UNIVERSITY OF NEVADA RENO

Nevada Bureau of Mines and Geology
University of Nevada Reno
Reno, Nevada 89557-0088
(702) 784-6691

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NBMG OPEN-FILE REPORT 83-4

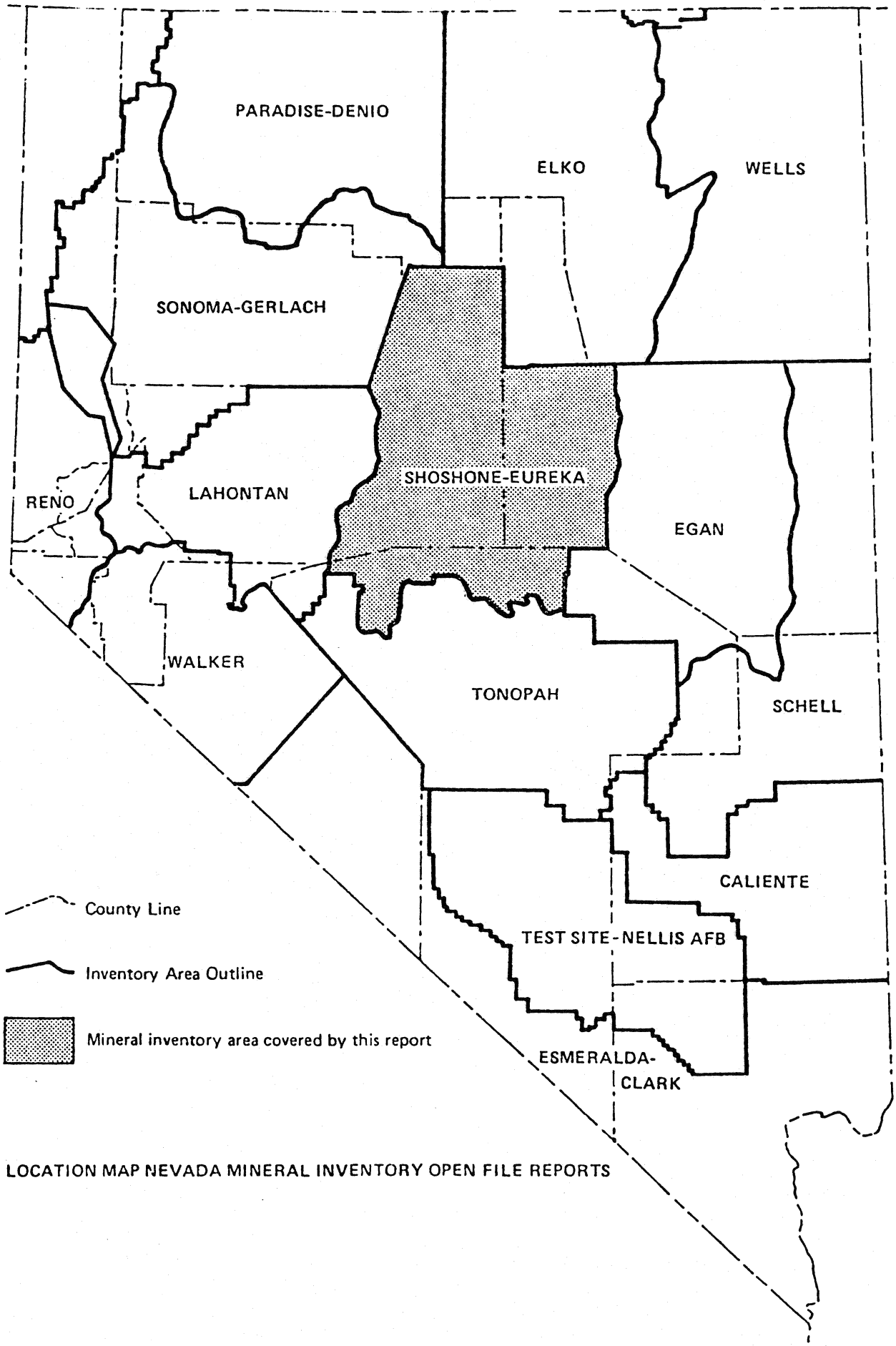
RESULTS OF GEOCHEMICAL SAMPLING WITHIN THE SHOSHONE-EUREKA RESOURCE AREA, EUREKA, LANDER, AND NYE COUNTIES, NEVADA (PORTIONS OF THE MILLETT, WINNEMUCCA, AND TONOPAH 2° SHEETS)

by J. V. Tingley and Peggy L. Smith

Samples collected by Nevada Bureau of Mines and Geology and analyzed by Branch of Exploration Research, United States Geological Survey, as part of the Mineral Inventory of the Shoshone-Eureka Resource Area, under Bureau of Land Management Contract #YA-553-CTI-1058.

This information should be considered preliminary. It has not been edited or checked for completeness or accuracy.

See NBMG 83-3 for Inventory Report.



LOCATION MAP NEVADA MINERAL INVENTORY OPEN FILE REPORTS

8 February 1983

ANALYSES FOR SAMPLE NUMBERS:

114, 115, 116

382, 383, 384, 385, 386A, 386B, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396A, 396B, 397, 398, 400

672, 673, 674, 675, 676, 677, 678, 679, 680A, 680B, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697

964, 965, 966, 968, 969, 980, 981, 982

1101, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11

Have not yet been received. The results will be added to this file as soon as the analyses are available.

Sample Description

Sample Number	Location	Description
114	Quad: Crescent Valley 15' Sec: 15 T: 30N R: 47E UTM: 4479400 N 0529800 E DBM mining property No Dist.	Bleached, Kaolinized igneous Rx w/ specks sulfides disseminated, surfac coated with Fe an Mn oxides, small gossany pods.
115	Quad: Crescent Valley 15' Sec: 15 T: 30N R: 47E UTM: 4479400 N 0529800 E DMB mining property No. Dist.	Punk, crumbly, FeOx + Mn Ox stained, gossany, altered volcanics, fracture Rhyolitic(?) glass, tuff.
116	Quad: The Cedars 15' Sec: 26 T: 27N R: 43E UTM: 4448400 N 0491450 E	Rhyolitic ash tuff, glass shards, qt crystals, abundant Rx fragments, opa deposited in vugs, cinnabar, ign Rx fragments.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM. N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
288	Quad: Carvers NW Sec: 23 T: 12N R: 42E UTM: 4303320 N 0479820 E	Dump, grab rhyolite porphyry dike, rounded qtz. phenocrysts, dissem. sulfides.
289	Quad: Carvers NW Sec: 26 T: 12N R: 42E UTM: 4303180 N 047960 E	Dump, select, vein quartz, silicifi. porphyry, clots galena, sooty black (Ag?) coatings, MnO, Feox.
290	Quad: Carvers NW Sec: 26 T: 12N R: 42E UTM: 4303170 N 0479610 E	Dump, select, breccia, qtz. cemente MnO, Feox, cerrussite.
291	Quad: Toiyabe Peak 7 1/2' Sec: Uns. T: 13 N R: 42E UTM: 4314620 N 0475940 E	Grab, dump from open cut. Milky-white vein qtz, cinnabar limonite in vugs (barite pit?)
292	Quad: Toiyabe Peak Sec: Uns. T: 13N R: 42E UTM: 4313770 N 0477640 E	Dump, select marbelized ls, white vein quartz with scheelite.
293	Quad: Toiyabe Peak Sec: Uns. T: 13N R: 42E UTM: 4313950 N 0477610 E	Select dump, white vein quartz with clots fine grain sphalerite, MnO.
294	Quad: Spencer Hot Springs 15' Sec: Uns. T: 17N R: 46E UTM: 4353560 N 0514505 E	Open pit, massive garnet tactite, scheelite.
295	Quad: Spencer Hot Springs Sec: Uns. T: 17N R: 45 1/2 46E? UTM: 4353100 N 0514150 E	Open pit, garnet-epidote tactite, pyrite, MoS_2, scheelite.
296	Quad: Spencer Hot Springs Sec: Uns. T: 17N R: 45 1/2R UTM: 4352470 N 0513550 E	Dump, grab, pale garnet, opal, epidote-rich endoskarn.

Sample Description

Sample Number	Location	Description
297	Quad: Spencer Hot Springs Sec: Uns. T: 17N R: 42 1/2E UTM: 4352700 N 0513190 E	Grab from open cut, brecciated gossan in garnet skarn, heavy hematite coatings, MnOxs.
298	Quad: Carvers NW Sec: 23 T: 13N R: 43E UTM: 4314550 N 0480540 E	Dump grab, massive qtz-epidote-garnet skarn, Fn-gr, pulverent WO_3 clots in cellular gossan-like areas in skarn.
299	Quad: Carvers NW Sec: 14 T: 13N R: 42E UTM: 4315180 N 0480550 E	Dump, grab, banded garnet-epidote-pyroxene tactite, clots scheelite along some fractures.
300	Quad: Millett Ranch Sec: 2 T: 13N R: 42E UTM: 4317700 N 0480800 E	Dump, grab, white vein quartz, vuggy, clots bright pyrite, Cuox stain.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R UTM: N E	

Sample Description

Sample Number	Location	Description
356	Quad: Millett Ranch Sec: 1 T: 13N R: 42E UTM: 4317850 N 0481760 E	Dump, epidote rich skarn, est. 50% pyrite, MnO, Feox, Cuox, Fn-gr. WO_3 present.
357	Quad: Millett Ranch 15' Sec: 1 T: 13N R: 42E UTM: 4318290 N 0481300 E	Dump, select, vuggy white quartz, limonitic coatings, some pyrite clots.
358	Quad: Millett Ranch 15' Sec: 2 T: 13N R: 42E UTM: 4318450 N 0481130 E	Dump, select, white vein quartz, clotx pyrite.
359	Quad: Millett Ranch 15' Sec: 2 T: 13N R: 42E UTM: 4319195 N 0480950 E	Dump, select, quartz-calcite vein materials. Minor disseminated pyrite, chlorite in vein walls.
360	Quad: Millett Ranch 15' Sec: 34 T: 13N R: 42E UTM: 4319460 N 0478900 E	Dump, select (ore pile material). Replacement ore, sugary calcite with quartz, galena, sphalerite, pyrite.
361	Quad: Millett Ranch 7 1/2' Sec: 35 T: 13N R: 42E UTM: 4320800 N 0479850 E	Select dump, vein quartz, clots galena, sphalerite, pyrite.
362	Quad: Millett Ranch 15' Sec: 27 T: 15N R: 43E UTM: 4331450 N 0489250 E	Random chip, 15' drift, altered meta lime(?), veinlets and clots blue-gray silica(?), limonite points.
362	Quad: Millett Ranch 15' Sec: 27 T: 15N R: 43E UTM: 4331450 N 0489250 E	Random chip, 15' drift, altered meta lime(?), veinlets and clots blue-gray silica(?), limonite points.
363	Quad: Millett Ranch Sec 11 T: 15N R: 43E UTM: 4336700 N 0489900 E	Select dump, white vein calcite, some quartz, spots tetrahedrite, MnO.

Sample Description

Sample Number	Location	Description
364	Quad: Millett Ranch Sec: 13 T: 16N R: 43E UTM: 4343680 N 0492260 E	Milk-white vein quartz, clots sphalerite, galena, tetrahedrite, chalcopyrite, pyrite, specks WO_3
365	Quad: Millett Ranch 15' Sec: 2 T: 15N R: 43E UTM: 4338500 N 0490820 E	Select dump, vein quartz, calcite, Feox stain.
366	Quad: Millett Ranch 15' Sec: 27, 28 T: 16N R: 43E UTM: 4341830 N 0488040 E	Select dump, Feox-stained milky-white vein quartz, minor green Cuox, black sooty mineral.
367	Quad: Millett Ranch Sec: 27 T: 16N R: 43E UTM: 4341800 N 0488400 E	Select, ore pile. Siliceous replacement lense or vein material, clots pyrite, sphalerite, dark carbonaceous material.
368	Quad: Austin 15' Sec: 27 T: 17N R: 43E UTM: 4350590 N 0489370 E	Ore pile, masses stibnite in white vein quartz, carbonaceous gouge, Feox stain.
369	Quad: Wildcat Peak 15' Sec: T: 15N R: 45E UTM: 4333810 N 0510330 E	Select, ore pile, vein quartz with clots chalcopyrite rimmed with chalcocite, melaconite.
370	Quad: Wildcat Peak 15' Sec: T: 15N R: 45E UTM: 4333850 N 0510250 E	Select, ore pile, Feox-stained vein quartz with clots chalcopyrite.
371	Quad: Wildcat Peak Sec: T: R: UTM: 4333850 N 0510250 E	Select, dump, Feox-stained tourmaline band, some Cuox stain.
372	Quad: Mt. Lewis 15' Sec: 35 T 30N R: 46E UTM: 4475200 N 0519800 E	Gossan in bedded barite.

Sample Description

Sample Number	Location	Description
373	Quad: Mt. Lewis 15' Sec: 35 T: 30N R: 46E UTM: 4475200 N 0519800 E	Bedded barite
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
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	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
382	Quad: Austin 15' Sec: 19 T: 19N R: 44E UTM: 4371375 N 0493180 E Bud North Star Reese River	White, sugary crystalline to massive qtz vein and zone material w/euhedra to subhedral sulfide crystals(galena. pyrite chalcopyrite). Small vugs of gossan, FeOx stains, 2ndary qtz vein cutting gouge.
	Quad: Sec: T: R: UTM: N E	
383	Quad: Austin 15' Sec: 20 T: 19N R: 44E UTM: 4370420 N 0493580 E Manhattan Reese River	Same as above w/addition of: dk grey LS breccia, MnO_2 staining, greater degree of iron staining; calcite vei
384	Quad: Austin 15' Sec: 20 T: 19N R: 44E UTM: 4371350 N 0494900 E Reese River	White qtz vein/gouge, sugary to mass euhedral to anhedral sulfides(pyrite. galena, sphalerite), sphalerite revi w/crystalline rhodochrosite surface ing of cerubrite(?) MnO_2, FeOx stains probably Au & Ag, vugs and fractures filled w/FeOx coated drusy qtz.
	Quad: Sec: T: R: UTM: N E	
385	Quad: Pinto Summit 15' Sec: 2 T: 18N R: 53E UTM: 4367450 N 0588275 E Western Windfall Ltd. Eureka	FeOx-limonitic stained, shear(?) mat al, kaolinized, minor gossan, silice dense, highly altered, some qtz vein
386 A&B	Quad: Pinto Summit 15' Sec: 15 T: 19N R: 53E UTM: 4369600 N 0587800 E Cropesus Mine Eureka	(A) Heavily iron stained, gossany, breccia. Cemented zone w/drusy q MnO_2 stained. Coating with stain between angular fragments. Unabl to original rock.
	Quad: Sec: T: R: UTM: N E	(B) Qtz breccia, gossany, boxworks, drusy qtz. with hematite(or oxid pyrite) stain vugs.
387	Quad: Pinto Summit 15' Sec: 35 T: 19N R: 53E UTM: 4370400 N 0587800 E Eldorado Tunnel Eureka	White, crystalline-hydrothermal qtz breccia, gossany coated w/FeOx, specularite highly fractured hematit oxide I can't recognize.

Sample Description

Sample Number	Location	Description
388	Quad: Eureka 15' Sec: 22 T: 19N R: 53E UTM: 4372800 N 0587200 E Ruby Hill? Eureka	Dense, vuggy, limonite-MnO_2 stained gossan, drusy qtz, boxwork.
389	Quad: Eureka 15' Sec: 22 T: 19N R: 53E UTM: 4372880 N 0586400 E Albion Shaft Eureka	Hydrothermal crystalline white barit vein cementing grey SS/ls gouge/bre cia, limonite staining, dendritic pyrolusite, specular hematite.
390	Quad: Antler Peak 15' Sec: 32 T: 32N R: 44E UTM: 4494880 N 0497025 E Copper Basin Battle Mountain	Highly atlered, bleached, limonited, stained, kaolinized, ash(?) coated wi fine grained supergene Cu minerals, f grained breccia, minor gossan/box-working
391	Quad: Antler Peak 15' Sec: 30 T: 32N R: 44E UTM: 4495700 N 0494225 E Buckingham Camp Battle Mtn.	Med-grey qtzite w/non-crystalline arsenopyrite in stringers and dissem inated fracture surface coated w/pal green, glassy mineral and milky whit circular mineral
	Quad: Sec: T: R: UTM: N E	
392	Quad: Antler Peak 15' Sec: 29 T: 32N R: 44E UTM: 4496540 N 0495525 E Copper Queen Battle Mtn.	Lt. to dk grey fine grained ash(?) minor bica cut w/veinlets malachite coating surface, limonite staining, azurite, tetrahedrite(?) minor sericite(?).
393	Quad: Battle Mtn. 15' Sec: 26,27 T: 32N R: 44E UTM: 4495400 N 0500350 E Battle Mtn.	Dirty grey, siltstone(?) limonitic/ hematite stained, opaline coats fracture surface, crystalline calcit siderite.
394	Quad: McCoy 15' Sec: 35 T: 30N R: 42E UTM: 4474950 N 0481450 E	Limonite/hematite stained, dirty gra siliceous Rx. 2ndary qtz deposited o surface, minor Cu staining gossany, boxwork, iron alteration, minor MnO_2
395	Quad: Mt. Moses 15' Sec: 16 T: 27N R: 41E UTM: 4451650 N 0468950 E Daisy Creek	Thinly bedded clays, coarse pebble SS/cong angular congl of altered limonitic stained, non-calcareous, differentiated weathering.

Sample Description

Sample Number	Location	Description
396A&B	Quad: Antler Peak 15' Sec: 33 T: 32N R: UTM: 4494700 N 0478950 E Buffalo Valley Mine Buffalo Valley	(A) FeOx-limonitic stained qtzite(?) slightly vuggy.
	Quad: Sec: T: R: UTM: N E	(B) Gossan, boxworks, limonitic MnO_2, qtz veinlets.
397	Quad: Antler Peak 15' Sec: 34 T: 32N R: 42E UTM: 4494050 N 0480740 E Black Rock Mine Buffalo Valley	Heavily FeOx-mostly hematite stain platy, slightly gossany siliceous Some qtz vein/siliceous material, MnO_2 stained, vuggy.
398	Quad: Battle Mtn. 15' Sec: 35 T: 32N R: 46E UTM: 4494800 N 0520250 E Argenta	Dk. grey, silt/mudstone stained, MnO_2-FeOx, slightly vuggy, minor (very) boxwork.
399	Quad: Crescent Valley 15' Sec: 11 T: 29N R: 48E UTM: 4472230 N 0541080 E (In Elko Resource Area)	Fine-grained siliceous rx. Mud/si stone(?) FeOx-MnO_2 staining some breccia, crystalline surface inter grown with gypsum(?), coast rx and filler vugs and fractures.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
400	Quad: Crescent Valley 15' Sec: 30 T: 30N R: 47E UTM: 4477350 N 0524420 E Bullion	Heavy, dense, MnO_2 stained, coated barite, massive barite disseminated in grey limestone.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
401	Quad: Burnt Cabin Summit 7 1/2' Sec: Uns. T: 14N R: 37E UTM: 4325300 N 0432740 E	Limonite stained (slightly) vuggy, crystalline chalcedony, biotite rhyolite, kaolinized, chalcedony veinlets Feox stained vugs. 3 samples
	Quad: Sec: T: R: UTM: N E	A) Altered B) Unaltered C) Welded tuff?
402	Quad: Burnt Cabin Summit 7 1/2' Sec: Uns. T: 14N R: 37E UTM: 4323950 N 0433033 E	White to medium gray rhyolite, Feox stained, some breccia, feldspar zone, drusy quartz, some silicificat quartz eyes, pyrite ghosts(?), milk crystalline quartz vein, remnant biotite, muscovite books (< 1 cm).
	Quad: Sec: T: R: UTM: N E	
403	Quad: Burnt Cabin Summit 7 1/2' Sec: Uns. T: 14N R: 37E UTM: 4323740 N 0433610 E	White to med-grey rhyolite porphyry breccia, limonite-Feox staining flow-banding, argillitized quartz eyes, pyritic oxidization rings, MnO_2 stains.
404	Quad: South Shoshone Peak Sec: Uns. T: 14N R: 39E UTM: 4319633 N 0450000 E	Medium gray Feox stained, fractured rhyolitic welded tuff(?) drusy qtz filled fractures, fine sprays of disseminated hematite coat some qtz surfaces, chalcedony, silicificatio pyrite ghosts.
	Quad: Sec: T: R: UTM: N E	
405	Quad: South Shoshone Peak 15' Sec: Uns. T: 13N R: 39E UTM: 4318633 N 0449675 E	Lt. grey, flow banded qtz eyes, kaolinized(?) welded tuff, rhyoliti limonite and MnO_2 stained. No apparent mineralization.
406	Quad: South Shoshone Peak 15' Sec. 35 T: 15N R: 39E UTM: 4329933 N 0451600 E	Dirty white crystalline, Feox stained qtz vein material. Pyrite ghosts(?), hematite. No obvious mineralization. Sample divided:
		A) Qtz vein material B) Feox stained gouge material

Sample Description

Sample Number	Location	Description
407	Quad: South Shoshone Peak 15' Sec: 36 T: 15N R: 39E UTM: 4330750 N 0452550 E	White crystalline qtz vein material with sulfide disseminated throughout and filling fractures, limonite staining, some gossan, some kaolinization.
408	Quad: South Shoshone Peak 15' Sec: 25 T: 15N R: 39E UTM: 4331450 N 0453160 E	White crystalline fractured limonite, stained qtz vein, galena, pyrite and chalcopyrite fill fractures in veins and breccia.
409	Quad: South Shoshone Peak 15' Sec: 36 T: 15N R: 39E UTM: 4329700 N 0453700 E	Dark greyish green, Feox stained meta andesite(?) coarse grained Cu mineral coating surfaces and filling fracture heavy slicks. Sample divided: A) greenish B) hematite stained. (See below)
	Quad: Sec: T: R: UTM: N E	Sample held out combine characterist of A and B.
410	Quad: South Shoshone Peak 15' Sec: 36 T: 15N R: 39E UTM: 4330300 N 0453850 E	Qtz vein material, white, crystalline with pyrite and chalcopyrite dissemin ated and in alternating bands with th qtz siderite Feox staining some of th adjacent wall rock. Fractured, silicified meta-andesite(?)
	Quad: Sec: T: R: UTM: N E	Sample held out combine characteristi of A and B.
411	Quad: South Shoshone Peak 15' Sec: Uns. T: 14N R: 39E UTM: 4323500 N 0452900 E	Vein and breccia material with fluori white to dark purple, crystalline hea argillitized, vitric-lithic ash-flow tuff, limonite stained, gossany.
412	Quad: South Shoshone Peak 15' Sec: Uns. T: 14N R: 39E UTM: 4324075 N 0453010 E	Kaolinized, Fe-Mg, and limonite stained, highly weathered tuff(?). No observed mineralization.
413	Quad: South Shoshone Peak 15' Sec: Uns. T: 14N R: 40E UTM: 4324450 N 0456333 E	Argillitized, Feox stained rhyolite(? porphyry, 1/2 sample fine rx, 1/2 some gouge material, remnant biotite small qtz veins(?)

