

Well Number SR2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
15 - 20 ft	light olive gray	heterogeneous alluvium; weathered dioritic material, minor aplitic material, felsic fragments (qtz, plagioclase)	Fe-oxide, stains, pseudomorphs, chloritizing biotite, hornblende		
25 to 30 ft	yellowish gray	heterogeneous alluvium; some well-rounded grains, tuffaceous material, ash fall tuffs, minor rhyolite, minor altered diorite, weathered gabbro, felsic fragments	Fe-oxide staining, limonite & hematite, CaCO <sub>3</sub> & clay aggregates, calcite coatings, minor epidote		
30 to 35 ft	yellowish gray	large-gravel size heterogeneous alluvium, well rounded grains, finer grained gabbroic material, weathered coarse-grained diorite some siliceous, tuffaceous volcanics (andesitic)	Fe-oxide staining, limonite & hematite		
40 to 45 ft	pale yellowish brown	heterogeneous alluvium; slight decrease in grain size, fine-grained volcanics, andesitic & basaltic andesites, dioritic material, siliceous volcanics (tuffs), quartzite.	Fe-oxide staining,		
50 to 55 ft	moderate yellowish brown	heterogeneous alluvium; felsic fragments, minor tuffaceous material, weathered diorite, minor dioritic material (qtz, plag. & mafic), some fresh coarse-grained rock, minor aplite, fine grained volcanics (andesite, basaltic andesite)	Fe-oxide staining, pseudomorphs, minor epidote (replacing hornblende)		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
90 to 95 ft	light brown	heterogeneous alluvium; minor aplite, weathered altered diorite (coarse-grained), felsic fragments (qtz, plag. & k-spar) minor tuffaceous material, minor fine-grained volcanic fragments (basaltic andesite)	Fe-oxide stains, pseudomorphs, chloritization of some biotite and hornblende, others are fresh	x	
125 to 130 ft	light olive gray	heterogeneous alluvium; minor gabbroic material, altered siliceous, tuffaceous material (with pyrite), some coarse-grained, weathered dioritic fragments, minor basalt, andesite (fine-grained), felsic fragments	Fe-oxide, limonite & hematite, minor epidote, minor pyrite (on siliceous & tuffaceous fragments), calcite cemented aggregates		
135 to 140 ft	light olive gray	heterogeneous alluvium; minor rhyolitic material, andesitic basalt and andesitic rock, tuffs, altered gabbro?, minor altered coarse-grained granodiorite	Fe-oxides, pyrite, Calcite cement, minor iceland spar calcite		
140 to 145 ft	greenish gray	heterogeneous alluvium; pyrite-rich, abundant gray altering dioritic fragments, andesite & basalt (fine-grained), quartzite fragments, fine-grained volcanics minor tuffaceous rhyolitic material	abundant pyrite (primary), minor epidote, minor Fe-oxides.	x	
145 to 150 ft	moderate yellowish brown	heterogeneous alluvium; dioritic (fine-grained) material, abundant coarse-grained felsic fragments (k-spar, plag & qtz), some fine-grained volcanics, minor tuffaceous volcanic rock	pyrite, Fe-oxides		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
160 to 165 ft	light brown	heterogeneous alluvium; abundant qtz-rich tuffaceous material, some dark gray gabbroic to dioritic rock (mafics altered), minor felsic fragments, quartzite pebbles, minor coarse-grained stained? or altered? granitics	minor sulfur, minor minor Fe-oxides & stains	x	
170 to 175 ft	moderate greenish gray	semi-heterogeneous alluvium; almost all gray, altered diorite?, no fresh mafics, abundant plag, abundant felsic fragments (plag - qtz - k-spar). Boulder?	pyrite, chalcopyrite minor sulfur, epidote, calcite, minor calcite and clay aggregates, minor Fe-oxides		
195 to 200 ft	moderate greenish gray	heterogeneous alluvium; abundant calcite and clay aggregates, abundant gray, fairly coarse-grained plag & qtz & altered mafics?, no fresh mafics, altered diorite?	pyrite aggregates (secondary?), minor chalcopyrite, sulfur minor Fe-oxides, minor epidote	x	
200 to 205 ft	light olive gray	heterogeneous alluvium; abundant calcite & clay aggregates of felsic fragments, tuffaceous material, minor rhyolite, gray altered diorite?, some chloritizing mafics, some greenish brown coarse-grained Fe-stained k-spar plag & qtz (scapolitized granite?)	Fe-oxides, minor sulfur, pyrite		
220 to 225 ft	moderate green	heterogeneous alluvium; abundant gray coarse-grained plag, qtz & chloritized or replaced mafics, some fine-grained fragments, siliceous volcanics (andesite). Boulder?	pyrite, epidote, sulfur, very minor Fe-oxides	x	

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
240 to 245 ft	moderate yellowish brown	heterogeneous alluvium; abundant felsic fragments (qtz, plag & k-spar), minor tuffaceous rock, some altered diorite?, no fresh mafics, some coarse-grained Fe-stained plag & k-spar & qtz (scapolitized granite?)	calcite, Fe-oxide staining, pseudomorphs, minor calcite & clay aggregates, minor sulfur		
260 to 265 ft	pale yellowish brown	heterogeneous alluvium; abundant coarse-grained plag, k-spar & qtz & altered mafics (scapolitized granite?), altered diorite?, abundant stained felsic fragments	Fe-oxidation, staining, pseudomorphs, minor sulfur & epidote	x	
280 to 285 ft	light brown	heterogeneous alluvium; abundant calcite & clay cemented aggregates of lithic & felsic fragments, some gray altered diorite, some greenish (altered?) diorite	Fe-oxides, stains, pseudomorphs, minor epidote		
305 to 310 ft	light olive gray	heterogeneous alluvium; aggregates of lithic & felsic material, greenish yellow mafic-free igneous rock (leuco-granite?), altered diorite or granite?, gray altered diorite	secondary qtz?, Fe-oxides, stains, pseudomorphs, minor sulfur	x	
325 to 330 ft	light olive gray	heterogeneous alluvium; 75% <sup>+</sup> is white to light green coarsely crystalline mafic-free qtz (Qtzite boulder?), some secondary qtz growth, minor altered diorite, chloritized mafics	secondary qtz?, Fe-oxides, stains, pseudomorphs, minor sulfur	x	

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
350 to 355 ft	yellowish gray	heterogeneous alluvium; abundant felsic fragments, some calcite cemented aggregates of lithic & felsic material, abundant small grains, minor siliceous volcanic material, altered diorite & coarse-grained greenish k-spar, plag & qtz (scapolitized granite?)	Fe-oxidation, pseudomorphs, staining, minor epidote, chloritizing mafics (hornblende & epidote)		
360 to 365 ft	light olive gray	heterogeneous alluvium; felsic fragments, abundant qtz fragments, aplite, gray altered diorite (chloritizing hornblende & biotite), greenish coarse-grained altering granitic material	Fe-oxide stains, pseudomorphs, chloritizing biotite & hornblende, epidote, sulfur, minor qtz replacements		
375 to 380 ft	light olive gray	heterogeneous alluvium; felsic fragments, gabbroic material (altered andesite or basalt?), qtzite fragments & altered granitic rock with abundant Fe staining, altered diorite, fine-grained volcanics (andesite-basalt)	chloritized mafics, minor sulfur, Fe-oxides, minor epidote, magnetite		
395 to 400 ft	light olive gray	heterogeneous alluvium; altered granodioritic material (weathered), mafic free aplite, felsic fragments (qtz, plag & k-spar)	Fe-oxidation, staining, pseudomorphs, cinnabar, minor sulfur, chloritizing mafics (biotite), minor epidote?		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
400 to 405 ft	moderate yellowish gray	heterogeneous alluvium; felsic material, greenish coarse-grained altered granitic rock, minor gabbro and diorite (fine-grained), some coarse-grained altering diorite or granodiorite, qtz sand & minor siliceous volcanics (tuffs)	Fe-oxides, stains, pseudomorphs, cinnabar?, minor sulfur, epidote, calcite, chloritization, magnetic hematite		
405 to 410 ft	moderate yellowish gray	heterogeneous alluvium; abundant felsic grains (qtz, plag & k-spar), minor gabbroic-dioritic rocks (fine-grained), minor siliceous volcanics, mafic-free(?) altered diorite (coarse-grained, mafics altered?), dolomite or coarse-grained limestone	Fe-oxidation, pseudomorphs, staining, chloritization, minor sulfur, calcite, minor epidote, dolomite		
430 to 435 ft	moderate yellowish gray	heterogeneous alluvium; felsic fragments, stained altered coarse-grained granitic material, qtz-plag-k-spar & altered mafic rock fragments, clay development	Fe-oxidation, staining, limonite & hematite pseudomorphs, minor calcite, chloritization of micas, minor pyrite, seritization?		
445 to 450 ft	greenish gray	heterogeneous alluvium; bleaching?, abundant tuffaceous, rhyolitic, siliceous volcanic material, weatering, altering to calcite or aragonite?, calcite coatings, altered diorite gray no fresh mafics, some coarse-grained stained granitics	pyrite, chalcopyrite, minor sulfur, epidote, Fe-oxide stain abundant calcite or aragonite?, calcite aggregates		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
450 to 455 ft	greenish gray	heterogeneous alluvium; calcite cemented aggregates of lithic & felsic fragments, gray altered diorite (no fresh mafics, calcite replacing plag?), coarse-grained greenish stained granitic rock	pyrite, Fe-oxides, abundant calcite (aragonite?), minor sulfur, epidote		
455 to 460 ft	light greenish gray	heterogeneous alluvium; increase in calcite, calcite replacing? plag or coating it, felsic fragments, calcite cemented aggregates, altered diorite (gray, no mafics), some stained coarse-grained granite (scapolitized)	abundant calcite (opaque), minor sulfur, epidote, Fe-oxidation, minor pyrite, pyrrhotite	x	
460 to 465 ft	light greenish gray	heterogeneous alluvium; Boulder? abundant gray quartzite, felsic fragments, minor stained altered coarse-grained granite (scapolitized?)	calcite (opaque), minor pyrite, sulfur, epidote, Fe-oxidation, chloritization	x	
465 to 470 ft	variable	heterogeneous alluvium; Boulder? Bedrock? abundant small sand-sized subrounded gray grains of plag & qtz, possible altered diorite, some grains with chloritized mafics, mostly plag & qtz, clay spattered	calcite, pyrite, Fe-oxides, staining	x	
475 to 480 ft	variable	heterogeneous alluvium; abundant pink aplite (coarse-grained), altered dioritic material (mafic chloritizing), some siliceous volcanics	pyrite, Fe-oxidation, pseudomorphs, seritization?, minor sulfur, calcite	x	

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
485 to 490 ft	light greenish gray	Bedrock or Boulder?, abundant gray altering qtz diorite material, plag is altering to clay, mafics to chlorite	pyrite, minor epidote	x	



Well Number SR1-A (SR2-A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
10 - 15 ft	pale yellowish brown	heterogeneous alluvial material, angular fragments, green, gray, brown volcanics (andesite mainly) quartz-feldspathic material, minor gabbroic rock - gabbro may be altered - mafic volcanics (mafics to chlorite) andesite, possible propylitized.	calcite coatings Fe-oxides (limonite limonite and hematite - pseudomorphs of hematite after pyrite. Limonitic coatings.		
30 - 35	variable (prewashed)	heterogeneous alluvial material- angular to subrounded grains of ... gabbroic material, volcanics (mafic) quartz plagioclase - altering mafics, - K-spar fragments.	possible caliche zone CaCO <sub>3</sub> - coatings, cementing aggregates of lithic material Fe-oxides - limonite- hematite (manganese?) deudrites-pyrolusite platinum.		
40 - 45	yellowish gray	heterogeneous alluvium - angular to subround gabbro fragments, yellow-green-gray volcanic? material. Quartz-plagioclase-K-spar-mafics fragments. Some fine-grained andesite.	CaCO <sub>3</sub> coatings Fe-oxides - limonite and hematite Epidote (minor) Manganese dendrites (pyrolucite)		
65 - 70	pale brown	heterogeneous alluvium: angular to subrounded gabbro fragments quartz-feldspathic and biotite and hornblende material (individual grains of). Minor siliceous volcanic material (tuffs). Light brown clay silt on grains.	Fe oxides-hematite pseudomorphs and limonite. Epidote- minor. Minor CaCO <sub>3</sub> .		
95 -100	pale yellowish brown	heterogeneous alluvium: angular to poorly rounded fragments. Minor gabbroic-dioritic material (weathering). Felsic material-altering mafics-some siliceous volcanics (tuffs)	Fe-oxides-hematite, limonite Epidote-minor cinnabar(?)		

