DESERT HAWK GOLD CORP.

M/045/0078
Leslie

January 29, 2016

RECEIVED
FEB 05 2016
DIV. OF OIL, GAS & MINING

Mr. Stephen Allen
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

RE: 3809 (UTW011) UTU 87834

Dear Mr. Allen,

Desert Hawk Gold Corp. is requesting approval on the background samples required by the Environment Assessment associated with the above referenced project. During 2014, quarterly water samples were taken from regional water sources near the Kiewit Project, and during 2015 biannual samples were taken for a total of 6 samples. The purpose was to create a background water quality baseline for the regional groundwater near the Kiewit Project. Reports were submitted to the BLM for each of these. The final report dated November 2015 has been attached herein.

Desert Hawk Gold Corp. believes that the amount of sampling conducted supplies enough data to create a baseline of water quality in the region. I have attached the final report which summarizes all of the water quality samples taken. It should also be noted that many sample sites rarely had water in them to sample.

Future sampling in the area will be taken quarterly from the onsite water well, as well as the three monitor wells should they have water in them. Desert Hawk Gold Corp. holds a groundwater discharge permit at the Kiewit Project, which stipulates the monitoring of these wells and sumps around the heap leach pad. This groundwater discharge permit is currently in the process of being renewed. Desert Hawk Gold Corp. will notify the BLM and DOGM when this renewal comes into effect.

Please send correspondence with your approval or denial of this request. Should you need any more information or would like copies of the reports previously submitted, please let me know.

Sincerely,

Melinda Havenstrite
Desert Hawk Gold Corp.

Enclosures

Cc: Leslie Heppler, DOGM

1290 Holcomb Ave Reno, NV 89502 Phone: 775.337.8057 Fax: 775.322.6867

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REGIONAL GROUND WATER SAMPLING
FALL, 2015

KIEWIT PROJECT
M/045/0078, UTU 87834, UGW 450011
TOOELE COUNTY, UTAH

DESERT HAWK GOLD CORP
290 HOLCOMB AVENUE
RENO, NV 89502

Prepared by:
North American Mine Services, Inc.
447 North 300 West, Suite #3
Kaysville, UT 84037
(801) 544-3421

November 2015

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Fall 2015 Sample Collection

Water samples from regional water sources near the Kiewit Project were collected by Oren Gatten of North American Mine Services on October 30, 2015. These samples and others collected during the past two years will serve as the basis for background water quality in the Kiewit area. Future sampling by Desert Hawk employees or contractors will monitor the quality of water pumped from the mine well (UGW 18-735) and possibly the three monitor wells located near the heap leach pad and in Rodenhouse Wash. This future testing will be done in accordance with the Ground Water Discharge Permit (UGW 450011) issued by the Utah Division of Water Quality.

Water flow from the natural springs was notably less than observed at other times during the past two years. Minniehaha Spring was too dry for sampling and water had ceased flowing in the wash at site 18-189. However, both of the locations in Rodenhouse Wash which were previously sampled had sufficient water and samples were obtained. These sites are the only two natural water seeps down gradient from the mine and leach pad which could be sampled.

