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Touro et al.

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[54] **SULFIDE TREATMENT TO INHIBIT MERCURY ADSORPTION ONTO ACTIVATED CARBON IN CARBON-IN-PULP GOLD RECOVERY CIRCUITS**

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[*] Notice: The portion of the term of this patent subsequent to Feb. 23, 2005 has been disclaimed.

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[52] **U.S. Cl.** ..... **423/29**; 423/30; 423/31; 423/109; 75/2; 75/97 A; 75/101 R; 75/105; 75/118 R

[58] **Field of Search** ..... 423/27, 29, 30, 31, 423/109; 75/2, 97 A, 101 R, 105, 118 R

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,256,707	3/1981	Flynn, Jr. et al.	75/118 R
4,289,532	9/1981	Matson et al.	75/118 R
4,528,166	7/1985	McDougall	75/118 R
4,552,589	11/1985	Mason et al.	423/29
4,578,163	3/1986	Kunter et al.	75/118 R

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[57] **ABSTRACT**

In this invention sulfide compounds are added to mercury and precious metal-containing carbonaceous ore slurries prior to the slurry being processed by a carbon-in-pulp system. The sulfide compound inhibits the mercury from being adsorbed onto the activated carbon by reacting with the mercury to form mercuric sulfide and by inhibiting the dissolution of mercury from the ore. The mercuric sulfide precipitate displays no activity toward the activated carbon. The sulfiding procedure is performed with a sufficient amount of sulfide-providing compound to provide at least about 30 times the stoichiometric amount of sulfide ions required to react with the mercury in the ore slurry.

22 Claims, 1 Drawing Figure