Well Number SR1-A (SR2-A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
120-125	light olive gray	heterogeneous alluvium-angular to rounded andesite siliceous volcanics/diorite abundant felsic fragments quartzite fragments	pyrite-fresh-on diorite fe-oxides-limonite and hematite. Clay development on diorite? chloritization, sericitization of plagioclase? in some grains.		
135-140	variable (pre-washed)	heterogeneous alluvium-siliceous volcanics more abundant (welded tuffs and or rhyolite), abundant felsic fragments and dioritic material-often altered, minor mafic volcanics (andesites)	very minor pyrite Fe-oxides-limonite and hematite, minor calcite, chloritized mafics (biotite hornblende)		
145-150	pale yellowish brown	heterogeneous alluvium-minor gabbroic material. Minor mafic volcanics. Dioritic material-minor siliceous volcanics. Felsic fragments-altering mafics.	epidote (minor) Fe-oxides (limonite and hematite)		
150-155	dark yellowish brown	heterogeneous alluvial material. abundant mafic-volcanic material (andesitic), abundant felsic fragments (qtz-plag-K-spar?) minor siliceous volcanics-altering to clay?	Fe-oxides-hematite, limonite, Cinnabar? altering mafics, to chlorite		
175-180	moderate yellowish brown	heterogeneous alluvial or minor siliceous volcanics - tuffs and rhyolites, minor quartzites, clay and CaCO <sub>3</sub> cemented aggregates, felsic fragments and greenish brown coarse-grained granitic material-appears altered, minor andesite and diorite (weathering)	Fe-oxides (limonite and hematite, Iceland spar (minor), epidote (minor), chloritizing biotite and hornblende		

Well Number SR1-A (SR2-A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
205-210	pale yellowish brown	heterogeneous alluvium-much smaller average grainsize (more uniform) felsic fragments (grains of quartz-plagioclase-and K-spar) andesitic and dioritic material (weathered mafics) minor rhyolite or tuffaceous material	chloritizing biotite Fe-oxides-limonite, hematite, sulfur, CaCO <sub>3</sub> -cementing aggregates of lithic fragments, epidote (minor)		
230-235	moderate yellowish brown	heterogeneous alluvium-CaCO <sub>3</sub> and clay loosely cemented aggregates, andesite and dioritic material (granodiorite), greenish brown coarse grained granite (scapolitized?), felsic fragments (quartz-plagioclase-K-spar-mafics)	CaCO <sub>3</sub> cement of lithic aggregates, Fe-oxides-pseudomorphs, chloritizing biotite, hornblende, epidote very minor		
270-275	moderate yellowish brown	heterogeneous alluvial material (brownish yellow washed), abundant felsic material, greenish-yellowish brown coarse grained igneous rock-granitic (scapolitized), minor mafic volcanic material	Fe-oxides - coatings, pseudomorphs, CaCO <sub>3</sub> and clay cemented aggregates, lithic material, chloritizing mafics-biotite-amphibole, epidote (minor)		
280-285	greenish gray	heterogeneous alluvium: pyritized abundant felsic material (quartz-plagioclase-K-spar-biotite) pyrite-disseminated, abundant gray-dioritic material (mafics replaced) altered	pyritization prominent CaCO <sub>3</sub> and clay cemented aggregates, sulfur } minor chalco epidote } Fe-oxides		
290-295	greenish gray	heterogeneous alluvium, some felsic fragments (quartz, plagioclase, minor K-spar) andesitic and dioritic clay covered material, abundant plagioclase dominated felsic igneous rock-seems mafic free (altered)	pyritization prominent, CaCO <sub>3</sub> and clay aggregates, sulfur, pyrrhotite? (minor) epidote (very minor)		

Well Number SR1-A (SR2-A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
295-300	greenish gray	heterogenous alluvium-gray (altering?) dioritic-andesitic material (mafics altering), felsic material-grains of quartz-plagioclase-minor K-spar), andesite may be partially propylitized, minor gabbro?	Fe-oxides, CaCO <sub>3</sub> and clay aggregates, pyritization, sulfur-minor, minor epidote		
300-305	light olive gray	heterogeneous alluvium, numerous felsic fragments (quartz-plagioclase-K-spar), quartz-feldspathic (plagioclase) material, felsic minor mafic volcanics and granodiorite	Fe-oxides-pseudomorphs CaCO <sub>3</sub> and clay cemented aggregates, minor sulfide content, chloritizing biotite, minor epidote		
320-325	light brown	heterogeneous alluvium, quartz-feldspar (mainly plagioclase)-biotite rich rock, andesitic material-greenish gray dioritic-chloritizing mafics, felsic material, (scapolitized granite?) - coarse grained igneous rock.	chloritizing Fe-mags, Fe-oxide coatings, pseudomorphs, minor pyrite		
325-330	light olive gray	heterogeneous alluvium: abundant granodioritic (fresh) material, boulder? felsic frags-quartz-plagioclase	sulfur abundant, Fe-oxides, epidote-replacing hornblende? cinnabar(?), minor pyrite		
350-355	pale yellowish brown	heterogeneous alluvium: felsic material, granodiorite fragments, coarse-grained quartz-feldspathic rocks, minor andesite to basaltic andesite	Fe-oxides-pseudomorphs epidote, sulfur		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
375-380	greenish gray	heterogeneous alluvium: gray-plagioclase rich, mafic free igneous rock (equigranular), felsic material (altered diorite or gabbro) possibly andesite	pyrite, chalcopyrite, Fe-oxides, limonite-hematite, CaCO <sub>3</sub> and clay aggregates		
395-400	greenish gray	heterogeneous alluvium: minor gabbro, andesite, felsic fragments (quartz, plagioclase, K-spar, dioritic and K-spar (weathered), greenish brown coarse grained igneous rock (scapolitized granite?) (plagioclase-mafic K-spar) appears altered	CaCO <sub>3</sub> and clay? coating and cement, Fe-oxides, chloritizing mafics, epidote		
420-425	light olive gray	heterogeneous alluvium: quartz feldspathic felsic fragments, andesite, material felsic, gabbro diorite, appears altered, coarse grained plagioclase and quartz and K-spar and altered biotite, gray-plagioclase rich-mafic free igneous rock	Fe-oxides, calcite, CaCO <sub>3</sub> and clay aggregates, chloritizing of Fe-mags, minor sulfides, minor epidote, sulfur		
450-455	light brown	heterogeneous alluvium, andesite (minor), felsic fragments, altered diorite or gabbro, coarse-grained feldspar-rich, quartz and K-spar rock - always seems to be stained	Fe-oxides - limonite-hematite, CaCO <sub>3</sub> and clay aggregates, minor sulfur and epidote		
485-490	light olive gray to greenish gray	heterogeneous alluvium, abundant greenish-gray coarse grained andesitic material with altered mafics appears to be propylitized felsic fragments	Fe-Oxides-limonite, minor hematite, sulfur-minor, minor epidote, minor chloritization		

Well Number SRL-A (SR2-A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
495-500	pale yellowish brown	heterogeneous alluvium, felsic fragments (quartz, plagioclase, K-spar), minor gabbroic material and andesite, coarse grained greenish, feldspar and quartz and biotite, altering granodiorite or granite	Fe-oxides, minor sulfur-epidote?, chloritizing mafics, calcite		
520-525	moderate yellowish brown	heterogeneous alluvium; abundant felsic fragments, minor andesitic material, altered granitic greenish-gray (coarse-grained) rock, minor siliceous volcanics. Weathered granodiorite	Fe-oxides, pseudomorphs, minor sulfur, epidote, chloritizing mafics		
555-560	pale yellowish brown	heterogeneous alluvium; coarse-grained (stained) plag & K-spar & qtz & biotite, abundant diorite & granodioritic material - slightly altered, mafics chloritizing-plag slightly altered, felsic fragments	Fe-oxides- minor sulfur-epidote calcite, minor pyrite		
580-586	light brown	heterogeneous alluvium; abundant felsic fragments, minor dioritic & andesitic material. Grey-red-dish-greenish volcanics(?) or igneous- relatively fine-grained (andesitic), some coarse-grained-stained plag & K-spar, qtz & biotite	chloritized biotite, hornblende, cinnabar? Fe-oxides, minor sulfur, epidote		
595-600	pale yellowish brown	heterogeneous alluvium; mainly felsic frags, andesites and granodiorite (weathering) minor siliceous volcanics (tuffs) minor-coarse-grained plag & qtz & K-spar & biotite (scapolitized granite?)	Fe-oxides-pseudomorphs-sulfur, cinnabar?, minor epidote		

Well Number SRIA (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
610-615	pale brown	heterogeneous alluvium; andesite and altered granodiorite, minor gabbro, minor siliceous volcanics (tuffs), minor coarse grained plag & K-spar & qtz (scapolitized), mostly felsic fragments	chloritization prominent, some sulfur, minor sulfide, Fe-oxides, staining pseudo. Calcite-icelandspar.		
635-640	moderate yellowish brown	heterogeneous alluvium; felsic fragments, altering granodioritic material, some andesite (propylitizing), some plag & qtz rich (gray), mafic free material, minor-coarse-grained (greenish-gray) plag & K-spar & qtz (scapolitized granite)	Fe-oxides, pseudomorphs, chloritized mafics		
665-670	moderate brown	heterogeneous alluvium (felsic material), granodioritic material, aplitic rock, greenish andesite? (propylitized), minor coarse-grained (greenish) plag & K-spar etc.	Fe-oxides, minor pyrite, cinnabar, apalite?		
670-675	greenish gray	heterogeneous alluvial material; felsic material - fragments of qtz, plag, K-spar, granodioritic material, minor gabbro & andesite scapolitized granite?, minor aplite	CaCO <sub>3</sub> & clay aggregates, fresh sulfides Fe-oxides, chloritized mafics, some sulfur, calcite-icelandspar, apalite?, epidote, minor cinnabar?	x	x
675-680	light gray	heterogeneous alluvium; felsic fragments, granodioritic fragments, some andesite, siliceous volcanics (tuff) minor greenish scapolitized granite?, minor leucogranite (apalite)	Cinnabar?, Fe-oxides, limonite/hemitite chloritized mafics, sulfides, pyrite, sulfur		

Well Number SR1A (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
680-685	light gray	heterogeneous alluvium; granodioritic minor gabbroic fragments, abundant leucogranite?, qtz & plag, few mafics some felsic material & mafic volcanics	chloritized mafics, pyrite, Fe-oxides, sulfur		
690-695	light olive gray	almost homogeneous - boulder? some granodioritic material - altering abundant densely crystalline, plag & qtz, & mafics, grayish green (andesite- propylitized?) mafics strongly altered or leucogranite	pyrite, minor Fe-oxides, cinnabar (very minor)	x	
705-710	pale yellowish brown?	heterogeneous alluvium - felsic material, tuffaceous sandstone (minor), dioritic material (weathered), minor aplite fragments, siliceous volcanics (minor) and some andesitic material	calcite - icelandspar Fe-oxides, pyrite		
720-725	pale brown	heterogeneous alluvium(?), small average grain size, abundant coarse grained plag & qtz & mafic, may be altered granodiorite, minor andesite and tuff	minor pyrite, Fe-oxides, limonite, hematite, cinnabar?		
740-745	variable greenish gray	heterogeneous alluvium?, some andesite, abundant coarse-grained plag & qtz & very few chloritized mafics, altered granodiorite?, minor siliceous volcanics	Fe-oxides, sulfur, pyrite, chloritizing mafics, cinnabar?		