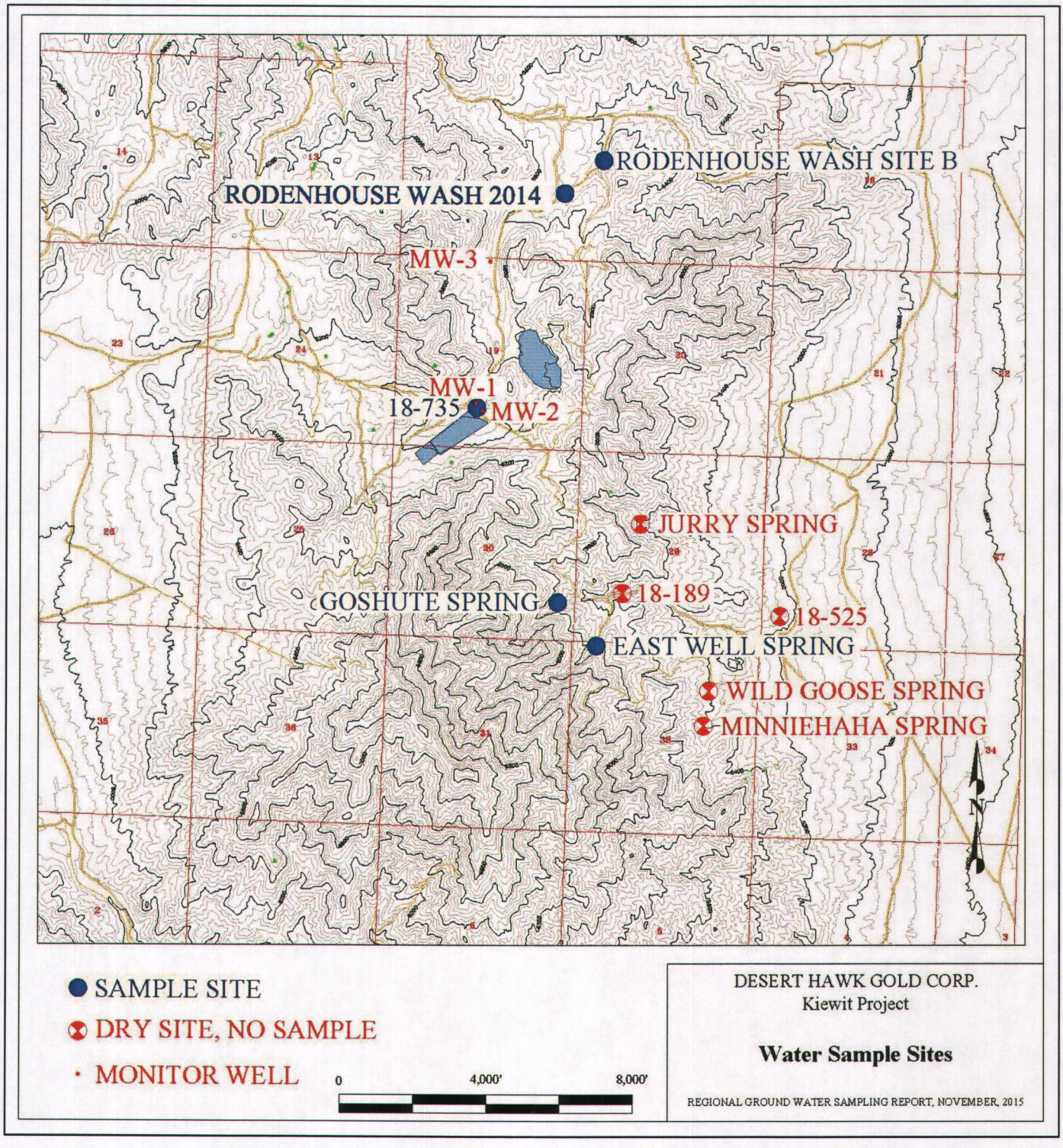
Access to the springs near Goshute Wash is becoming more difficult. An ATV can be used to travel up the wash to a point approximately ½ mile below site 18-189, but travel by foot is the only safe way to access Goshute Spring, East Well Spring and Minniehaha Spring. Both of the sites in Rodenhouse Wash were reached with a four wheel drive vehicle.

East Well Spring had almost no water flow. The sample was collected from a pool at the base of the spring which was dug out for sampling earlier in the year. The sand and gravel in the wash did not appear to have been disturbed by any flows from summer storms and footprints from Oren Gatten's last visit (May 12, 2015) were still visible in the stream bed.

Goshute Spring had a very minute amount of flowing surface water. Salt Cedar and Willow are beginning to overgrow the spring but the draw below the spring is still cleared of most sediment suitable for plant growth. The previous sample hole appeared to have been relatively undisturbed and no evidence of major recent water flow in the wash was observed.

Rodenhouse Wash has been very dry during most of the attempts to collect samples. One sample was first collected on March 31, 2014. This site is recorded as "Rodenhouse Wash 2014" on the following map and tables. No water samples from the wash were collected during the remainder of 2014 due to dry conditions. In May 2015, a water sample was collected some distance below the original sample site (See map "Water Sample Sites" below). This second site is down gradient from the confluence of another major drainage which is not part of the mining operation and is listed as "Rodenhouse Wash Site B" in this report. During this most recent visit, both of the locations had water present and a sample was collected from each site.

