is not necessarily indicative of the mineralization on the Waterloo Property that is the subject of this Technical Report.

1881-1896: Silver rich ore was discovered in the Calico Mountains in 1881 with exploration centered around high-grade oxidized deposits of vein related silver ore (Dibblee, 1970; Matson, 2008). Silver production from the Calico Mining District from 1881 to 1896 was never recorded; however, historical estimates vary from 15 to 25 million troy ounces, with most mines situated in the Wall Street and Odessa Canyon areas at the southern end of the Calico Mountains, east of the Waterloo Property (Figure 6.1; Kirwan, 2005; Matson, 2008). Silver grades mined during this period were estimated to average 25 ounces of silver per ton of ore (opt) but often ranged up to 100 opt. Silver deposits were characterized as low tonnage, high-grade oxidized and possibly supergene enriched (Matson, 2008). The most prolific producer of the area was the Silver King Mine, located approximately 1.5 miles (2.4 km) to the east of the Waterloo Property. The Silver King Mine operated from 1882 to 1896 and produced at rates of up to 100 tons of ore per day with reported silver grades ranging from 20 to 64 opt (Rodger, 1994). Four past-producing mines of the Calico Mining District are situated within the Waterloo Property, including Waterloo Mine, Voca Mine, Union Mine and Burcham Mine (Figure 6.1) and are discussed below in sub-section 6.2.

<u>1896 to 1950 -</u> Most mining operations ceased in 1896 due to the sharp decline in the price of silver and/or as a result of most of the ore being mined out (Dibblee, 1970). Additionally, the end of operations in 1896 was concurrent with an acute economic depression known as the Panic of 1896.

"The manpower shortage and downturn in mining during World War I and the subsequent Great Depression marked the end of significant activity, but not before the Calico Mining District had established itself as the largest silver producer in California. Total production is thought to have exceeded \$20,000,000 by 1940. However, put in the perspective of a true giant like the Comstock Lode (total production of \$396,000,000), the Calico Mining District must be considered quite small (Smith, 1943) (Weber, 1966)"

Limited production from the district continued sporadically until the 1930's. Additionally during the 1930's tailings from the old mills were re-treated utilizing cyanidation.



1950's: The barite potential of the Calico Mining District was investigated in the 1950's due to accelerated petroleum exploration in Southern California. The Leviathon Mine was the largest producer of barite on the west coast of the United States during this period (Figure 6.1; Weber, 1966). During the 1950's an economic boom and a renewed interest in silver resulted in the reopening of several of the mines in the Calico Mining District, but production remained low.

6.2 <u>1960's-present:</u>

In the 1960's, exploration programs conducted along the southwest flank of the Calico Mountains resulted in the re-discovery of the Waterloo deposit. Modern exploration of the Waterloo Property is discussed below in Section 6.3 Historical Past-Producers

Numerous past-producing mines and historical workings are located in the vicinity of the Waterloo Property, with most of the historical mining operations of the Calico Mining district situated over a 12 square mile (19.3 km²) area northeast of Calico (Figure 6.1). Four historical past-producing mines are located in the northeast portion of the Waterloo Property, including the Waterloo Mine, Voca Mine, Union Mine and Burcham Mine (Figure 6.1). The following text on the past producing mines located within the Property has been summarized from Wright et al. (1953). The reader is cautioned that where references are made to past production or historical mineral resources, the authors have not verified the information.

6.2.1 Waterloo Mine

Mining of silver ore at Waterloo Mine commenced in 1881 and continued to 1896, with peak mining production occurring in the 1880's. The ore bodies lie along a west-northwest striking and moderately north dipping fault zone between lacustrine deposits and volcanic rocks. The mineralized zone extended laterally for approximately 1,100 ft (335 m), down-dip for 525 ft (160 m) with thicknesses varying from 4 to 70 ft (1.2 to 21 m). The ore bodies were irregular masses of chlorides and chlorobromides of silver in a barite-jasper gangue. Ore grade is reported to have averaged from 11 to 20 opt Ag, with some shipments assaying up to 1,000 opt Ag. The mine workings at Waterloo Mine total approximately 10,000 ft (3,048 m) in length and center on a 350 ft (107 m) shaft.

6.2.2 Voca Mine

Voca Mine lies approximately 2,230 ft (680 m) east of the Waterloo Mine, along strike of the Waterloo vein. Most of the mining at Voca Mine was completed prior to 1888. During its years of active production, Voca Mine yielded daily outputs of 10 to 15 tons of ore that averaged 40 opt Ag. In comparison to other ore bodies in proximity, barite mineralization at Voca Mine was rare and the gangue was siliceous in composition.

6.2.3 Union Mine

Union Mine lies approximately 840 ft (256 m) northeast of the Waterloo Mine. Exploration work at Union Mine was conducted as late as 1940. The mineralized vein lies along a fault zone separating rhyolite breccia and lacustrine deposits. The vein varies in width from 6 to 30 ft (1.8 to 9 m), strikes north 50° west and dips 50° northwest, but flattens with depth. Silver and lead mineralization is distributed irregularly





Figure 6.1 Historical producers in the Calico Area



within the breccia, in a gangue of barite and subordinate quartz. The mine workings at Union Mine total approximately 1,000 ft (305 m).

6.2.4 Burcham Mine

Burcham Mine, also known as the "Total Wreck", lies approximately 0.7 miles (1.2 km) east-southeast of the Waterloo Mine and is the only mine in the area to produce gold as the primary commodity. Burcham Mine was developed several years after production had peaked in the Calico Mining District and was in production intermittently until 1941. Flat lying shales, sandstones, rhyolite tuffs, flows and tuff-breccias underlie the area of the mine. A northwest-trending thrust fault transects the area, thrusting the volcanic rocks to the southwest over the sedimentary rocks. The mineralization occurs in the Burcham and Mulcahy veins, which cut the volcanic rocks and are truncated by the thrust fault. The Burcham vein varies from 3 to 10 ft (0.9 to 3 m) in width, strikes north 70° west and dips to the southwest. The gold in the Burcham vein is disseminated in quartz and occurs with small high-grade pockets of galena, sphalerite and silver chloride. The Mulcahy vein varies in width from 4 to 30 ft (1.2 to 9 m). The ore of the Mulcahy vein is estimated to have averaged approximately \$6.50 per ton in Au and Ag. Wright et al. (1953) reports that a substantial tonnage of ore averaging approximately \$15.00 per ton was obtained from a 26-inch (66 cm) wide zone of mineralization, along the footwall. The mine workings on the two veins at Burcham Mine total approximately 10,000 ft (3,048 m) in length.

6.3 Historical Exploration

Modern exploration on the Property commenced in 1964 and has consisted of geological mapping, geochemical sampling, trenching and drilling. Modern exploration on the Property was completed by two exploration companies: American Smelting and Refining Company ("Asarco") and Pan American Silver Corp. ("Pan American"). Asarco acquired the Waterloo Project in 1964. Exploration by Asarco from 1964 to 1994 consisted of geological mapping, geochemical sampling, surface trenching and drilling. Permitting was completed during the early 1980's for a large tonnage open-pit silver mine, but a decline in the silver price put eh project on care and maintenance. Pan American acquired an interest in Waterloo in 1994–1995 and acquired 100 per cent of the Property in 1996. Pan American completed geological mapping, as well as RC and diamond drilling on the Property from 2008 to 2013.

As a cautionary statement, the QPs have not completed enough work to verify the accuracy of the historical precious metal intersections and grades discussed in the following sub-sections and recommends the Issuer conduct further future work to validate the historical results.

6.3.1 Surface Exploration

6.3.1.1 Asarco

Surface exploration by Asarco from 1964 to 1982 consisted of geological mapping, geochemical sampling and trench sampling. Limited information was available to the authors regarding the historical surface sampling conducted by Asarco. The information that follows has been summarized from a previous report on the Property by Rodger (1994).



Asarco conducted a trenching program on the Property following favorable results obtained from their initial geological mapping and sampling program. Trenches were cut using a bulldozer at irregular intervals along the Waterloo deposit with the trench program focused on the northwestern portion of the deposit. Channel samples were cut along 10 ft (3 m) lengths of the trenches. A total of 640 channel samples were collected; sample weight averaged 200 lbs (91 kg). The average grade of the trench samples was reported by Rodger (1994) as 2.5 opt Ag.

In addition to the trench work, Asarco completed a sampling program on the southeastern portion of the deposit and in accessible underground workings. Sampling was conducted in the area around the old Waterloo mine; this area could not be drilled due to caving risks and the presence of stopes. Channel samples were collected along the adit at Waterloo Mine and along road cuts over the southeastern portion of the deposit. The channel samples collected along road cuts were used as a guide in locating the drillholes and ranged from 7 to 10 lbs (3.2 to 4.5 kg) per sample. All surface and underground samples were sent to an independent laboratory in Tucson, Arizona, for silver analysis. Composites of the samples were assayed at the Asarco El Paso Laboratory.

Very limited fieldwork was completed by Asarco following their initial exploration program. Metallurgical and process testing continued intermittently until the early 1980s.

6.3.1.2 Pan American

Two geological mapping programs were completed on the Property by Dr. Warren Pratt for Pan American. The first geological mapping program was completed in September 2008. The objectives of were to generate a geological map and section, as well as generate targets for further exploration at the Property. The geological mapping refined the lithostratigraphy of the Property, recognized sub-divisions within the Calico and Barstow Formations and identified two major faults on the Property: the Calico and Cascabel faults (Pratt, 2008). Additionally, the geological mapping provided insight regarding the depositional environments of the geological formations, as well interpretations on the mineralized structures within the Property.

A second geological mapping program was completed by Dr. Warren Pratt in October 2012. The main objectives of the mapping program were to examine drill core from the spring 2012 drill program and extend the geological mapping of the Property. Only a limited amount of drill core was available for examination. The core was highly broken and lack of orientation data limited the structural information that could be collected. Therefore, the program focused on extending the 2008 geological mapping to the northwest and to the southeast. The mapping program provided further information on the lithostratigraphy, igneous intrusions, structure, hydrothermal alteration and mineralization of the Property. Pratt (2012) generated a property scale geology map that is discussed in Section 7.4.

6.3.2 Drilling

Several drill programs have been completed at the Waterloo Property from 1964 to 2013. Drilling was completed by Asarco from 1964 to 1982 and by Pan American from 2012 to 2013.



A total of 58,365.78 ft (17,789.62 m) in 255 drillholes has been completed historically at Waterloo. A summary of the historical drilling conducted at the Property is presented in Table 6.1 and Figure 6.2.

Owner	Years	Project	Туре	Number of Holes	Drilled (m)	Drilled (ft)
Asarco	1964-1982	Waterloo	RC	199	12,925.90	42,407.81
PAAS	2012-2013	Waterloo	RC	53	4,612.36	15,132.41
PAAS	2012	Waterloo	Diamond	3	251.63	825.56
Sub-total				255	17,789.62	58,365.78

Table 6.1 Stronghold Silver Property Drillhole Summary (1964-2013)

Asarco drilling included 199 holes drilled using a percussion rotary drill rig. The holes were drilled 100 ft (30.5 m) apart along section lines across that were spaced at 200 ft (61 m) intervals along the northwestern portion of the deposit and variable intervals between 100 ft and 200 ft at the southeastern part of the deposit. Drillholes were vertical and ranged between 25 and 494 ft (8 m and 207 m) total depth with the majority of holes between 98 to 361 ft (30 and 110 m) total depth. Many of the holes stopped short of the lower limit of the deposit, particularly in the southeastern portion. Drilling around the historical Waterloo mine is completed. However, samples collected from accessible workings in and around the historical Waterloo mine returned above average grade assays (Rodger, 1994).

