COUNTY ADMINISTRATOR'S OFFICE

PIMA COUNTY GOVERNMENTAL CENTER
130 W. CONGRESS, FLOOR 10, TUCSON, AZ 85701-1317
(520) 724-8661 FAX (520) 724-8171

C.H. HUCKELBERRY
County Administrator

September 28, 2017

William James, National Mining Expert
U.S. Army Corps of Engineers
3701 Bell Road
Nashville, Tennessee 37214-2660

Kerwin Dewberry, Forest Supervisor
U.S. Forest Service
300 W. Congress Street
Tucson, Arizona 85701

Re: **New information: Rosemont Copper Mine, Section 404 Clean Water Act**

Dear Messrs. James and Dewberry:

We appreciate the additional time and effort your agencies are taking with regard to the decisions before you. With this letter, Pima County and the Regional Flood Control District (collectively, Pima County) provide new additional information regarding the characteristics and values of the aquatic resources under your stewardship and share our concerns regarding contamination of water supplies that could be caused by the proposed Rosemont Copper Mine. Our June 6, 2017 letter to the South Pacific Division of the US Army Corps of Engineers (Corps) focused on the water supply impacts; this letter primarily concerns impacts to water quality.

A decision to issue a Clean Water Act (CWA) Section 404 permit for a modern mine carries with it the weight of geologic time. A modern mine is a landscape-level feature that opens mineralized areas to oxidation, erosion and other transformations for millennia. The Corps and US Forest Service (USFS) each have a public trust responsibility to consider, not only the potential short-term impacts of the mine, but also whether the mine design will ensure pollutants will be sequestered safely in the long-term, including long after closure.

Below we offer additional comments related to the decision of whether to issue a CWA Section 404 permit for this project and approve the Mining Plan of Operation. Our comments include responses and corrections to some of Hudbay's more questionable assertions, as well as new information representing the best and most accurate available information that should be considered as you make your decisions.

The following is a summary of key issues related to water quality that need to be considered:

1. Groundwater from the Cienega watershed appears in drinking water wells in central Tucson. Pollution resulting from the mine could impact the health of Tucson's residents.

2. Hudbay has renewed longstanding efforts to undermine water quality protections for Davidson Canyon. The State, during the designation of Davidson Canyon as an Outstanding Arizona Water (OAW), already considered those factors being rehashed by Hudbay in its opposition to the protective designation.

3. Hudbay incorrectly references stormwater data when arguing Davidson Canyon is not meeting criteria for OAWs. OAW designations rely on baseflow, not stormwater. Hudbay inappropriately references stormwater samples taken miles from the OAW reach.

4. There has been repeated reference to Barrel Canyon as ephemeral, when, in fact, lower Barrel Canyon contains an intermittent flow reach. The water quality standards for intermittent streams should be used when evaluating the effects of the mine on existing uses.

5. Observed surface water quality in Barrel Canyon and some of its tributaries exceed standards for existing uses during storm events, if not for baseflows as well. The Corps and USFS each have an obligation to protect existing uses under the CWA, whether or not those uses have been designated. Existing uses include livestock and warm-water aquatic wildlife in areas of intermittent streamflow.

6. Sediment sampling has identified the causes of copper anomalies that appeared to be emanating from the Rosemont deposit and McCleary Canyon. The effort distinguishes these anomalies from background and downstream sites.

7. Past mining activities may be contributing to the observed exceedances. These features include a former smelter site and other areas of historic mining activity defined by cultural resource surveys and Hudbay data, as well as drilling and road construction. The Corps and USFS should evaluate whether pollutants may be emanating from existing mine-related features prior to issuing permits or authorizations that could further affect water quality and existing uses.

New Information Shows Connection between Cienega Creek and Tucson Water Supply

A new publication (Eastoe and Gu 2016; (Attachment 1A) documents that the groundwater under Tucson originated from the Cienega Creek watershed. Water derived from Cienega Creek can be identified in the groundwater by the chemical signature of Permian marine sulfates that are not present in the Tucson Basin. Figure 1 below shows the spatial extent of the aquifer affected by recharge from this watershed. It extends from the Vail area to The University of Arizona campus and further down-gradient into downtown Tucson. Thus, the risks of waterborne pollutants

conveyed from the mine are not solely ecological; pollutants from mine seepage or downstream recharge would flow by gravity toward potable water supplies for Vail and Tucson.

In a *U.S. Copper Porphyry Mines Report*, *July 2012* (Attachment 1B), a study of 14 active copper mines in the U.S., found that all mines had at least one failure. The majority had multiple failures including, pipeline and tailing spills, and failure to contain mine seepage. The specific mines reviewed in the report accounted for 90 percent of US copper production; 9 of the 14 mines are located in Arizona. The report concludes that mine water quality impacts from mines, are common and often result from unanticipated circumstances causing release of contaminated water. Mines in close proximity to surface and groundwater are at highest risk for water quality impact. Indeed, the Arizona Department of Environmental Quality (ADEQ) 2016 Clean Water Act Assessment shows that copper affects over 200 miles of Arizona streams, second only to selenium as a pollutant stressor in streams (Condon and Jones 2017).

