The Terlingua Quicksilver Mining District, Brewster Co., Texas.

Written for the MINING AND SCIENTIFIC PRESS by H. W. TURNER.

The Terliugua district lies about 68 miles in an air liuc southwest of Marathon, which is the nearest point on the Southern Pacific Railroad. By the present wagon road it is about 85 miles from Marathon, but this road can he made about 10 miles shorter at small expense. The mines are on the mesa west of Terlingua creek and are in a Cretaceous formation, called by Prof. Robert T. Hill of the United States Geological Survey the Caprina limestone. All of the cinnabar deposits so far as exposed are in this limestone. Whether or not the deposits will be found in the heds underlying the limestone is at present a mat-ter of pure speculation, which can he determined only by future mining operations. Since the thickness of the limestone by the Rio Graude about 11 miles south of the mines is 1500 feet or more, it is probably that

ter of the lode is plainly due to the grinding up of the rock between the walls during movements. Such hrecciated fault zones form a ready avenue for solu-tions to rise from depths, and strengthens the as-sumption that the ore bodies would continue prohably through the entire thickness of the Caprina limestone

In the case of the small, irregular rusty veins found at many points in the mineralized zone, it is quite likely that they will not extend with a definite dup to any great depth, although it is prohable that these subsidiary irregular veins will be found at all depths through the limestone, but that they will be disconnected, or prove to be stringers from larger

vens. Prof W. P. Blake* has published the only satisfac-tory account of this new district. Prof. Blake noted pyrite in oue of the lodes in addition to cinnahar and iron oxide, and interpreted the ferruginous breccia, forming portions of the lodes, as indicative of fissures along fault planes.

The difficulty in developing the district lies in the scarcity of wood and water. However, reservoirs cau easily he huilt in the rocky ravines, the lime-



Quicksilver Retort at Terlingua, Texas.

stone heiug suitable for hurning lime for cement, as well as for huilding dams. The chief firewood is

About 1000 flasks of quicksilver have thus far been produced, this amount having heen reduced in five retorts. One of the companies is now putting up a furnace, and the production next year will undouhtedly he large.

*Trans. A. I. M. E., Vol. XXV, 1895, p. 68.

New Steel Syndicate.

The Crucible Steel Co. of America is the name of the new steel syndicate just organized at Pittshurg, Pa. It is the outgrowth of a consolidation scheme which was promoted by the Union Trust Co. of the city named. The capital stock issue is \$50,000,-000, heing one-half preferred and one-half common stock. The new company proposes to take over the

plants and assets of thirteen steel concerns at the aggregate purchase price of \$19,000,000, the plants and equipment to he paid for in stock in the uew con-cern, the material on hand to be paid for in cash. The following are the names of the steel concerns to he absorhed by the new syndicate : Park Steel Co., Pittshurg ; Singer, Nimick & Co., Pittsburg ; Howe, Brown & Co., Pittsburg ; Crescent Steel Co., Pitts-burg ; La Belle Steele Co., Alleghany, Pa.; Ander-son, Du Puy & Co., McKee's Rock, Pa.; Cumberland Steel & Tin Plate Co., Cumherland, Md.; Burgess Steel & Iron Works, Portsmouth, O.; Benjamin A tha and Illingworth, New Jersey ; Spalding & Jen-nings Co., New Jersey ; Sanderson Bros. Steel Co., Jersey City ; Beaver Falls Steel Co., Pennsylvania ; Aliquippa Steel Co., Pennsylvania. The new com-pany was organized under the laws of New Jersey, hut is to have its home office in Pittshurg. The consolidated coucerns helong in the main to that class of steel makers who are furnishers of drill and crucible tool steel and such stock as is usually used in shops that make mining machinery. Many of them do other classes of work, but the above constitutes a leading feature. This is mentioned hy way of dis-tinguishing them from such as the Carnegie and Bethlehem Works, which make a specialty of Harvey-ized armor plate, heavy shafting, structural work and ordnance material ; and from the Illinois Steel Co. and the Colorado Fuel & Iron Co., whose great specialties are material for railway equipment and steel structures.

World's Production of Copper.