The 2012 and 2013 Pan American drilling was designed to confirm historical assays from Asarco drilling, validate the thickness of the mineralization and grade across width and thickness of the ore zone and test alternate geological models on ore control. The drilling was guided by a detailed geological mapping studies completed by Dr. Warren Pratt (Pratt, 2008; Pratt, 2012) and targeted 5 areas across the zones of better mineralization identified by Asarco drilling. In 2012 and 2013, Pan American completed 53 vertical reverse circulation holes and 3 vertical diamond core holes. The majority of drillholes were collared at historical drill sites to utilize existing roads and drill pads. RC holes ranged between 98 and 640 ft (30-195 m). The majority of holes ranged between 197 and 394 ft (60 and 120 m) depth. Samples were assayed for silver, copper, cobalt, molybdenum, zinc and nickel. Samples of barite were also collected to determine if the mineral could provide additional value. Drilling returned wide, high-grade silver intersects with mineralization intersected in all holes at or close to the surface (Pan American, 2012b). Diamond drill holes ranged from 174-354 ft (53-108 m) in depth and recovered PQ sized core. Geotechnical measurements were completed on the core however no record of sampling or assay results are available for these holes.

In the southeastern part of the deposit (near cross section line A-A' on Figure 6.2) select highlights from 2012 drilling by Pan American include (Pan American, 2012b):

• 354 ft (108 m) at 181 g/t Ag, including 118 ft (36 m) at 285 g/t Ag from W-RC-S-12007



- 354 ft (108 m) at 142 g/t Ag, including 203 ft (62 m) at 192 g/t Ag from W-RC-S-12008
- 308 ft (94 m) at 109 g/t Ag, including 85 ft (26 m) at 170 g/t Ag from W-RC-S-12006
- 348 ft (106 m) at 120 g/t Ag, including 131 ft (40 m) at 166 g/t Ag from W-RC-S-12009

These 4 holes cover a horizontal distance of 426.5 ft (130 m). To the northwest of this area the mineralized intersections were somewhat narrower. Holes W-RC-S-12001, 12002, 12003, 12010 and 12011 intersected mineralization over down-hole lengths of between 111.5 and 262.5 ft (34 and 80 m) (~151 ft (46 m width)).

The reader is cautioned that the highlights listed above were reported as downhole lengths and have not been corrected to true widths for mineralized intervals.

During the 2012-2013 exploration program Pan American also selected 33 historical Asarco holes for resampling. A total of 1,008 samples were collected from these holes and submitted for assay to confirm historical assay results.

Geological cross-sections in Figures 6.3 and 6.4 show characteristic results of drill core assays for silver across 2 transects of the Property as shown in Figure 6.2. The cross sections also show comparative results from twinned holes drilled by Pan American along-side historical Asarco holes along with re-assays of Asarco samples completed by Pan American. The results of the Pan American twin drilling and re-assays of the Asarco holes compare very well with historical results and in some instances returned even higher grades.





Figure 6.2 Historical drilling at the Waterloo Property


Figures 6.3 and 6.4 show that there is a blanket of high-grade silver ore within the Barstow Formation. In Figure 6.3, a swath of high-Ag material (> 90 ppm) extends across much of the section, from a maximum vertical thickness of approximately 197 to 65 ft (60 to 20 m), over about 655 ft (200 m) lateral distance. The cross section shown in Figure 6.4 shows a similar association between high silver concentrations (90 - >200 ppm) and proximity to a fault in the Barstow formation. The distance between the mineralization in the two sections is 0.6 miles (930 m; Figure 6.2).



Figure 6.3 Geological cross section A-A' with drillholes and silver assays (Pan American, 2013)



Figure 6.4 Geological cross section 2260 northwest with drillhole silver assay data (Pan American, 2013)



Pan American's drill program further confirmed that the higher-grade intercepts are associated with fault structures. Figure 6.5 shows a three dimensional (3D) isometric view of the drilling associated with key faults in the Waterloo deposit (Pratt, 2012). In Figure 6.5 larger discs and hotter colors along the drill hole traces represent higher grades. The higher-grade intercepts are spatially associated with faults where faulting has offset the chert Formation (shown in purple). These concentrated areas of higher-grade material may be important for project development because they offer an opportunity to extract higher-grade material earlier in the mining cycle.



Figure 6.5 3D isometric view of the drilling associated with key faults in the Waterloo deposit (Pratt, 2012)





6.4 Historical Mineral Resource and Reserve Estimates

Most of the following discussion of historical resource and reserve estimates for the Waterloo Deposit is reproduced from a previous report on the Property by Rodger (1994). The historical mineral resource and reserve estimates discussed in this section were calculated prior to the implementation of the standards set forth in NI 43-101 and current CIM standards for mineral resource estimation (as defined by the CIM Definition Standard on Mineral Resources and Ore Reserves dated May 10, 2014). The authors of this Technical Report have referred to these estimates as "historical resources or reserves" and the reader is cautioned not to treat them, or any part of them, as current mineral resources or reserves. There is insufficient information available to properly assess the data quality, estimation parameters and standards by which the estimates were categorized. The historical resources and reserves summarized below have been included simply to demonstrate the mineral potential of the main target area of the Waterloo Property. A thorough review of all historical data performed by a Qualified Person, along with additional exploration work to confirm results, would be required in order to produce a current mineral resource estimate for the Waterloo Deposit.

The authors of this Technical Report have reviewed the information in this section, as well as that within the cited references, and have determined that it is suitable for disclosure. Cautionary language pertaining to the disclosure of historical resource estimates has been added to the text as necessary.

6.4.1 Asarco

Asarco completed an initial reserve estimate for the Waterloo Deposit in 1968, followed by a computer reserve estimate in the late 1970's. Based on the historical drilling, Asarco outlined a historical silverbarite mineral reserve close to, or at surface of, 33.8Mt at 93 g/t silver for a total of 100.9 Moz contained Ag (Pan American Silver, 2016). In September 1994, Robert J. Rodger, P.Eng., reviewed the Asarco reports and prepared a Technical Evaluation Report on the Waterloo Property (Rodger, 1994). Rodger (1994) confirmed that the historical estimate was based on reverse circulation drilling and underground sampling and concluded that the historical reserve estimate was based on sound methodology (Pan American Silver, 2016). The following sub-sections summarize the Asarco historical reserve estimates and have been mostly reproduced from Rodger (1994).

6.4.1.1 Historical Initial Reserve Estimate (1968)

"The initial [pit] envelope was prepared manually with benches at 25-foot [7.6 m] intervals.

The parameters utilized [were] as follows:

- 1. Cut-off silver grade of 1.5 opt.
- 2. Assays were NOT cutoff at high grades because relatively few of the assays were high. Of 8,160 assays, only 9 were above 25 opt and none above 50 opt.
- 3. Specific gravity was defined as 2.61 with a 4% allowance for voids.
- 4. A minimum of 15 feet [4.6 m] was added at the ore-waste contacts to account for dilution. The dilution factor was therefore 6% at a grade of 1.2 opt.



The initial historical reserve estimates were calculated by Asarco using a standard polygon method. Polygons were constructed on bench plans around the drill holes by taking one half the distance to adjacent holes. The area of the polygon was measured with a planimeter, with suitable checks.

The silver grade assigned to the polygon was the weighted average of the silver assays of the 5-foot [1.5 m] samples over the height of the bench. Quantities of ore and waste were then calculated for each bench.

The tonnages were adjusted by 4% as an allowance for voids and increased by 6% at 1.2 opt for dilution. The total quantity of rock within the pit envelope was estimated at 45,000,000 [45 M] tons.

... Measured reserves were those reserves occurring within the polygons.

Indicated reserves were those reserves which were outside the polygons but within the mineralized zone. Drill hole and geological information were utilized to assign a grade to the blocks (Rodger, 1994)".

The results of this calculation are shown in Table 6.2

<u>Quantity</u> (tons)	Silver <u>Grade</u> (opt)
27,000,000	3.06
2,000,000	3.02
	Quantity (tons) 27,000,000 2,000,000 29,000,000

Table 6.2 Asarco historical measured and indicated reserves (Rodger, 1994)

The reader is cautioned that the Asarco initial mineral reserve estimate was estimated prior to the implementation of the standards set forth in NI 43-101 and current CIM standards for mineral resource estimation (as defined by the CIM Definition Standard on Mineral Resources or Ore Reserves dated May 10, 2014). The authors of this Technical Report have referred to this estimate as a "historical reserve" and are not treating it, or any part it, as a current mineral reserve. This historical resource estimate should not be relied upon and has only been included to demonstrate the mineral potential of the Waterloo Property.

6.4.1.2 Historical Computer Reserve Estimate (late 1970's)

Asarco completed a computer reserve estimate in the late 1970's. Asarco entered all of the silver and barite assays from the drillholes into a computer database and established block grades for silver and barite using the "inverse of distance squared" interpolation. Where insufficient data was available for blocks on the boundaries, grades were assigned by the computer program. The pit envelope generated by the computer program was marginally different from the manual pit calculation; the total quantity of rock within the pit envelope calculated by the computer program was 47.34 million tons (Rodger, 1994). The reserve estimate calculated by Asarco is shown below (Table 6.3):



	<u>Quantity</u> (tons)	<u>Grade</u> <u>Silver Barite</u> (opt) (%)
Reserves Waste	26,640,000 20,700,000	3.11 14.7

Table 6.3 Asarco historical reserve estimate (late 1970's; Rodger 1994)

Asarco models showed that utilization of a lower cut-off grade within the same pit envelope would increase the quantity of reserves to 37.235 M tons (33.9 M tonnes) but lower the grade to 2.71 opt (92.9 g/t) silver and 13.4% barite (Table 6.4). This would additionally reduce the quantity of waste within the pit envelope by 10.5 M tons (Rodger, 1994).

Tor	inage		Average Grade			Conta	ained		
Tons	Tonnes	Grade	Grade	Barite	Barite	Barite	Grade	Silver	Silver
(M	(M	(g/t Ag)	(opt	(%)	(M	(g/t	(g/t	(M oz	(M oz
tons)	tonnes)		Ag)		tonnes)	AgEq)	AgEq)	Ag)	AgEq)
37.2	33.9	92.9	2.71	13.4	4.5	41.7	134.6	100.9	146.5

 Table 6.4 Waterloo historical silver mineral reserve (Stronghold Silver, 2021)

Pan American Silver Corp. (2016) indicated that the historical estimate category of 37,235,000 tons at 2.71 opt Ag of "measured and indicated reserves" most closely corresponds to 33,758,000 tonnes in the CIM definition category of "indicated mineral resource". The authors of this Technical Report have not done enough work to verify this statement or this historical reserve estimate. The reader is cautioned that the Asarco initial historical mineral reserve estimate summarized in this sub-section was estimated prior to the implementation of the standards set forth in NI 43-101 and current CIM standards for mineral resource estimation (as defined by the CIM Definition Standard on Mineral Resources or Ore Reserves dated May 10, 2014). The authors of this Technical Report have referred to this estimate as a "historical reserve" and are not treating it, or any part it, as a current mineral reserve. This historical reserve estimate should not be relied upon and has only been included to demonstrate the mineral potential of the Waterloo Property.

6.4.2 Pan American Silver Corp.

Pan American generated an internal resource estimate that was based on the results of their 2012 drilling program along with validated historical data from Asarco. The historical data was validated by Pan American by twinning drillholes, evaluating old samples and re-assaying stored material. The historical internal resource yielded a 101 million ounce silver deposit with an average grade of 93 g/T at a cutoff grade of 1.5 opt (~42 ppm).