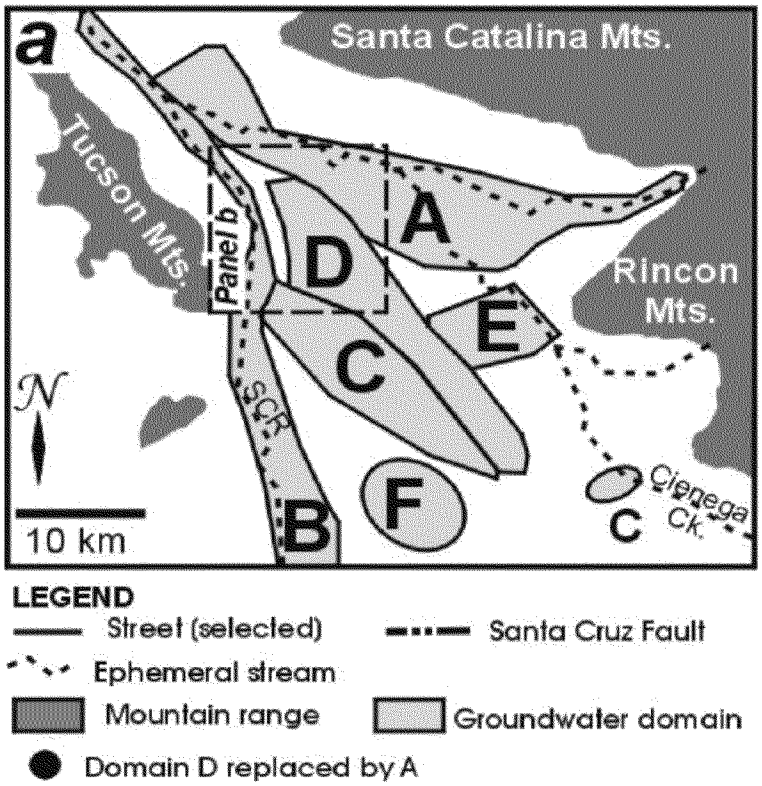

Figure 1. Reproduction from Figure 5 of Eastoe and Gu (2016) showing the contribution of water from Cienega Creek (noted by "C" on the map) to groundwater under Tucson and Vail.

Hudbay's Opposition to Outstanding Arizona Waters Designation has been Previously Evaluated by the State

The potential for the Rosemont mine to degrade water quality and diminish the amount of water available to OAWs has presented a serious concern to the Corps, as evidenced by the Colonel Helmlinger's December 2016 letter to Hudbay. We appreciate the Corps' concerns for the potential of the mine to degrade this aquatic resource, as well as downstream water supplies along Cienega Creek.

Since our last letter to you, we have become aware that Hudbay has renewed efforts to remove the state's OAW protection for Davidson Canyon. Records obtained from ADEQ indicate that in October 2016, Hudbay's Kathy Arnold asked the agency to discuss the triennial review of state water quality standards, which had been completed the previous month. In January 2017, Hudbay discussed a renewed triennial review with the Governor's representative and transmitted copies of three letters, including one from Hudbay to ADEQ requesting a process for removing or revising the OAW designations statewide (see emails and letters in Attachment 2). The January 2017 Hudbay letter requests that *"the Department undertake a review of both the rulemaking and listing process...that resulted in the listing of each of the Arizona Surface Waters classified as Outstanding Arizona Waters over the years."* In July 2017, ADEQ announced the initiation of a new triennial review, which we believe is in direct response to Hudbay's interest in reversing the longstanding designation of Davidson Canyon as an OAW.

The OAW designation helps protect the public's water supply, among other things, and has long been opposed by the mining industry. In their April 2017 presentation (Slide 13), Hudbay asserted the Davidson OAW does not meet the criteria for listing as an OAW because it includes ephemeral reaches. The previous owners of the mine attempted this argument before, and Hudbay is presenting it once again to argue for removal of the designation. This assertion clearly results from Hudbay's concerns about the stringent anti-degradation standards that OAW designation carries for both Davidson Canyon and Cienega Creek.

The Davidson Canyon OAW designation was approved by ADEQ in December 2008 after more than five years of informal and extensive stakeholder meetings. Additionally, the Davidson Canyon OAW was subject to the formal rule-making process with the Governor's Regulatory Review Commission. Attachment 3 documents some of the mining industry's issues and objections raised in 2008 during the deliberation process, including the same ephemeral streams issue Hudbay again raised in their April 2017 presentation. ADEQ granted the OAW designation in 2008 after considering this issue and the extensive input of the mining industry representatives, as well as other stakeholders.

Attachment 3 also contains excerpts from the Notice of Final Rulemaking dated December 2008 in which ADEQ established Tier 3 anti-degradation standards and other water quality protections that apply to OAWs. Explaining the purpose of these standards, the Notice states, *"Tier 3 maintains and protects existing water quality in Outstanding Arizona Waters (OAWs)."* (*Notices of Final Rulemaking* at 4713; emphasis added.) The Notice explicitly addresses the connection between OAWs and the federal anti-degradation rule (40 CFR 141.12) and specifically discusses

how it relates to Davidson Canyon. The discussion of Davidson Canyon emphasizes the canyon's recreational and ecological significance, and the role the area plays in the Sonoran Desert Conservation Plan are primary reasons for the protective designation (*Notices of Final Rulemaking* at 4715.)

Hudbay Conflated Upstream Data with the Outstanding Waters in Davidson Canyon

During the April 2017 meeting with the Corps attended by your staff, Hudbay suggested Davidson Canyon is not meeting criteria for OAW designation due to water quality considerations. Note that, in making this allegation, Hudbay conflated stormwater quality exceedances measured in in two locations in Davidson and Barrel Canyons with the OAW reach downstream.

The August 2016 water quality sampling by ADEQ did not show any exceedances in the Davidson Canyon reach located on County property, where the OAW reach of Davidson begins (see the first table in (Attachment 4). Pima County staff member Julia Fonseca clarified this point with ADEQ representative Jason Sutter at the April 2017 Corps meeting. There is an exceedance for lead, highlighted in red, for a site upstream of the Barrel Canyon confluence with Davidson. This is far upstream of the OAW reach.

The OAW designation requires, and is based on, samples of intermittent or perennial base flow, not samples of sediment-laden stormwater runoff. Base flows sustain aquatic habitat and other wildlife in the OAW during the times when washes would otherwise be dry.

Stormwater inputs provide much-needed recharge to the shallow aquifer of the OAWs and can certainly affect the biological, chemical and physical integrity of the stream. However, their effects are less easily understood because they are short-lived in comparison to the intermittent base flows. Further, the quality of the infiltrated floodwaters may change with time as they pass through sediments and the root zone of riparian and aquatic systems along the stream.

Pima County Regional Flood Control District has been conducting periodic sampling of the Davidson Canyon OAW reach on our property since its designation. Base flows are of good quality and meet applicable standards. Higher quality Davidson Canyon flows comingle with the Cienega Creek flows resulting in higher quality surface water just below their confluence.

Because stormwater sampling is not required for OAW designation, such samples were not (and should not be) used to define the water quality baseline for the Davidson Canyon OAW. Because of the lack of stormwater data to provide an adequate baseline to assess impacts from upstream mining, Pima County has entered into an agreement with ADEQ to collect additional samples of runoff in the OAW reach of Davidson. ADEQ has recently installed additional automated samplers in and upstream of the OAW (see map next page for locations).

