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Hole No. 1104-1

Collar location: U.V.X. Mine - 1100 level - 1104 drift Mine grid 11,310 N 8110 E

Inclination: +5° at collar

Azimuth: S 63° W at collar

Length:

Driller: Longyear Co. - Phoenix, AZ Jack Hayslip, driller Bill Mills, helper

Core recovery:

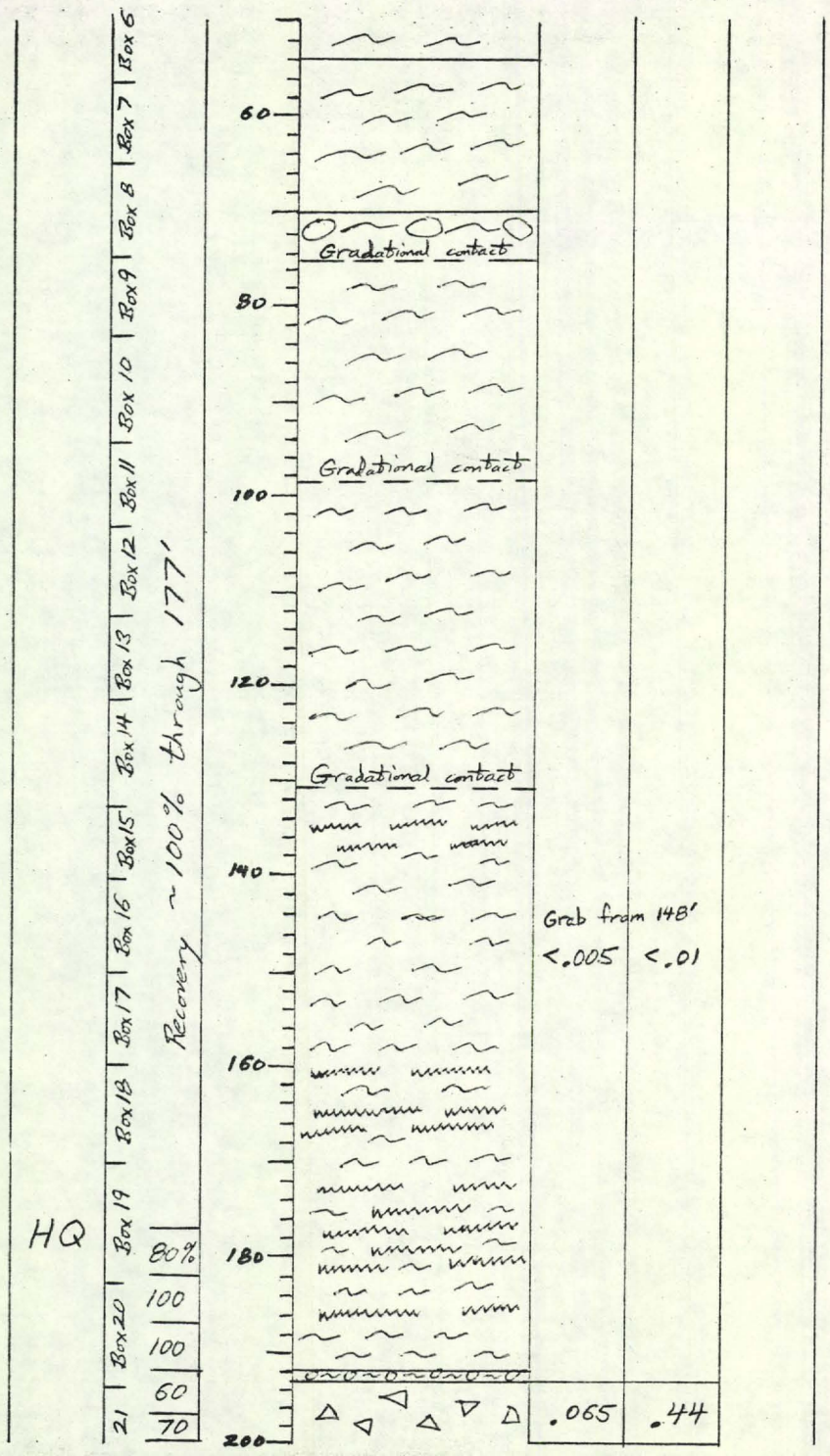
Dates: Aug. 12 thru , 1985

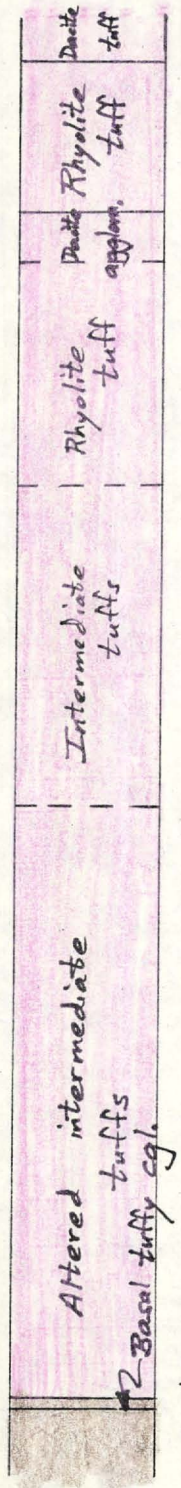
Assayer: Skyline Labs, Inc. - Tucson using Fire/AA and one assay ton

Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig.

Core size	Runs & recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type	Lithology
HQ 2½" dia.	Box 5 | Box 4 | Box 3 | Box 2 | Box 1 5' Core barrel	20 40	Gradational contact	Grab of matrix <.005	jasper from 14' <.01			Rhyolite agglomerate / Rhyolite tuff	0-50' Pink-gray, mottled, fine to med. grained, coarse fragmental qtz-feld-sericite (meta-rhyolite) with jasper fragments. Clasts vary from 1" to 4" dia., often equidimensional. Dominant clast are ~4", rubrounded, pink-gray, aphanitic to med. gr. feldspar porphyry with 1-4mm pink orthoclase (?) phenocrysts constituting about 10% of rock. Subordinate clast type (≤10%) is blood red aphanitic jasper, often more angular than the rhyolite clasts. Jasper fragments often have wispy corners that trail off into a red +/or brown iron-stained, jaspery matrix. Matrix ≤10% of core. No carbonate, very hard (H > 7.5) non-magnetic. Traces of malachite on fractures, especially at 35'. Beyond 35', grades to smaller clasts, less jasper, and more tuffy matrix. Foliation not very distinct but ~ 80° to core axis





50-54 Greenish gray, v.f.-m.gr. massive qtz-feld. porphyry with clear qtz phenocrysts ≤2mm, pink ortho(?) phenos. ≤6mm

54-70 Pink-gray, mottled, v.f.gr., thin foliated qtz-feld sch

70-75 Green-gray, mottled, f.gr., qtz-feld-chl. schist with pink feldspar porphyroblasts up to 2mm dia.