The origin of the resource model was located at 509000 Easting, 3867000 Northing and at an elevation of 500 m. The block model that surrounded this origin had a block dimension of 25 m x 25 m x 5 m. Coordinates of each block were taken from the centre of each block, with each block dimension outward from that point. Each block was labelled with a unique cell number. Each block had a silver grade (in ppm), density and classification attached to it. Classification was based on the level of confidence of the silver grade of a given block based on a set of parameters. Estimation of silver values for a given block used a search ellipse with specific ranges of 3 primary directions and sums the number of samples and number of drillholes found within each ellipse for a given block. Based on the number of samples and drill holes a specific classification was assigned, where 1 = measured (most confidence), 2 = indicated, 3 = inferred (least confident) (Pan American, 2013).

The Pan American Silver inferred resource table is shown in Table 6.5 and the resource estimate by cutoff grade is shown in Figure 6.6. Figure 6.6 shows that, like many open pit projects, the size of the resource is strongly influenced by the cutoff grade.

Ag ppm cut-						
off grade	Volume (m ³)	Tonnes (metric)	Mt	Ag ppm	Ounces Ag	Moz Ag
20	15,579,558	37,079,349	37.1	86	102,953,457	103.0
30	15,568,496	37,053,020	37.1	86	102,929,502	102.9
40	15,277,190	36,359,712	36.4	87	102,108,428	102.1
50	14,095,305	33,546,825	33.5	91	97,961,473	98.0
60	12,052,515	28,684,986	28.7	97	89,338,336	89.3
70	10,002,180	23,805,188	23.8	103	79,116,287	79.1
80	7,682,389	18,284,085	18.3	112	65,812,521	65.8
90	5,648,306	13,442,968	13.4	122	52,590,519	52.6
100	3,961,948	9,429,437	9.4	133	40,339,174	40.3
110	2,719,335	6,472,017	6.5	146	30,393,281	30.4
120	1,955,245	4,653,482	4.7	158	23,673,264	23.7
130	1,379,059	3,282,161	3.3	172	18,177,563	18.2
140	1,020,220	2,428,123	2.4	185	14,477,810	14.5
150	745,584	1,774,490	1.8	200	11,426,567	11.4
160	569,349	1,355,050	1.4	214	9,334,251	9.3
170	447,393	1,064,795	1.1	228	7,807,439	7.8
180	341,860	813,626	0.8	245	6,399,380	6.4
190	261,691	622,825	0.6	263	5,257,361	5.3
200	208,716	496,744	0.5	280	4,470,539	4.5

 Table 6.5 Pan American Silver Waterloo Deposit Inferred Resource Table





Figure 6.6 Pan American Silver Corp 2013 Resource Estimate by Cutoff Grade

The reader is cautioned that the Pan American Silver initial mineral reserve estimate was estimated prior to the implementation of the standards set forth in NI 43-101 and current CIM standards for mineral resource estimation (as defined by the CIM Definition Standard on Mineral Resources or Ore Reserves dated May 10, 2014). The authors of this Technical Report have referred to this estimate as a "historical resource" and are not treating it, or any part it, as a current mineral resource. This historical resource estimate should not be relied upon and has only been included to demonstrate the mineral potential of the Waterloo Property.

6.5 Historical Studies

Two historical economic studies were conducted for the Waterloo Property by Asarco in 1969 and by Fluor Mining and Metals Inc., on behalf of Asarco, in 1980. An economic study summary (Pan American, 2008) was completed by Pan American in 2008 to update the values for capital costs and operational costs of the historical economic studies and to give an estimation of the profitability of the Waterloo Project in 2008. The following text has been reproduced from Pan American (2008):



"Asarco conducted a Feasibility Study of the Project in 1969. The Project was to be of an open pit, cyanidization plant design capable of accommodating 6,000 tons of ore per day. Production figures were based off of a report conducted by Asarco, September 1967, showing an ore reserve of 30,067,000 tons and containing an average of 2.94 ounces of silver per ton. Mill capital and construction cost estimates were prepared by the Steams-Roger Corporation; operating costs and surface/ancillary plant costs estimated by ASARCO. A metallurgical recovery of 54.4% was estimated using the cyanidization process with an 80% minus 325-mesh grind... The conclusion of the feasibility study of 1969 was that the Project was financially unprofitable at \$1.75, \$2.00 and \$2.25 dollars per ounce (Pan American, 2008)"

"The Feasibility Study conducted by Fluor was done on behalf of Asarco in 1980. Technically it is not a feasibility study: the Scope of the Study consists solely of capital cost estimates of an updated silver and barite mill. This capital cost estimation concerns the construction of the mill exclusively, and does not include earthworks, the mine or mining equipment, or tailings work. The production rate is estimated to be 6,000 dry short tons a day, or 230,000 tons a year (Pan American, 2008)"

Pan American (2008) concluded that both historical economic studies cannot be used to give an accurate estimation of the profitability of the Project in 2008 due to several factors, including: 1) inflation from 1969 to 2008, 2) the financial estimation did not take into account discount or inflation rates, 3) the Project estimation was based solely on the first 10 years of operation and did not include cleanup and shutdown costs, 4) the Project estimation did not include the extraction of secondary minerals, such as barite or copper, and 5) the level of technology and the price of metals has changed significantly from 1969 to 2008.

6.6 Metallurgical Testwork

Asarco completed metallurgical testwork on samples collected from the Waterloo Deposit in several testing campaigns from the mid-1960's to 1980. The samples sent for metallurgical testwork included grab samples, representative drillhole samples and samples collected from old mine dumps within the Property.

The chronological history of the metallurgical testwork completed for Waterloo has been summarized from Rodger (1994) as follows:

- 1965-1967 Preliminary lab testing was conducted on underground channel, surface grab and drill cuttings. The results of this testwork were variable.
- 1968 Testing was conducted on a representative composite sample taken from drillhole samples. Fine grinding (80% -325 mesh), followed by cyanidation resulted in 55-60% Ag recovery. Use of a salt roast, followed by cyanide leach resulted in 80% Ag recovery.
- 1969-1970 A feasibility study was conducted based on fine grinding cyanidation process (see Section 6.5).



- 1970-1974 Process testing was conducted by several organizations using various processes, including vacuum distillation, sonic leaching and bromide leaching. These processes were not successful.
- 1974-1975 Pilot plant tests were conducted on the fine grinding cyanidation process. Semiautogenous grinding and rod mill-pebble mill grinding were evaluated as options and both options were deemed to be feasible.
- 1975-1980 Fine grinding followed by ammonium thiosulphate ammonium bisulphate leaching was evaluated and provided favorable results. The "Duval Clear Process" gave similar results to the conventional process. Both processes were more expensive than the conventional process. A second pilot plant test was conducted using rod mill-pebble mill grinding and this test confirmed feasibility. A feasibility study was conducted based on the fine grinding cyanidation process (see Section 6.5)

It was concluded that although fine grinding followed by cyanidation returned a lower percent of silver recovery, at 55-60% Ag recovery in comparison to 80% Ag recovery utilizing a salt roast followed by a cyanide leach, this option provided the best financial results at the time of the testwork (Rodger, 1994).

Pan American (2013b) indicates that exploration efforts in 2012 were focused on metallurgical testwork, geological mapping and geophysical surveys; however, the authors have not seen any documentation regarding metallurgical testwork completed by Pan American at the Waterloo Property.

The authors of this Technical Report have referred to these metallurgical studies as "historical metallurgical studies" and are not treating it, or any part it, as a current assessment of metallurgical recovery. This historical study should not be relied upon and this discussion has only been included to demonstrate the metallurgical potential of the Waterloo Property.



7.0 GEOLOGICAL SETTING AND MINERALIZATION

Detailed descriptions of the geology and mineralization of the Property have been completed by Tarman and Jessey (1989), Rodger (1994), Matson (2008), and Moran et al. (2012). The authors have reviewed these sources and consider these to contain all the relevant geological information about the Project area. Most of sections 7.1-7.4 have been reproduced from these reports.

7.1 Regional Geology

Stronghold's Waterloo Project is in the Calico Mountains of the Mojave Desert of the southwestern United States, part of the Basin and Range Province. The Basin and Range Province consists of evenly spaced north-south trending mountain ranges with intermittent flat desert basins filled by lacustrine-gravel-volcaniclastic-volcanic deposits. The Calico Mountains are in the central western portion of the Basin and Range and consist of a 9-mile (15 km) wide northwest-southeast trending range dominantly composed of Tertiary (Miocene) volcanics, volcaniclastics, sedimentary rocks, and dacitic intrusions (Figure 7.1; Singleton and Gans, 2008; Eaton, 1972).

"The Calico Mountains are posited centrally between the right lateral San Andreas Fault Zone bounding the Transverse Ranges on the West and the Death Valley Fault, also right lateral, on the East. The Northern boundary of similar terrain is defined by the Garlock Fault Zone, a left lateral wrench fault system while the southern boundary is irregularly shaped with either the Pinto Mountain or Manix Fault systems as left lateral wrench fault boundaries. The sub-province has been termed the Daggett Terrain of the Western Mojave Block. Understanding of this regional geology hasonly recently advanced with the identification of two Tertiary age large scale crustal deformation events. The terrain is now associated with extensive detachment faulting dating to 23 million years before present followed and displaced by the strike slip fault dominant regime beginning about 18 million years ago and continuing to the present.

The Calico Mountains form an uplifted block in a wedge-shaped zone between the east-west Garlock fault and the NW-SE trending faults with right lateral movement. Silver mineralization appears to be associated with mid- Tertiary volcanic activity along the NW trending fracture zones."





Figure 7.1 Regional Geology of the Calico Mountains (Modified from CGS, 2015 and USGS Fault Maps 2021).



7.2 Stratigraphy

The following section has been taken from Jessey and Tarman (1988), technical evaluation report for Pan American Mineral Corp (1994) and Singleton and Gans (2008):

"The oldest rocks in the region are foliated metamorphic rocks, possibly Precambrian, underlying the Waterman mountains some 4 miles to the west of Calico. The dominant rock type in the Precambrian formation is a quartz diorite gneiss.

Quartz monzonite and quartz diorite intrusions of the Jurassic and Early Cretaceous age are found to the northeast. There are basement rocks of different varieties to the SW, occurring as diatremes, volcanic necks and rhyolite tuffs.

The stratigraphic succession of Tertiary rocks, as briefly outlined below, from the oldest to the youngest, has been strongly broken up by faulting [see Figure 7.2 and Figure 7.3].

Jackhammer Formation (recent mapping has grouped with the Pickhandle Formation): [The formation is up to] 700 ft [213 m] of tuff, tuff breccia, volcanogenic sedimentary rock, arkosic conglomerate, and basalt.

Pickhandle Formation [Ti and Tvp]: The formation, up to 1,500 ft [460 m] thick, is dominated by rhyolite flows, breccias and tuffs. There are also glassy andesite flows near the middle of the formation. The Pickhandle is found primarily to the north and east at all elevations.

Calico Formation [Pickhandle Formation Tv]: *The formation, up to 1,000 ft* [300m] *thick, consists primarily of bedded to massive rhyolite tuffs. It is exposed in the central portions of the district.*

Barstow Formation [Mc]: The formation, up to 2,200 ft [670m] thick, consists of sandstones, mudstones, siltstones and limestones, which are silicified to varying degrees. It occurs in the west-central part of the district."

Calico Member of the Barstow Formation (Mc): Singleton and Gans (2008) identified a member of the Barstow Formation called the Calico Member. The Calico Member consists primarily of lacustrine siltstone, sandstone, and limestone. Lateral and vertical facies changes are common, although some distinct groups of beds can be mapped for around 2.5 miles (4 km). The Calico Member is generally considered part of the middle Miocene Barstow Formation, which is 3,280 ft (1,000 m) thick at its type locality in the Mud Hills (Dibblee, 1968; Woodburne et al., 1990).