Sample Description

Sample Number	Location	Description
414	Quad: North Shoshone Peak Sec: Uns. T: 14N R: 40E UTM: 4327450 N 0458950 E	Vitric-Lithic Argillized rhyolitic ash-flow tuff, comb & chalcedonic quartz veinlets, finely drussy. No apparent Mineralization , some silification, breccia.
415	Quad: North Shoshone Peak 15' Sec: 33? T: 15N R: 42E UTM: 4330000 N 0477525 E	Quartz vein white crystalline fractured with pyrite and galena in older fractures, FeOx and yellow ish oxide stains, pinkish cast to some sulfides .
416	Quad: Millet Ranch 15' Sec: Uns. T: 15N R: 42E UTM: 4328325 N 0479426 E 5	White lamellar quartz vein material with banding of galena, pyrite, Limonite staining, NaO2 staining pyrite unoxidized gossany, some stock work.
417	Quad: Millett Ranch 15' Sec: Uns. T: 14N R: 43E UTM: 4328040 N 0480025 E	White crystalline quartz vein material with disseminated, pod and vein galena, pyrite, sphalerite (and chalcopyrite, FeOx stain, fractu
418	Quad: South Shoshone Peak 15' Sec: 3 T: 15N R: 38E UTM: 4348225 N 0440420 E ?	Quartz vein material drussy, limoni stained quartz veinlets, eyes, brecc Mg staining, flakes of pyrite Chalcedony free gold and galena(?) scattered in quartz vein.
419	Quad: South Shoshone Peak 15' Sec: 5 T: 15N R: 38 E UTM: 4347790 N 0437980 E 3	Welded tuff dacite porphry, quartz vein limonite stained pyrite oxidized fractures quartz veined drussy, yellowish-green smectite(?) Sample divider:
	Quad: Sec: T: R: UTM: N E	A) Altered light green B) Welded tuff with Quartz
420	Quad: Burnt Cabin Summit Sec: Uns. T: 14N R: 37E UTM: 4328200 N 0426960 E	Lithic / Pumic rock pyroclastic, white to med. grey, breccia fragmen have inclusions. Limonite stained fragments up to 2 cm, most 1mm to 1
421	Quad: Burnt Cabin Summit 7 1/2 Sec: Uns. T: 14N R: 37E UTM: 4324965 N 0427290 E (?)	Quartz vein material, sugary, white limonite, stained white needle like mineral some banding, adjacent to breccia, silicification, quartz drussy in Vugs, Mg staining.

Sample Description

Sample Number	Location	Description
422	Quad: Buffalo Summit 7 1/2 Sec: Uns. T: 15N R: 37E UTM: 4332475 N 0432900 E	Limonite, quartz veined, drussy, cellular intrusive(?) rocks, silici fied breccia, pods of calcite, some sample very heavy, some banding of quartz.
423	Quad: Buffalo Summit Sec: Uns. T: 15N R: 37E UTM: 4334685 N 0432150 E	Lithic vitric rhyolite ash-flow, limonite stained, pyrite ghosts(?) quartz eyes, some silicification, breccia. No apparent Mineralization.
424	Quad: Cockalorum Wash 15' Sec: 17 T: 14N R: 52E UTM: 4326289 N 0573789 E	Multi-colored shales, pale pink to maroon, sulfur smell on fresh surf weathered, some chert.
425	Quad: Green Monster Canyon 7 1/2 Sec: Uns. T: 10N R: 48E UTM: 4286490 N 0538350 E	Breccia in siltstone(?)cemented with stibnite, and barite, stibicon hematite, country rock probably silt or mud stone, buff brown.
426	Quad: Danville 7 1/2 Sec: 23 (?) T: 11N R: 48E UTM: 4291550 N 0541615 E	White rhyolitic porphry, dike FeOx stained quartz eye. 1-5mm silicic matrix, feldspars weathered out.
427	Quad: Danville 7 1/2 Sec: 24 (?) T: 11N R: 48E UTM: 4291480 N 0540630 E	Jasperoid(?) brownish-red stain wit MnOz(?) stains. White radiating Uug-filled mineral.
428	Quad: Stargo Creek Sec: 20 T: 13N R: 49E UTM: 4311440 N 0544300 E	Some highly altered, FeOx stained weathered gossan(?) some med. grey crystalline Ls, pyrite Rx so altere it crumbles to dirt.
429	Quad: Stargo Creek Sec: 20 T: 13N R: 49E UTM: 4311440 N 0544300 E	FeOx stained silicic gossan, pyrit ghosts, micro-vein of quartz, slicl highly oxidized.
430	Quad: Dianas Punch Bowl 15' Sec: 10 T: 15N R: 48E UTM: 4333050 N 0539250 E	White to med. grey, crystalline, fractured calcite vein. FeOx stai surface and fractures. Some banded and radiating crystals, Mn oxides, dendritic.

Sample Description

Sample Number	Location	Description
431	Quad: Railroad Pass 15' Sec: 25 T: 25N R: 54E UTM: 4429850 N 0599275 E	Silic replaced limestone, dense, hornfilsed and with abundant CuOx. Small amount gossan and brx. Possibl Chalcocite.
432	Quad: Railroad Pass 15' Sec: 36 T: 25N R: 54E UTM: 4429450 N 0599500 E	Crudely layered tatite with bands of red garnet, calcite and epid/diops. and containing scattered clots of he atite, minor pyrite and chalcopyrite. Very minor scheelite.
433	Quad: Railroad Pass 15' Sec: 25 T: 25N R: 54E UTM: 4429975 N 0599700 E	Garnet-bearing skarn with abundant C Ox cement silic., brx frags. Minor sulfides also.
434	Quad: Pinto Summit Sec: Uns. T: 18N R: 53E UTM: 4363950 N 0587633 E	Gossany, FeOx-Mg-limonite stained fractured dolomite, white radiating mineral coating surface. Small piece sand and siltstone hemimorphite(?); heavy.
435	Quad: Caroll Summit 7 1/2 Sec: 8 T: 16N R: 38E UTM: 4346200 N 0437999 E	Light to med. grey, lithic rich, sil rhylitic ash tuff, oxidized pyrite, silicification FeOx stains, argellit ized. Some calcite veining.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
508	Quad: Whistler Mtn. 15' Sec: 18 T: 19N R: 53E UTM: 4374330 N 0581750 E Hawkeye Property Eureka District	Barite vein in dolomite.
513	Quad: The Cedars 15' Sec: 20 T: 25N R: 44E UTM: 4430380 N 0495470 E Palo Alto Property	Barite vein.
520	Quad: Mt. Lewis 15' Sec: 36 T: 30N R: 45E UTM: 4474700 N 0512250 E Starr Grove Mine Lewis District	Barite vein.
526	Quad: Mt. Lewis 15' Sec: 35 T: 30N R: 46E UTM: 4475300 N 0519750 E Bateman Canyon Mine Hilltop District	Bedded barite.
527	Quad: McCoy 15' Sec: 9 T: 28N R: 44E UTM: 4462650 N 0496600 E Mountain Springs Mine Mountain Springs District	Bedded barite.
528	Quad: Yankee Blade 7 1/2' Sec: 7 T: 20N R: 44E UTM: 4384500 N 0494100 E Elkhorn Gray Mine Reese River District	Bedded barite.
529	Quad: Jet Spring 7 1/2' Sec: 14 T: 13N R: 45E UTM: 4313220 N 0510420 E P & S Mine Northumberland District	Bedded barite.
530	Quad: Northumberland Pass 7 1/2' Sec: Uns. T: 12N R: 46E UTM: 4305800 N 0515650 E All Minerals Property Northumberland District	Bedded barite.
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
601	Quad: Mt. Jefferson 7 1/2 Sec: 1 T: 11N R: 44E UTM: 4298650 N 0500566 E	Lithic quartz rich as flow tuff(?) moderately weathered, crystalline qt vein, FeOx stained drusy qtz, some silicification, vesicular. No appare mineralization.
602	Quad: Mt. Jefferson 7 1/2 Sec: T: R: UTM: N E	Lithic and crystal rich ash flow tuf some breccia cemented w/crystalline (fine to coarse) qtz. Lithics up to appear to be dk. grey silicified Ls, Ox stained. No apparent mineralization
603	Quad: Jet Spring 7 1/2 Sec: 6 T: 12N R: 45E UTM: 4308550 N 0501790 E	White crystalline, clear to light gr qtz vein material euhedral azurite, malachite oxidized pyrite disseminat galena(?), gossany areas, tetrahedri Mn staining, crystalline galena mate
	Quad: Sec: T: R: UTM: N E	occur coating surface, filling vugs, and finely disseminated throughout qtz.
604	Quad: Wildcat 15' Sec: Uns. T: 14N R: 45E UTM: 4325625 N 0509080 E	Silicified Ls/chert breccia glubular hematite on surfaces, FeOx-limonite staining. No apparent mineralization
605	Quad: Northumberland Pass 7 1/2 Sec: Uns. T: 12N R: 46E UTM: 4306975 N 0515390 E	Med to dk. grey silt/mudstone, minor FeOx stained, brecciated, cemented w barite. Barite also disseminated throughout ore.
606	Quad: Northumberland Pass 7 1/2 Sec: Uns. T: 12N R: 46E UTM: 4307280 N 0514925 E	Silicified mudstone/shale fractured, limonite stained. No apparent minera ization.
607	Quad: Norhtumberland Pass 7 1/2 Sec: Uns. T: 13N R: 46E UTM: 4307575 N 0514550 E	Greenish grey, equigranular slightly porphryrite intrusive grandoiorite qtz eyes up to 1 cm, Minor hornblenc Muscauite mostly plag. No apparent mineralization.
608	Quad: Jet Spring Sec: Uns. T: 12N R: 45E UTM: 4308900 N 0510200 E	Light grey to muddy grey mudstone highly fractured, almost shear mater FeOx stained chalk-like substance f ing veins. No apparent mineralizatic

Sample Description

Sample Number	Location	Description
609	Quad: Jet Spring Sec: Uns. T: 13N R: UTM: 4310710 N 0510090 E	Drill Cuttings.
610	Quad: Austin 15' Sec: 27 T: 17N R: 43E UTM: 4350600 N 0489350 E	White massive qtz, vein material w/ disseminated flecks and pods of crystalline pyrolusite, minor sulfid drusy qtz, minor stibnite, minor FeOx staining.
611	Quad: Austin 15' Sec: 34 T: 18N R: 43E UTM: 4359700 N 0488750 E	Qtz vein/silicified Ls breccia sligh calcareous barite cement, FeOx stain
612	Quad: Austin 15' Sec: 26 T: 18N R: 43E UTM: 4359825 N 0491150 E	Crystalline pyrolusite in massive wh qtz vein and breccia material, yello oxides, minor FeOx staining.
613	Quad: Austin 15' Sec: 26 T: 18N R: 43E UTM: 4359950 N 0491225 E	Dark grey siltstone w/ disseminated barite, qtz crystals, minor breccia FeOx staining.
614	Quad: Austin 15' Sec: 6 T: 19N R: 44E UTM: 4365800 N 493280 E	Samples Divided: (A) Shear material of shaley, mud s friable cut w/qtz veins. Sercitation chalcopyrite, pyrite, lt. green mass mineral(?) FeOx stains, yellow oxide.
	Quad: Sec: T: R: UTM: N E	disseminated galena(?) (B) Massive white calcite and cryst ine vein malachite w/pods of oxidiz pyrite/chalcopyrite, fine sprays of
	Quad: Sec: T: R: UTM: N E	pyrite, disseminated galena.
615	Quad: Austin 15' Sec: 6 T: 18N R: 44E UTM: 4367025 N 0494150 E	A) Grandoiorite highly altered, mal gone, kaolinized, silica remains. B) Grandoiorite, unaltered flow patt biotite, quartz, equiganular.

Sample Description

Sample Number	Location	Description
616	Quad: Austin 15' Sec: 1 T: 18N R: 43E UTM: 4367400 N 0491550 E	Fine grained, lt. brown quartzite w/ euhedral autunite coating fracture a disseminated in matrix oxidized hematite/magnetite(?)
617	Quad: Vigus Butte NW 7 1/2 Sec: 34 T: 22N R: 42E UTM: 4396930 N 0480180 E	Light to dark grey fine grained silt stone with evenly distributed pyrite crystals. FeOx- limonite stains, som Rx greenish cast, dense.
618	Quad: Vigus Butte NW Sec: 2 T: 21N R: 42E UTM: 4396780 N 0480590 E	Light grey banded silt mud stone/phy ite, disseminated pyrite. FeOx stain epidotization(?) dendritic pyrolusit
619	Quad: Vigus Butte NW Sec: 34 T: 21N R: 42E UTM: 4387340 N 0478920 E	Shear material/breccia silicified limestone with quartz cement, turquo glubular and coating surface, limoni staining.
620	Quad: Vigus Butte 7 1/2 Sec: 31 T: 20N R: 43E UTM: 4379450 N 0483670 E	White massive quartz vein material with bands and disseminated pyrite a galena.
621	Quad: Vigus Butte 7 1/2 Sec: 6 T: 19N R: 43E UTM: 4376600 N 0484750 E	White quartz vein material with gale tetrahedrite, Cu minerals opaline qt Fe-Mn stains.
622	Quad: Mt Callaghon 15' Sec: 20 T: 20N R: 43E UTM: 4380950 N 0505950 E	A) White massive qtz, FeOx stained fractured, minor sulfides. B) Med. grey Rx, flow banded, lensoi inclusions, igneous(?) Rx fine grain pyrite distributed throughout, pyrite
	Quad: Sec: T: R: UTM: N E	microveins. Almost appear to be silicious gouge material.
623	Quad: Mt Callaghon 15' Sec: 14 T: 21N R: 46E UTM: 4392775 N 0519425 E	Dk.-reddish green massive dense tact crystalline Fe- garnet, massive epi sprays of powellite, scheelite, cal pods white fibrous mineral intergrow in garnet, Oxidized pyrite, lamping show tungsten and Mo.

Sample Description

Sample Number	Location	Description
624	Quad: Mt. Callaghon 15' Sec: 11 T: 21N R: 46E UTM: 4393700 N 0519600 E	Greenish massive hornfelsic veining, qtz pods, pyrolclastic dendritics lamping showed few scheelite(?)
625	Quad: Mt. Callaghon 15' Sec: 4 T: 21N R: 45E UTM: 4387025 N 0507500 E	Dark grey, highly fractured Jasperoi Fe-Ox - Mg stained cockscomb qtz li vugs. Some weathered to gossany heav dense.
626	Quad: Mt.Callaghon Sec: 9 T: 20N R: 45E UTM: 4383750 N 0506050 E	Medium to dk grey medium grained qtz w/ turquoise (lt. green to turquoise blue) infilling fractures FeOx stair
627	Quad: Yankee Blade 7 1/2 Sec: 5 T: 19N R: 44E UTM: 4377025 N 0495710 E	Light grey quartzite, FeOx stained yellow oxide. No apparent Mineraliza tion, possibly Au or Ag.
628	Quad: Yankee Blade 7 1/2 Sec: 5 T: 19N R: 44E UTM: 4376833 N 0495150 E	A) White qtz vein material, pyrite/ chalcopyrite crystals and pods, FeOx stained pyrite ghosts, and tetrahed B) Light grey fine grained mud/silt tone, clear bladed radiating minera
	Quad: Sec: T: R: UTM: N E	stained with FeOx, hemimorphite(?) sulfide(?)
629	Quad: Yankee Blade 7 1/2 Sec: 5/6 T: 19N R: 44E UTM: 4376860 N 0494700 E	Massive white qtz vein material, oxidized pyrite FeOx staining.
630	Quad: Northumberland Pass Sec: Uns. T: 13N R: 46E UTM: 4312525 N 0515490 E	Drill cuttings, iron-grey friable mud-stone/shale ReOx staining.
631	Quad: Northumberland Pass Sec: T 13N R: 46E UTM: 4311475 N 0513650 E	Dark grey, carbonaceous, calcareous shale, drill cuttings. (No Rep. Samples)

Sample Description

Sample Number	Location	Description
632	Quad: Wildcat Peak Sec: 18 T: 16N R: 46E UTM: 4341200 N 0514800 E	Brecciated/sheared mud/silt stone, cemented with malachite, also occurri in pods and stringers and coating sur face, FeOx stained chert, euhedral ca cite filling vugs.
633	Quad: Ackerman Canyon 15' Sec: 13 T: 19N R: 46E UTM: 4373000 N 0522200 E	A) Brecciated shales/mudstone and qtz. Cu-Fe-Mg stained turquoise(?) cementi mammillary hematite coating surface. B) Mud/silt stone, light purplish gre to buff colored, minor fracturing
	Quad: Sec: T: R: UTM: N E	Mn coating surface, No observed mineralization.
634	Quad: Hall Creek 15' Sec: 6 T: 22N R: 45E UTM: 4405675 N 0503266 E	A) Brecciated andesite(?) greenish gr altered cemented with euhedral to massive FeOx stained quartz, drusy cockscomb coating vugs, dendritic pyrolusite, hairline fractured.
	Quad: Sec: T: R: UTM: N E	B) Subhedral to anhedral fluorite crystals, white, light green, minor purple, limonite stained fractured drusy quartz infilling fracture minor Mn staining.
	Quad: Sec: T: R: UTM: N E	C) Breccia mudstone(?), some silicifi tion, cemented by cockcomb qtz euhedr FeOx staining, possible Au.
635	Quad: Vigus Butte NE Sec: 10 T: 21N R: 44E UTM: 4394500 N 0499320 E	Qtz/calcite/siderite vein material disseminated galena(?) oxidixed pyrit limonite stained, some breccia. Qtz cementing.
636	Quad: Yankee Blade 7 1/2 Sec: 31 T: 20N R: 44E UTM: 4378633 N 0493400 E	Gouge/vein material, qtz cemented bre ia, dirty grey siltstone limonite sta ed, dissem. grain. Pyrite/galena euhe qtz prisms filling vugs & fractures. stain, greenish oxide coating surface.
637	Quad: Yankee Blade 7 1/2 Sec: 21 T: 20 R: 44E UTM: 4378750 N 0493150 E	Qtz vein/gouge material massive, silt stone breccia. Dissseminated sulfides minor Fe staining yellow-green oxide. euhedral quartz prisms filling vugs.

Sample Description

Sample Number	Location	Description
638	Quad: Mt. Airy 7 1/2 Sec: T: 20N R: 40E UTM: 4384050 N 458500 E	Banded qtz vein material, fracture filled with FeOx dendrite pyrolusite, oxided pyrite, euhedral qtz crystals crystalline galena. Possibly dissem. Au. Banding calcareous.
639	Quad: Mt. Airy 7 1/2 Sec: T: 20N R: 40E UTM: 4384975 N 0460325 E	Qtz vein/gouge material highly fract pink material coating surface and fractures, minor sulfide limonite stained possible Au.
640	Quad: Mt. Airy 7 1/2 Sec: T: 20N R: 40E UTM: 4380475 N 0462190 E	Qtz vein material breccia gossan, galena, pyrite, yellow-grey minor Cu, yellow oxides, hemimorphite(?) dendri pyrolusite, galena in pods.
641	Quad: Mt. Airy 7 1/2 Sec: T: 20N R: 40E UTM: 4382390 N 0461350 E	Qtz vein/gouge material gossany, pods stringers galena, limonite stained ox ized pyrite, fractured chalky white Cockscomb qtz filling fractures and Mn Ox stains.
642	Quad: Mt. Airy 7 1/2 Sec: T: 20N R: 40E UTM: 4382420 N 0461300 E	Qtz vein/breccia material massive whi sulfide filling fracture, drusy qtz coating vugs some dark grey siltstone hematite coating vugs. Disseminated galena.
643	Quad: Mt. Airy Sec: T: 20N R: 41E UTM: 4384640 N 0467610 E	Dirty blackish grey wad (pyrolusite) minor gossan, bleaching on surface. Limonite staining.
644	Quad: Mt. Airy NE Sec: 32 T: 21N R: 42E UTM: 4388625 N 0476800 E	Mud stone brecciated, fractured, dirt brown to medium grey, FeOx-Mn limonit stained finely disseminated barite i greyish Rx some silicification.
645	Quad: Gilbert Creek NE 7 1/2 Sec: T: 24N R: 42E UTM: 4423025 N 0475025 E	Highly oxidized, minor bleaching, al ed volcanic lithic fragments, hemati stained small piece of Fe stained gypsum, possibly ash.
646	Quad: Gilbert Creek SW Sec: T: 23N R: 40E UTM: 4408100 N 0459050 E	Specular hematite/wad nodule vuggy, fractured, yellowish opolime filling fractures and vugs, dense, minor gos

Sample Description

Sample Number	Location	Description
647	Quad: Mt. Airy NW 7 1/2 Sec: T: 21N R: 40E UTM: 4390775 N 0461750 E	Pinkish-grey prophyritic rhyolite, biotite grain, approximately 2mm, som pearlite, almost pumaleous. No observed mineralization.
648	Quad: Mt. Airy NE 7 1/2 Sec: 8 T: 21N R: 42E UTM: 4394550 N 0476500 E	A) Skarn, red garnet, euhedral epidot crystalline calcite, little or no scheelite (lamped). B) Fine-grained, silicic, biotite ric white intrusive, oxidized hematite, with quartz veins, sericitization, fractured.
	Quad: Sec: T: R: UTM: N E	
649	Quad: Mt. Callaghan 15' Sec: 15 T: 20N R: 45E UTM: 4383300 N 0508000 E	Vuggy, fractured silica filled (chert chalcodony) red-green stained possibl Hot Springs area. Stains in swirl and stringer patterns possible Hg occur ence.
650	Quad: Mt. Airy NE 7 1/2 Sec: 33 T: 22N R: 42E UTM: 4397750 N 0477300 E	Med. grey fine grained quartzite, sericite, FeOx stained pyrite ghosts sprays of oxidized pyrite, MnOx stair fractured, vuggy
651	Quad: Manhattan Mtn. NW 7 1/2 Sec: T: 24N R: 43E UTM: 4415900 N 0487600 E	Very fine grained, buff colored silic volcanic (ash?) oxidized pyrite/hemat minor FeOx - Mn staining.
652	Quad: Manhattan Mtn. NE Sec: 26 T: 24N R: 44E UTM: 4418780 N 0490660 E	Pale yellow fine grained light weight argillaceous(?) Rx or possibly highly altered ash, minor yellow oxide, FeO staining. Silty conglomerate added fe flavor.
653	Quad: The Cedars 15' Sec: Uns. T: 25N R: 44E UTM: 4431110 N 0497433 E	Fe - Stained wad, minor barite veins replacement pods, pyrite(?) psudomorp specular hematite, FeOx staining.
654	Quad: Cortez 15' Sec: 34 T 27N R 47E UTM: 4446100 N 0528900 E	Breccia of bleached mudstone, chert, cemented with light blue to green mammallary turquoise, also infills fractures, bleached. FeOx stained gossan.