Groundwater Sample Sites



Water Sample Site Locations

Sample ID	UTM NAD83 CONUS Z12		Elevation (ft)
Rodenhouse Wash 2014	250,083	4,479,356	5,456
Rodenhouse Wash Site B	261,972	4,445,880	5,391
18-189	249,836	4,475,892	5,512
18-615	249,836	4,475,892	5,512
18-525	248,496	4,475,602	5,244
East Well Spring	250,089	4,475,458	5,714
Goshute Spring	250,394	4,475,852	5,686
Jurry Spring	249,639	4,476,472	5,587
Minniehaha Spring	249,215	4,474,712	5,403
Wild Goose Spring	249,152	4,475,006	5,400
18-735	260,732	4,443,943	5,915
Monitor Well #1	260,801	4,443,968	5,902
Monitor Well #2	260,817	4,443,972	5,903
Monitor Well #3	261,004	4,445,030	5,703
Public Water Reserves	**Location**		
PWR-1	NENW Sec 29 T8S R17W		
PWR-2	SESW Sec 25 T8S R18W		
PWR-3	NESW Sec 25 T8S R18W		

Field Testing Data for October 30, 2015

Field Sample Data					
Sample ID	Date	Time	Field pH	Temperature C°	Temperature F°
Rodenhouse Wash 2014	October 30, 2015	12:50	7.6	10.0°	50.0°
Rodenhouse Wash Site B	October 30, 2015	12:30	7.3	11.2°	52.2°
East Well Spring	October 30, 2015	11:11	8.2	4.2°	39.6°
Goshute Spring	October 30, 2015	10:47	8.2	6.5°	43.7°
18-735 (DHG Well)	October 30, 2015	13:30	7.6	22.4°	72.4°
Minniehaha Spring	October 30, 2015	8:45	Dry, No Sample		
18-189	October 30, 2015	11:35	Dry, No Sample		
Monitor Well 1	October 30, 2015	13:45	Dry, No Sample		
Monitor Well 2	October 30, 2015	13:45	Dry, No Sample		
Monitor Well 3	October 30, 2015	13:00	Dry, No Sample		

Rodenhouse Wash 2014

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				31-Mar	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	7.2	DRY SAMPLE SITE	DRY SAMPLE SITE	DRY SAMPLE SITE	DRY SAMPLE SITE	7.6						
Field Temperature (C°)		C°	0.1	7.8					10.0						
Bicarbonate (as $CaCO_3$)		mg/L	40.0	240					235						
Carbonate (as $CaCO_3$)		mg/L	40.0	<40.0					<10.0						
Chloride		mg/L	500	1,320					1,220						
Conductivity		µmhos/cm	2.00	3,990					5,020						
Cyanide		mg/L	0.00500	<0.00500					<0.00500						
Nitrate/Nitrite		mg/L	0.0100	0.155					<0.0100						
Lab pH @ 25°C		pH Units	1.00	7.50					7.32						
Sulfate		mg/L	62.5	337					358						
Total Dissolved Solids		mg/L	100	3,000					3,140						
Antimony	Sb	mg/L	0.00200	<0.00200					<0.00200						
Arsenic	As	mg/L	0.00200	0.0215					0.1250						
Barium	Ba	mg/L	0.00200	0.251					1.210						
Beryllium	Be	mg/L	0.00200	0.00215					0.00590						
Cadmium	Cd	mg/L	0.000500	0.00113					0.00462						
Calcium	Ca	mg/L	100	475					610						
Chromium	Cr	mg/L	0.00200	0.00457					0.04520						
Copper	Cu	mg/L	0.00200	0.0106					0.1360						
Lead	Pb	mg/L	0.00200	0.0615					0.3830						
Magnesium	Mg	mg/L	50.0	164					194						
Mercury	Hg	mg/L	0.000150	<0.000150					0.000163						
Potassium	K	mg/L	1.00	7.77					17.70						
Selenium	Se	mg/L	0.00200	0.0155					0.0649						
Silver	Ag	mg/L	0.00200	<.00200					0.00369						
Sodium	Na	mg/L	50.0	418					402						
Thallium	Tl	mg/L	0.00200	<0.00200					<0.00200						
Zinc	Zn	mg/L	0.00200	0.0669					0.3820						