"Intrusions of rhyolite cut the Pickhandle Formation, but not the Barstow. These lens-shaped to irregular intrusions appear to be controlled by pre-existing faults. The rhyolite is generally dark red to maroon, with a siliceous groundmass containing hematite. Poorly consolidated alluvial gravel, conglomerate, and sandstones of the Yermo Formation of Pliocene age are found to the west of the Calico Range."





Figure 7.2 Generalized Stratigraphic Column for the Central Mojave Region (from Jesse and Tarman, 1989).







7.3 Structural geology

The following section has been quoted from technical evaluation report for Pan American Minerals Corp (1994), Matson (2008), and Moran et al., (2012).

"Structurally the Calico Mountains are thought to be part of the upper plate of a regionally extensive detachment fault (Matson, 2008). The fault surface is not known to be exposed in the Calico district but is projected from exposures in nearby ranges. This detachment block consists of fractured block fault segments that have been displaced in varying directions by mainly normal faulting and vertical rotation.

Numerous folds have been mapped in the Calico Mountains, and the general structure of the bedded rocks is that of an anticlinorium plunging northward. Beds of the Barstow Formation north of the Calico fault are intensely folded into numerous east-west-trending, upright anticlines and synclines that represent 25–33 percent (up to $[0.3 \text{ mile}] \sim 0.5 \text{ km}$) north-south shortening. Folds are detached along the base of the Barstow beds and thrust over the Pickhandle Formation, which dips homoclinally \sim 15–30° to the south-southeast. The geometry and distribution of folds are most



compatible with localized transpression between the Barstow and Pickhandle Formations. The transpressional folding and faulting in the Calico Mountains postdate the ca. 17 Ma dacite intrusions and appear to be largely restricted to the area along the Calico fault restraining bend.

The regional deformation has been displaced by movement along the N70°W to N40°W trending system of the Calico-Hildago fault zone, which is a major Holocene and locally, historically active zone. The fault zone is a 115-km-long right-lateral fault system that lies along the southwest flank of the Calico Mountains and roughly defines the western boundary of the range front. The Calico-Hidalgo fault zone is delineated by well-defined geomorphic evidence of Holocene right lateral strike-slip displacement and locally offset Holocene alluvium. The system has been divided into three segments.

Deformation by faulting, with rotation and warping, is the major structural feature of the region. The most prominent are northwest trending faults, with right lateral movement. Extension faulting may have triggered volcanic activity during placement of the Pickhandle Formation, culminating in a major episode during the upper flows. Movement on faults is much larger in the Pickhandle Formation than the [Barstow Formation]. Some of the major faults are warped and branching. Blocks have been tilted by rotation on curved fault planes. Later movement occurred along the range-front faults in the south and southwest including the Calico fault. Rotation is demonstrated by the steep dip of the Barstow units. The Calico fault cuts the Waterloo deposit with a right lateral movement. Complex crumpling of the beds within the Barstow resulted from compression.

Most recently, the Calico and West Calico sections exhibited triggered slip during 1992 as a result of the M 7.3 Landers earthquake. A magnitude 5.3 aftershock occurred in the Calico Mountains in 1997 near the Calico ghost town.

Total strike slip displacement on the Calico fault may be several miles, while vertical displacement is several hundred feet with large local variations. The latest Pleistocene to Holocene slip rates are not well documented. Although Byrant (2000) reported proposed rates that range from 0.4 millimeters per year (mm/yr) to 5 mm/yr, the Southern California Earthquake Data Center (SCEDC, 2011) reported slip rates between 1.0 and 2.6 mm/yr for the Calico and West Calico segments, and a lower rate of 0.5 mm/yr or less for the Hidalgo segment. SCEDC reported probable magnitudes of M 6.4 to 7.1 with a questionable interval between major ruptures of roughly 1,500 years."

7.1 Local geology

The waterloo silver-barite deposit is a large, low grade disseminated deposit, extending over a length of 5800'. Widths range from 50' to 1000' (Technical Report for Pan American Silver, 1994). The deposit occurs within a north-west trending block of metamorphosed sedimentary rock of the Barstow formation and tertiary volcanic rocks of Pickhandle formation.

The host rocks for the early mined silver veins are lower-middle Tertiary volcanic rocks of the Pickhandle Formation. They consist primarily of andesitic and dacitic flow breccias, flows tuff breccias, agglomerates, dikes and minor volcanic derived sandstones. Individual volcanic units are typically irregular and discontinuous. The Pickhandle has been estimated to be up to 5,000 ft [1524 m] thick in the eastern Calico Mountains.



The next youngest rocks, overlying the Pickhandle, are the middle Miocene Barstow Formation. The Barstow Formation was deposited in a paleo- basin and consists of an alluvial fan facies, fluviatile facies and lacustrian facies. The respective rock types are conglomerate with sandstone, mudstone with siltstone and local silty limestone [See Figure 7.4].

The limestone and finer siliciclastics are more prominent in the basal part of the section. Tuff and tuffaceous sandstone horizons are sporadically interbedded which demonstrates proximity to an active volcanic center (Photo 7-1). The formation was deposited atop the Pickhandle rocks then eroded after mountain building. It may also have been deposited adjacent to the Pickhandle volcanics and on the lower flanks of the volcanic topographic high. Maximum thickness of the Barstow Formation is projected to be about 3,000 ft [914m] but based on vein zoning, it would have been much thinner if present, over the Pickhandle Formation (see **Error! Reference source not found.**). The Barstow Formation is host to the disseminated silver mineralization at the Waterloo Project.

In the northwest end of the Property, the contact between Barstow and Pickhandle Formations is defined as the Calico fault, through the middle and southeast of the Property the faults passes through the Barstow Formation (Figure 7.4). A few faults parallel to the Calico fault are observed in the Waterloo area; most of these occur in the Barstow Formation and at the contact between the Barstow and Pickhandle Formations. This high density of faults in the Barstow Formation is interpreted to be related to the precious metal mineralization.

At the Waterloo area, three main units of the Barstow Formation have been identified: 4, 4a, and 5 (Figure 7.4; Pratt, 2012). They are exposed along the Calico fault and are the main mineralized zones in the Waterloo area. Unit 4 and 4a include silicified siltstone, sandstone, limestone, variably baritized, and mineralized silver (Photo 7-1). Silicification in this unit of the Barstow Formation is abundant (Photo 7-2). Unit 5 includes altered bleached siltstone, sandstone, limestone, trace barite, and silver (Photo 7-3). The Barstow Formation is highly oxidized at the Waterloo Property and is distinguishable by red, orange and yellow coloring.





Figure 7.4 Local Geology of the Waterloo Property





Photo 7-1 The Barstow formation, view to the North, Waterloo area.

Photo 7-2 Brecciated and silicified structures in the Barstow formation.







Photo 7-3 A view from Barstow formation in Waterloo area

7.1.1 Alteration

The following text is quoted from technical report for Pan American Mineral Corp (1994).

The faults served as loci for hydrothermal solutions that altered the rocks in the Waterloo area. The hydrothermal activity probably commenced during deposition of volcanic rocks of the mid-Early Miocene Pickhandle Formation and continued sporadically through to the Barstow Formation. The hydrothermal alteration resulted in mild to intense alteration along fault and fracture zones in breccias and in permeable rocks forming veins at these discontinuities. Most major faults contain veins with coarse-grained to massive barite, varying quantities of hematite, and an abundance interstitial quartz. The veins range from 1-6 ft (0.3-2 m) in width, but can reach widths of 50 ft [15 m].

The most common vein minerals are barite and chalcedony with minor to abundant hematite. Quartz occurs as interstitial patches in the larger barite veins and as cavity filling in cores of chalcedony veins. Calcite may be abundant locally. The main silver minerals, cerargyrite (AgCL) and embolite (AgBrCl), form thin coatings on fractures. The minerals are often associated with manganese and iron oxides, and minor cerussite and chrysocolla. Typical for epithermal alteration, where they have



been investigated at depth, the veins display an increase in base metal sulfide minerals and a decrease in the quantity of silver minerals.

Mapping in the Waterloo area in 2008-2012 by Warren Pratt identified several zones of acid sulphate leaching/steam heated alteration at the top of the Pickhandle (Calico) Formation and in the basal sandstones on the Barstow Formation. The alteration was not noted to be directly related to the Ag mineralization at Waterloo (Figure 7.4; Pratt, 2008).

7.1.2 Petrography

The following text is quoted from technical evaluation report for Pan American Mineral Corp (1994).

The rhyolite flows of the Pickhandle Formation, as well as the later intrusions are porphyritic, contain phenocrysts of feldspar (sanidine), quartz and minor biotite and hornblende. The fine- grained mass is primarily feldspar, with disseminated hematite in some rocks. Alteration of the sanidine is usually incomplete to fine-grained kaolinite, sericite plus calcite. The hornblende is altered to celadonite. The quartz and biotite are unaffected by alteration. The rhyolite tuffs and breccias of the Pickhandle Formation contain fragments of rhyolite, phenocrysts and some basement rock. The fine-grained mass is primarily feldspar. Alteration is similar to the Pickhandle rhyolite flows. The glassy andesite of the Pickhandle formation has phenocrysts of plagioclase, lesser biotite, hornblende and locally quartz and/or amphibole. The mass is a volcanic glass. Alteration has affected the amphiboles more than the plagioclase and biotite while the groundmass has been progressively altered.

7.1.3 Mineralization

Silver-barite mineralization occurs in both the Lower Miocene Pickhandle Volcanics and the overlying sedimentary units of the Middle Miocene Barstow Formation. The style of mineralization is similar in both formations, but structural controls differ. The veins of the Pickhandle Volcanics consist of early barite and jasperoid, followed by a second stage of later barite, jasperoid, oxides and sulfides. Subsequent oxidation of some veins by meteoric water resulted in the formation of supergene oxides, carbonates and silver chlorides. Mineralization in the Barstow Formation is largely disseminated with veins accounting for only one percent of the total volume. However, paragenesis of the Barstow vein minerals closely parallels that of the Pickhandle with "Early Barite Veins" followed by "Silver-Silicification Veins" and "Late Calcite Veins". A suggested model favors hydrothermal emplacement of vein mineralization in dilatant zones in the Pickhandle Formation and disseminated mineralization in the Barstow Formation of supergene during Middle Miocene detachment faulting. This was followed by reactivation and continued dilation of some fissures and deposition of secondary oxides and jasperoid (Fletcher, 1986).

Two distinct types of barite-silver mineralization occur within the Waterloo district. Vein-type deposits are extensive within the Pickhandle volcanic rocks and have accounted for much of the past production, particularly from deeply oxidized, near-surface outcrops in the vicinity of Wall Street Canyon. Embolite constituted the main ore mineral with lesser cerargyrite and native silver. Disseminated to stockwork vein deposits of low-grade silver-barite mineralization also occur within the sedimentary units of the Barstow Formation. These have been described by Fletcher (1986) and subsequent discussions of this mineralization is taken largely from that reference.



7.1.3.1 Pickhandle Barite-Silver Veins

The following text is quoted from geology and silver deposits of the Calico district geology, Payne and Glass, 1987.

Five recognizable end-member vein types can be mapped (Jessey, 1986). Of these, only two are common. Gradations exist between all vein types. The most common vein type, termed "black-matrix", consists of brecciated barite fragments in a matrix of iron and manganese oxides and minor sulfides. Interstices between barite fragments are most commonly filled with a mixture of iron and manganese oxides. Magnetite occurs locally, with partial to total alteration to hematite. A variety of manganese oxides are present, but they cannot be differentiated by simple microscopic analysis. Sulfides are quite rare. The most common are pyrite and galena with trace chalcopyrite and tennantite.