The stormwater quality samples Hudbay referred to at the April 2017 Corps meeting are derived from their DC3 sampling site, which lies over seven channel-miles upstream of the OAW (Figure 2). Pima County has prepared the figure below to show the locations and names given to various water quality monitoring locations by the operators.

DC3, Barrel Canyon and tributaries upstream of the OAW show many repeated sampling events with metal concentrations exceeding state standards, including dissolved copper and total lead in stormwater runoff (Attachment 4, Pages 5 through 14). Copper is of particular concern because this metal constituent is shown to be in solution and therefore more available for biochemical reactions.

Upstream mining should not be permitted to release more pollutants and degrade the OAW. We appreciate that Hudbay has established the DC3 monitoring site upstream of the OAW to monitor pollutants in stormwater from the watershed upstream. However, DC3 data is not relevant to OAW designation. DC3 data should not be used to denigrate the public values of the downstream OAW that were the original motivations for anti-degradation standards in the first place. Instead, the data make clear that increased disturbance from mining in those areas upstream of the OAW is likely to contribute to degradation of water quality in Barrel and Davidson Canyon.

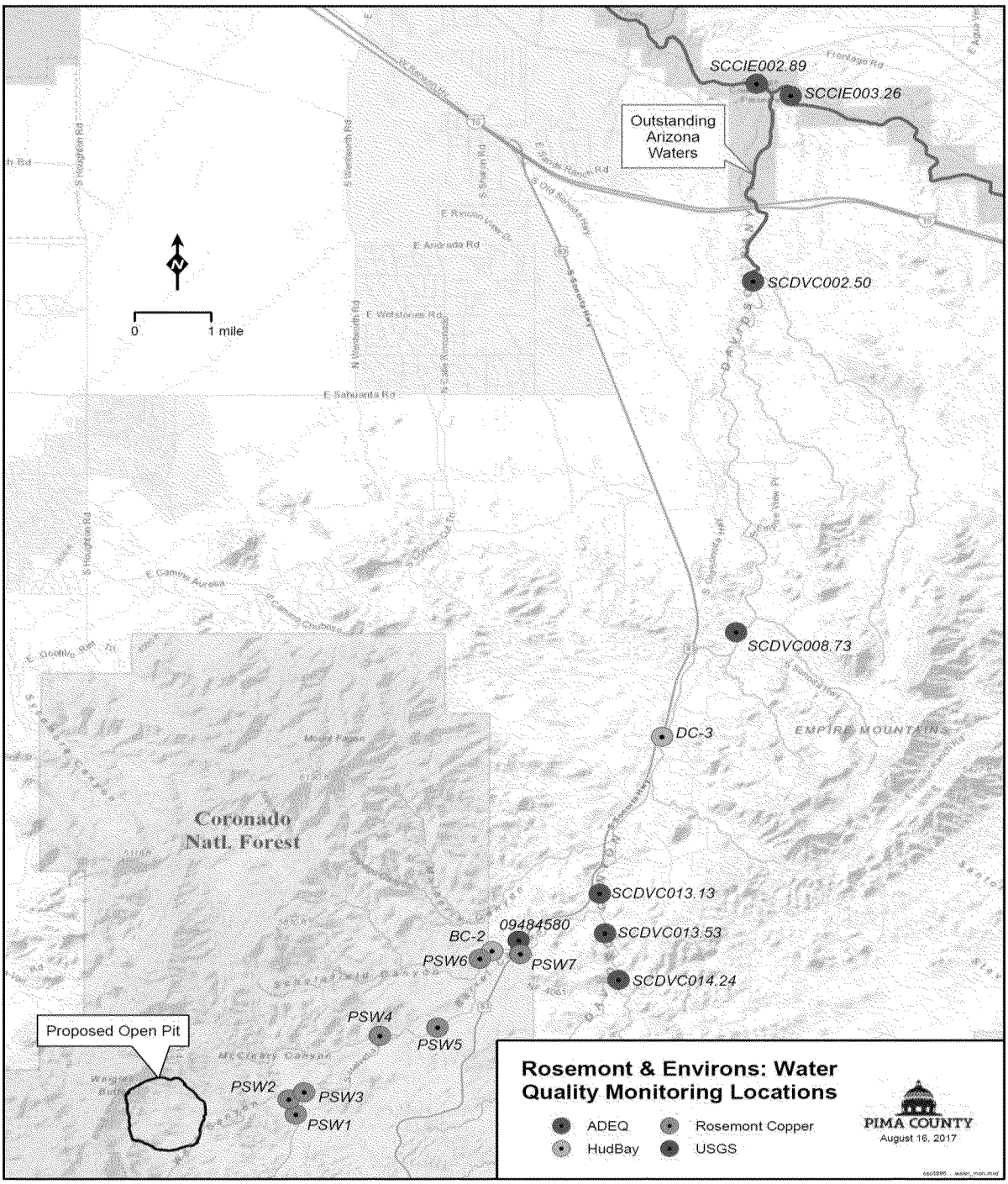

Figure 2. Location of water quality monitoring locations in relation to Outstanding Arizona Waters (Davidson Canyon and Cienega Creek).

Barrel Canyon has Intermittent Flow

At the April 2017 meeting the Corps convened, Hudbay referred to Barrel Canyon as ephemeral when, in fact, Barrel Canyon has an intermittent flow reach. The distinctions between the two are important because of their relationship to water quality protections and the potential for aquifer contamination.

U.S. Geological Survey (USGS) offers the following definitions for streamflow in relation to time (Langbein's Manual of Hydrology, after Meinzer, 1923, p. 5658, with state definitions in parentheses):

> ***Perennial.*** *One which flows continuously. (A.A.C. R18-11-101 (30) states "Perennial water" means a surface water that flows continuously throughout the year.)*
>
> ***Intermittent or seasonal.*** *One which flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow in mountainous areas. (A.A.C. R18-11-101 (25) states "Intermittent water" means a stream or reach that flows continuously only at certain times of the year, as when it receives water from a spring or from another surface source, such as melting snow.)*
>
> ***Ephemeral.*** *One that flows only in direct response to precipitation, and whose channel is at all times above the water table. (A.A.C. R18-11-101 (18) states "Ephemeral water" means a surface water that has a channel that is at all times above the water table and flows only in direct response to precipitation.)*

It is inaccurate to refer to all of Barrel Canyon as ephemeral, as is done in the Rosemont Final Environmental Impact Statement, the CWA Section 404 permit application, and the evaluations of water quality. In 2000, as part of the Sonoran Desert Conservation Plan, the Pima Association of Governments (PAG) mapped an intermittent flow reach for Barrel Canyon based on the definitions above (Attachment 5). "Barrel Spring" is noted on USGS maps, which overlaps with the intermittent flow reach as mapped by PAG.

