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REPORT ON

THE ADVISABILITY OF A DRILLING
CAMPAIGN AT INSPIRATION, ARIZONA, 30
TO DISCOVER A BODY OF PRIMARY ORE 32

BY

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INSPIRATION, ARIZONA.

OCTOBER 1930

NOTES

UNDERGROUND TRIP

OLD DOMINION MINE GLOBE, ARIZ. OCT. 17, 1930.

Deepest operating level is the 2600, which is probably about 2200 ft. vertically beneath surface, as the 2200 level is 1800 ft. below the collar of the shaft. Development on the 2600 is about 2000 ft. west of Pinal Creek. Ore on this level at the west end of the development is in a broken quartzite block - probably Dripping Springs - apparently caught in a diabase intrusion, for the quartzite does not show above on the 2400 level. The mineralization is chiefly pyrite and chalcopryrite.

The Old Dominion vein is a mineralized fault fissure which strikes about N 50-60° E, and dips to the south from 60-75°. It is offset by several strong N-S faults that dip to the west and have a normal movement. They are known as the Pinal Creek fault, West fault, Limestone fault, etc.

The hanging wall of the vein has moved downward with respect to the footwall about 600 - 700 ft. Mineralization is found along the vein in sedimentaries and within the diabase. The Mescal lime has been the most favorable sedimentary horizon, and in the upper levels it was frequently completely replaced and formed the large bodies of oxide copper ore mined in the earlier days of the Old Dominion. Ore in quartzite is generally confined to the immediate vicinity of the vein. Within the diabase intrusions there are several low grade ore bodies above the 2200 on which are pyritic and carry enough secondary chalcocite to be commercial. Above the 2400 level there is an orebody approximately 500 ft. long and from 600 - 800 ft. wide that Reed (asst. geologist) says will run over 3% Cu. The mineralization is not disseminated in type, but is present in 1/8 - 1/4 inch seams of pyrite and chalcopryrite. Present plans call for mining this orebody with Morenci type stopes.

Some ore has been discovered in the Martin limestone, but by far the larger part has been mined from the Mescal lime. Orebodies so far discovered in the limestone have been entirely oxidized ores of malachite, chrysocolla replacing malachite, and melaconite. In many cases above and below the beds of oxidized ore there are parallel beds of heavy iron oxides and altered and stained limestone that Reed believes to be oxidized pyrite in place.

A major diabase sill, with several offshoots, has a width from 600 to 1200 ft. vertically. In the western portion of the mine it lies above the Dripping Springs quartzite and below the Mescal lime. Near the main shaft the diabase breaks across the Mescal lime, and in the eastern portion of the mine, the diabase is above the Mescal and below the Troy quartzite. The thickness is about 600 ft. in the eastern portion of the mine. The diabase is quite fresh and unaltered where it is ore-bearing, but locally away from the orebodies it is well altered. No metamorphism of the sedimentaries by the diabase is in evidence,

In the extreme west end of the 2400 development, an unconsolidated breccia is exposed which is called the Whitetail conglomerate. It resembles a fault breccia more than a conglomerate bed; it contains fragments of the sedimentaries, a few rounded quartzite boulders, and is said to contain chunks of specularite. The matrix is brown and clayey, and apparently has developed some slickensided small walls. Dacite is supposed to overlie this "formation".

The Old Dominion Company is at present installing a new headframe and steel orebin, and has installed new hoist drums that will carry sufficient cable to reach the 2800