Silver assays as high as 1100[opt] have been reported, but 3-5[opt] is closer to the norm. The silverbearing species are uncertain. Samples of high-grade silver ore were examined and found to contain a high proportion of galena suggesting argentiferous galena. However, assays as high as 1100 ounces dictate the presence of a primary silver minerals such as argentite or native silver.

Alteration consists of minor to extensive silicification. Envelopes of weak propylitic alteration (calcite+chlorite+epidote) have been recognized adjacent to some veins, but the relationship is not ubiquitous and often can be seen only in thin section. Payne and Glass (1987) report hydrothermal alteration of amphibole to celadonite.

Oxidized barite veins are thought to represent the supergene equivalent of the black matrix barite veins. They are easily recognized by the brick red alteration adjacent to and intimately associated with the barite. The alteration consists of jasperoid and fine-grained secondary hematite. Most primary sulfides have been replaced, with only occasional and heavily corroded pyrite remaining. Galena has altered to cerrusite. Magnetite has been replaced and pseudomorphed by hematite. Microscopically, the secondary hematite occurs as fine-grained to colloidal veins cutting the altered primary sulfides and oxides. Jasperoid consists of banded aggregates of iron- poor chalcedony and iron-rich jasperoid filling the interstices between barite fragments. Secondary silver minerals, particularly embolite and cerargyrite are present in some veins, but they are absent in others. Silver grades in the oxidized veins of Wall Street Canyon were quite high, exceeding 10 oz./ton, but the norm for most oxidized veins is generally 1-2opt. The heavily-altered and oxidized veins appear to cluster in distinct groups adjacent to kinks or bends in the Calico fault.

A few unusual veins were noted during field studies. In all cases, these vein types are of restricted occurrence. Banded veins of jasperoid and barite occur near the St. Louis Mine. They are unusual because of the fine development of comb structure, often described as a signature of a true epithermal precious metal district. Iron and manganese oxides are minor and sulfides absent. Late calcite veinlets sometimes crosscut the earlier barite and jasperoid. Northeast of the Leviathan Mine, unaltered monomineralic veins of white barite can be observed.

Inclusions of brecciated host rock can be seen at many localities. Southwest of the Leviathan Mine, thin but laterally persistent veins of jasperoid with no attendant barite are present. The marked



differences in mineral suites of these two vein types which lie within 300 meters of one another may be explained by their age relationships. Monomineralic barite veins represent an early stage of mineralization while jasperoid veins represent a much later stage of mineralization.

7.1.3.2 Barstow Barite-Silver Mineralization

Mineralization within the Barstow Formation is largely disseminated. Barite silver veins also seen in the Barstow Formation (Photo 7-4 and 7-5). Fletcher (1986) reports that less than 1% of the primary barite-silver mineralization occurs in recognizable veins. Fletcher recognizes three stages of mineralization which correlate well with the paragenesis of the underlying Pickhandle barite-silver veins.

1) The earliest stage, termed "Early Barite Veins", consists of barite and quartz with minor hematite and trace anhydrite and sulfides.

2) The second stage, "Silver-Silicification Veins" are responsible for the bulk of the silver mineralization. These veins are composed primarily of quartz, lesser barite, minor hematite and calcite and trace sulfides and native silver. Acanthite and native silver have been identified as the chief ore minerals.

3) The final mineralizing stage, "Late Calcite Veins" are predominantly coarse calcite and minor quartz. Alteration consists of early bleaching which most commonly manifests itself as K-feldspar replacement of detrital grains. Although not termed as such by Fletcher, this alteration in many respects appears similar to the pervasive [potassium feldspar] alteration associated with many base and precious metal mining districts. The alteration is correlative with the early stage of barite-quartz mineralization. Intense silicification accompanied the silver-silicification stage veins. It occurs most commonly as colloform bands of jasperoidal chalcedony although minor recrystallized quartz is also present.





Photo 7-4 A view of Barite-Silver veins in the Barstow formation at the Waterloo area.

Photo 7-5 Two close views of Barite-Silver veins seen in the photo 7-4.



"Controls for the Barstow mineralization are rather enigmatic. Studies of the vein systems (Fletcher, 1986) indicate a near-random orientation typical of a stockwork vein system overlying a deep seated intrusive. However, these vein orientations are inconsistent with those of the Pickhandle volcanics which strike northwest. Furthermore Fletcher (1986) feels there is no genetic relationship with the Calico Fault because the Waterloo deposit has been offset by the fault. Finally, mineralization is pervasive throughout the lower portion of the Barstow Formation, apparently favoring no particular sedimentary horizon."



8.0 DEPOSIT TYPES

The authors reviewed the description of deposit types from the Waterloo project and found that the description of Tarman and Jessey (1989) has an adequate description of the deposit types and has been reproduced for Section 8.0.

"Many researchers have considered the Calico District to be a classic example of the epithermal precious metal deposit. Certainly, the district has many characteristic features including:

- 1. Association with volcanic rocks
- 2. Tertiary age
- 3. Normal faulting suggestive of crustal extension
- 4. Low temperature mineralization
- 5. [Potassium feldspar] and propylitic alteration

The most common epithermal model relates ore deposition to periods of extensional volcanism associated with plate subduction. The timing of mineralization in the Calico District (15-20 MY) is inconsistent with a subduction-related extensional model. Recent attention has focused on the detachment model to account for extension in many of the southern California precious metal districts. Detachment faults were originally described along the flanks of the Calico Mountains by Weber (1965) However, these detachment faults bear little similarity to classic detachment faults described by Davis and others (1980) in the eastern Mojave and Sonora Deserts. The Calico detachments are best termed gravity slides and are not related to deep crustal extension as are those in other districts. Moreover, even the gravity slide model has been challenged (Payne & Glass, 1987). In addition, the Barstow mineralization can be demonstrated to predate deformation associated with the "gravity slide" (Fletcher, 1986). More recently, Glazner et al. (1988) have documented detachment faulting in the Waterman Hills a few kilometers to the southwest of the Calico Mountains represent the upper plate of a detachment block, the high angle northwest-trending barite-silver veins could represent mineralized listric faults described in most detachment terranes.

The following model best explains the district's ore deposits. Extensional stresses during the early Miocene, related to detachment faulting, created a series of normal faults in the upper plate Pickhandle Volcanics. A small stock was emplaced in the vicinity of Wall Street Canyon which drove a hydrothermal convective system mineralizing the normal faults as well as the flat-lying sediments of the lower Barstow Formation (Figure 8.1). During the late Miocene, strike-slip movement began along the Calico Fault reactivating the dip-slip faults. The reactivated faults underwent additional extension in areas adjacent to bends in the main Calico fault causing further dilation and permitting the circulation of meteoric waters which oxidized the existing mineralization and deposited secondary oxides and silver chlorides."

The authors believes that although evidence of mineralogy within the hydrothermal veins show they are probably a structure-hosted epithermal vein, more studies such as fluid inclusion petrography, micro-thermometry, and estimation of fluid salinity are still required to confirm their sources.









9.0 EXPLORATION

Stronghold Silver has not performed any exploration to date. Historical exploration completed on the Property is discussed in Section 6.



10.0 DRILLING

Stronghold has yet to conduct any drilling at the Waterloo Property. A summary of the historical drilling completed by companies other than Stronghold is presented in Section 6. None of this work was conducted by or on behalf of Stronghold.



11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Asarco Samples for the Waterloo Site 1964-1982

The Asarco program included geological mapping, grab sampling, surface trenching, rotary drilling, underground adit sampling, road-cut channel sampling, and claim surveys. Sampling from mapping consisted of 7 to 10-pound (lbs) (3-5kg) grab samples.

Surface trenching was focused on the northwest of the deposit and was excavated with a bulldozer at irregular intervals across the deposit. Surface channel samples were cut along 10' (3m) lengths of the trenches. In all, 640 200 lbs (90 kg) samples were collected from the trenches. Sample preparation of channel samples was undertaken in an on-site facility. Samples were crushed in a jaw crusher, pulverized in a hammermill and split to two 6lbs (2.7kg) samples. The average grade of these surface channel samples was 2.5 troy opt of silver.

The drilling program was conducted with a rotary drill rig using a down-the-hole percussion rig. Water mist and bentonite were used as additives due to the nature of the broken and silicified rocks and to prevent cave-ins. Samples from drilling were collected by directing cuttings blown from the hole with compressed air through a 5" (127mm) pipe into a sample collection cyclone. Separate samples were collected in 5-gallon (19L) pails for each 5 ft' (1.5m) length of the hole. Samples were weighed and then split in a Jones-type splitter to obtain two 5-6lb. (2.3-2.7kg) samples. One sample was sent for assay while the other was retained as a duplicate. Recovery of the cuttings was estimated to be in the order of 83%. The largest loss, estimated to be 15%, resulted from cuttings blown from the hole which did not reach the cyclone. Most of the lost cuttings escaped from the collar of the hole.

Sampling was also undertaken in the accessible underground workings of the old Waterloo mine and on surface on the southeast portion of the deposit. Channel samples (10' (3m) in length) were cut along the adit (No.4) located at 2,390' (729m) elevation. These samples each weighed 200lbs (90kg).

Smaller 7-10lbs (3-5kg) channel samples were taken along road cuts over the southeastern portion of the deposit as a guide in locating the drill holes.

Adit and southwestern channel samples were sent to an independent analytical laboratory in Tucson for silver assays. Composites (239 in all) of the samples were assayed by the independent lab. The assays were within 0.1 oz (3g) and the sum of the Asarco El Paso assays was 1% higher than the sum of the Tucson, Arizona assays.

Individual samples were not analyzed for barite. Rather composites were prepared for drill holes and the composites were analyzed for barite in the Asarco El Paso laboratory. There was only limited field work undertaken during the period following initial exploration program conducted in the 1960s. Process testing continued intermittently until the early 1980's. The silver assay results were entered into a computer database in the late 1970's and used to prepare pit outlines. Periodic review of the financial viability was conducted on the project.



The QA/QC procedures, analysis methods, and assay certificates from the 1964-1982 Asarco drilling, grab samples, and trench assays at Waterloo were not available to the authors while writing this report.

11.2 Waterloo Project Drill Samples Organization

A detailed report prepared by Ahsan Chaudhary on July 30, 2007 describes the Waterloo project drill samples organization. In summary, Pan American purchased the Property in 1995 and began a cataloguing effort of historical Asarco samples stored in Tucson, AZ. This work was performed over three weeks in the summer of 2007; the organized, sorted and relabeled sample boxes were and are currently stored at a facility in Tucson, AZ.

11.3 Pan American Drilling and Assay Procedure

Very limited documentation is available detailing the field sample preparation and security of samples collected from the drill programs completed by Pan American in 2012 and 2013 at the Waterloo Property. The RC holes were sampled continuously over standardized lengths of 2 metres (Pan American, 2012b).

Pan American collected 3,850 samples for assay including 1,008 samples from historical Asarco drill holes for re-assay and 2,841 samples from the 2012-2013 Pan American drilling program. The samples were submitted for preparation and assay to four ALS Laboratories: 1) Reno, Nevada, 2) Elko, Nevada, 3) Winnemucca, Nevada, and 4) Vancouver, Canada. ALS is an ISO 9001:2015 certified and ISO/IEC 17025:2005 accredited geoanalytical laboratory.

Information about sample preparation and analytical procedures is available from the ALS assay certificates. The different preparation procedures and analytical methods used for the 2012-2013 drill samples and 2012 re-sampling program are shown in Figures 11.1 to 11.3.