In recent years, the USGS has more thoroughly identified the frequency, magnitude and duration of flows at USGS Gage #09484580, located at a culvert under Highway 83, upstream of "Barrel Spring" (Figure 3). The gage is located at a point within the PAG-mapped intermittent flow reach. USGS staff periodically visit the stream gage to perform maintenance and rate the accuracy of flow measurements. During visits, USGS documents actual stream flow conditions using direct measurement of flow and visual observations.

The USGS record of flow conditions is shown in Attachment 5, which documents the presence of many small flows. Their observations are important because they provide photographs and more accurate measurements than the gage. Small flows can sometimes bypass the sensors without being recorded as they move through this large, double-box culvert; and without maintenance, gage sensors can yield erroneous readings.

The table in Attachment 5 shows the days since last rain when USGS documented flows using field observation. The record shows recent events where base flows persisted as long as 14 days after rainfall (January 25, 2016). This monsoon, there were two periods with base flows for a number of consecutive days in July and August, which are shown in the graph below. Red Xs indicate the date of field observations at the gage by USGS personnel. Storm flows are shown by the sharp rises with a "tail," and the base flows by the relatively stable low flows in between the peaks.

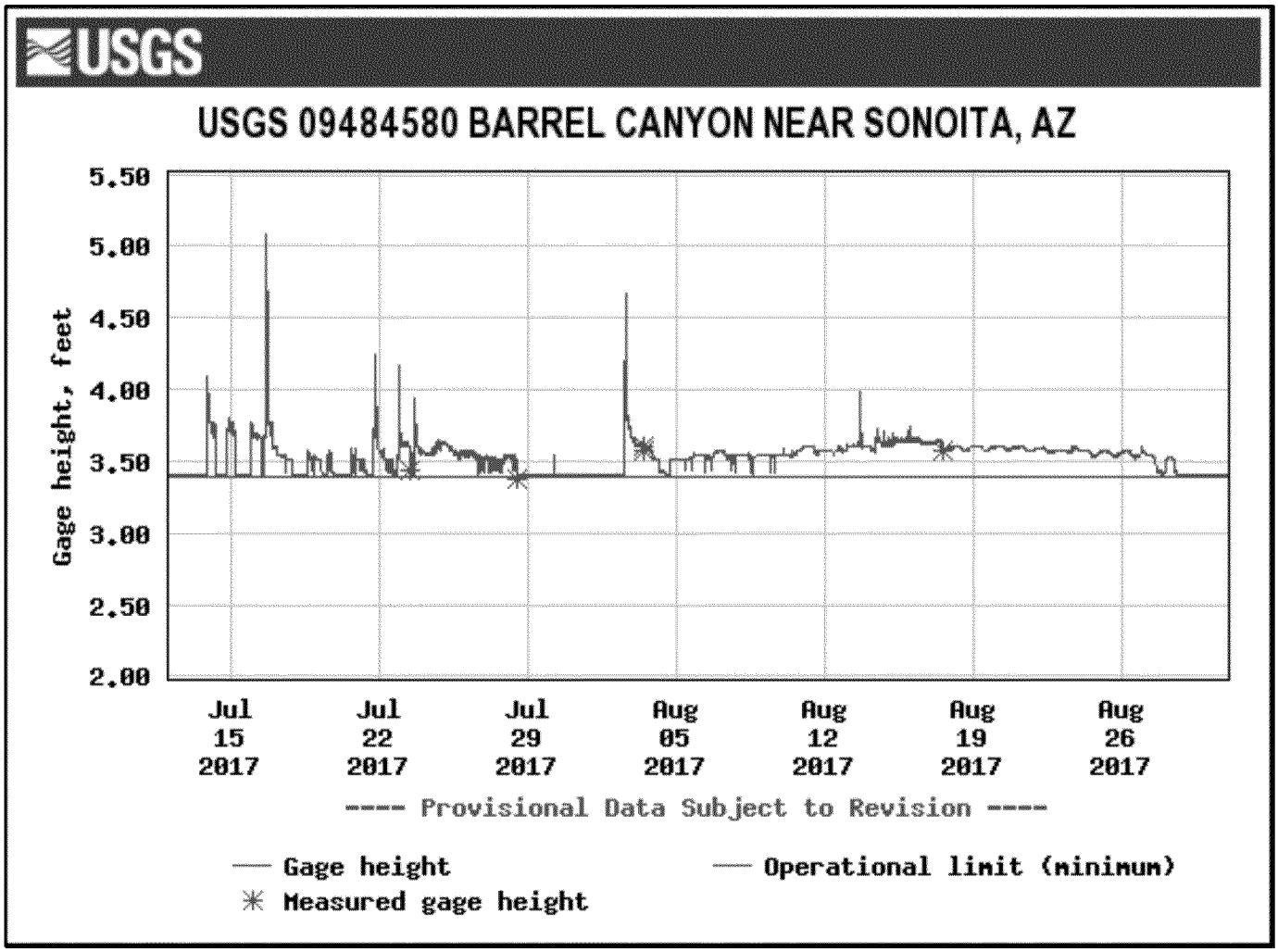

Figure 3. Peak and base flows in July and August 2017 at USGS Gage 09484580. Base flows persisted long after the last measured rain at the gage (August 3, August 15).

Figure 4. Algae in water around the pressure transducer at the Barrel gage. Algae is not found in ephemeral systems, but rather is typical of intermittent and perennial streams. Also note that the base flow is clear and very small in comparison to storm flows. The most recent rainfall (0.01 inch) at this site fell on January 16, 2016. The actual photo date is 2016/01/25, based on the field data sheet, camera metadata and confirmation with USGS (Attachment 5). USGS photograph.

