TECHNICAL MEMORANDUM

Golder Associates Inc.
4730 North Oracle Road, Suite 210
Tucson, Arizona, USA 85705

Telephone: 520-888-8818
Fax Access: 520-888-8817

TO:	Dr. Casey McKeon Resolution Copper Mining LLC	**DATE:**	November 21, 2007
FROM:	John Malusa, R.G Golder Associates Inc.	**OUR REF.:**	073-92522
RE:	**WELL INSTALLATION REPORT FOR NEW POINT OF COMPLIANCE AND ALERT WELLS, WEST PLANT SITE, SUPERIOR, ARIZONA**		

1.0 INTRODUCTION

This technical memorandum presents the "Well Installation Report" for new point of compliance (POC) and alert wells prepared by Golder Associates Inc. (Golder) on behalf of Resolution Copper Mining Company LLC (RCML) as part of their area-wide Aquifer Protection Permit (APP), No. P-101703. This technical memorandum fulfills APP Compliance Schedule Items No's 6 and 7, as follows:

- **Compliance Schedule Item No. 6 -** Install new Point of Compliance (POC) wells and alert wells as identified in Section 2.4 of the APP and collect initial groundwater sample.
- **Compliance Schedule Item No. 7 -** Submit well installation report for new POC Wells and alert well (including geologic logs, construction diagrams and results of initial sampling event) in accordance with APP section 2.7.4.4.

A work plan for the new POC Wells and the new alert well was prepared by Golder (Golder, 2006) and submitted to the Arizona Department of Environmental Quality (ADEQ). The groundwater monitoring well network, consisting of new wells and existing wells, was designed to monitor potential groundwater pathways downgradient of APP regulated facilities. Based on surface elevation and projected depths to water from existing data submitted in the APP application (Golder, 2005), screen intervals were designed so that 10 feet of screen would be above the water table and 30 feet of screen would be below the water (for a total of 40 feet of screen).

The estimation of the depth to groundwater at the proposed 500 Yard POC Well was not straightforward, because of the change from the basin fill hydrologic regime (i.e., the Gila Conglomerate) to the bedrock hydrologic regime on the east side of the Concentrator Fault (Figure 1), a range front fault interpreted to be a hydrologic barrier. Because of the lack of

data regarding the water levels in this area and the historical mine dewatering, the estimated water level was tenuous. Consequently, an approach consisting of cuttings analysis and well installation was used to evaluate the potential for groundwater impacts from the 500 yard development rock pile.

2.0 DRILLING, SOLIDS SAMPLING, AND WELL INSTALLATION

All wells were drilled and installed by Yellow Jacket Drilling of Phoenix. A Golder geologist supervised the drilling and logged samples using methods from the American Society for Testing and Materials (ASTM) Standard Practice for Description and Identification of Soils (Visual-Manual Procedure, 1993). The well locations are identified on Figure 1, with supporting information presented in Table 1. The Arizona Department of Water Resources (ADWR) Notice of Intent and Well Drilling Reports for the wells are included in Attachment 1.

With the exception of the Smelter Pond POC Well, all wells were completed using a Speedstar 50K-CH drill rig using Air Rotary Casing Hammer (ARCH) methods. The ARCH drilling/well installation was performed between May 21 and June 5, 2007. The ARCH method utilized an 8.75-inch bit and a 10-inch drive casing. The drive casing was advanced through unconsolidated materials using a tri-cone bit, to prevent borehole caving during well construction. Because caving is not a problem in consolidated formations (i.e., Gila Conglomerate and Apache Leap Tuff, drilled with a hammer bit) and advancing a drive casing in consolidated materials can be difficult, the drive casing was not used in these conditions. With the exception of the 500 Yard POC Well that had 5-foot composite samples collected, 10-foot composite samples of cuttings were collected at all boreholes from the drill rig cyclone. Sampling frequency was increased at the 500 Yard POC Well borehole because more detail was needed in order to assess the potential existence and extent of discharge underneath the 500 Yard development rock facility. All of the samples were double bagged and archived following logging until the drilling program had been completed.

4 inch schedule 40 polyvinyl chloride (PVC) wells with 40 feet of 0.020 slot screen were completed in all of the ARCH boreholes. With the exception of the Settling Ponds 1 and 2 Alert Well, all of the wells were constructed using the same, general annular material design (Attachment 2). The annular material design at the Settling Ponds 1 and 2 Alert Well required a cement seal across the pond sediments and contact with the Gila Conglomerate, to prevent the pond porewater from migrating downward into the underlying Gila Conglomerate aquifer, the targeted aquifer.

The Smelter Pond POC Well was installed by auger drilling on January 29, 2007. An 8-inch hollow stem auger with a continuous sampling core barrel advanced by a truck mounted BK-81 rig was used to install the Smelter Pond POC Well. The auger was advanced through 12.5 feet of alluvium and then 5 feet into the Gila Conglomerate. Because of the presence of

cobbles, the continuous core sampler was only used down to a depth of 5 feet below ground surface (ft bgs). Split-spoon samples were collected below this depth. A 2 inch schedule 40 PVC well with 10 feet of screen was completed across the alluvium/Gila Conglomerate contact (approximately 6.5 feet of screen in the alluvium and 3.5 feet in the Gila Conglomerate). A boring log and as-built well construction diagram for the Smelter Pond POC Well is included in Attachment 2.

Two of the five newly installed APP wells were dry. The 500 Yard POC Well was designed to be screened across the water table in the event that water was encountered less than 150 ft bgs. Though groundwater was not encountered at this location, a well was constructed according to the specification in the ADEQ approved workplan (Golder, 2006). The second dry well, the Indian Ponds POC Well, was designed to monitor groundwater in the alluvium. Although the well was screened across the Gila Conglomerate/alluvium contact (the most likely zone to encounter alluvial water), the well was dry. This well is anticipated to have seasonal groundwater.

Three of the five newly installed APP wells encountered groundwater, but were not screened across the water table as initially designed (Golder, 2006). Depths to water were estimated for the work plan using the existing information which proved to be inaccurate. The actual water levels encountered at the Settling Ponds 1 and 2 Alert Well and the Tailings Pond 5 POC Well were approximately 80 and 90 feet higher than originally estimated, respectively. These elevated levels may be due to groundwater mounding from overlying facilities.

Determining the water levels from borehole observations at the Settling Ponds 1 and 2 Alert well locations was especially complicated because pond sediments containing porewater needed to be penetrated prior to reaching the Gila Conglomerate Aquifer. Although the drive casing prevented porewater from infiltrating into the lower portion of the borehole (which penetrated the Gila Conglomerate), some water did infiltrate the drive casing, thus making moisture observations from the cuttings useless for identifying the saturated zone. Consequently, with a lack of reliable Gila Conglomerate moisture observations, the well screen was placed at the original target interval to assure the well would produce sufficient water for sampling. Any infiltrating water was removed during development (Section 3.0).

Additional complications identifying the water table were encountered while drilling the Tailings Pond 5 POC Well. The Tailing Pond 5 POC Well borehole was advanced to a depth of 100 ft bgs and allowed to sit for four days before drilling resumed. Following this break a water level of approximately 90 ft bgs was measured. Given that the borehole was not disturbed for four days, this water level measurement was thought to represent the static water level. Consequently, the screen interval was completed from 80 to 120 ft bgs. However, after two weeks, the water level eventually recovered to approximately 70 ft bgs, 10 feet above the top of the screen interval. A combination of extremely low formation

permeability and the air rotary drilling technique was likely responsible for the misidentification of the water table depth. That combination probably depresses the water table, when advancing the borehole.

3.0 WELL DEVELOPMENT

Development consisted of swabbing the screened intervals for approximately 15 minutes and bailing the well until it was dry. The wells were drilled using the ARCH method, and they were allowed to recover for two days before being bailed dry again. This process was performed on June 4 and June 6, 2007. The auger-drilled well was developed once on February 15, 2007, (instead of twice as on the ARCH wells, using the same method. The total volume bailed for well development of each well, not including sample purging, was:

- 500 Yard POC Well – dry well,
- Indian Ponds POC Well – dry well,
- Settling Ponds 1 & 2 Alert Well – 325 gallons,
- Smelter Pond POC Well – 8 gallons, and
- Tailings Pond 5 POC Well – 110 gallons.

4.0 CUTTINGS SAMPLING AND ANALYTICAL RESULTS

Upon completion of the drilling program a subset of solid samples was selected for additional analysis. Gila Conglomerate and alluvium samples were chosen to capture spatial and material variability (i.e., variations between well location and material types). Six samples were selected and analyzed for:

- paste pH (method ASAM10-3.2),
- paste electrical conductivity (EC) (method ASA10-3),
- total metals (method SW6010B and SW7471A),
- acid-base accounting (ABA) including sulfur forms (method modified Sobek),
- cation exchange capacity (CEC), and
- x-ray diffraction (XRD).

A subset of half of the samples collected during the installation of the 500 Yard POC Well was subjected to paste pH and paste EC testing. These samples were selected to capture the spatial (i.e. vertical variability) and material variability of both the 500 Yard development rock and underlying Apache Leap Dacite Tuff (Apache Leap). Based on the screening

results (i.e., paste pH and paste EC results), three samples from the development rock and six samples from the Apache Leap were selected for additional analysis. The development rock samples were analyzed for ABA and total metals. The Apache Leap samples were analyzed for acid neutralization potential (ANP) and total metals.

All laboratory analysis of cuttings samples was performed by SVL Analytical in Kellogg, Idaho, under contract to Golder. United States Environmental Protection Agency (USEPA) Level IV laboratory reporting was requested for the total metals analysis to allow validation. Data validation was performed by Innovative Technical Solutions Inc. (ITSI) under direct contract to RCML (Attachment 3). All of the data was considered useable for the intended purposes, with the exception of one rejected non-detect mercury result from the Apache Leap (sample ID, 500 Yard 40-45).

4.1 Gila Conglomerate

Total metals analysis of five Gila Conglomerate samples indicated that iron, aluminum, manganese, and barium were the dominant metals (Table 2). The average concentrations of these metals were 11,220; 8,312; 480; and 136 milligrams per kilogram (mg/kg), respectively. There were no exceedances to the non-residential soil remediation levels (SRLs) or the minimum ground water protection limits (GPLs) noted.

Paste pH for ten Gila Conglomerate samples ranged from 7.74 to 8.47 with an average of 8.19 standard units (s.u.) (Table 3). Paste EC ranged from 0.25 to 1.78 milliSiemens per centimeter (mS/cm), with an average of 0.72 mS/cm.

ABA results for Gila Conglomerate samples indicated that only two of the five samples had total sulfur concentrations slightly above the practical quantitative limit of 0.01 percent sulfur (Table 3). The samples from the Settling Ponds 1 and 2 POC Well boreholes had a maximum of 0.03 percent total sulfur, which was present as sulfate, indicating oxidized conditions. The ANP ranged from approximately 50 to 250 tons of $CaCO_3$ per kiloton of material ($tCaCO_3/kt$) with an average of 150. Using the Price criteria (Price, 1997), the five Gila Conglomerate samples analyzed are classified as having no potential to generate acid.

The bulk mineralogy of the Gila Conglomerate was determined using XRD (Table 4). In order of abundance, plagioclase, calcite, quartz and smectite were the dominant mineral phases. Cristobalite, potassium feldspar, mica, clinoptiloite, and hematite were also detected in minor amounts ($\leq$10 percent) in the Gila Conglomerate. No sulfide or sulfate mineral phases were detected in the Gila Conglomerate.

CEC values in the Gila Conglomerate ranged from 4.4 to 40.4 milliequivalents per 100 grams (meq/g) with an average of 14 meq/g (Table 4). Increased CEC generally corresponded with the abundance of clays.

4.2 Alluvium

Total metals results in the alluvium sample were similar to the results in the Gila Conglomerate samples with iron, aluminum, manganese, and barium being the dominant metals (Table 2). Concentrations were 16,100; 15,500; 627; and 181 mg/kg, respectively. There were no exceedances to the non-residential SRLs or the minimum GPLs noted.

As with the Gila Conglomerate, ABA results of the alluvium sample indicated there is no potential to generate acid with the total sulfur content being low (0.02 percent) (Table 3). The ANP for the alluvium was 108 $tCaCO_3$/kt. Analysis of one alluvium sample produced a paste pH of 8.13 s.u. and paste EC of 2.62 mS/cm.

In order of abundance, the primary mineral phases in the alluvium sample included smectite, calcite, quartz, plagioclase, and clinoptilolite. No sulfide or sulfate mineral phases were detected in the alluvium sample (Table 4). The CEC for the alluvium sample was 34.84 meq/g (Table 4).

4.3 500 Yard Development Rock

Total metals analysis of three 500 Yard development rock samples indicated that iron, aluminum, copper, manganese, and zinc were the dominant metals (Table 2). Average concentrations of these metals were 28,613; 9,830; 2,958; 1,390; and 790 mg/kg, respectively. Two of the three samples exceeded non-residential SRLs for arsenic and one of the samples exceeded the minimum GPL for lead.

Paste pH of four development rock samples ranged from 7.28 to 8.05 s.u. with an average of 7.8 s.u. (Table 3). Paste EC ranged from 3.01 to 4.95 mS/cm, with an average of 4.38 mS/cm.

ABA results for three development rock samples indicated that total sulfur ranged from 0.15 to 1.94 percent with the concentration decreasing with depth (Table 4). In all of the samples, the majority of the sulfur is present as sulfate sulfur, indicating oxidized conditions. The ANP for the same three samples ranges from approximately 54 to 98 $tCaCO_3$/kt. Because of the relatively high ANP in the lower portions of the facility at this location, all three samples were classified as having no potential to generate acid when using the Price criteria (Price, 1997).

4.4 Apache Leap Dacite Tuff

Total metals analysis of six Apache Leap samples from a formation underlying the 500 Yard, indicated that aluminum, iron, manganese, and zinc were the dominant metals (based on average concentrations) (Table 2). Average concentrations of these metals were 12,750;

5,135; 469; and 311 mg/kg, respectively. None of the samples exceeded the non-residential SRLs or minimum GPLs.

Figure 2 shows profiles of copper, lead, manganese, and zinc concentrations with depth below the 500 Yard. These profiles suggest historical releases to the vadose zone penetrated approximately 30 to 90 feet below the contact between the development rock and Apache Leap (i.e., approximately 60 to 120 ft bgs). Because a total metals analysis was not performed on cutting samples between 30 and 90 feet below the contact, the extent of impacts in this interval cannot be positively identified.

Whether the historical impacts to the Apache Leap penetrate 30 or 90 feet does not matter because current and probable future dry conditions do not provide a transport mechanism to move metals down to the aquifer. Historical conditions probably had seepage emanating from the 500 Yard into the Apache Leap; however, this likely stopped due to the 500 Yard being closed, in order to prevent discharges as much as possible (Golder, 2007). Also, due to mine dewatering, groundwater levels are expected to stay below the zone of impacted Apache Leap.

Paste pH for 11 Apache Leap samples ranged from 7.80 to 8.55 s.u. with an average of 8.13 s.u.(Table 3). Paste EC ranged from 0.24 to 4.6 mS/cm, with an average of 1.9 mS/cm. ANP results for six Apache Leap samples ranged from 5.28 to 31.68 $tCaCO_3$/kt with an average of 17.3 tCaCO3/kt (Table 4).

5.0 INITIAL GROUNDWATER SAMPLING

Groundwater samples were collected from three of the five new APP wells on June 21, 2007. Samples were not collected from two of the new APP wells (i.e., 500 Yard POC and Indian Ponds POC) because both wells were dry. Well purging and sample collection was performed using a Grundfos Ready Flow-2 submersible pump. All sampling equipment was decontaminated using an Alconox solution followed by a distilled water rinse. Static water levels collected prior to sample purging are included in Table 1 and on the well construction diagrams (Attachment 2). Because all the wells have low yields, the wells were purged until dry while monitoring field parameters and allowed to recover for a minimum of 24 hours before sampling. Sample aliquots for dissolved metals were field-filtered using a 0.45-micron disposable filter.

The groundwater analytical suite and laboratory methods are included in Table 5. The analytical suite was the same for all wells with the exception of the addition of benzene, toluene, ethylbenzene, and xylene (BTEX) to the alert well suite. This suite is consistent with that required for new POC Wells (APP Table 4.2-1) and the Alert Well (APP Tables 4.2-2 and 4.2-3). Quality control samples included a duplicate sample from the Alert Well

(sample DS-1) and a decontamination rinseate sample (i.e., EB-1). Additionally a trip blank was added to the organic samples collected from the alert well.

With the exception of the BTEX that was analyzed by Test America in Phoenix, Arizona and the radionuclides that were analyzed by ACZ laboratories in Steamboat, Colorado, all other analyses were performed by was SVL Analytical in Kellogg, Idaho. EPA Level IV laboratory reporting was requested to allow data validation by ITSI in Tempe, Arizona (Attachment 3). All data was considered useable for the intended purposes, with the exception of the BTEX analyses, which were rejected due to an elevated sample receipt temperature.

Table 6 shows the results of the initial groundwater samples. There were no exceedances of the Arizona Aquifer Water Quality Standards (AWQS), except for gross alpha activity at the Smelter Pond POC Well.

6.0 SUMMARY

RCML installed five new wells and collected initial groundwater samples to fulfill APP Compliance Item No. 6. This technical memorandum fulfills Compliance Schedule Item No.7. The key findings include:

- Conditions Underlying the 500 Yard Development Rock Facility
  - Apache Leap underlies the 500 Yard facility (not limestone as originally anticipated); and
  - although historical impacts to the underlying vadose zone were observed, there is no transport mechanism to the groundwater because groundwater is deep and the 500 Yard was closed to prevent discharges to the extent practicable.
- Initial Groundwater Sampling Results
  - No exceedances of the AWQS were identified, except for gross alpha in the Smelter Pond POC Well. Additional sampling during the ambient monitoring period will provide further information.
  - BTEX results were all non-detect for the Settling Ponds 1 and 2 Alert well; however, results were rejected due to an elevated sample receipt temperature. Care will be taken to avoid this issue in the future. Additional sampling during the ambient monitoring period will provide further information.

7.0 REFERENCES

Golder, 2005. Aquifer Protection Permit Application, West Plant Site, Superior Mine, Superior, Arizona. Submitted to Resolution Copper Company. June 24, 2005.

Golder, 2006. Proposed Program for New Point of Compliance and Alert Wells, West Plant *Site, Superior, Arizona*. Submitted to Resolution Copper Company. August 29, 2006.

Golder, 2007. *Closure Completion Report for the 500 Yard West Plant Site, Superior, Arizona.* Submitted to Resolution Copper Mining LLC. August 2007

Price, W.A., 1997. *Draft Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia.* Reclamation Section, Energy and Minerals Division, Ministry of Employment and Investment, Smithers, B.C.

Attachments: Tables 1-6
Figures 1-2
Attachment 1 - Well Driller Reports and Well Logs
Attachment 2 - Borehole Logs and As-Built Drawings
Attachment 3 - ITSI Data Validation Reports

TABLES

TABLE 1

WELL COORDINATES, SPECIFICATIONS, AND WATER LEVELS

Well ID	Well Coordinates				Casing Diameter (inch)	Total Depth of Well (ft-bgs)	Screen Interval (ft-bgs)	Water Levels		
	Latitude	Longitude	Water Level Measuring Point Elevation (TOC) (ft-amsl)	Ground Surface Elevation (ft-amsl)				Date Measured (month/day/year)	Depth to Water (ft-btoc)	Water Level Elevation (ft-amsl)
500 Yard POC Well	33° 17' 56.9"	111° 5' 45.4"	2,998.67	2,996.10	4	140	95-135	6/20/2007	dry	dry
Indian Ponds POC Well	33° 17' 13.6"	111° 6' 53.3"	2,674.25	2,672.37	4	52	7-47	6/20/2007	dry	dry
Settling Ponds 1 and 2 Alert Well	33° 18' 1.2"	111° 6' 14.4"	2,976.20	2,974.14	4	185	140-180	6/19/2007	79.92	2,896.28
Smelter Pond POC Well	33° 17' 29.8"	111° 6' 25.5"	2,746.28	2,745.30	2	17.5	7-17	6/20/2007	7.89	2,738.39
Tailings Pond 5 POC Well	33° 17' 57.0"	111° 6' 24.5"	2,965.32	2,963.47	4	125	80-120	6/20/2007	71.05	2,894.27

Notes:
All coordinates in AZ state plane central, NAD 83
amsl = above mean sea level
bgs = below ground surface
TOC = Top of Casing
ft btoc = feet below top of casing
ft = feet

TABLE 2
TOTAL METALS RESULTS FROM CUTTINGS SAMPLES

Sample Location (depth, feet)	Sample Date	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Fluoride	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Thallium	Zinc
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Non-residential SRL		**920,000**	**410**	**10**	**170,000**	**1,900**	**510**	**65**	**41,000**	**37,000**	**NS**	**800**	**19,000**	**310**	**5,100**	**20,000**	**5,100**	**67**	**310,000**
Minimum GPL		**NS**	**35**	**290**	**12,000**	**23**	**29**	**590**	**NS**	**NS**	**NS**	**290**	**NS**	**12**	**NS**	**590**	**290**	**12**	**NS**
500 Yard Development Rock																			
500 Yard 15-20	6/1/2007	14,800	4.1	**166**	55	1.2	7.20	19.6	7,490	1.07	68,000	**513**	2,380	0.49	<1.6	13.1	< 0.43	< 0.23	1790
500 Yard 20-25	6/1/2007	5,820	1.1	**27**	81	0.85	1.30	5.0	1,130	NA	12,200	86.8	1,050	0.22	<1.3	5.0	< 0.43	< 0.23	431
500 Yard 25-30	6/1/2007	8,870	0.64	3.8	116	0.9	0.66	3.0	253	3.80	5,640	23.4	740	0.02	<0.38	3.2	< 0.43	< 0.23	150
Apache Leap Dacite Tuff																			
500 Yard 35-40	6/1/2007	12,500	0.36	2.7	152	1.2	0.41	2.7	90.1	10.9	5,150	11.8	660	0.02	<0.98	3.5	< 0.43	< 0.23	1,560
500 Yard 40-45	6/1/2007	12,400	0.63	2.4	183	1.2	0.46	2.2	121	10.8	4,870	9.1	557	---	<0.97	2.8	< 0.43	< 0.23	130
500 Yard 50-55	6/1/2007	13,800	0.6	3.8	181	1.2	0.49	3.0	140	5.32	6,380	15.4	547	0.03	<0.9	3.3	< 0.43	< 0.23	108
500 Yard 60-65	6/1/2007	12,300	0.43	1.8	144	1.3	0.22	2.2	37.4	4.09	4,550	8.0	424	0.02	<0.87	2.3	< 0.43	< 0.23	35
500 Yard 120-125	6/4/2007	11,200	< 0.33	1.6	106	0.9	0.22	3.1	12.2	2.94	4,780	5.3	311	0.20	<0.99	3.2	< 0.43	< 0.23	16.8
500 Yard 145-150	6/4/2007	14,300	0.48	1.2	132	1.0	0.21	2.7	12.6	3.07	5,080	6.2	315	0.02	<1	2.8	< 0.43	< 0.23	16.4
Alluvium																			
Indian Ponds 10-15	5/31/2007	15,500	0.35	5.9	181	1.1	0.98	10.4	34.9	6.53	16,100	15.7	627	0.06	<0.58	20.2	< 0.43	< 0.23	52
Gila Conglomerate																			
Indian Ponds 55-60	5/31/2007	16,600	0.43	8.6	247	1.2	1.10	12.0	38.2	12.6	19,400	20.2	736	0.55	<1.3	23.4	< 0.43	< 0.23	65.8
S. Ponds 1&2 100-110	5/23/2007	6,600	0.51	2.7	91.2	0.6	0.40	4.9	92.7	2.63	7,260	9.9	398	0.03	<1	3.2	< 0.43	< 0.23	43.3
S. Ponds 1&2 140-150	5/23/2007	5,140	0.52	3.4	78	0.47	0.40	3.6	98.0	2.25	7,740	17.7	532	0.03	<1.2	2.3	< 0.43	< 0.23	71
T. Pond 5 90-100	5/25/2007	1,220	0.63	6.8	133	0.55	0.71	5.4	17.8	1.92	11,300	14.5	368	0.04	<0.7	6.1	< 0.43	< 0.23	55.4
T. Pond 5 120-130	5/28/2007	12,000	0.36	5.0	130	0.54	0.66	4.9	18.0	1.86	10,400	17.8	368	0.04	<0.53	5.8	< 0.43	< 0.23	63.2

Notes:
SRL - Soil Remediation Level
GPL - Groundwater Protection Limit
NS - No Standard
NA - Not Analyzed
mg/kg - milligrams per kilogram
--- Datum Rejected
Exceeds non-residential SRL
Exceeds minimum GPL
Exceeds SRL and GPL