Figure 11.1 Sample preparation and analysis for 2012-2013 Pan American RC drillholes

SAMPLE PREPARATION				
ALS CODE	DESCRIPTION			
WEI-21	Received Sample Weight			
SPL-21	Split sample - riffle splitter			
PUL-31	Pulverize split to 85% <75 um			
CRU-QC	Crushing QC Test			
DRY-21	High Temperature Drying			
PUL-QC	Pulverizing QC Test			
LOG-24	Pulp Login - Rcd w/o Barcode			
WEI-22	Dry Weight			
WSH-21	"Wash" crushers			
WSH-22	"Wash" pulverizers			
LOG-22	Sample login - Rcd w/o BarCode			
CRU-31	Fine crushing – 70% < 2mm			

	ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT	
Au-AA23	Au 30g FA-AA finish	AAS	
Hg-CV41	Trace Hg - cold vapor/AAS	FIMS	
ME-ICP61	33 element four acid ICP-AES	ICP-AES	
Ag-OG62	Ore Grade Ag - Four Acid	VARIABLE	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES	
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim 'or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him/her and based on an evaluation of all engineering data which is available concerning any proposed project. Statement required by Nevada State Law NRS 519			

Figure 11.2 Sample preparation and analysis for re-sampled Asarco RC drillholes

SAMPLE PREPARATION

ļ		
	ALS CODE	DESCRIPTION
	WEI-21	Received Sample Weight
	SPL-34	Pulp Splitting Charge
	LOG-24	Pulp Login - Rcd w/o Barcode
	LOG-22	Sample login - Rcd w/o BarCode
	SPL-21	Split sample - riffle splitter
	PUL-31	Pulverize split to 85% <75 um
1		

	ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT	
ME-ICP61	33 element four acid ICP-AES	ICP-AES	
ME-OG62	Ore Grade Elements - Four Acid	ICP-AES	
Ag-OG62	Ore Grade Ag - Four Acid	VARIABLE	
Zn-OG62	Ore Grade Zn - Four Acid	VARIABLE	
Au-AA23	Au 30g FA-AA finish	AAS	
The results of this assay were based solely upon the content of the sample submitted. Any decision to invest should be made only after the potential investment value of the claim 'or deposit has been determined based on the results of assays of multiple samples of geological materials collected by the prospective investor or by a qualified person selected by him/her and based on an evaluation of all engineering data which is available concerning any proposed project. Statement required by Nevada State Law NRS 519			



Figure 11.3 Sample preparation and analysis for select re-assayed Asarco RC drilling submitted to ALS in Vancouver, BC

SAMPLE PREPARATION			
ALS CODE	DESCRIPTION		
WEI-21	Received Sample Weight		
LOG-22	Sample login - Rcd w/o BarCode		
CRU-31	Fine crushing – 70% <2mm		
SPL-21	Split sample - riffle splitter		
PUL-31	Pulverize split to 85% <75 um		
WSH-22	"Wash" pulverizers		
LOG-24	Pulp Login - Rcd w/o Barcode		
	ANALYTICAL PROCEDURES		
ALS CODE	DESCRIPTION	INSTRUMENT	
ME-ICP41	35 Element Aqua Regia ICP-AES	ICP-AES	
Ag-OG46	Ore Grade Ag - Aqua Regia	VARIABLE	
ME-OG46	Ore Grade Elements - AquaRegia	ICP-AES	
Zn-OG46	Ore Grade Zn - Aqua Regia	VARIABLE	
Au-AA23	Au 30g FA-AA finish	AAS	

Initial Ag and multi element analyses were completed using inductively coupled plasma atomic emission spectrometry (ICP-AES; ALS procedure ME-ICP61 or ME-ICP41). All samples containing Ag >100 ppm were automatically re-analyzed using either four acid dissolution or Aqua regia dissolution followed by ICP – AES or Atomic absorption spectroscopy (AAS) (ALS procedure Ag-OG62 or Ag-OG46, respectively). Samples with Cu, Pb, or Zn >1.0% were automatically reanalyzed four acid digestion with ICP-AES finish (ALS procedure OG-62).

11.4 Quality Assurance and Quality Control

11.4.1 2012-2013 Drilling and re-assay

Pan American's in-house Quality Assurance and Quality Control (QA/QC) procedures were reviewed by the authors' in 2021. All data was obtained from the Waterloo database. QA/QC procedures included the insertion of 185 certified reference material (CRM) samples, 177 blank samples, and 110 duplicates samples into the sampling stream for the 2012-2013 drilling samples and the 2012 re-sampling of historical holes.

11.4.1.1 Blank Analysis

A total of 177 blank samples were inserted into the sample stream. Figure 11.4 shows the assay results of the blanks used in the QA/QC program for the 2012-2013 RC drilling campaigns and 2012 re-sampling program. From the 177 blanks, only one blank returned a maximum value of 2.5 ppm Ag, which is the Ag limit for blank samples. The majority of samples returned assays below 0.25 ppm Ag.





Figure 11.4 Blank Samples, RC and DH Programs (2012-2013) and re-assay of historical Asarco holes

11.4.1.2 Duplicate Analysis

Pan American's in-house QA/QC procedure included the insertion of 110 duplicate samples into the sample stream for the 2012-2013 RC drilling campaigns. Figure 11.5 shows a comparison graph of the laboratory duplicates. The Q-Q plots effectively indicate no scatter in the data, with R² values of 0.9935 for the RC drilling program.



Figure 11.5 Laboratory Duplicate Comparison (2012-2013)



11.4.1.3 Standards Analysis

A total of 185 certified reference materials (CRMs) were inserted into the sample stream from the 2012-2013 drilling campaigns and the 2012 re-sampling program. Three standard samples of PM1131 (112 ppm Ag), CDN-ME-19 (103 ppm Ag), and PANAM1 (50.5 ppm Ag), each with a unique and specific certified assay value, were used. To date, the authors' have no specific information on how CRMs were used in the Waterloo QA/QC procedures.

Figures 11.6 to 11.8 show the lab assay Ag value of the CRM compared to the certificate value and standard deviation. The laboratory's analytical results generally correlate well with the standard values with no outliers beyond two standard deviations.











Figure 11.8 PANAM1 assay CRM results, from RC and Core Drilling Programs (2012-2013) and re-assay of historical Asarco holes.





11.5 QA/QC: Qualified Persons' Opinion on Adequacy

Although there are several excel files for Waterloo covering the in-house Quality Assurance and Quality Control (QA/QC) procedures, no detailed explanation or reports were found in the database about sample preparation, chain of custody, analytical procedures, and data security measures. As a result, it is difficult to determine sample adequacy for the historical database, although the sample management and QA/QC procedures performed recently by Pan American show:

- Assaying of standard material produced no systematic errors
- Blank material assays indicated that no contamination occurred from sample to sample
- Duplicate assays showed the sample preparation protocol produced sufficiently precise results.

The authors believe the following recommendations should be implemented for future drilling programs:

- Formal, written procedures for data collection and handling should be developed and made available to Stronghold field personnel. These should include procedures and protocols for fieldwork, logging, database construction, sample chain of custody, and documentation trail. These procedures should also include detailed and specific QA/QC procedures for analytical work, including acceptance/rejection criteria for batches of samples.
- A detailed review of field practices and sample collection procedures should be performed on a regular basis to ensure that the correct procedures and protocols are being followed.
- Review and evaluation of laboratory process should be an on-going process, including occasional visits to the laboratories involved.
- In general, the QA/QC sample insertion rates used fall below general accepted industry standards. For future exploration campaigns, standards, blanks, and duplicates including one standard, one duplicate, and one blank sample should be inserted every 20 interval samples, as is common within industry standards.


12.0 DATA VERIFICATION

The authors visited the Waterloo Property to perform a Qualified Person site visit, and to attempt some data validation.

12.1 Site Inspection (2021)

GRE's QPs L. Breckenridge and Dr. H. Samari conducted an on-site inspection of the project on February 9, 2021. The site visit was constrained to six hours on site and was geographically constrained by the closure of several key access roads, in particular, the road between the Burcham mine (which was accessible) and the Voca and Waterloo mines to the north. The access roads were deliberately blocked during Pan American's interim shut-down. The authors attempted to access mineralized areas and historical workings further north by foot. No Pan American or Stronghold Silver representatives were present to direct the site visit.

Historical Pan American samples are stored in a warehouse in Tucson, Arizona, and no sample storage exists on site. The QPs did not visit the Tucson warehouse, and as a result, had no access to core, RC chips, or any other form of sample collected during the historical exploration programs.

While on-site, QPs conducted a general geological inspection of the Waterloo area, including visual inspection of key geologic formations, lithologies, and mineralization (**Error! Reference source not found.**). The QPs checked all lithologies on the ground with the latest prepared geologic maps including those prepared by Warren Pratt in 2008 and 2012. QPs also examined different types of alterations. All types of Barite-Silver veins along a few cross sections were checked by QPs (See Section 7.1.3).



Photo 12-1 Waterloo Site Inspection



Small historical working near Burcham Mine



Sealed mine portal Burcham Mine





Silicification in Barstow Formation



Barite-silver vein associated with manganese



Major faults contain veins with coarse-grained to massive barite, varying quantities of hematite.



12.2 Visual Sample Inspection and Check Sampling

Dr. Samari walked the site for several hours, observing the geologic formations and the areas of mineralization which were exposed in road cuttings, outcrops, or at historical excavations. During the site inspection, Dr. Samari collected surface chip samples to confirm the presence or absence of silver mineralization at the Waterloo Property. Dr. Samari did not have access to any core or RC chip samples for collecting check samples. Based on geological context and professional judgement from observing the mineralization contained in the rock at various locations, eight samples, each 0.7-1 kg, from Waterloo area were selected for assay.

The eight samples were collected exclusively from rocks with visible mineralization/alteration based on Dr. Samari's field evaluation. For example, samples were collected if they contained barite and/or quartz. All samples were bagged and labeled by the QPs. Samples were packed and delivered by the QPs to Hazen Research Inc. (Hazen) in Golden, Colorado, USA (Photo 12-2).

Error! Reference source not found. lists the eight (8) samples that were collected from the Waterloo Property. Sample locations are shown on Figure 12.1. The samples were collected from outcrops of the Pickhandle and Barstow formation, including seven samples from the Barstow formation and one sample from the Pickhandle formation. Due to time constraints and limited road access, samples were collected exclusively from the Burcham mine area (which had road access) and between the Voca and Burcham areas (which had hiking access). The more-mineralized areas around the Voca and Waterloo mines were not accessible within the time limits of the site visit. QPs tried to collect samples from different lithologies and different alteration zones (See Photo 12-2).

On March 3, 2020, GRE received Hazen's analytical report on the Au and Ag fire assay results for the eight Waterloo samples. Assay results from Hazen are presented in Table 12.1. The eight samples targeted mineralized zones, they are not indicative of the extent of mineralization on the Property and cannot be used to confirm the assay results in the drill hole database. However, the samples provide confirmation that silver mineralization is present at the Waterloo Project associated with the expected rock types. The presence of samples with low Ag assays may indicate that visual mineralization may not be indicative of silver grade. As discussed in Section 7.1.3, the mineralization picture at Waterloo is fairly complicated, and largely driven by the structural geology. From the point of geology, the main result that can be mentioned is that unit 4 of the Barstow formation has a higher amount of silver than unit 5. For confirmation of this issue, more systematic surface sampling is needed.