Note: Results in Red Exceed Utah Ground Water Quality Standards

Rodenhouse Wash Site B

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				31-Mar	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	NO SAMPLE	NO SAMPLE	NO SAMPLE	NO SAMPLE	7.2	7.3						
Field Temperature (C°)		C°	0.1					13.4	11.2						
Bicarbonate (as $CaCO_3$)		mg/L	40.0					196	189						
Carbonate (as $CaCO_3$)		mg/L	40.0					<10.0	<10.0						
Chloride		mg/L	500					1,350	1,310						
Conductivity		µmhos/cm	2.00					6,600	5,310						
Cyanide		mg/L	0.00500					<0.00500	<0.00500						
Nitrate/Nitrite		mg/L	0.0100					<0.0100	<0.0100						
Lab pH @ 25°C		pH Units	1.00					7.23	7.46						
Sulfate		mg/L	62.5					514	475						
Total Dissolved Solids		mg/L	100					3,800	3,260						
Antimony	Sb	mg/L	0.00200					<0.00200	<0.00200						
Arsenic	As	mg/L	0.00200					0.2160	0.0967						
Barium	Ba	mg/L	0.00200					4.500	1.630						
Beryllium	Be	mg/L	0.00200					0.02080	0.00581						
Cadmium	Cd	mg/L	0.000500					0.01440	0.00328						
Calcium	Ca	mg/L	100					1,380	713						
Chromium	Cr	mg/L	0.00200					0.15200	0.04750						
Copper	Cu	mg/L	0.00200					0.4910	0.1400						
Lead	Pb	mg/L	0.00200					1.4100	0.3770						
Magnesium	Mg	mg/L	50.0					324	218						
Mercury	Hg	mg/L	0.000150					<0.000150	<0.000150						
Potassium	K	mg/L	1.00					42.10	18.30						
Selenium	Se	mg/L	0.00200					0.00221	<0.00200						
Silver	Ag	mg/L	0.00200					0.01040	0.00253						
Sodium	Na	mg/L	50.0					424	412						
Thallium	Tl	mg/L	0.00200					<0.00200	<0.00200						
Zinc	Zn	mg/L	0.00200					1.4500	0.3880						

Note: Results in Red Exceed Utah Ground Water Quality Standards

UGW 18-189

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				31-Mar	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	7.0	7.8	DRY SAMPLE SITE	7.4	7.2	DRY SAMPLE SITE						
Field Temperature (C°)		C°	0.1	9.0	15.8		1.4	11.6							
Bicarbonate (as $CaCO_3$)		mg/L	40.0	276	362		237	273							
Carbonate (as $CaCO_3$)		mg/L	40.0	<40.0	<40		<10	<10							
Chloride		mg/L	500	988	1,030		1,220	844							
Conductivity		µmhos/cm	2.00	3,290	3,830		4,670	4,350							
Cyanide		mg/L	VARIES	<0.00500	<0.0100		<0.00500	<0.00500							
Nitrate/Nitrite		mg/L	0.0100	<0.0100	0.112		<0.0100	<0.0100							
Lab pH @ 25°C		pH Units	1.00	7.02	7.01		7.88	7.27							
Sulfate		mg/L	62.5	467	285		413	252							
Total Dissolved Solids		mg/L	100	2,360	2,500		3,020	2,320							
Antimony	Sb	mg/L	0.00200	<0.00200	<0.00200		<0.00200	<0.00200							
Arsenic	As	mg/L	0.00200	0.0644	0.5800		0.1400	0.1100							
Barium	Ba	mg/L	0.00200	0.178	5.660		2.780	2.850							
Beryllium	Be	mg/L	0.00200	<0.00200	0.05580		0.01820	0.00883							
Cadmium	Cd	mg/L	0.000500	0.00123	0.03250		0.01310	0.00907							
Calcium	Ca	mg/L	100	339	3010		1170	584							
Chromium	Cr	mg/L	0.00200	0.00383	0.18500		0.23100	0.10600							
Copper	Cu	mg/L	0.00200	0.0438	1.0600		0.3820	0.2250							
Lead	Pb	mg/L	0.00200	0.1520	4.3500		0.8860	0.8320							
Magnesium	Mg	mg/L	50.0	133	381		318	154							
Mercury	Hg	mg/L	0.001500	<0.00150	<0.00150		<0.00150	<0.00150							
Potassium	K	mg/L	1.00	6.66	53.90		39.90	23.20							
Selenium	Se	mg/L	0.00200	0.00517	0.0928		0.00283	<0.00200							
Silver	Ag	mg/L	0.00200	<0.00200	0.02890		0.01030	0.00812							
Sodium	Na	mg/L	50.0	321	414		467	309							
Thallium	Tl	mg/L	0.00200	<0.00200	0.00331		0.00219	<0.00200							
Zinc	Zn	mg/L	0.00200	0.1200	5.6500		1.8800	0.9550							