Sample Description

Sample Number	Location	Description
655	Quad: Cortez 15' Sec: ____ T: 27N R: 47E UTM: 4446850 N 0528800 E	Altered shales/mudstones FeOx-limonit stained friable, interspersed with Fe stained subhedral gypsum. Some pieces relatively denser than others.
656	Quad: Cortez 15' Sec: 5 T: 26N R: 48E UTM: 4444200 N 0532050 E	Dirty grey brown siltstone breccia cemented with vuggy, euhedral, quartz FeOx - stained galena/pyrite/chalcopy grains and pods dissem. throughout, com gossan/box working. Minor CuOx staining Rx surfaces,
657	Quad: Cortez 15' Sec: ____ T: 27N R: 47E UTM: 4449000 N 0532050 E	Pale purple to pinkish grey, slightly calcareous silt/mudstone white massiv sometimes crystalline. Cu Co_3 infills fracture and coats staining. Mn Ox staining. No observe
	Quad: ____ Sec: ____ T: ____ R: ____ UTM: ____ N ____ E	oxidized surface beneath.
658	Quad: Carico Lake 15' Sec: 11 T: 27N R: 46E UTM: 4452370 N 0520800 E	Light grey to purple med/silt stone highly fractured. FeOx Mn-limonite stained, some heavy (barite?) No observed mineralization yellow oxide.
659	Quad: Mt. Lewis 15' Sec: 31 T: 30N R: 46E UTM: 4474999 N 0512950 E	White massive to subhedral qtz vein material euhedral pyrite/chalcopyrite galena veinlets and pods, minor FeOx stained qtzite, finely dissem. throug out yellow oxide, minor Cu staining.
660	Quad: Mt. Lewis 15' Sec: 35 T: 30N R: 45E UTM: 4475550 N 0510850 E	A) Silt/sand stone(?) highly fracture and brecciated, cemented w/euhedral, vitreous qtz, crystalline qtz fills v Minor pyrite FeOx staining, hematite, minor staining.
	Quad: ____ Sec: ____ T: ____ R: ____ UTM: ____ N ____ E	B) Dirty brown stained, banded nodule of subhedral crystalline white barite some euhedral qtz crystal coating sur face, veins and separate crystals gal
661	Quad: Mt. Lewis 15' Sec: 22 T: 30N R: 45E UTM: 4477500 N 059200 E	A) White to medium euhedral vitreous barite, with possibly dissem. galena of dull grey, soft mineral(Moly?) Da green veins (organic of mineral?)

(continued on next page)

Sample Description

Sample Number	Location	Description
661	Quad: Mt. Lewis (continued) Sec: T: R: UTM: N E	B) Qtz vein/breccia material w/massiv pyrolusite pods/stringers/dissem. sul (oxidized) in vein material, breccia Fe rich silt/mudstone with pyrite.
662	Quad: Mt. Lewis 15' Sec: 28 T: 30N R: 46E UTM: 4476000 N 0516000 E	A) Medium grey, fine grained qtzite, randomly disseminated oxidized pyrite kaolinized pockets, dendritic Mn Ox. B) Bleached, qtz phenocryst rich volcanic, silicic veins oxidized, p.
	Quad: Sec: T: R: UTM: N E	pyrite/hematite, pyrite ghosts, dendri pyrolusite. No observed mineralizatic
663	Quad: Mt. Lewis 15' Sec: 4 T: 29N R: 46E UTM: 4473700 N 0516510 E	Highly fractured, FeOx-MnOx stained silicic Rx (qtzite, mudstone siltstor yellow oxide some dense, minor gossar No observed minerals.
664	Quad: Mt. Lewis 15' Sec: 4 T: 29N R: 46E UTM: 4474025 N 0516625 E	A) Dirty grey mud/siltstone w/finely disseminated pyrite crystals, subhedı qtz veins with pyrite rims, FeOx-limor stained quartzite minor gossan qtz fractured, pyrite filling.
	Quad: Sec: T: R: UTM: N E	B) Highly altered, yellow stained por yry with pyrite, smokey qtz eyes. Feldspar zone, Rx mostly silicic pods galena.
665	Quad: Mt. Lewis 15' Sec: 3 T: 29N R: 46E UTM: 4473300 N 0518400 E	Granular silica rich pyrite rich, FeO stained light colored mica (lepidolit feldspar altered out, dioritic(?) intrusive.
666	Quad: Mt. Lewis 15' Sec: 14 T: 29N R: 46E UTM: 4469600 N 0520500 E	Biotite rich, equigranular, silica ri granite intrusive cut with qtz vein with pods/stringer, Au bearing pyrit
667	Quad: Mt. Lewis 15' Sec: 6 T: 29N R: 46E UTM: 4474100 N 0514150 E	Fine grained, med.-grey qtzite w/kao ized intrusive, fractured and breccia pyrite and specular hematite dissemi ated in pods or qtzite, FeOx stained surface vugs lined with drusy quartz.

Sample Description

Sample Number	Location	Description
668	Quad: McCoy 15' Sec: T: 28N R: 42E UTM: 4460440 N 0482500 E	A) Iron ore composed of magnetite, oxidized and specular hematite, vugs filled with muscovite, also disseminat throughout ore, heavy. B) Sample from altered zone above or
	Quad: Sec: T: R: UTM: N E	pistachio green. Noutronite with fractures filled with silica, salmon colored surface coating. FeOx staini
669	Quad: McCoy 15' Sec: T: 28N R: 42E UTM: 4464175 N 0481325 E	Fine grained grey siliceous sediments (qtz and siltstone mud/siltstone) FeO Mn stained, oxidized pyrite, malachite quartzite coating surface, some brec
670	Quad: McCoy 15' Sec: T: 28N R: 42E UTM: 4461100 N 0481550 E	Highly altered, fractured, FeOx-Mn stained gossany kaolinized(?) silicic sediment(mud siltstone, quartzite) mi pyrite.
671	Quad: The Cedars 15' Sec: 10/11 T: 26N R: 42E UTM: 4442225 N 0480725 E	Grey, pink crystalline intrusive Rx, smokey qtz eyes, K-spar weathered out No observed mineral, specular hemati
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
673	Quad: Crescent Valley 15' Sec: 31 T: 30N R: 47E UTM: 4475020 N 0523000 E Barite Bullion	Vuggy, sulfide bearing, limonitic sta ed, fractured, qtz vein, slightly gossany, minor staining, subhedral pyrite, blebs and stringers, dirty g siltstone.
674	Quad: Crescent Valley 15' Sec: 13 T: 29N R: 46E UTM: 4470870 N 0522100 E Bullion	Pods and blebs of pyrite in qtz. gou slightly vuggy, some barite(?) sulfi oxidizing, limonite.
675	Quad: Crescent Valley 15' Sec: 13 T: 29N R: 46E UTM: 4461850 N 0522050 E Bullion	Qtz/calcite gouge material bearing sulfide and sphalerite equi-granular intrusive with sulfide, sericite.
676	Quad: Crescent Valley 15' Sec: 30 T: 29N R: 47E UTM: 4466900 N 0522490 E Louie (Bonnie Jean) Bullion	Lt. grey, clavish, almost kaolinized with pods and blebs black sphalerite (marmatite), minor barite, fine-grain galena & pyrite, calcite veining, slightly gossany.
677	Quad: Crescent Valley 15' Sec: 30 T: 29N R: 47E UTM: 4467200 N 0522150 E Silver Prize Bullion	Sulfide bearing qtz vein material, MnO_2 stained, crystalline sphalerite, vuggy, slightly gossany, dendritic pyrolusite, limonite, stained.
678	Quad: Crescent Valley 15' Sec: 8 T: 28N R: 47E UTM: 4462450 N 0525700 E Little Gem Bullion	Copper stained dk grey mudstone, brec cemented with oxidized sulfide, minor gossan.
679	Quad: Crescent Valley 15' Sec: 8 T: 20N R: 47E UTM: 4462050 N 0525650 E Gold quartz Bullion	Limonite stained qtzite breccia, MnO_2 stained.
680 A&B	Quad: Crescent Valley 15' Sec: 8 T: 28N R: 47E UTM: 4461900 N 0525050 E Phoenix Bullion	A) Qtz breccia/gouge in dk grey, fine grain siliceous rx (silicified ls?) disseminated grains, pods, stringers, sulfides, drusy qtz and calcite coats surfaces. Arsenopyrite(?)
	Quad: Sec: T: R: UTM: N E	B) Copper, limonite stained gossany c vein/gouge material, turquoise(?) ve lets, arsenopyrite, dk platy mineral.

Sample Description

Sample Number	Location	Description
681	Quad: Crescent Valley 15' Sec: 16 T: 28N R: 47E UTM: 4461350 N 0526750 E Violet Bullion	Highly fractured, Fe-Mn oxide stained mud/siltstone, cut with sugary qtz ve brecciated, gossany w/specularite, m Cu staining.
682	Quad: Crescent Valley 15' Sec: 32 T: 29N R: 47E UTM: 4466120 N 0526080 E	Shales, mudstone, w/turq. infilling fractures & bedding planes. Some silicification. Rx highly fractured, calcite veining.
683	Quad: Crescent Valley 15' Sec: 6 T: 28N R: 47E UTM: 4464400 N 0524700 E Lander Mine/Silver Sides Bullion	Qtz vein/gouge material cutting silic sediments Fe-Mn oxides, patches of gossan. Finely disseminated sulfides, rx highly fractured.
684	Quad: Crescent Valley 15' Sec: 6 T: 28N R: 47E UTM: 4464100 N 0523840 E No Name Bullion	Qtz vein/gouge material, material sug qtz intergrown w/fine sulfides, MnO coating surfaces, vuggy,dissem. barit Some breccia; FeOx stains.
685	Quad: Mt. Lewis 15' Sec: 13-14 T: 29N R: 46E UTM: 4469690 N 0521110 E Gray Eagle Mine Bullion	Qtz gouge w/sulfides(pyrite, chalcopy rite, galena, crystalline, dissem., banded), dark, platy mineral, in brecciated qtz vein. Yellow and limon colored oxidizes coat fresh weathered surface. Qtz veinlets cuts all inter-faces, minor sericite, Cu minerals co surfaces, elongated qtz crystals inte grown in sulfides.
686	Quad: Cortez Sec: T: R: UTM: N E Caledonia (Not on map, in Elko Resource Area)	Malachite coated surface and fracture in iron stained gossans. Rx sheared, vuggy, some boxworks.
687	Quad: Carico Lake 15' Sec: 26 T: 26N R: 45E UTM: 4437650 N 0510850 E Aurora(?)	Silicified mudstone/ls, highly fractu FeOx stained, turquoise nodules coat surface.
688	Quad: The Cedars 15' Sec: 34 T: 26N R: 44E UTM: 4436400 N 0498900 E	Highly altered, kaolinized, shale/che turquoise.

Sample Description

Sample Number	Location	Description
689	Quad: Carico Lake 15' Sec: 35 T: 26N R: 44E UTM: 4437125 N 0500920 E No name No district	Vuggy, argillaceous, highly fractur (or brecciated) limonite stained siliceous seds. No observed minerali ation.
690	Quad: Carico Lake 15' Sec: 34 T: 26N R: 45E UTM: 4436300 N 0580120 E	Thinly bedded, fine-grained sediment light grey, clastic, limonite staine
691	Quad: Carico Lake 15' Sec: 10 T: 25N R: 45E UTM: 4433825 N 0508550 E Sylvin or Syliva None	Same description as 692. Add: turquoise greenish, and mammall
692	Quad: Carico Lake 15' Sec: 11 T: 25N R: 45E UTM: 4433350 N 0510250 E W. District. X-15 Turquoise	Mud grey, highly fractured silicifie silt(?)stone, kaolinized, minor limo stained, blue turquoise fills fractu surface.
693	Quad: Carico Lake 15' Sec: 12 T: 25N R: 45E UTM: 4433650 N 0511600 E Red Mountain No dist.	Blue & green turquoise fills fractur and shaley layers, also fills vugs, grey shales, pods of argillite.
694	Quad: The Cedars 15' Sec: 10 T: 25N R: 44E UTM: 4432675 N 0498700 E No district Black Diamond	Crystalline barite replacing siliceous shale, highly fractured limonite/hem tite stained, patches of gossan.
695	Quad: Same as 694 Sec: T: R: UTM: 4432675 N 0498700 E	Vuggy, gossany, highly sheared fract siliceous seds. Fe-Mn oxide stained specularite, barite(?)
696	Quad: The Cedars 15' Sec: 21 T: 25N R: 44E UTM: 4430300 N 0497410 E Palo Alto	Dirty grey, silty mudstone, brecciate cemented w/white crystalline barite. Barite, secondary Cu mineral.
697	Quad: The Cedars 15' Sec: 10 T: 25N R: 44E UTM: 4430300 N 0497410 E Palo Alto No dist.	Dk grey siliceous seds, vuggy, fractured, Fe-Mn oxides w/replaced a vein barite, breccia.

Sample Description

Sample Number	Location	Description
730	Quad: Diamond Springs 15' Sec: 2 T: 22N R: 54E UTM: 4407500 N 0598650 E	White massive qtz vein w/galena desse ated and in stringer. FeOx stains, sh material, cerussite(?) sphalerite, hemmimorphite, malachite, Sb(?) oxide Watch for Zn anomaly.
731	Quad: Diamond Springs 15' Sec: 14 T: 22N R: 54E UTM: 4404650 N 0598950 E	White to light grey coarse grained crystalline marble with scattered patches of reddish-brown garnets, sma metallic thragonal crystals randomly and fractured sample FeOx stain veins
732	Quad: Diamond Springs 15' Sec: 26 T: 22N R: 54E UTM: 4400750 N 059850 E	Silicified shear material and white massive qtz vein material FeOx stain galena sprays. Yellow-oxide, limonite stained gossan.
733	Quad: Eureka 15' Sec: 36 T: 22N R: 54E UTM: 4399975 N 0598675 E	White massive quartz vein material M stained, yellow oxide coating surfac disseminated malachite, galena stringers and pods, pyrite stibnite ghosts slight FeOx staining.
734	Quad: Eureka Sec: 35 T: 22N R: 54E UTM: 4399600 N 0597725 E	FeOx-Mg stained gossany material, quartz veining shear material pyrite oxidized, anglesite(?)
735	Quad: Mineral Hill 15' Sec: 34 T: 25N R: 52E UTM: N E No utm-map 1937	Silicified, fractured med-grey Ls malachite, Azurite, tetrahedrite coating surface and filling fracture FeOx staining.
736	Quad: Mineral Hill 15' Sec: SW 1/4 34 T: 25N R: 52E UTM: 4428400 N 0576100 E Old Whalen Mine	Dirty reddish silicified dolomite vein material, crystalline barite, sprays of galena, crystalline quartz veins and filling vugs, micro-calcit veins.
	Quad: Sec: T: R UTM: N E	Sample divided: A) Quartz/barite vein. B) Silicified dolomite.
	Quad: Sec: T: R UTM N E	

Sample Description

Sample Number	Location	Description
737	Quad: Mineral Hill 15' Sec: 33, 34(?) T: 25 N R: 52 E UTM: N E No utm, map 1937	Med-grey, fractured fined grained Ls /dolomite and breccia malachite coating surface, FeOx stained yello oxide, hemimorphite(?), disseminated barite(?).
738	Quad: Mineral Hill 15' Sec: 33 34? T: 25N R: 54E UTM: N E Vigilante Claim	White, xtalline barite appears to be cementing ls brx, limonite and yello brown oxide.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
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	Quad: Sec: T R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
739	Quad: Garden Valley Sec: Uns. T: 24 N R: 52 E UTM: 4420000 N 0575550 E	Buff colored fine grained dolomite breccia with malachite and hematite filling fractures and coating surface, silicification.
740	Quad: Garden Valley 15' Sec: Uns. 28(?) T: 23 N R: 52 E UTM: 4410233 N 0575425 E	Med. buff to reddish-purple dolomite breccia, silicification lots of azurite, very litte malachite, MnO2 stains coating surface.
741	Quad: Garden Valley Sec: 11 T: 23 N R: 52 E UTM: 4415000 N 0578450 E	Med. grey to buff dolomite and brecc limonite stained on surface MnO2 sta some silicification, calcite veining.
742	Quad: Garden Valley Sec: 13(?) T: 23 N R: 52 E UTM: 4412475 N 0575725 E	Silicifed(?) ore, recrystallized ligh to med. grey dolomite, cut with quar veins stained with malachite, oxidiz hematite, limonite staining. Dark t ~~med. reddish brown heavy jasperoid, platy.~~
743	Quad: Garden Valley 15' Sec: 9 (?) T: 23 N R: 52 E UTM: 4415800 N 0575950 E	Med. to dark grey, crystalline highl fractured dolomite, azurite, malachit hematite coating surface and fractu ~~FeOx - MnO2 staining.~~
744	Quad: Garden Valley 15' Sec: 1 T: 23 N R: 51 E UTM: 4417050 N 0570050 E	Rhyolite with smoky quartz eyes. wi disseminated Cu minerals, silificatio tion, FeOx-MgO stained gossan cut with crystalline quartz veins, specu hematite.
	Quad: Sec: T: R: UTM: N E	Separated in to 2 samples A) FeOx stained gossan B) Malachite stained rhyolite.
745	Quad: Garden Valley 15' Sec: Uns. T: 22N R: 52 E UTM: 4405633 N 0574150 E	Light to med. grey mud stone, fractu whitish alterations, malachite/broch rite coating surface, FeOx stains alternating light and dark bands.
746	Quad: Bartine Ranch 15' Sec: Uns. T: 20 N R: 51 E UTM: 4384800 N 0563300 E	FeOx stained limontie stained silic ied limestone with crystalline stib barite, pyrite, drusy quartz, galen

Sample Description

Sample Number	Location	Description
747	Quad: Bartine Ranch 15' Sec: Uns. T: 20 N R: 51 E UTM: 4384950 N 0563000 E	Med. grey fractured limestone with pods and stringer of aplite, rhodochrosite, smithsonite, hemimorphite(?) filling cracks and coating surface barite(?) occurring
	Quad: Sec: T: R: UTM: N E	shear material some gossan , silicif ication.
748	Quad: Mineral Hill 15 Sec: 3,10 T: 26 N R: 52 E UTM: N E No Utm, map 1937	Silicified limestone/dolomite, med. dark grey, fracture malachite coats surface, Sb(?)oxides anglesite(?) Zn minerals(?) coating vugs, barite.
749	Quad: Mineral Hill 15' Sec: 29,32 T: 27 N R: 53 E UTM: N E Utm set in feet and yards 1937 map	Silicifed greenish grey limestone/do mite, FeOx stained gossan, banding, heavy.
750	Quad: Mineral Hill 15' Sec: 5 (?) T: 26 N R: 53 E UTM: N E No utm, map 1937	Fe-Mg stained silicified limestone/ dolomite, drusy quartz coating surfa disseminated barite(?) specular hema gossan, limonite.
751	Quad: Spencer Hot Spring 15' Sec: 25 T: 18 N R: 44E UTM: 4359800 N 0501550 E	altered, weathered quartz monzonite, cut by quartz veins bearing sulfide and barite dendritic pyrolusite, FeOx stains, Minor Cu staining.
752	Quad: Spencer Hot Spring 15' Sec: 25 T: 18 N R: 44 E UTM: 4360850 N 0501350 E	Massive white crystalline quartz vei with moly, hematite , pyrite, crysta and stringers, FeOx staining.
753	Quad: Spencer Hot Spring 15' Sec: 25 T: 18 N R: 44 E UTM: 4360700 N 0501400 E	gar-nitiferous banded tactite Cu, epidote, yellow oxide crystals, approximately .5 cm, Cu minerals, crystalline calcite.
754	Quad: Spencer Hot Springs 15' Sec: 23 T: 18 N R: 44E UTM: 4361980 N 0500100 E	White crystalline quartz vein in qua monzonite, with oxidized biotite and altered feldspars(zone), fracture contains crystalline moly, pyrite ghost, Cu staining.