75-99 Same as 54-70

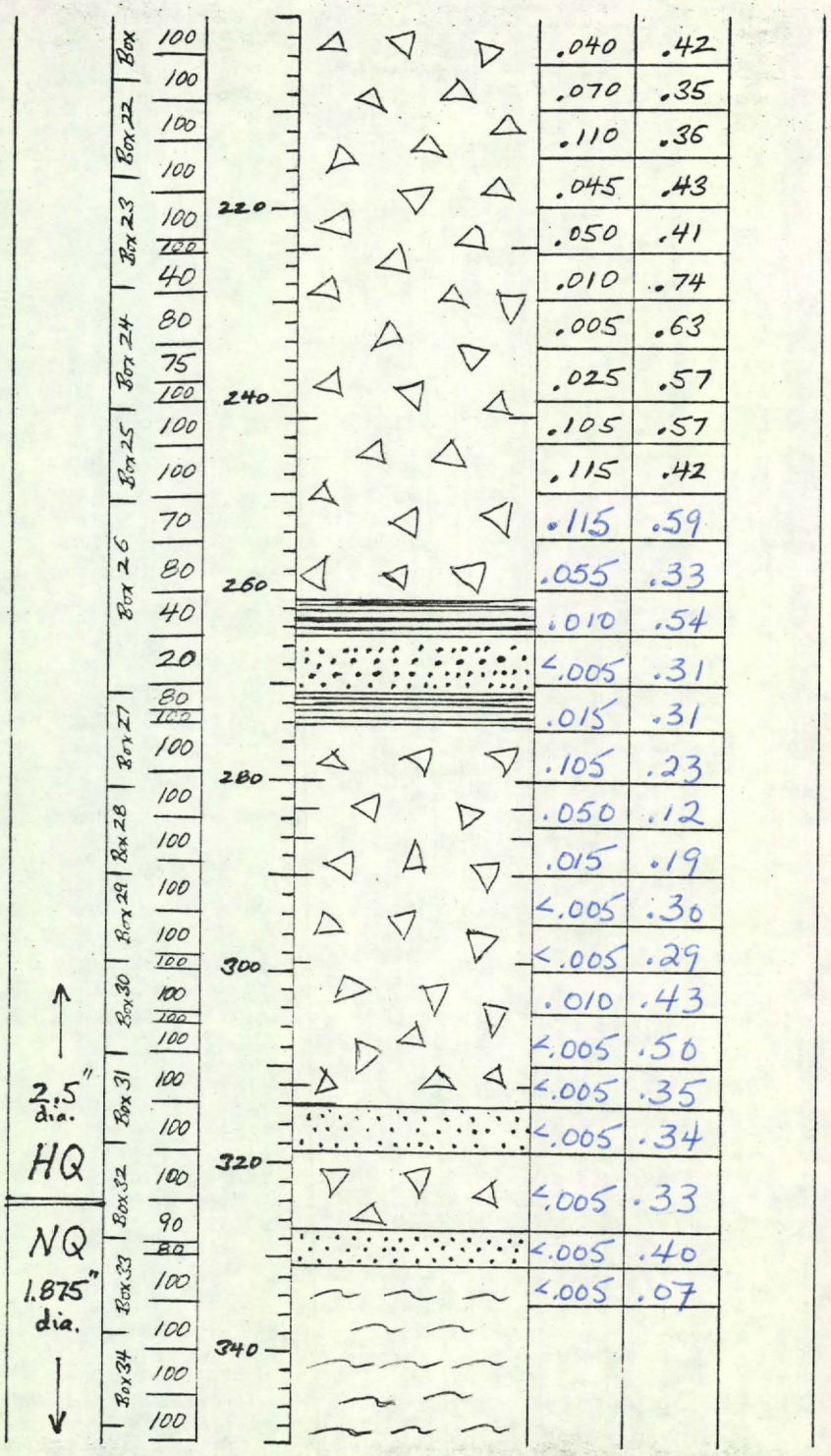
99-131 Green-gray, mottled, f.-m.gr., faintly banded qtz-feld-sericite porphyry. Qtz phenocrysts ≤1mm and ≤5% of rock. Feldspar (pink orthoclase?) phenos. ≤4mm and scattered uniformly, ~15% of rock, 99'-105' contains ~10% x-cutting calcite veins ≤1cm. More iron stain with depth; also grading softer with depth (ie., more altered, as unit below).

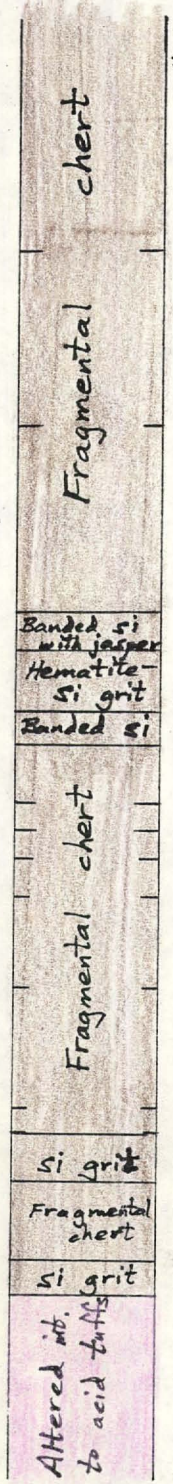
131-192 Brick red and gray, alternating and mottled, f.gr., faintly banded qtz-ser. sch.; kaolinized & iron stained. Locally brecciated and healed with fine (<1mm) gray, anastomosing qtz. veins. Probably altered as a result of proximity to main orebody &/or Florencia fault. 137-139 - Brown, limonitic, with Liesgang banding.

134-137
160-162
164-167
172-182
185-187
} Broken core intervals; much gouge and kaolin.

Hardness ~5. No carbonate. Foliation ~80°-90° to core axis.

192-193 Brick red matrix (~50%) of hematite stained & cemented qtz grains (fine to med. sand size) carrying buff and gray, aphanitic chert fragments (~50%) which are very hard, angular, and matrix supported.





193-331 Chert, as detailed below. Variously fragmental, massive, jaspery, banded, milky, and sandy. Traces of malachite scattered thruout. No other carbonate. H>7.5

193-224 Pale gray, translucent, cryptocrystalline, massive, quartz (chert) with yellow-brown and red-brown iron staining on multitudes of qtz-hematite healed fractures. Larger fractures not fully healed, leaving vugs lined with v.f. gr. drusy qtz xl crusts. Vug linings locally, in turn, coated with malachite (only trace Cu overall).

224-242 Same as above but more dark red + maroon iron staining. Poor core recovery where most broken.

242-261 Same as 193-224

261-265 Gray and red, banded, cryptocrystalline, jasper/chert. Very dense and hard. Banding perpendicular to core axis.

265-271 Brick red, f.gr., gritty, sandy textured hematite-stained and cemented qtz. Very poor core recovery because of loose cementing and vulnerability to water.

271-274 Same as 261-265 but less red jasper.

274-280 Same as 193-224

280-283 Gray-white, sugary, massive chert

283-286 Orange-yellow and white mottled, porous, banded chert. Banding 90° to core axis.

286-290 Brick red, more dense, banded chert

290-299 Chocolate brown + dark red-brown, dense, hard, massive + locally fragmental chert.

299-312 White, massive, coarsely fragmental chert with much brown iron staining on fracture surfaces.

312' - Prominent, sharply defined angular unconformity between red and yellow stained chert bands; each with fragments of the same chert type within their matrix.

312-314 Pale brown and buff, dense, hard, non-fragmental chert

314-319 Pale brown, f.gr., sandy, very poorly cemented silica grit. Locally better cemented + as hard as overlying chert. Otherwise H=6.5 Malachite ~2% on fractures, 318'-319'.

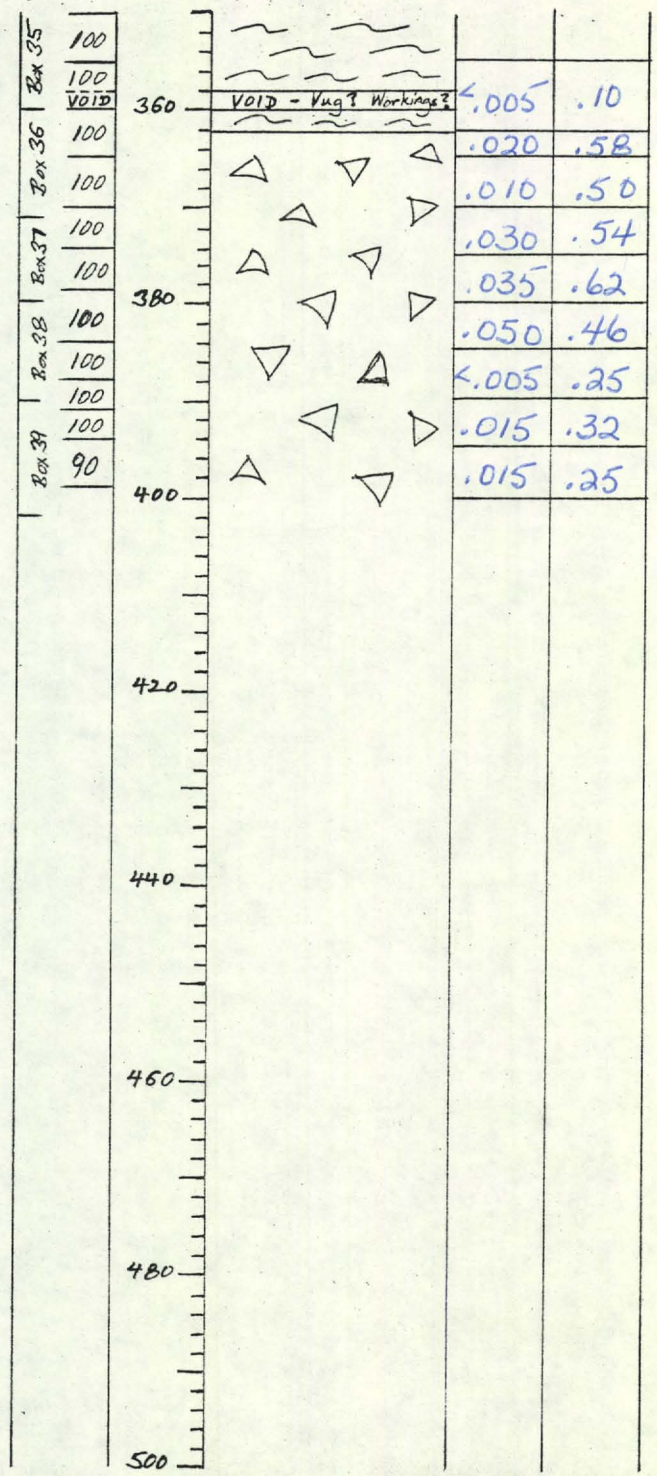
319-327 Brown + mustard yellow, massive, healed frag. chert.