Note: Results in Red Exceed Utah Ground Water Quality Standards

East Well Spring

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				31-Mar	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	7.8	7.8	8.2	7.8	8.4	8.4						
Field Temperature (C°)		C°	0.1	2.6	15.2	12.4	2.7	14.1	4.2						
Bicarbonate (as $CaCO_3$)		mg/L	40.0	226	208	213	289	192	210						
Carbonate (as $CaCO_3$)		mg/L	VAIRES	<40.0	<20.0	<1.0	<10	<10	<10.0						
Chloride		mg/L	500	772	682	600	1,150	640	582						
Conductivity		µmhos/cm	2.00	2,160	2,220	2,360	4,710	3,190	2,370						
Cyanide		mg/L	VARIES	<0.00500	<0.0100	<0.002	<0.00500	<0.00500	<0.00500						
Nitrate/Nitrite		mg/L	0.0100	<0.0100	0.238	0.1	<0.0100	0.152	<0.0100						
Lab pH @ 25°C		pH Units	1.00	7.94	8.11	8.3	7.72	8.20	8.22						
Sulfate		mg/L	62.5	112	129	106	451	111	102						
Total Dissolved Solids		mg/L	100	1,380	1,720		2,980	1,620	1,160						
Antimony	Sb	mg/L	0.00200	<0.00200	<0.00200	<0.0005	<0.00200	<0.00200	<0.00200						
Arsenic	As	mg/L	0.00200	0.00834	0.00970	0.0055	0.0197	0.00344	0.00334						
Barium	Ba	mg/L	0.00200	0.166	0.163	0.153	0.463	0.150	0.216						
Beryllium	Be	mg/L	0.00200	<0.00200	<0.00200	<0.0005	<0.00200	<0.00200	<0.00200						
Cadmium	Cd	mg/L	0.000500	0.00425	0.00132	0.0002	0.00103	<0.000500	<0.000500						
Calcium	Ca	mg/L	100	434	342	186	439	210	223						
Chromium	Cr	mg/L	0.00200	<0.00200	0.00233	0.0009	0.01710	<0.00200	<0.00200						
Copper	Cu	mg/L	0.00200	0.0139	0.0084	0.0024	0.0278	<0.00200	<0.00200						
Lead	Pb	mg/L	0.00200	0.0258	0.0085	0.0015	0.0543	<0.00200	<0.00200						
Magnesium	Mg	mg/L	50.0	76.7	75	60.3	159	68.8	69						
Mercury	Hg	mg/L	0.000150	<0.000150	<0.000150	<0.0002	<0.000150	<0.000150	<0.000150						
Potassium	K	mg/L	1.00	4.51	5.53	4.6	8.80	4.61	4.74						
Selenium	Se	mg/L	0.00200	0.00208	<0.00200	0.0063	<0.00200	<0.00200	<0.00200						
Silver	Ag	mg/L	0.00200	<0.00200	<0.00200	<0.0005	<0.00200	<0.00200	<0.00200						
Sodium	Na	mg/L	50.0	199	213	165	435	177	166						
Thallium	Tl	mg/L	0.00200	<0.00200	<0.00200	<0.0002	<0.00200	<0.00200	<0.00200						
Zinc	Zn	mg/L	0.00200	0.2100	0.0928	0.01	0.1380	<0.00500	0.00860						