Sample Description

Sample Number	Location	Description
755	Quad: Spencer Hot Spring 15' Sec: 13 T: 18 N R: 44 E UTM: 4362750 N 0502050 E	A) Weathered FeOx stained sericitize quartz monzonite(?),fractured, cut w quartz vein. B) Dark grey clastic banded FeOx-limo stained, heavy, dense.
756	Quad: Spencer Hot Spring 15' Sec: 36 T: 18 N R: 44E UTM: 4358866 N 0501450 E	FeOx linonite stained, highly fractu brecciated quartz vein material cut with quartz veinlets. No observed mineralization.
757	Quad: Austin 15' Sec: 34 T: 18 N R: 44 N UTM: 4358700 N 0499150 E	Light bluish grey silicic Rx with sm 1 cm oxidized pyrite and micro cry highly fractured hematite stained, drusy quartz, possible sheared materi
758	Quad: Austin 15' Sec: 34 T: 18 N R: 44 E UTM: 4357900 N 0498900 E	Milky white quartz vein material wit finely crystalline galena pods and stringers and pyrite crystals up to 1 cm,small patches of sericite, FeOx stained on surface and fracture fragments of sericite and calcite
	Quad: Sec: T: R: UTM: N E	distributed throughout quartz, small quartz veinlets.
759	Quad: Manhattan Mtn. 7 1/2 Sec: Uns. T: 22 N R: 42 E UTM: 440206 N 048027 E	Dark grey limestone,fractured crystalline calcite, limonite stained pyrolusite,heavy,collected from dozer cut. No observed mineralization.
760	Quad: Manhattan Mtn. 7 1/2 Sec: Uns. T: 22 N R: 42 E UTM: 4402000 N 0479550 E	2 sample: A) White quartz vein material fracti with barite, disseminated galena,oxi ized pyrite malachite, brochentite, azurite, tetrahedrite.
	Quad: Sec: T: R: UTM: N E	B) Massive breccia,quartz,pyrite, chalcopyrite,silicified limestone,
761	Quad: Gilbert Creek SE 7 1/2 Sec: Uns. T: 22 N R: 42 E UTM 4403060 N 0477770 E	Dump quartz vein, fractured with galena,Cu minerals and yellow and black oxides filling fractures Oxidized pyrite(?) throughout veins, malachite, galena also finely disseminated throughout quartz.

Sample Description

Sample Number	Location	Description
762	Quad: Gilbert Creek SE Sec: Uns. T: 22 N R: 42 E UTM: 4403310 N 0476640 E	Otcp. and dump, silicified limestone, fractures, malachite, galena replacin and filling fractures, FeOx2, MnO2 quartz filling vugs, silica cementir breccia, oxidized pyrite(?)
763	Quad: Manhattan Mtn. Sec: Uns. T: 23 N R: 43 E UTM: 4408790 N 0485800 E	Collected from ridge top. Dark reddi to light grey fine to coarse grained jasperoid, banding, thin quartz vein some breccia, vugs lined with chalco No observed mineralization.
764	Quad: Bellevue Peak 15' Sec: 4,5 T: 17 N R: 52 E UTM: 4359575 N 0574400 E	Olive green(epidote?) FeOx stained, grained, heavy, contact met. Rx, pale red disseminated garnets white, highly altered quartzite with pyrite possibly in filled with calcite.
765	Quad: Bellevue Peak 15' Sec: 4,5(?) T: 17 N R: 52 E UTM: 4359575 N 0574400 E	Coarse grained, fractured slightly, argillitized FeOx stained intrusive, drusy quartz crystals coating surfac biotite up to 1/2 cm, small books, heavy, altered, feldspars in tact,
	Quad: Sec: T: R: UTM: N E	quartz eyes, equigranular, fracture coated with FeOx.
766	Quad: Diamond Springs 15' Sec: 11,12 T: 22N R: 54 E UTM: 4406200 N 0598500 E	Half the sample: White massive quar vein with oxidized pyrite FeOx stain fractured. The other half is altered gossan limonite stained, CuOx, sulfides
	Quad: Sec: T: R: UTM: N E	weathered out. Sample divided: A) Quartz B) Gossan
767	Quad: Roberts Creek Mtn 15' Sec: 35(?) T: 24 N R: 50 E UTM: 4418800 N 0560300 E	Dirty black(possibly Mn stained) limestone with veins and nodules and disseminated crystalline barite, min FeOx staining.
768	Quad: Bellevue Peak Sec: 30 T: R: UTM: 4370380 N 0582120 E	Med. grey limestone breccia with stringers and pods galena in white crystalline calcite, galena crystals also in breccia, minor silicification. Galena also finely disseminated
		throughout calcite, specular hematit

Sample Description

Sample Number	Location	Description
769	Quad: Bellevue Peak 15' Sec: 29 T: R: UTM: 4370410 N 0582900 E	Fe-Mg limonite stained gossan, specu hematite, drusy malachite filling vu smithsonite(?) and hemimorphite(?) filling vugs and fractures.
770	Quad: Pinto Summit 15' Sec: Uns. T: 17 N R: 53 E UTM: 4357700 N 0587700 E	Highly silicified FeMg stained brecc pyrite ghosts(?) Chert, crystalline quartz coating surface and cementing breccia.
771	Quad: Millett Ranch Sec: Uns. T: 15 N R: 42 E UTM: 4333750 N 0480500 E	Light grey to dark olive grey horns- felsic rock, heavy, dense, micaceous oxidized pyrite, cut with smoky quar pyrolusite sprays, color zones from light to dark grey gradational, barit
	Quad: Sec: T: R: UTM: N E	blades on surface rock possibly silt fine sandstone, epidote crystals inte mixed with pyrite in quartz vein.
772	Quad: Millet Ranch Sec: Uns. T: 15 N R: 42 E UTM: 4334175 N 0478920 E	Milky white to FeOx stained vuggy, crystalline quartz vein material, dendritic pyrolusite, oxidized pyrite hematite, minor gossan, quartz veinlet within vein material.
773	Quad: North Shoshone Peak Sec: 21 T: 15 N R: 42 E UTM: 4334125 N 0477560 E	White to smoky quartz vein material contain pyrite, and other sulfides, epidote, Cu stains, FeOx stains, dendr pyrolusite, Sb ghosts.
774	Quad: Toiyabe Peak 7 1/2 Sec: Uns. T: 13 N R: 42 E UTM: 4312460 N 0470560 E	Greenish grey to dark reddish brown fine grained, dense highly fractured rock with sulfide in sprays and disseminated breccia, siderite, bari some silicification, FeOx stained.
775	Quad: Toiyabe Peak 7 1/2 Sec: Uns. T: 13 N R: 42 E UTM: 4312200 N 0470320 E	Same as 774 with addition of sphaler minor veinlets.
776	Quad: Toiyabe Peak 7 1/2 Sec: Uns. T: 13 N R: 42 E UTM: 4311080 N 0471850 E	Sample composed of 3 rock types - Silicic volcanic, quartzite and whit quartz vein material, euhedral oxidiz pyrite crystal and ghosts gossan, highly fractured galena(?), volcanic micaceous, fluorite crystals coating surface, breccia.

Sample Description

Sample Number	Location	Description
777	Quad: Toiyabe Peak 7 1/2 Sec: Uns. T: 13 N R: 42 E UTM: 4310100 N 0473010 E	Highly fractured, milky white quartz vein material with sulfides in filli spaces, FeOx stains slicks. Galena pyrite, chalcopyrite, fluoite, malachite, azurite, galena in stringe
	Quad: Sec: T: R: UTM: N E	and pods, volcanic quartz biotite, equigranuilar, k-spars. Malachite infilling between other crystals. B rock type cut with micro veinlets of quartz, barite(?)
	Quad: Sec: T: R: UTM: N E	Separated in to 2 samples: A) Quartz vein B) volcanic
778	Quad: Toiyabe Peak 7 1/2 Sec: Uns. T: 13 N R: 42 E UTM: 4310450 N 0475760 E	Med. grey limestone breccia cementec with white milky quartz bearing crystalline and massive pyrite, yellowish coating oxide, hematite oxide.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
963	Quad: Roberts Creek Mtn. Sec: 22 T: 23 N R: 49 E UTM: 4409700 N 0546910 E	Drill hole material Koalinized, dark green staining Cu(?) oxidized hematite grains scattered throughout beige siliceous Rx. No observed mineralization.
964	Quad: Roberts Creek Mtn. 15' Sec: 26 T: 23 N R: 49 E UTM: 4409650 N 0548875 E	Dark grey fine grain with silicic inclusion chert with disseminated bar FeOx Stains, minor gossan.
965	Quad: Roberts Creek Mtn. 15' Sec: 26 T: 23 N R: 49 E UTM: 4409600 N 0549100 E	See Above. More oxidixed than previc sample, less barite.
966	Quad: Roberts Creek Mtn. 15' Sec: 26 T: 23 N R: 49 E UTM: 4409600 N 0549100 E	Same as above.
967	Quad: Roberts Creek Mtn. Sec: 24 T: 23 N R: 49 E UTM: 4410100 N 0550775 E	Dark grey, silicified limestone and breccia, drusy quartz coating surfac stibnite, Sb oxides, massive crystall barite, minor pyrite, pyrite ghosts.
968	Quad: ROBERTS CREEK MTN. 15' Sec: Uns. T: 23 N R: 50 E UTM: 4406650 N 0558925 E	Fe-Mg limonite stained gossan, specul hematite, some silicification. No mineralization observed, white crystall calcite. Fe stained.
969	Quad: Roberts Creek Mtn. Sec: Uns. T: 23 N R: 50 E UTM: 4408500 N 0556800 E	FeOx stained, white milky crystalline calcite vein and cementing material in limestone breccia, No observed mineral ization.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
976	Quad: Roberts Creek Mtn. Sec: 35(?) T: 24N R: 50E UTM: 4421050 N 0562550 E	Dark grey friable shales, carboncarec Fe-limonite stained, no representativ sample held out, small amount calcite
977	Quad: Roberts Creek Mtn. 15' Sec: 25(?) T: 24N R: 50E UTM: 4419775 N 0561666 E	Med to dark grey limestone breccia cemented with calcite. Also filling interstick, pyrite, galena, sphaleri FeOx stained crystalline calcite min in pods and dissem. throughout breccia, some gossan, pyrite ghosts, fractured.
978	Quad: Garden Valley 15' Sec: 9, 10 T: 23N R: 51E. UTM: 4413600 N 0565500 E	Shale dark grey to muddy. Some silicification, breccia, gossan, lim stained, veins of calcite, carboncar Sample separated: A) Gossan
	Quad: Sec: T: R: UTM: N E	~~B) Shale~~
979	Quad: Garden Valley 15' Sec: 9(?) T: 23N R: 51E UTM: 4414150 N 0564450 E	Fractured, sheared gouge material, silicified, FeOx stained mud stone(? No observed minerals.
980	Quad: Walti Hot Spring 15' Sec: 23 T: 24N R: 48E UTM: 4419750 N 0538600 E	Drill cuttings, limestone-Sh, powder Rx.
981	Quad: Walti Hot Spring 15' Sec: 22,27 T: 24N R: 48E UTM: 4419350 N 0537975 E	Skarn, ganodiorite and silicified limestone, minerals present: Pyrite galena, sphalerite, garnet, epidote, chalcedony, sulfides dissem. and in in skarn, FeOx staining, Cu minerals.
982	Quad: Walti Hot Springs 15' Sec: 26 T: 24N R: 48E UTM: 4419200 N 0538450 E	Silicified limestone, Fe-Mg stained. Breccia, drusy qtz filling vugs, pyr galena, sphalerite, barite(?) chalco rite, malachite, Chrysocolla, yellow ~~ides, qtz. and calcite veining, yellow~~ powder oxide.
983	Quad: Cockalorum Wash 15' Sec: 35 T: 16N R: 52E UTM: 4340100 N 0578550 E	Dirty soft, charcoal grey, massive MnO2 with heavily fractured med-grey limestone, FeOx stained very few cry ~~No representative sample held out.~~

Sample Description

Sample Number	Location	Description
984	Quad: Cockalorum Wash 15' Sec: 3 T: 15 N R: 53 E UTM: 4339990 N 0578190 E	Carbonaceous shale, surface altered t browns and green, no observed mineralization.
985	Quad: Bellevue Peak 15' Sec: 7 T: 16 N R: 53 E UTM: 4346966 N 0581750 E	FeOx-MgO- limonite stained gossan wi cal cite veinlet, blobs. Some silicification, breccia quartz cemen minor MnO2 staining, Rx in ordinately heavy, no obvious mineralization.
986	Quad: Bellevue Peak 15 ' Sec: Uns. T: 17 N R: 52 E UTM: 4355780 N 0573400 E	Calcite vein and shear material with euhedral pyrite, chalcopyrite and ga Crystals up to 1cm, FeOx limonite st ing. MnO2 stains Rx highly fracture galena in pods and stringers.
987	Quad: Bellevue Peak 15' Sec: Uns. T: 17 N R: 52 E UTM: 4355500 N 0573000 E	FeOx - limonite stained gossan, spec: hematite fine grained galena dissemi: ated and hemimorphite(?) filling vug: and cracks, yellow oxide slightly calcareous.
988	Quad: Whistler Mtn. 15' Sec: Uns. T: 19 N R: 52 E UTM: 4375290 N 0578050 E	Silicic breccia, fine pebble silty, grey limestone fragments in calcite FeOx matrix. No mineralization.
989	Quad: Whistler Mtn. 15' Sec: Uns. T: 19 N R: 51 E UTM: 4377066 N 0569390 E	Milky white massive quartz vein with pods, stringers and individual cryst of sphalerite and galena, pyrite zone. FeOx stain. Silicified med-grey graining limestone breccia, quartz
990	Quac: Whistler Mtn. 15' Sec: Uns. T: 19 N R: 51 E UTM: 4375100 N 0570775 E	pseudomorphs after calcite. Low grade metar-phyllitic sla FeOx -MgO stained gossan, specular hematitic, limonite stained yellow o dense, heavy, vuggy, silicification,
	Quad: Sec: T: R: UTM: N E	surface coating of calcite, gouge mat ial, divided in to 2 A) Shale B) Gossan silicified.
991	Quad: Bellevue Peak 15' Sec: uns. T: 18 N R: 52 E UTM: 4365200 N 0575533 E	Silicified FeOx stained limestone breccia, quartz crystals well formed with fluorite crystal interspersed, dr purplish-yellow stained shear materia hemimorphite(?), vuggy, some piece
		heavy, sulfide ghosts. Separated into 2 A) Silicified limestone B) FeOx stained breccia

Sample Description

Sample Number	Location	Description
992	Quad: Bellevue Peak 15' Sec: Uns. T: 18N R: 52E UTM: 4364333 N 0575275 E Thompson Mine Fish Creek District	Medium grey fine grained limestone breccia silicified, crystalline quar filling vugs, crystalline calcite filling fractures, FeOx-Mg staining yellow oxide. No observed mineraliz ation.
	Quad: Sec: T: R: UTM: N E	
993	Quad: Bellevue Peak 15' Sec: 13 T: 18N R: 51E UTM: 4365325 N 0570633 E Last Time Prospect Fish Creek District	Light to medium grey silty limestone dolomite breccia with pods and strin ers of galena oxide pyrite and hema- tite. MnO2 yellow oxidized malachit and chrysocolla coating surface and fractures, some silicification and drusy quartz coating surface, FeOx stains.
	Quad: Sec: T: R: UTM: N E	
994	Quad: Bellevue Peak 15' Sec: Uns. T: 18N R: 51E UTM: 4364500 N 0571000 E Angelo Belli Mine Fish Creek District	FeOx, Cu stained shear material oxi- dized pyrite, calcite crystals, mala chite disseminated, micro veining, MnO2 stains, some pieces heavy, drus quartz, yellowish-green oxide.
995	Quad: Bellevue Peak 15' Sec: Uns. T: 18N R: 52E UTM: 4365400 N 0576700 E Rose Mine Fish Creek District	Medium grey, massive silicified limestone/dolomite with Sb oxides an barite(?) veining, small amount stibnite, small amount malachite and azurite crystalline quartz filling vugs. FeOx staining.
	Quad: Sec: T: R: UTM: N E	
996	Quad: Bellevue Peak 15' Sec: Uns. T: 18N R: 52E UTM: 4365100 N 0576775 E Rose Mine Fish Creek District	Medium to dark grey, coarse crystal- line limestone/dolomite breccia, som silicification, minor FeOx staining, crystalline barite, vein and in brec cia yellow oxide, vugs filled with crystalline quartz, pyrite ghosts(?)
	Quad: Sec: T: R: UTM: N E	

Sample Description

Sample Number	Location	Description
997	Quad: Bellevue Peak 15' Sec: Uns. T: 18N R: 52E UTM: 4364480 N 0580280 E Reese and Berry Mine Fish Creek District	Medium to dark grey, grainy limeston breccia cemented with crystalline white calcite minor FeOx staining MnO2 staining, yellow oxides, no obvious mineralization.
998	Quad: Bellevue Peak 15' Sec: 6(?) T: 18N R: 52E UTM: 4367450 N 0580550 E Silverado #23 Claim Fish Creek District	Massive dirty, and crystalline pyrolusite, high-graded, calcite intergrowths.
999	Quad: Bellevue Peak 15' Sec: Uns. T: 18N R: 53E UTM: 4366725 N 0585500 E Stibnite Prospect Fish Creek District	Dirty quartz vein material, FeOx MnO stains, limonite, crystalline quartz filling vugs, gouge and shear materi pyrite ghosts(?) gossan.
1000	Quad: Bellevue Peak 15' Sec: 30 T: 19N R: 53E UTM: 4370825 N 0582425 E Unknown Shaft #2 Fish Creek District	FeOx Mg limonite stained silicic limestone/dolomite/fine grained gale disseminated and in pods and stringe malachite, clear bladed mineral fill ing veins, gossan, high-graded for galena.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T R UTM N E	

Sample Description

Sample Number	Location	Description
1101	Quad: Ione 15" Sec: 19 T: 12N R: 38E UTM: 4304050 N 0436050 E Brunto Pass Union	Dk grey LS breccia cemented w/cinnabar bearing, vuggy, crystal calcite vugs filled w/white chalky material.
1102	Quad: Paradise Peak 15' Sec: 19 T: 13N R: 38E UTM: 4313800 N 0435725 E Grand View Mammoth(?)	Sugary qtz & crystalline calcite v material carrying tetrahedrite alt ing to malachite & azurite, limoni stains, rx highly fractured, minor barite(?) dendritic MnO_2 stains, minor gossan.
	Quad: Sec: T: R: UTM: N E	
1103	Quad: Paradise Peak 15' Sec: 30 T: 13N R: 38E UTM: 4313000 N 0435725 E Esta Buena, Esta Wanda Mammoth	White crystalline (massive to suga qtz veins carry fine crystalline blobs, and disseminated sulfide, FeOx-MnO_2 stains, brecciated, mino cu minerals coating surfaces.
1104	Quad: Ione 15' Sec: 2 T: 12N R: 39E UTM: 4309325 N 0452400 E Mercury Mining Corp. Mini Union	Hihgly altered Fe-mn stained volca (rhyolite?), vuggy, some mudstone/ shale, crystalline calcite coats fractures and fills fissures.
1105	Quad: Ione 15' Sec: 15 T: 12N R: 39E UTM: 4310200 N 0451000 E Shamrock Mine	White crystalline, vuggy qtz and material w/fresh & oxidized sulfid cu mineral fill vugs. Tetrahedrit limonite stained.
1106	Quad: Ione 15' Sec: 14 T: 12N R: 39E UTM: 4307200 N 0452000 E NV Cinnabar Co./Shoshone Quicksilver Mine. Union	Fresh and altered ashfall tuff w/ cinnabar covering surface, some pumice fragments, FeOx stained.
1107	Quad: Ione 15' Sec: 15 T: 12N R: 39E UTM: 4306650 N 0450400 E	White crystalline calcite, vein, MnO_2 stains. Gossany pods, intergrown barite.
1108	Quad: Ione 15' Sec: 15' T: 12N R: 39E UTM: 4307500 N 0449450 E Union	White crystalline qtz vein/breccia material, country rx altered completely to gossan, heavily FeMn stained, oxidized sulfides.