TABLE 3

ACID-BASE ACCOUNTING RESULTS FROM CUTTINGS SAMPLES

Sample Location (Depth, feet)	ASTM Classification	Sample Date	Paste pH	Paste EC	Sulfur				ABA Results				Acid Generating Potential
					Residual	Sulfide	Sulfate	Total	AGP	ANP	Net Neutralizing Potential	ANP/AGP	
			S.U.	mS/cm	%	%	%	%	$tCaCO_3/kt$	$tCaCO_3/kt$	$tCaCO_3/kt$	$tCaCO_3/kt$	
500 Yard Development Rock													
500 Yard 5-10	Silty gravel with sand (GM)	6/1/2007	7.87	3.01	--	--	--	--	--	--	--	--	--
500 Yard 15-20	Silty sand with some gravels (SM)	6/1/2007	7.28	4.87	0.01	0.78	1.15	1.94	24	98	73	4	**None**
500 Yard 20-25	Silty sand with some gravels (SM)	6/1/2007	8.00	4.67	< 0.01	0.04	0.23	0.27	1	54	53	43	**None**
500 Yard 25-30	Silty sand with some gravels (SM)	6/1/2007	8.05	4.95	< 0.01	< 0.01	0.15	0.15	< 0.3	98	98	651	**None**
Apache Leap Dacite Tuff													
500 Yard 30-35	--	6/1/2007	7.97	1.12	--	--	--	--	--	13	--	--	--
500 Yard 35-40	--	6/1/2007	7.80	4.60	--	--	--	--	--	--	--	--	--
500 Yard 40-45	--	6/1/2007	7.83	4.43	--	--	--	--	--	26	--	--	--
500 Yard 45-50	--	6/1/2007	7.91	3.60	--	--	--	--	--	--	--	--	--
500 Yard 50-55	--	6/1/2007	7.90	3.40	--	--	--	--	--	32	--	--	--
500 Yard 60-65	--	6/1/2007	8.38	0.62	--	--	--	--	--	12	--	--	--
500 Yard 75-80	--	6/1/2007	7.87	1.76	--	--	--	--	--	--	--	--	--
500 Yard 105-110	--	6/1/2007	8.28	0.51	--	--	--	--	--	--	--	--	--
500 Yard 120-125	--	6/4/2007	8.55	0.29	--	--	--	--	--	16	--	--	--
500 Yard 135-140	--	6/4/2007	8.53	0.24	--	--	--	--	--	--	--	--	--
500 Yard 145-150	--	6/4/2007	8.43	0.43	--	--	--	--	--	5	--	--	--
Alluvium													
Indian Ponds 10-15	Sandy silt (SL)	5/31/2007	8.13	2.62	< 0.01	< 0.01	0.02	0.02	< 0.3	108	108	722	**None**
Indian Ponds 35-40*	Sandy clay (CL)	5/31/2007	8.09	0.79	--	--	--	--	--	--	--	--	--
Gila Conglomerate													
Indian Ponds 55-60	Sandy clay (CL)	5/31/2007	8.26	0.59	< 0.01	< 0.01	< 0.01	< 0.01	< 0.3	50	50	334	**None**
S. Ponds 1&2 90-100	Poorly-graded gravel and sand (GP)	5/22/2007	8.06	0.76	--	--	--	--	--	--	--	--	--
S. Ponds 1&2 100-110	Poorly-graded sand (SP)	5/23/2007	8.14	0.96	< 0.01	< 0.01	0.02	0.02	< 0.3	193	193	1285	**None**
S. Ponds 1&2 110-120	Poorly-graded sand (SP)	5/23/2007	8.10	0.90	--	--	--	--	--	--	--	--	--
S. Ponds 1&2 140-150	Poorly-graded sand (SP)	5/23/2007	7.74	1.78	0.01	< 0.01	0.03	0.03	< 0.3	98	98	651	**None**
S. Ponds 1&2 180-190	Poorly-graded sand (SP)	5/23/2007	8.10	1.00	--	--	--	--	--	--	--	--	--
T. Pond 5 20-30	Clayey sand with gravel (SC)	5/25/2007	8.07	0.34	--	--	--	--	--	--	--	--	--
T. Pond 5 70-80	Clayey sand with gravel (SC)	5/25/2007	8.70	0.32	--	--	--	--	--	--	--	--	--
T. Pond 5 90-100	Clayey gravel with sand (GC)	5/25/2007	8.47	0.25	< 0.01	< 0.01	< 0.01	< 0.01	< 0.3	161	161	1074	**None**
T. Pond 5 120-130	Clayey sand (SC)	5/28/2007	8.22	0.28	< 0.01	< 0.01	< 0.01	< 0.01	< 0.3	254	253	1690	**None**

Notes:

* - Alluvial sample may contain some Gila Conglomerate

S.U. - Standard Units

EC - Electrical Conductivity

mS/cm - milliSiemens per centimeter

XRD AND CEC RESULTS FROM CUTTINGS SAMPLES

Sample Location (depth, feet)	Material Sampled	ASTM Classification	CEC	Quartz	Cristobalite	Calcite	K-Feldspar	Plagioclase	Smectite	Mica	Clinoptilolite	Hematite	Unaccounted
Units			**(meq/100 g)**	**%**									
Indian Ponds POC Well (55-60')	Gila Conglomerate	Poorly-graded sand (SP)	40.40	20	3*	22	6	12	22	4	10	--	<5
Settling Ponds 1 and 2 Alert Well (100-110')	Gila Conglomerate	Poorly-graded sand (SP)	6.75	9	10	15	8	41	4	2	5	2	<5
Settling Ponds 1 and 2 Alert Well (140-150')	Gila Conglomerate	Poorly-graded sand (SP)	4.40	10	9	12	8	48	2	2	5	2	<5
Tailing Pond 5 POC Well (90-100')	Gila Conglomerate	Clayey Gravel with Sand (GC)	6.27	15	4	20	4	30	6	1	15	2	<5
Tailing Pond 5 POC Well (120-130')	Gila Conglomerate	Clayey Sand (SC)	5.30	16	4	23	5	26	5	1	14	2	<5

Notes:
POC= Point of Compliance
XRD = x-ray diffraction
CEC = cation exchange capacity
meq/100 g = milliequivalents per 100 grams
* May be present
- - Not present

INITIAL WATER QUALITY SAMPLING SUITE

Parameter	Units	Requested Reporting Limit	Method
Major Ions and Miscellaneous			
Alkalinity	mg/L	---	2320B
Bicarbonate	mg/L	---	2320B
Carbonate	mg/L	---	2320B
Chloride	mg/L	---	300
Fluoride	mg/L	2	300
Magnesium	mg/L	---	200.7
Potassium	mg/L	---	200.7
Sodium	mg/L	---	200.7
Calcium	mg/L	---	200.7
Hardness	mg/L	---	calculated
Sulfate	mg/L	---	300
Total Dissolved Solids	mg/L	---	2540C
Nitrate + Nitrite (as N)	mg/L	5	353.2
Dissolved Metals			
Aluminum	mg/L	---	200.7
Antimony	mg/L	0.003	200.8
Arsenic	mg/L	0.025	200.7
Barium	mg/L	1	200.7
Beryllium	mg/L	0.002	200.7
Cadmium	mg/L	0.0025	200.7
Chromium (total)	mg/L	0.05	200.7
Copper	mg/L	---	200.7
Iron	mg/L	---	200.7
Lead	mg/L	0.025	200.7
Manganese	mg/L	---	200.7
Molybdenum	mg/L	---	200.7
Mercury	mg/L	0.001	245.1
Nickel	mg/L	0.05	200.7
Selenium	mg/L	0.025	200.7
Thallium	mg/L	0.001	200.8
Zinc	mg/L	---	200.7
Radionuclides			
Gross Alpha (including Radium 226)	pCi/L	7.5	M9310
Radium 226 and Radium 228	pCi/L	2.5	M903.1 & M904.0
Field Parameters			
pH	S.U.	---	---
Conductivity	mmhos/cm	---	---
Temperature	Degrees F	---	---
Volatile Organic Compounds (Alert Well only)			
Benzene	mg/L	0.0025	8021B
Ethylbenzene	mg/L	0.035	8021B
Toluene	mg/L	0.5	8021B
Xylenes	mg/L	5	8021B

Notes:
AWQS = Arizona Aquifer Water Quality Standard
mg/L = milligrams per liter
pCi/L = pico Curies per liter

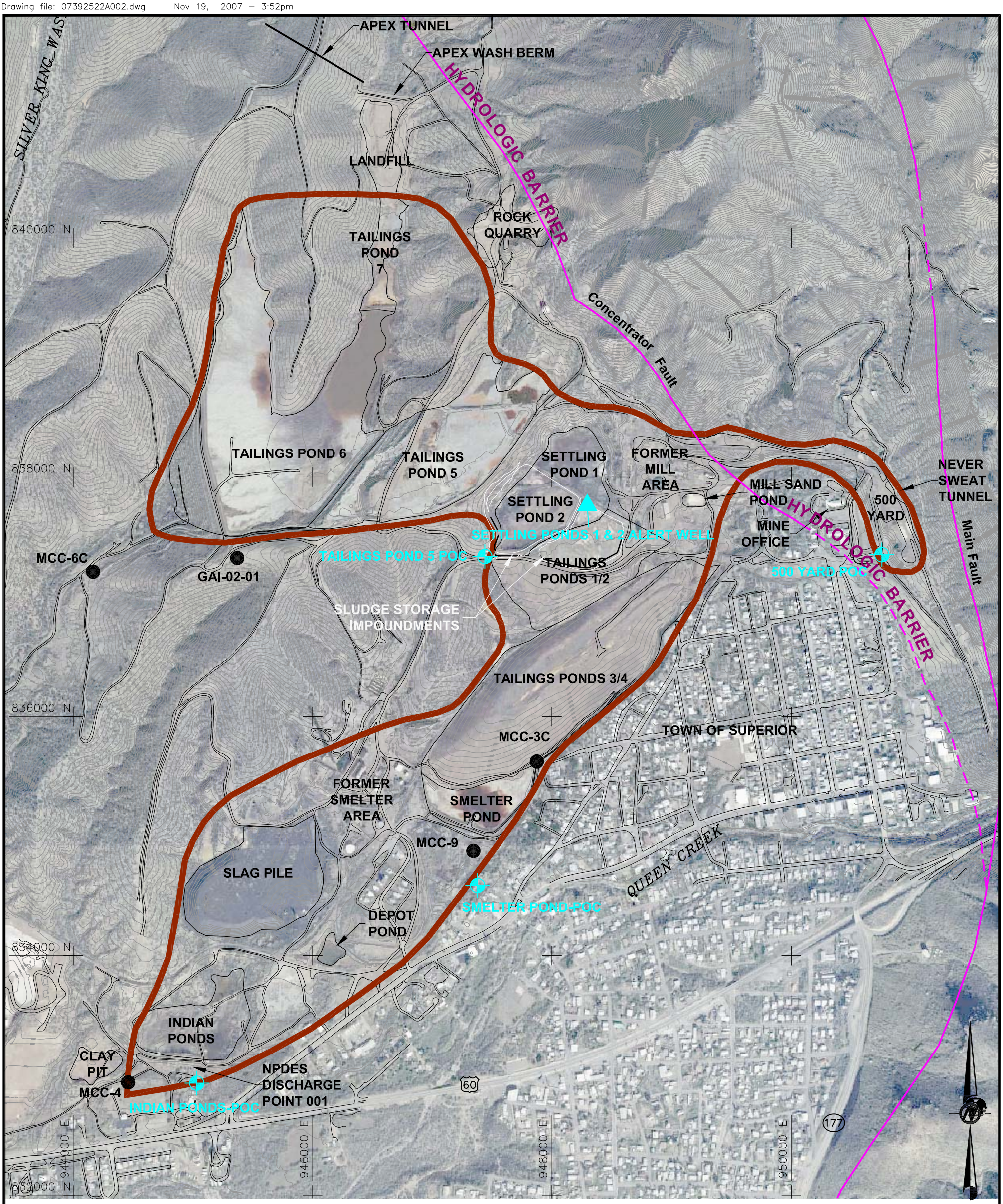
TABLE 6
INITIAL GROUNDWATER SAMPLE RESULTS

Sample Location	Sample Date	Physical Parameters and Other Constituents										Radiochemistry					Major Cations and Anions							Dissolved Metals																	
		Field Temperature	Field pH	Field Conductivity	Alkalinity	Carbonate (CO_3)	Bicarbonate (HCO_3)	Hardness	Nitrate + Nitrite (as N)	Cation/Anion Charge Balance	Measured TDS	Uranium	Gross α	Corrected Gross α	Radium 226	Radium 228	Calcium	Chloride	Fluoride	Magnesium	Potassium	Sodium	Sulfate (SO_4)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Thallium	Uranium	Zinc
		°C	S.U.	µS/cm	mg/L	mg/L	mg/L	mg/L	mg/L	%	mg/L	mg/L	pCi/L	pCi/L	pCi/L	pCi/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
					total	total	total	total	total	total	total	total					total	total	total	total	total	total	total	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved	dissolved
AWQS		NS	NS	NS	NS	NS	NS	NS	10	NS	NS	NS	NS	15*	5**		NS	NS	4	NS	NS	NS	NS	NS	0.006	0.05	2	0.004	0.005	0.1	NS	NS	0.05	NS	0.002	NS	0.1	0.05	0.002	NS	NS
Settling Ponds 1 and 2 Alert Well	6/21/2007	25.8	7.63	698	268	<1	268	115	3.01	-4.63	382	0.0136	24.0	14.9	0.16	0.76	13.5	16.0	0.58	19.7	2.62	100	64.2	<0.011	<0.00019	0.0045	0.0146	<0.0002	<0.0003	<0.0004	<0.0021	<0.0072	<0.0024	<0.0212	<0.0001	0.0073	<0.0016	0.0021	<0.00002	0.0136	<0.0007
Smelter Pond POC Well	6/21/2007	22	7.05	2500	227	<1	227	1320	1.69	-3.16	2,070	0.0078	29	**23.8**	0.57	1.4	330	77.8	0.74	120	5.81	63.4	1,167	<0.011	<0.00022	0.0033	0.0322	<0.0002	<0.0003	0.00059	<0.0021	<0.0072	<0.0024	<0.007	<0.0001	0.0024	<0.0018	0.0021	<0.00002	0.0078	<0.0011
Tailings Pond 5 POC Well	6/21/2007	28.6	7.66	410	221	<1	221	109	0.314	-1.74	240	0.0051	6.4	3.0	0.11	0.67	19.4	14.1	0.82	14.8	2.49	57.9	4.65	<0.011	<0.00069	0.0021	0.0357	<0.0002	<0.0003	<0.0004	<0.0021	<0.0072	<0.0024	0.203	<0.0001	0.0198	<0.0018	<0.0006	<0.00002	0.0051	<0.0007

Notes:
AWQS - Arizona Aquifer Water Quality Standard
Exceeds AWQS
S.U. - Standard Units
µS/cm - microSiemens per centimete
mg/L - milligrams per liter
pCi/L - picoCuries per liter
NS - No Standard
TDS - Total Dissolved Solids
* The maximum concentration for gross alpha particle activity, including Radium 226 but excluding radon and uranium, shall not exceed 15 pCi/L.
** The maximum concentration for combined Radium-226 and Radium-228 shall not exceed 5 pCi/L.

FIGURES

Drawing file: 07392522A002.dwg Nov 19, 2007 – 3:52pm



800 0 800

Scale: 1" = 800' AZC NAD83

CONTOUR INTERVAL = 10 FT.

LEGEND

- EXISTING APP WELLS
- NEW POC WELL LOCATION
- NEW ALERT WELL LOCATION
- FAULT (DASHED WHERE INFERRED)
- POLLUTANT MANAGEMENT AREA (PMA)

REFERENCES

1.) 2004 TOPOGRAPHY PROVIDED BY DARLING SURVEYING AND ENVIRONMENTAL.

PROJECT

Resolution Copper Mining

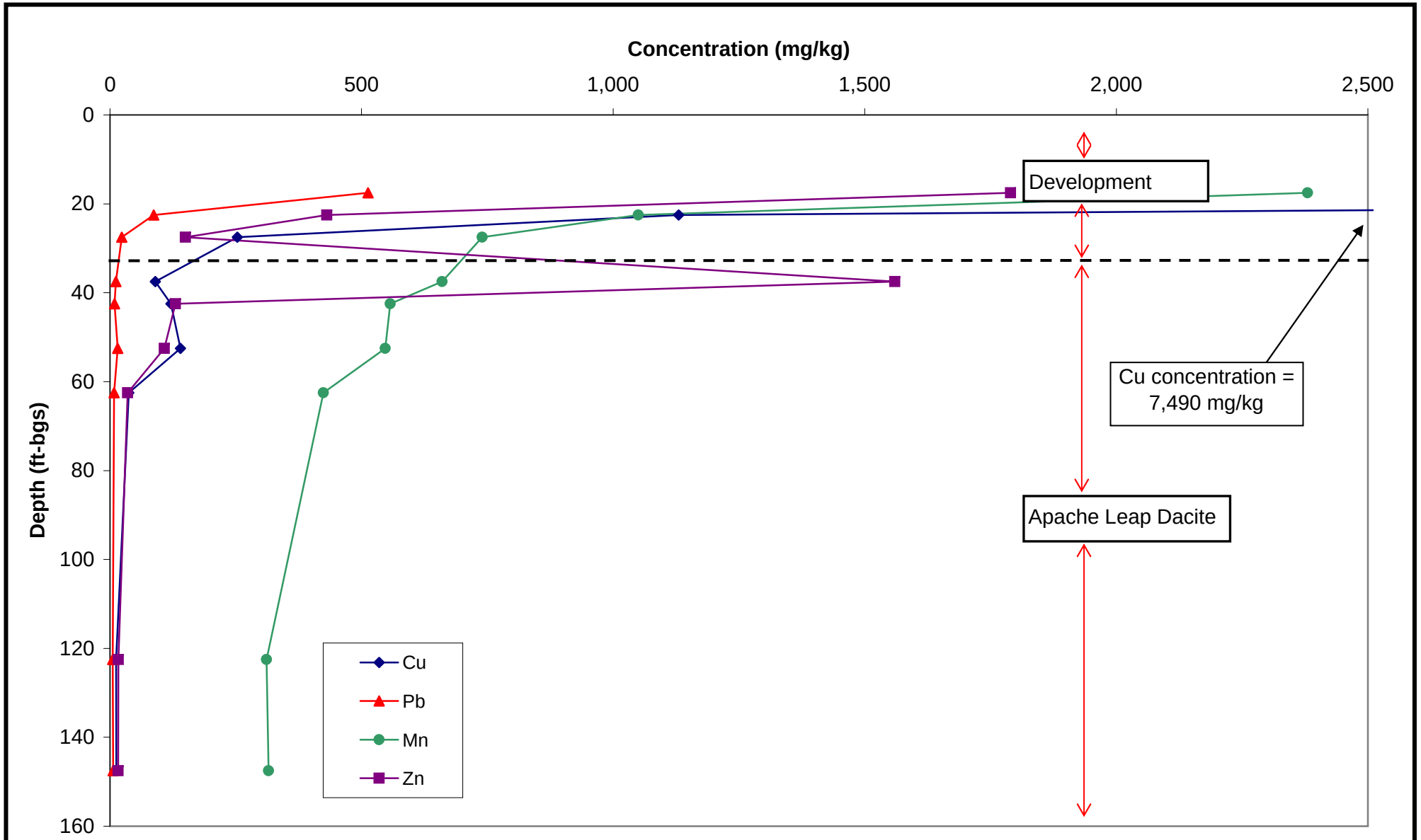
WELL INSTALLATION REPORT
WEST PLANT SITE, SUPERIOR MINE
SUPERIOR, ARIZONA

TITLE

NEWLY INSTALLED APP WELLS

Golder Associates
Tucson, Arizona

PROJECT No.	073-92522		FILE No.	07392522A002	
DESIGN	JJM	10/22/07	SCALE AS SHOWN	REV.	A
CADD	ANV	10/22/07	**FIGURE 1**		
CHECK	JJM	10/23/07			
REVIEW	KRJ	10/23/07			



Golder Associates

Tucson, Arizona

TITLE

500 YARD
SELECTED METAL CONCENTRATIONS VERSUS DEPTH

CLIENT/PROJECT

Resolution Copper Mining

WELL INSTALLATION REPORT
WEST PLANT SITE, SUPERIOR MINE
SUPERIOR, ARIZONA

DRAWN	AB	DATE	11/1/07	JOB NO.	073-92522
CHECKED	JM	SCALE	na	DWG. NO.	na
REVIEWED	KJ	FILE NO.	na	FIGURE NO.	2

ATTACHMENT 1

WELL DRILLER REPORTS AND WELL LOGS

Arizona Department of Water Resources
Information Management Unit
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

COPY

FILE NUMBER D(1-12)35 DAB

WELL REGISTRATION NUMBER 55 - 907035

PERMIT NUMBER (IF ISSUED)

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm (Mail To)

NAME: YELLOW JACKET DRILLING SERVICES L L C	DWR LICENSE NUMBER: 78
ADDRESS: P.O. BOX 801	TELEPHONE NUMBER: 602-453-3252
CITY / STATE / ZIP: GILBERT, AZ, 85299-0801	FAX: 602-453-3258

SECTION 2. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL	Resolution Copper Company
MAILING ADDRESS	102 Magma Heights
CITY / STATE / ZIP	Superior, AZ, 85273
CONTACT PERSON NAME AND TITLE	Casey McKeon
TELEPHONE NUMBER	520 689-9374
FAX	520-689-9304
WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.)	500 yd. Well

Location of Well

WELL LOCATION ADDRESS (IF ANY): 102 Magma Heights Rd. Superior

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1S	12 E	35	SE 1/4	NE 1/4	NW 1/4

LATITUDE			LONGITUDE		
33 °	17 '	.969 "N	111 °	05 '	.760 "W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE)
☐ USGS Quad Map ☐ Conventional Survey ☒ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: 2992 Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE)
☐ USGS Quad Map ☐ Conventional Survey ☒ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE)
☒ NAD-83 ☐ Other (please specify)

COUNTY: Pinal

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT): BOOK — MAP — PARCEL —

SECTION 3. WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
- ☒ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (please specify)

Method of Well Development

CHECK ONE
- ☐ Airlift
- ☐ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (please specify)
- ☒ None

Condition of Well

CHECK ONE
- ☒ Capped
- ☐ Pump Installed

Method of Sealing at Reduction Points

CHECK ONE
- ☒ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify)

Construction Dates

DATE WELL CONSTRUCTION STARTED: 6/1/07

DATE WELL CONSTRUCTION COMPLETED: 6/4/07

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY: R. L. Dale

DATE: 7.1.07

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907035

SECTION 4: WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth

DEPTH OF BORING	DEPTH OF COMPLETED WELL
150 Feet Below Land Surface	140 Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
Not Encountered Feet Below Land Surface	—	—	☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	150	10

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE (inches)
0	95	4.5		X			X						
95	135	4.5		X							X		.040
135	140	4.5		X			X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	20			X								
20	70				X							
70	80						X					
80	140									X		10-20

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907035

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	Description Describe material, grain size, color, etc.	Check (T) every interval where water was encountered (if known)
0	32	Brown Sand + Gravel	
32	140	Bedrock - Gila Conglomerate	
		TD - 140	
		∇ - Dry - not Encountered	

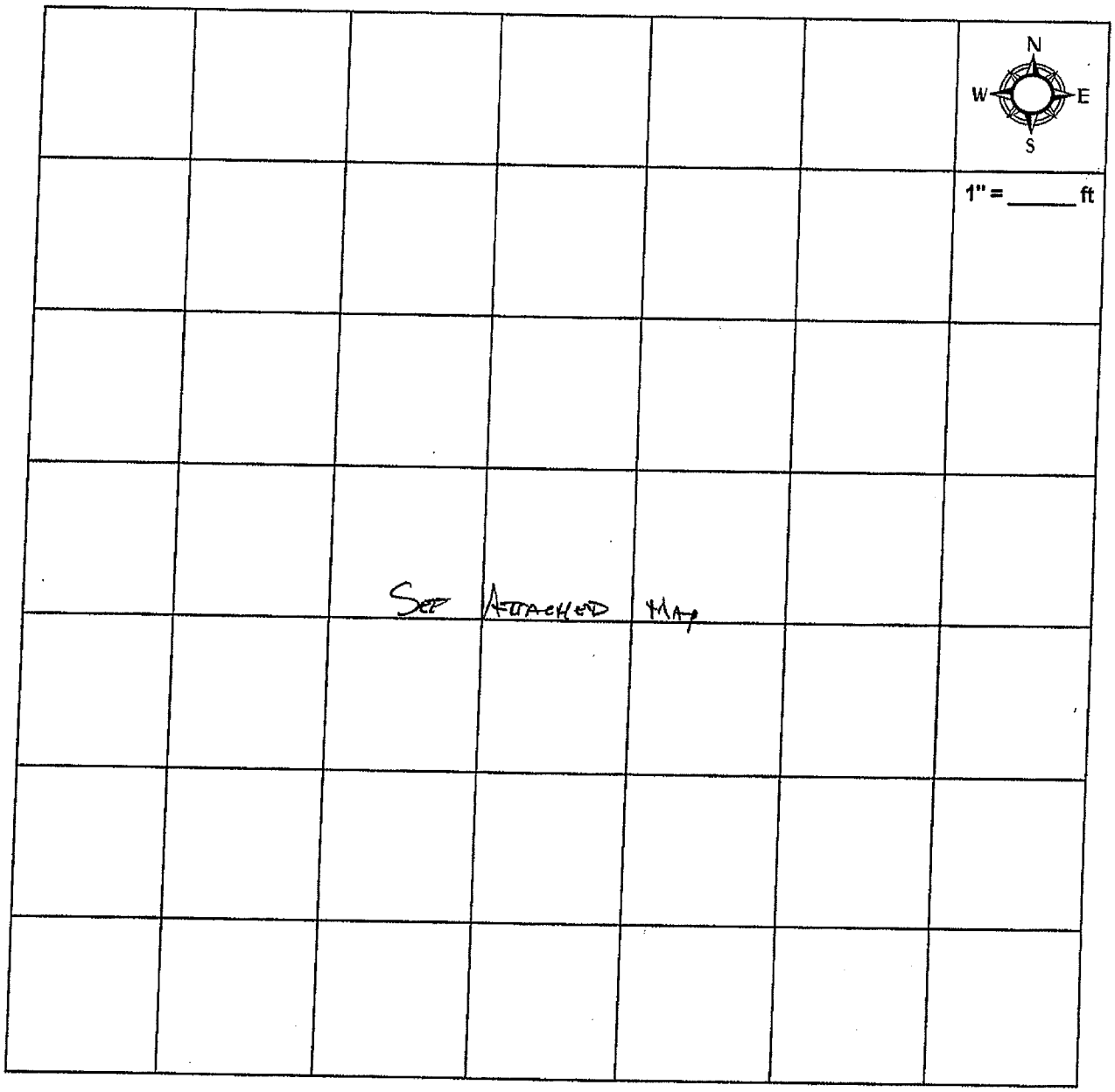
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907035