Note: Results in Red Exceed Utah Ground Water Quality Standards

Goshute Spring

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				31-Mar	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	7.8	7.2	7.8	7.4	8.4	8.2						
Field Temperature (C°)		C°	0.1	5.6	17.6	13.1	0.9	11.6	6.5						
Bicarbonate (as $CaCO_3$)		mg/L	40.0	268	294	426	257	270	284						
Carbonate (as $CaCO_3$)		mg/L	40.0	<40.0	<40.0	ND	<10.0	<10.0	<10						
Chloride		mg/L	500	945	864	720	844	783	706						
Conductivity		µmhos/cm	2.00	2,710	2,960	3,180	3,650	4,170	3,080						
Cyanide		mg/L	VARIES	<0.00500	<0.0100	ND	<0.00500	<0.00500	<0.00500						
Nitrate/Nitrite		mg/L	0.0100	<0.0100	0.065	ND	<0.0100	<0.0100	<0.0100						
Lab pH @ 25°C		pH Units	1.00	7.70	7.38	7.70	7.42	8.83	8.08						
Sulfate		mg/L	62.5	236	210	250	293	279	255						
Total Dissolved Solids		mg/L	100	2,380	2,100		2,180	2,220	1,960						
Antimony	Sb	mg/L	0.00200	<0.00200	<0.00200	<0.0100	<0.00200	<0.00200	<0.00200						
Arsenic	As	mg/L	0.00200	0.00319	0.0627	0.0815	0.0195	0.0174	0.00908						
Barium	Ba	mg/L	0.00200	0.0496	0.612	0.638	0.219	0.171	0.0879						
Beryllium	Be	mg/L	0.00200	<0.00200	0.00559	<0.0100	<0.00200	<0.00200	<0.00200						
Cadmium	Cd	mg/L	0.000500	<0.00500	0.00420	<0.0040	0.00069	0.000659	<0.000500						
Calcium	Ca	mg/L	100	280	1200	427	364	351	304						
Chromium	Cr	mg/L	0.00200	<0.00200	0.02740	0.0471	0.01330	0.01130	0.00341						
Copper	Cu	mg/L	0.00200	0.00324	0.1060	0.1070	0.0268	0.0214	0.00576						
Lead	Pb	mg/L	0.00200	<0.00200	0.1340	0.1810	0.0333	0.0314	0.00804						
Magnesium	Mg	mg/L	50.0	118	164	131	135	118	113						
Mercury	Hg	mg/L	0.000150	<0.000150	<0.000150	0.0002	<0.000150	<0.000150	<0.000150						
Potassium	K	mg/L	1.00	3.64	12.10	12.6	6.44	6.37	4.83						
Selenium	Se	mg/L	0.00200	0.00297	0.0105	<0.0100	0.0028	0.00241	0.00209						
Silver	Ag	mg/L	0.00200	<0.00200	0.00299	<0.010	<0.00200	<0.00200	<0.00200						
Sodium	Na	mg/L	50.0	239	272	216	285	240	236						
Thallium	Tl	mg/L	0.00200	<0.00200	<0.00200	<0.0040	<0.00200	<0.00200	<0.00200						
Zinc	Zn	mg/L	0.00200	0.00551	0.7830	0.24	0.1050	0.0690	0.2030						