Well Number SRL (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
760-765	light olive gray	heterogenous sample; bedrock? abundant coarse-grained granodiorite, mafics increased in abundance, freshness, abundant plag & mafic & Qtz, minor aplite, stained felsic, lithic fragments	pyrite, chalcopyrite? cinnabar?, Fe-oxides	x	
785-790	light olive gray	heterogeneous alluvium(?) bedrock?, abundant plag fragments & Qtz, altered mafics (chloritized) in a coarse-grained plagioclase-rich granodiorite.	pyrite, Fe-oxides, cinnabar, sulfur		
810-815	light olive gray	heterogeneous alluvium(?), some granodiorite that is altering andesites and minor gabbro, siliceous volcanic leuco-granite appears aplitic, abundant coarse-grained plag & mafic bedrock? frags	Fe-oxides, coatings, pseudo, epidote, pyrite		
835-840	greenish gray	heterogeneous alluvium(?) abundant coarse-grained plag & altered mafic biotite & (K-spar) granodioritic material, bedrock?	Fe-oxides, pyrite, chalcopyrite, cinnabar		
860-865	greenish gray	heterogeneous alluvium?; abundant coarse-grained plag & Qtz & mafics that are altering to chlorite, bedrock?, minor aplite	pyrite, Fe-oxides, coatings, stainings, limonitic & hematitic	x	
900-905	greenish gray	heterogeneous alluvium?, bedrock? abundant coarse-grained plag & altering mafic & Qtz (granodiorite), minor tuffaceous material, stained lithic fragments	minor epidote, Fe-oxides, minor pyrite		

Well Number SR1A (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
930-935	greenish gray	heterogeneous alluvium or bedrock?, abundant coarse-grained plag & qtz & altering mafic rock, granodioritic minor apalitic material, stained lithic & felsic fragments	Fe-oxides, staining, coating, pseudomorphs pyrite, cinnabar?		
950-955	greenish gray	bedrock? 85%, abundant coarse-grained plag & qtz & mafic (hornblende, biotite) mafics are fresher, more hornblende (granodiorite), minor siliceous volcanics & stained felsic fragments	Increase in sulfur, cinnabar?, epidote		
960-965	dark greenish gray	bedrock?, abundant coarse-grained granodioritic rock, abundant hornblende (fresh), 90% appears slightly altered	Decrease in sulfur very minor pyrite, Fe-oxides staining cinnabar?	x	
965-970	greenish gray	bedrock?, increase in (lithic) fraction, decrease in grain size, mafics less fresh, abundant granodioritic material w/altering mafics, increase in heterogeneity	minor pyrite, Fe-oxides, minor CaCO <sub>3</sub> & clay aggregates, cinnabar, chloritization increase	x	x
975-980	light olive gray	bedrock?, abundant granodioritic material with altered mafic material, grayish green, stained felsic & lithic fragments, minor aplite	Fe-oxides, stains, minor pyrite, sulfur, calcite (minor)	x	
980-985	light gray	increase in heterogeneity, abundant granodioritic material, chloritizing mafics 75-80%, minor tuffaceous and aplitic material, stained felsic fragments	pyrite (minor), Fe-oxides, pseudomorphs, stains		

Well Number SR1A (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
995-1000	light olive gray	bedrock?, abundant (75%-80%) granodioritic material w/abundant hornblende (chloritizing) minor aplitic material, minor tuffaceous and rhyolitic material	very minor sulfur & pyrite, Fe-oxides, cinnabar?, calcite		
1010-1015	greenish gray	bedrock: granodioritic material (80%-85%), hornblende dominant, fairly fresh, minor-stained lithic & felsic fragments	sulfur- minor, Fe-oxides, minor pyrite, cinnabar?, minor		
1030-1035	greenish gray	bedrock: fairly fresh granodioritic material, minor stained lithic & felsic fragments, tuffaceous material	sulfur- minor, Fe-oxides, cinnabar? - minor, pyrite - minor	x	
1075-1080	greenish gray	definite change - bedrock?, increase in heterogeneity, dolomite w/minor mafic? inclusions, (coarse grained) HCL (weakly), replaced plag? (75-85%), stained lithic & felsic fragments, minor dioritic material, may be a mislabeled sample	minor sulfur, minor cinnabar, Fe-oxides, dolomite, secondary? replacing plag?	x	
1095-1100	greenish gray	bedrock: 85-90% granodioritic material, minor alteration (chloritization) of the hornblende, minor tuffaceous & siliceous volcanic rock, minor aplitic material	Fe-oxides, minor sulfur, very minor pyrite	x	
1120-1125	greenish gray	bedrock? altered granodioritic material (80%), no evidence of fresh hornblende or other mafics, bleaching, minor tuffaceous & siliceous volcanics stained, minor felsic fragments	pyrite, Fe-oxides, calcite (minor), minor CaCO <sub>3</sub> & clay aggregates	x	x

Well Number SR1A (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1155-1160	greenish gray	bedrock?, altered granodiorite, bleached, no mafics, replaced?, altered, replaced by plag?, minor tuffaceous & rhyolitic material	minor pyrite, Fe-oxides, minor cinnabar?	x	x
1195-1200	light olive gray	bedrock?, increase in heterogeneity (75-80%), partially altered granodioritic material, Femags chloritized, abundant coarse-grained plag & qtz & chloritized mafics, minor Fe-stained material (lithic-felsic) contamination from upper portions of hole?	pyrite-F Fe-oxides, magnetite replacing hornblende?	x	
1225-1230	greenish gray	bedrock?, increase in heterogeneity (60-65%) coarse-grained plag & qtz & altered mafics, granodioritic material, slightly altered, minor tuffaceous and stained lithic & felsic frags.	minor pyrite, Fe-oxides, stains, pseudomorphs of hemitite after pyrite	x	
1260-1265	greenish gray	bedrock: 75% altered granodiorite chloritized mafics (hornblende, biotite), abundant plag, some frags w/no sign of mafics, minor tuffaceous rhyolitic and lithic & felsic fragments	minor pyrite, minor calcite, Fe-oxide stains, pseudomorphs of hemitite after pyrite	x	
1295-1300	greenish gray	bedrock(?) 75-80% altered granodiorite, mafics completely altered or replaced, stained lithic material from upper portion of hole, minor amount of felsic fragments, minor tuffaceous rhyolitic and or aplitic material	diorite w/specs of magnetite, pyrite, Fe-oxides, stains, pseudomorphs of hemitite after pyrite	x	

Well Number SRIA (SR2A)

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1325-1330	greenish gray	bedrock: (75%) altered granodioritic material, coarse grained greenish gray plag & qtz & altered mafics, mafics completely altered or replaced, minor lithic & felsic fragments (stained), minor tuffaceous material	minor pyrite, chalcopyrite, magnetite specs in dioritic material, replace mafic, Fe-oxides, stains	x	
1385-1390	greenish gray	bedrock(?): (65-70%) altered granodioritic material, appears more bleached, mafic free, all mafics completely altered or replaced by plag?, tuffaceous material (increase)	pyrite, minor pyrrohtite?, minor sulfur, calcite - minor, Fe-oxides	x	
1410-1415	greenish gray	bedrock: 80% altered granodioritic material, less bleached, more evidence of altering mafics, to chlorite, minor lithic & felsic fragments (stained) tuffaceous material	calcite - minor, pyrite, Fe-oxides, stains, minor sulfur	x	
1420-1425	light olive gray	bedrock: 80% altered granodioritic material, no fresh mafics, all altered or replaced(?) minor lithic, felsic frags., minor tuffaceous material	pyrite confined to diorite, Fe-oxides, stains, minor sulfur, minor calcite	x	

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
15 to 20 ft	pale yellowish brown	heterogeneous alluvium; minor tuffaceous fragments, minor dioritic, and gabbroic fragments, mostly granitic material - some is greenish-brn stained, coarse grained (scapolitized?), and some is more fine-grained with lesser mafics (aplitic), few fine-grained mafic volcanics pale yellow to yellow orange.	Fe-oxide coatings, limonite i.e., goethite? hematite some mafics chloritizing		
40 to 45 ft	moderate yellowish brown	heterogeneous alluvium; fine grained mafic volcanics, mainly weathering granitic fragments and some of dioritic composition, felsic fragments, minor siliceous, tuffaceous volcanic material.	Fe-oxidation-goethite, hematite, mainly coatings, stains chloritizing biotite minor calcite coatings.		
55 to 60 ft	light brown	heterogeneous; pebble to gravel sized, some relatively fresh dioritic material, minor tuff fine-grained mafic volcanics, mainly andesitic granitic material, some coarse-grained, some almost mafic free (aplitic).	very minor epidote, some biotite is chloritizing, Fe-oxidation--as stains and coatings as yellow-orange to pale yellow-goethite, hematite.		
85 to 90 ft	light brown	heterogeneous; fine-grained mafic volcanics of andesitic to basaltic composition. Some tuff diorite fragments, aplitic material (pink, crystalline). Granitic fragments some greenish brown, coarse-grained (scapolitized)	Calcite as cement, Fe-oxidation-pale yellow to yellow-orange to brownish yellow. Chloritization of biotite in many fragments. Fresh hornblende.	x	x

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
115 to 120 ft	pale brown	heterogeneous-large pebbles, with zeolites, abundant fine to medium grained mafic volcanics mainly of andesitic comp., some basaltic. Some tuffaceous material, minor diorite, minor siliceous rhyolite.	Fe-oxidation; pale yellow to ochre - jarosite, minor epidote, zeolites-stilbite? natrolite		x
135 to 140 ft	pale yellowish brown	heterogeneous; welded tuff, aplitic material fine-grained volcanics, basalts, mainly andesite, minor dioritic and gabbroic fragments, weathered-stained granitic material	jarosite and goethite (limonitic) coatings, calcite-secondary?		
150 to 155 ft	pale yellowish brown	heterogeneous; large pebbles, fine-grained volcanics, chiefly andesitic welded & nonwelded tuffs, weathering granitic material, diorite with chloritizing mafics. Some quartzite, aplitic material (minor)	calcite coatings, jarosite? (limonite)		
165 to 170 ft	light brown	heterogeneous; decrease in grain size, unwelded tuff, abundant qtz. sand, felsic fragments, minor fine-grained volcanic rock, minor diorite and weathered granite fragments	fresh & chloritized biotite, Fe-oxide-limonite-jarosite? goethite		
170 to 175 ft	pale yellowish brown	heterogeneous; abundants siliceous volcanic material-rhyolitic, tuffaceous, minor andesite, abundant qtz. frags. Aplite fragments	Fe-oxides-limonite hematite		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
195 to 200 ft	pale yellowish brown	heterogeneous; small to large pebbles, fine grained volcanics-flow material and andesites, tuffs, quartzite, minor diorite, weathered granite, minor coarse aplite	calcite coatings, altered plagioclase? epidote, Fe-oxides-limonites and hematite		x
235 to 240 ft	light brown	heterogeneous; weathered granites and diorites with chloritizing biotite, minor tuff and gabbro, fine-grained andesites	abundant Fe-oxidation-limonites, minor hematite, calcite coatings		x
270 to 275 ft	light brown	heterogeneous alluvium; volcanics, andesites and basalts? Weathering granite-stained some diorite material-slightly altered (mafic) minor leuco-granite, pink-alkali, abundant felsic frags.-sand	chloritizing mafics, Fe-oxides-limonites-jaoriste-hematite		
295 to 300 ft	light brown	heterogeneous alluvium; diorite with chloritizing mafics. Altered?-stained coarse-grained granitic material (scapolitized) chloritizing, minor fine-grained volcanics-basalts-andesites, minor leuco-granite and/or aplitic rock. Altered diorite?	Fe-oxides-limonites (jarosite?), magnetite or lodestone sanidine?-altering or plag.		
330 to 335 ft	light brown	heterogeneous alluvium; some CaCO <sub>3</sub> cemented tuffaceous material-sediment, with lithic fragments, minor gabbro, dioritic material, granitic rock-some altering-chloritizing, minor fine grained mafic volcanics, leuco-granite	Fe-oxidation, limonites, (jarosite?) calcite, sericite? minor		x



Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
360 to 365 ft	pale yellowish brown	heterogeneous alluvium; abundant leuco-granite or aplitic material-med. to coarse-grained, minor fine-grained mafic volcanics, altering diorite and granitic rock, felsic fragments.	chloritizing mafics, Fe-oxides-limonites, hematite.		
395 to 400 ft	light brown	heterogeneous alluvium; abundant relatively mafic free, pink, coarsely xtaline granitic rock, some dioritic material, minor gabbro, minor mafic volcanics, andesites to basalts, some stained greenish coarse-grained granitic rock-scapolitized?	Fe-oxides, limonites, hematite, some specular, some chloritizing mafics, sericite?, minor		x
415 to 420 ft	moderate yellowish brown	heterogeneous alluvium; minor gabbro (altered?), minor leuco-granite, abundant felsic frags. some volcanics (mafic) (qtz.-plag.-feldspar sand size), some granitic rock-some stained-altering, altering (chloritizing?) diorite	Fe-oxides, limonites hematite, minor CaCO <sub>3</sub> -cement, coatings, some biotite, hornblende chloritizing		
445 to 450 ft	light brown	heterogeneous alluvium; quartzite, minor leuco-granite or aplite. Weathered dioritic and granitic material, minor mafic volcanics	Fe-oxides-limonites and hematite, some hornblende-biotite altering to chlorite, Some CaCO <sub>3</sub> cement-coatings, sericite? minor		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
480 to 485 ft	light brown	heterogeneous alluvial material; aplitic or leuco-granite rock, fine-grained mafic volcanics, basalts and andesites, weathered granitic and dioritic rock - may be altered, partial alteration of plag.? replacement, minor gabbroic frags., scapolitized? granite	Fe-oxides-limonites-hematites, chloritizing mafics, magnetite with clay, CaCO <sub>3</sub> minor, sericite? minor		
505 to 510 ft	pale yellowish brown	heterogeneous; mafic volcanics, quartzite, weathering, (altering?) granitics & dioritic rock, leuco-granite (aplitic?) material, some granitic, dioritic rock relatively fresh	Fe-oxides-limonites-jarosite, calcite, or goethite, specular hematite, some chloritizing mafics		
530 to 535 ft	light brown	heterogeneous alluvium; minor mafic volcanics diorite, some altering-weathering-chloritizing-sericitizing? Weathered granitic rock, minor quartzite, leuco-granite, dolomite-pink, abundant sand sized felsic fragments	Fe-oxides-limonites-jarosite-hematite (minor) calcite coatings, magnetite, sericite?, natrolite, minor (or plag.)		x
565 to 570 ft	light brown	heterogeneous alluvium; fine-grained mafic volcan., dioritic rock-some plag. & mafics altering leuco-granite and altered-weathered granite	Fe-oxides-limonites-hematite (minor) cinnabar? (or plag.) minor sericite? zeolite?		
595 to 600 ft	light brown	heterogeneous alluvium; fine grained mafic volcanics, abundant felsic material, aplitic-leuco-granite rock, dioritic and granitic material, some stained, weathering	Fe-oxides, limonitic staining coatings, specular hematite, magnetite, minor chloritization		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
625 to 630 ft	grayish orange	heterogeneous alluvium; aplitic-leuco-granite rock, granite, some weathered-stained, diorite mostly altered, chloritized mafics, minor volcanics, abundant felsic material	Fe-oxides-limonites jarosite & goethite hematite, minor calcite coatings		
650 to 655 ft	light brown	heterogeneous; leuco-granite and/or aplitic rock, minor tuff, weathered granitic and dioritic rock, fine-grained mafic volcanics, basalt, andesite with sanidine or plag., weathering out	Fe-oxidation-limonites minor hematite, epidote calcite (minor), very minor pyrite in andesite		
670 to 675 ft	grayish orange	heterogeneous; leuco-granite and/or aplitic rock, dioritic rock, altering, weathering-chloritization, weathered granite, fine-grained volcanics, andesitic abundant felsic fragments (qtz. quartzite, plag. & feldspar)	Fe-oxidation-staining & coating-limonitic, some hematite, some chloritization, some alteration of plag. to clay		
715 to 720 ft	light brown	heterogeneous alluvium; abundant leuco-granite, dioritic material mafics altered to hematite?, minor fine-grained mafic volcanics, minor quartzite, abundant felsic material	Fe-oxidation-limonitic, minor calcite		
745 to 750 ft	light brown	heterogeneous alluvium; abundant leuco-granite, aplitic material, (mafic free) quartzite, dioritic material, weathered, granitic too. Minor siliceous volcanics, rhyolites, felsic material	Fe-oxidation, limonitic magnetite or lodestone		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
775 to 780 ft	light brown	heterogeneous alluvium; quartzites, leuco-granite material, fine-grained volcanics, mainly andesitic, minor gabbro, altering-weathering diorite & granite, abundant felsic fragments	Fe-oxides, limonitic staining coating, specular hematite, calcite coatings, some chloritization		
815 to 820 ft	light brown	heterogeneous alluvium; tuff (minor); stained leuco-granite, gabbro? diorite, diorite & granite, some weathering, altering, minor mafic volcanics, quartzite	Fe-oxides-limonitic staining and coatings, hematite, minor chloritization		
855 to 860 ft	light brown	heterogeneous alluvium; mostly leuco-granite (pink xtaline), minor tuff and rhyolitic material weathered, slightly altered dioritic and granitic rock, some fresh mafics, minor gabbro frags, minor andesitic and basaltic andesitic rock	Fe-oxides-limonites (jarosites & goethite) minor hematite, very minor sulfur, and calcite, some chloritization of biotite		
875 to 880 ft	light brown	heterogeneous alluvium; some fine-grained mafic volcanics, some mafic-free granitic rock, minor diorite, quartzite & gabbro, some rhyolitic material	minor epidote-chloritization of biotite and hornblende, limonitic, some hematitic coatings		
895 to 900 ft	light brown	heterogeneous alluvium; quartzite leuco-granite and/or aplitic rock, minor tuff, dioritic rock, slightly altered (plag.) stained granite, alot of mafic fragments	hematite, limonitic coatings, chloritizing mafics		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
915 to 920 ft	light brown	heterogeneous; minor fine-grained volcanics, mainly andesitic, some basalt, altering diorite and granite, some leuco-granite	chloritizing biotite & hornblende, Fe-oxides, limonites and hematites		
940 to 945 ft	light brown	heterogeneous alluvium; large grain size, essentially mineralogically & lithologically similar to interval (875'-880')	magnetite octehedra, Fe-oxides-limonites		
955 to 960 ft	light brown	see interval (855'-860')	minor epidote, Fe-oxides-limonite-hematite		
985 to 990 ft	pale yellowish brown	heterogeneous, mainly altering dioritic and granitic material and mafic volcanics, abundant felsic fragments	minor epidote to limonitic coatings, minor hematite coatings most mafics chloritizing		
990 to 995 ft	light brown	similar to interval 985' to 990', more leuco-granite material, quartzite, minor rhyolitic material, lesser felsic fragments	" no epidote, possible sericitization? of some grains		
1000 to 1005 ft	pale brown (variable)	heterogeneous; essentially the same as interval (990'-995'), less quartzite, more mafic volcanic (andesitic) rock, may be propylitized	" propylitization, no seritization		
1005 to 1010 ft	pale yellowish brown	heterogeneous alluvium; see interval 1000' to 1005'	chloritization well developed		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1020 to 1025 ft	light brown	heterogeneous; med. pebble grain size, fine-grained volcanics-rhyolitic to andesitic basalt - may be propylitized, leuco-granite and granitic material, minor tuff	Fe-oxidation, limonitic and hematitic staining and coating		
1045 to 1050 ft	pale yellowish brown	heterogeneous alluvium; abundant dark grayish blk-green fine-grained, with chloritized? mafics--propylitic altered, andesite/basalt, leuco-granite material, weathered granite, minor quartzite	Fe-oxidation, limonitic stainings & coatings, minor epidote, sulfur well developed chloritization, propylitic alteration?	x	x
1070 to 1075 ft	pale yellowish brown	heterogeneous; decrease in grain size, quartzite, leuco-granite, weathering granitic and dioritic fragments, andesitic basalt which may be propylitized or chloritized felsic fragments	minor sulfur, chloritization of mafics, Fe-oxidation mainly limonitic coatings, stains hematite (jarosite) calcite, propylitization of andesite?		
1085 to 1090 ft	light brown	heterogeneous - see interval 1070'-1075' abundant felsic fragments	"		
1090 to 1095 ft	pale yellowish brown	see interval 1070'-1075', lesser volcanics, more felsic material	"		
1105 to 1110 ft	light brown	refer to interval 1070'-1075', heterogeneous; lesser propylitized? andesite rock	"		
1120 to 1125 ft	pale yellowish brown	see interval 1070'-1075'	minor epidote, minor calcite		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1130 to 1135 ft	light olive gray	heterogeneous alluvium; see interval 1070'-1075', increase in granodioritic material with mafics strongly chloritizing, abundant felsic fragments	Fe-oxides, limonites hematite chloritization of mafics, propylitization of volcanics sulfur		
1135 to 1140 ft	greenish brownish gray	semi-heterogeneous; abundant grayish-green plagioclase-qtz-mafics, finely coarse-grained altered-chloritized-propylitized dioritic? or granodioritic rock, some andesitic basalt-propylitized rhyolite (breccia), some welded siliceous tuff, grayish-green with mafics	Fe-oxides-limonitic & hematitic coatings & stains	x	
1140 to 1145 ft	greenish gray	heterogeneous; abundant grayish green, propylitized andesite (rhyolite?) and andesite, chloritization (partial) of mafics in granodioritic rock-coarse grained, minor leucogranite and welded tuff	propylitization-well developed, Fe-oxidation-limonitic and minor hematite, minor calcite, sulfur	x x	x
1145 to 1150 ft	light olive gray to pale yellowish brown	heterogeneous increase in granodioritic material - fresher, less chloritization, less pylitized andesite and less siliceous rhyolite or andesite, felsic material, minor aplitic rock (pink)	minor epidote, very fresh hornblende, minor chloritization limonite development as stains and coatings		