The following from official and private statistics shows how completely North America surpasses other countries in the production of copper. It shows, also, that the production is hardly equal to the demand, for, in spite of increased prices, produc-tion in 1899 advanced only 9% over 1898:

	1898—Tons.	1899—Tons
Algeria	50	
Argentine Republic.	125	65
Australasia	18,000	20,750
Austria-Hungary	1,540	1,505
Bolivia	$\dots 2,050$	2,500
Canada	8,040	6,732
Cape Colony	7,060	6,490
Chile	$\dots 24,850$	25,000
Germany	20,085	23,460
England	550	550
Italy	3,435	3,000
Japan	$\dots 25,175$	27,560
Mexico	15,668	19,335
Newfoundland	2,100	2,700
Norway.	3,615	3,610
Peru.	3,040	5,165
Russia	6,000	6,000
Spain and Portugal.	53,225	53,720
Sweden	480	520
North America	239,241	265,156
Totals	434, 329	473,818

THE great denudation of the Colorado river, carv-ing out of rock a series of canyons about 500 miles long, in one place more than a mile deep, with a multitude of trihutary chasms and gorges, is held hy some to he due to the slow rising of an ancient lake bed. At first the Colorado river and its tributaries, or some nameless ancestor of these, sweeping over the slowly rising surfaces, planed them down in most relentless fashion, and then hegan wearing out hroad, shallow stream heds. But the country rose more rapidly, and the water had to cut deeper channels in



Hydraulic Work on Grounds of Mecca Gold Placer M. Co., Breckenridge, Colo.-(See page 70.)

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thick at the mines, as it is the very top of the forma-tion in which the ore is now found. Up to the pres-ent time nearly all of the ore has come from surface workings, or shallow shafts, and the size of the ore hodies in depth and the depth to which they will ex-tend is another point to be determined by mining operations. It is certain, however, that the cinna-har comes from below—undouhtedly from a source heneath the limestone—and it is therefore more than prohahe that ore hodies will he found to a depth of more than 1000 feet, with a good chance of their ex-tending still deeper.

more than 1000 feet, with a good chance of their ex-tending still deeper. The cinnahar mines lie in a limited area about 2 miles wide hy 4 miles long, hut it is prohable that the mineralized area is of greater extent—at least 3 miles wide by 5 miles long. The general trend of the main lodes is in an easterly and westerly direction. The quicksilver occurs in limited amount in the native form, hut chieffy as the red sulphide of quicksilver or cinnahar. The limestone formation of the district contains numerous rusty hrown veins. These, as ahove noted, usually trend in an easterly and west-erly direction, hut many of the smaller veins are exerly direction, hut many of the smaller veins are ex-tremely irregular and strike in all directions. These These rusty hrown veins are composed of calcite or crys-tallized carbonate of lime and oxide of iron, usually enclosing fragments of hroken up limestone. Many of them show walls with striated and smooth surfaces, them show walls with striated and smooth surfaces, showing that movements have taken place along the walls, as is usually the case along mineralized lodes. In these veins or lodes the cinnahar occurs in string-ers or pockets. Many of the veins show no trace of mercury, and even when cinnabar is present it often can not he seen on the weathered surface until the rock is hroken, as it is black or otherwise discolored. The thorough prospecting of the veins is therefore a matter of time. In addition to cinnahar, mercury occurs in the na-

In addition to cinnahar, mercury occurs in the na-tive form—notahly in the McKinley lode—and as a white coating and as yellow-green crystals. Prof. S. L. Penfield has identified the white coating as calomel or mercury chloride (Hg₂ Cl₂), and the green-ish crystals as an oxychloride of mercury, forming a new mineral species, for which I have suggested the name terlinguaite. In tunueling in on the vein of the Crœsus claim, a vertical cavity in the limestone was found, perhaps 50 feet in depth, lined hy a dazzling white layer of saccharoidal crystalline gypsum, asso-ciated with some cinnahar. Calcite is present in nearly all of the hrecciated lodes as veinlets, and it also lines cavities when it is often finely crystallized; occasionally seams of it are colored nearly black hy manganese. manganese.

There can be no doubt that the so-called lodes are formed along fault zones. This is particularly evident with the larger lodes, where the brecciated charac-