327-331 Brick red, orange, + mustard yellow, f.g., sandy + silty, poorly cemented silica grains. Very crumbly, disintegrates in water. Some bx textures (healed) + chalcedonic vein (≤2mm) at 329'

331-362 Various colored, v.f.gr., kaolinized, qtz-ser.-schist.

331-338 Pale purple with white blotches (leached-?)

338-342 White and orange-red



342-358 Same as 331-338

358-360 2 feet of open space; nature unknown.

360-362 Same as 331-338 and 342-358.

362-362.5 Tan, v.f.gr., thin laminated and poor cemented siliceous tuff. Brick red stained on fractures.

362.5- Brown, red-brown, and biege, cryptocrystalline, iron stained, fragmental chert. Often vuggy with v.f.gr. drusy qtz linings. Exhibits rapid color changes. Malachite on fractures from 393-400 (trace Cu only). Extremely hard drilling (burned out 3 bits 388'-404').

Hole No. 1104-2

10-24-86

Preliminary
Hole still drilling
Assays incomplete

Collar location: UVX Mine - 1100-Level - 1104 Drift
Mine grid 11,310 N 8,110 E

Inclination: +15° at collar, + 18° at 520'

Azimuth: S63°W at collar

Length:

Driller: Longyear Co. - Phoenix, AZ
Jack Hayslip, Driller Bill Mills, Helper

Core recovery:

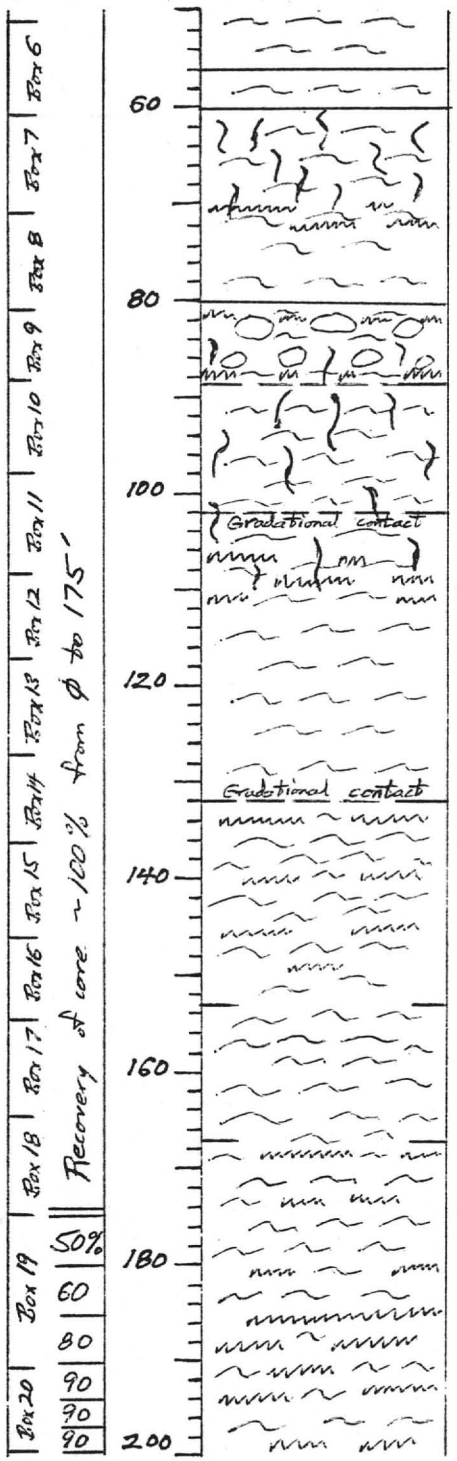
Dates: Sept 17 thru

Assayer: Skyline Labs, Inc. - Tucson
using Fire/AA and one assay ton

Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig.
NQ core to 587', BQ to

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type (Protolith)	Lithology
NQ core 1.875" dia.	Box 1 | Box 2 | Box 3 | Box 4 | Box 5 — 5' core barred —	20 40	Gradational contact					Rhyolite agglomerate Rhyolite	0-56' Pink-gray, mottled, fine to med. grained, coarse fragmental qtz-feld-sericite (meta-rhyolite) with jasper fragments. Clast ≤4" dia., equidimensional, subrounded, feldspar porphyry with feldspar phenocrysts 1-4mm (pink, orthoclase-?) constituting ~10% of rock. Some (~10%) blood red, aphanitic, jasper fragments and some red-brown jaspery matrix between all clast types. No carbonate, non-magnetic, very hard (H ≥ 7.5) Beyond 44', grades to smaller clasts, less jasper, and more tuffy matrix.



tuff

Dacite tuff

Rhyolite tuff

Dacite agglom.

Rhyolite tuff

Intermediate tuffs

Altered intermediate tuffs

56-60' Greenish gray, v.f. to m.gr., massive, qtz-feld. porphy. with clear qtz phenos ≤2mm, pink ortho. phenos ≤6mm

60-80 Pink gray, mottled, v.f.gr., thin foliated qtz-fold sch.
Note: 60-74' - ~2% Calcite veinlets ≤2mm thick

80-89 Green-gray, mottled, f.gr., qtz-fold-chlorite sch with pink fold. porphyroblasts ≤2mm.
Note: 83-110' - ~1% Calcite veinlets ≤2 mm thick