SECTION 6: WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
Resolution Copper Company	—	—	—

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

** PLEASE PRINT CLEARLY **

AMA / INA		B	SB
RECEIVED	DATE	WS	
ISSUED	DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

SECTION 1. REGISTRY INFORMATION

Well Type (CHECK ONE)
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action (CHECK ONE)
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER: 55 -

Location of Well
WELL LOCATION ADDRESS (IF ANY): 102 MAGMA HEIGHTS, SUPERIOR, AZ

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1S	12E	35	SE ¼	NE ¼	NW ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED: PINAL

SECTION 2. OWNER INFORMATION

Well Owner
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: RESOLUTION COPPER COMPANY
MAILING ADDRESS: 102 MAGMA HEIGHTS
CITY / STATE / ZIP CODE: SUPERIOR AZ 85273
CONTACT PERSON NAME AND TITLE: CASEY McKEON
TELEPHONE NUMBER: 520-689-9374
FAX: 520.689-9304

Landowner (if different from Well Owner)
FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL:
MAILING ADDRESS:
CITY / STATE / ZIP CODE:
CONTACT PERSON NAME AND TITLE:
TELEPHONE NUMBER:
FAX:

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm
NAME:
DWR LICENSE NUMBER:
ROC LICENSE CATEGORY:
TELEPHONE NUMBER:
FAX:
E-MAIL ADDRESS:

Consultant (if applicable)
CONSULTING FIRM: GOLDER ASSOCIATES
CONTACT PERSON NAME: JOHN J. MALUSA
TELEPHONE NUMBER: 520-888-8818
FAX: 520-888-8817
E-MAIL ADDRESS: jmalusa@golder.com

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	✓		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		✓	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		✓	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)		✓	IF YES, PLEASE STATE
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	✓		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER: KRISTIE KILGORE - WQ DIVISION 602-771-4632
6. For monitor wells, is dedicated pump equipment to be installed?	✓		IF YES, PLEASE STATE DESIGN PUMP CAPACITY: 15 Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		✓	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?		✓	IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED? ETCHED INTO CEMENT PAD PRIOR TO DRILLING

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method
CHECK ONE
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☑ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

MAY 18, 2007
DATE CONSTRUCTION TO BEGIN

Method of Well Development
CHECK ONE
- ☐ Airlift
- ☑ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method
CHECK ONE
- ☐ Gravity
- ☐ Pressure Grout
- ☑ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points
CHECK ONE
- ☑ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing
CHECK ONE
- ☐ Flush Mount in a vault
- ☑ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	150	8

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	20	4	✓										
20	100	4		✓			✓						
100	140	4		✓							✓		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	22				✓							
22	85						✓					
85	90								#60 CHOKE SAND			
90	150									✓		10-20

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS

EXPECTED DEPTH TO WATER
Unknown
Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE
Casey McKeon, Environmental Supervisor

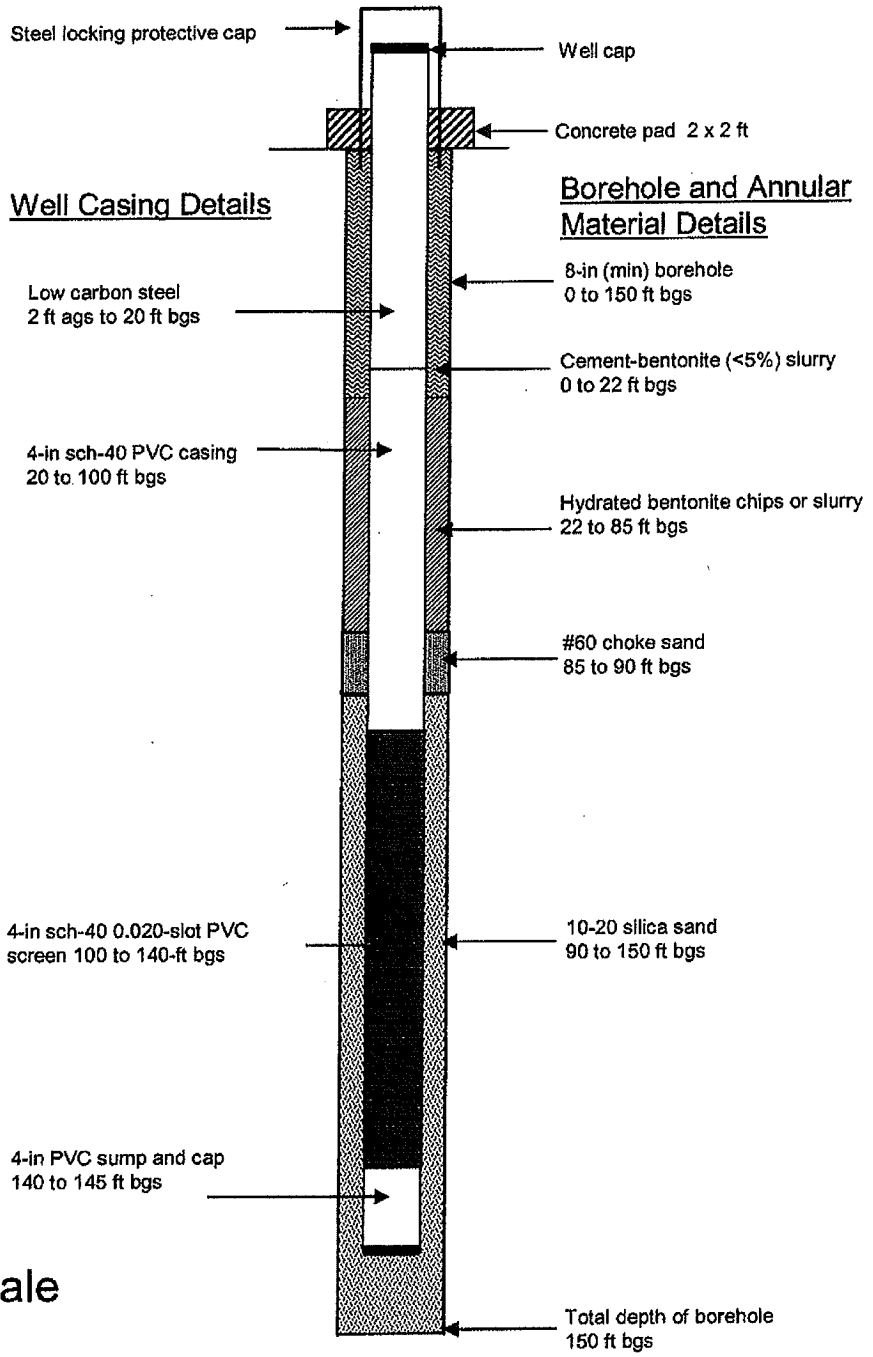
SIGNATURE OF WELL OWNER
Casey McKeon
DATE
5-11-07

TYPE OR PRINT NAME AND TITLE

SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)
DATE

Well Construction Schematic

Proposed **500 Yard** Point of Compliance Well



Not to Scale

Notes:
ft ags = feet above ground surface
ft bgs = feet below ground surface

Golder Associates

Project number: 053-2519-100.000

Arizona Department of Water Resources
Information Management Unit
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

COPY

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

FILE NUMBER: D(2-12)4 ADD 4
WELL REGISTRATION NUMBER: 55 - 907037
PERMIT NUMBER (IF ISSUED):

SECTION 1 - DRILLING AUTHORIZATION

Drilling Firm

Mail To:

NAME	DWR LICENSE NUMBER
YELLOW JACKET DRILLING SERVICES L L C	78
ADDRESS: P.O. BOX 801	**TELEPHONE NUMBER**: 602-453-3252
CITY / STATE / ZIP: GILBERT, AZ, 85299-0801	**FAX**: 602-453-3258

SECTION 2 - REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: resolution Copper Company

MAILING ADDRESS: 102 Magma Heights

CITY / STATE / ZIP: Superior, AZ, 85273

CONTACT PERSON NAME AND TITLE: Casey McKeon

TELEPHONE NUMBER: 520 689-9374

FAX: 520-689-9304

WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.): Indian Pond Rd

Location of Well

WELL LOCATION ADDRESS (IF ANY): 102 Magma Heights Rd Superior,

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
2S	12E	4	NE 1/4	SE 1/4	SE 1/4

LATITUDE			LONGITUDE		
33 °	17 '	.260 "N	111 °	06 '	.793 "W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ■ *GPS: Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: 2708 Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE): ■ *GPS: Hand-Held ☐ USGS Quad Map ☐ Conventional Survey ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ■ NAD-83 ☐ Other (please specify)

COUNTY: Pinal

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT): BOOK — MAP — PARCEL —

SECTION 3 - WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
- ■ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (please specify)

Method of Well Development

CHECK ONE
- ☐ Airlift
- ■ Bail
- ■ Surge Block
- ☐ Surge Pump
- ☐ Other (please specify)

Method of Sealing at Reduction Points

CHECK ONE
- ■ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify)

Condition of Well

CHECK ONE
- ■ Capped
- ☐ Pump Installed

Construction Dates

DATE WELL CONSTRUCTION STARTED: 5/31/07

DATE WELL CONSTRUCTION COMPLETED: 5/31/07

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY: D. LaDare

DATE: 7.1.07

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907037

SECTION 4: WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth

DEPTH OF BORING	DEPTH OF COMPLETED WELL
60 Feet Below Land Surface	55 Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
53 Feet Below Land Surface	6/6/07	–	☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	60	10

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE (inches)
0	5	4.5		X			X						
5	50	4.5		X							X		.040
50	55	4.5		X			X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	3			X								
3	4						X					
4	60									X		10-20

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907037

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	TO (feet)	Description Describe material, grain size, color, etc.	Check (T) every interval where water was encountered (if known)
0	30	Tailings	
30	60	BEDROCK - highy Weathered w/ Clay	X
		TD - 60	
		▽ - ~58'	

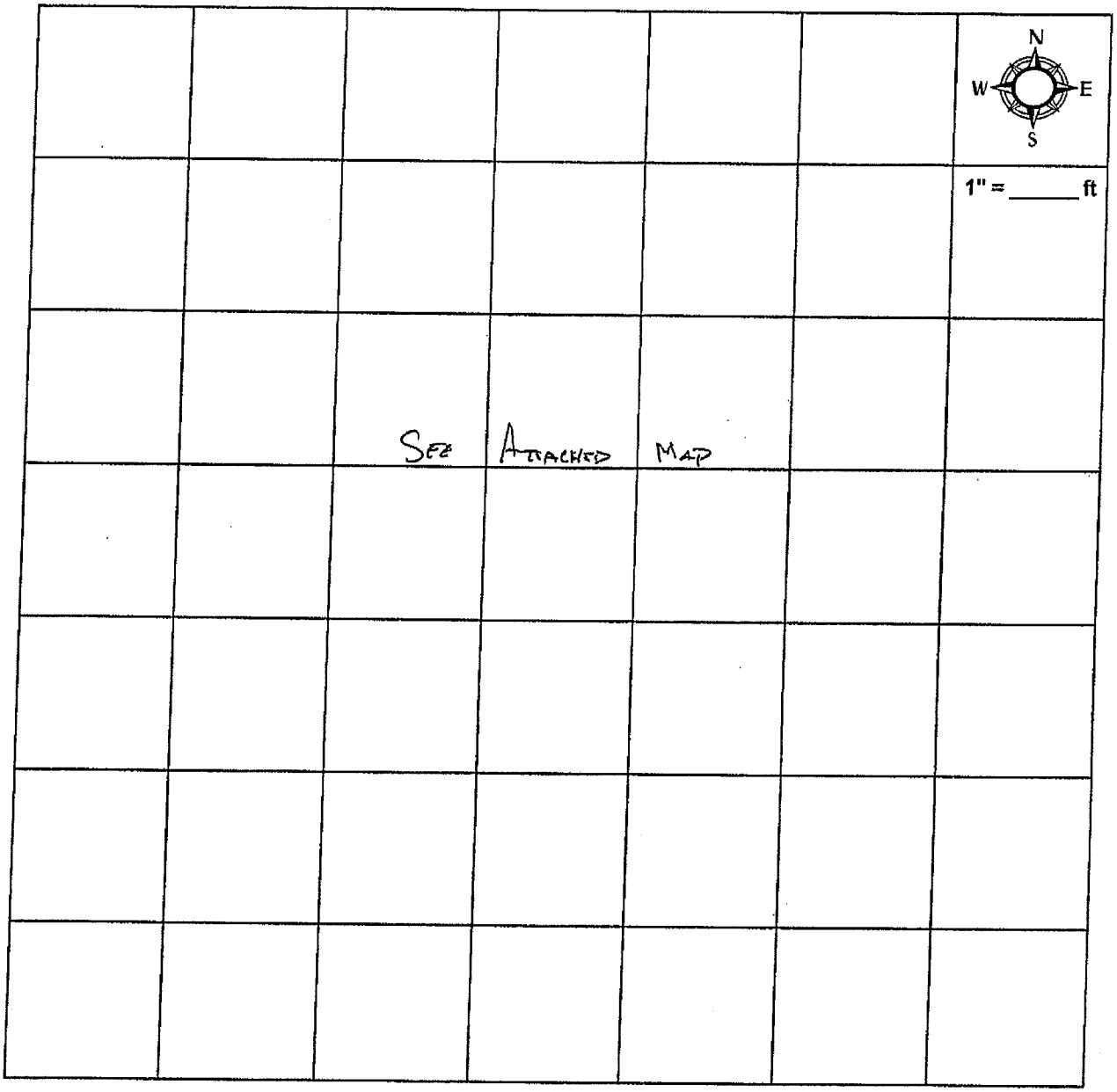
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907037

SECTION 6: WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
resolution Copper Company	—	—	—

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
- $150 check or money order for the filing fee.
- Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

** PLEASE PRINT CLEARLY **

AMA / INA		B	SB
RECEIVED	DATE	WS	
ISSUED	DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)
102 MAGMA HEIGHTS, SUPERIOR, AZ

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
25	12E	4	NE ¼	SE ¼	SE ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
PINAL

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
RESOLUTION COPPER COMPANY

MAILING ADDRESS
102 MAGMA HEIGHTS

CITY / STATE / ZIP CODE
SUPERIOR AZ 85273

CONTACT PERSON NAME AND TITLE
CASEY McKEON

TELEPHONE NUMBER	FAX
520-689-9374	520-689-9304

Landowner (If different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER	FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME

DWR LICENSE NUMBER	ROC LICENSE CATEGORY

TELEPHONE NUMBER	FAX

E-MAIL ADDRESS

Consultant (if applicable)

CONSULTING FIRM
GOLDER ASSOCIATES INC.

CONTACT PERSON NAME
JOHN J. MALUSA

TELEPHONE NUMBER	FAX
520-888-8818	520-888-8817

E-MAIL ADDRESS
jmalusa@golder.com

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	✓		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		✓	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		✓	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)		✓	IF YES, PLEASE STATE
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	✓		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE - WQ DIVISION 602-771-4632
6. For monitor wells, is dedicated pump equipment to be installed?	✓		IF YES, PLEASE STATE DESIGN PUMP CAPACITY 15 Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		✓	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?		✓	IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED? ETCHED INTO CEMENT PAD PRIOR TO DRYING

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method (CHECK ONE)
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☑ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

DATE CONSTRUCTION TO BEGIN: MAY 18 2007

Method of Well Development (CHECK ONE)
- ☐ Airlift
- ☑ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method (CHECK ONE)
- ☐ Gravity
- ☐ Pressure Grout
- ☑ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points (CHECK ONE)
- ☑ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing (CHECK ONE)
- ☐ Flush Mount in a vault
- ☑ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	60	8

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	10	4		✓			✓						
10	50	4		✓							✓		0.020
50	55	4		✓			✓						

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE
0	5				✓							
5	7								# 60 CHOKE SAND			
7	60									✓		10-20

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS:

EXPECTED DEPTH TO WATER: 15 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE: Casey McKean, Environmental Supervisor

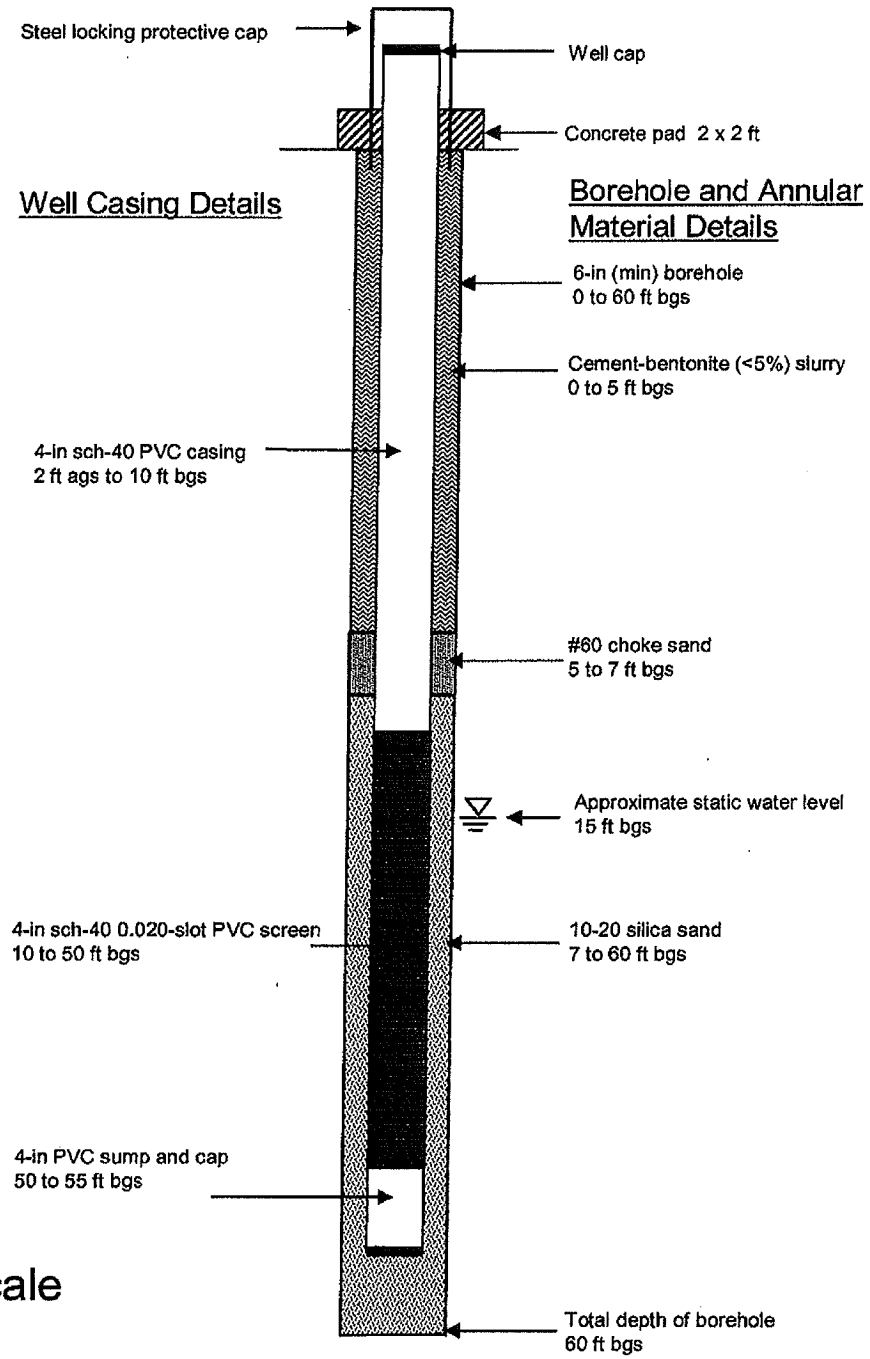
SIGNATURE OF WELL OWNER: Casey McK — DATE: 5-11-07

TYPE OR PRINT NAME AND TITLE:

SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS) — DATE:

Well Construction Schematic

Proposed **Indian Ponds** Point of Compliance Well



Not to Scale

Notes:
ft ags = feet above ground surface
ft bgs = feet below ground surface

Golder Associates

Project number: 053-2519-100.000

Arizona Department of Water Resources
Information Management Unit
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

COPY

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

FILE NUMBER: D(1-12)35 ADD
WELL REGISTRATION NUMBER: 55 - 907034
PERMIT NUMBER (IF ISSUED):

SECTION 1: DRILLING AUTHORIZATION

Drilling Firm

Mail To

NAME	DWR LICENSE NUMBER
YELLOW JACKET DRILLING SERVICES L L C	78
ADDRESS: P.O. BOX 801	**TELEPHONE NUMBER**: 602-453-3252
CITY / STATE / ZIP: GILBERT, AZ, 85299-0801	**FAX**: 602 - 453 - 3268

SECTION 2: REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Resolution Copper Company

MAILING ADDRESS: 102 Magma Heights

CITY / STATE / ZIP: Superior, AZ, 85273

CONTACT PERSON NAME AND TITLE: Casey McKeon

TELEPHONE NUMBER: 520 689-9374

FAX: 520-689-9304

WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.): Settling Pond 1 + 2 / Alert Well

Location of Well

WELL LOCATION ADDRESS (IF ANY): 102 MAGMA HEIGHTS, Superior Az

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1S	12 E	35	NW 1/4	SE 1/4	SE 1/4

LATITUDE			LONGITUDE		
33 °	18 '	.016 "N	111 °	06 '	.200 "W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ■ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: 2972 Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ■ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ■ NAD-83 ☐ Other (please specify)

COUNTY: Pinal

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT): BOOK — MAP — PARCEL —

SECTION 3: WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
- ■ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (please specify)

Method of Well Development

CHECK ONE
- ☐ Airlift
- ■ Bail
- ■ Surge Block
- ☐ Surge Pump
- ☐ Other (please specify)

Method of Sealing at Reduction Points

CHECK ONE
- ■ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify)

Condition of Well

CHECK ONE
- ■ Capped
- ☐ Pump Installed

Construction Dates

DATE WELL CONSTRUCTION STARTED: 5/22/07

DATE WELL CONSTRUCTION COMPLETED: 5/24/07

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY: R. L. Dane

DATE: 7.1.07

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907034

SECTION 4: WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth

DEPTH OF BORING	DEPTH OF COMPLETED WELL
190 Feet Below Land Surface	185 Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
60 Feet Below Land Surface	5/24/07	—	☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	190	10

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE (inches)
0	140	4.5		X			X						
140	180	4.5		X							X		.040
180	185	4.5		X			X						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	20			X								
20	120				X							
120	130							X				
130	190									X		10-20

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907034

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE		Description	Check (T) every interval where water was encountered (if known)
FROM (feet)	TO (feet)	Describe material, grain size, color, etc.	
0	100	Tailings	X
100	190	Bed Rock - Gila Conglomerate - Very Hard	
		TD - 190'	
		∇ - 60'	

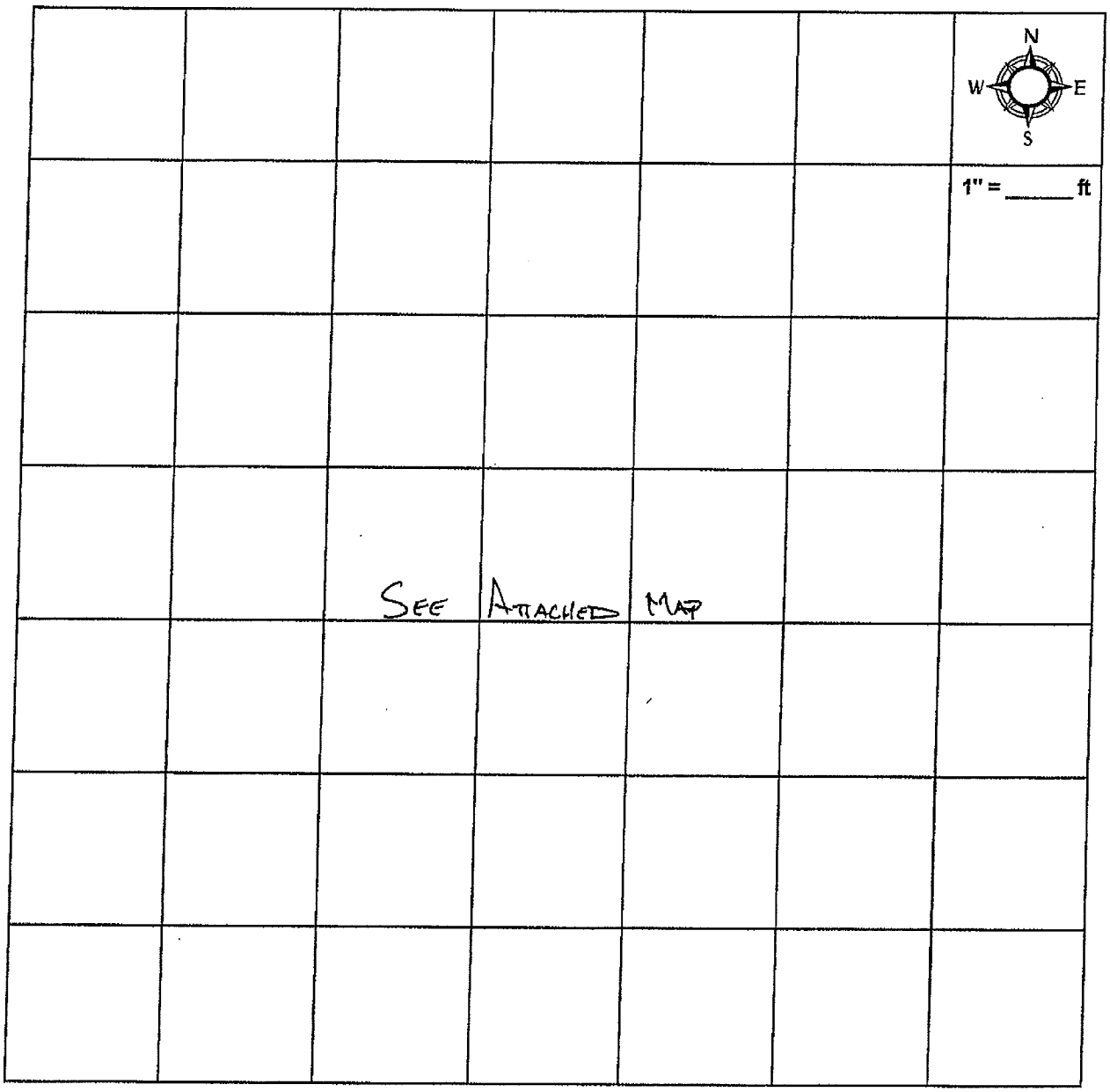
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907034