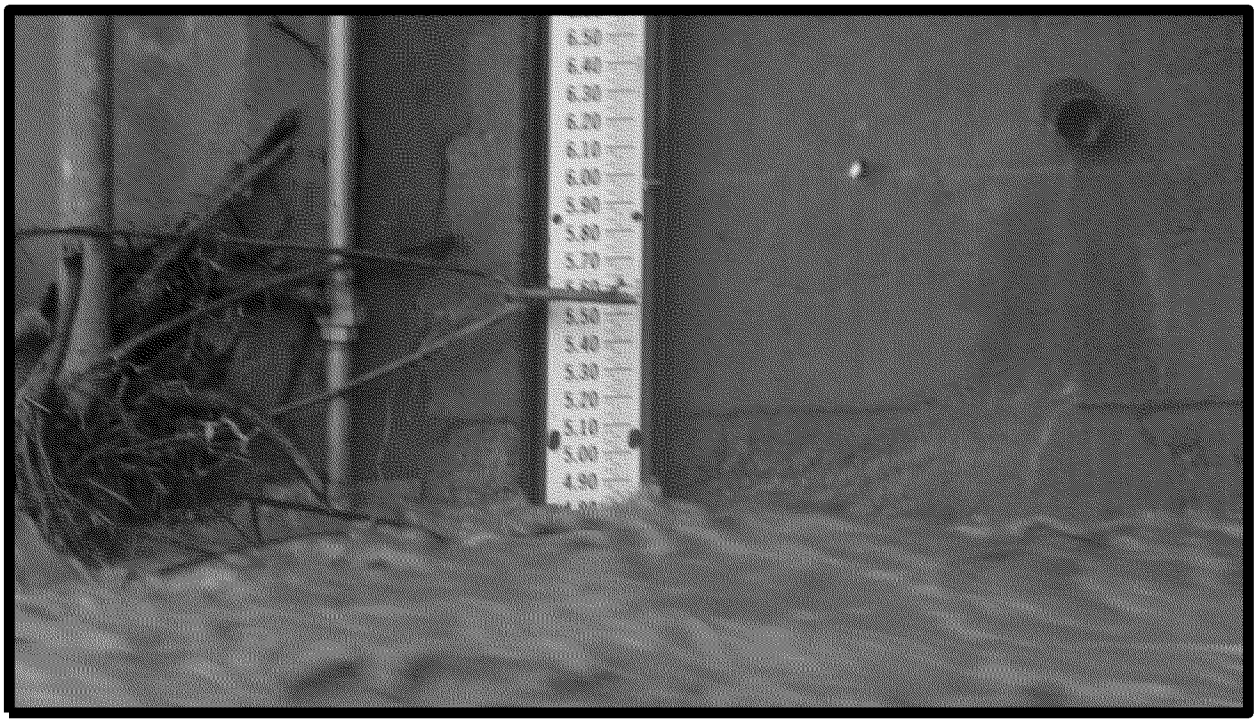

Figure 5. Flood flow taken by U. S. Geological Survey at the same location from September 11, 2013, 2:48 p.m. Note the higher elevation of the flow on the staff gage and the turbidity of the stormwater.

The water table is close to the surface in the intermittent reach, based on repeated water level measurements that have been provided to the USFS by Hudbay (2015e, see excerpts in Attachment 5. Downstream of the gage, an unnamed well (D-18-16-14dac) shows measurements that fluctuated flow less than 1 to more than 10 feet below land surface over the period 2008 to 2014. Upstream of the gage, a monitoring well installed by Hudbay (located at D18-16-15dcc) fluctuated from 2 to 3 feet below land surface during 2013 and 2014.

<u>The Clean Water Act Requires Protection of Water Uses</u>

The Rosemont area has been under continuous livestock use since the passage of the CWA. This is documented in the 1977 Draft Environmental Impact Statement, as well as the 2013 Final Environmental Impact Statement (FEIS). Intermittent flow conditions in Barrel Canyon are an asset to the livestock operation and motivated previous owners of the Rosemont Ranch to acquire surface water rights to the spring. Applicable water rights are shown in Attachment 6. A photograph documenting flow conditions of the streambed and a statement that Barrel Spring has been used for stock watering since 1886 is included in the Statement of Claimant filed by Robert Cote in 1989.

An intermittent stream is a type of surface water under A.A.C. R18-11-101(41)(c) defined in the rule as "a stream or reach that flows continuously only at certain times of the year, as when it

receives water from **a spring or from another surface source,** such as melting snow." (A.A.C. R18-11-101(25).)

Figure 6. This photograph, taken from the culvert and looking upstream of the gage on August 16, 2017, shows intermittent stream flow and numerous hoof prints in moist sand from livestock use.

Figure 7. This photo (same date as Figure 6), shows flow continuing downstream across bedrock exposures. A gate under the culvert can be opened to allow livestock to move safely under Highway 83.

Under the State of Arizona's tributary rule, designated uses of the reach do not currently include livestock use and do not acknowledge the existing livestock uses of the Rosemont Ranch. However, the FEIS does acknowledge Hudbay's intention to continue ranching, based on their representation to continue that use; and indeed, Tetra Tech's 2013 data summary acknowledges exceedances of livestock water quality standards for total copper and lead based on 2008 sampling. The Corps and the USFS each have an obligation to protect existing uses of the stream under the CWA, whether or not those uses have been designated, and this would include livestock use and warm-water aquatic life for an intermittent stream.

Furthermore, ADEQ must ensure the water quality standards adopted for upstream water bodies also provide for the attainment and maintenance of the water quality standards for downstream waters, as stated in R18-11-104F: *"In designating uses of a surface water and in establishing water quality criteria to protect the designated uses, the Director shall take into consideration the applicable water quality standards for downstream surface waters and shall ensure that the water quality standards that are established for an upstream surface water also provide for the attainment and maintenance of the water quality standards of downstream surface waters."*

Barrel Canyon Flows Exceed State Standards for Partial Body Contact and Livestock Use

To our knowledge, neither the USFS nor the Corps have evaluated the water quality data relative to their duties to protect existing uses including livestock and warm-water aquatic wildlife in Barrel Canyon. Hudbay (2015e) presented water quality data to the Forest highlighting where a total metal concentration was higher than a water quality standard established for the watershed. Seventeen water samples were collected at PSW7 between July 2012 and September 2014 (Attachment 4, Pages 9 through 14). The table did not differentiate between intermittent baseflows and storm event flows. The latter would have higher total metal concentrations due to the higher sediment load. Lead concentrations were higher than the partial body contact standard for 82 percent of the samples. Copper concentrations were higher than the agricultural livestock watering standard for 41 percent of the samples. Selenium concentrations were higher than the aquatic and wildlife (ephemeral) standard twice and one arsenic concentration was higher than the agricultural livestock watering standard.