Sample Description

Sample Number	Location	Description
1109	Quad: Ione 15' Sec: 29 T: 12N R: 39E UTM: 4303625 N 0447510 E Berlin Mine Union	White massive qtz vein/gouge material bearing crystalline, fresh & oxidized pyrite and other sulfides, highly fractured, FeOx-MnO_2 stained crystalline calcite veining.
1110	Quad: Ione 15' Sec: 3 T: 11N R: 39E UTM: 4299550 N 0450430 E Grantsville Mine? Union	Sulfide bearing qtz vein gouge cutting fine-grained siliceous rx, minor calcite veins, rx heavy, dense, almost hornfelsic, some ls breccias, pyrite oxidized, FeOx stain.
1111	Quad: Ione 15' Sec: 10 T: 11N R: 39E UTM: 4297600 N 0450550 E	Sugary qtz gouge material, Fe-Mn-Cu stained, highly fractured/brecciated, slightly vuggy, slightly gossany.
	Quad: Sec: T: R: UTM: N E	
	Quad: Sec: T: R: UTM: N E	
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	Quad: Sec: T: R: UTM: N E	

Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	114	115	116						
Fe %(.05)	3	10	7						
Mg %(.02)	1.5	.7	.2						
Ca %(.05)	3	.5	.5						
Ti %(.002)	.3	.3	.3						
Mn(10)	1000	300	300						
Ag(.5)	7	N	N						
As(200)	N	300	N						
Au(10)	N	N	N						
B(10)	L	N	N						
Ba(20)	5000	3000	G5000						
Be(1)	N	N	1						
Bi(10)	L	N	N						
Cd(20)	N	N	N						
Co(5)	7	10	L						
Cr(10)	100	30	15						
Cu(5)	70	20	10						
La(20)	20	N	50						
Mo(5)	5	7	30						
Nb(20)	N	N	20						
Ni(5)	50	5	L						
Pb(10)	150	15	50						
Sb(100)	N	100	100						
Sc(5)	15	20	10						
Sn(10)	N	N	N						
Sr(100)	150	200	1500						
V(10)	300	300	200						
W(50)	N	N	70						
Y(10)	20	20	20						
Zn(200)	700	N	N						
Zr(10)	30	50	300						
Th(100)	N	N	N						

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	288	289	290	291	292	293	294	295	296
Fe % (.05)	1.5	7	10	1.5	1	5	20	15	10
Mg % (.02)	.3	.02	.07	.07	10	10	3	1	1
Ca % (.05)	.3	L	.05	.2	20	20	20	15	10
Ti % (.002)	.05	.015	.02	.1	.07	.03	.2	.1	.07
Mn (10)	200	20	50	200	1000	G(5000)	G(5000)	5000	5000
Ag (.5)	5	2000	2000	3	3	G(5000)	3	1	N
As (200)	N	G(10000)	G(10000)	N	N	N	N	N	N
Au (10)	N	N	L	N	N	N	N	N	N
B (10)	100	70	50	50	L	N	L	L	70
Ba (20)	1000	500	70	5000	L	N	100	30	200
Be (1)	2	L	1.5	N	N	N	5	2	1
Bi (10)	N	20	10	N	N	G(1000)	20	200	L
Cd (20)	N	200	G(500)	N	N	G(500)	N	N	N
Co (5)	N	L	5	10	N	15	20	20	30
Cr (10)	L	L	10	30	15	10	70	50	20
Cu (5)	50	50	1500	500	5	1500	100	30	50
La (20)	30	20	L	L	N	N	20	20	L
Mo (5)	N	15	7	N	N	70	100	1000	10
Nb (20)	L	N	N	N	N	N	N	N	N
Ni (5)	L	L	L	20	L	5	30	100	30
Pb (10)	1000	G(20000)	G(20000)	100	150	20000	50	50	15
Sb (100)	N	1500	2000	N	N	N	N	N	N
Sc (5)	5	5	5	5	5	L	1	5	L
Sn (10)	N	20	70	N	N	N	50	20	N
Sr (100)	100	100	L	100	700	300	N	N	150
V (10)	L	10	L	100	10	10	500	500	150
W (50)	N	N	N	N	2000	N	500	1000	100
Y (10)	20	L	20	15	10	50	20	20	15
Zn (200)	1000	1500	5000	N	N	G(10000)	L	N	L
Zr (10)	100	50	70	30	30	10	100	20	15
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	297	298	299	300					
Fe %(.05)	7	7	10	7					
Mg %(.02)	.7	1.5	5	.05					
Ca %(.05)	10	10	20	.1					
Ti %(.002)	.1	.5	.7	.01					
Mn(10)	2000	2000	5000	50					
Ag(.5)	.7	L	N	150					
As(200)	N	N	N	N					
Au(10)	N	N	N	N					
B(10)	70	L	L	10					
Ba(20)	500	20	50	70					
Be(1)	2	50	50	N					
Bi(10)	L	20	20	200					
Cd(20)	N	N	N	N					
Co(5)	20	15	30	20					
Cr(10)	50	150	200	10					
Cu(5)	70	20	10	1000					
La(20)	50	100	100	L					
Mo(5)	20	7	10	N					
Nb(20)	N	L	20	N					
Ni(5)	30	30	100	5					
Pb(10)	20	20	30	150					
Sb(100)	N	N	L	N					
Sc(5)	7	20	20	L					
Sn(10)	N	20	10	N					
Sr(100)	300	1000	2000	N					
V(10)	150	200	200	L					
W(50)	150	50	100	N					
Y(10)	20	50	70	N					
Zn(200)	N	200	200	N					
Zr(10)	30	200	500	N					
Th(100)	N	N	N	N					

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	356	357	358	359	360	361	362	363	364
Fe %(.05)	15	2	7	1	20	3	.2	1.5	.7
Mg %(.02)	2	.15	.15	.2	1.5	1	.05	1.5	.05
Ca %(.05)	15	.05	.07	7	G(20)	2	7	G(20)	.5
Ti %(.002)	.1	.15	.1	.1	.03	.07	.02	.07	.02
Mn(10)	G(5000)	150	100	3000	G(5000)	5000	20	1000	15
Ag(.5)	150	100	50	50	500	100	15	1.5	30
As(200)	N	N	N	N	2000	N	N	N	N
Au(10)	N	L	N	N	N	N	N	N	N
B(10)	N	30	20	10	N	L	10	L	15
Ba(20)	L	700	500	700	L	L	200	500	300
Be(1)	5	15	2	L	N	N	N	N	N
Bi(10)	500	200	150	150	N	50	N	N	L
Cd(20)	N	20	N	N	150	G(500)	N	N	150
Co(5)	50	5	15	N	N	70	5	7	5
Cr(10)	20	10	L	L	10	15	10	30	10
Cu(5)	7000	100	1500	20	1000	700	5	20	10000
La(20)	30	L	20	30	20	20	20	20	N
Mo(5)	N	50	20	50	N	N	N	N	N
Nb(20)	N	N	N	N	N	N	N	N	N
Ni(5)	15	5	5	5	L	5	5	7	7
Pb(10)	100	500	150	500	20000	20000	50	70	1500
Sb(100)	N	N	N	N	N	N	N	N	L
Sc(5)	7	5	5	5	N	L	L	L	N
Sn(10)	N	L	N	N	N	N	N	N	N
Sr(100)	500	N	N	500	200	L	L	1500	N
V(10)	150	100	50	20	20	70	15	20	50
W(50)	100	N	N	N	N	N	N	N	N
Y(10)	30	N	N	10	L	10	L	20	10
Zn(200)	700	N	N	N	5000	G(10000)	N	N	G(10000
Zr(10)	30	15	50	70	N	L	10	20	L
Th(100)	N	N	N	N	N	N	N	N	N

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Fe, Mg, Ti reported in %, all other elements reported in ppm.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	365	366	367	368	369	370	371	372	373
Fe % (.05)	1.5	1.5	5	.7	2	2	20	.7	.5
Mg % (.02)	.5	.2	.1	1	.02	.1	2	.05	L
Ca % (.05)	7	.5	L	.5	L	.05	.7	.3	.05
Ti % (.002)	.1	.1	.07	.05	.03	.015	.2	.02	.03
Mn (10)	70	50	10	150	20	100	1500	G(5000)	70
Ag (.5)	5	150	100	1	100	150	10	N	.5
As (200)	200	L	500	N	500	N	N	N	N
Au (10)	N	N	30	N	N	N	N	N	N
B (10)	20	50	20	50	100	1000	G(2000)	N	20
Ba (20)	1000	1500	1500	500	1500	1000	500	G(5000)	G(5000)
Be (1)	L	1.5	N	N	3	20	30	N	N
Bi (10)	N	N	N	N	G(1000)	G(1000)	300	N	N
Cd (20)	N	N	70	N	N	N	N	N	N
Co (5)	7	5	7	7	7	7	10	N	N
Cr (10)	50	20	15	20	10	15	20	L	L
Cu (5)	100	500	1500	20	G(20000)	G(20000)	7000	150	30
La (20)	N	50	L	20	L	L	30	70	20
Mo (5)	N	15	15	5	N	N	150	7	N
Nb (20)	N	N	N	N	N	N	N	N	N
Ni (5)	20	15	10	20	5	5	15	30	5
Pb (10)	20	2000	5000	10	500	150	100	10	N
Sb (100)	N	100	L	500	1500	700	300	N	N
Sc (5)	5	5	5	5	L	5	20	5	L
Sn (10)	N	N	N	N	N	N	150	N	N
Sr (100)	200	L	N	200	N	N	100	700	700
V (10)	100	200	100	200	100	200	500	30	20
W (50)	N	N	N	N	L	70	500	N	N
Y (10)	L	15	L	10	10	50	50	30	L
Zn (200)	N	300	3000	N	N	N	200	300	N
Zr (10)	20	70	50	20	50	20	30	10	L
Th (100)	N	N	N	N	N	N	N	N	N

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Fe, Mg, Ti reported in %, all other elements reported in ppm.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	382	383	384	385	386A	386B	387	388	389
Fe %(.05)	1.5	2	3	7	10	5	7		3
Mg %(.02)	.5	.3	.2	.3	.07	.03	.05		.7
Ca %(.05)	.5	1	2	7	.2	.1	5		G20
Ti %(.002)	.15	.03	.05	.15	.002	.005	.01		.007
Mn(10)	1000	300	G5000	1000	3000	700	700		2000
Ag(.5)	150	1500	G5000	20	500	500	200		300
As(200)	700	200	5000	7000	7000	G10000	5000		7000
Au(10)	N	N	N	N	N	L	N		N
B(10)	20	1000	10	100	N	L	10		N
Ba(20)	300	70	70	G5000	1500	500	300		1000
Be(1)	7	5	3	10	3	L	L		N
Bi(10)	30	L	N	N	200	100	150		L
Cd(20)	150	300	70	N	N	N	N		G500
Co(5)	5	7	L	10	5	N	N		N
Cr(10)	20	15	20	50	10	10	10		10
Cu(5)	3000	150	5000	50	700	300	700		300
La(20)	20	L	30	20	N	20	L		L
Mo(5)	L	50	15	L	20	7	N		N
Nb(20)	N	N	N	N	N	N	N		N
Ni(5)	10	15	10	50	10	15	7		5
Pb(10)	10000	3000	20000	3000	15000	G20000	15000		G20000
Sb(100)	1500	100	7000	L	1500	3000	1000		500
Sc(5)	5	N	L	7	N	N	N		N
Sn(10)	L	N	100	N	100	G1000	300		70
Sr(100)	N	L	N	1000	N	N	N		100
V(10)	70	20	50	50	50	100	70		15
W(50)	N	N	N	N	N	N	N		N
Y(10)	10	L	15	70	N	N	N		L
Zn(200)	G10000	5000	10000	2000	G10000	5000	10000		G10000
Zr(10)	30	10	L	30	N	N	N		15
Th(100)	N	N	N	N	N	N	N		N

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Fe, Mg, Ti reported in %, all other elements reported in ppm.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	390	391	392	393	394	395	396A	396B	397
Fe % (.05)	10	7	1	3	20	10	20	10	10
Mg % (.02)	.15	.5	.5	.5	.1	.2	.1	3	.05
Ca % (.05)	.3	L	.07	10	7	.2	1	1	L
Ti % (.002)	.5	.7	.5	.2	.02	.2	.05	.2	.05
Mn (10)	100	200	30	G5000	1500	200	200	5000	2000
Ag (.5)	200	100	5	150	2	.5	10	5	N
As (200)	500	5000	L	3000	N	N	2000	1500	L
Au (10)	N	N	N	N	N	N	L	L	N
B (10)	N	150	30	100	100	200	50	150	100
Ba (20)	2000	700	1500	500	150	300	150	700	1000
Be (1)	L	3	2	L	1	5	1	1.5	L
Bi (10)	50	50	L	N	N	N	N	N	N
Cd (20)	N	L	N	200	N	N	N	N	N
Co (5)	10	10	L	7	50	N	N	20	L
Cr (10)	100	100	100	100	50	N	100	100	N
Cu (5)	20000	1500	G20000	500	G20,000	70	70	200	70
La (20)	20	30	20	20	20	50	50	50	50
Mo (5)	15	500	10	5	10	20	N	10	N
Nb (20)	L	L	L	L	20	20	20	20	20
Ni (5)	100	50	15	30	20	L	10	100	20
Pb (10)	300	5000	30	10000	10	100	10	10	L
Sb (100)	L	100	150	150	N	N	200	150	L
Sc (5)	7	20	10	5	N	5	L	10	N
Sn (10)	70	100	L	N	N	N	N	N	N
Sr (100)	150	N	N	100	L	N	200	200	N
V (10)	30	200	150	300	200	100	100	200	500
W (50)	L	L	N	N	50	N	N	N	N
Y (10)	10	30	20	20	50	10	50	100	10
Zn (200)	N	3000	N	G10000	200	L	L	200	L
Zr (10)	200	150	100	150	50	100	100	200	20
Th (100)	N	N	N	N	N	N	N	N	N

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Fe, Mg, Ti reported in %, all other elements reported in ppm.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	398	399	400	401A	402	403	404	405	406A
Fe % (.05)	20	7	.1	2	1	.3	1	1	1
Mg % (.02)	.5	.05	L	.7	.07	.1	.1	.05	.07
Ca % (.05)	1.5	2	L	.15	.15	1	L	.1	.07
Ti % (.002)	.1	.2	.005	.2	.15	.07	.07	.07	.007
Mn (10)	300	100	20	500	100	300	100	200	150
Ag (.5)	L	N	1	1	200	20	3	1	3
As (200)	N	200	N	N	N	N	N	N	N
Au (10)	N	N	N	N	L	N	N	N	N
B (10)	150	100	15	70	15	10	30	30	30
Ba (20)	G5000	2000	G5000	1000	1500	700	200	200	20
Be (1)	1.5	1.5	L	5	5	3	3	5	N
Bi (10)	N	N	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	N	N	N	N
Co (5)	10	N	N	7	N	5	N	L	L
Cr (10)	20	70	N	10	L	L	10	L	30
Cu (5)	70	50	50	7	10	7	10	10	500
La (20)	50	50	50	50	50	30	50	70	N
Mo (5)	10	70	L	N	50	N	20	N	N
Nb (20)	20	20	N	L	N	N	30	30	N
Ni (5)	70	L	L	5	5	5	5	L	7
Pb (10)	150	10	200	30	50	20	70	70	1500
Sb (100)	N	L	N	N	N	N	N	L	L
Sc (5)	10	5	N	7	5	L	L	L	L
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	200	700	2000	200	150	100	L	N	N
V (10)	200	200	20	70	20	10	15	L	500
W (50)	N	100	N	N	N	N	N	N	N
Y (10)	20	10	N	20	10	L	30	30	L
Zn (200)	300	L	N	N	N	N	N	L	200
Zr (10)	50	200	L	200	70	30	300	200	N
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	401B	401C							
Fe % (.05)	3	1.5							
Mg % (.02)	.7	.3							
Ca % (.05)	.1	.3							
Ti % (.002)	.15	.2							
Mn (10)	1000	1000							
Ag (.5)	3	3							
As (200)	N	N							
Au (10)	N	N							
B (10)	20	15							
Ba (20)	300	1500							
Be (1)	10	5							
Bi (10)	N	N							
Cd (20)	N	N							
Co (5)	10	7							
Cr (10)	L	L							
Cu (5)	5	L							
La (20)	70	50							
Mo (5)	N	N							
Nb (20)	L	L							
Ni (5)	7	5							
Pb (10)	20	30							
Sb (100)	N	N							
Sc (5)	5	5							
Sn (10)	N	N							
Sr (100)	200	300							
V (10)	70	50							
W (50)	N	N							
Y (10)	20	15							
Zn (200)	L	N							
Zr (10)	200	150							
Th (100)	N	N							

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Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	410								
Fe % (.05)	7								
Mg % (.02)	2								
Ca % (.05)	7								
Ti % (.002)	.2								
Mn (10)	5000								
Ag (.5)	1.5								
As (200)	N								
Au (10)	N								
B (10)	200								
Ba (20)	200								
Be (1)	L								
Bi (10)	N								
Cd (20)	N								
Co (5)	15								
Cr (10)	10								
Cu (5)	7								
La (20)	70								
Mo (5)	N								
Nb (20)	N								
Ni (5)	5								
Pb (10)	10								
Sb (100)	N								
Sc (5)	10								
Sn (10)	N								
Sr (100)	200								
V (10)	150								
W (50)	N								
Y (10)	20								
Zn (200)	N								
Zr (10)	70								
Th (100)	N								

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	406B	407	408	409A	409B	410 A	411	412	413
Fe %(.05)	20	.2	5	10	7	2	7	1.5	1.5
Mg %(.02)	.1	.05	1	5	3	.5	1	.2	.15
Ca %(.05)	.3	L	2	10	10	.2	20	.7	.15
Ti %(.002)	.005	.03	.1	.5	.5	.2	.1	.15	.1
Mn(10)	150	10	700	2000	1500	300	2000	500	300
Ag(.5)	500	100	150	10	15	2	3	N	.5
As(200)	700	N	N	N	N	N	N	N	N
Au(10)	150	N	L	N	N	N	N	N	N
B(10)	20	500	70	20	50	70	15	70	70
Ba(20)	5000	20	100	700	300	500	300	300	500
Be(1)	N	N	N	1	1.5	7	50	7	7
Bi(10)	N	N	N	N	N	N	N	N	N
Cd(20)	50	N	150	N	N	N	N	N	N
Co(5)	7	5	10	100	30	7	10	N	N
Cr(10)	100	20	50	500	300	L	L	10	10
Cu(5)	7000	500	1500	20000	20000	100	5	5	5
La(20)	L	L	N	20	30	50	100	100	100
Mo(5)	7	N	N	N	N	N	30	50	N
Nb(20)	N	N	N	N	N	N	N	30	30
Ni(5)	15	7	30	200	100	5	5	5	5
Pb(10)	G(20000)	7000	2000	70	150	10	200	30	30
Sb(100)	300	N	200	N	N	N	N	100	150
Sc(5)	L	L	10	50	30	5	20	5	5
Sn(10)	N	N	N	N	N	N	N	N	N
Sr(100)	N	100	100	1000	1500	150	700	L	N
V(10)	1000	30	70	500	300	30	50	30	30
W(50)	N	N	N	N	N	N	N	N	N
Y(10)	N	N	L	20	20	15	500	30	30
Zn(200)	2000	N	3000	N	N	N	200	N	N
Zr(10)	N	N	20	70	100	150	200	300	300
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	414	415	416	417	418	419A	419B	420	421
Fe % (.05)	1.5	5	2	15	1	5	2	2	.3
Mg % (.02)	.1	.07	L	.15	.05	1.5	.1	.2	.07
Ca % (.05)	.07	.1	.03	15	.3	3	.07	.15	.1
Ti % (.002)	.1	.03	L	.01	.05	.3	.07	.2	.05
Mn (10)	300	200	2000	G(5000)	300	1500	5000	70	70
Ag (.5)	15	10	1500	1000	3	.5	2	5	30
As (200)	N	500	N	20000	L	N	N	L	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	30	20	L	N	20	20	15	15	15
Ba (20)	500	50	20	70	300	1500	1500	700	200
Be (1)	7	N	L	N	5	5	5	1.5	2
Bi (10)	N	N	500	50	N	N	N	N	N
Cd (20)	N	20	200	G(500)	N	N	N	N	N
Co (5)	5	7	15	70	5	15	7	5	N
Cr (10)	L	20	L	10	10	10	L	15	L
Cu (5)	15	20	1500	10000	30	7	50	15	L
La (20)	50	L	L	50	50	70	20	30	20
Mo (5)	50	N	300	10	50	N	5	N	N
Nb (20)	20	N	N	N	N	N	N	N	N
Ni (5)	L	7	5	10	L	5	5	7	7
Pb (10)	50	1500	G(20000)	G(20000)	70	20	70	50	30
Sb (100)	N	N	700	300	100	N	N	N	N
Sc (5)	5	L	L	L	L	10	L	5	L
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	N	N	N	100	L	700	200	150	L
V (10)	15	10	L	10	30	150	30	150	20
W (50)	N	N	N	N	50	N	N	N	N
Y (10)	30	L	N	10	15	20	L	10	L
Zn (200)	N	700	10000	G(10000)	N	N	N	N	N
Zr (10)	300	10	N	L	100	200	50	70	50
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

ement — Sample Number

	422	423	424	425	426	427	428	429	430
Fe % (.05)	1.5	1.5	7.	1	1	2	5	20	.1
Mg % (.02)	.2	.1	.15	.02	.15	2	2	.07	.7
Ca % (.05)	.3	.15	.15	15	.1	3	5	.5	G(20)
Ti % (.002)	.2	.07	.15	.07	.2	.007	.5	.1	.015
Mn (10)	150	50	20	30	30	5000	1500	2000	1000
Ag (.5)	30	10	1.5	1	.5	2000	1	1	.5
As (200)	L	N	N	200	N	N	N	N	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	10	20	70	10	50	30	30	15	N
Ba (20)	500	700	1000	2000	700	150	1000	500	300
Be (1)	1.5	3	N	N	3	15	2	10	5
Bi (10)	N	N	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	150	N	N	N
Co (5)	7	L	L	20	N	N	15	100	N
Cr (10)	10	L	30	20	L	15	50	50	L
Cu (5)	20	7	50	100	30	700	20	30	7
La (20)	20	30	20	70	70	L	70	20	L
Mo (5)	70	N	50	10	N	7	N	N	N
Nb (20)	N	N	N	N	20	N	L	N	N
Ni (5)	5	5	7	70	5	10	7	150	L
Pb (10)	20	20	20	100	70	2000	30	30	20
Sb (100)	100	N	N	G(20000)	500	2000	L	N	N
Sc (5)	5	L	5	5	5	L	15	7	N
Sn (10)	N	N	N	N	N	10	N	N	N
Sr (100)	200	L	300	150	100	N	200	N	200
V (10)	70	20	1000	100	20	70	200	70	15
W (50)	N	N	N	N	N	L	N	N	N
Y (10)	L	10	10	10	15	L	20	50	L
Zn (200)	N	N	N	200	N	G(10000)	N	2000	N
Zr (10)	70	150	70	30	200	L	300	50	10
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	431	432	433	434	435				
Fe %(.05)	20	20	15	5	1.5				
Mg %(.02)	.7	1	1.5	5	.7				
Ca %(.05)	15	20	15	7	20				
Ti %(.002)	.07	.015	.05	.005	.07				
Mn(10)	2000	1000	700	1500	G(5000)				
Ag(.5)	15	2	150	1500	700				
As(200)	N	N	N	1000	N				
Au(10)	N	N	N	N	150				
B(10)	N	L	N	20	30				
Ba(20)	L	L	L	L	700				
Be(1)	N	L	L	N	1				
Bi(10)	N	15	50	N	N				
Cd(20)	N	N	N	100	N				
Co(5)	150	10	70	N	N				
Cr(10)	30	100	100	10	L				
Cu(5)	20,000	1000	G(20000)	2000	700				
La(20)	N	N	N	L	50				
Mo(5)	N	N	30	7	70				
Nb(20)	N	N	N	N	N				
Ni(5)	700	20	100	L	L				
Pb(10)	30	70	50	20000	1000				
Sb(100)	N	N	N	G(10000)	200				
Sc(5)	L	N	5	L	5				
Sn(10)	200	70	150	1000	N				
Sr(100)	N	N	N	N	1000				
V(10)	70	30	100	10	20				
W(50)	N	N	N	N	N				
Y(10)	15	15	20	N	20				
Zn(200)	3000	200	700	G(10000)	L				
Zr(10)	L	10	20	N	50				
Th(100)	N	N	N	N	N				