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Table 12.1 Summary of Hazen Assay Results

Property Location	Geological Formation	Sample Type	Easting NAD83 Zone 11	Northing NAD38 Zone 11	Elevation (m)	GRE Sample ID	Lab Sample ID	Request Analysis Fire Assay Gold & Silver	Hazen Au (ppm)	Hazen Ag (ppm)
Waterloo	Barstow	Surface Sample	511282	3867587	752	W-1	21M01263- 006	Ŋ	0.05	3.7
Waterloo	Barstow	Surface Sample	511252	3867535	736	W-2	21M01263- 007	Ŋ	0.14	4.7
Waterloo	Barstow	Surface Sample	511226	3867495	737	W-3	21M01263- 008	Ŋ	0.11	1.21
Waterloo	Barstow	Surface Sample	511240	3867486	734	W-4	21M01263- 009	Ø	0.29	0.13
Waterloo	Pickhandle	Surface Sample	511227	3867676	760	W-5	21M01263- 010	V	0.34	0.11
Waterloo	Barstow	Surface Sample	510537	3867778	719	W-6	21M01263- 011	Ø	0.3	2.24
Waterloo	Barstow	Surface Sample	510549	3867789	723	W-7	21M01263- 012	Ø	<0.02	24.2
Waterloo	Barstow	Surface Sample	510548	3867811	718	W-8	21M01263- 013	V	<0.02	10.4



W-1 W-2 W-3 W-4 W-5 W-6

Photo 12-2 Waterloo Surface Chip Sample Locations















12.3 Database Audit

Dr. Hamid Samari completed a manual audit of the digital project database provided by Pan American by comparing original assay certificates from ALS Minerals, to corresponding information contained in the database. The drill assay database contained 10,912 assay samples including assay information from the Asarco and Pan American drill programs. Original laboratory assay certificates were only available for the Pan American 2012-2013 drill program and re-sampling program. The manual audit examined eight certificate PDF files from ALS dated 2012 and 25 certificates PDF files dated 2013 and revealed no discrepancies between the hard-copy information and digital data for the Pan American program at the Waterloo project. No original Asarco assay certificates were available.

12.4 QP Opinion on Adequacy

Based on the review and audit of the project database and all existing project documents, and the author's observations of the geology and mineralization at the project during the site visit, Dr. Samari considers the lithology and mineralization data contained in the project database to be sufficiently reliable for use in ongoing exploration and studies.



13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Stronghold has yet to conduct mineral processing and/or metallurgical testing at the Waterloo Property.



14.0 MINERAL RESOURCE ESTIMATES

A current Mineral Resource Estimate has not been completed for the Waterloo Property. Historical resource estimates are reviewed in Section 6.4.



15.0 ADJACENT PROPERTIES

The reader is cautioned that the following section discusses mineralization, and/or historical mines that are not located on the Waterloo Property but are located in the vicinity of the Property. The authors of this report have not had the opportunity to visit most of these sites and mineral deposits, or verify any of information presented below, and the reader is further cautioned that this information is not intended to imply that such mineralization exists at the Waterloo Property. The information provided in this section is simply intended to describe examples of the type and tenor of mineralization that exists in the region and is being explored for at the Waterloo Property.

15.1 Historical Mines Proximal to the Waterloo Property

The area has a long history of precious and base metal mining as described in Sec 6.1. Silver was the primary ore produced from the area with the majority of production occurring between 1881-1896. Historical production during this period was not recorded however, historical estimates vary from 15 to 25 million troy ounces (Kirwan, 2005; Matson, 2008). Silver grades were estimated to average 25 ounces of silver per ton of ore (opt) with localized grades up to 100 opt (Matson, 2008). Historical producers stretch over an area 5 miles long by 2 miles wide and are divided into 3 districts: Central group, East Group and the West Group (Figure 15.1). The Waterloo Property including the historical Waterloo mine lie within the West group. Silver deposits in the area were characterized as low tonnage, high-grade oxidized and possibly supergene enriched (Matson, 2008).

The Central group includes the historical Silver King-Oriental Mine located just north of the Calico townsite, 0.6 miles (~1 km) east of the Waterloo Property. The Silver King-Oriental Mine was the first mine in the district, it was the most productive and the longest operating mine on the Calico area. Mining targeted two main, northwest striking veins: the Oriental and Silver King. The veins extended for 2 miles on the surface and vary in width from 21 inches to 2 feet. Mine workings were very extensive and include over 12,000 feet of drifts. Between 1883 and 1886 the mine yielded 37,000 tons of silver ore (Wright et al., 1953). Production continued into the 1930's at a reduced scale. The area surrounding the historical Calico townsite and encompassing the Silver King-Oriental Mines has been converted into the Calico Ghost Town regional park on land currently owned by San Bernardino County.

The East Group encompasses the Calico-Odessa group of mines. The Odessa group includes: Dragon, Dunderberg, Gobbler, Little Jane and Odessa. The Occidental Group includes mines Argonaut, Bismarck, Boss, Cleveland, Garfield, Invisible, Occidental, Runover, Thunderer and Veto. Silver deposits in this area were hosted in rhyolite tuffs as impregnations along a zone of porous rock. No production is reported directly for the majority of the mines in this group. However Odessa Mine is reported to have had the highest average ore grade in the district. Partial production figures are available only for the Garfield mine and from 1882-1884 total approximately 400 tons of ore. The Garfield Mine continued production to 1896 (Wright et al., 1953). Privately held Fee land parcels cover the areas of the historical Odessa and Garfield mines.

In addition to the Waterloo Mine the West Group also encompasses the Langtry, Union, Voca and Burcham mines. The historical Waterloo, Union, Voca and Burcham Mines lie within the current Property and are described in Section 6.1 The historical Langtry mine is located ~1 mile (1.7 km) northwest of the



Waterloo Property. Historically, Langtry was not an important producer; however is notable because the silver mineralization was hosted in veins. The ore is reported to have averaged from 6-22 ounces of silver per ton (Wright et al., 1953).

15.2 Current Active Projects

The Langtry Property is adjacent to the Waterloo Property to the northwest and covers the historical Langtry Mine (Figure 15.1). The Property is currently held by Stronghold Silver Corp. It encompasses 20 patented lode claims and 38 unpatented lode claims covering an area of 1,177.64 acres (476.6 ha). The Langtry Property is host to large tonnage, moderate to low grade disseminated silver-barite mineralization. The mineralization is found disseminated in Miocene aged Barstow Formation sediments and veins in the underlying Pickhandle Formation. The veins generally trend northwest paralleling a regional zone of northwestern-trending faults. The faults have acted as feeders for mineralization and displaced the mineralization during periods of tectonic reactivation. The disseminated silver mineralization is characterized by pervasive silicification with barite. At depth it grades to quartz with lesser barite, minor hematite, calcite, and silver bearing sulfides, mostly acanthite with very fine grained native silver. Local occurrences of argentojarocite and cerargyrite have been reported. The Langtry deposit is a high-level silver-dominant epithermal precious metals deposit; a low-sulfidation epithermal vein and disseminated type deposit (Moran et al., 2012). The geology, host rocks, and mineralization style of the Langtry deposit are similar to the Waterloo deposit located on the current Waterloo Property and have been interpreted to be part of the same mineralization system.

Modern exploration on the Langtry Property was conducted by Superior Oil and Athena Silver. In the 1970's Superior Oil completed more than 200 shallow, rotary drill holes on the Langtry property. In 2011, Athena Silver completed 13 holes, including 10 confirmatory, RC holes. The historical drill holes extend over an area that covers approximately 5,100 ft (1,500 m) by 2,700 ft (800 m) along the southwest slope of the Calico Mountains. In 2012, Athena commissioned Independent Mining Consultants (IMC) to prepare a resource estimate for the Langtry deposit. The mineral resource estimate was based on 148 historical drill holes of the over 200 holes drilled by Superior, and an additional 13 confirmatory and exploration holes drilled by Athena. The Langtry Silver deposit was reported to contain Indicated Mineral Resources of 12.7 million short tons grading 1.48 ounces per ton (opt) silver (Ag) and Inferred Mineral Resources of 30.4 million short tons grading 1.40 Ag, at a 0.76 opt cutoff grade, as in-pit resources (Moran et al., 2012). The authors of this Technical Report have not independently verified the resource reported for the Langtry property. The Langtry resource estimate predates the updated CIM Definition Standards on Mineral Resources and Mineral Reserves (May 10, 2014) and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines (2019) and is considered historical in nature. The Author's do not imply any size or grade relationship between the Langtry and Waterloo Properties and note that this information is not necessarily indicative of the mineralization known or to be expected on the Waterloo Property, which is the subject of this Technical Report. Stronghold Silver has executed an option to obtain the Langtry Property.



In the nearby vicinity of the Waterloo Property two placer claims are held by private owners. No information is available about the production from the placer claims. Two unpatented lode mining claims are located 1 mile (~1.5 km) northeast of the property over the Silver Contact historical producer. They are held by private owners; no additional information is available on any exploration completed on these claims.



Figure 15.1 Historical Mines of the Calico District and Adjacent Properties



16.0 OTHER RELEVANT DATA AND INFORMATION

The authors are not aware of any other relevant data and information to report at this time.



17.0 INTERPRETATION AND CONCLUSIONS

It is the opinion of the authors of this Technical Report that the Waterloo Property is a "Property of Merit" that warrants future exploration work.

The Waterloo Property is located in San Bernardino County in California, approximately 145 miles (230 km) northeast of Los Angeles and is situated approximately halfway between Los Angeles and Las Vegas, Nevada. It is situated in the Calico Mining District, a historically prolific mining district with 15-20 million troy ounces of silver (Ag), with minor barite, gold, lead and copper, produced from silver mines in the district between 1881 and 1896 (Weber, 1966). The reader is cautioned that the historical mineralization produced from deposits within Calico Mining District may not be necessarily indicative of mineralization at the Waterloo Property. Several past-producing mines and historical workings are situated in the vicinity of the Property including four historical past-producing mines that are located in the northeast portion of the Property: Waterloo Mine, Voca Mine, Union Mine and Burcham Mine. The Property is currently being assessed by Stronghold Silver for its epithermal precious metal mineralization potential.

The Property lies in a favorable geological setting in the Calico Mountains. The Property is underlain by the mineralized Miocene-aged Pickhandle and Barstow Formations which are cut by the Calico fault. The Pickhandle Formation consists of intercalated pyroclastic rocks and volcanic flows of rhyodacitic to dacitic composition. The Barstow Formation unconformably overlies the Pickhandle Formation and is composed of fossiliferous limestones, calcareous mudstones, siltstones, sandstones, and conglomerates. Both formations, especially Barstow outcrop extensively throughout the Property. Mineralization in the Pickhandle Formation occurs as discrete veins striking generally northwest. In the Barstow Formation, mineralization occurs as veinlet stockworks and disseminations. Veins are composed of similar minerals including barite, jasperoid/chalcedony, oxides, and sulphides. Near surface veins exposures are often oxidized, enriching the silver grade with embolite, chlorargyrite, cerargyrite, and native silver. Alteration dominantly consists of silicification (chalcedony and jasperoid) and patchy propylitic alteration. Potassium feldspar alteration is noted in the Barstow Formation associated with mineralization. Mineralization at Waterloo is interpreted to be epithermal precious metal vein-type and stockwork type deposit. Fluids were focused along detachment faults and bedding planes of the Barstow Formation. The timing of mineralization (15-20 ma) lines-up with a period of subduction and extension in the region.

Modern exploration on the Property by Asarco and Pan American from 1964 to 2013 has consisted of geological mapping, geochemical sampling, trenching and drilling. A total 58,365.78 ft (17,789.62 m) in 255 RC and diamond drillholes has been completed historically at Waterloo. The historical drilling identified high-grade silver mineralization within the Barstow formation and provided valuable geological information on the Property. The high-grade intercepts drilling indicates the importance of faults and lithological contacts as conduits for mineralized hydrothermal fluids at Waterloo, with historical high-grade intercepts associated with faulting structures.