The implication of these data is that current conditions, which include numerous mining features and land disturbance for roads, drilling and water catchment, result in elevated lead and copper concentrations. Additional land disturbance will increase the exposure of rock and soil to rainfall and stormwater runoff with the likely effect of increasing total metal concentrations. This likelihood is counter to the provisions of the CWA.

Multi-sector General Permits Do Not Change the Risks

Hudbay says that Multi-sector General Permits (MSGPs) for this project means the risk of lowering water quality is "extremely low," per Slide 19 of their "conservative water quality analysis." The fact that stormwater is regulated under an MSGP does not mean the risk is "extremely low." Rather, the permit is based on activities likely to cause a surface water quality problem that needs to be managed and tracked so ADEQ can verify Hudbay's practices will minimize impacts. A number of studies have documented that unanticipated pollution from mines occurs despite this type of state and federal regulation (e.g. Kuipers and Maest 2006 and Earthworks 2012).

The Carlota mine, located on USFS land in Arizona, serves as an example of a modern mine with unanticipated releases of pollutants despite an MSGP. In 2010, ADEQ found that *"the facility's structural BMPs (i.e. terraced slopes and surface pipes to prevent slope saturation) ...were ineffective to prevent discharges...The facility also failed to design and implement a combination of erosion and sediment control BMPs to keep sediment in place and to capture sediment to the extent practicable before it leaves the site."* Despite the MSGP, the facility sent pollutants downstream (Attachment 7).

Both Hudbay and the FEIS acknowledge that the most recent water quality results for the Rosemont area already exceed standards for certain metals. In addition, renewed ground disturbance and mining will cause the release of more pollutants, which will be carried in runoff and the 22,170 tons of additional sediment per year that has been estimated by the FEIS to come from the mine site. These pollutants will be carried downstream to Cienega Creek and ultimately to Tucson's water supply. We believe the failure to appropriately characterize the Rosemont

hydrologic environment (underestimating rainfall and runoff, ignoring the presence of the intermittent flow reach and shallow depths to the aquifer at Highway 83, contributes to the risk of lowering water quality.

Aquifer Protection Permit is Not Protective

Hudbay and ADEQ have described the Aquifer Protection Permit (APP) as providing protection for aquifer conditions. While we agree with the intent to protect aquifer conditions, the current permit authorizes discharges of pollutants to the aquifer from regulated facilities. The tailings facility, even though it is dry stack, is estimated in the permit application to discharge 8.4 gallons per minute (more than 4 million gallons per year) to the aquifer. The current APP also authorizes a heap leach operation, a fact that is at odds with the USFS Record of Decision (ROD).

For this mine, Hudbay's unrealistic assumptions about seepage and groundwater movement mean there are no plans for mitigating the effects of mine seepage other than monitoring because of the conclusion that what reaches the aquifer will not pollute the water beyond aquifer water quality standards. Furthermore, numerous activities not covered by the APP may also result in impacts to water quality standards. For example, the APP does not prevent any impacts to surface water quality resulting from groundwater that may eventually discharge at springs into surface streams such as the intermittent flow reach along lower Barrel Canyon. It also does not regulate the discharge likely to result from the mine pit lake that will form after closure because it is excluded from the permit.

It also does not regulate discharges from the existing slag pile or smelter site that lies adjacent to Wasp Canyon, a designated Water of the US located on Rosemont's private property, just upstream of its confluence with Barrel Canyon.

Finally, the APP does not restrict discharges that might occur from regulated facilities during storm events in excess of the 10-year, 24-hour event; and it does not have provision for regulating concentrations of sulfate, total dissolved solids or copper in the aquifer.

Pima County sought to require Hudbay to bond for post-closure costs to ensure funds are available in the event of a mine bankruptcy. Pima County also urged the state to seek a performance bond for reclaiming the dry stack tailings facility. Instead, ADEQ exercised its discretion to accept a surety bond based on a "closure strategy" rather than a detailed closure plan. Final closure plans and costs will be determined by the state only when Rosemont notifies ADEQ of its intent to close the mine, at which time there is no guarantee of fund availability. This is another risk factor that leaves existing uses and downstream populations vulnerable to impairment.

Barrel, Wasp and McCleary are Sources of Copper

A paper from the Journal of Geochemical Exploration (Hawkes 1976) documents the sources of copper anomalies in sediments tributary to Cienega Creek (Figure 8 below, from Attachment 8). The anomalous values are identified as having sources in Barrel Canyon and "old copper prospects" in McCleary Canyon. These areas have been affected by many previous mine-related activities.