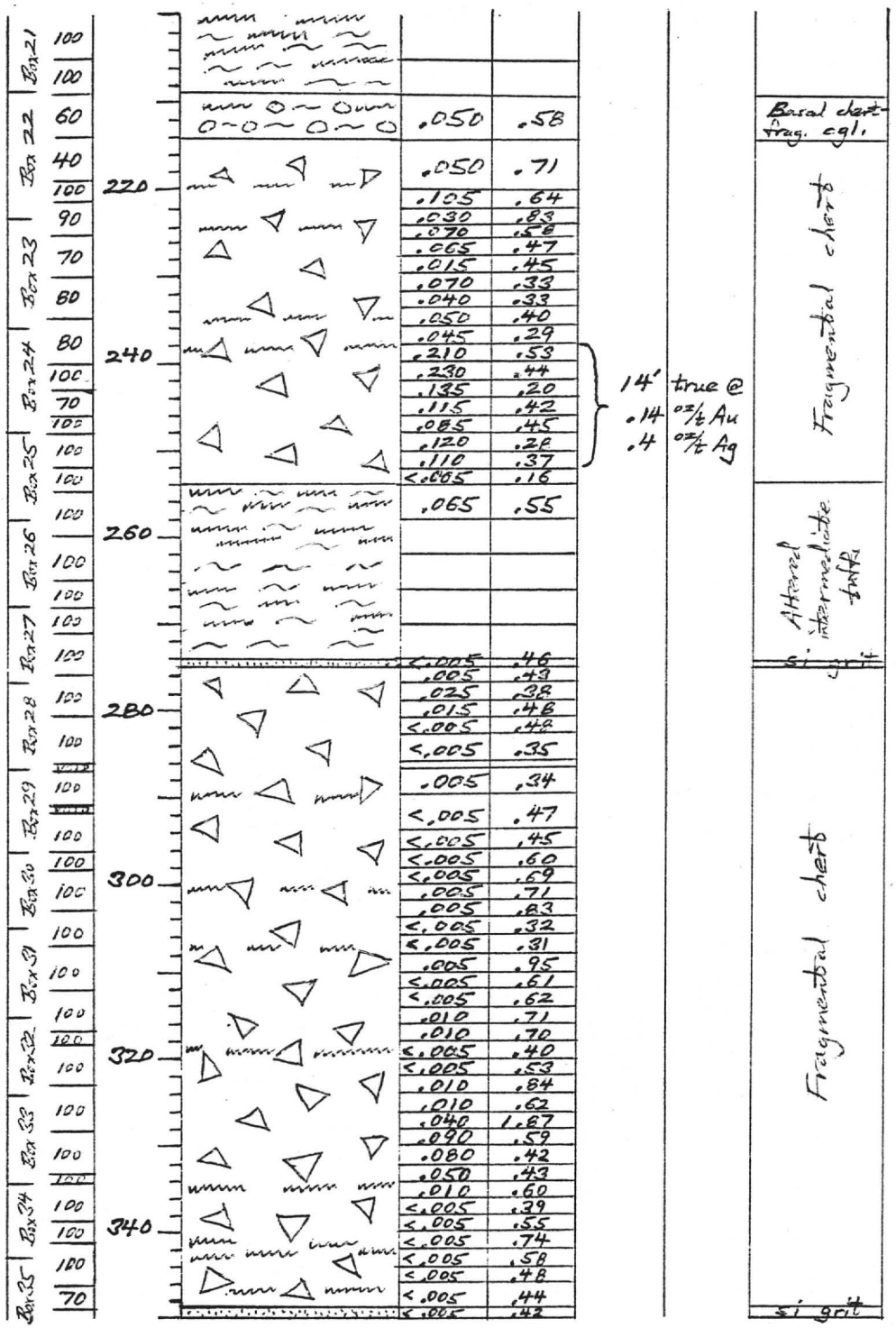
89-102 Same as 60-80 H still ~7.0 except for calcite veinlets.

102-132 Green gray, mottled, f.-m.gr. faintly banded qtz-fold-seritte porphyry. Qtz phenos ≤1mm, ~5%. Feldspar (pink orthoclase?) phenos ≤4mm, and scattered uniformly ~15% of rock. Trace calcite, as above. Grades more iron stained, more kaolinitic, hence softer, into the more altered rock below.

132-209 Brick red, gray, and white, alternating and mottled, f.gr., faintly banded, qtz-ser. sch; kaolinized and iron stained. Locally brecciated and healed with fine gray, anastomosing qtz veins (≤1mm).

Note: 153-167 Blotchy green-gray, pink gray, and brick red, f.gr., coarse fragmental. H-6.5 for both clasts and matrix

167-209 White and pale gray, more heavily kaolinized than above, locally sericitized (especially 207-209) qtz-fold-seritte sch. Wet surface still reveals original fragmental texture with clasts from 2mm to ~3 cm. H-6.5 No carbonate.



209-214 Orange-red, f.gr., gritty, hematitic silica sand matrix with ~60% buff, angular, amorphous, chert fragments, matrix supported.

214-254 Fragmental chert. Top is beige/buff as with fragments in overlying cgl. Remainder dark and light brown, red brown, gray brown, yellow brown, banded, mottled, and fragmental. Generally tight silica healed but locally porous and gossanous. Traces of $CuCO_3$ as botryoidal malachite linings and spots within vugs. Clear, resinous, qtz eyes generally ~1 mm but up to 10 mm dia. occur locally within dense chalcedonic chert. H ~ 7.5 No carbonate other than the trace malachite.

254-274 Yellow white and pale purple, blotchy, v.f. gr., kaolinized, qtz-fld-ser sch. with obvious fine fragmental (welded tuff/ignimbrite) texture. Foliation ~ 90° to core axis.

274-275 Red brown, f.gr., banded silica grit.

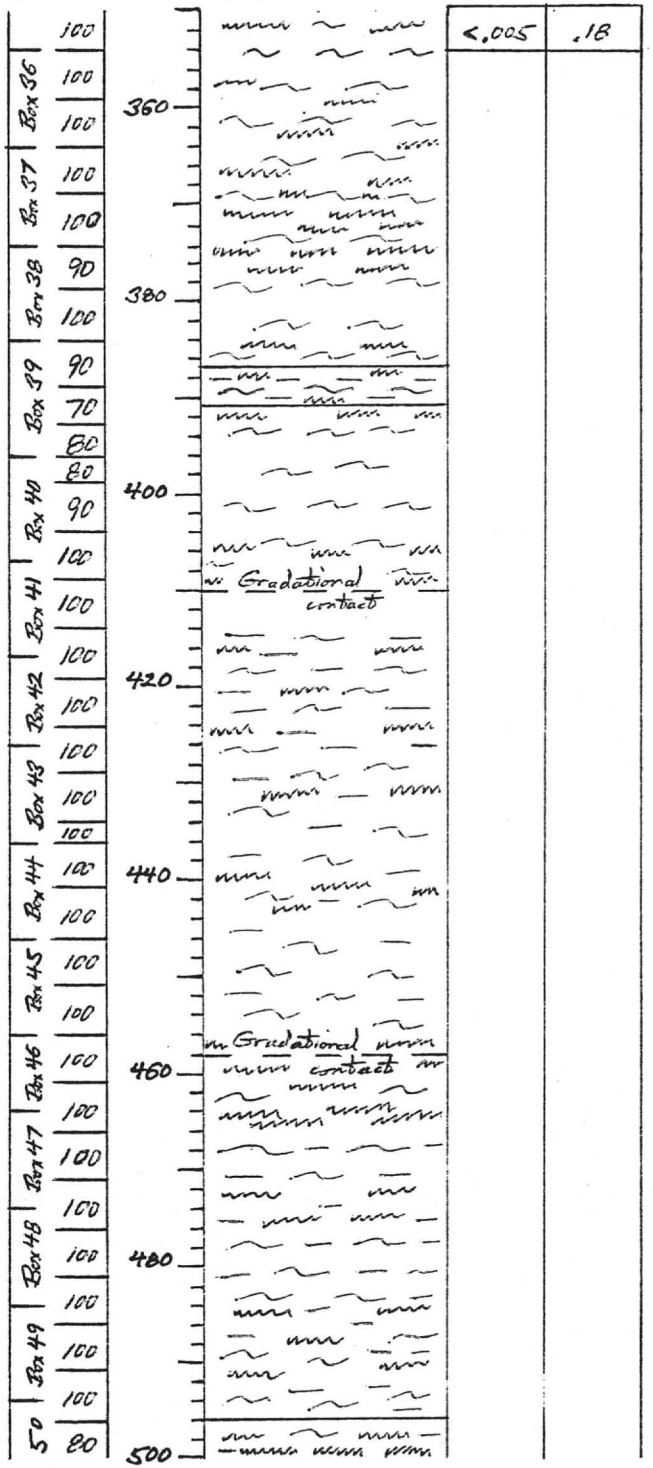
275-349 Fragmental chert. Same as 214-254

excepting: 285-286, 303-307, 328-334 } Dense, pale chestnuts brown, non-fragmental (unless frags are too large to see with NQ core). 328-334 contains clear (translucent) qtz/chert fragments, very angular.

286-287, 291-292 } One-foot voids; lost drill circulation.

No carbonate, no magnetite.

349-350 Yellow-red, banded, v.f. gr. silica grit. H ~ 7



Altered intermediate tuff

Heavily altered v.d.c.

Altered intermediate tuff

Altered intermediate tuff

Altered basic to int. tuff

350-387 Pale purple and white, blotchy, v.f. gr., qtz-feld-ser. sch with some kaolin. Color and relict fragments up to 5 mm suggest intermediate ~~tuff~~ protolith.

Note: 369-377 Crushed zone

387-391 White, v.f. gr., heavily sheared and broken sericite - kaolin. H ~ 5

391-410 Same as 350-387

Note: 393-405 Crushed zone

410-458 Orange and red-gray, alternating, v.f. gr., soft (H ~ 5.5) kaolinized, locally sheared, broken, qtz-feld-ser. sch.