Note: Results in Red Exceed Utah Ground Water Quality Standards

Minniehaha Spring

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				31-Mar	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	7.2	7.2	7.2	7.6	7.2	DRY SAMPLE SITE						
Field Temperature (C°)		C°	0.1	11.0	14.8	15.7	7.8	11.6							
Bicarbonate (as $CaCO_3$)		mg/L	40.0	218.0	220	407	194	238							
Carbonate (as $CaCO_3$)		mg/L	VARIES	<40.0	<20.0	<1.0	<10.0	<10.0							
Chloride		mg/L	500	1,490	1,670	1,520	1,440	1,640							
Conductivity		µmhos/cm	2.00	4,400	4,810	5,590	5,370	7,360							
Cyanide		mg/L	VARIES	<0.00500	<0.0100	<0.002	<0.00500	<0.00500							
Nitrate/Nitrite		mg/L	0.0100	0.0182	0.203	<0.1	<0.0100	<0.0100							
Lab pH @ 25°C		pH Units	1.00	7.30	7.31	7.3	7.27	7.23							
Sulfate		mg/L	62.5	265.0	324	280	274	311							
Total Dissolved Solids		mg/L	100	2,840	3,360		2,600	3,900							
Antimony	Sb	mg/L	0.00200	<0.00200	<0.00200	<0.0005	<0.00200	<0.00200							
Arsenic	As	mg/L	0.00200	0.00909	0.0154	0.0051	0.0132	0.0241							
Barium	Ba	mg/L	0.00200	0.13400	0.211	0.119	0.254	0.371							
Beryllium	Be	mg/L	0.00200	<0.00200	0.00236	<0.0005	0.00223	0.00409							
Cadmium	Cd	mg/L	0.00500	0.000512	0.000548	0.0003	0.000624	0.001260							
Calcium	Ca	mg/L	100	368	440	319	415	521							
Chromium	Cr	mg/L	0.00200	0.00505	0.05240	0.0091	0.03990	0.06830							
Copper	Cu	mg/L	0.00200	0.00825	0.0586	0.0172	0.0493	0.1010							
Lead	Pb	mg/L	0.00200	0.01600	0.0283	0.0057	0.0190	0.0424							
Magnesium	Mg	mg/L	50.0	227.0	317	231	270	298							
Mercury	Hg	mg/L	0.000150	<0.000150	<0.000150	<0.0002	<0.000150	0.000182							
Potassium	K	mg/L	1.00	10.60	17.40	12.1	13.30	20.00							
Selenium	Se	mg/L	0.00200	0.01170	0.0222	0.0125	0.0054	0.0131							
Silver	Ag	mg/L	0.00200	<0.00200	0.00605	0.0010	0.00407	0.01050							
Sodium	Na	mg/L	50.0	408.0	512	425	446	454							
Thallium	Tl	mg/L	0.00200	<0.00200	<0.00200	<0.0002	<0.00200	<0.00200							
Zinc	Zn	mg/L	0.00200	0.02150	0.5540	<0.01	0.0779	0.1310							

Note: Results in Red Exceed Utah Ground Water Quality Standards

Desert Hawk Source Water Well UGW 18-735

Compound	Units	Reporting Limit	2014				2015				2016		2017	
			21-May	27-Jun	25-Sep	31-Dec	12-May	8-Jul	18-Sep	30-Oct				
Field pH	pH Units	1.1		7.2	8.2	8.0	7.2	7.22	8.1	7.6				
Field Temperature (C°)	C°	0.1	20.9	27.9	28.5	23.9	24.2	28.1	28	22.4				
Bicarbonate (as $CaCO_3$)	mg/L	40.0		199	188	164	144	140	140	316				
Carbonate (as $CaCO_3$)	mg/L	40.0		<20.0	<1.0	<10.0	<10.0	<1.0	<1.0	<10.0				
Chloride	mg/L	500		965	950	951	1,030	980	890	919				
Conductivity	µmhos/cm	2.00		3,520	3,590	2,170	4,800	4,100	4,100	3,600				
Cyanide, WAD	mg/L	0.002			<0.002	<0.00500	<0.00500	<0.010	<0.010	<0.00500				
Cyanide	mg/L	0.00500		<0.00500	<0.002	<0.00500	<0.00500	<0.010	<0.010	<0.00500				
Nitrate/Nitrite	mg/L	0.0100		0.0136	0.2	<.0100	<.0100	<1.0/<0.250	<1.0/<0.250	<0.0100				
Lab pH @ 25°C	pH Units	1.00	7.27	7.46	7.7	7.17	7.09	7.22	7.64	7.35				
Sulfate	mg/L	62.5		449	300	361	292	290	270	272				
Total Dissolved Solids	mg/L	100	2,300	2,220		2,500	2,720	2,700	2,400	1,720				
Antimony Sb	mg/L	0.00200	<0.0025	<0.00200	<0.0005	<0.00200	<0.00200	<0.00250	<0.00250	<0.00200				
Arsenic As	mg/L	0.00200	<.0050	<0.00200	0.0022	<0.00200	<0.00200	<0.0050	<0.0050	<0.00200				
Barium Ba	mg/L	0.00200	0.120	0.071	0.098	0.06520	0.08270	0.0780	0.090	0.0773				
Beryllium Be	mg/L	0.00200	0.0010	<0.00200	<0.0005	<0.00200	<0.00200	<0.0010	0.00120	<0.00200				
Cadmium Cd	mg/L	0.000500	0.0050	<0.000500	<0.0002	<0.000500	<0.000500	<0.0010	<0.0010	<0.000500				
Calcium Ca	mg/L	100	320	324	292	317	301	260	280	293				
Chromium Cr	mg/L	0.00200	0.0050	<0.00200	0.0012	<0.00200	<0.00200	<0.0050	<0.0050	<0.00200				
Copper Cu	mg/L	0.00200	<0.050	0.0051	0.0037	<0.00200	0.00289	<0.050	<0.050	0.00298				
Lead Pb	mg/L	0.00200	0.0230	<0.00200	<0.0005	<0.00200	<0.00200	<0.0250	<0.00250	<0.00200				
Magnesium Mg	mg/L	50.0	210.0	214	208	205	190	170	170	187				
Mercury Hg	mg/L	0.000150	<.00010	<0.000150	<0.0002	<0.000150	<0.000150	<0.00010	<0.00010	<0.000150				
Potassium K	mg/L	1.00	14.00	8.51	9.6	8.12	9.31	8.80	9.00	8.47				
Selenium Se	mg/L	0.00200	<0.0050	<0.00200	0.0056	<0.00200	<0.00200	<0.0050	<0.0050	<0.00200				
Silver Ag	mg/L	0.00200	<0.0050	<0.00200	<0.0005	<0.00200	<0.00200	0.00610	0.00500	<0.00200				
Sodium Na	mg/L	50.0	180.0	158	156	151	155	140	150	141				
Thallium Tl	mg/L	0.00200	<.0010	<0.00200	<0.0002	<0.00200	<0.00200	<0.0010	<0.0010	<0.00200				
Zinc Zn	mg/L	0.00200	0.680	15.80000	0.52	7.4900	0.3340	0.1100	0.0830	0.0327				