MINING PROSPECTS IN GILA, PINAL AND GRAHAM COUNTIES, ARIZONA

Report	Name of Property	Location	Class of Ore	Shipments	Remarks
45E	Abandoned Group		Au, Ag		Beckwith: Likely prospect.
22A	West Bros.	E-4	Cu	Some to Old Dom.	" Favorable small property.
26	Renfro		Cu		Old report favorable.
27 36D	Gypsy Queen Dickson	D-4	Au, Ag, Pb, Zn.		Some good grade Pb-Zn mineralization. Leasing proposition, now owned by the King of Bronze Mining Co.
38	Callahan	G-3	Au, Cu.		Beckwith: Rich copper oxides with \$20. gold ore.
40	Calumet and Copper Creek	F-5	Cu		2-3% Cu ore, and possible million tons can be developed.
41	Single Standard		Au		Beckwith: Favorable prospect.
45D	Grand Reef Mine		Cu, Pb, Ag	Some to El Paso	Strong vein in andesite, with some indica- tions of secondary enrichment of copper minerals: Beckwith.
300	Iron Cap Copper Co.	D-5	Cu, Ag		Old, large producer in Globe district.
323	Ramrod Group		Cu		Small tonnage of oxidized siliceous copper ore: Botsford.
336	Crenshaw Reading and Mercer	D-4	Cu	Some 15% ore	Leasing proposition: Beckwith.
346	Lake Shore	G-2	Cu		Good prospect; estimated one million tons 2.65% oxidized copper ore: Beckwith.
354A	New Dominion		Cu	Some 7% Cu to Inter.S.Co., 1925 from surface.	Report by Botsford and Spilsbury incon- clusive.
368A	Cons. H. & T. Co. North Group	E-4	Cu, Ag		Vein type resembles Magna vein. <i>just south of Superior.</i>

Report	Name of Property	Location	Class of Ore	Shipments	Remarks
384	Ray Silver Lead Mining Co.	E-4	Pb, Ag, Au	12,000 T -30% Pb 15 oz. Ag, \$5 Au	50,000 T shipping ore: Botsford
400	Copper Butte Mines		Cu	470 cars of 4% to Hayden	Breccia containing copper carbonates. Management claims 100,000 T of 3%.
413	Molybdenite King	G-5	Pb, Ag, Au little Cu		Little development, but ore is fairly high grade.
429	Superior and Boston Copper Co.		Cu		Old producer in Globe district.
468A	Sombrero Butte		Cu	At least 9000 T of possibly 18%	Small productive lenses - developed ones probably worked out.
470A	Sunset Copper Mining Co.	F-6	Cu		Extension of Sombrero Butte; small lense of oxide ore developed.
471	Copper State Mining Co.	F-5-1/2	Cu		Spilsbury notes; N.Y. report gives estimate 1,410,000 T of 3.25% in lenses along shear in diorite. N. extension Som. Butte.
500	Troy-Arizona Copper Co.		Cu		Small orebodies in limestone.
501 26	Pinal Development Company.	E-4	Cu		Small orebodies in limestone.
519	McMillen Stonewall		Ag, Au	Old high grade Ag producer.	Beckwith: Not promising; small high grade lenses.
533	Cactus Copper Co. (Pinto D. Co.)	D-4	Cu		Report ⁱⁿ unconclusive; hearsay estimate of 600,000 - 1,000,000 T ore developed.
542	Radium Mines Co.	D-4-1/2	Ag, Pb		Some high grade lead ore.
545	Husband and Hill	D-5	Ag, Cu	Cu Some 9%/with 300-400 oz. Ag.	Beckwith: Fair leasing property.
555	Mineral Butte	E-3	Cu		Spilsbury and Botsford: Possible ten million T of secondary ore.

Report	Name of Property	Location	Class of Ore	Shipments	Remarks
563	Brewery (now Carlota)	D-4	Cu	Some 5% to Magma	Leasers claim 45,000 T of 5% ore blocked out.
635	Lunsford Group	G-7	Pb, Zn, Ag little Cu		Some bunchy Ag-Pb ore. Adjoins Norquay group.
645	Norquay Group	G-7	Pb, Ag		Argentiferous galena in bunches through quartz porphyry. Interesting geology.
647	Table Mt. Group	G-5 1/2	Cu		Limestone contact ore; small tonnage.
718	Red Hills Group		Cu, Au, Ag		Small seams-3-4" of chalcocite in granite. Several tons of high grade near surface.
752	79 Mining Co.	E-4	Pb, Ag, Cu	About 6000 t	Botsford: 20,000 T indicated; excellent leasing property. <i>Shattuck also reported to own 1/2 interest. Making excellent profit from lead.</i>
812	Snyder Group		Cu	Small shipment to I S Co. ran 13%	Small high grade lenses in Gibson district.
852	Bronx		Cu		Small veins in granite. Geologically interesting.
858	Queen mine	F-4 1/2	Au, Ag		Apparently leasing proposition.
883	Copper Prince		Cu		Worthy of some exploration for small tonnage.
897	Rio Grande Mining & Metals Company	C-4	Cu, Ag	Some assayed 15% Cu-9 oz. Ag	Strong vein structure with sulphides developed. Beckwith did not see underground work.
899	San Juan Group	E-7	Cu		Botsford and Beckwith: Estimate one million tons 3% Cu; estimate made from old drill records.
900	Ariz. Quicksilver Ord Group.	C-3	Hg		Botsford: Excellent prospect.
901	Lone Star		Cu, Ag		Probably not a disseminated deposit, but may be a small producer.