SECTION 6: WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
Resolution Copper Company	—	—	—

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



Arizona Department of Water Resources
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www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
- $150 check or money order for the filing fee.
- Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

** PLEASE PRINT CLEARLY **

AMA / INA		B	SB
RECEIVED	DATE	WS	
ISSUED	DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

SECTION 1. REGISTRY INFORMATION

Well Type (CHECK ONE)
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action (CHECK ONE)
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well
WELL LOCATION ADDRESS (IF ANY)
102 MAGMA HEIGHTS, SUPERIOR, AZ

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
15	12E	35	NW ¼	SE ¼	SE ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
PINAL

SECTION 2. OWNER INFORMATION

Well Owner
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
RESOLUTION COPPER COMPANY
MAILING ADDRESS
102 MAGMA HEIGHTS
CITY / STATE / ZIP CODE
SUPERIOR AZ 85273
CONTACT PERSON NAME AND TITLE
CASEY McKEON
TELEPHONE NUMBER: 520-689-9374 FAX: 520-689-9304

Landowner (If different from Well Owner)
FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
MAILING ADDRESS
CITY / STATE / ZIP CODE
CONTACT PERSON NAME AND TITLE
TELEPHONE NUMBER FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm
NAME
DWR LICENSE NUMBER ROC LICENSE CATEGORY
TELEPHONE NUMBER FAX
E-MAIL ADDRESS

Consultant (If applicable)
CONSULTING FIRM
GOLDER ASSOCIATES INC.
CONTACT PERSON NAME
JOHN J. MALUSA
TELEPHONE NUMBER: 520-888-8818 FAX: 520-888-8817
E-MAIL ADDRESS
jmalusa@golder.com

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	✓		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		✓	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		✓	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)		✓	IF YES, PLEASE STATE
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	✓		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER: KRISTIE KILGORE - WQ DIVISION 602-771-4632
6. For monitor wells, is dedicated pump equipment to be installed?	✓		IF YES, PLEASE STATE DESIGN PUMP CAPACITY: 15 Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		✓	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?		✓	IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED? ETCHED INTO CEMENT PAD PRIOR TO DRYING

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER: 55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method
CHECK ONE
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☑ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

MAY 18, 2007
DATE CONSTRUCTION TO BEGIN

Method of Well Development
CHECK ONE
- ☐ Airlift
- ☑ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method
CHECK ONE
- ☐ Gravity
- ☐ Pressure Grout
- ☑ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points
CHECK ONE
- ☑ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing
CHECK ONE
- ☐ Flush Mount in a vault
- ☑ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole / Casing

Borehole: DEPTH FROM SURFACE FROM (feet)	Borehole: DEPTH FROM SURFACE TO (feet)	Borehole: BOREHOLE DIAMETER (inches)	Casing: DEPTH FROM SURFACE FROM (feet)	Casing: DEPTH FROM SURFACE TO (feet)	Casing: OUTER DIAMETER (inches)	Casing: MATERIAL TYPE (T): STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	Casing: PERFORATION TYPE (T): BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	190	8	0	20	4	✓										
			20	140	4		✓			✓						
			140	180	4		✓							✓		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	GRAVEL	SIZE
0	22				✓							
22	125						✓					
125	130								#60 CHOKE SAND			
130	190									✓		10-20

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS

EXPECTED DEPTH TO WATER: 150 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

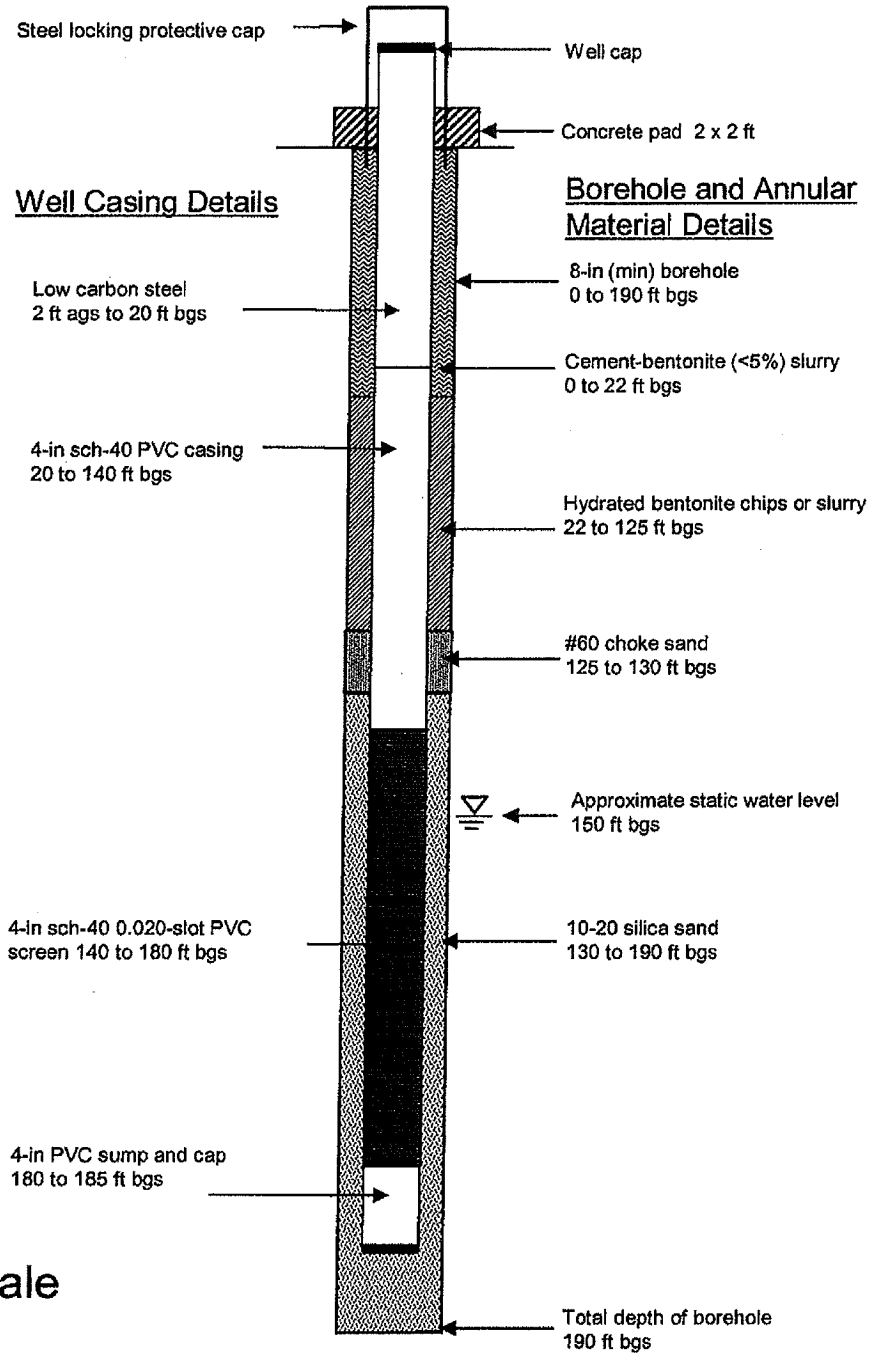
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
Casey McKeon, Environmental Supervisor	Casey McKeon	5-11-07
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

55-907034

Well Construction Schematic

Proposed **Settling Ponds 1 and 2**

Alert Well



Not to Scale

Notes:
ft ags = feet above ground surface
ft bgs = feet below ground surface

Golder Associates

Project number: 053-2519-100.000

Arizona Department of Water Resources
Information Management Unit
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log COPY

FILE NUMBER: D(2-12)3 BAA
WELL REGISTRATION NUMBER: 55 - 906300
PERMIT NUMBER (IF ISSUED):

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm

Mail To:

NAME: YELLOW JACKET DRILLING SERVICES L L C
DWR LICENSE NUMBER: 78
ADDRESS: P.O. BOX 801
TELEPHONE NUMBER: 602-453-3252
CITY / STATE / ZIP: GILBERT, AZ, 85299-0801
FAX: 602 453 3258

SECTION 1. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Resolution Copper Mining, LLC
MAILING ADDRESS: 102 Magma Heights
CITY / STATE / ZIP: Superior, AZ, 85273
CONTACT PERSON NAME AND TITLE: Casey mc Keon, Env Advisor
TELEPHONE NUMBER: 520 689-9374
FAX: 520-689-9304

Location of Well

WELL LOCATION ADDRESS (IF ANY): 102 Magma Heights, Superior AZ

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
2S	12E	3	NW 1/4	NE 1/4	NE 1/4

LATITUDE			LONGITUDE		
33 °	17 '	30.6 "N	111 °	06 '	25.5 "W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☑ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: 2715 Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ☑ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ☑ NAD-83 ☐ Other (please specify)

WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.): LSP-08

COUNTY: Pinal

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT): BOOK | MAP | PARCEL

SECTION 3. WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
- ☐ Air Rotary
- ☑ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (please specify)

Method of Well Development

CHECK ONE
- ☐ Airlift
- ☑ Bail
- ☑ Surge Block
- ☐ Surge Pump
- ☑ Other (please specify) pump

Condition of Well

CHECK ONE
- ☑ Capped
- ☐ Pump Installed

Method of Sealing at Reduction Points

CHECK ONE
- ☐ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☑ Other (please specify)

Construction Dates

DATE WELL CONSTRUCTION STARTED: 1-31-07
DATE WELL CONSTRUCTION COMPLETED: 1-31-07

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY:
DATE: 2.26.07

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 906300

SECTION 4: WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth:

DEPTH OF BORING	DEPTH OF COMPLETED WELL
17.5 Feet Below Land Surface	17 Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
4 Feet Below Land Surface	1-31-07		☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	17.5	8

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER (inches)	MATERIAL TYPE (T): STEEL	MATERIAL TYPE (T): PVC	MATERIAL TYPE (T): ABS	MATERIAL TYPE (T): IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T): BLANK OR NONE	PERFORATION TYPE (T): WIRE WRAP	PERFORATION TYPE (T): SHUTTER SCREEN	PERFORATION TYPE (T): MILLS KNIFE	PERFORATION TYPE (T): SLOTTED	PERFORATION TYPE (T): IF OTHER TYPE, DESCRIBE	SLOT SIZE (inches)
+3	7	2.375		✓			✓						
7	17	2.375		✓							✓		0.020

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T): NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE: GROUT	BENTONITE: CHIPS	BENTONITE: PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK: SAND	FILTER PACK: GRAVEL	FILTER PACK: SIZE
0	3			✓								
3	5						✓					
5	17									✓		10-20

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 906300

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	Description Describe material, grain size, color, etc.	Check (T) every interval where water was encountered (if known)
0	2	Sandy silT	
2	12.5	Sand w/ trace gravel	
12.5	17.5	Sand w/ fine to coarse gravel (weathered Gila Cong.)	
		TD 17.5	
		▽ 4	

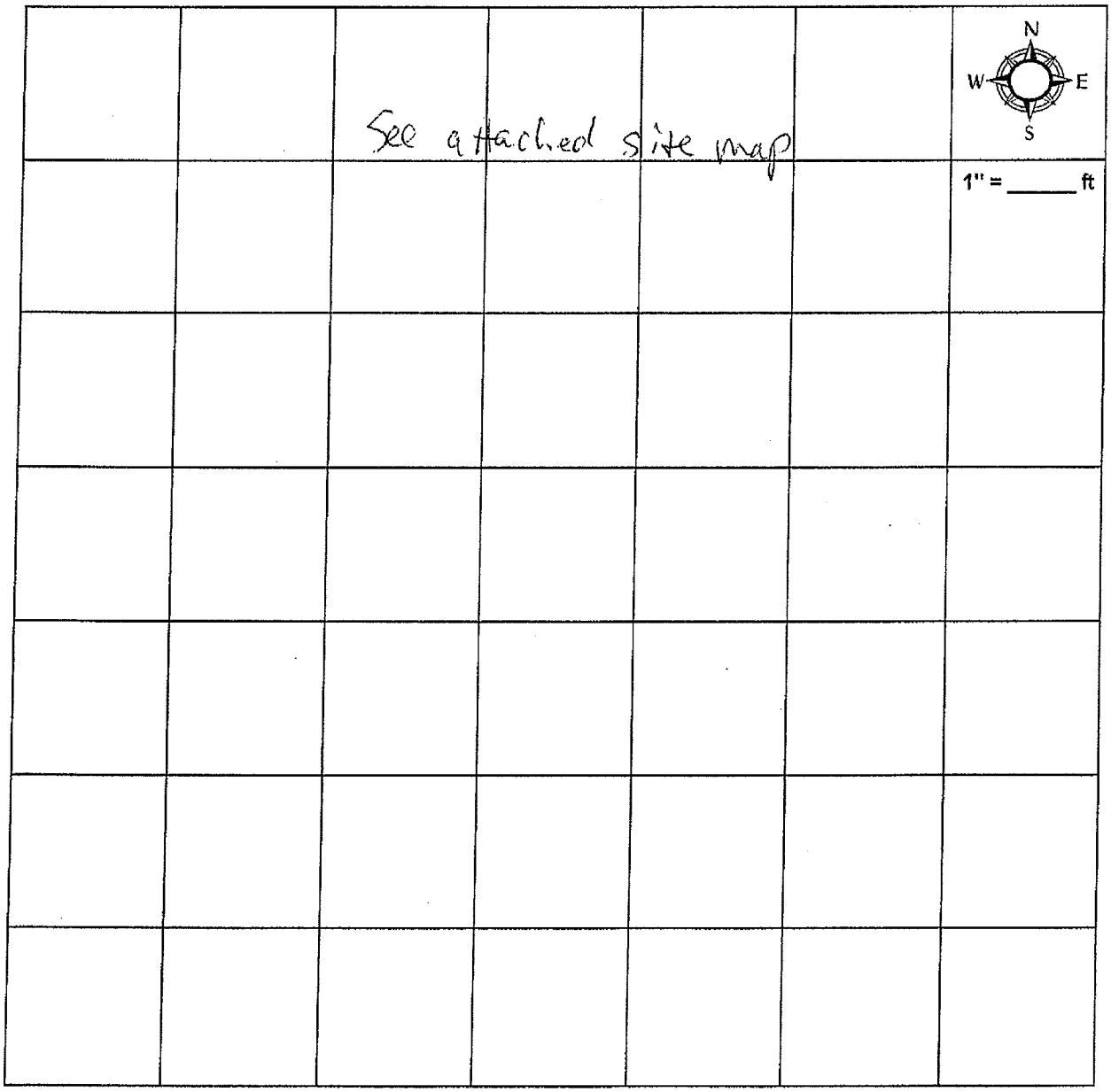
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 906300

SECTION 6: WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
Resolution Copper Mining, LLC			

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
- $150 check or money order for the filing fee.
- Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

** PLEASE PRINT CLEARLY **

AMA / INA		B	SB
RECEIVED	DATE	WS	
ISSUED	DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55-966300

LSP-8

SECTION 1. REGISTRY INFORMATION

Well Type

CHECK ONE
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action

CHECK ONE
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:

WELL REGISTRATION NUMBER
55 -

Location of Well

WELL LOCATION ADDRESS (IF ANY)
102 Magma Heights, Superior, AZ

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
2S	12E	3	NW ¼	NE ¼	NE ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
Pinal

SECTION 2. OWNER INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
Resolution Copper Mining LLC

MAILING ADDRESS
102 Magma Heights

CITY / STATE / ZIP CODE
Superior, AZ 85273

CONTACT PERSON NAME AND TITLE
Casey McKeon/Environmental Advisor

TELEPHONE NUMBER	FAX
520.689.9374	520.689.9304

Landowner (if different from Well Owner)

FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL

MAILING ADDRESS

CITY / STATE / ZIP CODE

CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER	FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm

NAME

DWR LICENSE NUMBER	ROC LICENSE CATEGORY

TELEPHONE NUMBER	FAX

E-MAIL ADDRESS

Consultant (if applicable)

CONSULTING FIRM
Golder Associates

CONTACT PERSON NAME
John Malusa

TELEPHONE NUMBER	FAX
520.888.8818	520.888.8817

E-MAIL ADDRESS
jmalusa@golder.com

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	✓		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		✓	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?	✓		The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)		✓	IF YES, PLEASE STATE
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?		✓	IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER
6. For monitor wells, is dedicated pump equipment to be installed?		✓	IF YES, PLEASE STATE DESIGN PUMP CAPACITY Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		✓	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?		✓	IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED? Etched into cement pad prior to cement drying.

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER: 55

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ONE

- ☐ Air Rotary
- ☑ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

January 8, 2007

DATE CONSTRUCTION TO BEGIN

Method of Well Development

CHECK ONE

- ☑ Airlift
- ☑ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (*please specify*):

Grout Emplacement Method

CHECK ONE

- ☐ Gravity
- ☐ Pressure Grout
- ☑ Tremie
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE

- ☑ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Surface or Conductor Casing

CHECK ONE

- ☐ Flush Mount in a vault
- ☑ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole / Casing

Borehole: DEPTH FROM SURFACE FROM (feet)	Borehole: DEPTH FROM SURFACE TO (feet)	Borehole: BOREHOLE DIAMETER (inches)	Casing: DEPTH FROM SURFACE FROM (feet)	Casing: DEPTH FROM SURFACE TO (feet)	Casing: OUTER DIAMETER (inches)	Casing: MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	Casing: PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	52	8	0	5	2		✓			✓						
			5	52	2		✓							✓		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	3								Pozzolonic Cement			
3	4						✓					
4	52									✓		10-20

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS	EXPECTED DEPTH TO WATER: 6 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

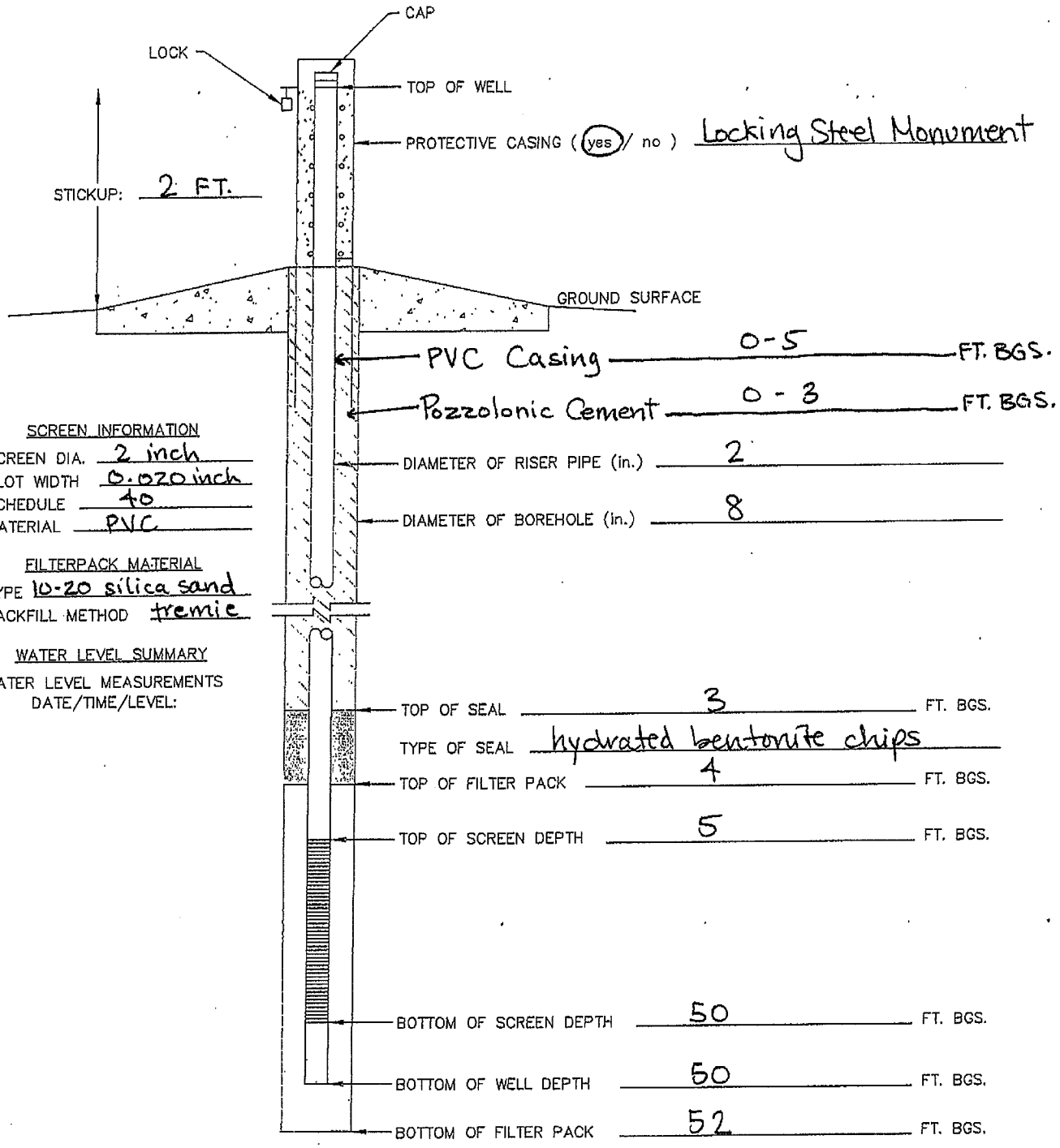
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF WELL OWNER	DATE
Casey McKeon - Environmental Advisor	Casey McKeon	1-9-07
TYPE OR PRINT NAME AND TITLE	SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS)	DATE

GROUNDWATER MONITORING WELL

Golder Associates

SITE NAME: Resolution Copper	LOCATION: Lower Smelter Pond Area
CLIENT: Resolution Copper Company	SURFACE ELEVATION:
GEOLOGIST:	NORTHING: / EASTING:
DRILLER:	STATIC WATER LEVEL: / COMPLETION DATE:
DRILLING COMPANY:	DRILLING METHODS:

DEPTHS MEASURED FROM GROUND SURFACE



SCREEN INFORMATION

SCREEN DIA. 2 inch
SLOT WIDTH 0.020 inch
SCHEDULE 40
MATERIAL PVC

FILTERPACK MATERIAL

TYPE 10-20 silica sand
BACKFILL METHOD tremie

WATER LEVEL SUMMARY

WATER LEVEL MEASUREMENTS DATE/TIME/LEVEL:

Arizona Department of Water Resources
Information Management Unit
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8627 • (800) 352-8488
www.water.az.gov

Well Driller Report and Well Log

COPY

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK

FILE NUMBER: D(1-12)35 CBA
WELL REGISTRATION NUMBER: 55 - 907036
PERMIT NUMBER (IF ISSUED):

SECTION 1 DRILLING AUTHORIZATION

Drilling Firm

Mailing

NAME	DWR LICENSE NUMBER
YELLOW JACKET DRILLING SERVICES L L C	78
ADDRESS: P.O. BOX 801	TELEPHONE NUMBER: 602-453-3252
CITY / STATE / ZIP: GILBERT, AZ, 85299-0801	FAX: 602- 453- 3258

SECTION 2 REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: Resolution Copper Company

MAILING ADDRESS: 102 Magma Heights

CITY / STATE / ZIP: Superior, AZ, 85273

CONTACT PERSON NAME AND TITLE: Casey McKeon

TELEPHONE NUMBER: 520 689-9374

FAX: 520 - 689 - 9304

WELL NAME (e.g., MW-1, PZ-3, lot 25 Well, Smith Well, etc.): Tailing Pond 5

Location of Well

WELL LOCATION ADDRESS (IF ANY): 102 MAGMA HEIGHTS RD. Superior

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1 S	12 E	35	SW 1/4	NW 1/4	NE 1/4

LATITUDE			LONGITUDE		
33 °	17 '	.978 "N	111 °	06 '	.377 "W

METHOD OF LATITUDE/LONGITUDE (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ■ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: 2915 Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE): ☐ USGS Quad Map ☐ Conventional Survey ■ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*IF GPS WAS USED, GEOGRAPHIC COORDINATE DATUM (CHECK ONE): ■ NAD-83 ☐ Other (please specify)