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number							
	508	513	520	526	527	528	529	530
Fe % (.05)	L	L	.2	15	.15	1	.7	.05
Mg % (.02)	L	L	1	L	.03	L	L	L
Ca % (.05)	2	L	5	L	.15	L	.7	.2
Ti % (.002)	L	.07	.05	.02	.05	.015	.01	.015
Mn (10)	L	15	5000	500	3000	15	L	N
Ag (.5)	N	N	150	N	N	N	7	1
As (200)	N	N	N	N	N	N	N	N
Au (10)	N	N	N	N	N	N	N	N
B (10)	N	N	10	N	L	N	10	10
Ba (20)	G(5000)	G(5000)	G(5000)	G(5000)	G(5000)	G(5000)	G(5000)	G(5000)
Be (1)	N	L	L	1.5	L	L	1	N
Bi (10)	N	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	N	N	N
Co (5)	N	N	N	10	5	N	5	N
Cr (10)	N	10	10	20	10	L	150	50
Cu (5)	L	20	200	100	20	30	100	15
La (20)	N	L	N	50	N	N	L	L
Mo (5)	N	N	N	5	N	N	20	L
Nb (20)	N	N	N	N	N	N	N	N
Ni (5)	L	L	L	30	L	L	150	L
Pb (10)	N	N	100	20	L	N	10	10
Sb (100)	N	N	200	N	N	N	N	N
Sc (5)	N	L	L	L	L	L	5	L
Sn (10)	N	N	N	N	N	N	N	N
Sr (100)	5000	5000	1000	3000	5000	5000	500	G(5000)
V (10)	L	10	30	20	30	15	500	150
W (50)	N	N	N	N	N	N	N	N
Y (10)	10	10	10	10	15	10	20	15
Zn (200)	N	N	200	300	N	N	200	N
Zr (10)	L	L	50	10	15	10	20	10
Th (100)	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

ement	Sample Number								
	601	602	603	604	605	606	607	608	609
Fe %(.05)	1.5	.3	1	3	.7	.7	5	7	7
Mg %(.02)	.2	.07	.1	.3	1.5	.07	3	.1	1
Ca %(.05)	.15	.05	.5	.05	1.5	2	3	.3	.5
Ti %(.002)	.1	.07	.02	.2	.1	.1	.5	.07	.5
Mn(10)	700	50	300	20	150	10	1000	20	100
Ag(.5)	100	50	15	1	1	7	L	.5	1
As(200)	300	N	500	N	N	N	N	L	N
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	50	30	20	100	70	70	50	50	500
Ba(20)	10000	200	3000	2000	G(5000)	5000	5000	300	2000
Be(1)	5	2	N	2	L	2	3	20	7
Bi(10)	N	N	N	N	N	N	N	N	N
Cd(20)	N	N	N	N	N	N	N	L	500
Co(5)	5	N	7	7	7	L	30	15	20
Cr(10)	10	10	15	50	50	150	200	30	150
Cu(5)	50	20	7000	70	30	100	50	150	150
La(20)	100	50	L	20	20	20	30	30	100
Mo(5)	70	70	N	10	N	20	N	200	100
Nb(20)	L	N	N	N	N	N	N	N	L
Ni(5)	5	5	10	15	30	20	100	300	200
Pb(10)	30	20	300	10	L	10	30	15	30
Sb(100)	100	L	5000	N	N	N	N	N	N
Sc(5)	5	5	L	7	5	5	15	7	10
Sn(10)	N	N	N	N	N	N	N	N	N
Sr(100)	L	L	L	100	1000	1000	700	300	200
V(10)	100	70	20	300	100	500	150	1000	1000
W(50)	N	N	N	N	N	N	N	N	N
Y(10)	20	L	L	20	15	30	20	700	70
Zn(200)	N	N	700	N	N	N	N	1000	2000
Zr(10)	150	70	10	100	70	50	150	50	300
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

ement — Sample Number

	610	611	612	613	614A	614B	615A	615B	616
Fe %(.05)	.07	.15	.05	.5	1.5	.7	.7	5	.2
Mg %(.02)	.02	.1	L	.07	2	1	.03	1.5	.2
Ca %(.05)	.15	.5	.3	.5	10	G(20)	.15	3	.1
Ti %(.002)	.005	.015	.003	.07	.15	.02	.5	.5	.3
Mn(10)	L	20	10	10	200	1000	10	1000	70
Ag(.5)	3	3	15	10	2	N	N	.5	.7
As(200)	N	N	N	L	N	N	200	N	N
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	10	20	N	70	100	N	70	50	70
Ba(20)	300	G(5000)	700	G(5000)	1000	50	200	2000	1000
Be(1)	N	N	N	N	L	N	1	3	5
Bi(10)	N	N	N	N	N	N	N	N	N
Cd(20)	N	N	N	N	N	N	N	N	N
Co(5)	N	N	5	N	5	N	N	15	15
Cr(10)	L	10	10	10	50	10	30	50	20
Cu(5)	200	10	100	50	50	L	30	15	30
La(20)	20	30	30	20	20	N	70	50	50
Mo(5)	N	N	5	N	N	N	N	N	50
Nb(20)	N	N	N	N	N	N	L	N	L
Ni(5)	10	10	20	15	70	L	5	30	30
Pb(10)	100	150	200	70	15	L	15	20	20
Sb(100)	G(10000)	3000	G(10000)	10000	100	L	100	N	N
Sc(5)	L	N	N	L	7	L	5	10	10
Sn(10)	N	N	N	N	N	N	N	N	N
Sr(100)	N	150	N	300	500	300	300	1000	700
V(10)	20	15	10	30	500	100	100	100	70
W(50)	N	N	N	N	N	N	N	N	N
Y(10)	N	L	L	10	20	L	10	20	30
Zn(200)	5000	N	N	N	300	N	N	N	N
Zr(10)	L	20	15	500	30	L	300	300	300
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	617	618	619	620	621	622A	622B	623	624
Fe %(.05)	5	5	3	.2	.2	.3	7	20	10
Mg %(.02)	7	7	.15	.03	.03	.02	1	3	5
Ca %(.05)	5	15	L	.3	.1	L	2	G(20)	15
Ti %(.002)	.5	.3	.1	.07	.02	.005	1	.3	.3
Mn(10)	5000	2000	100	70	70	30	70	G(5000)	G(5000)
Ag(.5)	2	1	3	200	3000	70	.7	N	N
As(200)	N	N	N	N	500	N	N	N	N
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	L	10	70	20	20	10	200	10	15
Ba(20)	700	700	300	70	70	L	5000	L	500
Be(1)	70	70	L	N	N	N	3	50	100
Bi(10)	70	30	N	N	N	N	N	N	N
Cd(20)	N	N	N	N	70	N	N	N	N
Co(5)	15	15	10	N	N	N	20	50	100
Cr(10)	150	100	50	10	20	10	30	100	30
Cu(5)	50	30	70	200	2000	70	500	150	50
La(20)	100	70	20	20	L	20	150	L	100
Mo(5)	10	50	15	N	20	N	N	1000	20
Nb(20)	20	N	N	N	N	N	70	L	70
Ni(5)	70	70	50	7	5	5	30	30	20
Pb(10)	50	70	50	1500	3000	300	30	15	10
Sb(100)	L	N	500	200	5000	L	N	N	N
Sc(5)	15	15	5	L	L	L	15	10	15
Sn(10)	N	N	N	N	N	N	N	50	N
Sr(100)	500	500	N	N	N	N	200	N	300
V(10)	100	150	500	20	30	15	100	300	300
W(50)	N	100	N	N	N	N	N	1000	50
Y(10)	50	20	30	N	L	N	70	20	150
Zn(200)	L	200	N	300	1500	N	N	200	200
Zr(10)	300	150	70	10	10	N	500	100	100
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	625	626	627	628A	628B	629	630	631	632
Fe %(.05)	7	1	1.5	2	3	.5	2	2	2
Mg %(.02)	.07	.2	.5	.05	5	.03	1.5	2	1
Ca %(.05)	L	.5	.05	.1	10	L	1	7	20
Ti %(.002)	.3	.15	.1	.03	.3	.015	.5	.2	.1
Mn(10)	70	20	20	300	2000	100	1000	200	1500
Ag(.5)	.7	1	5	2000	20	5	1	2	20
As(200)	2000	N	200	10000	N	N	N	1500	N
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	100	30	500	30	70	10	500	200	100
Ba(20)	700	1000	500	L	1500	70	G(5000)	G(5000)	1000
Be(1)	7	N	1.5	1	5	N	5	1.5	L
Bi(10)	N	N	N	N	N	N	N	N	N
Cd(20)	N	N	N	70	N	N	N	N	N
Co(5)	10	5	N	N	10	L	15	15	7
Cr(10)	50	50	70	10	70	10	70	100	30
Cu(5)	200	700	30	2000	150	5	200	100	G(20000)
La(20)	70	50	30	20	50	20	50	50	N
Mo(5)	30	N	7	200	20	N	5	70	N
Nb(20)	N	N	20	N	N	N	L	N	N
Ni(5)	200	10	5	10	70	5	70	100	30
Pb(10)	10	10	10	G(20000)	200	200	20	30	20
Sb(100)	N	N	100	700	N	N	N	100	1000
Sc(5)	15	15	10	L	10	L	10	10	5
Sn(10)	N	N	N	300	N	N	N	N	N
Sr(100)	300	L	N	N	300	N	200	200	L
V(10)	300	2000	200	70	150	10	500	2000	100
W(50)	50	N	N	L	N	N	N	N	N
Y(10)	150	50	L	L	30	N	20	50	15
Zn(200)	200	200	N	10000	300	N	N	700	N
Zr(10)	100	200	300	50	300	10	200	300	50
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	633A	633B	634A	634B	634C	635	636	637	638
Fe % (.05)	15	3	2	.1	.2	.7	1.5	.1	1.5
Mg % (.02)	.2	.5	.5	.07	.03	.2	.15	.02	.1
Ca % (.05)	.07	.1	2	G(20)	.7	20	.07	.2	1.5
Ti % (.002)	.1	.3	.3	.01	.05	.05	.1	.015	.1
Mn (10)	100	200	500	L	50	150	70	30	500
Ag (.5)	1	1.5	.7	N	.5	20	200	300	100
As (200)	L	N	N	N	N	N	200	N	1500
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	70	500	30	N	10	15	50	15	70
Ba (20)	300	500	700	700	300	70	200	30	300
Be (1)	1.5	5	10	1.5	3	N	1.5	N	N
Bi (10)	N	N	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	N	N	N	N
Co (5)	10	7	15	N	5	N	L	N	7
Cr (10)	50	100	L	L	10	15	50	15	50
Cu (5)	1000	500	7	N	L	30	200	700	300
La (20)	20	50	20	50	L	L	20	L	L
Mo (5)	15	30	N	N	N	N	10	N	5
Nb (20)	N	N	N	N	N	N	N	N	N
Ni (5)	100	70	5	L	5	7	10	7	10
Pb (10)	30	50	L	N	10	500	700	1000	5000
Sb (100)	N	N	N	N	N	N	150	500	L
Sc (5)	10	10	7	L	L	5	5	L	7
Sn (10)	N	N	N	N	N	N	15	50	N
Sr (100)	L	200	150	700	L	300	L	N	N
V (10)	150	1000	150	L	10	70	300	30	100
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	20	30	10	N	N	15	15	L	L
Zn (200)	500	N	N	N	N	N	300	1000	700
Zr (10)	50	100	150	L	15	10	100	10	10
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement — Sample Number

-	639	640	641	642	643	644	645	646	647
Fe % (.05)	1	1	.7	1	.5	7	5	2	2
Mg % (.02)	.07	.2	.1	.1	.3	.1	.07	.15	.5
Ca % (.05)	7	.7	.3	.3	1	.2	5	1	1
Ti % (.002)	.07	.1	.1	.02	.07	.1	.3	.005	.2
Mn (10)	300	700	500	700	G(5000)	300	150	G(5000)	1500
Ag (.5)	15	100	.7	N	100	.5	.5	200	15
As (200)	N	L	N	N	N	500	N	N	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	30	500	1000	2000	20	50	70	10	70
Ba (20)	200	200	300	200	G(5000)	G(5000)	1500	5000	2000
Be (1)	L	N	N	N	L	10	N	50	5
Bi (10)	N	N	N	N	N	N	N	N	N
Cd (20)	N	150	N	N	N	N	N	N	N
Co (5)	7	10	7	10	500	10	5	20	L
Cr (10)	20	15	L	10	10	50	50	N	L
Cu (5)	100	1000	150	30	1500	200	70	20	20
La (20)	L	N	20	L	N	70	70	300	100
Mo (5)	N	10	N	N	150	10	10	300	N
Nb (20)	N	N	N	N	N	N	N	N	L
Ni (5)	7	10	5	5	200	100	L	10	L
Pb (10)	70	7000	L	15	15	20	20	N	30
Sb (100)	N	500	N	N	N	300	N	N	N
Sc (5)	5	5	5	5	L	5	7	N	5
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	L	150	L	L	1000	1500	1500	5000	500
V (10)	30	100	70	70	700	200	300	1500	30
W (50)	N	N	N	N	N	L	N	N	N
Y (10)	L	10	L	N	10	15	10	20	30
Zn (200)	N	5000	N	N	N	500	N	N	N
Zr (10)	15	10	30	L	30	70	100	N	300
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	648A	648B	649	650	651	652	653	654	655
Fe % (.05)	15	2	.2	5	1.5	1	3	.7	5
Mg % (.02)	7	.2	.05	.3	1	.3	.07	.03	1
Ca % (.05)	20	.1	.15	L	3	1	.3	.1	1.5
Ti % (.002)	.2	.1	.03	.3	.2	.2	.015	.15	.5
Mn (10)	G(5000)	300	150	200	200	500	G(5000)	50	1000
Ag (.5)	N	.7	.7	L	L	N	N	.7	1.5
As (200)	N	N	N	N	N	N	N	L	700
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	50	50	50	30	200	30	100	10	700
Ba (20)	20	700	200	700	1000	1500	G(5000)	500	500
Be (1)	200	15	20	30	5	2	1.5	2	3
Bi (10)	50	N	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	N	N	N	N
Co (5)	20	L	L	5	7	5	300	N	20
Cr (10)	30	L	10	50	30	10	10	150	100
Cu (5)	70	30	7	150	20	15	1000	15000	100
La (20)	30	L	20	100	70	150	30	20	50
Mo (5)	700	N	N	30	7	N	20	N	7
Nb (20)	N	L	N	N	L	L	N	N	L
Ni (5)	15	5	5	10	5	5	150	10	100
Pb (10)	20	30	L	10	30	15	10	20	30
Sb (100)	N	N	100	N	N	N	N	N	L
Sc (5)	7	5	L	10	7	7	L	10	15
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	100	100	L	100	700	1000	150	N	N
V (10)	150	15	15	100	100	70	2000	150	200
W (50)	N	N	N	70	N	N	50	N	N
Y (10)	30	10	L	20	50	50	10	10	30
Zn (200)	1000	N	N	N	N	N	N	1000	700
Zr (10)	70	50	50	300	300	200	30	150	300
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

ement — Sample Number

	656	657	658	659	660A	660B	661A	661B	662A
Fe % (.05)	1.5	1.5	7	2	.5	.5	.3	1.5	.3
Mg % (.02)	7	7	.7	.1	1.5	10	.3	5	.07
Ca % (.05)	10	20	.15	.07	3	G(20)	20	7	.5
Ti % (.002)	.005	.3	.3	.1	.07	.007	.015	.07	.07
Mn (10)	2000	500	150	300	G(5000)	G(5000)	5000	G(5000)	30
Ag (.5)	1500	10	1	1000	300	150	1	1000	N
As (200)	1000	N	200	N	N	N	N	N	N
Au (10)	N	N	N	200	N	N	N	N	N
B (10)	L	150	200	15	20	N	N	10	10
Ba (20)	50	150	1000	1000	G(5000)	500	G(5000)	300	1500
Be (1)	N	1	1.5	N	N	1.5	N	N	N
Bi (10)	N	N	N	N	N	N	N	N	N
Cd (20)	100	N	N	N	N	N	N	150	N
Co (5)	N	10	10	L	N	N	N	5	L
Cr (10)	L	70	100	15	15	L	L	30	30
Cu (5)	1500	15	500	20	30	50	L	1000	50
La (20)	L	30	30	20	30	30	30	L	30
Mo (5)	N	N	15	N	N	N	N	N	N
Nb (20)	N	N	N	N	N	N	N	N	N
Ni (5)	5	30	70	5	7	L	L	15	10
Pb (10)	G(20000)	100	10	1500	150	1500	20	2000	10
Sb (100)	10000	N	N	L	150	L	N	1000	N
Sc (5)	L	7	15	5	5	L	L	L	L
Sn (10)	N	N	N	N	N	N	N	20	N
Sr (100)	L	200	L	100	100	300	2000	100	300
V (10)	L	500	500	20	50	10	15	100	70
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	N	20	30	L	L	L	15	10	10
Zn (200)	2000	N	N	N	N	N	200	5000	N
Zr (10)	L	200	200	20	100	L	L	100	300
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	662B	663	664A	664B	665	666	667	668A	668B
Fe % (.05)	.7	5	15	7	5	7	2	G(20)	5
Mg % (.02)	.07	.2	.05	.3	2	1	.2	1.5	1
Ca % (.05)	.07	.05	L	L	5	2	.1	.05	.7
Ti % (.002)	.07	.5	.03	.5	.5	.3	.15	.03	.1
Mn (10)	70	50	100	100	1500	1000	30	700	200
Ag (.5)	N	10	200	15	2	100	3000	1.5	2
As (200)	N	500	10000	1500	N	10000	500	N	N
Au (10)	N	N	50	L	N	N	N	N	N
B (10)	70	1500	30	70	200	70	30	10	10
Ba (20)	1500	1500	2000	2000	1500	700	1000	500	700
Be (1)	5	L	N	2	3	3	L	N	2
Bi (10)	N	N	500	N	N	30	N	N	N
Cd (20)	N	N	70	30	N	100	N	N	N
Co (5)	N	5	10	50	20	7	10	150	15
Cr (10)	L	70	15	30	100	20	30	20	15
Cu (5)	L	500	3000	300	700	500	500	150	15
La (20)	30	50	L	50	50	20	50	100	20
Mo (5)	N	100	N	N	N	N	50	N	N
Nb (20)	L	N	N	N	N	N	N	N	N
Ni (5)	5	30	15	7	20	5	50	50	10
Pb (10)	10	3000	7000	5000	150	3000	100	N	L
Sb (100)	N	200	2000	1500	N	500	G(10000)	N	N
Sc (5)	L	7	L	10	15	7	5	5	5
Sn (10)	N	N	200	300	10	N	N	N	N
Sr (100)	N	N	500	1000	500	200	300	N	100
V (10)	L	300	30	70	100	70	200	200	50
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	15	15	10	20	20	15	20	15	15
Zn (200)	N	N	3000	700	300	3000	L	N	N
Zr (10)	100	100	10	150	100	100	150	N	100
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	669	670	671	672	673	674	675	676	677
Fe % (.05)	7	10	5	1.5	5	10	7	7	10
Mg % (.02)	.3	.2	.07	1.5	1	1.5	1	3	.15
Ca % (.05)	5	.2	.3	3	2	2	2	7	.2
Ti % (.002)	.3	.15	.2	.07	.03	.05	.2	.15	.15
Mn (10)	1000	70	700	500	700	700	700	G5000	G5000
Ag (.5)	15	.5	.5	L	70	30	30	150	300
As (200)	L	N	N	N	200	G10,000	G10,000	7000	2000
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	30	70	30	N	10	50	100	N	70
Ba (20)	1000	700	300	1000	200	700	700	5000	1000
Be (1)	1	2	7	3	L	1	2	N	L
Bi (10)	50	N	N	N	500	30	10	N	N
Cd (20)	50	N	N	N	100	N	300	G500	G500
Co (5)	20	70	5	N	N	N	L	10	15
Cr (10)	70	20	L	L	N	N	L	50	20
Cu (5)	2000	300	7	30	200	700	100	700	1500
La (20)	20	20	150	30	50	50	50	N	L
Mo (5)	N	N	7	10	10	N	10	N	N
Nb (20)	N	N	20	L	20	20	20	N	N
Ni (5)	15	100	L	L	10	5	5	15	20
Pb (10)	150	15	20	70	20,000	1000	2000	700	20000
Sb (100)	N	N	N	N	200	1500	200	200	200
Sc (5)	10	5	5	5	N	L	10	5	5
Sn (10)	N	N	N	10	70	N	20	100	70
Sr (100)	200	150	100	200	100	100	100	N	N
V (10)	150	150	15	15	100	30	150	20	50
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	20	10	30	30	10	L	50	15	L
Zn (200)	3000	N	N	N	2000	200	3000	G10000	G10000
Zr (10)	200	100	300	150	20	50	100	15	10
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	678	679	680A	680B	681	682	683	684	685
Fe %(.05)	7	3	5	5	20	3	3	1.5	7
Mg %(.02)	.5	.1	.03	.03	.1	.2	.1	.2	.5
Ca %(.05)	2	.05	.7	.07	.5	.7	.1	5	3
Ti %(.002)	.07	.03	.01	.015	.07	.15	.07	.05	.03
Mn(10)	500	50	150	L	150	10	150	G5000	500
Ag(.5)	200	3	70	1000	300	5	300	2000	1000
As(200)	7000	700	G10000	G10000	10000	N	500	L	7000
Au(10)	N	N	N	10	N	N	N	N	N
B(10)	30	N	N	N	N	100	30	15	N
Ba(20)	700	1000	30	70	700	1000	1000	2000	1000
Be(1)	L	N	N	N	N	1	1	N	1
Bi(10)	70	15	50	300	700	L	N	N	150
Cd(20)	100	N	100	100	L	N	N	200	G500
Co(5)	20	N	N	N	100	7	N	N	10
Cr(10)	50	70	L	L	50	70	30	10	10
Cu(5)	G20000	500	1000	1500	7000	1500	1500	3000	5000
La(20)	L	N	N	N	L	L	N	20	L
Mo(5)	15	30	10	100	200	30	100	70	20
Nb(20)	N	N	N	N	N	N	N	N	N
Ni(5)	50	20	5	L	50	70	20	5	5
Pb(10)	150	70	5000	15000	1000	100	7000	15000	G20000
Sb(100)	200	N	150	3000	N	N	700	3000	1500
Sc(5)	7	L	L	N	5	5	5	5	L
Sn(10)	100	N	300	1000	150	N	15	70	N
Sr(100)	L	N	N	150	700	500	N	N	N
V(10)	200	70	L	10	1000	200	70	10	20
W(50)	N	N	N	N	N	N	N	N	N
Y(10)	15	L	N	N	10	20	15	L	L
Zn(200)	1000	N	3000	L	700	N	700	G10000	G10000
Zr(10)	50	15	N	N	20	30	30	10	10
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	686	687	688	689	690	691	692	693	694
Fe % (.05)	5	7	1.5	5	1	.7	.7	1.5	1
Mg % (.02)	3	.05	.2	.15	.3	.5	.15	.2	.15
Ca % (.05)	10	.07	.1	3	.3	.7	.07	.07	.05
Ti % (.002)	.03	.07	.15	.05	.15	.3	.07	.15	.05
Mn (10)	300	70	20	20	15	70	L	10	70
Ag (.5)	700	7	2	3	1	3	7	2	L
As (200)	300	1500	N	300	N	N	N	N	N
Au (10)	20	N	N	N	N	N	N	N	N
B (10)	100	10	100	100	150	70	30	100	30
Ba (20)	500	700	1000	1000	700	3000	500	1500	G5000
Be (1)	L	N	N	2	N	N	N	3	N
Bi (10)	G1000	L	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	N	N	N	N
Co (5)	7	L	N	N	N	N	N	L	5
Cr (10)	30	100	100	100	50	100	100	50	30
Cu (5)	G20000	700	1500	500	50	7000	3000	5000	70
La (20)	20	L	L	20	L	20	L	30	N
Mo (5)	50	100	10	50	5	N	20	15	N
Nb (20)	N	N	L	N	N	L	N	L	N
Ni (5)	70	70	15	15	20	5	10	100	15
Pb (10)	700	100	30	70	30	30	20	30	30
Sb (100)	L	200	N	N	N	N	N	N	N
Sc (5)	5	L	7	15	7	15	L	5	L
Sn (10)	150	N	N	N	N	N	N	N	N
Sr (100)	150	N	150	2000	150	700	N	150	1500
V (10)	70	1000	200	700	300	500	700	200	50
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	20	15	15	20	15	20	15	30	L
Zn (200)	1000	200	500	N	N	1000	N	1500	N
Zr (10)	20	50	50	70	70	200	50	70	20
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	695	696	697						
Fe % (.05)	10	.5	1.5						
Mg % (.02)	.3	.05	.05						
Ca % (.05)	.1	1	1						
Ti % (.002)	.2	.05	.05						
Mn (10)	500	50	300						
Ag (.5)	N	1.5	N						
As (200)	N	N	N						
Au (10)	N	N	N						
B (10)	10	20	N						
Ba (20)	G5000	G5000	G5000						
Be (1)	1.5	N	N						
Bi (10)	N	N	N						
Cd (20)	N	N	N						
Co (5)	15	N	N						
Cr (10)	50	50	50						
Cu (5)	200	200	150						
La (20)	L	20	L						
Mo (5)	7	L	10						
Nb (20)	N	N	N						
Ni (5)	100	10	15						
Pb (10)	50	100	L						
Sb (100)	N	N	N						
Sc (5)	7	N	N						
Sn (10)	N	N	N						
Sr (100)	300	5000	1500						
V (10)	150	20	20						
W (50)	N	N	N						
Y (10)	15	20	20						
Zn (200)	700	N	N						
Zr (10)	50	30	30						
Th (100)	N	N	N						