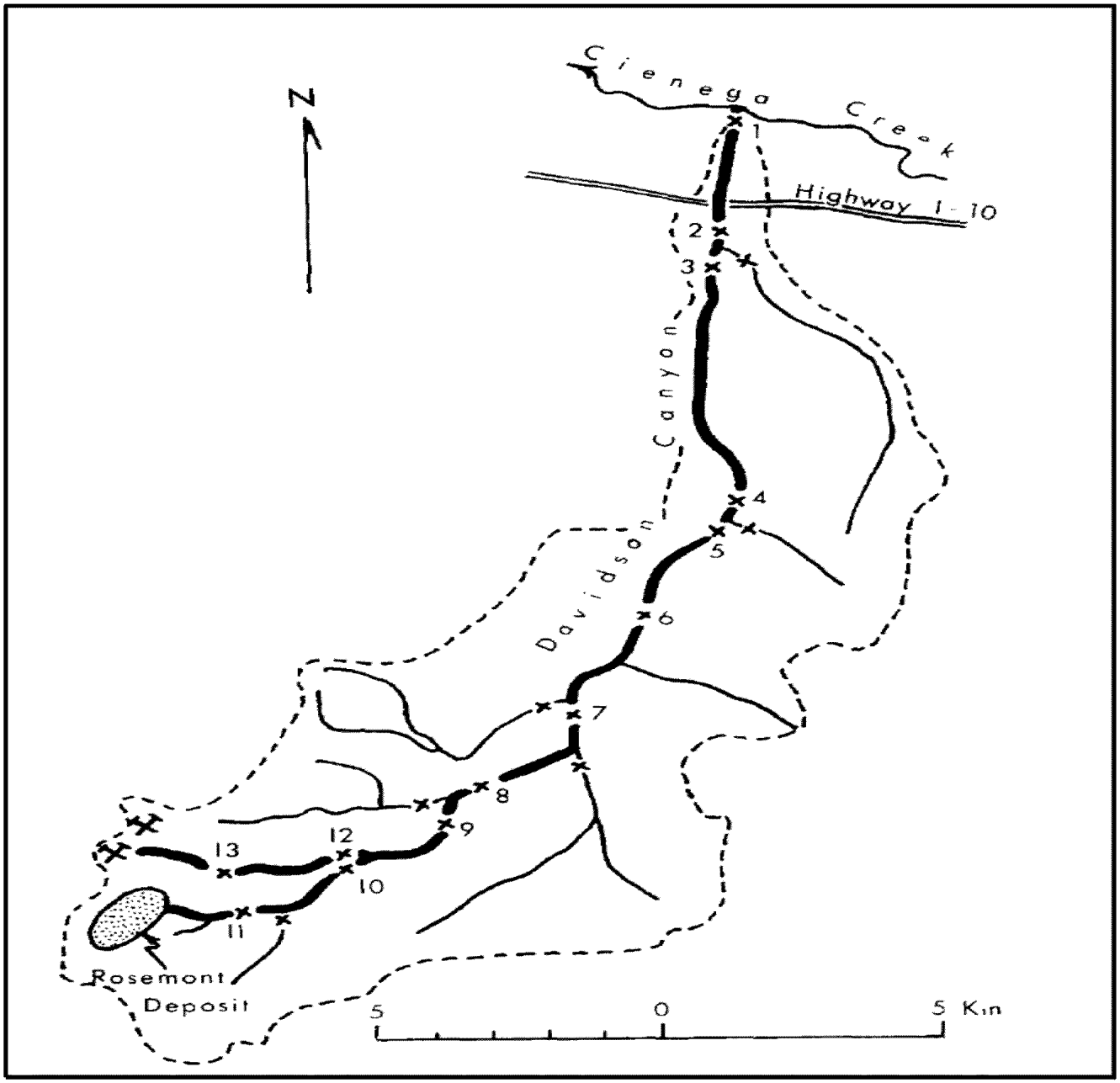

Figure 8. Sediment sampling locations in the Davidson watershed, from Hawkes (1976)

A smelter operated along Wasp Canyon just upstream of its confluence with Barrel Canyon from 1879 to 1905, and was subsequently removed. (Tetra Tech 2009 in Appendix 8, and Figure 9 below) The smelter site is exempt from APP regulations per §A.R.S. 49-250(B)(11). The APP applicant proposes to cover the slag pile and remains of the smelter site with new, "dry" tailings. We are unaware of any further site investigation that has been required by state or federal authorities.

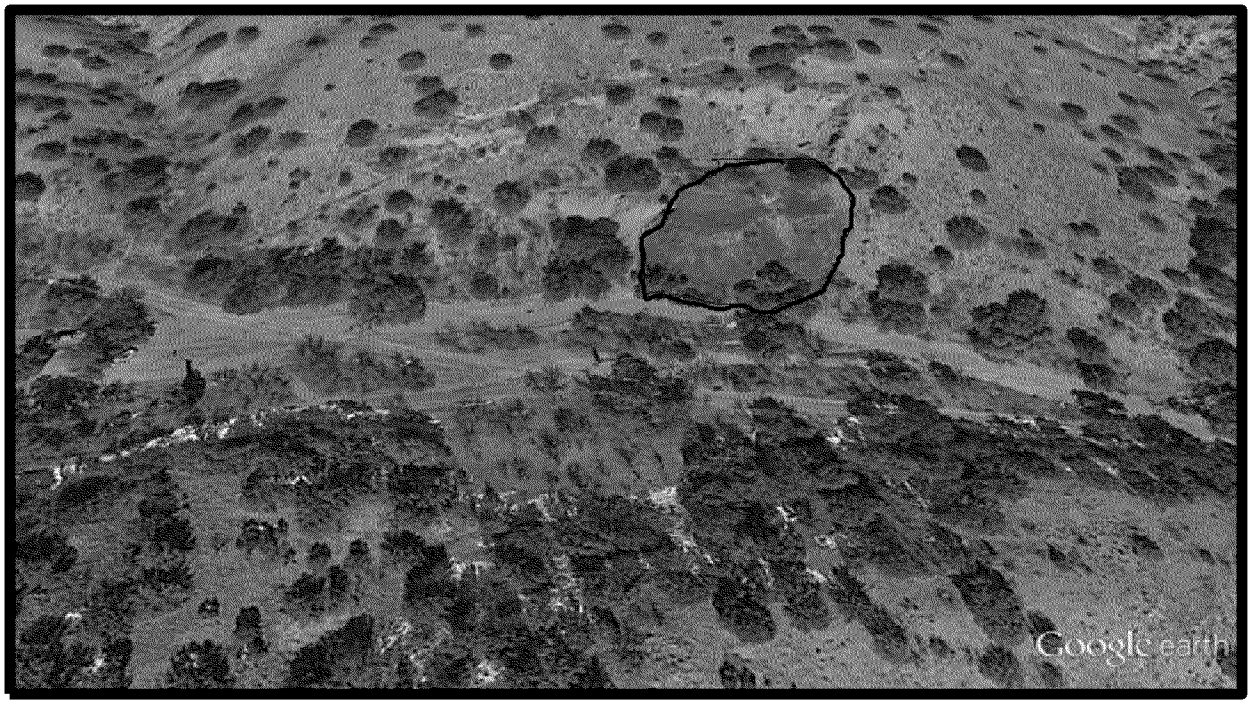

Figure 9. A photograph of the slag and former smelter site from Google Earth (outlined in black). Needs and opportunities for remediation of this site, which may be contributing to degraded water quality, have not been investigated.

Appendix 9 provides an inventory of other mining features in the Rosemont Project area such as shafts, adits, drill holes and mechanically disturbed sites, which might have enhanced the delivery of pollutants to Waters of the US to the stormwater monitoring sites that Hudbay has reported. Numerous shafts and adits that have been documented by WestLand Resources, Inc. bat researchers are mapped in Appendix 9, along with areas of previous disturbance from Rosemont's geological hazards mapping.