COUNTY: Pinal

ASSESSOR'S PARCEL ID NUMBER (MOST RECENT): BOOK – MAP – PARCEL –

SECTION 3 WELL CONSTRUCTION DETAILS

Drilling Method

CHECK ONE
- ■ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (please specify)

Method of Well Development

CHECK ONE
- ☐ Airlift
- ■ Bail
- ■ Surge Block
- ☐ Surge Pump
- ☐ Other (please specify)

Method of Sealing at Reduction Points

CHECK ONE
- ■ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (please specify)

Condition of Well

CHECK ONE
- ■ Capped
- ☐ Pump Installed

Construction Dates

DATE WELL CONSTRUCTION STARTED: 5/25/07

DATE WELL CONSTRUCTION COMPLETED: 5/29/07

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY: R. LaDare

DATE: 7.1.07

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907036

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth

DEPTH OF BORING	DEPTH OF COMPLETED WELL
130 Feet Below Land Surface	125 Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL	DATE MEASURED	TIME MEASURED	IF FLOWING WELL, METHOD OF FLOW REGULATION
~ 120 Feet Below Land Surface	6/6/07		☐ Valve ☐ Other:

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	130	10

Installed Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE (inches)
0	80	4.5		x			x						
80	120	4.5		x							x		.040
120	125	4.5		x			x						

Installed Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	20			x								
20	55				x							
55	65						x					
65	130									x		10-20

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907036

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE FROM (feet)	TO (feet)	Description Describe material, grain size, color, etc.	Check (T) every interval where water was encountered (if known)
0	1	Fill - Roadway AB	
1	130	Bedrock - Gila Conglomerate	X
		TD - 130'	
		▽ - 120'	

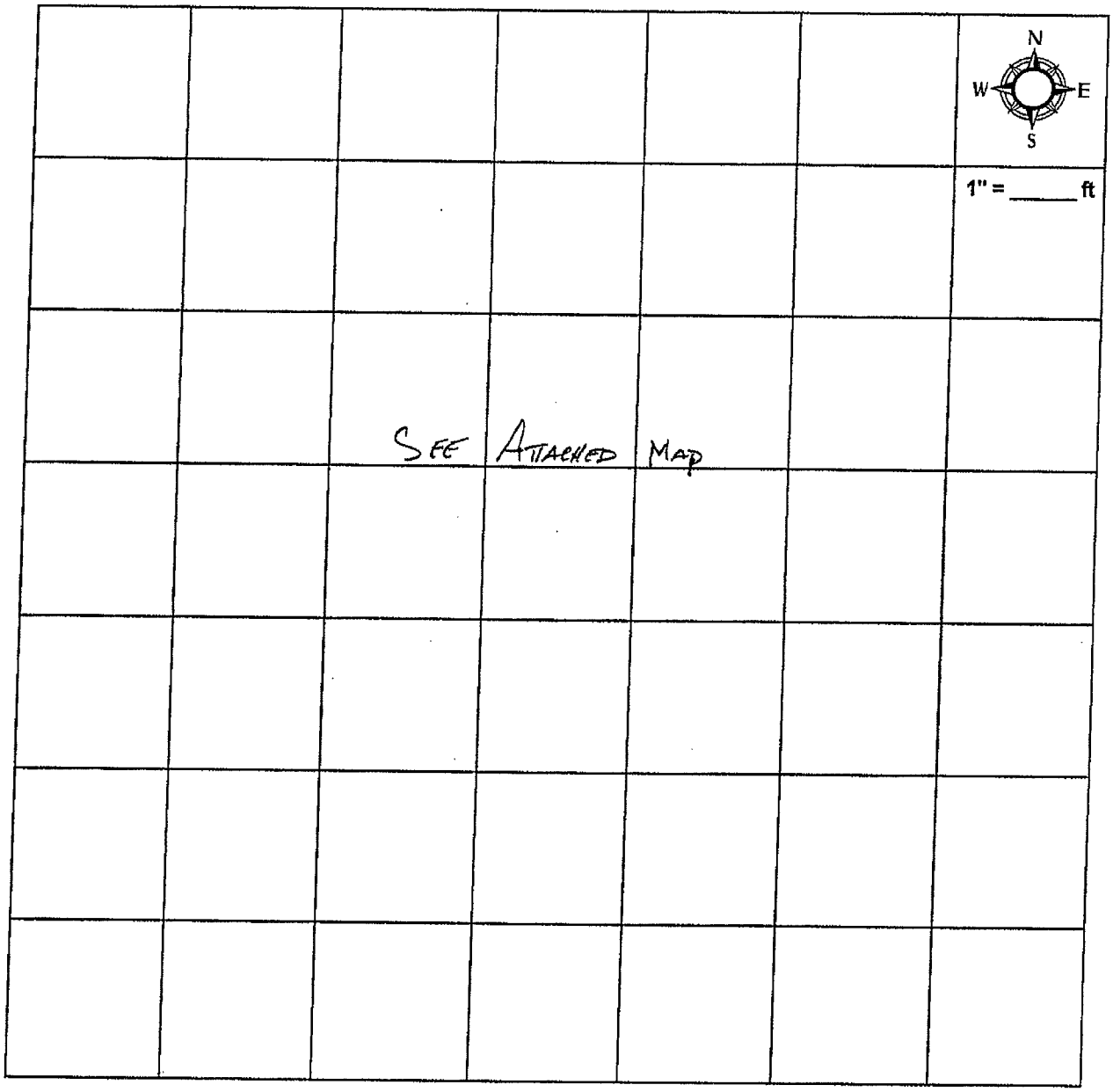
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 907036

SECTION 6. WELL SITE PLAN

NAME OF WELL OWNER	COUNTY ASSESSOR'S PARCEL ID NUMBER (MOST RECENT)		
	BOOK	MAP	PARCEL
Resolution Copper Company	—	—	—

- Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- Please indicate the distance between the well location and any septic tank system or sewer system.



Arizona Department of Water Resources
Water Management Support Section
P.O. Box 458 • Phoenix, Arizona 85001-0458
(602) 771-8500 • (800) 352-8488
www.azwater.gov

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

FEE

- Review instructions prior to completing form in black or blue ink.
- You must include with your Notice:
  - $150 check or money order for the filing fee.
  - Well construction diagram, labeling all specifications listed in Section 6.
- Authority for fee: A.R.S. § 45-596.

** PLEASE PRINT CLEARLY **

AMA / INA	B	SB
RECEIVED DATE	WS	
ISSUED DATE	WQAR	CERCLA

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

SECTION 1. REGISTRY INFORMATION

Well Type (CHECK ONE)
- [x] Monitor
- [ ] Piezometer
- [ ] Vadose Zone
- [ ] Air Sparging
- [ ] Soil Vapor Extraction
- [ ] Other (*please specify*):

Proposed Action (CHECK ONE)
- [x] Drill New Well
- [ ] Deepen
- [ ] Modify

If Deepening or Modifying:
WELL REGISTRATION NUMBER
55 -

Location of Well
WELL LOCATION ADDRESS (IF ANY)
102 MAGMA HEIGHTS, SUPERIOR, AZ

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
1S	12E	35	SW ¼	NW ¼	NE ¼

COUNTY ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL

COUNTY WHERE WELL IS LOCATED
PINAL

SECTION 2. OWNER INFORMATION

Well Owner
FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL
RESOLUTION COPPER COMPANY
MAILING ADDRESS
102 MAGMA HEIGHTS
CITY / STATE / ZIP CODE
SUPERIOR AZ 85273
CONTACT PERSON NAME AND TITLE
CASEY McKEON

TELEPHONE NUMBER	FAX
520-689-9374	520-689-9304

Landowner (if different from Well Owner)
FULL NAME OF COMPANY, GOVERNMENT AGENCY, OR INDIVIDUAL
MAILING ADDRESS
CITY / STATE / ZIP CODE
CONTACT PERSON NAME AND TITLE

TELEPHONE NUMBER	FAX

SECTION 3. DRILLING AUTHORIZATION

Drilling Firm
NAME

DWR LICENSE NUMBER	ROC LICENSE CATEGORY

TELEPHONE NUMBER	FAX

E-MAIL ADDRESS

Consultant (if applicable)
CONSULTING FIRM
GOLDER ASSOCIATES INC.
CONTACT PERSON NAME
JOHN J. MALUSA

TELEPHONE NUMBER	FAX
520-888-8818	520-888-8817

E-MAIL ADDRESS
jmalusa@golder.com

SECTION 4.

Questions	Yes	No	Explanation:
1. Are all annular spaces between the casing(s) and the borehole for the placement of grout at least 2 inches?	✓		2-inch annular spaces are special standards required for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
2. Is the screened or perforated interval of casing greater than 100 feet in length?		✓	100-foot maximum screen intervals are a special standard for wells located in and near groundwater contamination sites (such as CERCLA, WQARF, DOD, LUST).
3. Are you requesting a variance to use thermoplastic casing in lieu of steel casing in the surface seal?		✓	The wells must be constructed in a vault as defined in A.A.C. R12-15-801(27).
4. Is there another well name or identification number associated with this well? (e.g., MW-1, PZ2, 06-04, etc.)		✓	IF YES, PLEASE STATE
5. Have construction plans been coordinated with the Arizona Department of Environmental Quality?	✓		IF YES, PLEASE STATE AGENCY CONTACT & PHONE NUMBER KRISTIE KILGORE - WQ DIVISION 602-771-4632
6. For monitor wells, is dedicated pump equipment to be installed?	✓		IF YES, PLEASE STATE DESIGN PUMP CAPACITY 15 Gallons per Minute
7. Is this well a new well located in an Active Management Area **AND** intended to pump water for the purpose of remediating groundwater?		✓	IF YES, UNLESS THE WELL IS A REPLACEMENT WELL AND THE TOTAL NUMBER OF OPERABLE WELLS ON THE SITE IS NOT INCREASING, YOU MUST ALSO FILE A SUPPLEMENTAL FORM A.R.S. § 45-454(C) & (F). *(See Instructions)*
8. Will the well registration number be stamped on the vault cover or on the upper part of the casing?		✓	IF NO, WHERE WILL THE REGISTRATION NUMBER BE PLACED? ETCHED INTO CEMENT PAD PRIOR TO DRYING

Notice of Intent to Drill, Deepen, or Modify a *Monitor / Piezometer / Environmental* Well

WELL REGISTRATION NUMBER
55 -

SECTION 5. WELL CONSTRUCTION DETAILS

Drill Method (CHECK ONE)
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☑ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

MAY 18, 2007
DATE CONSTRUCTION TO BEGIN

Method of Well Development (CHECK ONE)
- ☐ Airlift
- ☑ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points (CHECK ONE)
- ☑ None
- ☐ Welded
- ☐ Swedged
- ☐ Packed
- ☐ Other (*please specify*):

Grout Emplacement Method (CHECK ONE)
- ☐ Gravity
- ☐ Pressure Grout
- ☑ Tremie
- ☐ Other (*please specify*):

Surface or Conductor Casing (CHECK ONE)
- ☐ Flush Mount in a vault
- ☑ Extend 1' above grade

SECTION 6. PROPOSED WELL CONSTRUCTION PLAN (attach additional page if needed)

Attach a well construction diagram labeling all specifications below.

Borehole

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	BOREHOLE DIAMETER (inches)
0	260	9

Casing

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	OUTER DIAMETER (inches)	MATERIAL TYPE (T) STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	PERFORATION TYPE (T) BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	20	5	✓										
20	210	5		✓			✓						
210	250	5		✓							✓		0.020

Annular Material

DEPTH FROM SURFACE FROM (feet)	DEPTH FROM SURFACE TO (feet)	ANNULAR MATERIAL TYPE (T) NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	BENTONITE GROUT	BENTONITE CHIPS	BENTONITE PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	FILTER PACK SAND	FILTER PACK GRAVEL	FILTER PACK SIZE
0	22				✓							
22	195						✓					
195	200								#60 CHOKE SAND			
200	260									✓		10-20

IF THIS WELL HAS NESTED CASINGS, SPECIFY NUMBER OF CASING STRINGS

EXPECTED DEPTH TO WATER: 220 Feet Below Ground Surface

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

TYPE OR PRINT NAME AND TITLE: Casey McKeon, Environmental Supervisor

SIGNATURE OF WELL OWNER: Casey McKeon DATE: 5-11-07

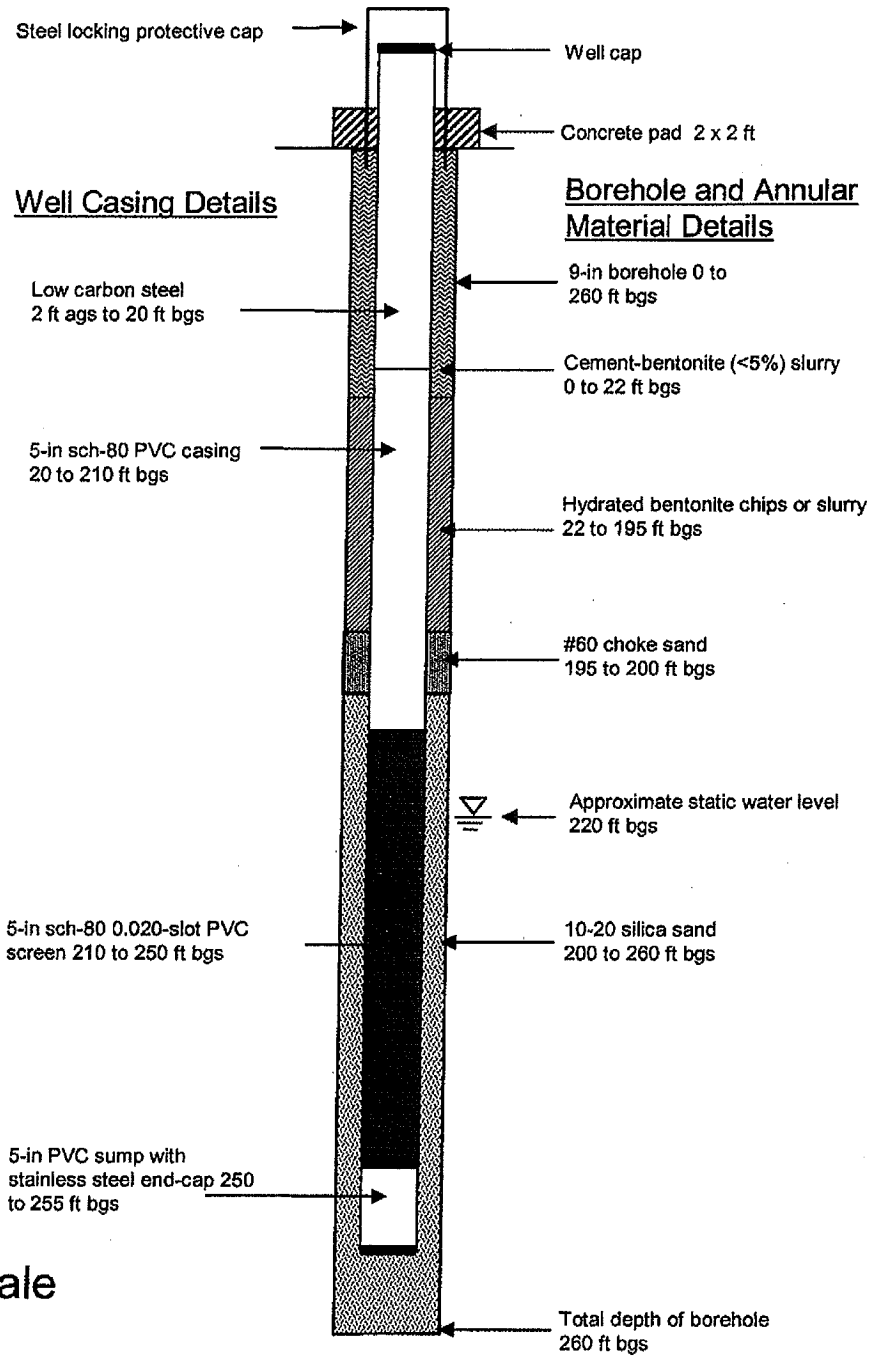
TYPE OR PRINT NAME AND TITLE

SIGNATURE OF LANDOWNER, IF APPLICABLE (SEE INSTRUCTIONS) DATE

Well Construction Schematic

Proposed **Tailings Pond 5**

Point of Compliance Well



Not to Scale

Notes:
ft ags = feet above ground surface
ft bgs = feet below ground surface

Golder Associates

Project number: 053-2619-100.000

ATTACHMENT 2

BOREHOLE LOGS AND AS-BUILT DRAWINGS

500 YARD POC WELL

AZ STATE PLANE CENTRAL NAD 83

NORTHING: 837352 ELEVATION (TOC):2998.67

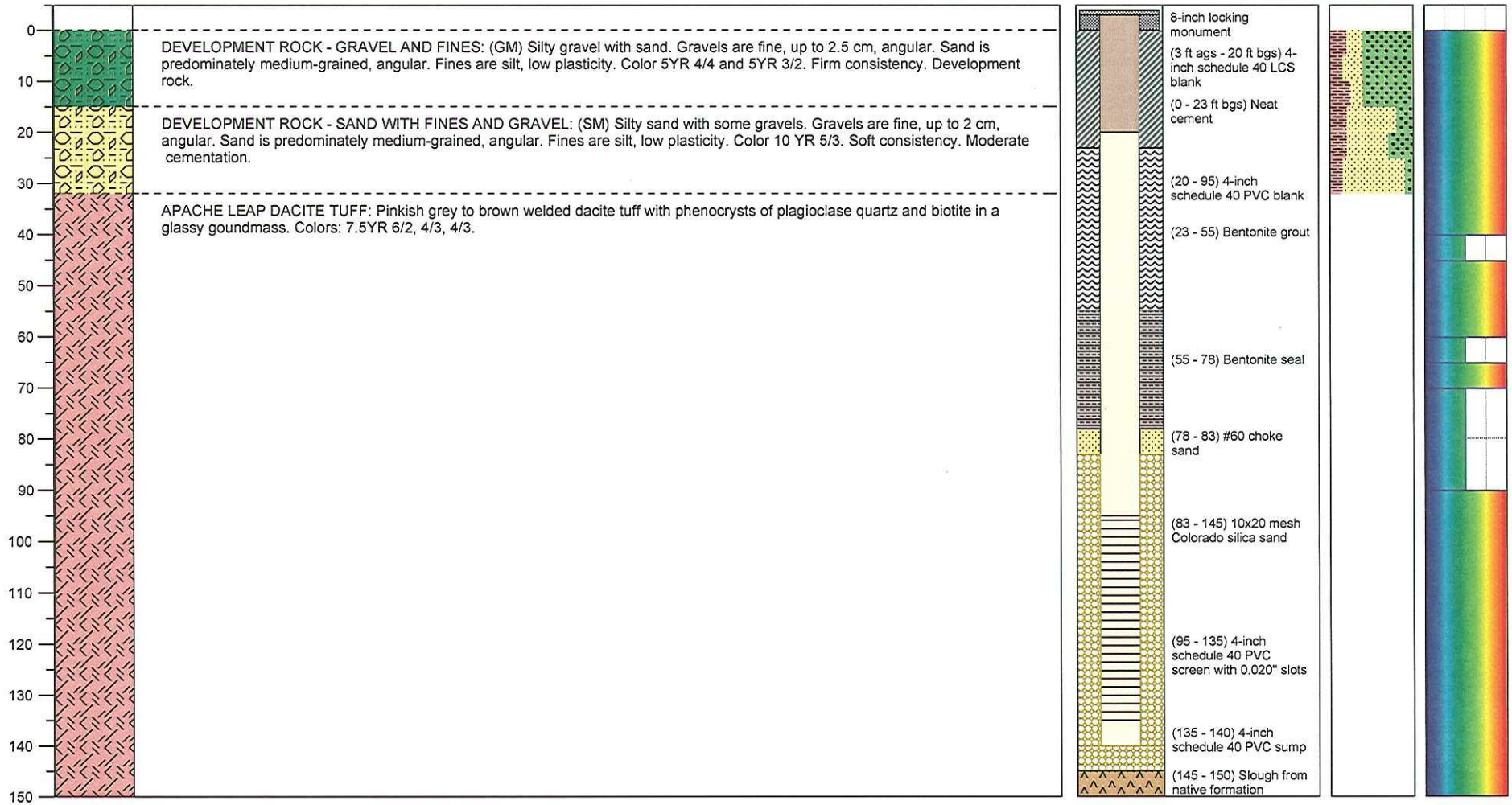
EASTING: 950758

LITHOLOGY

AS-BUILT

CUTTINGS SIZE — FINES, MEDIUM, COARSE

REACTION TO HCl — NONE, WEAK, MOD, STRONG



BOREHOLE No.	500 YARD POC WELL	TOTAL DEPTH DRILLED	150 ft bgs	SCALE	AS SHOWN
ADWR REG No.	55-907035	BIT DIAMETER	8.75"	DATE	06/07/07
LOCATION	SUPERIOR, AZ	DRILLING FLUID	AIR	DESIGN	JCR
CLIENT	RESOLUTION COPPER MINE	LOGGED BY	KKH	CHECK	JJM
DRILLING CO	YELLOW JACKET DRILLING	DATE STARTED	06/01/07	REVIEW	KJ
DRILLING EQUIPMENT	SPEEDSTAR 50K-CH	DATE FINISHED	06/04/07	REV 1	FILE 500 YARD POC WELL.LDF
DRILLING METHOD	AIR ROTARY CASING HAMMER	COMMENTS	USCS SCALE, MUNSELL COLOR CHART	PROJECT No.	073-92522

TITLE

BOREHOLE LOG AND AS-BUILT DRAWING

Golder Associates

FIGURE 2-1

INDIAN PONDS POC WELL

AZ STATE PLANE CENTRAL NAD 83

NORTHING: 832934 ELEVATION (TOC):2674.25

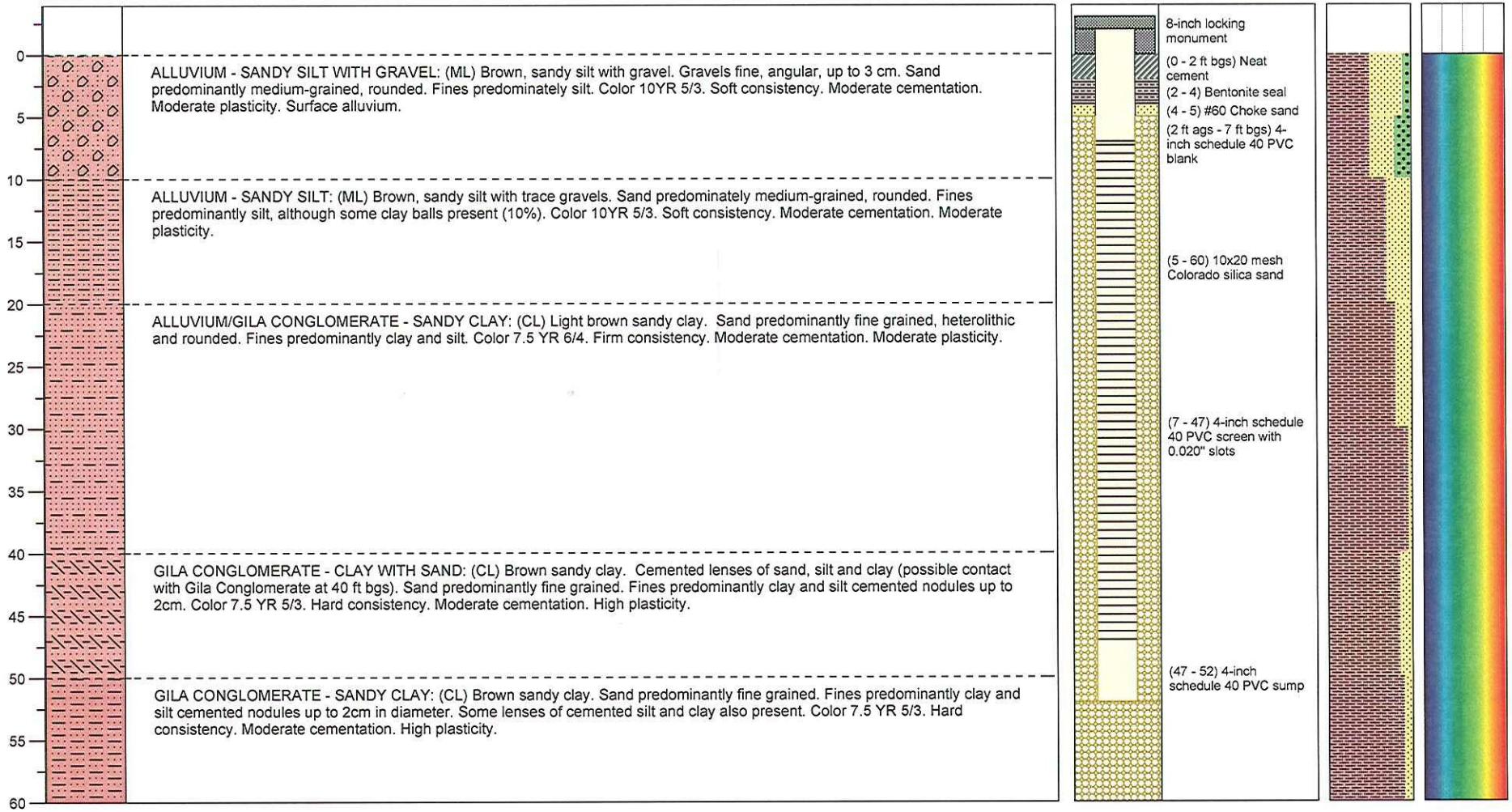
EASTING: 945033

LITHOLOGY

AS-BUILT

CUTTINGS SIZE — FINES, MEDIUM, COARSE

REACTION TO HCl — NONE, WEAK, MOD, STRONG



BOREHOLE No.	INDIAN PONDS POC WELL	TOTAL DEPTH DRILLED	60 ft bgs	SCALE	AS SHOWN
ADWR REG No.	55-907037	BIT DIAMETER	8.75"	DATE	06/07/07
LOCATION	SUPERIOR, AZ	DRILLING FLUID	AIR	DESIGN	JCR
CLIENT	RESOLUTION COPPER MINE	LOGGED BY	KKH	CHECK	JJM
DRILLING CO	YELLOW JACKET DRILLING	DATE STARTED	05/31/07	REVIEW	KJ
DRILLING EQUIPMENT	SPEEDSTAR 50K-CH	DATE FINISHED	05/31/07	REV 1	FILE INDIAN PONDS POC WELL.LDF
DRILLING METHOD	AIR ROTARY CASING HAMMER	COMMENTS	USCS SCALE, MUNSELL COLOR CHART	PROJECT No.	073-92522