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1165 to 1170 ft	pale yellowish brown	heterogeneous alluvium; increase in granodiorite (75-80%), increasing chloritization of mafics, decrease in andesitic rock, minor light greenish-gray siliceous tuff, quartzite, aplitic rock	limonitic alteration, minor sulfur, very minor epidote, magnetite, slight sericitization of plag?		
1185 to 1190 ft	light olive gray	bedrock; 85%-90% altering granodioritic to dioritic material - mafics strongly chloritized, dark grayish green, some propylitized andesite, minor aplite, minor tuffaceous - propylitized material	strong chloritization, Fe-oxidation, not on bedrock, minor epidote, magnetite	x	
1195 to 1200 ft	light olive gray	bedrock?; 90% altering granodiorite - mafics strongly chloritizing, some plag is altering, minor propylitized andesite - aplitic rock	pyrite, minor sulfur, Fe-oxidation, limonitic, hematitic, magnetite, plag alteration - to sericite? wairakite	x	x
1200 to 1205 ft	greenish gray	bedrock? - see interval 1195'-1200', minor aplitic rock	no pyrite, magnetite		
1215 to 1220 ft	light olive gray	refer to interval (1195'-1200') bedrock, mafics somewhat lesser altered, some aplitic material	no sulfur, magnetite	x	
1240 to 1245 ft	greenish gray	bedrock; greenish gray, with slightly chloritized (propylitized?) mafics of a granodiorite, minor aplitic material	very minor limonitic alteration, no sulfur, magnetite	x	



Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1255 to 1260 ft	light olive gray	bedrock; dominantly, altering granodioritic material - chloritizing, hornblende, pyroxene?, a lot of free-fresh plag, very minor tuffaceous fragments - aplitic rock	Iceland spar-calcite, minor Fe-oxidation - limonitic, magnetite		
1270 to 1275 ft	greenish gray to light olive gray	bedrock? altering, chloritizing, serpentinizing? granodiorite, dark gray to blackish green, pyroxenes to amphiboles, minor aplite material	serpentine? magnetite, fault zone? - evidence of shearing		x
1290 to 1295 ft	light olive gray	heterogeneous or contamination from above? abundant greenish brown altered granodioritic rock with abundant fresh pyroxene/ amphibole - scaplitized? minor aplitic material	minor serpentine? plag altering - to a greenish color, minor Fe-oxidation, chloritization, magnetite		
1310 to 1315 ft	light olive gray	bedrock; 90% altering granodiorite, chloritizing hornblende, some grains appear to be aggregates of granodiorite? material - not strongly cemented, minor aplitic material, siliceous tuff	minor Fe-oxidation, limonitic fault gauge? - fractured, magnetite		
1330 to 1335 ft	variable (already cleaned)	heterogeneous? dominantly altered granodiorite - some chloritization some plag altering - to sericite? welded, (discolored), minor aplitic material - unaltered tuff, siliceous tuff - greenish gray - abundant, some appears to be serpentinized or propylitized	serpentine? (fault-zone) Fe-oxidation limonitic and hematitic, plag to sericite? magnetite	x	x

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1335 to 1340 ft	light olive gray	refer to interval 1330'-1335' less siliceous, propylitized tuff or rhyolite(?)	minor serpentine? " " magnetite		
1360 to 1365 ft	light olive gray	see interval 1330'-1335', chloritization, alteration of mafics is slightly more intense, (plag discolored) to a greenish gray, bedrock?	no serpentine " " magnetite		
1375 to 1380 ft	already cleaned (greenish gray)	see interval 1330'-1335', chloritization is <u>less</u> intense plag. appears to be fresher, less altered	minor epidote, very minor serpentine		
1390 to 1395 ft	light olive gray	refer to interval 1330'-1335', less siliceous tuff	" "	x	
1400 to 1405 ft	already cleaned	heterogeneous? abundant free, unaltered plagioclase and alter- ing granodiorite, slightly chloritizing, aplitic material, minor propylitized andesite, minor tuffaceous material	Fe-oxidation, limonitic, minor hematite to minor sulfur	x	x
1415 to 1420 ft	light olive gray	heterogeneous? bedrock? abun- dant altering granodioritic material, abundant propylitized andesite, fairly abundant aplitic rock, some granodiorite appears disaggregated - brecciated fractured, minor tuffaceous material	minor limonitic and hematitic alteration chloritization, fault gauge	x  x	  x

Well Number H-1

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1425 to 1430 ft	(cleaned)	heterogeneous; abundant, highly fractured or brecciated granodioritic material, decrease in andesitic material, - some fractured, much of the plag. is a greenish gray, aplitic material	limonitic, minor hematitic alteration, chloritization of biotite and some hornblende	x	
1435 to 1440 ft	(cleaned)	see interval 1425'-1430' bedrock? granodioritic material intensely fractured or brecciated - fairly fresh looking though, fault			
1445 to 1450 ft	(cleaned) greenish gray	more heterogeneous; abundant altering granodioritic rock - much of it fractured, some andesite - propylitized? aplitic material - some siliceous welded tuff	minor pyrite, Fe-oxidation, limonitic, minor hematite, chloritization		
1470 to 1475 ft	(cleaned)	heterogeneous; abundant altered granodiorite with some chloritization of mafics - pyroxene, hornblende, aplitic rock, some andesitic (slightly propylitized?) some granodiorite - fractured, minor tuffaceous material	limonitic and hematitic alteration, chloritization, sericitization of plag? minor		
1485 to 1490 ft	(cleaned)	heterogeneous; dominantly altered granodiorite - some fractured - some plag. altered to a greenish gray color, minor tuffaceous material, aplitic fragments - andesitic material	chloritization of hornblende in some fragments, some biotite, limonitic and minor hematitic alteration, some mafics are very fresh! minor sulfur		
1495 to 1500	(cleaned)	refer to interval 1485'-1490', bedrock? and contamination from above?	"		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
10 to 15 ft	medium yellow brown	devitrified and glassy welded tuff, granodiorite/diorite rhyolite lithic tuff, limestone	opal (tuff) gypsum qtz. (may be primary), limonite, hematite, chlorite (after biotite, hnbld, white clay (lithic tuff)		
30 to 35 ft	medium yellow brown	hornblende "granite", rhyolite, granodiorite/diorite (biotite and hornblende) vitric tuff, poly qtz. rock	clays, calcite, (minor) limonite/goethite, cerrusite with galena, hematite, sericite, zeolite		
50 to 55 ft	dark yellow brown	diorite/granodiorite, "granite" (coarse with hornblende and biotite), qtz. rock, vesicular basalt with calcite and zeolite's, fine grain, very light granitic with corundum? (syenite or aplite?)	chlorite, sericite, clays granite, cerrusite with galena limonite, hematite, calcite in fissures		
55 to 60 ft	light olive gray	vesicular tuff with calcite in vugs, 'alaskite', greenish limestone, med. grained hornblende, granitic grains	hematite, calcite (1 mm/xtals), clays limonite, cerrusite with galena, chlorite and epidote on granite		
60 to 65 ft	light olive gray	greenish limestone (predominant), basalt (minor), coarse grained hornblende 'granite', fine grain light 'granitic' rock (aplite), diorite/granidioritic	calcite, (xtals slightly orange), limonite, hematite, clays, zeolite (on orange granitic rock)		
70 to 75 ft	light olive gray	greenish yellow limestone, coarse grain granite, gabbro (extensive hematitic alter), 'diorite/granodiorite (biotite and hornblende)	clays, limonite, chlorite, calcite, hematite		
90 to 95 ft	dark yellow brown	med. grained diorite/granodiorite, med. grained light granitic rock (alaskite) some free qtz.	epidote (on F-spar) chlorite, clays, limonite, hematite		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
100 to 105 ft	dark yellow brown	gabbro/diorite , light fine grain granite (aplite), vesicular tuff with calcite, Ande/dacite ?, int. dr. volcanic porphory	limonite, clays (on f-spar) chlorite and epidote, hematite, calcite, cerrusite w/ galena, zeolites		
120 to 125 ft	med. dark brown	diorite/gabbro, alaskite, granite with med. grains, diorite, qtz rock, ande/basalt, greenish lsto. minor	limonite, clays (on F-spar) sericite, pyrite, sphalerite, chlorite, and epidote, hemitite		
135 to 140 ft	med. yellow brown	light fine grain granitic rock (aplite) med. grain diorite, ande/basalt, devitrified tuff ? very light, gabbro	limonite, sericite, clays, hematite, and chlorite, epidote		
145 to 150 ft	med. dark yellow brown	alaskite, diorite/gabbro, int. grain granite, ande/dacite (prophyllitized? gabbro, aplite	clays ( on f-spar) limonite, chlorite, hematite, sericite, epidote, calcite and dacite		
150 to 155 ft	med. dark yellow brown	med. grain granite, gabbro, fine grained light granite (aplite) granodiorite, dolomite and siderite, iron rich tuff (vesicular tuff)	limonite, clays, hematite, chlorite and epidote, zeolites		
175 to 180 ft	med. yellow brown	med. grain granite, granodiorite, aplite, diorite/gabbro, gabbro	limonite, clays hematite chlorite and epidote (minor), sericite (?)		
190 to 195 ft	med. dark yellow brown	aplite, med. grain granite, granodiorite, impure limestone	chlorite and epidote, limonite, sericite. clays, hematite, calcite		
195 to 200 ft	med. dark brown	fine med. grained granite, gabbro aplite granodiorite, impure limestone, vesicular basalt	epidote and chlorite, clays (f-spar), limonite, hematite, sericite, calcite (alot)		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
205 to 210 ft	light olive gray	impure greenish gray limestone, aplite, med. grain granite, granodiorite	chlorite, pyrite (minor) epidote, clays, sericite, calcite, hematite, limonite,		
225 to 230 ft	light orange olive gray	diorite/gabbro, med. grain, granite, aplite, basalt	metallic sulphide (?) chlorite, limonite (minor), hematite, calcite, clays (on F-spar)		
230 to 235 ft	light olive gray	aplite, med. grain granite, granodiorite	limonite, chlorite, epidote, clay (minor)		
235 to 240 ft	med. dark yellow brown	med. grain granite, gabbro, aplite vesicular andesite	clays, limonite, hematite (minor) calcite, chlorite, epidote		
260 to 265 ft	med. dark brown	gabbro med. grain granite, impure limestone, granodiorite	limonite, hematite, sericite, clays, chlorite, calcite (on gabbro) epidote		
280 to 285 ft	light olive gray	med. grain granite, granodiorite/diorite, qtz. rock (minor)	clays, chlorite and epidote, limonite, hematite		
300 to 305	med. dark yellow brown	med. grain granite, granodiorite/diorite, fine grain granite	clays, chlorite and epidote, calcite, limonite		
330 to 335	med. dark yellow brown	med. grain granite, granodiorite, diorite/gabbro	chlorite, epidote, limonite, clays, hematite, calcite, siderite		
350 to 355 ft	med. dark yellow brown	med. grain granite, granodiorite, diorite/gabbro, vesicular, andesite	calcite/siderite, limonite, sericite, chlorite and epidote, hematite, clays (minor)		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
375 to 380 ft	med. dark yellow brown	med. grain granite, granodiorite/diorite, qtz. rock, gabbro/diorite	clay, limonite, siderite, calcite, chlorite (very minor),		
400 to 405 ft	yellow brown	aplite, granodiorite (dominant) med. grain granite	chlorite and epidote, limonite, calcite, pyrite (minor), clay (minor)		
430 to 435 ft	med. dark yellow brown	med. grain granite, granodiorite/diorite, qtz. rock with metal sulfides (?)	clay, limonite, chlorite, hematite (minor) metal sulfides (in qtz. rocks)		
465 to 470 ft	med. dark yellow brown	med. grain granite, granodiorite, diorite, qtz. rock	limonite, clays, chlorite, epidote, verosite (minor), calcite		
490 to 495	med. dark yellow brown	med. grain granite, granodiorite, diorite/gabbro, qtz. rock wth metal sulphides (?)	chlorite, limonite, metal sulphides, jarosite, clays, calcite, epidote		
515 to 520 ft	med. dark yellow brown	granodiorite, med. grain granite very impure dolomitic limestone diorite qtz. rock	clays, epidote, chlorite, sericite, limonite, calcite, hematite (minor) siderite		
540 to 545 ft	med. dark yellow brown	med. grain granite, gabbro/diorite granodiorite, gabbro, prophyllitized andesite	calcite, limonite, sphalerite, clays (extensive on acid rocks), chlorite (minor), sericite		
570 to 575 ft	med. dark yellow brown	granodiorite/diorite, gabbro, med. grain granite, qtz. rock	limonite, chlorite, clays (extensive on acid rocks), epidote, hematite (minor)		
595 to 600 ft	med. yellow brown	granodioritic (predominant) med. grain granite, qtz. rock with sphalerite, limestone, diorite, qtz. rock w/metal sulphides (not sphal.)	clays, sphalerite (?), chlorite, sericite, epidote, calcite (minor) jarosite (?)		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
625 to 630 ft	pale yellow brown	diorite/granodiorite, med. grain- ed granite, qtz. rock with some metal sulphides, gabbro/diorite (minor)	limonite, chlorite, epidote, hematite, clays, calcite (minor)		
655 to 660 ft	med. dark yellow brown	med. grained granite, grandio- rite, diorite, basalt	limonite, clays, chlorite, epidote, calcite, hematite, realgar (minor)		
675 to 680 ft	pale yellow brown	basalt with vugs filled with calcite, med. grained granite, diorite, gabbro	hemite, calcite, clays, limonite, jar- osite, chlorite (min- or), epidote		
700 to 705 ft	med. dark yellow brown	granodiorite, diorite/ gabbro, gabbro, med. fine grained gran- ite	chlorite/epidote, clays, limonite, ser- icite, calcite (very minor)		
725 to 730 ft	med. dark yellow brown	qtz. rock with metal sulphides med. grain granite, diorite	chlorite, epidote, hemite, limonite, clays, calcite		
750 to 755 ft.	med. dark yellow brown	diorite, med. grain granite qtz. rock with metallic sulphides	clays, limonite, cal- cite, chlorite, ser- icite, hemite (min- or)		
780 to 785 ft	med. dark yellow brown	med. grain granite, qtz. rock, alaskite, <u>lime rock</u> , granodio- rite	limonite, sphalerite, calcite, chlorite (minor), clays		
795 to 800 ft	med. dark yellow brown	granodiorite/diorite, fine- med. grained granite, qtz. rock	limonite, clays (min- or), chlorite, epidote hematite (minor)		



Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
800 to 805 ft	dark yellow brown	diorite (predominant), qtz. rock with metal sulphides, med. grained granite	clays, limonite, jarosite/alurite, calcite (very minor)		
830 to 835 ft	med. dark brown	diorite, med. grained granite, qtz. rock, amygdaloidal basalt (one grain)	hemitite, calcite, clays, chlorite/epidote, limonite		
865 to 870 ft	med. dark yellow brown	med. grained granite, qtz. rock with metallic sulphides, granodiorite (very minor), diorite, lime rock	clays, limonite, chlorite (very minor), hemitite(minor)		
885 to 890 ft	med. dark yellow brown	med. grained granodiorite/diorite, impure limestone, med. grained granite (minor), qtz. rock (minor)	anglesite (?), hematite, chlorite, clays-limonite, epidote,		
900 to 905 ft	med. dark yellow brown	granodiorite/diorite (predominant) qtz. rock with metallic sulphides, gabbro (minor), med. grained granite	pyrite, clays, chlorite, and epidote, limonite, hemitite, cerrusite with galena, sericite, allunite (?)		
915 to 920 ft	med.-pale yellow brown	granodiorite/diorite, med.-fine grained granite, qtz. rock, diorite/gabbro (minor), lime rock	limonite, clays (minor) hematite, calcite, epidote (very minor), chlorite		
950 to 955 ft	med. pale yellow brown	med. grained granite, greenish dolomite limestone, granodiorite/diorite, qtz. rock, white impure limestone	hematite, clay (minor), limonite, calcite, epidote, chlorite		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
955 to 960 ft	med. pale yellow brown	med. grained granite, gabbro, alaskite (minor), qtz. rock	limonite, chlorite, epidote, calcite (minor), hematite (minor), clays, jorosite, met. sul.		
990 to 995 ft	pale yellow brown	qtz. rock with metal sulphides, granodiorite, fine-grained granite, white limestone	chlorite, epidote, limonite, hematite, calcite, clays (minor)		
1025 to 1030 ft	pale yellow brown	med.-fine grained granite, granodiorite, qtz. rock with hematite metallic sulphides, diorite/gabbro (minor)	limonite, clay chlorite, calcite (minor)		
1050 to 1055 ft	med. dark yellow brown	med. grained granite, diorite/granodiorite, qtz. rock with metallic sulphides	limonite, hematite, clays, calcite, chlorite (very minor)		*
1075 to 1080 ft	med. dark yellow brown	qtz. rock with metal sulphides, hematite, fine-grained granite, granodiorite/diorite	limonite, clays, chlorite and epidote (minor), hematite (very minor)		
1090 to 1095 ft	med. dark yellow brown	med. grained granite, qtz. rock, with metal sulphides, diorite/granodiorite, gabbro (minor)	limonite, epidote, chlorite, clays, hematite, calcite		
1120 to 1125 ft	med. dark yellow brown	diorite, med. grained granite, qtz. rock, with metal sulphides	clay, chlorite, epidote, limonite, hematite, calcite (very minor)		
1140 to 1145 ft	med. dark yellow brown	med. grained granite, qtz. rock with metal sulphides, granodiorite/diorite, gabbro (minor), limerock	hematite, epidote and chlorite, clays, limonite, calcite and siderite		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1170 to 1175 ft	med. dark yellow brown	med. grained granite, qtz. rock with metallic sulphides, gabbro (minor), granodiorite/diorite	limonite, clay calcite (minor), chlorite and epidote, hematite (minor)		
1195 to 1200 ft	med. dark yellow brown	fine-med. grained granite, granodiorite/diorite, qtz. rock with metallic sulphides	clays, limonite, hematite, chlorite, calcite (minor), epidote		
1225 to 1230 ft	med. dark yellow brown	med. grained granite, granodiorite/diorite, gabbro (minor), qtz. rock with metal sulphides (minor)	chlorite, limonite, hematite, clays, epidote (very minor), calcite		
1250 to 1255 ft	med. dark yellow brown	granodiorite/diorite, med. grained grainite, qtz. rock (minor)	limonite, hematite, clays, chlorite, calcite,		
1275 to 1280 ft	med. dark yellow brown	med. grained granite (predominant) granodiorite, qtz. rock with metallic sulphides, limerock	clays, chlorite, and epidote, calcite, hematite, limonite		
1300 to 1305 ft	med. dark yellow brown	med. grained granite, granodiorite/diorite, limerock, vesicular basalt (compl. alt. to hematite), qtz. rock, (minor), diogabbro (minor)	chlorite and epidote, hematite, limonite, clays, calcite and siderite, jorosite (minor)		
1305 to 1310 ft	med. dark yellow brown	granodiorite/diorite, med.- fine grained granite, quartzo feldspathic rock with metal sulphides, limerock (minor)	limonite, hematite, clays, epidote and chlorite, calcite (minor)		
1345 to 1350 ft	med. dark yellow brown	med. - fine grained granite, granodiorite/diorite, qtz. rock and gabbro (very minor)	limonite, hematite, and clays, chlorite, calcite (minor)		

Well Number H-2

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1370 to 1375 ft	med. dark yellow brown	med. grained granite, diorite, qtz. rock&gabbro (very minor)	limonite, calcite hematite, clay epidote, chlorite		
1400 to 1405 ft	med. dark yellow brown	med. grained granite, diorite, qtz. rock with metal sulphides	limonite, hematite, clays, epidote, and chlorite, calcite		
1440 to 1445	med. dark yellow brown	med. grained granite, granodiorite/ diorite, limerock (minor), qtz. rock (minor)	limonite, chlorite, hematite, clays, epidote (minor)		
1465 to 1470 ft	med. dark yellow brown	med. grained granite, qtz. rock with metallic sulphides, granodio- rite/diorite	limonite, hematite clay, epidote and chlorite, calcite (minor)		
1490 to 1495 ft	med. dark yellow brown	granodiorite/diorite (predomi- nant) gabbro, med, grained granite, qtz. rock	chlorite, hematite, limonite, clay py- rite, (qtz. rock and granodiorite), epidote (minor)		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
40 to 60 ft	light olive gray	heterogeneous lithology; light gray rhyolitic material - altering to clay, with CaCO <sub>3</sub> cement, fine-grained volcanics - andesitic, weathered, altered granitic material - some greenish coarse-grained, quartzite, minor aplite	minor pyrite, CaCO <sub>3</sub> , clay development, limonitic and hematitic alteration		x
80 to 100 ft	pale yellowish brown	heterogeneous; minor tuff, fine-grained volcanics, minor rhyolite mostly andesitic and some basalt, some coarse-grained, greenish (plag.) granitic material (propylitized), minor aplite or alaskite, quartzite fragments, hornblende rich granodioritic material	limonitic and hematitic alteration, chloritization of some biotite, minor sulfur, magnetite - octahedral minor epidote		
160 to 180 ft	light olive gray	heterogeneous; tuffaceous material, some rhyolite, andesite (propylitized?), minor basalt, altered granodioritic material - some coarse-grained greenish-gray (plag.) granitic rock, quartzite, aplite	limonite-hematite chloritization of biotite, minor epidote, magnetite, sericitized plagioclase		
200 to 220 ft	light brown	heterogeneous; fine-grained volcanics ranging from gray rhyolite to andesite (some propylitized) to basaltic andesite, weathered granodiorite (chloritizing mafics) quartzite, tuff breccias, greenish gray coarse-grained granitic material, minor aplitic rock, tuff	limonitic-hematitic staining, alteration, CaCO <sub>3</sub> coatings, botryoidal, aggregates, rhombs, magnetite, sericitized? plag. or zeolite		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
240 to 260 ft	moderate brown	heterogeneous; some very large pebbles, fine-grained volcanics, mainly andesite (some propylitized) (chloritized), some highly altered-weathered granitic and granodioritic material, some plag. weathering to clay? minor welded tuff, scapolitized granite? coarse-grained - stained	limonite and hematite, CaCO <sub>3</sub> - coating, rhombs chloritizing biotite magnetite		
280 to 300 ft	pale yellowish brown	heterogeneous; andesite, andesitic basalt, some andesite propylitized minor tuff, granodiorite, with sericitizing plag. in some frags. coarse-grained, greenish brown, plag. and altered mafic and qtz. material (scapolitized) minor, some chunks are fractured, aplitic rock	minor epidote, sulfur, limonite, hematite, CaCO <sub>3</sub> aggregates, sericitizing? plag. or zeolite		
340 to 360 ft	pale brown	refer to interval 280' to 300'	apatite? - minor cinnabar? - minor "		
380 to 400 ft	pale yellowish brown	refer to interval 280' to 300'	"		
440 to 460 ft	pale brown	refer to interval 280' to 300' - slightly more mafic volcanics, (more basaltic), slightly more granodioritic material (weathering) - plag. altering	minor sulfur, minor epidote "		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
500 to 520 ft	greenish gray	heterogeneous; CaCO <sub>3</sub> cemented aggregates tuff (with pyrite), fine-grained volcanics, aplitic material, weathering-altering granitic and granodioritic material, siliceous, gray welded tuff (altering) or rhyolitic andesite, some andesitic rock appears propylitized	pyrite, cubic-abundant, sulfur (minor), epidote (minor) cinnabar? limonite/hematite, calcite, altering plag. chloritization	x	
560 to 580 ft	light olive gray	refer to interval 500' to 520', plag. and mafics of granodioritic appear more altered	widespread pyrite (secondary?) limonitic & hematitic alteration chalcopryrite mafics more strongly altered to chlorites	x	
600 to 620 ft	light olive gray	refer to interval 500' to 520', more abundant andesite and lesser amount, of altered granodiorite - some mafics completely weathered out - replaced - altered	refer to interval 500' to 520'	x	
640 to 660 ft	light olive gray	heterogeneous; welded tuffs, CaCO <sub>3</sub> aggregates of lithic fragments, altered granodioritic rock, plag. & mafics weathering, altering, being replaced, quartzite, aplitic material and aplite, andesite	pyrite - appears secondary, surrounded by limonite, minor chalcopryrite, sulfur (minor) limonitic alteration (jarosite)		
700 to 720 ft	greenish gray	heterogeneous; abundant light gray tuff - welded and cemented partially with CaCO <sub>3</sub> , CaCO <sub>3</sub> aggregates of lithic fragments, quartzite, aplite, andesite	malachite & azurite pyrite, minor epidote and sulfur, limonitic & hematitic (minor) alteration	x	x