Figure 10 below compiles all of the drill holes and areas of historic mining activity from recent cultural resource documentation for the first time. Drilling of boreholes and road construction to provide access can generate finely comminuted sediments, which may be contributing pollutants to runoff. Historic mining district activities shown along Wasp and McCleary may have included ore processing or assaying activities, as well as blasting or otherwise liberating mineralized bedrock.

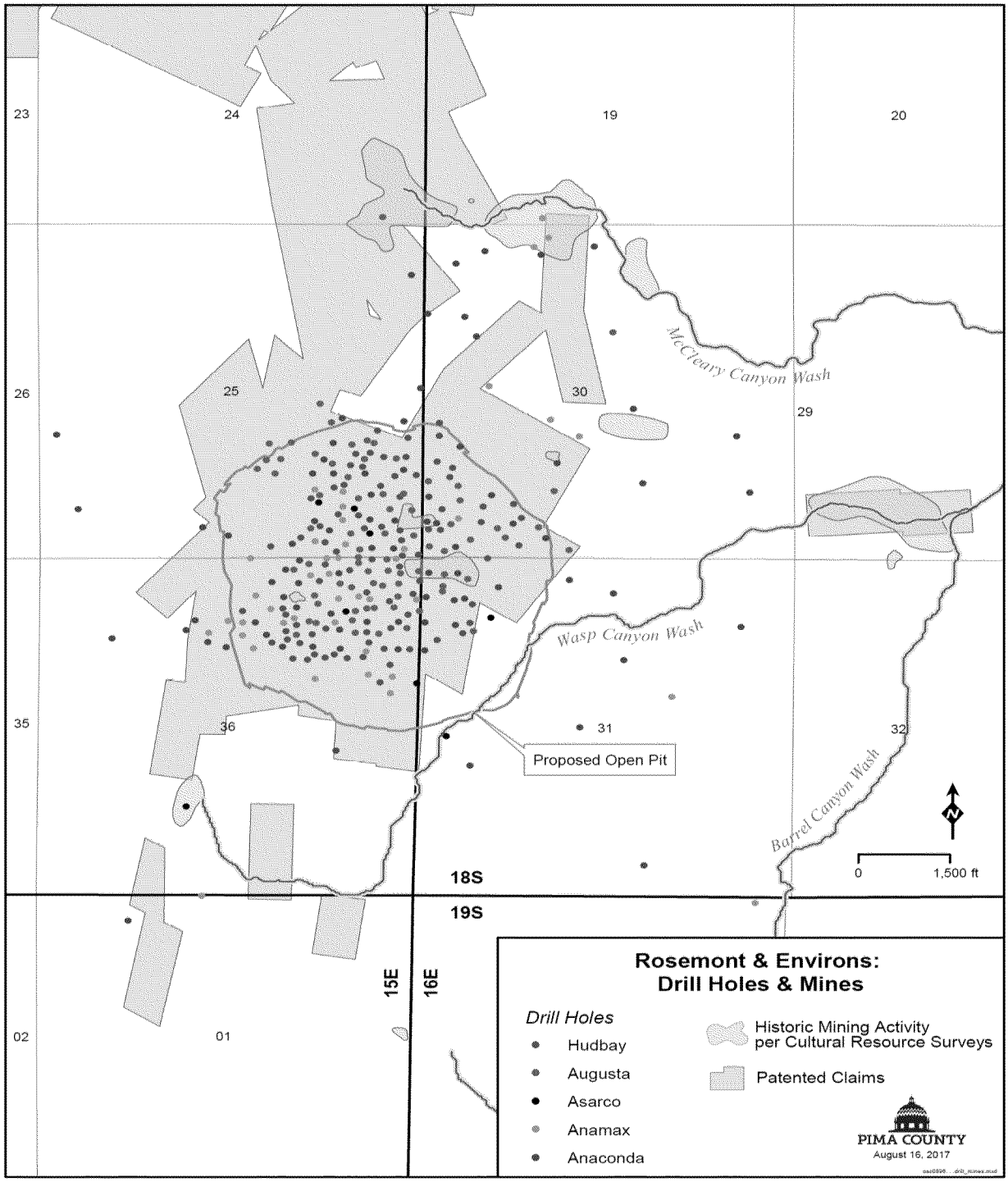

Figure 10. Map of all known drill holes and areas of historic mining activity from recent cultural resource documentation.

Finally, because prior to 1993, many holders of unpatented mineral claims performed a minimum of $100 in assessment work each year in order to justify their claims, we provide in Attachment 9 a map of Rosemont's unpatented claims, which can be seen to cover nearly the entire watershed of Barrel Canyon.

Prior to issuing permits to renew mining, the Corps and USFS should be investigating the possibility that past mine-related activities have contributed to pollution in groundwater or surface water emanating from Barrel Canyon and now detectable in stormwater. You are no doubt aware of the court decisions regarding Comprehensive Environmental Response, Compensation, and Liability Act cleanup costs. It seems prudent to clarify the situation now, rather than after dredge and fill activities begin.

Hudbay, as the owner of the patented lands, should be held accountable for investigating and remediating the slag pile, smelter site, ore leaching site and other mining features prior to renewed mining. When Hudbay acquired the property, it knew or should have known of the former smelter location and other sites that may be degrading surface water quality. It is disingenuous for Hudbay to now complain it is being held to unfair standards, rather than take responsibility for the property conditions they purchased.

In conclusion, Pima County and the Regional Flood Control District appreciate the Corps' thorough analysis of Rosemont's impacts to the Waters of the U.S. The attachments to this letter are intended to provide perspective on the significance of your decision and evaluate new information that has come to our attention since our last communication. We hope you will take the new information presented here into consideration as you make your determination to issue or deny a CWA Section 404 permit for the Rosemont mine as currently proposed.

As before, my staff are available to provide additional data and answers to any questions you may have regarding these and other matters.

Sincerely,

C.H. Huckelberry
County Administrator

Enclosures

c: Deanna Cummings, US Army Corps of Engineers
Elizabeth Goldmann, US Environmental Protection Agency
Jason Brush, US Environmental Protection Agency