TITLE

BOREHOLE LOG AND AS-BUILT DRAWING

Golder Associates

FIGURE 2-2

SETTLING PONDS 1 & 2 ALERT WELL

AZ STATE PLANE CENTRAL NAD 83

NORTHING: 837767 ELEVATION (TOC):2976.2

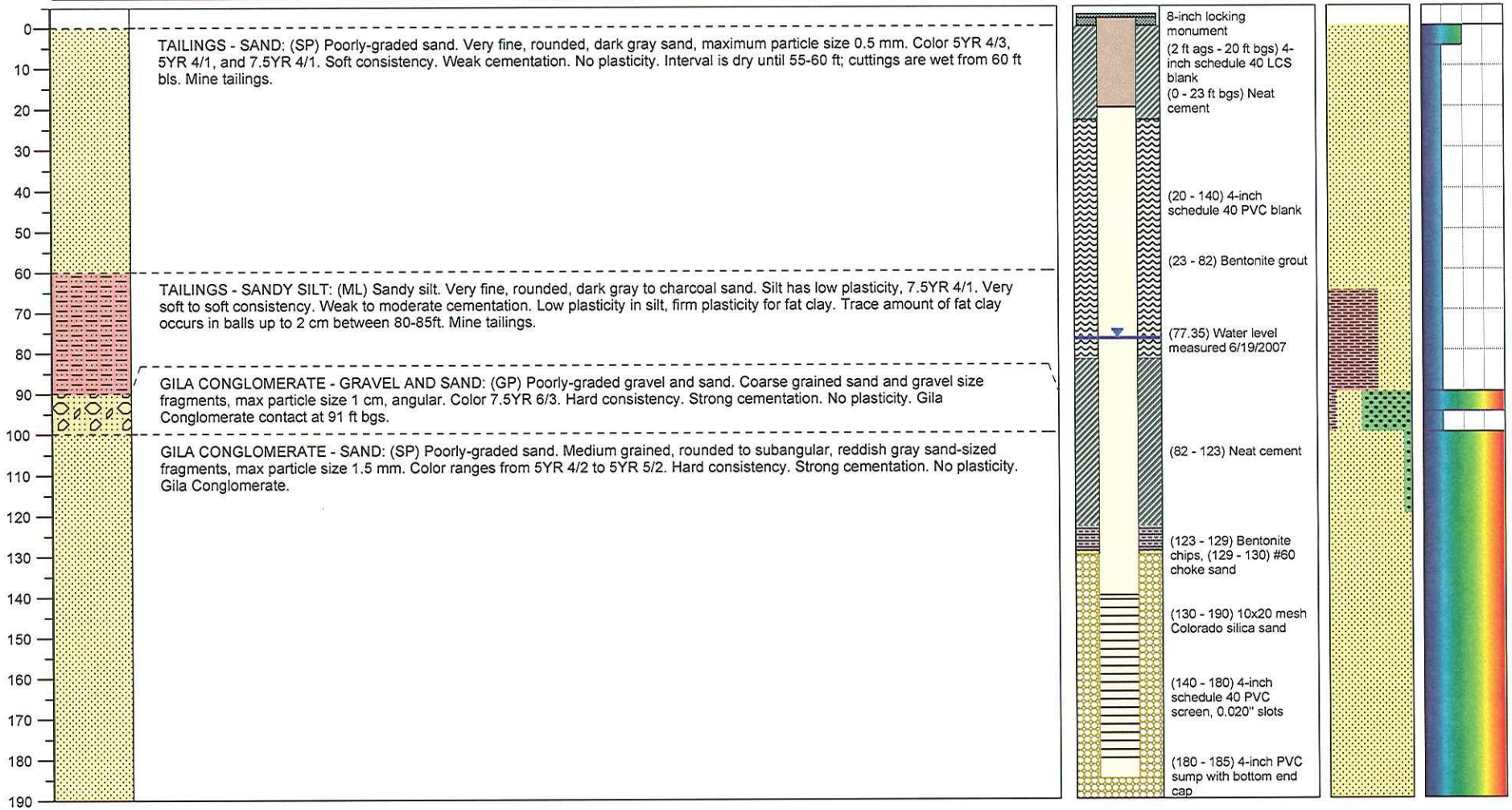
EASTING: 948296

LITHOLOGY

AS-BUILT

CUTTINGS SIZE — FINES, MEDIUM, COARSE

REACTION TO HCl — NONE, WEAK, MOD, STRONG



BOREHOLE No.	SETTLING PONDS 1 & 2 ALERT WELL	TOTAL DEPTH DRILLED	190	SCALE	AS SHOWN
ADWR REG No.	55-907034	BIT DIAMETER	8.75"	DATE	06/07/2007
LOCATION	SUPERIOR, AZ	DRILLING FLUID	AIR	DESIGN	JCR
CLIENT	RESOLUTION COPPER MINE	LOGGED BY	KKH	CHECK	JJM
DRILLING CO	YELLOW JACKET DRILLING	DATE STARTED	05/22/07	REVIEW	KJ
DRILLING EQUIPMENT	SPEEDSTAR 50K-CH	DATE FINISHED	05/23/07	REV 1	FILE ALERT WELL.LDF
DRILLING METHOD	AIR ROTARY CASING HAMMER	COMMENTS	USCS SCALE, MUNSELL COLOR CHART	PROJECT No.	073-92522

TITLE

BOREHOLE LOG AND AS-BUILT DRAWING

Golder Associates

FIGURE 2-3

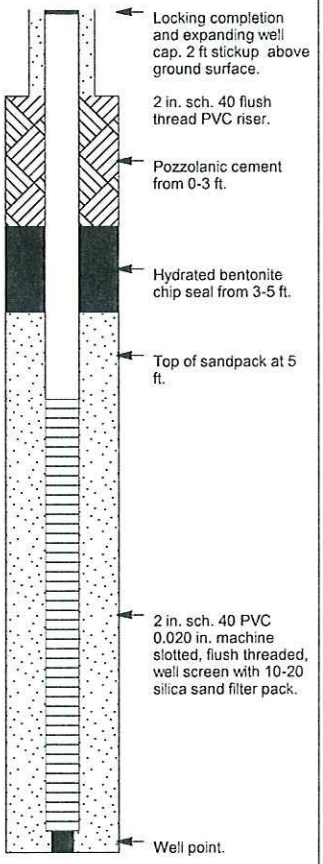
FIGURE 2-4

SMELTER POND POC WELL

CLIENT:	Resolution Copper Company	AZ STATE PLANE N: 834587	SHEET: 1 OF 1
PROJECT:	Lower Smelter Pond	CENTRAL NAD 83 E: 947379.3	DRILL RIG/METHOD: BK-81/4.25" HSA
LOCATION:	Superior, Arizona	ELEVATION: 2743.149 FT AMSL	LOGGED: JAC DATE: 2/13/07
PROJECT NO.:	063-2596	INCLINATION: -90	CHECKED: JAC DATE: 4/25/07

DEPTH	ELEVATION	WATER	SAMPLE NUMBER	RECOVERY / ATTEMP (FT/FT)	SAMPLE TYPE	GRAPHIC LOG	USCS	Sample Description (consistency or density, color, MAJOR COMPONENT, minor components, moisture, other notes.)	PASTE pH (SU)	ELECTRICAL CONDUCTIVITY (mS)	ADDITIONAL LABORATORY TESTING
0							ML	soft, moderate brown, SANDY SILT, cohesive, some organics, low plasticity, strong reaction with HCl, little to some tails, moist, (fill).	8.04	4.41	
	2741.1										
	2.0		1	2 / 4				dense, moderate brown, fine to coarse SAND, trace fine to medium gravel, trace to little fines, completely weathered clasts, variable reaction with HCl, wet, (alluvium). -sample barrel refusal at 4 ft.			
5		▽					SP				
10			2	0.5 / 0.5					7.97	1.61	
	2730.6										
	12.5		3	0.5 / 0.5				hard, weakly cemented, pale brown, fine to coarse SAND, little fine to coarse gravel, little fines, dry, (weathered Gila Conglomerate).	7.28	1	
15			4	0.2 / 0.3			GILA		7.56	0.7	
	2725.6										
	17.5		5	0.2 / 0.3				End of Boring at 17.5 Feet Below Ground Surface.			

Monitor Well Details
Top of Casing Elevation: 2746.28 ft. AMSL



Report of borehole must be read in conjunction with accompanying notes and abbreviations

TAILINGS POND 5 POC WELL

AZ STATE PLANE CENTRAL NAD 83

NORTHING: 837338 ELEVATION (TOC):2965.32

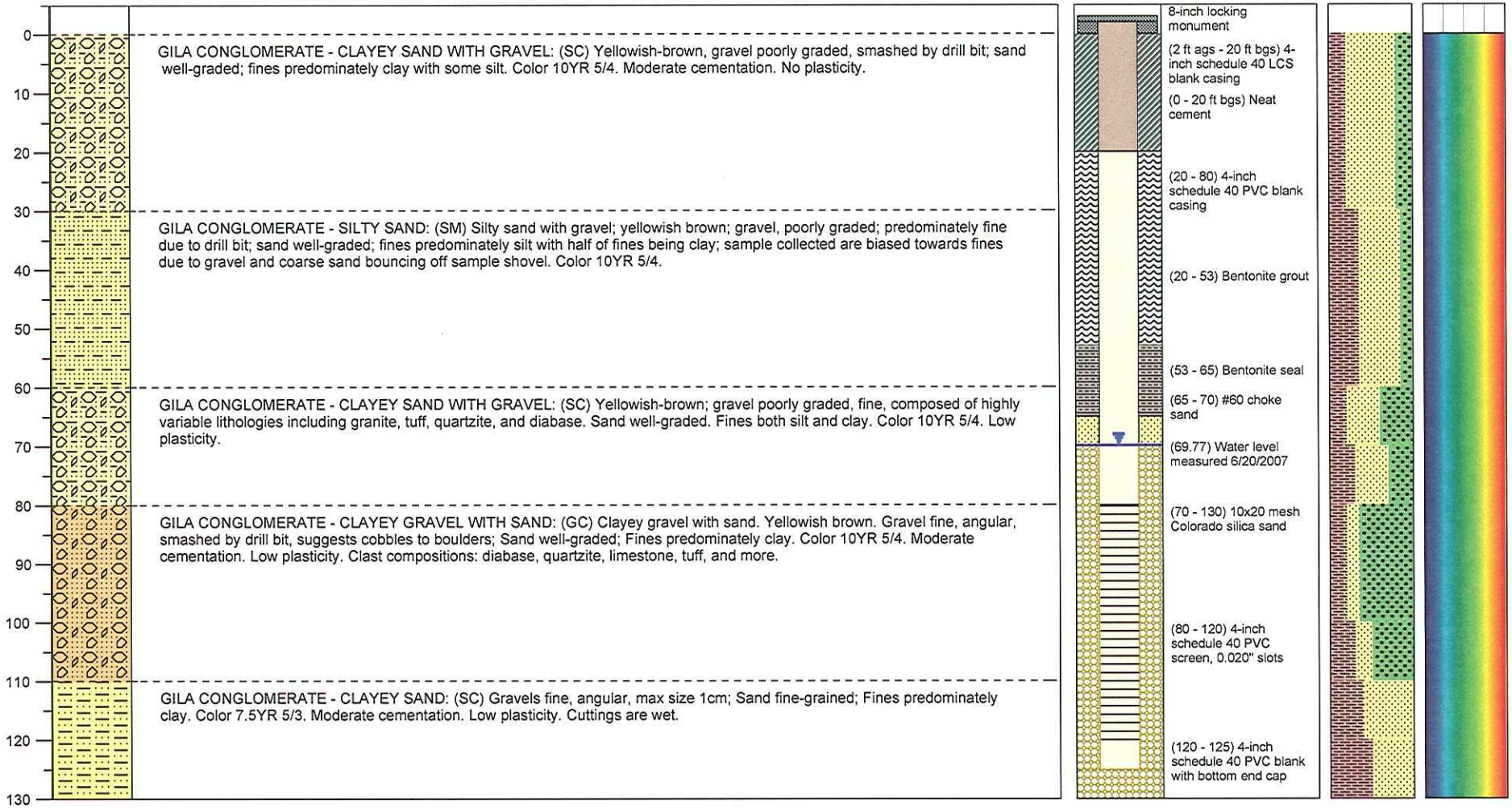
EASTING: 947439

LITHOLOGY

AS-BUILT

CUTTINGS SIZE — FINES, MEDIUM, COARSE

REACTION TO HCl — NONE, WEAK, MOD, STRONG



BOREHOLE No.	TAILINGS POND 5 POC WELL	TOTAL DEPTH DRILLED	130 ft bgs	SCALE	AS SHOWN
ADWR REG No.	55-907036	BIT DIAMETER	8.75"	DATE	06/07/07
LOCATION	SUPERIOR, AZ	DRILLING FLUID	AIR	DESIGN	JCR
CLIENT	RESOLUTION COPPER MINE	LOGGED BY	JJM AND KKH	CHECK	JJM
DRILLING CO	YELLOW JACKET DRILLING	DATE STARTED	5/24/07	REVIEW	KJ
DRILLING EQUIPMENT	SPEEDSTAR 50K-CH	DATE FINISHED	05/29/07	REV 1	FILE TP5 POC Well.ldf
DRILLING METHOD	HAMMER, AIR ROTARY	COMMENTS	USCS SCALE, MUNSELL COLOR CHART	PROJECT No.	073-92522

TITLE

BOREHOLE LOG AND AS-BUILT DRAWING

Golder Associates

FIGURE 2-5

ATTACHMENT 3

ITSI DATA VALIDATION REPORTS

Innovative Technical Solutions, Inc.

August 23, 2007

Dr. Casey McKeon
Resolution Copper Company
47206 North Magma Shaft #9 Road
Superior, Arizona 85273

RE: ITSI DATA VALIDATION REPORT
RESOLUTION COPPER
PROJECT NO. 073-92522

Dear Dr. McKeon:

Innovative Technical Solutions, Inc. (ITSI) has completed the data review for Resolution Copper Company (RCC) for its Ambient Alert – APP Wells. ITSI performed data review as described in the U.S. Environmental Protection Agency's (EPA) U.S. Environmental Protection Agency (EPA) *National Functional Guidelines for Superfund Organic Data Review*, 2005; the *Quality Assurance Plan Surface Water Baseline Resource Investigation for Resolution Copper Company*, January 23, 2006; and using criteria in the referenced method.

The acronym listing is included as Appendix A. Data review qualifiers have been marked in red directly on the analytical reports provided by the laboratory and are attached as Appendix B. A summary of all qualified data is provided in a qualified results table (QRT) as Appendix C. The ITSI standard legal notice is provided as Appendix D.

1.0 CROSS REFERENCE OF SAMPLES VERIFIED

The analytical data in the laboratory Sample Delivery Group (SDG) indicated below were reviewed. This SDG contained data for benzene, toluene, ethlylbenzene and total xylenes (BTEX) by EPA Method 8021B

The samples were analyzed by Test America (TA) of Phoenix, Arizona. The table below provides an analytical summary and cross reference for the samples. All samples underwent a level 3 data verification.

Field Sample ID	TA SDG	Sample Matrix	BTEX
EB-1	PQF0865-01	Water	X
Trip Blank	PQF0865-02	Water	X
SP ½ Alert Well	PQF0865-03	Water	X
DS-1	PQF0865-04	Water	X

1501 West Fountainhead Parkway, Suite 360
Tempe, AZ 85282

(480) 706-6488
fax (480) 704-2952
www.itsi.com

2.0 LABORATORY REPORT

The laboratory report was reviewed for completeness. There were no anomalies observed.

3.0 SAMPLE INTEGRITY/PRESERVATION

The chain-of-custody (COC) and sample receipt temperature were reviewed. The following temperature anomaly was observed.

- The samples were received at the laboratory at 14.4°C which is out of the criteria of 4±2°C. The associated results, which were all non-detect have been flagged "R" for rejected.

4.0 HOLDING TIME

The samples were analyzed within the method-recommended holding time of 14 days.

5.0 INITIAL AND CONTINUING CALIBRATION

Initial and continuing calibration criteria were not reviewed for this level of data verification.

6.0 BLANK EVALUATION

A method blank was analyzed to assess laboratory contamination. A trip blank was provided with the samples to measure contamination due to travel and storage. No target compounds were reported above the reporting limits (RL) in any of the blanks.

7.0 LABORATORY CONTROL SAMPLES (LCS) AND LABORATORY CONTROL SAMPLE DUPLICATES (LCSD)

An LCS/LCSD pair was reported for the analysis. All recoveries and relative percent differences (RPDs) were within laboratory limits.

8.0 MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD)

An MS/MSD pair was reported for the analysis. All recoveries and RPDs were within laboratory limits.

9.0 SURROGATES

Surrogate spike recoveries were reviewed against the established control limits. All recoveries were within limits.

10.0 COMPOUND QUANTITATION AND IDENTIFICATION

The laboratory RLs and results were reviewed. There were no quantitation anomalies that required qualification of the data.

11.0 FIELD DUPLICATE SAMPLES

DS-1 is a field duplicate of SP ½ Alert Well. There were no compounds detected in the field duplicate samples

12.0 RECOMMENDATIONS

ITSI recommends that the laboratory contact the client if samples are received at the laboratory at temperatures exceeding 6°C. The sampler should check the receipt temperature before leaving the laboratory to verify the accuracy of the temperature reading. Also, a temperature blank should be included in every sample cooler.

13.0 OVERALL ASSESSMENT

All BTEX results were rejected. Based on the available information, the data are considered unusable for their intended purposes.

We thank you for the opportunity to serve you and look forward to supporting RCC with data verification in the future.

Sincerely,

Innovative Technical Solutions, Inc.

Evelyn H. Dawson
Senior Chemist

Appendix A – List of Acronyms and Abbreviations
Appendix B – Qualified Report Pages
Appendix C – Qualified Results Table
Appendix D – ITSI Standard Legal Notice

cc: John Malusa
Golder Associates, Inc.
4730 North Oracle Road, Suite 210
Tucson, Arizona, 85705

APPENDIX A

LIST OF ACRONYMS AND ABBREVIATIONS

LIST OF ACRONYMS AND ABBREVIATIONS

BTEX	benzene, toluene, ethylbenzene, total xylenes
COC	chain-of-custody
EPA	U.S. Environmental Protection Agency
ITSI	Innovative Technical Solutions, Inc.
LCS/LCSD	laboratory control spike/laboratory control spike duplicate
MS/MSD	matrix spike/matrix spike duplicate
QAPP	Quality Assurance Project Plan
RCC	Resolution Copper Company
RL	reporting limit
RPD	relative percent difference
SDG	Sample Delivery Group
TA	Test America

APPENDIX B

QUALIFIED REPORT PAGES

TestAmerica
ANALYTICAL TESTING CORPORATION
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 (480) 785-0043 Fax:(480) 785-0851

Golder Associates - Tucson
4730 N. Oracle
Tucson, AZ 85705
Attention: John Malusa

Project ID: [none]

Report Number: PQF0865

Sampled: 06/20/07
Received: 06/22/07

BTEX (EPA 5030B/8021B)

Analyte	Method	Batch	Reporting Limit		Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PQF0865-01 (EB-1 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8021B	P7F2215	0.50	UR	ND	1	6/22/2007	6/23/2007	
Toluene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Ethylbenzene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Total Xylenes	EPA 8021B	P7F2215	1.5		ND	1	6/22/2007	6/23/2007	
Surrogate: 4-BFB (PID) (80-120%)					*108 %*				
Sample ID: PQF0865-02 (Trip Blank - Water)									
Reporting Units: ug/l									
Benzene	EPA 8021B	P7F2215	0.50	UR	ND	1	6/22/2007	6/23/2007	
Toluene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Ethylbenzene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Total Xylenes	EPA 8021B	P7F2215	1.5		ND	1	6/22/2007	6/23/2007	
Surrogate: 4-BFB (PID) (80-120%)					*106 %*				
Sample ID: PQF0865-03 (SP 1/2 Alert Well - Water)									
Reporting Units: ug/l									
Benzene	EPA 8021B	P7F2215	0.50	UR	ND	1	6/22/2007	6/23/2007	
Toluene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Ethylbenzene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Total Xylenes	EPA 8021B	P7F2215	1.5		ND	1	6/22/2007	6/23/2007	
Surrogate: 4-BFB (PID) (80-120%)					*104 %*				
Sample ID: PQF0865-04 (DS-1 - Water)									
Reporting Units: ug/l									
Benzene	EPA 8021B	P7F2215	0.50	UR	ND	1	6/22/2007	6/23/2007	
Toluene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Ethylbenzene	EPA 8021B	P7F2215	1.0		ND	1	6/22/2007	6/23/2007	
Total Xylenes	EPA 8021B	P7F2215	1.5		ND	1	6/22/2007	6/23/2007	
Surrogate: 4-BFB (PID) (80-120%)					*106 %*				

PC ITJ
7/16/07

TestAmerica - Phoenix, AZ
Ken Baker
Project Manager

APPENDIX C

QUALIFIED RESULTS TABLE

Qualified Results Table for
Resolution Copper
SDG PQF0865
June 2007 Sampling

Sample	Lab ID	Type	Parameter	Original Value	Original Qualifier	Added Qualifier	New Value	Units	Reason	Method	Validator
EB-1	PQF0865-01	EB	Benzene	< 0.50		UR	0.50 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
EB-1	PQF0865-01	EB	Toluene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
EB-1	PQF0865-01	EB	Ethylbenzene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
EB-1	PQF0865-01	EB	Total Xylenes	< 1.5		UR	1.5 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
Trip Blank	PQF0865-02	TB	Benzene	< 0.50		UR	0.50 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
Trip Blank	PQF0865-02	TB	Toluene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
Trip Blank	PQF0865-02	TB	Ethylbenzene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
Trip Blank	PQF0865-02	TB	Total Xylenes	< 1.5		UR	1.5 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
SP 1/2 Alert Well	PQF0865-03	Water	Benzene	< 0.50		UR	0.50 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
SP 1/2 Alert Well	PQF0865-03	Water	Toluene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
SP 1/2 Alert Well	PQF0865-03	Water	Ethylbenzene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
SP 1/2 Alert Well	PQF0865-03	Water	Total Xylenes	< 1.5		UR	1.5 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
DS-1	PQF0865-04	Water	Benzene	< 0.50		UR	0.50 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
DS-1	PQF0865-04	Water	Toluene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
DS-1	PQF0865-04	Water	Ethylbenzene	< 1.0		UR	1.0 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC
DS-1	PQF0865-04	Water	Total Xylenes	< 1.5		UR	1.5 UR	µg/L	Temperature Exceedence	EPA 8021B	ITSI/PC

Abbreviations
µg/L = micrograms per liter
EB = equipment blank
SDG = sample delivery group
TB = trip blank

Data Qualifier Flags
R = rejected
U = not detected

APPENDIX D

ITSI STANDARD LEGAL NOTICE

ITSI STANDARD LEGAL NOTICE

ITSI is issuing this report at the request of the Client and based upon information furnished by Client. Further, the presence of environmental contamination can be influenced by many factors, including unknown and changing underground conditions. Therefore: 1. This report may not be relied upon by anyone for financial decision-making. 2. No one other than Client is authorized to use this report for any purpose. 3. Any conclusions or opinions included in this report are subject to reasonable revision based upon any new environmental or other data which is later developed. 4. Any results or conclusions stated are to be considered limited by the quality of the underlying sample or other data on which they are based, the budget established by the Client or otherwise for gathering and analyzing data, and by any assumptions and qualifications contained within this report.

Innovative Technical Solutions, Inc.

August 22, 2007

Dr. Casey McKeon
Resolution Copper Company
47206 North Magma Shaft #9 Road
Superior, Arizona 85273

RE: ITSI DATA VALIDATION REPORT
RESOLUTION COPPER
PURCHASE ORDER NO. 073-92522
SDG 130103

Dear Dr. McKeon:

Innovative Technical Solutions, Inc. (ITSI) has completed the data review for Resolution Copper Company (RCC) for its Ambient Alert – APP Wells. ITSI performed data review as described in the U.S. Environmental Protection Agency's (EPA) *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004; the *Quality Assurance Plan Surface Water Baseline Resource Investigation for Resolution Copper Company*, January 23, 2006; and using criteria in the referenced methods.

The list of acronyms and abbreviations is included as Appendix A. Data review qualifiers have been marked in red directly on the analytical reports provided by the laboratory and are attached as Appendix B. A summary of all qualified data is provided in a qualified results table (QRT) as Appendix C. The ITSI standard legal notice is provided as Appendix D.