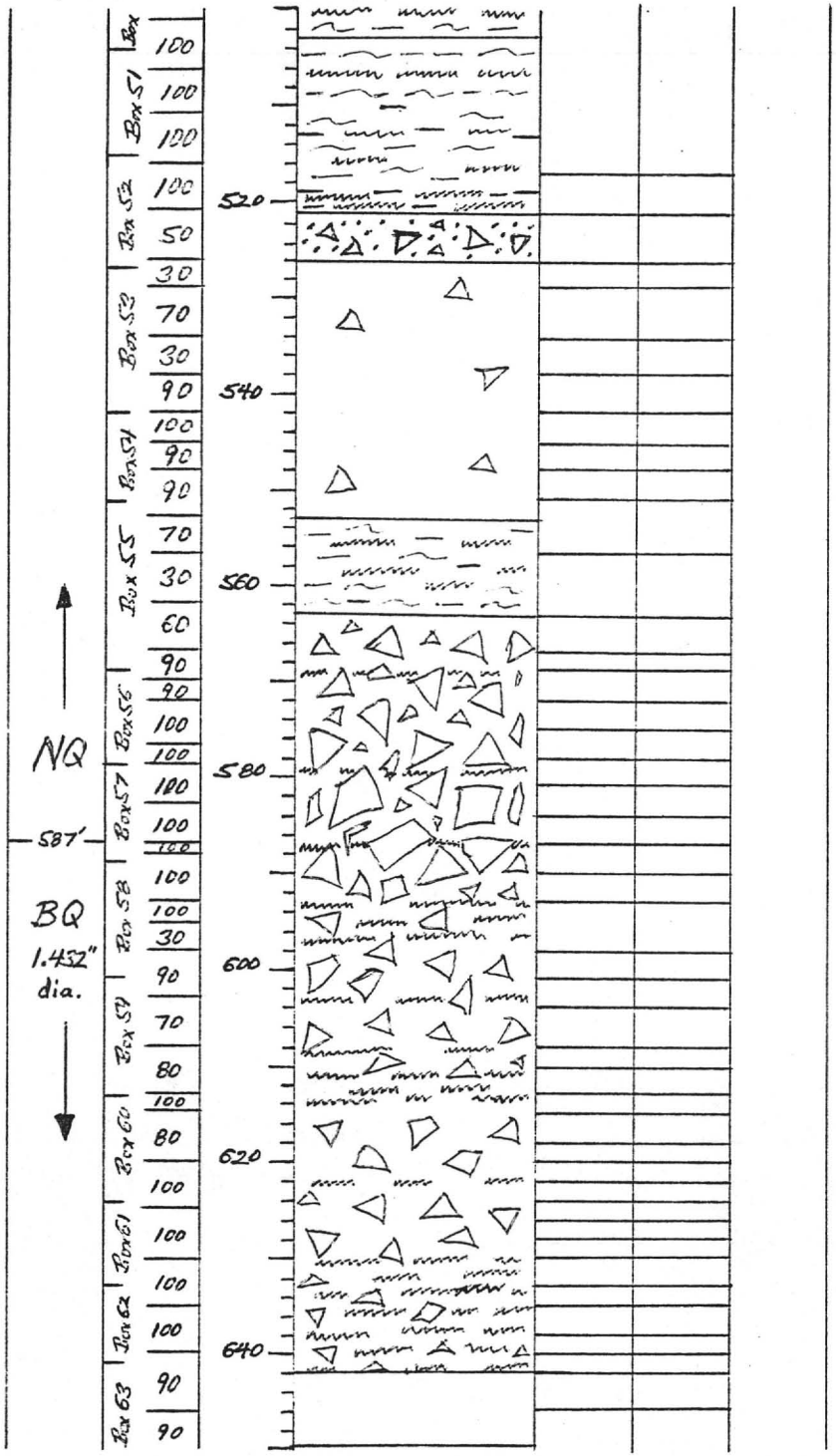
Note: 426-429 Trace disseminated calcite.

458-496 Dark brown-red, v.f. gr., soft (H=5) locally gouge, often broken, heavily kaolinized; Protolith only conjecturable as basic to int. tuff.

Note: 464-466 Crushed zone

496-503 Same but pale yellow-brown and gray-brown.

Note: 499-501 Crushed zone



Heavily alt'd & sheared int. tuffs

Frag. chert & silica grit

Massive chert

Rhyolite flow

Fragmental cherts

Heavily alt'd volc's-?

503-513 Same as 350-387 excepting 506-507 ± red-brown fault gouge and mylonite.

513-519 Same but more pink

519-521 Same but more red and white and brick red; much more heavily sheared and kaolinized.

521-526 Light yellow brown to amber, f. gr. fragmental chert in silica grit matrix. Locally poorly cemented. No carbonate. H ~7.0

526-553 Red brown, amorphous, generally massive chert. Faint color banding in various orientations and small silica-healed fractures, sometimes exhibiting small (≤ 1cm) offsets. No carbonate H-7.5

553-563 Blotchy, pale purple, brick red, and white, f.gr., kaolinized qtz-fold-sericite schist, H~5.5 Bottom two feet, 561-563, reveal less altered protolith which may apply to entire interval. It is a light gray, v.f. gr. qtz-ser. matrix with ~50% white, kaolinized orthoclase(?) phenocrysts ~/-5 mm. No favored orientation or alignment of phenos. May have been rhy. flow,

563-569 Dark red, massive chert with some faint fragments (obscured by silica flooding-?). ~10% tiny vugs (<1mm to 1cm). Trace of malachite.

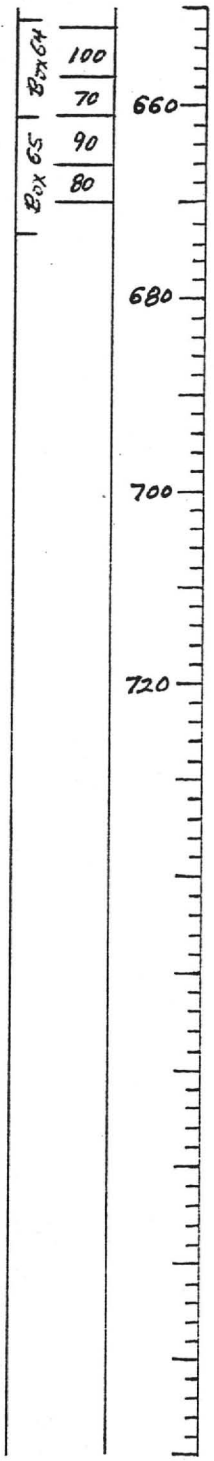
569-572 Tan massive chert; may be a single, large clast (since color & texture match that of fragments below).

572-587 Tan, massive chert occurring as angular fragments up to 10 cm in red brown, ferruginous chert matrix. Fragments are matrix supported but neighboring frags. match like jigsaw puzzle pieces. Hydro-fractured-?

587-601 Red and tan fragmental cherts. Tan, banded chert may be very large clasts or alternate bands with red brown bx. chert. Much hematite. Traces malachite.

601-642 Tan, red brown, and translucent white qtz/chert fragments all sizes up to 20 cm (obvious clasts) and possibly two feet (613-615). Looks much like an angular qtz-pebble cgl. with very ferruginous cement. Traces malachite. Very hard (drills about 1 ft/hour despite rod pressure adequate to collapse rod couplings in upon themselves). No carbonate, no magnetite.

642-650 White and pale gray, v.f.gr., heavily kaolinized and altered rock. Protolith may be c.gr. massive diorite or coarse intermediate tuffs and fragmentals.



650- Brick red ~~to~~ pale purple, vf. gr., kaolinized and altered and mildly silicified (?) intermediate tuff. Now a kaolin-qtz-sericite schist. Interval 650-670 exhibits 2-20 cm dia. chert clasts, matrix supported, probably deposited as bombs within a tuff.

