

FACT SHEET

(pursuant to Nevada Administrative Code [NAC] 445A.401)

Permittee Name: **Gold Standard Ventures Corporation**

Project Name: **North Bullion Project—Rapid Infiltration Basin**

Permit Number: **NEV2014105 (New Permit 2014)**

A. Location, Site Access, and General Description

Location: Gold Standard Ventures Corporation (GSV) is the Permittee for the North Bullion Project—Rapid Infiltration Basin (RIB). The project is located in southwest Elko County, Nevada, approximately 14 miles southeast (by air) of the town of Carlin and 23 miles southwest (by air) of the town of Elko, in the historic Railroad (also referred to as the Bullion) Mining District.

The RIB, collection sumps, and associated conveyance pumps, pipes, and hoses are located within portions of Sections 27, Township 31 North, Range 53 East, Mount Diablo Baseline and Meridian (MDB&M).

The purpose of the RIB is to manage water generated from the Permittee's exploration drilling activities by re-introducing the water into the local groundwater basin. Water Pollution Control Permit (WPCP) NEV2014105 authorizes the Permittee to collect, convey, and infiltrate up to one million gallons of excess water generated per day that meets background groundwater quality and not consumed for any other uses on site into the RIB.

Site Access: Proceed on Interstate-80 (I-80) westbound to "Exit-279, West Carlin/I-80 Business/State Route-278 (S.R.-278). Proceed south on S.R.-278 approximately 14.5 miles to Ferdelford Creek Road. Turn left and proceed east then northeast along Ferdelford Creek for a distance of 4 miles and then turn right crossing Ferdelford Creek and head in a southeasterly direction for approximately 2.7 miles. Veer right at the fork in road and continue for 0.6 miles to a second intersection. Veer right at fork in road and continue for approx. 1.6 mi to the North Bullion Project RIB.

General Description: The Permittee has undertaken a drilling and minerals exploration program to assess the extent and variability of gold mineralization at the North Bullion Project site. At least 45 sites are proposed for exploration drilling. Once drilling is completed at a particular site, all equipment will be removed and each site reclaimed pursuant to the approved reclamation plan.

In July of 2013, GSV was granted a Temporary Discharge Permit (TDP) TNEV2013446-TR by the Bureau of Water Pollution Control (BWPC), authorizing the discharge of up to one million gallons per day (gpd) of waters generated from exploration activities at the North Bullion Project site.

The expired Temporary Discharge Permit (TDP) allowed for the discharge of up to 1.0 million gallons per day (gpd) over a period not to exceed 180 days. Pursuant to the TDP, water encountered during drilling activities is diverted to excavated sumps, dispersed overland, or directly pumped into an infiltration basin.

With the anticipated five-year timeframe of exploration activities at the Project site, long-term water management is necessary. Since there are no regulatory mechanisms authorizing the renewal or extension of Temporary Discharge Permits, the Permittee submitted on 11 February 2014, an application and support documentation to the Bureau of Mining Regulation and Reclamation (BMRR) for the design, construction, operation, and closure of a RIB to manage water generated from the Permittee's exploration drilling activities by re-introducing the water into the local groundwater basin.

B. Synopsis

Background: The exploration holes at the Project site are drilled into gold bearing formations to an approximate depth of 1,500 feet, and an average depth-to-water of 500 feet. Water mixed with bentonite and other environmentally acceptable compounds are used as drilling fluids and circulated around to the drill bit to cool and flush rock bits to the surface. The rock chips are collected and characterized, and the fluids are recovered and reused. In the event the exploration results are encouraging, the Permittee will formally submit a WPCP for a mining and chemical beneficiation operation.

During drilling, significant volumes of water are routinely encountered, contributing significantly to the amount drilling fluids requiring management. Initially, the Permittee utilized drill mud sumps, pursuant to TDP TNEV2013446TR. As the volume of water encountered increased, the Permittee needed to discharge excess drilling fluids generated to a RIB through a series of pumps and flexible hoses.

Rapid Infiltration Basin Design and Operation: The RIB is approximately 385 feet long by 110 feet wide by 10 feet deep, with sloped sides at 2:1 H:V; approximate capacity is 2,262,700 gallons. Drill sumps are approximately 15 feet deep by 32 feet wide by 75 feet long, with a capacity of 270,000 gallons. Each drill rig site is served by two drill sumps.

At estimated percolation rates of 20 minutes per inch on average, the sumps would infiltrate approximately 100,000 gallon per day. At the maximum drill fluids/groundwater production rate of 200 gpm, pumping transfer to the RIB from the drill sumps at an estimated 50 hours after any exploration drill intersects the aquifer. Flow-meters installed at each drill site monitor the amount of water discharged into the sumps to ensure timely initiation of pumping transfers to the infiltration basin.