1.0 CROSS REFERENCE OF SAMPLES VERIFIED

The analytical data in the laboratory Sample Delivery Group (SDG) indicated below were reviewed. This SDG contained data for the following methods and compounds.

- Metals
  - Inductively coupled plasma/atomic emission spectroscopy (ICP/AES) metals by EPA Method 200.7
  - ICP/mass spectrometry (MS) metals by EPA Method 200.8
  - Cold vapor atomic absorption (CVAA) mercury by EPA Method 245.1

1501 West Fountainhead Parkway, Suite 360
Tempe, AZ 85282

(480) 706-6488
fax (480) 704-2952
www.itsi.com

- General Chemistry Methods
  - Alkalinity, $CaCO_3$ by Standard Method (SM) 2320B
  - Anions (chloride, fluoride and sulfate) by ion chromatography (IC) by EPA Method 300.0
  - Nitrite/Nitrate as N by EPA Method 353.2
  - Total dissolved solids (TDS) by EPA Method 160.1

The samples were analyzed by SVL Analytical (SVL) of Kellogg, Idaho. The table below provides an analytical summary and cross reference for the samples. All samples underwent a level 3 data verification.

Field Sample ID	Sample Matrix	Collection Date	SVL SDG	Type	Metals	General Chemistry
EB-1	EB	6/20/07	W583716	Total	X	X
			W583723	Dissolved	X	
DS-1	Water	6/21/07	W583717	Total	X	X
			W583724	Dissolved	X	
Tailings Pond 5 POC Well	Water	6/21/07	W583718	Total	X	X
			W583725	Dissolved	X	
SP ½ Alert Well	Water	6/21/07	W583719	Total	X	X
			W583726	Dissolved	X	
Smelter Pond POC Well	Water	6/21/07	W583720	Total	X	X
			W583727	Dissolved	X	

2.0 LABORATORY REPORT

The laboratory report was reviewed for completeness. There were no anomalies observed.

3.0 SAMPLE INTEGRITY

The chains-of-custody (COCs) were available for review. There were no anomalies that required qualification of the data.

4.0 DATA EVALUATION

4.1 METALS BY EPA METHODS 200.7, 200.8 AND 245.1

4.1.1 Sample Receipt and Holding Times

The samples were extracted and analyzed within the method-recommended holding time. There were no anomalies concerning the receipt of the samples that required qualification of the data.

4.1.2 Blank Evaluation

Preparation blanks were analyzed to assess laboratory contamination. Equipment blanks were provided to assess contamination that could occur during the collection of the samples. There were no anomalies in the preparation or equipment blanks that required qualification of the data except as noted below.

- Several metals were detected in the preparation and equipment blanks associated with the ICP metal analyses. The sample results that were less than ten times (10X) the highest blank contamination have been flagged "U" and changed to non-detect at the observed value. No data qualifiers are required for the results that are greater than 10X the highest blank contamination or are non-detect.

4.1.3 Initial and Continuing Calibration

Initial and continuing calibration criteria were not reviewed for this level of data verification.

4.1.4 Laboratory Control Samples (LCS)/Laboratory Control Samples Duplicate (LCSD)

A single LCS was analyzed for all metal analyses. There were no anomalies that required qualification of the data.

4.1.5 Matrix Spike (MS)/Matrix Spike Duplicate (MSD) and Duplicate Samples

An MS, laboratory sample duplicate and field duplicate samples were analyzed to measure precision and accuracy. There were no anomalies that required qualification of the data except as noted below.

- The percent recovery for selenium was out of the QAPP criteria of 85 to 115 percent at 125.7 percent in the MS. Since the LCS recovery was acceptable and the MS recovery was biased high, only the associated result in spiked sample DS-1 and its duplicate sample SP ½ Alert Well have been flagged "J" for an estimated value.

- The RPD for antimony was out of the QAPP criteria of less than 20 percent at 70.3 percent in the sample duplicate pair due to sample results being close to the reporting limit. Since there was no other measurement of precision available, the associated positive result in sample EB-1 has been flagged "J" for an estimated value.

- Several of the metals were non-detect in both the laboratory duplicate and field duplicate samples. Since there was no other measurement of precision available, the associated positive metal results in the samples have been flagged "J" for an estimated value. No data qualifiers are required for the non-detect results.

4.1.6 Practical Quantitation Limits (PQLs) and Compound Quantitation

The laboratory PQLs and sample results were reviewed. There were no anomalies that required qualification of the data.

4.1.7 Field Duplicate Samples

DS-1 is a field duplicate of SP ½ Alert Well. The RPDs for the positive results that were greater than five times (5X) the reporting limit were evaluated in the table below.

Primary (PO) and Duplicate Samples (D1)	Lab ID	Analyte	Primary Sample Result µg/L	Duplicate Sample Result µg/L	RPD
SP ½ Alert Well DS-1	W583719 W583717	Calcium, Total	13500	12800	5.3
SP ½ Alert Well DS-1	W583719 W583717	Magnesium, Total	19700	19600	0.5
SP ½ Alert Well DS-1	W583719 W583717	Potassium, Total	2620	2550	2.7
SP ½ Alert Well DS-1	W583719 W583717	Sodium, Total	100000	101000	1.0
SP ½ Alert Well DS-1	W583726 W583724	Arsenic, Dissolved	4.5	4.4	2.2
SP ½ Alert Well DS-1	W583726 W583724	Barium, Dissolved	14.6	14.8	1.4
SP ½ Alert Well DS-1	W583726 W583724	Lead, Dissolved	<RL	2.6	NC
SP ½ Alert Well DS-1	W583726 W583724	Selenium, Dissolved	2.1	2	4.9
SP ½ Alert Well DS-1	W583726 W583724	Molybdenum, Dissolved	7.3	5.4	30

NC = Not calculable
RL = Reporting Limit

All RPDs were within the QAPP criteria of less than 20 percent, except for lead and molybdenum. Since the associated results for these metals in the field duplicate set were less than five (5X) the reporting limit, no data qualifiers are required.

4.1.8 Assessment for Metals

There were no rejected metal analytical results. Based on the available information, the data as qualified are considered useable for their intended purposes.

4.2 GENERAL CHEMISTRY METHODS

4.2.1 Sample Receipt and Holding Times

The samples were extracted and analyzed within the method-recommended holding time. There were no anomalies concerning the receipt of the samples that required qualification of the data.

4.2.2 Blank Evaluation

Method blanks were analyzed to assess laboratory contamination. Equipment blanks were provided to assess contamination that could occur during the collection of the samples. There were no anomalies in the method or equipment blanks that required qualification of the data.

4.2.3 Initial and Continuing Calibration Evaluation

Initial and continuing calibration criteria were not reviewed for this level of data verification.

4.2.4 LCS/LCSD

A single LCS was reported for each analysis. There were no anomalies that required qualification of the data.

4.2.5 MS/MSD and Duplicate Samples

An MS, laboratory sample duplicate and field duplicate samples were analyzed to measure precision and accuracy. There were no anomalies that required qualification of the data.

4.2.6 PQLs and Compound Quantitation

The laboratory PQLs and results were reviewed. There were no quantitation anomalies that required qualification of the data.

4.2.7 Field Duplicate Samples

DS-1 is a field duplicate of SP ½ Alert Well. The RPD for the positive results were evaluated in the table below. All RPDs were within the QAPP criteria of less than 20 percent.

Primary (PO) and Duplicate Samples (D1)	Lab ID	Analyte	Primary Sample Result mg/L	Duplicate Sample Result mg/L	RPD
SP ½ Alert Well DS-1	W583719 W583717	Alkalinity	268	271	1.1
SP ½ Alert Well DS-1	W583719 W583717	TDS	382	382	0.0
SP ½ Alert Well DS-1	W583719 W583717	Chloride	16	16.2	1.2
SP ½ Alert Well DS-1	W583719 W583717	Fluoride	0.58	0.56	3.5
SP ½ Alert Well DS-1	W583719 W583717	Nitrate/Nitrite as N	3.01	2.63	13
SP ½ Alert Well DS-1	W583719 W583717	Sulfate	64.2	57.7	11

4.2.8 Assessment for General Chemistry

There were no rejected or estimated general chemistry analytical results. Based on the available information, the data are considered useable for their intended purposes.

5.0 OVERALL ASSESSMENT FOR SDG

There were no rejected analytical results in this SDG. Based on the available information, the data as qualified are considered useable for their intended purposes.

6.0 RECOMMENDATIONS

ITSI has the following recommendations.

- The laboratory should analyze an MSD or LCSD with each method to ensure that the analytical batch has precision in the event that the sample duplicate fails or the results of the original sample and the sample duplicate are non-detect.

- The equipment blank (EB) should not be used as the matrix spike or sample duplicate. Since the EB is not a project sample, it does not provide meaningful measurements of precision or accuracy for the matrix of interest.

We thank you for the opportunity to serve you and look forward to supporting RCC with data review in the future.

Sincerely,
Innovative Technical Solutions, Inc.

Evelyn H. Dawson
Senior Chemist

Enclosures:

Appendix A – List of Acronyms and Abbreviations
Appendix B – Qualified Report Pages
Appendix C – Qualified Results Table
Appendix D – ITSI Standard Legal Notice

cc: John Malusa
Golder Associates, Inc.
4730 North Oracle Road, Suite 210
Tucson, Arizona, 85705

APPENDIX A

LIST OF ACRONYMS AND ABBREVIATIONS

LIST OF ACRONYMS AND ABBREVIATIONS

COC	chain-of-custody
AA	atomic absorption
AES	atomic emission spectroscopy
CVAA	cold vapor atomic absorption
EB	equipment blank
EPA	U.S. Environmental Protection Agency
IC	ion chromatography
ICP	inductively coupled plasma
ITSI	Innovative Technical Solutions, Inc.
LCS/LCSD	laboratory control samples/laboratory control samples duplicate
mg/L	milligrams per liter
MS	mass spectrometry
MS/MSD	matrix spike/matrix spike duplicate
PQL	practical quantitation limit
QAPP	Quality Assurance Project Plan
QRT	qualified results table
RCC	Resolution Copper Company
RL	reporting limit
RPD	relative percent difference
SDG	Sample Delivery Group
SM	Standard Method
SVL	SVL Analytical
TDS	Total Dissolved Solids

LIST OF VALUE FLAGS

J	estimated value
J-	estimated value, low bias
J+	estimated value, high bias
R	rejected, not useable
U	not detected
UJ	estimated reporting limit
UR	rejected, unusable RL

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

W583716

Lab Name: SVL_ANALYTICAL_INC._____ Contract: _____
Lab Code: SILVER Case No: _____ SAS No: _____ SDG No: 130103
Matrix (soil/water): WATER Lab Sample ID: W583716
Level (low/med): LOW Date Received: 07/28/07
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic				NR
7440-39-3	Barium				NR
7440-41-7	Beryllium				NR
7440-43-9	Cadmium				NR
7440-70-2	Calcium	130		N	P
7440-47-3	Chromium				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead				NR
7439-95-4	Magnesium	21.6	B		P
7439-96-5	Manganese				NR
7439-97-6	Mercury				NR
7440-02-0	Nickel				NR
7440-09-7	Potassium	21.0	U		P
7782-49-2	Selenium				NR
7440-23-5	Sodium	411			P
7440-28-0	Thallium				NR
7440-66-6	Zinc				NR
7439-98-7	Molybdenum				NR
	Hardness	415			P

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CLIENT_ID: EB-1
HARDNESS_BY_CALCULATION

No Flags

RC IBJ

5

SVL ANALYTICAL, INC.
One Government Gulch ▪ P.O. Box 929 ▪ Kellogg, Idaho 83837-0929 ▪ Phone: (208)784-1258 ▪ Fax: (208)783-0891

Certificate: AZ AZ0538

CLIENT : GOLDER ASSOCIATES
PROJECT:
CLIENT SAMPLE ID: EB-1
Sample Collected: 6/20/07 12:15
Sample Receipt : 6/26/07
Date of Report : 7/28/07

SVL JOB: 130103
SAMPLE: 583716
TOT/DIS
Matrix: WATERG

	Determination	Result	Units	Dilution	Method	Analyzed	
T	ALKALINITY	<1.0	mg CaCO3/L		2320B	6/28/07	
T	CO3, CaCO3	<1.0	mg CaCO3/L		2320B	6/28/07	
T	HCO3, CaCO3	<1.0	mg CaCO3/L		2320B	6/28/07	
T	TDS	<10	mg/L		2540C	6/27/07	
T	Chloride	0.41	mg/L		300.0	7/09/07	
T	Fluoride	<0.10	mg/L		300.0	7/09/07	
T	NO2+NO3-N	0.0230	mg/L		353.2	7/09/07	J
T	Sulfate, SO4	<0.30	mg/L		300.0	7/09/07	

CalcTDS:<10	TDS/Cond:	CATION SUM: 0.00meq/L	BALANCE
TDS/CalcTDS:	CalcTDS/Cond:	ANION SUM: 0.01meq/L	N/A %

Filtered fraction: 583723

Reviewed By: Debby Lang Date 07/29/07
7/28/07 14:05

AZ: AZ0538 CA: CERT NO. 2080 CO: CERT NO. ID00019 ID: ID00019 MT: CERT. 0027 NV: CERT. ID19 WA: C1268

PC III
8/11/07

U.S. EPA - CLP

1 INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

W583723(DIS

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130103
Matrix (soil/water): WATER Lab Sample ID: W583723
Level (low/med): LOW Date Received: 07/28/07
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11.0	U		P	
7440-36-0	Antimony	0.12	B		PM	J
7440-38-2	Arsenic	0.30	U		PM	
7440-39-3	Barium	0.50	U		P	
7440-41-7	Beryllium	0.20	U		P	
7440-43-9	Cadmium	0.30	U		P	
7440-70-2	Calcium				NR	
7440-47-3	Chromium	0.40	U		P	
7440-50-8	Copper	2.6	B		P	
7439-89-6	Iron	7.2	U		P	
7439-92-1	Lead	2.4	U		P	
7439-95-4	Magnesium				NR	
7439-96-5	Manganese	2.4	B		P	
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	2.6	B		P	
7440-09-7	Potassium				NR	
7782-49-2	Selenium	0.12	B	N	PM	
7440-23-5	Sodium				NR	
7440-28-0	Thallium	0.02	U		PM	
7440-66-6	Zinc	0.70	U		P	
7439-98-7	Molybdenum	2.2	U		P	
	Hardness				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: Clarity After: Artifacts:

Comments:
CLIENT_ID: EB-1 (DISSOLVED METALS)

pc IDI
8/11/07

U.S. EPA - CLP

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1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

W583724(DIS

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130103
Matrix (soil/water): WATER Lab Sample ID: W583724
Level (low/med): LOW Date Received: 07/28/07
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11.0	U		P	
7440-36-0	Antimony	~~0.16~~	B		PM	0.16 U
7440-38-2	Arsenic	4.4			PM	
7440-39-3	Barium	14.8			P	
7440-41-7	Beryllium	0.20	U		P	
7440-43-9	Cadmium	0.30	U		P	
7440-70-2	Calcium				NR	
7440-47-3	Chromium	0.40	U		P	
7440-50-8	Copper	2.1	U		P	
7439-89-6	Iron	7.2	U		P	
7439-92-1	Lead	2.6	B		P	J
7439-95-4	Magnesium				NR	
7439-96-5	Manganese	~~22.4~~			P	22.4 U
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	~~1.6~~	B		P	1.6 U
7440-09-7	Potassium				NR	
7782-49-2	Selenium	2.0	B	N	PM	J
7440-23-5	Sodium				NR	
7440-28-0	Thallium	0.02	U		PM	
7440-66-6	Zinc	0.70	U		P	
7439-98-7	Molybdenum	5.4	B		P	J
	Hardness				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: Clarity After: Artifacts:

Comments:
CLIENT_ID: DS-1 (DISSOLVED METALS)

PC ITJ
8/13/07

U.S. EPA - CLP

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CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

W583725(DIS

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130103
Matrix (soil/water): WATER Lab Sample ID: W583725
Level (low/med): LOW Date Received: 07/28/07
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11.0	U		P	
7440-36-0	Antimony	~~0.69~~	B		PM	0.69 U
7440-38-2	Arsenic	2.1	B		PM	
7440-39-3	Barium	35.7			P	
7440-41-7	Beryllium	0.20	U		P	
7440-43-9	Cadmium	0.30	U		P	
7440-70-2	Calcium				NR	
7440-47-3	Chromium	0.40	U		P	
7440-50-8	Copper	2.1	U		P	
7439-89-6	Iron	7.2	U		P	
7439-92-1	Lead	2.4	U		P	
7439-95-4	Magnesium				NR	
7439-96-5	Manganese	203			P	
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	~~1.8~~	B		P	1.8 U
7440-09-7	Potassium				NR	
7782-49-2	Selenium	~~0.60~~	B	N	PM	0.64
7440-23-5	Sodium				NR	
7440-28-0	Thallium	0.02	U		PM	
7440-66-6	Zinc	0.70	U		P	
7439-98-7	Molybdenum	19.8			P	J
	Hardness				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: Clarity After: Artifacts:

Comments:
CLIENT_ID: TAILINGS_POND_5_POC_WELL_(DISSOLVED_METALS)

PC III
8/13/07

17
JK 07/30/2007

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

W583726(DIS

Lab Name: SVL_ANALYTICAL_INC._____ Contract: _____
Lab Code: SILVER Case No: _____ SAS No: _____ SDG No: 130103
Matrix (soil/water): WATER Lab Sample ID: W583726
Level (low/med): LOW Date Received: 07/28/07
% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11.0	U		P	
7440-36-0	Antimony	~~0.19~~	B		PM	0.19 U
7440-38-2	Arsenic	4.5			PM	
7440-39-3	Barium	14.6			P	
7440-41-7	Beryllium	0.20	U		P	
7440-43-9	Cadmium	0.30	U		P	
7440-70-2	Calcium				NR	
7440-47-3	Chromium	0.40	U		P	
7440-50-8	Copper	2.1	U		P	
7439-89-6	Iron	7.2	U		P	
7439-92-1	Lead	2.4	U		P	
7439-95-4	Magnesium				NR	
7439-96-5	Manganese	~~21.2~~			P	21.2 U
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	~~1.6~~	B		P	1.6 U
7440-09-7	Potassium				NR	
7782-49-2	Selenium	2.1	B	N	PM	J
7440-23-5	Sodium				NR	
7440-28-0	Thallium	0.02	U		PM	
7440-66-6	Zinc	0.70	U		P	
7439-98-7	Molybdenum	7.3	B		P	J
	Hardness				NR	
			I			

Color Before: COLORLESS Clarity Before: CLEAR Texture: _____
Color After: _____ Clarity After: _____ Artifacts: _____

Comments:
CLIENT_ID: SP_1/2_ALERT_WELL_(DISSOLVED_METALS)

pc III
8/13/07

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

W583727(DIS

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130103
Matrix (soil/water): WATER
Level (low/med): LOW
% Solids: 0.0
Lab Sample ID: W583727
Date Received: 07/28/07

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11.0	U		P	
7440-36-0	Antimony	~~0.22~~	B		PM	0.22 U
7440-38-2	Arsenic	3.3			PM	
7440-39-3	Barium	32.2			P	
7440-41-7	Beryllium	0.20	U		P	
7440-43-9	Cadmium	0.30	U		P	
7440-70-2	Calcium				NR	
7440-47-3	Chromium	0.59	B		P	J
7440-50-8	Copper	2.1	U		P	
7439-89-6	Iron	7.2	U		P	
7439-92-1	Lead	2.4	U		P	
7439-95-4	Magnesium				NR	
7439-96-5	Manganese	~~7.0~~			P	7.0 U
7439-97-6	Mercury	0.10	U		CV	
7440-02-0	Nickel	~~1.8~~	B		P	1.8 U
7440-09-7	Potassium				NR	
7782-49-2	Selenium	2.1	B	N	PM	
7440-23-5	Sodium				NR	
7440-28-0	Thallium	0.02	U		PM	
7440-66-6	Zinc	~~1.1~~	B		P	1.1 U
7439-98-7	Molybdenum	2.4	B		P	J
	Hardness				NR	

Color Before: COLORLESS Clarity Before: CLEAR Texture:
Color After: Clarity After: Artifacts:

Comments:
CLIENT_ID: SMELTER_POND_POC_WELL_(DISSOLVED_METALS)

PC ITJ
8/13/07

APPENDIX C

QUALIFIED RESULTS TABLE

Qualified Results Table for
Resolution Copper
APP Wells
SDG 130103
June 2007 Sampling

Sample	Lab ID	Type	Parameter	Original Value	Original Qualifier	Added Qualifier	New Value	Units	Reason	Method	Validator
DS-1	W583724	GW	Antimony, Dissolved	0.16	B	U	0.16 U	µg/L	PB/EB Contamination	EPA 200.8	ITSI/PC
DS-1	W583724	GW	Manganese, Dissolved	22.4		U	22.4 U	µg/L	EB Contamination	EPA 200.7	ITSI/PC
DS-1	W583724	GW	Nickel, Dissolved	1.6	B	U	1.6 U	µg/L	PB/EB Contamination	EPA 200.7	ITSI/PC
Tailings Pond 5 POC Well	W583725	GW	Antimony, Dissolved	0.69	B	U	0.69 U	µg/L	PB/EB Contamination	EPA 200.8	ITSI/PC
Tailings Pond 5 POC Well	W583725	GW	Nickel, Dissolved	1.8	B	U	1.8 U	µg/L	PB/EB Contamination	EPA 200.7	ITSI/PC
Tailings Pond 5 POC Well	W583725	GW	Selenium, Dissolved	0.60	B	U	0.60 U	µg/L	PB/EB Contamination	EPA 200.8	ITSI/PC
SP ½ Alert Well	W583726	GW	Antimony, Dissolved	0.19	B	U	0.19 U	µg/L	PB/EB Contamination	EPA 200.8	ITSI/PC
SP ½ Alert Well	W583726	GW	Manganese, Dissolved	21.2		U	21.2 U	µg/L	EB Contamination	EPA 200.7	ITSI/PC
SP ½ Alert Well	W583726	GW	Nickel, Dissolved	1.6	B	U	1.6 U	µg/L	PB/EB Contamination	EPA 200.7	ITSI/PC
SP ½ Alert Well	W583726	GW	Selenium, Dissolved	2.1	BN	J	2.1 J	µg/L	MS %R	EPA 200.8	ITSI/PC
Smelter Pond POC Well	W583727	GW	Antimony, Dissolved	0.22	B	U	0.22 U	µg/L	PB/EB Contamination	EPA 200.8	ITSI/PC
Smelter Pond POC Well	W583727	GW	Manganese, Dissolved	7.0		U	7.0 U	µg/L	EB Contamination	EPA 200.7	ITSI/PC
Smelter Pond POC Well	W583727	GW	Nickel, Dissolved	1.8	B	U	1.8 U	µg/L	PB/EB Contamination	EPA 200.7	ITSI/PC
Smelter Pond POC Well	W583727	GW	Zinc, Dissolved	1.1	B	U	1.1 U	µg/L	PB Contamination	EPA 200.7	ITSI/PC
DS-1	W583724	GW	Selenium, Dissolved	2.0	B	J	2.0 J	µg/L	MS %R	EPA 200.8	ITSI/PC
EB-1	W583723	EB	Antimony, Dissolved	0.12	B	J	0.12 J	µg/L	RPD>20	EPA 200.7	ITSI/PC
DS-1	W583724	GW	Lead, Dissolved	2.6		J	2.6 J	µg/L	No Precision	EPA 200.7	ITSI/PC
DS-1	W583724	GW	Molybdenum, Dissolved	5.4		J	5.4 J	µg/L	No Precision	EPA 200.7	ITSI/PC
Tailings Pond 5 POC Well	W583725	GW	Molybdenum, Dissolved	19.8		J	19.8 J	µg/L	No Precision	EPA 200.7	ITSI/PC
SP ½ Alert Well	W583726	GW	Molybdenum, Dissolved	7.3		J	7.3 J	µg/L	No Precision	EPA 200.7	ITSI/PC
Smelter Pond POC Well	W583727	GW	Chromium, Dissolved	0.59		J	0.59 J	µg/L	No Precision	EPA 200.7	ITSI/PC

Abbreviations
µg/L = micrograms per liter
mg/L = milligrams per liter
EB = equipment blank
MS = matrix spike
PB = preparation blank
%R = percent recovery
SDG = sample delivery group

Data Qualifier Flags
J = estimated value
U = not detected

APPENDIX D

ITSI STANDARD LEGAL NOTICE

ITSI STANDARD LEGAL NOTICE

ITSI is issuing this report at the request of the Client and based upon information furnished by Client. Further, the presence of environmental contamination can be influenced by many factors, including unknown and changing underground conditions. Therefore: 1. This report may not be relied upon by anyone for financial decision-making. 2. No one other than Client is authorized to use this report for any purpose. 3. Any conclusions or opinions included in this report are subject to reasonable revision based upon any new environmental or other data which is later developed. 4. Any results or conclusions stated are to be considered limited by the quality of the underlying sample or other data on which they are based, the budget established by the Client or otherwise for gathering and analyzing data, and by any assumptions and qualifications contained within this report.

Innovative Technical Solutions, Inc.