Note: Results in Red Exceed Utah Ground Water Quality Standards

Desert Hawk Gold - Barren Cyanide Solution

Compound		Units	Reporting Limit	2014				2015		2016		2017		2018	
				21-May	27-Jun	25-Sep	31-Dec	12-May	30-Oct						
Field pH		pH Units	1.1	No Leach Solution for Testing	No Leach Solution for Testing	10.7	10.7	No Sample	No Sample						
Field Temperature (C°)		C°	0.1			18.3	1.2								
Bicarbonate (as $CaCO_3$)		mg/L	40.0			<1.0	<10.0								
Carbonate (as $CaCO_3$)		mg/L	40.0			34	94.6								
Chloride		mg/L	500				2,710								
Conductivity		µmhos/cm	2.00			8,130	10,500								
Cyanide		mg/L	0.00500			212	67.7								
Nitrate/Nitrite		mg/L	0.0100				12.6								
Lab pH @ 25°C		pH Units	1.00			10.5	9.88								
Sulfate		mg/L	62.5				482								
Total Dissolved Solids		mg/L	100				5,460								
Antimony	Sb	mg/L	0.00200			<0.0050	<0.00200								
Arsenic	As	mg/L	0.00200			<0.0050	0.00758								
Barium	Ba	mg/L	0.00200			0.090	0.05480								
Beryllium	Be	mg/L	0.00200			<0.0050	<0.00200								
Cadmium	Cd	mg/L	0.000500			0.0037	0.00643								
Calcium	Ca	mg/L	100			161	308								
Chromium	Cr	mg/L	0.00200			0.0060	0.00230								
Copper	Cu	mg/L	0.00200			4.3200	6.7500								
Lead	Pb	mg/L	0.00200			<0.0050	<0.00200								
Magnesium	Mg	mg/L	50.0			31.4	24.50								
Mercury	Hg	mg/L	0.000150			0.0026	0.003840								
Potassium	K	mg/L	1.00			23.0	20.50								
Selenium	Se	mg/L	0.00200			0.0282	0.00953								
Silver	Ag	mg/L	0.00200			0.109	0.12500								
Sodium	Na	mg/L	50.0			1530	1,950								
Thallium	Tl	mg/L	0.00200			<0.0020	<0.00200								
Zinc	Zn	mg/L	0.00200			0.33	0.2990								

Note: Results in Red Exceed Utah Ground Water Quality Standards

Appendix A – American West Analytical Labs Report

AWAL

Lab Set ID: 1510656

November 13, 2015