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	730	731	732	733	734	735	736A	736B	737
Fe %(.05)	1.5	1	5	.1	20	.7	1.5	2	.2
Mg %(.02)	.15	10	.05	.1	1	1.5	2	.05	10
Ca %(.05)	.15	20	.2	.2	3	5	7	.3	20
Ti %(.002)	.05	.007	.05	.01	.015	.01	.02	.03	.005
Mn(10)	500	1500	200	70	500	200	100	10	700
Ag(.5)	150	20	500	500	10	500	100	20	1000
As(200)	N	N	300	500	700	1000	N	200	1500
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	10	L	20	15	10	30	15	50	N
Ba(20)	300	30	2000	300	300	2000	G(5000)	G(5000)	50
Be(1)	3	N	2	N	1	N	N	L	N
Bi(10)	L	20	N	N	N	10	N	N	N
Cd(20)	N	N	N	N	30	N	150	100	200
Co(5)	5	5	N	N	L	N	N	N	N
Cr(10)	20	10	30	10	15	15	15	20	L
Cu(5)	3000	50	1000	5000	1500	20000	700	1000	20000
La(20)	L	20	20	20	L	L	L	L	20
Mo(5)	N	N	50	N	N	N	150	100	7
Nb(20)	N	N	N	N	N	N	N	N	N
Ni(5)	15	L	5	5	7	5	10	15	L
Pb(10)	15000	700	G(20000)	20000	20000	100	G(20000)	15000	G(20000)
Sb(100)	N	N	200	G(20000)	100	20000	1500	1000	10000
Sc(5)	L	L	L	N	L	N	L	N	L
Sn(10)	G(1000)	20	G(1000)	N	700	20	N	N	N
Sr(100)	N	L	100	N	L	N	2000	100	100
V(10)	70	10	1000	30	15	20	150	150	L
W(50)	L	N	200	N	150	N	N	N	N
Y(10)	L	L	N	N	20	N	L	10	N
Zn(200)	G(10000)	700	10000	1000	10000	500	2000	7000	1000
Zr(10)	15	10	70	20	N	15	15	20	N
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
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Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	738	739	740	741	742	743	744A	744B	745
Fe % (.05)	.3	1.5	5	1	15	7	G(20)	.3	1
Mg % (.02)	5	7	2	10	7	10	.2	.1	1.5
Ca % (.05)	10	G(20)	7		20	G(20)	10	20	.1
Ti % (.002)	.015	.01	.01	.07	.015	.007	.03	.2	.2
Mn (10)	200	200	70	300	300	1000	500	15	30
Ag (.5)	3	30	10	.5	70	15	10	30	3
As (200)	N	5000	1000	N	N	1500	700	L	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	15	15	20	50	20	L	70	100	50
Ba (20)	G(5000)	500	100	70	150	300	300	1500	1000
Be (1)	N	N	L	N	3	N	1	N	1
Bi (10)	N	L	100	N	30	150	N	20	N
Cd (20)	50	N	N	N	N	50	500	N	N
Co (5)	5	15	50	7	20	500	30	10	N
Cr (10)	15	L	10	50	50	10	70	70	30
Cu (5)	100	G(20000)	20000	150	G(20000)	G(20000)	10000	G(20000)	G(20000)
La (20)	20	N	L	30	L	N	20	L	50
Mo (5)	7	20	10	N	50	50	1000	70	N
Nb (20)	N	N	N	N	N	N	N	N	N
Ni (5)	20	50	70	15	70	70	150	30	10
Pb (10)	7000	700	100	100	1000	2000	300	700	15
Sb (100)	100	700	L	N	N	N	N	N	N
Sc (5)	L	L	L	5	L	N	5	5	5
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	G(5000)	100	150	150	L	L	500	300	N
V (10)	2000	70	100	50	500	30	300	100	100
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	10	N	L	15	10	L	20	L	30
Zn (200)	2000	700	1500	N	500	1000	5000	1000	N
Zr (10)	10	N	50	15	L	L	10	70	300
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	746	747	748	749	750	751	752	753	754
Fe % (.05)	15	1	1	10	20	7	.7	15	1
Mg % (.02)	2	7	1.5	.05	.07	.2	.02	1	.1
Ca % (.05)	5	20	10	.05	.1	1	L	G(20)	.7
Ti % (.002)	.02	.01	.1	.05	.007	.2	.01	.1	.1
Mn (10)	500	2000	500	L	20	700	20	G(5000)	100
Ag (.5)	.1	7	700	300	10	L	1.5	30	200
As (200)	500	N	N	1500	1000	N	N	N	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	1.5	N	20	10	10	150	10	30	50
Ba (20)	G(5000)	700	300	100	50	700	300	50	1000
Be (1)	N	N	N	N	N	30	N	30	5
Bi (10)	N	N	N	N	N	N	N	30	30
Cd (20)	100	G(500)	70	N	150	N	N	20	N
Co (5)	N	5	N	N	N	10	N	15	N
Cr (10)	20	15	30	10	20	10	10	20	L
Cu (5)	200	150	1500	100	100	200	700	15000	1000
La (20)	L	20	20	L	20	50	20	L	50
Mo (5)	20	N	N	20	50	20	500	50	50
Nb (20)	N	N	N	N	N	L	N	N	N
Ni (5)	5	5	5	L	50	L	5	50	L
Pb (10)	3000	500	7000	20000	5000	15	15	N	1000
Sb (100)	N	N	1500	100	100	N	L	N	500
Sc (5)	L	L	L	L	N	5	N	5	L
Sn (10)	N	N	N	N	N	N	N	200	N
Sr (100)	G(5000)	100	100	L	N	L	L	150	500
V (10)	500	10	1000	10	100	150	L	1500	10
W (50)	N	N	N	N	N	N	N	300	N
Y (10)	N	15	N	L	N	15	N	20	10
Zn (200)	5000	G(10000)	2000	2000	10000	N	N	2000	N
Zr (10)	N	N	50	70	N	200	N	70	150
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

lement — Sample Number

	755A	755B	756	757	758	759	760A	760B	761
Fe % (.05)	7	1.5	10	.7	.5	2	3	15	2
Mg % (.02)	.07	.5	.02	.15	.1	5	.7	.5	.05
Ca % (.05)	.5	.2	.07	3	5	G(20)	2	1	.15
Ti % (.002)	.5	.3	.1	.07	.02	.1	.007	.02	.01
Mn (10)	700	30	70	100	2000	1500	1000	300	300
Ag (.5)	1	2	.7	1	2	L	1	15	200
As (200)	N	N	1500	N	L	N	N	N	300
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	100	300	10	70	20	100	15	30	70
Ba (20)	300	500	100	500	100	G(5000)	G(5000)	5000	1000
Be (1)	5	2	1.5	7	N	1	N	N	N
Bi (10)	N	N	N	N	N	N	N	N	N
Cd (20)	N	N	N	N	N	N	100	N	50
Co (5)	100	5	5	L	L	7	7	7	7
Cr (10)	70	100	20	10	30	70	L	15	10
Cu (5)	100	100	150	10	15	20	20000	G(20000)	20000
La (20)	100	30	20	30	20	30	N	L	N
Mo (5)	30	50	1000	N	N	N	N	N	N
Nb (20)	N	L	N	N	N	N	N	N	N
Ni (5)	100	7	L	5	7	20	5	15	
Pb (10)	30	30	L	15	10	70	2000	5000	G(20000)
Sb (100)	N	N	150	N	N	N	700	N	5000
Sc (5)	10	7	L	L	L	7	N	N	N
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	L	100	N	700	200	150	G(2000)	L	200
V (10)	150	200	150	10	30	30	L	10	500
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	30	20	10	15	10	20	N	L	L
Zn (200)	N	N	N	N	N	N	G(1000)	3000	700
Zr (10)	300	150	200	50	20	20	N	10	L
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement

Sample Number

	762	763	764	765	766A	766B	767	768	769
Fe %(.05)	2	.7	15	5	1	G(20)	.3	.2	20
Mg %(.02)	2	.15	2	.7	1.5	.2	.03	2	.07
Ca %(.05)	5	.2	20	3	5	.5	.15	70	.7
Ti %(.002)	.1	.1	.15	.5	.01	.03	.03	.02	.002
Mn(10)	1000	30	5000	300	500	200	N	300	700
Ag(.5)	30	.5	1	.5	20	15	N	50	1000
As(200)	N	N	N	N	N	N	N	200	1000
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	70	20	10	30	15	15	L	20	20
Ba(20)	1000	500	300	5000	1000	G(5000)	G(5000)	1000	300
Be(1)	N	10	3	3	1	3	N	N	1
Bi(10)	N	N	20	N	20	200	N	N	N
Cd(20)	N	N	N	N	N	N	N	100	30
Co(5)	7	5	20	10	N	7	N	N	10
Cr(10)	15	10	100	10	15	30	L	10	20
Cu(5)	3000	15	50	50	30	70	10	100	20000
La(20)	L	L	50	150	L	50	20	20	L
Mo(5)	N	N	7	N	N	7	N	10	N
Nb(20)	N	N	N	N	N	N	N	N	N
Ni(5)		5	20	L	5	15	L	20	5
Pb(10)	15000	10	20	30	150	1500	10	G(20000)	G(20000)
Sb(100)	500	N	N	N	N	N	N	500	3000
Sc(5)	5	L	7	5	L	L	L	L	N
Sn(10)	N	N	N	N	300	N	N	N	G(1000)
Sr(100)	200	200	500	700	L	L	G(5000)	100	N
V(10)	50	30	50	50	10	20	20	30	10
W(50)	N	N	N	N	N	200	N	N	N
Y(10)	50	L	20	15	N	L	N	N	L
Zn(200)	L	N	L	N	200	5000	N	G(10000)	G(10000
Zr(10)	300	30	200	300	N	N	10	N	N
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

ement	Sample Number								
	770	771	772	773	774	775	776	777A	777B
Fe % (.05)	3	3	2	.7	7	10	5	2	5
Mg % (.02)	.05	.7	.7	.05	1	3	.7	.2	1.5
Ca % (.05)	.15	1.5	7	.2	.5	3	.05	.5	1.5
Ti % (.002)	.007	.5	.3	.03	.3	.2	.2	.05	.5
Mn (10)	150	700	2000	200	2000	G(5000)	700	100	1000
Ag (.5)	.7	.7	2	500	.7	50	50	200	20
As (200)	N	N	N	N	N	N	N	N	300
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	20	100	30	70	200	100	200	1500	100
Ba (20)	1500	2000	2000	1500	G(5000)	500	1000	2000	1500
Be (1)	L	5	7	1	2	1.5	2	N	5
Bi (10)	N	L	10	L	N	N	N	500	70
Cd (20)	N	N	N	100	N	N	N	N	N
Co (5)	7	15	20	N	30	20	10	N	50
Cr (10)	15	70	50	10	150	150	50	10	30
Cu (5)	50	70	30	7000	30	500	30	1000	15000
La (20)	L	50	50	L	30	30	20	20	50
Mo (5)	N	N	N	30	10	N	15	20	N
Nb (20)	N	L	N	N	N	N	N	N	L
Ni (5)	10	20	15	5	100	70	50	5	20
Pb (10)	70	50	100	2000	100	5000	500	15000	15000
Sb (100)	N	N	N	1500	L	300	N	100	N
Sc (5)	N	10	10	L	20	15	7	L	10
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	200	150	200	L	150	200	N	100	150
V (10)	70	70	200	15	200	150	50	50	200
W (50)	N	N	700	L	N	N	N	L	70
Y (10)	L	50	30	L	30	15	10	N	20
Zn (200)	200	N	N	1500	N	N	N	N	N
Zr (10)	10	500	300	30	100	70	100	L	70
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

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Sample Number

	778								
Fe % (.05)	10								
Mg % (.02)	.15								
Ca % (.05)	.3								
Ti % (.002)	.05								
Mn (10)	100								
Ag (.5)	1000								
As (200)	1500								
Au (10)	N								
B (10)	20								
Ba (20)	500								
Be (1)	N								
Bi (10)	N								
Cd (20)	100								
Co (5)	N								
Cr (10)	20								
Cu (5)	300								
La (20)	L								
Mo (5)	N								
Nb (20)	N								
Ni (5)	7								
Pb (10)	10000								
Sb (100)	500								
Sc (5)	5								
Sn (10)	N								
Sr (100)	N								
V (10)	20								
W (50)	N								
Y (10)	N								
Zn (200)	2000								
Zr (10)	15								
Th (100)	N								

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

lement — Sample Number

	963	964	965	966	967	968	969		
Fe % (.05)	.7	5	2	.15	1.5	G(20)	5		
Mg % (.02)	7	.5	.05	L	.15	.1	.3		
Ca % (.05)	15	.3	.05	.05	.5	7	G(20)		
Ti % (.002)	.03	.1	.07	.005	.1	.02	.05		
Mn (10)	200	700	100	L	L	5000	500		
Ag (.5)	15	2	.7	N	N	L	.7		
As (200)	N	N	N	N	700	5000	N		
Au (10)	N	N	N	N	N	N	N		
B (10)	10	50	20	N	50	20	10		
Ba (20)	150	G(5000)	G(5000)	G(5000)	2000	5000	G(5000)		
Be (1)	N	N	N	N	1	70	N		
Bi (10)	N	N	N	N	N	N	N		
Cd (20)	50	N	N	N	N	N	N		
Co (5)	N	7	10	N	N	200	30		
Cr (10)	10	30	20	L	20	20	20		
Cu (5)	300	50	50	7	70	50	15		
La (20)	20	L	L	30	20	L	20		
Mo (5)	N	10	20	N	10	100	70		
Nb (20)	N	N	N	N	N	N	N		
Ni (5)	5	20	50	7	15	3000	150		
Pb (10)	7000	50	L	N	20	100	70		
Sb (100)	2000	N	N	N	G(10000)	500	N		
Sc (5)	L	5	5	L	5	7	5		
Sn (10)	N	N	N	N	N	N	N		
Sr (100)	N	2000	5000	G(5000)	100	L	300		
V (10)	100	150	100	10	150	150	70		
W (50)	N	N	N	N	N	N	N		
Y (10)	L	10	15	L	10	50	30		
Zn (200)	2000	N	N	N	N	5000	300		
Zr (10)	10	30	15	N	100	L	20		
Th (100)	N	N	N	N	N	N	N		

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
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18 Oct 85

Semi-Quantitative Spectrographic Analysis

lement — Sample Number

	976	977	978A	978B	979A	979B	980	981	982
Fe % (.05)	10	2	15	5	7	5	2	10	10
Mg % (.02)	1	.5	.2	.2	.15	.2	5	2	1.5
Ca % (.05)	.5	7	15	7	.2	.15	20	15	20
Ti % (.002)	.3	.03	.02	.03	.1	.1	.2	.3	.02
Mn (10)	30	200	100	200	150	200	300	G(5000)	G(5000)
Ag (.5)	.5	15	1	1	N	.7	1	20	1000
As (200)	N	200	N	N	N	N	N	N	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	500	20	50	70	70	70	50	30	L
Ba (20)	2000	5000	200	300	1000	1000	500	1000	50
Be (1)	3	N	N	1	1	N	1	5	2
Bi (10)	N	N	N	N	N	N	N	20	100
Cd (20)	N	N	G(500)	N	N	N	N	100	200
Co (5)	7	L	7	7	5	N	100	50	30
Cr (10)	150	10	20	30	50	50	100	50	30
Cu (5)	200	300	50	50	30	50	30	3000	G(20000)
La (20)	50	L	L	L	20	20	50	100	200
Mo (5)	15	30	150	20	50	20	10	50	50
Nb (20)	L	N	N	N	N	N	N	L	N
Ni (5)	50	20	20	50	30	7	70	10	50
Pb (10)	50	70	100	70	10	15	150	10000	G(20000)
Sb (100)	100	300	N	N	N	N	N	L	100
Sc (5)	15	L	L	5	10	10	7	10	L
Sn (10)	N	N	N	N	N	N	N	20	N
Sr (100)	200	L	100	100	150	150	300	700	100
V (10)	200	30	200	300	G(10000)	G(10000)	300	150	50
W (50)	N	N	N	N	N	N	N	N	N
Y (10)	50	L	L	10	15	10	30	30	30
Zn (200)	N	G(10000)	N	L	N	N	N	7000	G(10000)
Zr (10)	200	L	N	15	50	30	70	150	10
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

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18 Oct 85

Semi-Quantitative Spectrographic Analysis

ement	Sample Number								
	983	984	985	986	987	988	989	990A	990B
Fe %(.05)	2	1	20	20	15	1	2	2	G(20)
Mg %(.02)	5	.2	3	.5	.1	3	.2	1	.2
Ca %(.05)	10	1.5	20	20	2	10	10	2	1
Ti %(.002)	.1	1	.02	.05	.1	.07	.007	.3	.01
Mn(10)	G(5000)	100	300	G(5000)	1500	100	1500	70	500
Ag(.5)	N	1	N	200	100	.5	70	1.5	N
As(200)	N	N	N	200	N	N	N	N	N
Au(10)	N	N	N	N	N	N	N	N	N
B(10)	100	200	15	N	20	30	L	300	30
Ba(20)	G(5000)	2000	G(5000)	20	300	150	300	5000	500
Be(1)	7	2	N	1	N	2	N	3	3
Bi(10)	N	N	N	100	N	N	L	N	N
Cd(20)	G(500)	70	N	G(500)	300	N	150	N	N
Co(5)	2000	10	5	15	N	5	7	10	30
Cr(10)	30	70	15	15	20	15	70	100	70
Cu(5)	2000	50	15	150	1000	7	50	100	1000
La(20)	L	30	N	20	50	30	L	50	N
Mo(5)	1000	150	10	15	7	N	20	15	50
Nb(20)	N	N	N	N	N	N	N	N	N
Ni(5)	G(5000)	100	20	7	5	15	20	50	100
Pb(10)	100	20	2000	G(20000)	G(20000)	30	20000	20	20
Sb(100)	N	N	N	L	100	N	L	N	N
Sc(5)	7	5	L	L	5	L	N	10	N
Sn(10)	N	N	N	N	N	N	N	N	N
Sr(100)	500	150	500	200	300	L	100	100	L
V(10)	2000	5000	100	15	150	30	100	500	700
W(50)	100	N	N	N	N	N	N	N	N
Y(10)	20	30	N	15	30	10	N	20	200
Zn(200)	G(10000)	500	3000	G(10000)	10000	N	7000	N	200
Zr(10)	70	70	N	30	150	100	N	200	L
Th(100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

lement	Sample Number								
	991A	991B	992	993	994	995	996	997	998
Fe % (.05)	5	5	1	5	7	15	.2	3	20
Mg % (.02)	5	5	.7	7	15	1	3	3	.15
Ca % (.05)	10	10	2	15	15	3	7	7	1
Ti % (.002)	.015	.2	.01	.003	.5	.007	.01	.01	.3
Mn (10)	300	150	100	100	300	200	150	500	G(5000
Ag (.5)	2000	50	200	500	1000	500	500	150	20
As (200)	500	N	1500	N	N	N	N	N	N
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	20	50	15	L	70	L	10	20	10
Ba (20)	300	G(5000)	G(5000)	100	300	G(5000)	G(5000)	300	G(5000)
Be (1)	N	1	N	2	100	N	N	N	7
Bi (10)	N	N	N	N	G(1000)	N	N	N	N
Cd (20)	200	N	30	20	100	N	150	N	N
Co (5)	N	7	N	N	70	N	N	N	200
Cr (10)	10	100	10	20	700	10	L	20	30
Cu (5)	10000	150	300	10000	20000	500	200	30	20
La (20)	L	20	L	N	100	L	N	N	30
Mo (5)	30	5	N	N	N	N	N	N	20
Nb (20)	N	N	N	N	N	N	N	N	N
Ni (5)	7	30	7	15	200	5	5	5	30
Pb (10)	20000	1000	10000	G(20000)	15000	500	5000	500	70
Sb (100)	G(10000)	300	10000	100	10000	G(10000)	7000	1000	100
Sc (5)	N	7	N	L	20	L	N	L	5
Sn (10)	70	N	N	G(1000)	G(1000)	10	L	N	N
Sr (100)	L	100	L	L	100	500	100	N	500
(10)	300	150	100	200	200	10	70	15	50
V (50)	N	N	N	N	150	N	N	N	N
(10)	N	10	N	N	20	L	N	L	30
n (200)	1000	1500	2000	G(10000)	700	1000	5000	5000	G(10000)
r (10)	N	50	L	N	100	L	N	L	30
h (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