Report	Name of Property	Location	Class of Ore	Shipments	Remarks
903	Mammoth Mine	F-5	Au, Mo, Pb Zn	300,000 T of \$6- \$9 Au Ore	Beckwith: Good chance to be a lead producer.
910	Edwards Group	F-4	Cu, Ag		Beckwith: Mineralized area too small for ICCCo.
911	C&B Vanadium Group		Pb, V		Small carbonate orebodies on limestone contact.
920	Moniton Group		Cu, Ag		Beckwith: Some merit as a small proposition.
914	Ray Integrity Min.Co.	E-4	Pb, Ag		Some lenses of good ore in schist; small possibilities for any large tonnage.
928	Alimo Group	F-5	Pb, Ag		NW extension of the Collins vein of the Mammoth Mine.
929	Gila Canyon Copper	E-5	Cu		Considerable oxide copper showing. Owners claim 250' crosscut assays 2.43% Cu.
950	Silver Ball Mine	E-4	Pb, Ag	Shipping to El Paso	Old Silver producer. Beckwith thinks too low grade, but property is in operation.
954	Money Metals		Au, Ag, Pb Cu		Beckwith: Good looking prospect.
957	Apache Vanadium Corp.	D-5	Pb, V, Ag		Beckwith: Excellent prospect.
960	Mineral Basin Copper Co.	E-4-1/2	Au, Ag, Cu Pb, Zn		Complex ore in persistent veins with punchy mineralization.

FOLLOWING PROPERTIES HAVE MADE SHIPMENTS TO INTERNATIONAL SMELTER

20	Ariz. Globe		Cu, Ag	5.9% Cu, 1 oz. Ag 1925	Old Cole Goodwin property in Gibson district.
	Atlantis Min. Co.	B-3-1/2	Cu	11.9% Cu 1929	No ICCCo report, but map by Min. Bureau shows a curved vein structure that resembles Cananea Duluth. Probably warrants some geo-

Report	Name of Property	Location	Class of Ore	Shipments	Remarks
					LOGIC examination.
	Bob Tail Mines	E-5	Cu	5% Cu 1928	Near Doak on south side of Pinals.
337	American Mines	D-4	Cu	3.4% Cu 1930	Gibson District.
	Belcher		Cu, Ag	11.5% Cu, 3 oz. Ag 1929	In Pinals ?
	Braley		Cu	4.2% Cu, 82.2% SiO ₂	Ships from Red Rock.
505	Bellevue Copper Co.		Cu	14.6% Cu 27.6% Cu 16.6% Cu	Gibson Mine in 1930
	Central Copper Co.		Cu, Au, Ag	16.9% Cu 24 oz. Ag \$8.60 Au	Dos Cabezas
	Forbes and Corn		Cu	8% Cu	No information.
	Kinney		Cu	5% Cu 12 oz. Ag	Gibson district beyond Cole Goodwin.
	{ PINAL DEVELOPMENT CO. Lorraine Copper Co.		Cu	26.7% Cu	South of Gibson Mine. 1925.
	Bankers Group		Cu	5.7% Cu	Near Radium.
	Louis d'Or Lease		Cu	4-6% Cu	Siliceous ore from sedimentary bed.
	Tonto Cons. Copper Co.		Cu	14% Cu	Near Payson.

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— $5\frac{1}{4}$
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— $3\frac{1}{2}$

PROMISING

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GLOBE (Ariz.) Dec. 14. (Exclu-