Portuguese Creek Mine - Summary of Assays and Analysis

Date/ Lab/ Consultant	Source/ Method	Ounces per Ton					Notes	Source Document in PCM Exec Summary Files
		Gold (Au)	Silver (Ag)	Platinum (Pt)	Palladium (Pd)	Rhodium (Rh)		
Primary Core Hole Assays and Analyses								
2002-12-04/ Wendell/ Daniele	Core Holes/ Alkali Fusion Assay	0.1226	0.0033	1.4372	0.1773	0.0019	The Alkali Fusion Assay method for microcluster/ nanomolecular precious metal samples was developed into a repeatable and effective fire assay method, and later into an effective extraction procedure for the Batch Plant by Mr. Wendell, with a major advantage that the metals are converted into soluble hydroxides. Comparisons follow from Iseman.	22J4- Wendell PC Core Results Averages 2002-12-04/ 06- Daniele External Report 2003-06-30
2002-12-22/ Iseman Consulting	Core Holes/ Microwave	0.0274	0.0353	0.0471	0.0075	0.0077	The "Microwave Method" of analysis was developed by the Bureau of Mine and was used as their standard for years. Shows continue to improve…	22G1- Iseman Report 2002-12-22
2002-12-22/ Iseman Consulting	Core Holes/ Fusion-Microwave	0.0239	0.0648	0.0458	0.0073	0.0061	The Combination of these methods is starting to breakdown the molecular bonds inherent in the ore.	22G1- Iseman Report 2002-12-22
2002-12-22/ Iseman Consulting	Core Holes/ Alkali Fusion - Simlar to PMART	0.0316	0.1368	0.0781	0.0130	0.0031	The Alkali Fusion method of analysis is a non-selective method designed to breakdown all metals. Shows are improving still.	22G1- Iseman Report 2002-12-22
2002-12-22/ Iseman Consulting	Core Hole Composites/ Firing-Inquart-Electrowinning-Microwave	0.7705		1.3371	0.4680	0.8170	The Inquarting method was the primary method of analysis in years gone by. It requires a very skilled metallurgist to know how to quantify the additions and subtractions of the inquart.	22G1- Iseman Report 2002-12-22
2003-01-26/ Iseman Consulting	Core Hole Composites/ Firing-Inquart-Electrowinning-Microwave	1.5484		0.3705	0.9644	1.1112	"The Law of Inquartia:" like metals attract like metals. Shows are the best of all five analysis conducted by Iseman Consulting.	22G7- Iseman Metallurgical Report 2003-01-31
2003-01-14/ Auro-Research Laboratories/ McMahon	Core Hole Composites/ PMART- Precious Metals Advanced Reactor Technology	0.3900		3.0000	0.3600	0.2250	PMART non-selectively breaks down the bonds holding the precious metals together. Once liberated, they can be seen by AA Spectrometry or by EDXRF. It is possible that some of the other elemnts combined to give a false high reading on Platinum.	22F1- McMahon AURO Research Report Rev 2003-01-14+29
2009-06-24/ Dow Chemical/ Gates	Bulk Sample from around Core Hole 4/ PMART - Halide Leach	0.4250		0.3205	0.0845	0.2460	Significant results were found from the advanced assays made on the bulk sample by Dow's labs using the "Modified Halide Leach with Ion-Exchange Resins"	08- Metallurgical Report Gates 2010-03-15/ 22M1- Rogers Resin Results Rev5 2009-06-24
	Low	0.0239	0.0033	0.0458	0.0073	0.0019	The Gold average is nearly the same as the Gold measurement in the 2009 Dow analysis, and the Platinum average was higher, so the clearest and more conservative measurement to use in the Production Pro-Forma economic analysis is the Dow.	06- Daniele External Report 2003-06-30
	Median	0.2563	0.0501	0.3455	0.1309	0.1164		
	Average	**0.4174**	**0.0600**	**0.8295**	**0.2603**	**0.3023**		
	Count	8	4	8	8	8		
	High	1.5484	0.1368	3.0000	0.9644	1.1112		

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Secondary Assays and Analysis								
2002-02-25/ Wendell/ Mehrtens	44 Random Surface Samples/ Alkali Fusion Assay	0.1336	0.0073	0.9894	0.1341	0.0213	From the first 10 claims. The Alkali Fusion Method is much better, as compared to the initial Iseman Assays following.	07- Comprehensive Assay Description on 44 Samples 2002-02-25
2002-12-22/ Iseman Consulting	Core Hole Composites/ Fire Assay	0.0003	0.0183	0.0002	0.0002	0.0000	Comparing "Standard Fire Assay" methods to other methods clearly showed, the limitations of its use over non-selective methods especially with ores with PGE's	22G1- Iseman Report 2002-12-22
2002-12-22/ Iseman Consulting	Core Holes/ Aqua Regia	0.0073	0.0311	0.0014	0.0023	0.0008	While the "Aqua Regia" method isn't a standard method used in labs, It is known to breakdown metals.	22G1- Iseman Report 2002-12-22
2003-06-15/ Wendell/ Mehrtens	44 Random Surface Samples/ Alkali Fusion Assay	1.5008		1.3463	0.1388		From the first 10 claims. Mehrtens discovered that Platinum was interfering in all the test work over the past 7 years, reducing the assay results on Gold by a factor of about 9. This factor was applied to Gold, but not to Palladium. Note that the Gold:Platinum ratio is about the same for these results as for the **Halide Leach results, in which Gold is *not* suppressed by Platinum**.	15- Mehrtens Report 2003-06-15
	Low	0.0003	0.0073	0.0002	0.0002	0.0000	The Gold and Platinum averages are similar to and verify the Core Hole Assays.	
	Median	0.0705	0.0183	0.4954	0.0682	0.0008		
	Average	**0.4105**	**0.0189**	**0.5843**	**0.0688**	**0.0074**		
	Count	4	3	4	4	3		
	High	1.5008	0.0311	1.3463	0.1388	0.0213		