Hole No. 1104-1

Collar location: U.V.X. Mine - 1100 level - 1104 drift
Mine grid 11,310 N 8110 E

Inclination: +5° at collar; +2° at 300'; +4° at 567'

Azimuth: S 63° W at collar

Length: 567 feet

Driller: Longyear Co. - Phoenix, AZ
Jack Hayslip, driller Bill Mills, helper

Core recovery: 92% overall; 95% for first 540'

Dates: Aug. 12 thru Sept 16, 1985

Assayer: Skyline Labs, Inc. - Tucson
using Fire/AA and one assay ton

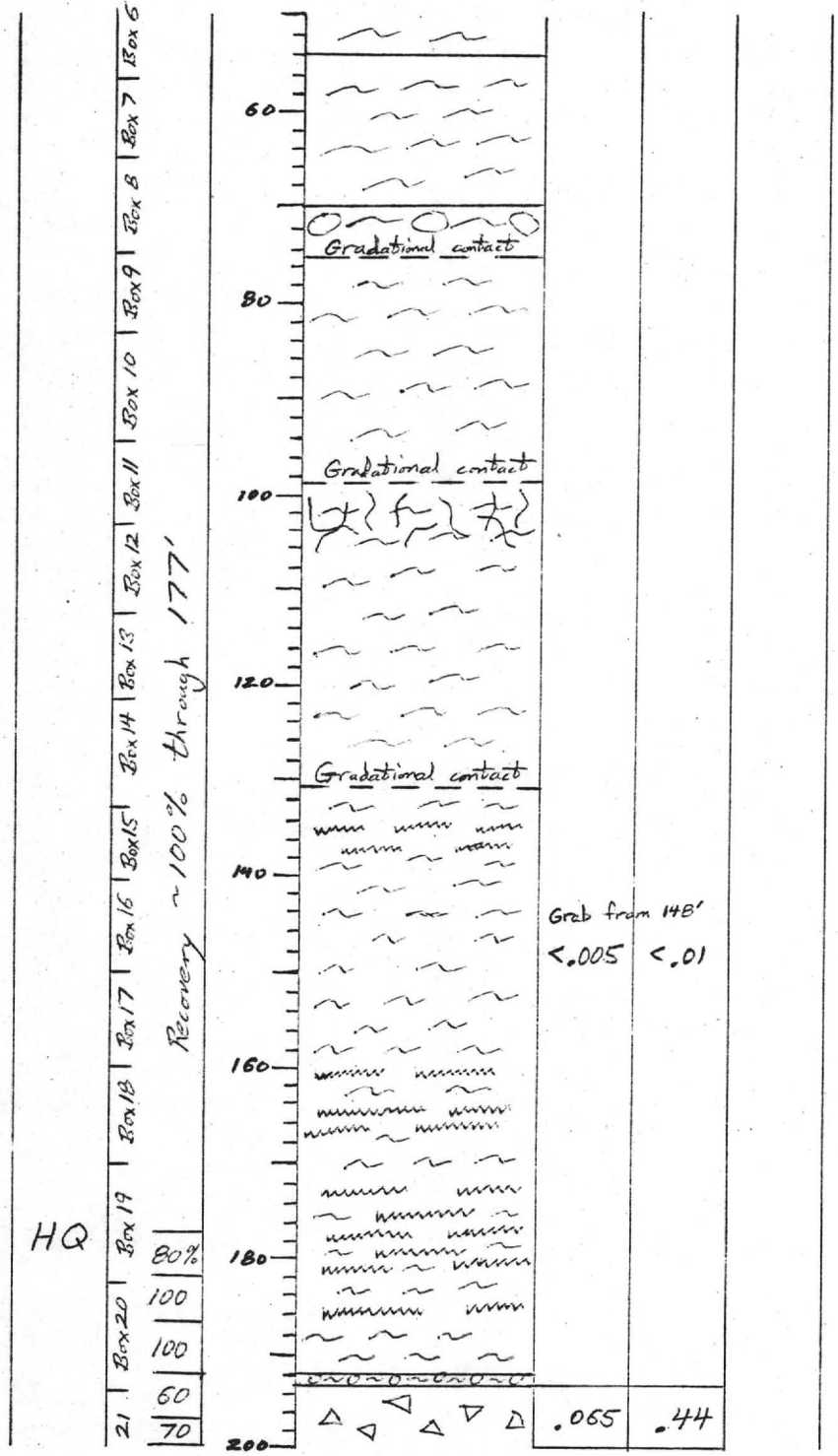
Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig.
HQ core to 324', NQ to end of hole

All casing recovered from hole; none left (not even collar pipe).
Inclination tests by acid etch technique

21 ft/shift (total of 27 shifts) including down-time, pulling rods + casing, etc. (8-hr shifts)

Core size	Runs & recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type	Lithology
HQ 2½" dia.	Box 1 | Box 2 | Box 3 | Box 4 | Box 5 — 5' Core barrel	20 / 40	Gradational contact	Grab of matrix <.005	jasper from 14' <.01			Rhyolite agglomerate / Rhyolite tuff	0-50' Pink-gray, mottled, fine to med. grained, coarse fragmental qtz-feld-sericite (meta-rhyolite) with jasper fragments. Clasts vary from 1" to 4" dia., often equidimensional. Dominant clast are ~4" subrounded, pink-gray, aphanitic to med. gr. feldspar porphyry with 1-4mm pink orthoclase (?) phenocrysts constituting about 10% of rock, subordinate clast type (≤10%) is blood red aphanitic jasper, often more angular than the rhyolite clasts. Jasper fragments often have wispy corners that trail off into a red +/or brown iron-stained, jaspery matrix. Matrix ≤10% of core. No carbonate, very hard (H > 7.5) non-magnetic. Traces of malachite on fractures, especially at 35'. Beyond 35', grades to smaller clasts, less jasper, and more fatty matrix. Foliation not very distinct but ~80° to core axis



50-54 Greenish gray, vf-mgr. massive qtz-feld. porphyry with clear qtz phenocrysts ≤2mm, pink ortho(?) phenos. ≤6mm

54-70 Pink-gray, mottled, v.f. gr., thin foliated qtz-feld sch.

70-75 Green-gray, mottled, f. gr., qtz-feld-chl. schist with pink feldspar porphyroblasts up to 2mm dia.

75-99 Same as 54-70

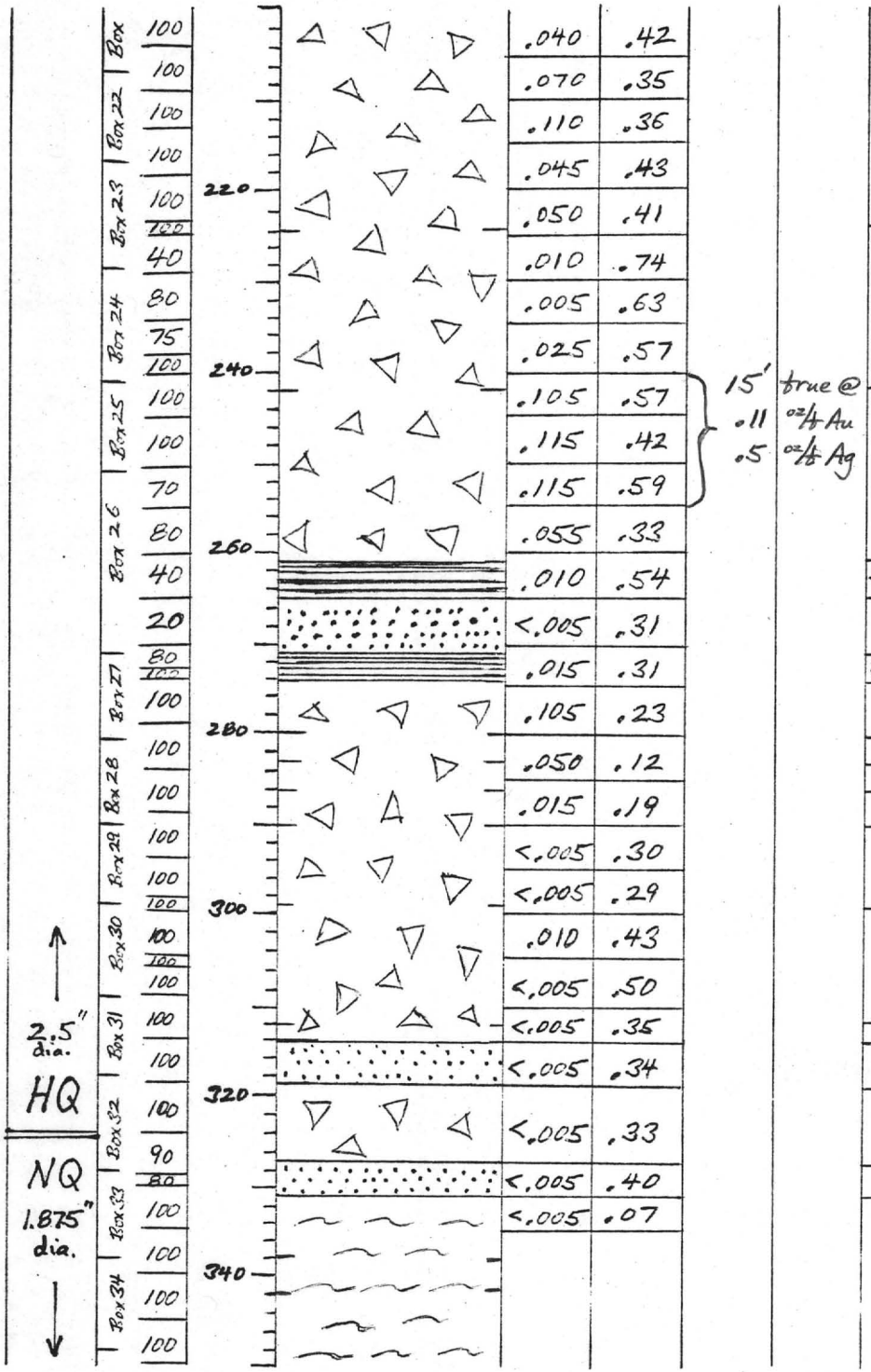
99-131 Green-gray, mottled, f.-m.gr., faintly banded qtz-feld-sericite porphyry. Qtz phenocrysts ≤1mm and ≤5% of rock. Feldspar (pink orthoclase?) phenos ≤4mm and scattered uniformly, ~15% of rock. 99'-105' contains ~10% x-cutting calcite veins ≤1cm. More iron stain with depth; also grading softer with depth (ie., more altered, as unit below).