Asarco calculated a mineral reserve from the historical drilling, yielding a silver-barite mineral resource of 37.2 million (M) tons (33.9 M tonnes) grading 2.71 opt (92.9 g/t) Ag for a total of 100.9 M ounces (oz) of contained silver. The initial historical reserve estimate was calculated by Asarco in 1968, followed by a computer reserve estimate in the late 1970's. The reader is cautioned that this reserve estimate is



historical in nature and the authors of this Technical Report are not treating it, or any part of it, as a current mineral reserve, therefore it should not be relied upon.

An internal resource was calculated by Pan American based on the results of their 2012 drilling program, along with validated historical data from Asarco. The resource yielded a 101 million ounce silver deposit with an average grade of 93 g/T at a cutoff grade of 1.5 opt (~42 ppm). The reader is cautioned that this resource estimate is historical in nature and the authors of this Technical Report are not treating it, or any part of it, as a current mineral resource, therefore it should not be relied upon.

The authors conducted an on-site inspection of the project on February 9, 2021. During the site visit, the QPs conducted a general geological inspection of the Waterloo area, including checking the formations, lithologies, and mineralization. This effort was limited by the short duration of the site visit and by the lack of road access to the Voca and Waterloo areas of the project. Regardless, eight surface samples were collected on the Property from the Barstow and Pickhandle formations and mineralized zones. Samples were submitted for assay to Hazen Research Inc. in Golden, Colorado, USA. The samples collected from road cuts, outcrops, and mine spoil piles contained limited silver at the surface and confirmed the presence of silver mineralization at the Property within the Barstow and Pickhandle Formations.

The Property is situated in a mining-friendly county in California and is in a country with low political risk. California has several operating mines in San Bernardino county including Castle Mountain (gold) and Mountain Pass (Rare Earth Ores). Kore mining's Imperial project is relatively nearby, as is the Mesquite mine (owned by Equinox Gold). The Waterloo Property is well-suited in terms of infrastructure and is in proximity to road, rail, electrical energy, natural gas and telephone services.

17.1 Risks and Uncertainties

Permitting and development challenges remain. In the opinion of the authors, in order to mine, the Project will require a full Environmental Impact Statement ("EIS") under the National Environmental Policy Act ("NEPA"). Exploratory drilling will also require permits from State and Federal entities. These permits are significantly easier to acquire. GRE estimates that exploration permits will take about the same time as planning and mobilizing the drilling program. Water for the drilling program will likely be provided by truck from nearby water providers.

Prior to mining, the site must find a viable water resource for mineral processing and mining and will have to invest in a program to protect the Mojave Desert tortoise. In addition, there is a historical mineral resource on the Property that has not been confirmed. It is uncertain whether future work will lead to a current mineral resource estimate for the Project.

While San Bernardino county is a mining-friendly jurisdiction, California in general is not (when compared to neighboring Nevada). There is risk of delay and complication in the acquisition of state permits. Furthermore, California has a pit backfill law which may substantially increase reclamation costs.

In addition to the risks and uncertainties mentioned above, the Property is subject to the typical external risks that apply to all mineral exploration projects, such as changes in metal prices, availability of



investment capital, changes in government regulations, community engagement and general environmental concerns. The authors are unaware of any unusual risk factors, other than the ones mentioned above and risks normally associated with mineral exploration, that might affect future exploration work and potential development of the Property.

18.0 RECOMMENDATIONS

Historical exploration has identified significant silver mineralization within the Property. Therefore, an aggressive exploration program is warranted. The Property is high priority for follow-up exploration

The exploration should include but not be limited to the following phased recommendations:

Phase 1: The publication of a revised Waterloo resource statement based on the historical data. This effort would rely heavily on the Pan American Silver unpublished resource (see Section 6.5.1) but would be validated by the new Qualified Person and re-modeled based on the requirements of NI 43-101. This effort will include re-assay of stored samples, core inspection of prior core, field verification of drilling monuments, review of prior sample QA/QC methods, and hole twinning with new drilling. An NI 43-101 compliant resource reporting 100M plus ounces is a realistic possibility and would be a firm foundation for Stronghold Silver's resource base going forward.

Meanwhile, it will be necessary to acquire the necessary claim transfers, land acquisitions, permits, and approvals for an exploration and development program. It is essential to start the permitting effort immediately upon intent to develop. Due to the mix of patented and unpatented mine claims, and due to the size of the project, the project will require a full Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA).

Drilling should prioritize the validation and advancement of the Waterloo resource. In-fill drilling to convert inferred to measured and indicated resources and twinning holes to validate the data should be high priority.

Historical drilling at Waterloo is valuable data with respect to a mineral resource estimation moving forward. More specifically, the recommended program should include but not be limited to:

- Verification of previous holes locations.
- Checking existing core and RC samples.
- Airborne Lidar and Magnetics.
- Taking random duplicate samples from existing core and RC samples.
- Checking assay from existing hole samples (RC and DH).
- Verification of existing assay database.
- Twinning historical drill holes to confirm analytical data (16 holes or ~ 1,600 m; Figure 18.1).
- Deep drilling to test mineralization where historic drill holes ended in mineralization (19 drill holes or approx. 1,900 m; Figure 18.1).
- Infill drilling along sections, utilizing existing access (40 drill holes or approx. 4,000 m; Figure 18.1). Including earthworks.
- Metallurgical test work.

Phase 2 (Contingent on Phase 1):

- New additional drillings at the areas which have no data.
- Metallurgical test work.

The recommended phase 1 and 2 exploration totals \$6,500,000 (Table 18.1).



18.1 Recommendation Budget

Table 18.1 Recommended Exploration Bud	get
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Phase 1					
Activity Type	Cost				
Airborne Geophysics (Magnetics and Lidar)	\$500,000				
Airborne Interpretation, quality control and Inversions	\$50,000				
Mapping and Sampling	\$350,000				
Data Compilation	\$50,000				
Delineation Drilling – 7,500m @ \$240/meter	\$1,800,000				
Geological Studies	\$50,000				
Analytical (10,000 samples @ \$40/sample)	\$400,000				
Earthworks	\$100,000				
Environmental	\$150,000				
Permitting	\$100,000				
Metallurgical Studies	\$200,000				
Updated 43-101 Report & Resource	\$150,000				
Phase 1 Activities Subtotal \$4,000,000					



Phase II				
Activity Type	Cost			
Follow Up Drilling – 5000m @ \$240/meter	\$1,200,000			
Geological Studies	ical Studies \$60,000			
Analytical \$240,000				
Earthworks	\$50,000			
Environmental	\$150,000			
Permitting				
Metallurgical Studies				
Updated 43-101 Report & Resource				
	Phase 2	\$2,200,000		
	\$6,200,000			
	\$300,000			
	Grand Total	\$6,500,000		





Figure 18.1 Proposed drillholes for the Waterloo Property



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20.0 Certificate of Qualified Person

I, Hamid Samari, PhD, of 600 Grant St., Suite 975, Denver, Colorado, 80203, the co-author of the report entitled "NI 43-101 Technical Report, Waterloo Project, California, USA" with an effective date of May 6th, 2021 and an issue date of May 12th, 2021 (the "Technical Report"), DO HEREBY CERTIFY THAT:

- 1. I am currently employed as senior geologist by Global Resource Engineering, Ltd.
- I am a graduate of Azad University, Sciences and Research Branch, Tehran and received a PhD in Geology-Tectonics in 2000 and I am a graduate of Beheshti University, Tehran and received a MS in Geology-Tectonics in 1995 MS and I am a graduate of Beheshti University, Tehran and received a BS in Geology in 1991
- 3. I am a Qualified Professional in the United States from the Mining and Metallurgical Society of America (MMSA) with special expertise in Geology with membership number 01519QP
- 4. I have practiced area of geology, mining, and civil industry for over 20 years. I have worked for Azad University, Mahallat branch as assistant professor and head of geology department for 19 years, for Tamavan consulting engineers as senior geologist for 12 years, and for Global Resource Engineering for nearly four years. I have worked on geologic reports and resource statements for silver and gold deposits in the United States and Latin America. This includes epithermal silver deposits in Peru, gold deposits in Nevada and Utah, and mixed precious metals deposits elsewhere in the Western Hemisphere.
- I have read the definition of "qualified person" set out in National instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6. I visited the Waterloo Property on February 9, 2021 and conducted a short field reconnaissance of the Waterloo site. This visit focused on the Burcham mine area. I checked prepared geologic maps including formations, lithologies, structures, and mineralization within the property. A few samples of potentially mineralized outcrops and spoil piles were collected for assay sampling.
- 7. I am responsible for Sections 7 to 12, and contributed to 1, 17, 18, and 19.
- 8. I have not previously worked on the Waterloo Property.
- 9. I am independent of Stronghold Silver as described in section 1.5 by National Instrument 43-101.
- 10. I have read National Instrument 43-101 and Form 43-101F1 and confirm the sections of the Technical Report for which I am responsible (as listed above) have been prepared in compliance with that instrument and form.
- 11. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information required to be disclosed to make the report not misleading.

Hamid Samari, PhD

"Hamid Samari" Director of Geology Global Resource Engineering, Ltd. Denver, Colorado Date of Signing: May 12, 2021



Certificate of Qualified Person

I, J. Larry Breckenridge, P.E., of 600 Grant St., Suite 975, Denver, Colorado, 80203, the co-author of the report entitled "NI 43-101 Technical Report, Waterloo Project, California, USA" with an effective date of May 12, 2021 and an issue date of May 6, 2021 (the "Technical Report"), DO HEREBY CERTIFY THAT:

- 1. I am currently employed as principal environmental engineer by Global Resource Engineering, Ltd.
- 2. I am a graduate of Dartmouth College with a degree in Engineering Modified with Environmental Science (BA) and from the Colorado School of Mines with a Masters' degree in Environmental Engineering.
- 3. I am a Qualified Person under NI 43-101 because I am a registered Environmental Engineer in the State of Colorado, USA, No. 38048.
- 4. I have practiced area of water management, geochemistry, and environmental management -exclusively for precious and base metals projects for over 25 years. I have worked with Global Resource Engineering in my same role for the last 12 years. I have participated in the permitting process for numerous mines in the United States and in Latin America. I have evaluated geochemical risk for precious metals projects and also performed water availability studies. My most-relevant experience (similar to Waterloo) has been the Corani project, a large-tonnage, low-grade silver development project in Peru, which was GRE's flagship client for four years. For this project, I worked geochemistry, mine water management, pit dewatering, and environmental on compliance/permitting.
- I have read the definition of "qualified person" set out in National instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- 6. I visited the Waterloo Property on February 9, 2021 and surveyed the site for potential environmental issues, water availability, and geochemistry risks. I supported Dr. Samari as required.
- 7. I am responsible for Sections 4-6, and contributed to 1, 2, and 15-19.
- 8. I have not previously worked on the Waterloo Property.
- 9. I am independent of Stronghold Silver as described in section 1.5 by National Instrument 43-101.
- 10. I have read National Instrument 43-101 and Form 43-101F1 and confirm the sections of the Technical Report for which I am responsible (as listed above) have been prepared in compliance with that instrument and form.
- 11. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information required to be disclosed to make the report not misleading.

Mr. J. Larry Breckenrdige, P.E.

"J Larry Breckenridge" Principal Environmental Engineer Global Resource Engineering, Ltd. Denver, Colorado Date of Signing: May 12, 2021