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
760 to 780 ft	greenish gray	heterogeneous; abundant CaCO <sub>3</sub> and clay (tuffaceous) cemented aggregates of lithic fragments altered granodioritic rock (plag. and mafics altering) fine-grained volcanics - rhyolites and andesites aplite.	pyrite (primary) minor limonite and hematite, minor chalcopryrite, mafics to chlorite, plag. to clay - sericite		x
780 to 800 ft	(pre-washed) variable	heterogeneous; fine-grained mafic volcanics, mainly andesites, welded tuffs, altered granodiorite with chloritized biotite, and hornblende and plagioclase altering to sericite, minor aplite and rhyolite	pyrite; calcite limonite-hematite chalcopryrite, minor sulfur and epidote, magnetite		
800 to 820 ft	pre-washed variable (shades of gray)	heterogeneous; chiefly fine-grained volcanic rock (andesitic) leuco-granite, altering granodiorite, gray-green propylitized (?) andesite and rhyolitic material, minor quartzite and altered (silicified?), tuff, some greenish coarse-grained granitic rock	pyrite, limonitic and hematitic alteration and staining on some grains, minor sulfur, minor CaCO <sub>3</sub> cemented aggregates of lithic material, some tuff altering to clay		
820 to 840 ft	greenish gray	heterogeneous; granules to large pebbles, mostly grayish siliceous andesite, leucogranite, silicified tuff or rhyolite, minor greenish brown coarse-grained granitic rock, minor granodiorite with altered mafics & weathered plag. minor aplite	pyrite, minor chalcopryrite, limonitic staining and minor hematite	x	



Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
835 to 840 ft	dark yellowish brown	heterogeneous; refer to interval 820' to 840', more abundant fine-grained mafic volcanic material, less siliceous andesite more aplite, some fragments of granite or granodiorite are completely bleached of mafics, with plagioclase altering to clay and sericite	refer to interval 820' to 840', minor sulfur, minor pyrite		
845 to 850 ft	greenish gray	heterogeneous; refer to interval 820' to 840' for description, some andesite may be propylitizing, minor quartzite	refer to interval 820' to 840'	x	
860 to 865 ft	pale brown	heterogeneous; fine-grained mafic volcanics of andesitic composition, altered granodiorite with chloritized mafics and altered plagioclase, aplite and leucogranite, minor tuff, gray silicified? andesite or extremely altered granodiorite, some greenish coarse-grained granitic rock (appears altered-stained)	limonite and hematite minor pyrite, minor calcite		
875 to 880 ft	pale brown	heterogeneous; refer to interval 860' to 865' for description, some andesitic rock appears to be propylitized	refer to interval 860' to 865'		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
895 to 900 ft	pale brown	heterogeneous; CaCO <sub>3</sub> loosely cemented aggregates of lithic fragments in an Fe-stained tuffaceous matrix (altering to clay), altered granodioritic rock (chloritized mafics, greenish-gray quartz and slightly altered plagioclase), minor welded tuff, fine-grained mafic volcanics-andesites, quartzites	minor pyrite, widespread hematitic and lesser liminitic alteration		
910 to 915 ft	pale brown	heterogeneous; fine-grained volcanics, andesites - some are gray dense and siliceous bordering on a rhyolite, (may be a very altered granodiorite), aplite, quartzite, welded tuffs CaCO <sub>3</sub> loosely cemented aggregates of lithic material and altered granodiorite - some plag. altering to clay? or sericite	minor epidote, sulfur pyrite, minor chalcopyrite, limonite and hematite chloritizing biotite		
940 to 945 ft	pale brown	refer to interval 910' to 915'	refer to interval 910' to 915', no epidote		
955 to 960 ft	pale brown	heterogeneous; minor aggregates of lithic fragments loosely cemented with CaCO <sub>3</sub> , minor aplite altered (chloritizing, sericitizing) granodiorite, fine grained volcanics, andesites, and gray siliceous welded <u>tuffs</u> or rhyolites, aplite and minor gabbro	minor calcite, pyrite and sulfur, limonitic and hematitic coatings stains		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
985 to 990 ft	pale brown	refer to interval 955' to 960', for description, increase in aplite, decrease in gray, siliceous welded tuff	refer to interval 955' to 960'		
995 to 1000 ft	pale brown	heterogeneous; fine-grained mafic volcanics, andesites to minor basalt, minor aplite, altered granodiorite, CaCO <sub>3</sub> loosely cemented aggregates of altering tuff and lithic material, tuffaceous material silicified, minor gabbro, quartzite	minor calcite, limonitic & hematitic alteration, minor pyrite and chalcopyrite, some chloritization of biotite, some plag. altering to sericite		
1015 to 1020 ft	greenish gray	refer to interval 995' to 1000', increase in mafic volcanics, andesites, mainly (some may be propylitizing), increase in lithic aggregates cemented with CaCO <sub>3</sub>	refer to interval 995' to 1000', no pyrite		
1035 to 1040 ft	greenish gray	heterogeneous; CaCO <sub>3</sub> loosely cemented aggregates of lithic and felsic material, quartzite and aplite, gray, siliceous (devitrified?) welded tuff, altered granodiorite (chloritized mafics) welded tuff, andesite - some appears silicified	pyrite, limonite - hematite, chloritization, some plagioclase altering		
1050 to 1055 ft	pale brown	heterogeneous; fine-grained mafic volcanics, mostly andesite (some may be propylitized), aplite and altering granodiorite (chloritized mafics and some plagioclase altering to clay and/or sericite) minor siliceous welded gray tuff and quartzite, minor gabbro and CaCO <sub>3</sub> cemented aggregates	pyrite - pyritohedrons minor calcite, chloritization of biotite, hornblende, limonite and hematite, minor chalcopyrite		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1070 to 1075 ft	moderate brownish gray	refer to interval 1050' to 1055' for rock type description	refer to interval 1050'-1055' for mineral description, decrease in pyrite		
1080 to 1085 ft	pale brown	heterogeneous; CaCO <sub>3</sub> plus clay, loosely cemented aggregates of lithic and felsic material, minor aplite, fine-grained volcanics, andesite to basaltic andesite (some fragments are propylitized) altered granodiorite silicified, gray, fine-grained welded tuff, (some altering to clay)	limonitic & hematitic staining and alteration, alteration of plagioclase to sericite, chloritization of hornblende to biotite, pyritohedrons (secondary?)		
1090 to 1095 ft	greenish gray	refer to interval 1080' to 1085' for rock type description, slight increase in altered granodiorite, slight decrease in gray silicified welded tuff	refer to interval 1080' to 1085'		
1105 to 1110 ft	pale red	heterogeneous; leucogranite, fine-grained dense volcanic material, chiefly andesite, altered granodiorite, (chloritized hornblende and altered plagioclase) minor quartzite, lithic aggregates loosely cemented with CaCO <sub>3</sub> , gabbro and tuffaceous material, strong chloritization and alteration of granodiorite	limonitic and hematitic staining and alteration, pseudomorphs, pyrite, chlorite, calcite, sericite		
1110 to 1115 ft	light brownish gray	refer to interval 1105'-1110' for description, increase in altered granodiorite	refer to interval 1105'-1110'		

Well Number DD9

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1195 to 1200 ft	pale brown	refer to interval 1175' to 1180' for description, some andesite appears to be propylitized	refer to interval 1175'-1180', minor epidote		
1215 to 1220 ft	pale brown	heterogeneous; gray-green to grayish red andesite (minor propylitization) minor aplite, leucogranite, altered granodiorite and minor gabbroic fragments, some siliceous welded lithic tuffs, quartzite	limonitic and hematitic alteration, hematite pseudomorphs, chlorite, minor epidote, calcite, minor sericite, essentially no pyrite		
1230 to 1235 ft	pale yellowish brown	refer to interval 1215'-1220' for description	refer to interval 1215'-1220'		
1235 to 1240 ft	pale brown	heterogeneous; minor oxidized (reddish) $\text{CaCO}_3$ loosely cemented aggregate of lithic material, abundant reddish gray to gray andesite, some very siliceous and dense, quartzite, welded tuff, minor altered granodiorite and gabbro	abundant Fe-oxidation, hematitic limonite and hematite (specular) chlorite, minor epidote, pyrite (minor)		
1245 to 1250 ft	light olive gray	refer to interval 1215'-1220' for description, decrease in reddish gray and an increase in gray to grayish-green andesitic material, decrease in altering granodiorite	refer to interval 1215'-1220'		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1250 to 1255 ft	greenish gray	heterogeneous; abundant gray silicified welded lithic tuff and/or rhyolite and leucogranite, fine-grained mafic volcanics - andesites to basalts, minor altered granitic and dioritic rock and gabbro, minor rhyolite	pyrite, minor chalcopyrite, hematite and limonite, minor sericite, epidote chlorite, minor calcite (as coatings)	x	
1260 to 1265 ft	greenish gray	refer to interval 1250'-1255' for description	refer to interval 1250'-1255' for details		
1280 to 1285 ft	light olive gray	refer to interval 1250'-1255' for description, some CaCO <sub>3</sub> cemented lithic fragments, abundant siliceous gray lithic welded tuff, and leucogranite	refer to interval 1250'-1255'		
1290 to 1295 ft	light olive gray	refer to interval 1250'-1255' for description	refer to interval 1250'-1255'		
1300 to 1305 ft	light olive gray	heterogeneous; abundant gray siliceous welded lithic tuff and leucogranitic material, altered granodiorite (chloritized altering plagioclase), grayish-green andesite (some may be propylitized) welded tuff, quartzite and minor gabbro	pyrite, limonite and hematite, chlorite, minor epidote and sulfur, minor sericite, calcite		
1315 to 1320 ft	pale brown gray	refer to interval 1300'-1305', increase in hematitic alteration, abundant reddish gray to grayish green mafic volcanics, minor diorite	refer to interval 1300'-1305'		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1325 to 1330 ft	light olive gray	refer to interval 1300'-1305' for description	refer to interval 1300'-1305'		
1335 to 1340 ft	greenish gray	refer to interval 1300'-1305' for description, increase in leucogranite, light colored siliceous andesite or rhyolite and siliceous welded lithic tuff, decrease in darker andesitic rock	refer to interval 1300'-1305', pyrite as fracture fillings (veins), pyritohedrons and cubes		
1350 to 1355 ft	greenish gray	heterogeneous; abundant gray leuco-granite and siliceous welded lithic tuff, minor dark andesite and weathered (highly chloritized) granodioritic rock - mafics replaced(?) some quartzite	abundant pyrite (some as fracture fillings), limonite and hematite, minor calcite chlorite		
1360 to 1365 ft	light olive gray	refer to interval 1350'-1355' for description, slight increase in andesitic material	refer to interval 1350'-1355', decrease in pyrite		
1380 to 1385 ft	pale brown	heterogeneous; abundant reddish to reddish gray volcanic rock andesitic, leucogranite fragments and minor altered granitic rock, also some gray basaltic andesite and welded lithic tuff	abundant Fe-oxidation limonite & hematite, pyrite, chlorite, minor epidote and calcite	x	
1395 to 1400 ft	greenish gray	heterogeneous; quartzite, welded, siliceous, lithic tuffs, andesite (some propylitizing) leucogranite and minor altered granitic material, minor basaltic andesite and rhyolite	limonite and hematite minor pyrite, calcite, and epidote chlorite		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1400 to 1405 ft	greenish gray	heterogeneous; minor altered granodiorite, mostly leucogranite and welded, siliceous, lithic tuffs, andesites (some propylitizing) and minor siliceous rhyolites and quartzites	limonitic and hematitic staining and alteration, pyrite - some as fracture fillings, chlorite, minor calcite		
1405 to 1410 ft	pale brown	refer to interval 1380'-1385' for description, minor lithic tuffaceous breccia	refer to interval 1380'-1385', no pyrite		
1420 to 1425 ft	light olive gray	heterogeneous; abundant calcite fragments leucogranite and minor tuffaceous material, andesite fragments and altering granitic rock, calcite vein?	abundant clear calcite, (Iceland spar) minor pyrite, limonite and hematite, chlorite		
1445 to 1450 ft	light olive gray	heterogeneous; abundant grayish pink siliceous, lithic welded tuffaceous material and mafic-free (leucogranite) rock, minor altered granodiorite (chloritized) and basalt, siliceous andesite and rhyolite fragments	limonite and hematite, pyrite, chlorite, minor calcite, and epidote		