Pursuant to WPCP NEV2014105, the one million gpd RIB discharge rate will remain unchanged, since it is highly unlikely that during the operation of all four exploration drill rigs, the simultaneous intersection of the aquifer would occur. The Permittee anticipates that maximum excess discharge time would be four days per drill rig for an average drill hole.

Additives to assist with drill bit lubrication and cooling are authorized for use by the Division. A best management practices plan (BMP) has been implemented utilizing sumps at each drill site to intercept fluids resulting from drilling activities. The sumps have half a foot of freeboard to intercept runoff flows and infiltrate back to groundwater with any excess water conveyed to the RIB. Straw wattles are placed at the toe of each sump to intercept potential runoff. Special attention will be paid to the sumps that have potential for overflow runoff to intercept ephemeral drainages and carry fluid outside of the project area.

C. Receiving Water Characteristics

Groundwater beneath the exploration and RIB areas ranges in depth from 410 to 500 feet below ground surface (bgs). Groundwater gradient flows from the southwest to the northeast.

Background groundwater quality is characterized by arsenic, antimony, manganese, and iron exceedences above their respective Profile I reference values, and primarily due to the complex lithology beneath the exploration and RIB areas. The lithology is comprised of younger latite crystal tuffs, and sandstones of the Oligocene Indian Hills Formation, tuffaceous mudstones and limestones of the Eocene Elko Formation, and sandstones and mudstones of the older Mississippian Chainman Formation. Formations appear to be slightly shattered to brecciated, with greater deformation occurring in Paleozoic lithologies at depths greater than 400 feet below ground surface. Alteration of the lithologies ranges from argillic (clay) alteration of the volcanic rocks to fracture-controlled barite-quartz-pyrite or carbon-pyrite alteration assemblages in the Paleozoic sedimentary rocks. Gold appears to be hosted in silicified breccias in addition to trace concentrations of arsenic, antimony, iron, and manganese.

The infiltration of drilling fluids from the drill sumps and RIB is not expected to degrade background groundwater quality any further. At a minimum, the Permittee is required to monitor and report the volume of water discharged into and into the Drill Sumps and RIB monthly, water quality of the drilling fluid discharge solution monthly, quarterly upgradient and downgradient water elevations and water quality, daily water elevation for each active Drill Sump and RIB, and the presence of mounding as a result of RIB operation.

There are a few unnamed drainages and springs on-site within Section 27. Approximately 1.5 miles to the west of the project boundary is Webb Creek; at approximately four miles from the project boundary, Webb Creek merges with

Ferdelford Creek. Approximately five miles east of the project boundary is Dixie Creek, which terminates into the Humboldt River. Murdock Spring and Cherry Spring are located an approximate half mile to the northwest from the project area.

A series of unnamed ephemeral drainages within the project area have potential to carry water/drilling fluids northeast and out of the project area to meet with Dixie Creek downstream. An ephemeral stream in the south of the project area also has potential to carry water/drilling fluids east to connect with Dixie Creek. No habitable buildings or populations of people within one mile of the project site (Section 27) were identified.

There are no domestic drinking water wells within five miles down-gradient of the project area. No wells have been recorded with the Nevada Department of Water Resources (NDWR). Stock watering wells are present within Section 27. These have been built using prior exploration drilling holes and rely on the aquifer. Their average depth to groundwater is approximately 500 feet bgs.

D. Procedures for Public Comment

The Notice of the Division's intent to issue the permit, authorizing the facility to construct, operate, and close subject to the conditions contained within the permit, is being sent to the **Elko Daily Free Press** in Elko for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing within a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected intrastate agency, the regional administrator, or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.403 through NAC 445A.406. The final determination of the Administrator may be appealed within 15 days of the decision to the State Environmental Commission pursuant to NRS 445A.605.

E. Proposed Determination

The Division has made the tentative determination to issue the proposed new permit.

F. Proposed Effluent Limitations, Schedule of Compliance and Special Conditions

Refer to WPCP NEV2014105, Section I for specific details.

G. Rational for Permit Requirements

The discharge quality must meet permit and regulatory requirements to prevent degradation of the waters of the State. Routine monitoring and inspection are required in accordance with the permit to assure the Division that no discharge is occurring that will result in degradation of the waters of the State.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 United States Code (U.S.C.) 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 Code of Federal Regulations [CFR] 10, April 15, 1985) includes nearly every bird species found in the State of Nevada.

The U.S. Fish and Wildlife Service is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with state permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife. Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances.

The Service is aware of two approaches that are available to prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (covering with netting), and 2) chemical detoxification. These approaches may be facilitated by minimizing the extent of toxic water. Methods which attempt to make uncovered ponds unattractive to wildlife are not always effective. Contact the U.S. Fish and Wildlife Service at 1340 Financial Blvd., Reno, Nevada 89502, (775) 861-6300, for additional information.

<i>Prepared by:</i>	<i>Rob Kuczynski, P.E.</i>
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