Element	Sample Number								
	999	1000							
Fe % (.05)	10	15							
Mg % (.02)	.15	5							
Ca % (.05)	5	7							
Ti % (.002)	.015	.002							
Mn (10)	700	1500							
Ag (.5)	2000	1000							
As (200)	700	2000							
Au (10)	N	N							
B (10)	10	N							
Ba (20)	200	100							
Be (1)	N	2							
Bi (10)	N	N							
Cd (20)	500	100							
Co (5)	N	5							
Cr (10)	20	20							
Cu (5)	5000	5000							
La (20)	L	L							
Mo (5)	N	N							
Nb (20)	N	N							
Ni (5)	5	5							
Pb (10)	G(20000)	G(20000)							
Sb (100)	10000	5000							
Sc (5)	5	L							
Sn (10)	300	1000							
Sr (100)	N	N							
V (10)	10	10							
W (50)	N	N							
Y (10)	L	L							
Zn (200)	G(10000)	G(10000)							
Zr (10)	30	N							
Th (100)	N	N							

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, L = detected, but below value shown

Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	1101	1102	1103	1104	1105	1106	1107	1108	1109
Fe % (.05)	.03	.15	.7	7	.7	.7	.1	7	3
Mg % (.02)	1.5	.07	.15	5	.05	.07	L	.05	1
Ca % (.05)	20	5	2	10	.2	.2	.15	1	3
Ti % (.002)	.03	L	.03	.2	.03	.07	.002	.07	.3
Mn (10)	20	1000	700	1500	150	50	150	300	700
Ag (.5)	N	2000	5000	10	500	N	5	7	5
As (200)	N	3000	1500	N	N	N	N	2000	500
Au (10)	N	N	N	N	N	N	N	N	N
B (10)	N	10	L	300	300	30	100	50	500
Ba (20)	30	300	150	1500	100	150	G5000	700	500
Be (1)	7	3	3	L	N	N	N	1.5	1.5
Bi (10)	N	N	L	N	N	N	N	N	N
Cd (20)	N	L	200	N	L	N	N	N	N
Co (5)	N	N	7	70	5	N	N	30	10
Cr (10)	15	L	10	30	L	N	L	L	15
Cu (5)	50	5000	15000	200	1500	7	30	1000	30
La (20)	L	L	20	L	L	20	20	20	L
Mo (5)	N	N	N	L	N	7	N	5	N
Nb (20)	N	N	N	N	N	N	N	N	N
Ni (5)	7	7	7	50	10	L	L	15	15
Pb (10)	15	2000	3000	50	70	50	L	30	100
Sb (100)	N	1500	10000	L	1000	N	N	L	N
Sc (5)	N	N	N	10	N	N	N	L	10
Sn (10)	N	N	N	N	N	N	N	N	N
Sr (100)	100	100	100	200	N	150	G5000	300	300
V (10)	15	50	30	100	30	10	20	50	200
W (50)	N	700	N	N	N	N	N	N	N
Y (10)	L	N	N	20	N	L	N	10	10
Zn (200)	N	500	10000	N	500	N	N	N	N
Zr (10)	15	L	N	30	10	50	N	30	30
Th (100)	N	N	N	N	N	N	N	N	N

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown, N = not detected at limit of detection, < detected, but below value shown.

Semi-Quantitative Spectrographic Analysis

Element — Sample Number

	1110	1111							
Fe % (.05)	3	.7							
Mg % (.02)	.2	1.5							
Ca % (.05)	7	3							
Ti % (.002)	.07	.03							
Mn (10)	3000	300							
Ag (.5)	1000	200							
As (200)	1000	1500							
Au (10)	N	N							
B (10)	N	10							
Ba (20)	150	70							
Be (1)	10	L							
Bi (10)	G1000	300							
Cd (20)	G500	150							
Co (5)	15	N							
Cr (10)	20	20							
Cu (5)	1000	7000							
La (20)	L	L							
Mo (5)	20	15							
Nb (20)	N	N							
Ni (5)	15	10							
Pb (10)	20000	2000							
Sb (100)	150	1000							
Sc (5)	5	L							
Sn (10)	10	N							
Sr (100)	300	N							
V (10)	150	30							
W (50)	300	N							
Y (10)	15	N							
Zn (200)	G10000	700							
Zr (10)	20	10							
Th (100)	N	N							

Analysis by Branch Exploration Research, U.S. Geol. Survey, Denver, Colorado
Fe, Mg, Ti reported in %, all other elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element	Sample Number 280	281	282	283	284	285	286	287	83-4 288
As (5)	N(5)	L(5)	50	170	280	G(200)	G(200)	380	60
Au (.05)	.20	.15	8.25	5.50	.05	.25	L(.05)	N(.05)	N(.05)
Sb (1)	98	105	360	1200	100	220	11	45	3
Zn (5)	75	1000	5300	G(10,000)	250	250	110	620	640

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements r[illegible] in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	289	290	291	292	293	294	295	296	297
As (5)	G(200)	G(200)	30	L(5)	N(5)	N(5)	N(5)	L(5)	10
Au (.05)	.80	2.50	.05	N(.05)	1.80	L(.05)	L(.05)	.05	L(.05
Sb (1)	340	330	7	N(1)	4	N(1)	N(1)	N(1)	N(1)
Zn (5)	350	1100	35	50	7800	160	25	50	35

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.

Atomic-Adsorbtion Analysis

Element | Sample Number

83-4

	298	299	300						
As (5)	N(5)	N(5)	55						
Au (.05)	N(.05)	N(.05)	N(.05)						
Sb (1)	N(1)	N(1)	N(1)						
Zn (5)	170	35	40						

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	356	357	358	359	360	361	362	363	364
As (5)	N(5)	10	35	N(5)	G(200)	25	5	5	10
Au (.05)	.10	270	.70	N(.05)	.25	N(.05)	N(.05)	N(.05)	1.00
Sb (1)	N(1)	N(1)	N(1)	1	29	16	2	N(1)	67
Zn (5)	310	25	60	75	1500	G(10,000)	50	35	2700

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	365	366	367	368	369	370	371	372	373
As (5)	80	20	G(200)	5	G(200)	55	80	N(5)	N(5)
Au (.05)	1.30	.50	80.50	.15	.95	.55	.60	N(.05)	.05
Sb (1)	N(1)	73	44	120	600	230	500	3	N(2)
Zn (5)	80	300	600	220	150	25	60	250	10

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elemen[illegible]ted in ppm.

Lower limits of determinations are in parentheses

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	382	383	384	385	386A	386B	387	388	389
As (5)				G200					
Au (.05)									
Sb (1)				14					
Zn (5)				G200					

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm.

Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	390	391	392	393	394	395	396A	396B	397
As (5)	G200		60		120	95	G2000	1800	80
Au (.05)					.05	N(.05)	6.0	6.7	.05
Sb (1)	2		G100		12	4	300	200	24
Zn (5)	95		5						

Analysis by B[illegible] Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	398	399	400	401A	401B	401C	402	403	404
As (5)	25	200		L(5)	20	20	10	5	N(5)
Au (.05)	N(.05)	.10		N(.05)	N(.05)	.05	27	.75	.15
Sb (1)	8	38		3	N(1)	N(1)	5	16	3
Zn (5)				50	145	35	2.5	70	20
Hg(.2)				.10					

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elemen[illegible]d in ppm.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-1

	405	406A	406B	407	408	409A	409B	410A	410B
As (5)	N(5)	10	500	5	55	L(5)	5	L(5)	10
Au (.05)	L(.05)	3.3	190	4.2	37.10	.05	.10	.10	.60
Sb (1)	10	44	300	13	140	2	2	3	3
Zn (5)	85	95	3600	25	G(2000)	95	55	55	35
Hg(.2)					G(4.0)				

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	411	412	413	414	415	416	417	418	419A
As (5)	N(5)	5	N(5)	5	380	50	G(4000)	60	N(5)
Au (.05)	.05	L(.05)	L(.05)	3.50	.65	.10	1.7	.55	N(.05)
Sb (1)	2	3	5	4	9	41	300	25	N(1)
Zn (5)	210	70	60	50	193	G(2000)	G(4000)	140	60
Hg(.2)				.55	.05	1.3			

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements [illegible]ted in ppm.

Atomic-Adsorbtion Analysis

lement

Sample Number

83-4

	419B	420	421	422	423	424	425	426	427
As (5)	15	45	5	25	20	10	15	N(5)	120
Au (.05)	1.8	.15	2.40	.65	N(.05)	N(.05)	H	L(.05)	.05
Sb (1)	27	7	N(1)	5	6	16	G(4000)	20	680
Zn (5)	35	35	5	35	15	10	60	1600	G(2000)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements [illegible] ed in ppm.

Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element 83-4

Sample Number

	428	429	430	431	432	433	434	435	436
As (5)	15	10	N(5)	10	L(5)	25	520	35	65
Au (.05)	.05	N(.05)	N(.05)	.03	.15	.30	.35	120	
Sb (1)	320	22	55	1	N(1)	6	G(1000)	100	59
Zn (5)	65	1260	10	G1000	240	40	G(2000)	260	G200

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm.

Lower limits of determination are in parentheses.

G = greater than value shown. N = not detected at limit of detection. L = detected, but below [illegible]

Atomic-Adsorbtion Analysis

Sample Number

83-4

lement	501	502	503	504	505	506	507	508	509
As (5)	N	N	10	N	15	200	N	N	5
Au (.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)
Sb (1)	5	N	6	N	4	N	N	1	1
Zn (5)	G1000	40	35	45	N(5)	400	20	N	20

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements [illegible]d in ppm.

Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number 83-4

	510	511	512	513	514	515	516	517	518
As (5)	L(5)	210	5	5	5	N	40	N	80
Au (.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	.05	N(.05)	N(.05)
Sb (1)	N(1)	600	5	N	1	1	85	8	31
Zn (5)	30	380	5	N(5)	N	15	220	230	680

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

	519	520	521	522	523	524	525	526	527
	83-4							83-4	
As (5)	15	15	5	L(5)	N	5	N	10	5
Au (.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)
Sb (1)	10	230	1	N	2	N	N	N	18
Zn (5)	G1000	200	25	5	N	N	N	250	10

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element 83-4 Sample Number

	528	529	530	531	532	533	534	535	536
As (5)	N	5	N	N	5	10	10	L(5)	220
Au (.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)				
Sb (1)	N	N(1)	N	1	2	5	N(1)	N(1)	35
Zn (5)	N	370	5	N(5)	N	G(200)	G(200)	40	G(200)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-Y

	601	602	603	604	605	606	607	608	609
As (5)							N(5)	60	25
Au (.05)							N(.05)	N(.05)	N(.05)
Sb (1)							N(1)	5	5
Zn (5)							40	340	680

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-1

	610	611	612	613	614A	614B	615A	615B	616
As (5)	15	5	N(5)	15	15	10	55	N(5)	15
Au (.05)	H	N(.05)	N(.05)	L(.05)	L(.05)	.05	.10	N(.05)	15
Sb (1)	G4000	G(1000)	G(1000)	G4000	130	90	70	4	15
Zn (5)	1600	70	N(5)	100	500	15	5	40	50
Hg (.2)		.60	.55						

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

lement — Sample Number

83-4

	617	618	619	620	621	622A	622B	623	624
As (5)	L(5)	L(5)	5	10	80	10	10	L(5)	N(5)
Au (.05)	L(.05)	.05	N(.05)	.15	N(.05)	.05	N(.05)	N(.05)	L(.05)
Sb (1)	180	45	G(1000)	320	G(1000)	240	3	34	L(2)
Zn (5)	70	65	30	600	1100	15	25	70	35
Hg(.2)			.15		.65			.23	

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-1

	625	626	627	628A	628B	629	630	631	632
As (5)	1300	5	100	G(1000)	40	40	N(5)	740	10
Au (.05)	2.4	.30	N(.05)	.05	N(.05)	N(.05)	N(.05)	.05	150
Sb (1)	54	25	60	G(1000)	170	85	30	62	5
Zn (5)	400	15	5	G(2000)	170	85	30	800	5

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

lement — Sample Number

83-4

	633A	633B	634A	634B	634C	635	636	637	638
As (5)	35	5	N(5)	N(5)	N(5)	N(5)	50	N(5)	800
Au (.05)	N(.05)	.05	.10	.05	.05	L(.05)	N(.05)	.05	N(.05)
Sb (1)	16	27	4	3	5	240	160	500	90.
Zn (5)	440	100	25	L(5)	5	30	500	2300	750
Hg(.2)	.50						.50		1.1

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements in ppm.
Lower limits of determination are in parentheses.
G = greater than value shown. N = not detected

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	639	640	641	642	643	644	645	646	647
As (5)	N(5)	80	N(5)	N(5)	70	200	25	100	N(5)
Au (.05)	4.01	2.30	L(.05)	.05	.05	N(.05)	N(.05)	.05	N(.05)
Sb (1)	20	210	10	7	4	100	N(1)	N(1)	N(5)
Zn (5)	40	G(2000)	5	30	165	200	5	50	40
Hg(.2)		G(4.0)			.45				

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elem[illegible]orted in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

lement

Sample Number

83-4

	648A	648B	649	650	651	652	653	654	655
As (5)	N(5)	5	5		20				
Au (.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	L(.05)	L(.05)	.20
Sb (1)	4	N(1)	N(1)	N(1)	10	N(1)	8	N(1)	20
Zn (5)	850	45	5	10	45	35	80	800	300
Hg(.2)	.25				.05				

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements [illegible]ed in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	656	657	658	659	660A	660B	661A	661B	662A
As (5)	400	55	45	50	30	5	5	35	20
Au (.05)	50	N(.05)	N(.05)	57.50	.05	N(.05)	N(.05)	L(.05)	N(.05)
Sb (1)	G(1000)	15	N(.05)	25	100	25	2	460	N(1)
Zn (5)	1160	60	G(2000)	35	75	80	200	G(2000)	45
Hg(.2)			.55					.45	

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm.

Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

.lement

Sample Number

83-4

	663	664A	664B	665	666	667	668A	668B	669
As (5)	200	G(1000)	450	30	G(1000)	170	N(5)	N(5)	95
Au (.05)	2.65	41.50	1.75	.25	.65	1.05	N(.05)	N(.05)	.25
Sb (1)	120	500	100	3	100	G(1000)	10	12	4
Zn (5)	30	900	200	220	1050	130	20	20	1500

Analysis by Br[illegible]h Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements [illegible] in ppm.

Lower limits of determination are [illegible]

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	670	671	672	673	674	675	676	677	678
As (5)	35	N(5)	N(5)	100	G2000	G2000			
Au (.05)	N(.05)	N(.05)		.10	2.3	.90			
Sb (1)	2	N(1)	N(1)	140	670	50			
Zn (5)	5	75	70						

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elem[illegible]orted in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Sample Number 83-4

lement	728	729	730	731	732	733	734	735	736A
As (5)	5	40	5	N(5)	90	200	480	400	40
Au (.05)	N	N	N(.05)	N(.05)	.15	.05	N(.05)	.05	.10
Sb (1)	N	N	40	4	80	G(4000)	80	G(4000)	600
Zn (5)	60	50	G(2000)	430	G(4000)	1800	G(2000)	700	4000
Au Sw	10.00 g	10.00 g							
Hg (.2)			2.0	.40					

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element	Sample Number 83-4								
	736B								
As (5)	85								
Au (.05)	.10								
Sb (1)	720								
Zn (5)	G(4000)								

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	737	738	739	740	741	742	743	744A	744B
As (5)	670	25	G(4000)	670	10	800	1500	600	25
Au (.05)	N(.05)	.05	N(.05)	N(.05)	L(.05)	(.05)	N(.05)	.05	.05
Sb (1)	80	76	380	37	13	9	6	6	3
Zn (5)	G(2000)	4000	600	1270	25	500	3200	G(2000)	140

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All element[illegible]orted in ppm.

Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element	Sample Number 83-4								
	~~742~~	742X							
As (5)	~~5(5)~~	700							
Au (.05)	~~.05~~	N(.05)							
Sb (1)	~~N(1)~~	10							
Zn (5)	~~5~~	460							
Hg(.2)		G(4.0)							

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements [illegible] in ppm.

Atomic-Adsorbtion Analysis

Element — Sample Number 83-4

	745	746	747	748	749	750	751	752	753
As (5)	N(5)	200	25	65	350	1200	15	25	20
Au (.05)	N(.05)	(.05)	L(.05)	.25	N(.05)	L(.05)	N(.05	L(.05)	N(.05)
Sb (1)	3	6	120	1000	G(1000)	120	8	79	4
Zn (5)	110	G(4000)	G(4000)	4000	700	G(4000)	85	90	G(2000)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.

Atomic-Adsorbtion Analysis

lement

Sample Number

83-4

	754A	754B	755A	755B	756	757	758	759	760A
As (5)	20	70	20	40	800	10	20	55	65
Au (.05)	N(.05)	.35	N(.05)	.20	N(.05)	L(.05)	N(.05)	N(.05)	N(.05)
Sb (1)	270	8	4	10	110	3	400	840	320
Zn (5)	140	G200	40	15	145	30	30	350	G(2000)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element	Sample Number 83-4								
	760B								
As (5)	15								
Au (.05)	N(.05)								
Sb (1)	27								
Zn (5)	860								

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element

Sample Number

83-4

	761	762	763	764	765	766A	766B	767	768
As (5)	230	45	5	N(5)	5	N(5)	30	15	60
Au (.05)	.45	.05	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)	N(.05)
Sb (1)	G(1000)	30	7	2	3	3	6	4	200
Zn (5)	520	310	5	35	40	210	G(2000)	50	G(2000)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm

Atomic-Adsorbtion Analysis

lement	Sample Number 83-4								
	768X								
As (5)	G(1000)								
Au (.05)	.10								
Sb (1)	G(1000)								
Zn (5)	G(2000)								
Hg(.2)	G(4.0)								

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements [illegible]ted in ppm.
Lower limits of determination are in parentheses

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	769	770	771	772	773	774	775	776	777A
As (5)	760	40	N(5)	N(5)	40	25	45	N(5)	65
Au (.05)	.35	N(.05)	N(.05)	L(.05)	L(.05)	N(.05)	L(.05)	.15	.40
Sb (1)	13	7	3	3	1100	10	120	21	80
Zn (5)	G(2000)	80	50	50	2600	65	85	35	55

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm

Atomic-Adsorbtion Analysis

Element 83-4

Sample Number

	777B	778	779	780	781	782	783	784	785
As (5)	270	1100	50	35	5		G200		
Au (.05)	L(.05)	1.2	N(.05)	N(.05)	N(.05)		.30		
Sb (1)	8	240	18	210	1		G100		
Zn (5)	120	2600	240	90	220		5		

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm.

Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	956	957	958	959	960	961	962	963	964
As (5)	780	710	110	220	45	20	55	65	5
Au (.05)	N	N(.05)	N	N	0.10	N	L(.05)	L(.05)	.10
Sb (1)	G1000	16	22	G1000	530	340	560	G(1000)	6
Zn (5)	G2000	1600	340	G2000	850	30	G1000	G(2000)	60
Au Sw	10.00 g	10.00 g	10.00 g	10.00 g	10.00 g	10.00 g			

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	965	966	967	968	969	970	971	972	973
As (5)	5	N(5)	280	G(4000)	90	20	15	60	1400
Au (.05)	.05	N(.05)	N(.05)	.05	L(.05)	0.05	N	L	N
Sb (1)	5	2	G(1000)	340	110	19	13	760	G1000
Zn (5)	100	10	40	G(4000)	300	15	20	50	G2000
Au Sw						10.00 g	10.00 g	10.00 g	10.00

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.
G = greater than the above, N = not detected

Atomic-Adsorbtion Analysis

Element — Sample Number

83-4

	974	975	976	977	978A	978B	979A	979B	980
As (5)	70	40	5	130	10	5	25	20	25
Au (.05)	N	N	N(.05)	.05	N(.05)	N(.05)	N(.05)	L(.05)	N(.05)
Sb (1)	10	160	110	160	20	5	6	6	10
Zn (5)	G2000	G2000	N(.05)	G(2000)	1180	120	40	25	210
Au Sw	10.00 g	10.00 g							

Analysis by Brai[illegible]oloration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

lement

Sample Number

83-4

	981	982	983	984	985	986	987	988	989
As (5)	15	45	105	L(5)	60	130	80	25	5
Au (.05)	.05	.05	.05	N(.05)	N(.05)	.10	.20	N(.05)	N(.05)
Sb (1)	70	75	47	24	1	38	99	7	4
Zn (5)	G(4000)	G(4000)	G(2000)	1090	G(2000)	G(2000)	G(4000)	100	G(2000)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado

All elements reported in ppm

Atomic-Adsorbtion Analysis

Element — Sample Number 83-4

	990A	990B	991A	991B	992	993	994	995	996
As (5)	5	85	300	120	1100	60	300	30	55
Au (.05)	.05	N(.05)	.10	.20	.05	.05	.05	N(.05)	.10
Sb (1)	4	N(1)	G(4000)	340	G(4000)	16	G(4000)	G(4000)	G(4000)
Zn (5)	30	370	2000	4000	4000	G(4000)	1200	1300	G(4000)

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Sample Number

Element	53-11								
	997	998	999	1000					
As (5)	5	20	200	1600					
Au (.05)	.10	.05	.45	.55					
Sb (1)	420	10	G(4000)	2100					
Zn (5)	G(400)	1600	G(4000)	G(4000)					

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elemen[illegible]orted in ppm.
Lower limits of determination are in parentheses.

Atomic-Adsorbtion Analysis

Element — Sample Number

83-1

	1100	1101	1102	1103	1104	1105	1106	1107	1108
As (5)							10		
Au (.05)							N(.05)		
Sb (1)							1		
Zn (5)							20		

Analysis by Branch Exploration Geochemistry, U.S. Geol. Survey, Denver, Colorado
All elements reported in ppm.