Well Number Corral

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
0 to 5 ft	light olive gray	dioritic to granodioritic material, - fine grained; some quartz-rich rhyolite and tuff, chloritizing mafics, some fine grained volcanics - basalts, andesites, also some coarser-grained (chloritizing mafics) dioritic or granodioritic rock.	Fe oxides, limonite, hematite, magnetite, chlorite, sulfur, and epidote (minor)		
15 to 20 ft	pale brown	some siliceous volcanics (tuffs and rhyolites); greenish-brown-coarse-grained altered granite; dioritic or granodioritic rock, fine grained volcanics - basaltic andesites; alluvium	limonite, hematite, magnetite, chlorite, (orpiment, realgar,?) sphalerite, epidote (minor)	*	
35 to 40 ft	light olive gray	scapolitized granite, greenish, coarse grained and somewhat altered. Rhyolitic material - tuffaceous rock, some andesitic rock; - fine grained minor gabbroic material, mostly granodiorite that is weathered, some with chloritizing mafics	epidote, secondary limonite, hematite, chlorite, epidote, Cinnabar, Fe-oxides, limonite		
50 to 55 ft	pale yellowish brown	Minor rhyolitic material with free quartz; - Andesite - porphyritic, claydusting, some rhyolitic material kaolinizing. Welded tuff; scapolitized material, granitic rock, minor fine - grained mafic volcanics; granodiorite, weathered	limonite, hematite (specular) chloritized biotite, hornblende		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
70 to 75 ft	variable pale oranges to pale browns	larger fragments; tuffaceous fragments, minor rhyolite, granodiorite, scapolitized(?) material; granitic rock (minor); minor limestone, minor fine grained volcanics, mostly andesite, basalt	minor limonitic staining, minor chloritization, minor epidote		
90 to 95 ft	dark yellowish brown	fairly large fragments of (granules to pebble size) siliceous and intermediate volcanics (rhyolites and andesites) scapolitized granite, minor basalt, granodioritic fragments (weathered), minor tuff and quartzite	minor chloritization of horn-biotite minor limonitic staining, minor calcite coatings		
120 to 125 ft	greenish light gray	CaCO <sub>3</sub> cemented aggregates, very small grains (med. sand) of lithic material); siliceous volcanics, weathering to clay. euhedral biotite, abundant qtz sand and altered tuff. smaller average grain size, minor scapolitized rock, fine grained volcanics, minor basalt, andesite	clear calcite, iceland spar, minor chlorite, limonite staining		*
125 to 130 ft	light gray	abundant gray, altering, chloritizing material, appears to be granodioritic (talcish, soft); monolithologic; mafics almost completely chloritized, (none fresh); minor tuffaceous, siliceous volcanics	calcite (not clear), minor Fe oxides, staining, Wairakite (by x-ray)	*	*

Well Number Corral

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
140 to 145 ft	brownish gray to grayish red	monolithologic; euhedral plag, some quartz in a basalt or andesite, plagioclase weathering to clay, no mafics, volcanic rock, (2 stages of cooling), no mafics, stained siliceous volcanics.	Fe oxide staining Wairakite (zeolite)	*	*
165 to 170 ft	grayish red	appears to be essentially monolithologic; no evidence of mafics, completely altered; altered granodiorite, gray on <sup>fresh</sup> surface, euhedral plagioclase weathering to clay, rhyolitic material, siliceous, not aphanitic; minor aplite	Fe oxide staining, reddish brown wairakite	*	*
185 to 190 ft	brownish gray	monolithologic; brown-red andesite material with plagioclase weathering, (sill or flow); relatively fine grained with free qtz. euhedral plag. altering to wairakite.	garnet, reddish (almandine?) minor calcite coating	*	*
195 to 200 ft	pale yellowish brown	alluvial material, heterogenous; some highly fractured rock (chalcedony) appears brecciated, abundant K-spar, some fine-grained volcanic material, andesite, and granitic material, fault zone?	minor Fe oxides and calcite, manganese, dendrites, calcite, and/or argonite, sericitization? alter tion of plag?	*	*
210 to 215 ft	pale brown	monolithologic; volcanic material, (appears to be two-stage) phenos of plag. and qtz.; plag. weathering out; andesitic material, with plag. phenos	minor limonitic staining, realgar and orpiment (very min)	*	

Well Number Corral

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
230 to 235 ft	pale brown	monolithologic; brownish-red fine grained volcanic material of the andesite reange with phenos of plag. and qtz. (weathering out)	very minor limonite amigdyloidal Fe oxidation sandine?	*	*
245 to 250 ft	med. light gray	aggregated material, <sup>cemented w/</sup> CaCO <sub>3</sub> ; very loose; abundant free qtz.; rhyolitic material, tuffaceous material, some weathering to clay; mafics slightly chloritized; altered granitic and dioritic rock abundant	minor Fe oxides secondary biotite, very euhedral		
255 to 260 ft	brownish gray siliceous	essentially monolithologic, appears to be a rhyolite altering to clay, devitrified; tuffaceous sedimentary rocks, contains free qtz., mafics, plag.; lithic fragments in a tuffaceous, siliceous matrix	chloritization of mafics	*	
270 to 275 ft	medium gray	essentially monolithologic; weathering to clay(?) qtz. is abundant, plag. and K-spar, minor CaCO <sub>3</sub> and biotite in a devitrified glass, fragments in a tuffaceous, siliceous matrix	minor limonite		
295 to 300 ft	medium light gray	monolithologic; siliceous volcanic rock, probably a rhyolitic flow, weathering plag. (may contain sanidines to clay)	cherty to chalcedony material, chloritizing biotite flakes, euhedral plag. or sandine, weathering out.	*	*
305 to 310	medium brownish gray	monolithologic; tuffaceous or rhyolitic rock, sanidine or plag. weathering out; very similar to interval 295 to 300 ft.	doubly terminated qtz. from siliceous rock, chloritizing biotite sandine?		*

Well Number Corral

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
315 to 320 ft	brownish gray	appears to be monolithic; very siliceous, much more massive (quartzitic)? very few mafics euhefrol plag. or sandine, minor tuff fragments; silicified rhyolite	one hunk of epidote, magnetite hemitite, sandine?	*	
335 to 340 ft	light brownish gray	monolithologic; siliceous volcanic rock, minor mafics (biotite) gray, rhyolitic to andesitic, due to mafics, possibly a welded tuff	sandine, weathering	*	
370 to 375 ft	pale brown	essentially monolithologic; dark gray siliceous rhyolite; fine grained volcanic, minor mafic content (biotite)	sandine or plag. weathering	*	
395 to 400 ft	light brownish gray	monolithologic; fine grained siliceous? volcanic material, few mafics	sandine weathering out plag.	*	
400 to 405 ft	light brownish gray	monolithologic; siliceous, fine-grained volcanic material, probably rhyolite, intervals 395 to 400 and 370 to 375 ft, similar; minor mafic content	minor Fe oxidation	*	
420 to 425 ft	light gray	light gray siliceous volcanic rock, rhyolitic, monolithologic; or densely welded tuff, silicified.	minor pyrite (dodec), some cubic grains; very minor calcite, opaque, sandine?, or plag. weathering out	*	
455 to 460 ft	light brownish gray	lithologically heterogeneous; detrital grains, chert, siliceous volcanics, tuff grains, chlorotizing biotite, stained granitic rock (altered), minor dioritic material	Fe oxides and staining, (magnetite)		

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Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
1115 to 1120 ft	light brownish gray	refer to interval 1105'-1110' for description, increase in volcanic material, gray and grayish purple andesite (siliceous)	refer to interval 1105'-1110', pyrite filling fractures		
1125 to 1130 ft	light olive gray	heterogeneous; abundant siliceous andesite (gray to grayish red) leucogranite or aplite, altered granitic and dioritic material, minor welded tuff, quartzite, gabbro, some CaCO <sub>3</sub> and altering tuffaceous material coating, some fragments	pyrite filling fractures, minor epidote, chlorite, limonite, hematite, magnetite, calcite, sulfur	x	
1150 to 1155 ft	greenish gray	refer to interval 1125' to 1130', slight increase in tuffaceous material (welded)	refer to interval 1125'-1130'		
1160 to 1165 ft	greenish gray	refer to interval 1125' to 1130' for description	refer to interval 1125'-1130', no apparent pyrite in fractures		
1175 to 1180 ft	greenish gray	heterogeneous; CaCO <sub>3</sub> loosely cemented aggregates of lithic material, aplitic and/or leucogranite, mafic volcanics, andesites to basaltic andesite, altered granodiorite (chloritized biotite and hornblende) that is stained greenish gray, minor quartzite, lithic tuff and gabbro	pyrite, minor chalcopyrite, calcite, limonite, hematite, minor sulfur, sericite		

Well Number Corral

Depth interval	Unwashed color	Description	Secondary minerals	grain mt	x-ray
475 to 480 ft	medium gray	Lithologically heterogeneous; tuffaceous sediment; fairly coarse grained, mafic-rich, volcanic (andesite) rock, andesitic-basaltics, andesite may be propylitized, minor siliceous material, tuff with free qtz., altered dioritic-granodioritic material - abundant free qtz., doubly terminated	Fe oxides, stains, coatings; abundant epidote, bright orange vein? breccia	*	*
480 to 485 ft	light gray	essentially monolithologic; tuff, white siliceous rhyolitic or tuffaceous volcanic rock, abundant free qtz. doubly terminated, appears to be weathering to clay?	bright orange xtaline material, minor Fe oxidation, minor <u>fresh</u> , secondary biotite	*	*
495 to 500 ft	greenish gray	siliceous volcanic material; monolithologic; white, tuff (welded), abundant free qtz., fine opal?	Minor Fe oxidation	*	