September 17, 2007

Dr. Casey McKeon
Resolution Copper Company
47206 North Magma Shaft #9 Road
Superior, Arizona 85273

RE: ITSI DATA VALIDATION REPORT
RESOLUTION COPPER
PURCHASE ORDER NO. RCJVH00414
SDG 130423

Dear Dr. McKeon:

Innovative Technical Solutions, Inc. (ITSI) has completed the data review for Resolution Copper Company (RCC) for its Ambient Alert – APP Wells. ITSI performed data review as described in the U.S. Environmental Protection Agency's (EPA) *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, October 2004; the *Quality Assurance Plan Surface Water Baseline Resource Investigation for Resolution Copper Company*, January 23, 2006; and using criteria in the referenced methods.

The list of acronyms and abbreviations is included as Appendix A. Data review qualifiers have been marked in red directly on the analytical reports provided by the laboratory and are attached as Appendix B. A summary of all qualified data is provided in a qualified results table (QRT) as Appendix C. The ITSI standard legal notice is provided as Appendix D.

1.0 CROSS REFERENCE OF SAMPLES VERIFIED

The analytical data in the laboratory Sample Delivery Group (SDG) 130423 were reviewed. This SDG contained data for the following methods and metals.

- Inductively coupled plasma/atomic emission spectroscopy (ICP/AES) metals by EPA Method 6010B
- Cold vapor atomic absorption (CVAA) mercury (Hg) by EPA Method 7471A

The samples were analyzed by SVL Analytical (SVL) of Kellogg, Idaho. The table below provides an analytical summary and cross reference for the samples. All samples underwent a level 3 data verification.

1501 West Fountainhead Parkway, Suite 360
Tempe, AZ 85282

(480) 706-6488
fax (480) 704-2952
www.itsi.com

Field Sample ID	SVL Number	Sample Matrix	Collection Date	ICP Metals & Hg
500 Yard 15-20	587449	Soil	6/01/2007	X
500 Yard 20-25	587450	Soil	6/01/2007	X
500 Yard 25-30	587451	Soil	6/01/2007	X
500 Yard 35-40	587452	Soil	6/01/2007	X
500 Yard 40-45	587453	Soil	6/01/2007	X
500 Yard 50-55	587454	Soil	6/01/2007	X
500 Yard 60-65	587455	Soil	6/01/2007	X
500 Yard 120-125	587456	Soil	6/04/2007	X
500 Yard 145-150	587457	Soil	6/04/2007	X
S. POND 1&2 100-110	587458	Soil	5/23/2007	X
S. POND 1&2 140-150	587459	Soil	5/23/2007	X
INDIAN POND 10-15	587460	Soil	5/31/2007	X
INDIAN POND 55-60	587461	Soil	5/31/2007	X
T. POND 5 90-100	587462	Soil	5/25/2007	X
T. POND 5 120-130	587463	Soil	5/28/2007	X

2.0 LABORATORY REPORT

The laboratory report was reviewed for completeness. There were no anomalies observed.

3.0 SAMPLE INTEGRITY

The chains-of-custody (COCs) were available for review. There were no anomalies that required qualification of the data except as noted below.

- The temperatures of the samples upon receipt at the laboratory were 11.7°C and 15.6°C which are out of the criteria o f 4±2°C for mercury. The associated positive results have been flagged "J-" for an estimated value with a low bias. The non-detect result for sample 500 YARD 40-45 has been previously flagged "R" for rejected. No further data qualifier flags are required.

4.0 SAMPLE RECEIPT AND HOLDING TIMES

The samples were extracted and analyzed within the method-recommended holding time except as noted below.

- The samples were analyzed for mercury at least 25 days past the method recommended holding time of 28 days. The associated positive results have been flagged "J-" for an estimated value with a low bias and the non-detect result has been flagged "R" for rejected.

5.0 BLANK EVALUATION

Preparation blanks were analyzed to assess laboratory contamination. No qualification of the data was required due to compounds detected in the preparation blank except as noted below.

- Molybdenum was detected in the preparation blank. The associated sample results which were all less than ten times (10X) the blank contamination, have been flagged "U" and changed to non-detect at the observed value.

6.0 INITIAL AND CONTINUING CALIBRATION

Initial and continuing calibration criteria were not reviewed for this level of data verification.

7.0 LABORATORY CONTROL SAMPLES (LCS)/LABORATORY CONTROL SAMPLES DUPLICATE (LCSD)

A single LCS was analyzed for each analysis. There were no anomalies that required qualification of the data.

8.0 MATRIX SPIKE (MS)/MATRIX SPIKE DUPLICATE (MSD)

MS/MSD pairs were analyzed for each analysis. There were no anomalies that required qualification of the data except as noted below.

- The percent recoveries for antimony were out of the laboratory criteria of 75 to 125 percent at 74.4 and 73.4 percent in the MS/MSD. Since the LCS recovery was acceptable and the MS/MSD recoveries were biased low, only the associated result in spiked sample S. POND 1&2 100-110 has been flagged "J" for an estimated value with a low bias.

9.0 PRACTICAL QUANTITATION LIMITS (PQLS) AND COMPOUND QUANTITATION

The laboratory PQLs and sample results were reviewed. There were no anomalies that required qualification of the data.

10.0 FIELD DUPLICATE SAMPLES

Field duplicate samples were not provided.

11.0 RECOMMENDATIONS

There are no recommendations.

12.0 OVERALL ASSESSMENT FOR SDG

There was one rejected mercury result. Based on the available information, the other data as qualified are considered useable for their intended purposes.

We thank you for the opportunity to serve you and look forward to supporting RCC with data review in the future.

Sincerely,
Innovative Technical Solutions, Inc.

Evelyn H. Dawson
Senior Chemist

Enclosures:

Appendix A – List of Acronyms and Abbreviations
Appendix B – Qualified Report Pages
Appendix C – Qualified Results Table
Appendix D – ITSI Standard Legal Notice

cc: John Malusa
Golder Associates, Inc.
4730 North Oracle Road, Suite 210
Tucson, Arizona 85705

APPENDIX A

LIST OF ACRONYMS AND ABBREVIATIONS

LIST OF ACRONYMS AND ABBREVIATIONS

COC	chain-of-custody
AES	atomic emission spectroscopy
CVAA	cold vapor atomic absorption
EPA	U.S. Environmental Protection Agency
ICP	inductively coupled plasma
ITSI	Innovative Technical Solutions, Inc.
LCS/LCSD	laboratory control samples/laboratory control samples duplicate
MS/MSD	matrix spike/matrix spike duplicate
PQL	practical quantitation limit
QAPP	Quality Assurance Project Plan
QRT	qualified results table
RCC	Resolution Copper Company
RL	reporting limit
RPD	relative percent difference
SDG	Sample Delivery Group
SVL	SVL Analytical

LIST OF VALUE FLAGS

J	estimated value
J-	estimated value, low bias
J+	estimated value, high bias
R	rejected, not useable
U	not detected
UJ	estimated reporting limit
UR	rejected, unusable RL

APPENDIX B

QUALIFIED REPORT PAGES

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587449

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587449
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	14800			P	
7440-36-0	Antimony	4.1		N	P	
7440-38-2	Arsenic	166			P	
7440-39-3	Barium	55.0			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	7.2			P	
7440-47-3	Chromium	19.6			P	
7440-50-8	Copper	7490			P	
7439-89-6	Iron	68000			P	
7439-92-1	Lead	513			P	
7439-96-5	Manganese	2380			P	
7439-97-6	Mercury	0.50			CV	J.
7440-02-0	Nickel	13.1			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	1790			P	
7439-98-7	Molybdenum	~~1.6~~			P	1.6 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT_ID: 500_TARD_15-20
SAMPLE_WAS_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

PC ITJ1
9/12/07

U.S. EPA - CLP

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1

CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587450

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587450
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5820			P	
7440-36-0	Antimony	1.1	B	N	P	
7440-38-2	Arsenic	27.0			P	
7440-39-3	Barium	81.0			P	
7440-41-7	Beryllium	0.85			P	
7440-43-9	Cadmium	1.3			P	
7440-47-3	Chromium	5.0			P	
7440-50-8	Copper	1130			P	
7439-89-6	Iron	12200			P	
7439-92-1	Lead	86.8			P	
7439-96-5	Manganese	1050			P	
7439-97-6	Mercury	0.22			CV	J-
7440-02-0	Nickel	5.0			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	431			P	
7439-98-7	Molybdenum	~~1.3~~			P	1.3 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: 500 YARD 20-25
SAMPLE DRIED AND PULVERIZED.
PERCENT SOIDS NOT APPLICABLE.

PC ETM
9/12/07

U.S. EPA - CLP

1
INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.
S587451

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids: 100.0
Lab Sample ID: S587451
Date Received: 07/12/07

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	8870			P	
7440-36-0	Antimony	0.64	B	N	P	
7440-38-2	Arsenic	3.8			P	
7440-39-3	Barium	116			P	
7440-41-7	Beryllium	0.86			P	
7440-43-9	Cadmium	0.66			P	
7440-47-3	Chromium	3.0			P	
7440-50-8	Copper	253			P	
7439-89-6	Iron	5640			P	
7439-92-1	Lead	23.4			P	
7439-96-5	Manganese	740			P	
7439-97-6	Mercury	0.02	B		CV	J-
7440-02-0	Nickel	3.2			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	150			P	
7439-98-7	Molybdenum	~~0.38~~	B		P	0.38 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: 500 YARD 25-30
SAMPLE DRIED AND PULVERIZED.
PERCETN SOLIDS NOT APPLICABLE

PC ITS1
9/12/07

U.S. EPA - CLP

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1 CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587452

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587452
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12500			P	
7440-36-0	Antimony	0.36	B	N	P	
7440-38-2	Arsenic	2.7			P	
7440-39-3	Barium	152			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	0.41			P	
7440-47-3	Chromium	2.7			P	
7440-50-8	Copper	90.1			P	
7439-89-6	Iron	5150			P	
7439-92-1	Lead	11.8			P	
7439-96-5	Manganese	660			P	
7439-97-6	Mercury	0.02	B		CV	J-
7440-02-0	Nickel	3.5			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	130			P	
7439-98-7	Molybdenum	~~0.98~~			P	0.98 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT_ID: 500_YARD_35-40
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

PC ITS1
9/12/07

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587453

Lab Name: SVL_ANALYTICAL_INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids: 100.0
Lab Sample ID: S587453
Date Received: 07/12/07

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12400			P	
7440-36-0	Antimony	0.63	B	N	P	
7440-38-2	Arsenic	2.4	B		P	
7440-39-3	Barium	183			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	0.46			P	
7440-47-3	Chromium	2.2			P	
7440-50-8	Copper	121			P	
7439-89-6	Iron	4870			P	
7439-92-1	Lead	9.1			P	
7439-96-5	Manganese	557			P	
7439-97-6	Mercury	0.02	U		CV	R
7440-02-0	Nickel	2.8			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	130			P	
7439-98-7	Molybdenum	~~-0.97~~			P	0.97 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT_ID: 500_YARD_40-45
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

Pc ITS1
9/12/07

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587454

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587454
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	13800			P	
7440-36-0	Antimony	0.60	B	N	P	
7440-38-2	Arsenic	3.8			P	
7440-39-3	Barium	181			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	0.49			P	
7440-47-3	Chromium	3.0			P	
7440-50-8	Copper	140			P	
7439-89-6	Iron	6380			P	
7439-92-1	Lead	15.4			P	
7439-96-5	Manganese	547			P	
7439-97-6	Mercury	0.03	B		CV	J-
7440-02-0	Nickel	3.3			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	108			P	
7439-98-7	Molybdenum	~~0.90~~			P	0.90 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT_ID: 500_YARD_50-55
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

PC ITS1
9/12/07

U.S. EPA - CLP

25

1 CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587455

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587455
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12300			P	
7440-36-0	Antimony	0.43	B	N	P	
7440-38-2	Arsenic	1.8	B		P	
7440-39-3	Barium	144			P	
7440-41-7	Beryllium	1.3			P	
7440-43-9	Cadmium	0.22			P	
7440-47-3	Chromium	2.2			P	
7440-50-8	Copper	37.4			P	
7439-89-6	Iron	4550			P	
7439-92-1	Lead	8.0			P	
7439-96-5	Manganese	424			P	
7439-97-6	Mercury	0.02	B		CV	J.
7440-02-0	Nickel	2.3			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	35.0			P	
7439-98-7	Molybdenum	~~0.87~~			P	0.87 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: 500 YARD 60-65
SAMPLE DRIED AND PULVERIZED.
PERCENT SOLIDS NOT APPLICABLE

PC ITS1
9/12/07

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587456

Lab Name: SVL_ANALYTICAL_INC._____ Contract: _____
Lab Code: SILVER Case No: _____ SAS No: _____ SDG No: 130423_____
Matrix (soil/water): SOIL_ Lab Sample ID: S587456
Level (low/med): LOW__ Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	11200			P	
7440-36-0	Antimony	0.33	U	N	P	
7440-38-2	Arsenic	1.6	B		P	
7440-39-3	Barium	106			P	
7440-41-7	Beryllium	0.90			P	
7440-43-9	Cadmium	0.22			P	
7440-47-3	Chromium	3.1			P	
7440-50-8	Copper	12.2			P	
7439-89-6	Iron	4780			P	
7439-92-1	Lead	5.3			P	
7439-96-5	Manganese	311			P	
7439-97-6	Mercury	0.02	B		CV	J-
7440-02-0	Nickel	3.2			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	16.8			P	
7439-98-7	Molybdenum	~~0.99~~			P	0.99 U

Color Before: BROWN Clarity Before: _____ Texture: FINE
Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:
CLIENT_ID:_500_YARD_120-125
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APLLICABLE

PC ITS)
9/12/07

U.S. EPA - CLP

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INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587457

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587457
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	14300			P	
7440-36-0	Antimony	0.48	B	N	P	
7440-38-2	Arsenic	1.2	B		P	
7440-39-3	Barium	132			P	
7440-41-7	Beryllium	1.0			P	
7440-43-9	Cadmium	0.21			P	
7440-47-3	Chromium	2.7			P	
7440-50-8	Copper	12.6			P	
7439-89-6	Iron	5080			P	
7439-92-1	Lead	6.2			P	
7439-96-5	Manganese	315			P	
7439-97-6	Mercury	0.02	B		CV	J-
7440-02-0	Nickel	2.8			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	16.4			P	
7439-98-7	Molybdenum	~~1.0~~			P	1.0 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: 500 YARD 145-150
SAMPLE DRIED AND PULVERIZED.
PERCENT SOLIDS NOT APPLICABLE

Pc. ITs)
9/12/07

U.S. EPA - CLP

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1

CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587458

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587458
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	6600			P	
7440-36-0	Antimony	0.51	B	N	P	J-
7440-38-2	Arsenic	2.7			P	
7440-39-3	Barium	91.2			P	
7440-41-7	Beryllium	0.60			P	
7440-43-9	Cadmium	0.40			P	
7440-47-3	Chromium	4.9			P	
7440-50-8	Copper	92.7			P	
7439-89-6	Iron	7260			P	
7439-92-1	Lead	9.9			P	
7439-96-5	Manganese	398			P	
7439-97-6	Mercury	0.03	B		CV	J-
7440-02-0	Nickel	3.2			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	43.3			P	
7439-98-7	Molybdenum	~~1.0~~			P	1.0 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: S. PONDS 1&2 100-110
SAMPLE DRIED AND PULVERIZED.
PERCENT SOLIDS NOT APPLICABLE

PC ITSI
9/12/07

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587459

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL Lab Sample ID: S587459
Level (low/med): LOW Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	5140			P	
7440-36-0	Antimony	0.52	B	N	P	
7440-38-2	Arsenic	3.4			P	
7440-39-3	Barium	78.0			P	
7440-41-7	Beryllium	0.47			P	
7440-43-9	Cadmium	0.40			P	
7440-47-3	Chromium	3.6			P	
7440-50-8	Copper	98.0			P	
7439-89-6	Iron	7740			P	
7439-92-1	Lead	17.7			P	
7439-96-5	Manganese	532			P	
7439-97-6	Mercury	0.03	B		CV	J-
7440-02-0	Nickel	2.3			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	71.0			P	
7439-98-7	Molybdenum	~~1.2~~			P	1.2 4

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: S. PONDS 1&2 140-150
SAMPLE DRIED AND PULVERIZED.
PERCENT SOLIDS NOT APPLICABLE

Pc ITS)
9/12/07

U.S. EPA - CLP

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1 CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587460

Lab Name: SVL_ANALYTICAL_INC._____ Contract: _____
Lab Code: SILVER Case No: _____ SAS No: _____ SDG No: 130423_____
Matrix (soil/water): SOIL_
Level (low/med): LOW__
% Solids: 100.0
Lab Sample ID: S587460
Date Received: 07/12/07

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	15500			P	
7440-36-0	Antimony	0.35	B	N	P	
7440-38-2	Arsenic	5.9			P	
7440-39-3	Barium	181			P	
7440-41-7	Beryllium	1.1			P	
7440-43-9	Cadmium	0.98			P	
7440-47-3	Chromium	10.2			P	
7440-50-8	Copper	34.9			P	
7439-89-6	Iron	16100			P	
7439-92-1	Lead	15.7			P	
7439-96-5	Manganese	627			P	
7439-97-6	Mercury	0.06			CV	J-
7440-02-0	Nickel	20.2			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	52.0			P	
7439-98-7	Molybdenum	~~0.58~~	B		P	0.58 U

Color Before: BROWN Clarity Before: _____ Texture: FINE
Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:
CLIENT_ID: INDIAN_PONDS_10-15
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

Pc ITS)
9/12/07

U.S. EPA - CLP

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1

CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587461

Lab Name: SVL ANALYTICAL INC. Contract:
Lab Code: SILVER Case No: SAS No: SDG No: 130423
Matrix (soil/water): SOIL
Level (low/med): LOW
% Solids: 100.0

Lab Sample ID: S587461
Date Received: 07/12/07

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	16600			P	
7440-36-0	Antimony	0.43	B	N	P	
7440-38-2	Arsenic	8.6			P	
7440-39-3	Barium	247			P	
7440-41-7	Beryllium	1.2			P	
7440-43-9	Cadmium	1.1			P	
7440-47-3	Chromium	12.0			P	
7440-50-8	Copper	38.2			P	
7439-89-6	Iron	19400			P	
7439-92-1	Lead	20.2			P	
7439-96-5	Manganese	736			P	
7439-97-6	Mercury	0.55			CV	J-
7440-02-0	Nickel	23.4			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	65.8			P	
7439-98-7	Molybdenum	~~1.3~~			P	1.3 U

Color Before: BROWN Clarity Before: Texture: FINE
Color After: YELLOW Clarity After: Artifacts:

Comments:
CLIENT ID: INDIAN PONDS 55-60
SAMPLE DRIED AND PULVERIZED.
PERCENT SOLIDS NOT APPLICABLE

PC ITS)
9/12/07

U.S. EPA - CLP

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1

CLIENT SAMPLE NO.

INORGANIC ANALYSES DATA SHEET

S587462

Lab Name: SVL_ANALYTICAL_INC._____ Contract: _____
Lab Code: SILVER Case No: _____ SAS No: _____ SDG No: 130423_____
Matrix (soil/water): SOIL_
Level (low/med): LOW__
% Solids: 100.0
Lab Sample ID: S587462
Date Received: 07/12/07

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12200			P	
7440-36-0	Antimony	0.63	B	N	P	
7440-38-2	Arsenic	6.8			P	
7440-39-3	Barium	133			P	
7440-41-7	Beryllium	0.55			P	
7440-43-9	Cadmium	0.71			P	
7440-47-3	Chromium	5.4			P	
7440-50-8	Copper	17.8			P	
7439-89-6	Iron	11300			P	
7439-92-1	Lead	14.5			P	
7439-96-5	Manganese	368			P	
7439-97-6	Mercury	0.04			CV	J-
7440-02-0	Nickel	6.1			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	55.4			P	
7439-98-7	Molybdenum	~~0.70~~	B		P	0.70 U

Color Before: BROWN Clarity Before: _____ Texture: FINE
Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:
CLIENT_ID:_T.POND_5_90-100
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

PC ITSI
9/12/07

U.S. EPA - CLP

1

INORGANIC ANALYSES DATA SHEET

CLIENT SAMPLE NO.

S587463

Lab Name: SVL_ANALYTICAL_INC._____ Contract: _____
Lab Code: SILVER Case No: _____ SAS No: _____ SDG No: 130423_____
Matrix (soil/water): SOIL_ Lab Sample ID: S587463
Level (low/med): LOW__ Date Received: 07/12/07
% Solids: 100.0

Concentration Units (ug/L or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M	
7429-90-5	Aluminum	12000			P	
7440-36-0	Antimony	0.36	B	N	P	
7440-38-2	Arsenic	5.0			P	
7440-39-3	Barium	130			P	
7440-41-7	Beryllium	0.54			P	
7440-43-9	Cadmium	0.66			P	
7440-47-3	Chromium	4.9			P	
7440-50-8	Copper	18.0			P	
7439-89-6	Iron	10400			P	
7439-92-1	Lead	17.8			P	
7439-96-5	Manganese	368			P	
7439-97-6	Mercury	0.04			CV	J-
7440-02-0	Nickel	5.8			P	
7782-49-2	Selenium	0.43	U		P	
7440-28-0	Thallium	0.23	U		P	
7440-66-6	Zinc	63.2			P	
7439-98-7	Molybdenum	~~0.53~~	B		P	0.53 U

Color Before: BROWN Clarity Before: _____ Texture: FINE
Color After: YELLOW Clarity After: _____ Artifacts: _____

Comments:
CLIENT_ID: T.POND_5_120-130
SAMPLE_DRIED_AND_PULVERIZED.
PERCENT_SOLIDS_NOT_APPLICABLE

pc. ITS1
9/12/07

APPENDIX C

QUALIFIED RESULTS TABLE

Qualified Results Table for
Resolution Copper
APP Wells
SDG 130423
June-May 2007 Sampling

Sample	Lab ID	Type	Parameter	Original Value	Original Qualifier	Added Qualifier	New Value	Units	Reason	Method	Validator
500 Yard 15-20	587449	Soil	Mercury	0.50		J-	0.50 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 20-25	587450	Soil	Mercury	0.22		J-	0.22 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 25-30	587451	Soil	Mercury	0.02	B	J-	0.02 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 35-40	587452	Soil	Mercury	0.02	B	J-	0.02 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 40-45	587453	Soil	Mercury	<0.02	U	R	<0.02 UR	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 50-55	587454	Soil	Mercury	0.03	B	J-	0.03 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 60-65	587455	Soil	Mercury	0.02	B	J-	0.02 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 120-125	587456	Soil	Mercury	0.02	B	J-	0.02 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 145-150	587457	Soil	Mercury	0.02	B	J-	0.02 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
S. POND 1&2 100-110	587458	Soil	Mercury	0.03	B	J-	0.03 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
S. POND 1&2 140-150	587459	Soil	Mercury	0.03	B	J-	0.03 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
INDIAN POND 10-15	587460	Soil	Mercury	0.06		J-	0.06 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
INDIAN POND 55-60	587461	Soil	Mercury	0.55		J-	0.55 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
T. POND 5 90-100	587462	Soil	Mercury	0.04		J-	0.04 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
T. POND 5 120-130	587463	Soil	Mercury	0.04		J-	0.04 J-	mg/Kg	Temperature; HT	EPA 7471A	ITSI/PC
500 Yard 15-20	587449	Soil	Molybdenum	1.6		U	1.6 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 20-25	587450	Soil	Molybdenum	1.3		U	1.3 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 25-30	587451	Soil	Molybdenum	0.38	B	U	0.38 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 35-40	587452	Soil	Molybdenum	0.98		U	0.98 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 40-45	587453	Soil	Molybdenum	0.97		U	0.97 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 50-55	587454	Soil	Molybdenum	0.90		U	0.90 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 60-65	587455	Soil	Molybdenum	0.87		U	0.87 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 120-125	587456	Soil	Molybdenum	0.99		U	0.99 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
500 Yard 145-150	587457	Soil	Molybdenum	1.0		U	1.0 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
S. POND 1&2 100-110	587458	Soil	Molybdenum	1.0		U	1.0 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
S. POND 1&2 140-150	587459	Soil	Molybdenum	1.2		U	1.2 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
INDIAN POND 10-15	587460	Soil	Molybdenum	0.58	B	U	0.58 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
INDIAN POND 55-60	587461	Soil	Molybdenum	1.3		U	1.3 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
T. POND 5 90-100	587462	Soil	Molybdenum	0.70	B	U	0.70 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
T. POND 5 120-130	587463	Soil	Molybdenum	0.53	B	U	0.53 U	mg/Kg	PB Contamination	EPA 6010B	ITSI/PC
S. POND 1&2 100-110	587458	Soil	Antimony	0.51	N	J-	0.51 J-	mg/Kg	MS/MSD %R	EPA 6010B	ITSI/PC

Abbreviations

HT = holding time
MS/MSD = matrix spike/matrix spike duplicate
mg/Kg = milligrams per kilograms
%R = percent recovery
PB = preparation blank
SDG = sample delivery group

Data Qualifier Flags

J- = estimated value with low bias
U = not detected
R = rejected result

APPENDIX D

ITSI STANDARD LEGAL NOTICE

ITSI STANDARD LEGAL NOTICE

ITSI is issuing this report at the request of the Client and based upon information furnished by Client. Further, the presence of environmental contamination can be influenced by many factors, including unknown and changing underground conditions. Therefore: 1. This report may not be relied upon by anyone for financial decision-making. 2. No one other than Client is authorized to use this report for any purpose. 3. Any conclusions or opinions included in this report are subject to reasonable revision based upon any new environmental or other data which is later developed. 4. Any results or conclusions stated are to be considered limited by the quality of the underlying sample or other data on which they are based, the budget established by the Client or otherwise for gathering and analyzing data, and by any assumptions and qualifications contained within this report.