131-192 Brick red and gray, alternating and mottled, f. gr., faintly banded qtz-ser. sch.; kaolinized & iron stained. Locally brecciated and healed with fine (<1mm) gray, anastomosing qtz. veins. Probably altered as a result of proximity to main orebody &/or Florencia fault. 137-139 - Brown, limonitic, with Liesgang banding.

134-137
160-162
164-167
172-182
185-187
} Broken core intervals; much gouge and kaolin.

Hardness ~5. No carbonate. Foliation ~80°-90° to core axis.

192-193 Brick red matrix (~50%) of hematite stained & cemented qtz grains (fine to med. sand size) carrying buff and gray, aphanitic chert fragments (~50%) which are very hard, angular, and matrix supported.



193-331 Chert, as detailed below. Variously fragmental, massive, jaspery, banded, milky, and sandy. Tracer of malachite scattered thruout. No other carbonate. H>7.5

193-224 Pale gray, translucent, cryptocrystalline, massive, quartz (chert) with yellow-brown and red-brown iron staining on multitudes of qtz-hematite healed fractures. Larger fractures not fully healed, leaving vugs lined with v.f. gr. drusy qtz xl crusts. Vug lining locally, in turn, coated with malachite (only trace Cu overall).

224-242 Same as above but more dark red + maroon iron staining. Poor core recovery where most broken.

242-261 Same as 193-224

261-265 Gray and red, banded, cryptocrystalline, jasper/chert. Very dense and hard. Banding perpendicular to core axis.

265-271 Brick red, f.gr., gritty, sandy textured hematite-stained and cemented qtz. Very poor core recovery because of loose cementing and vulnerability to water.

271-274 Same as 261-265 but less red jasper.

274-280 Same as 193-224

280-283 Gray-white, sugary, massive chert

283-286 Orange-yellow and white mottled, porous, banded chert. Banding 90° to core axis.

286-290 Brick red, more dense, banded chert

290-299 Chocolate brown + dark red-brown, dense, hard, massive + locally fragmental chert.

299-312 White, massive, coarsely fragmental chert with much brown iron staining on fracture surfaces.

312' - Prominent, sharply defined angular unconformity between red and yellow stained chert bands; each with fragments of the same chert types within their matrix.

312-314 Pale brown and buff, dense, hard, non-fragmental chert

314-319 Pale brown, f.gr., sandy, very poorly cemented silica grit. Locally better cemented + as hard as overlying chert. Otherwise H=6.5

Malachite ~2% on fractures, 316'-319'.

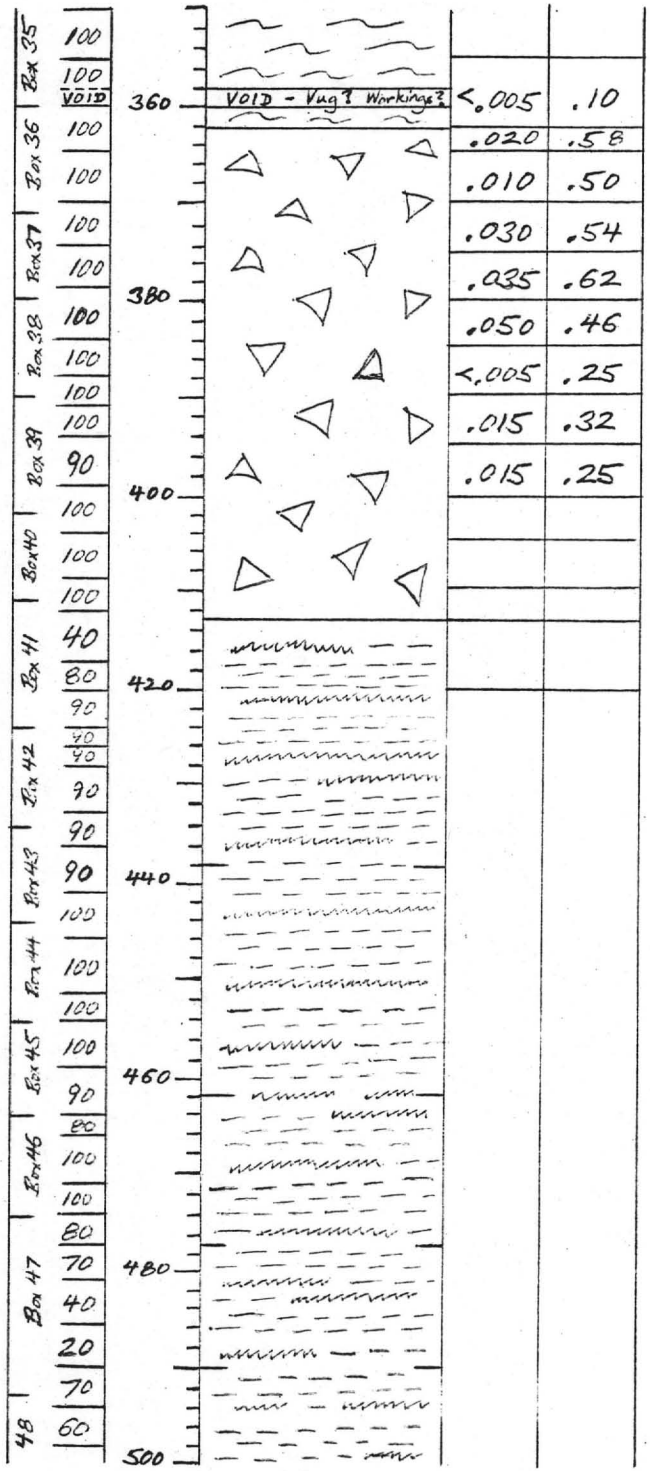
319-327 Brown + mustard yellow, massive, healed frag. chert.

327-331 Brick red, orange, + mustard yellow, f.g., sandy + silty, poorly cemented silica grains. Very crumbly, disintegrates in water. Some bx textures (healed) + chalcedonic veins (≤2mm) at 329'.

331-362 Various colored, v.f.gr., kaolinized, qtz-ser.-chlor. schist.

331-338 Pale purple with white blotches (leached-?)

338-342 White and orange-red



Fragmental chert

Heavily altered (sheared + kaolinized) intermediate to acid tuffs (?)

342-358 Same as 331-338

358-360 2 feet of open space; nature unknown.

360-362 Same as 331-338 and 342-358.

362-362.5 Tan, v.f.gr., thin laminated and poor cemented siliceous tuff. Brick red stained on fractures.

362.5-413 Brown, red-brown, and biege, cryptocrystalline, iron stained, fragmental cherts. Often vuggy with v.f.gr. drusy qtz linings. Exhibits rapid color changes. Malachite on fractures from 393-400 (trace Cu only) Extremely hard drilling (burned out 3 bits 388'-404').

413-438 Blotchy white and pale purple, soft (H~5) heavily kaolinized, with pale red iron stain & very broken core. May be fault gouge. May have been an intermediate to acid tuff with angular rock fragments.

438-462 Pale red, iron stained, kaolinized, heavily sheared. May have been intermediate tuff and fragmental.

462-477 Light orange variant of 438-462

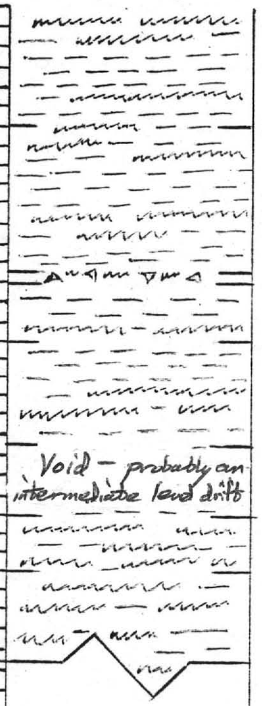
477-490 Red-brown, more iron stained, but otherwise the same as above.

490-512 Pink color; otherwise same as 413-490.

NQ to end

Box	Recovery
Box	90
	80
Box 49	80
	100
	90
Box 50	100
	100
Box 51	80
	60
	100
	100
Box 52	80
	VOID
	30
	50
	50
Box 53	30

Depth: 520 – 540 – 560 – 567' EOH



Fault gouge and such intense alteration that protolith is unrecognizable.

512-527 Same pink but now containing shears ~1mm thick carrying traces of azurite and malachite.

527-528 Same rock type but sheared, broken, angular fragments surrounded by a red mud matrix. Slickensided surfaces are lined with sheared chlorite

528-534 Light orange, iron stained version of 413-438

534-545 Pale purple and buff, v.f.gr., heavily altered/kaolinized rock; original rock type unknown.

545-552 Seven foot void

552-558 Light orange, iron stained, f.gr. gritty gouge

558-EOH Red-brown fault gouge returned in core barrel as mud with a few gritty pea-gravel sections, mostly loose mylonite.

Preliminary

Hole No. 1104-3

Still Drilling 11-11-85

Collar location: U.V.X. Mine - 1100 Level 1104 Drift 11,310 N 8110E

Inclination: -11° at collar

Azimuth: S 63° W at collar

Length:

Driller: Longyear Co. - Phoenix, AZ Jack Hayslip - driller, Bill Mills - helper

Core recovery:

Dates: Oct. 29 thru

Assayer: Iron King Assay, Inc. Humboldt, AZ. using Fire/A.A. and one assay ton

Logger: DON WHITE

Remarks: Drilled with a Longyear 34, compressed air powered rig. NQ core

Core size	Runs & recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type (Protolith)	Lithology
NQ core 1.875" dia.	Box 1 50%	0						Rhyolite agglomerate	
	Box 2 80%	20							
	Box 3 90%								
	Box 4 100%	40							
	Box 5 50%		Gradational contact					Rhyolite tuff	
	Box 6 100%	60							
	Box 7 90%								
	Box 8 80%	80							
	Box 9 100%							Dacite tuff	
	Box 10 100%	100						Intermediate to felsic tuffs + agglomerates	
	Box 11 90%								
	Box 12 40%	120							
	Box 13 100%								
	Box 14 100%	140							
	Box 15 100%								
	Box 16 100%	160							
	Box 17 100%								
	Box 18 60%	180	Gradational contact						
	Box 19 80%							Altered int. tuffs + gouge	
	Box 20 90%	200							
	Box 21 50%			<.0003	.09			Intense gouge	
		220		.002	.12			Chert bx in gouge	
				.013	.24				
				.156	.39	9 feet at .143 Au .32 Ag	19 ft. .12 Au .33 Ag	Chert bx in si-grit	
				.159	.31				
				.114	.30				
	Box 22 100%			.001	.35				
		240		.058	.27				
				.132	.41	5 feet at .161 Au .39 Ag			
				.204	.37				
	Box 23 90%			.070	.39				
				.053	.30				
				.082	.17				
				.042	.60				
		260		.064	.30				
				.064	.29				
				.077	.20				
				.065	.25				
				.096	.16				
				.034	.30				
				.083	.31				
				.045	.20				
				.023	.41			Fragmental chert	
		280							
		300							
		320							

Chert thru 314' +

Hole No.	Date drilled	From	To	Interval	Gold oz/t	Silver oz/t	Value/ton @ $320 gold $6 silver
1104-1	8-85	193	200	7	0.065	0.44	$23.44
		200	205	5	0.040	0.42	$15.32
		205	210	5	0.070	0.35	$24.50
		210	215	5	0.110	0.36	$37.36
		215	220	5	0.045	0.43	$16.98
		220	225	5	0.050	0.41	$18.46
		225	230	5	0.010	0.74	$7.64
		230	235	5	0.005	0.63	$5.38
		235	240	5	0.025	0.57	$11.42
		240	245	5	0.105	0.57	$37.02
		245	250	5	0.115	0.42	$39.32
		250	255	5	0.115	0.59	$40.34
		255	260	5	0.055	0.33	$19.58
		260	265	5	0.010	0.54	$6.44
		265	270	5	*	0.31	$1.86
		270	275	5	0.015	0.31	$6.66
		275	280	5	0.105	0.23	$34.98
		280	285	5	0.050	0.12	$16.72
		285	290	5	0.015	0.19	$5.94
		290	295	5	*	0.30	$1.80
		295	300	5	*	0.29	$1.74
		300	305	5	0.010	0.43	$5.78
		305	310	5	*	0.50	$3.00
		310	314	4	*	0.35	$2.10
		314	319	5	*	0.34	$2.04
		319	327	8	*	0.33	$1.98
		327	331	4	*	0.40	$2.40
		331	335	4	*	0.07	$0.42
		355	362	7	*	0.10	$0.60
		362	365	3	0.020	0.58	$9.88
		365	370	5	0.010	0.50	$6.20
		370	375	5	0.030	0.54	$12.84
		375	380	5	0.035	0.62	$14.92
		380	385	5	0.050	0.46	$18.76
		385	390	5	*	0.25	$1.50
		390	395	5	0.015	0.32	$6.72
		395	400	5	0.015	0.25	$6.30

Mineralized From	To	Interval	Gold oz/t	Silver oz/t	Value	Silver:gold ratio
						6.8
						10.5
						5.0
193	215	22.0	0.071	0.397	$25.00	3.3
193	225	32.0	0.063	0.404	$22.72	9.6
						8.2
						74.0
						126.0
						22.8
						5.4
						3.7
240	255	15.0	0.112	0.527	$38.89	5.1
240	260	20.0	0.098	0.478	$34.07	6.0
						54.0
						20.7
						2.2
						2.4
						12.7
						43.0
						29.0
						50.0
						18.0
						17.7
						9.2
						21.3
						16.7

Hole No. 901-3

Collar location: U.V.X. Mine - 950-Level Mine grid 11,690N 7750E

Inclination: +18° at collar; +7° at 350'

Azimuth: S65°W at collar

Length: 367 feet

Driller: Longyear Co. - Phoenix, AZ Jack Hayslip-driller, Bill Mills-helper

Core recovery: ~100% thru 257' } ~91% overall
~70% 257'-367' }

Dates: Nov. 20 thru Dec. 9, 1985

Assayer: Iron King Assay, Inc. Humboldt, AZ using Fire/AA and one assay ton

Logger: DON WHITE

Remarks: Drilled with a Longyear 34, compressed air powered rig

HQ core to 291', NQ core to E.O.H.

30.6 ft/shift (total of 12 8-hr shifts)

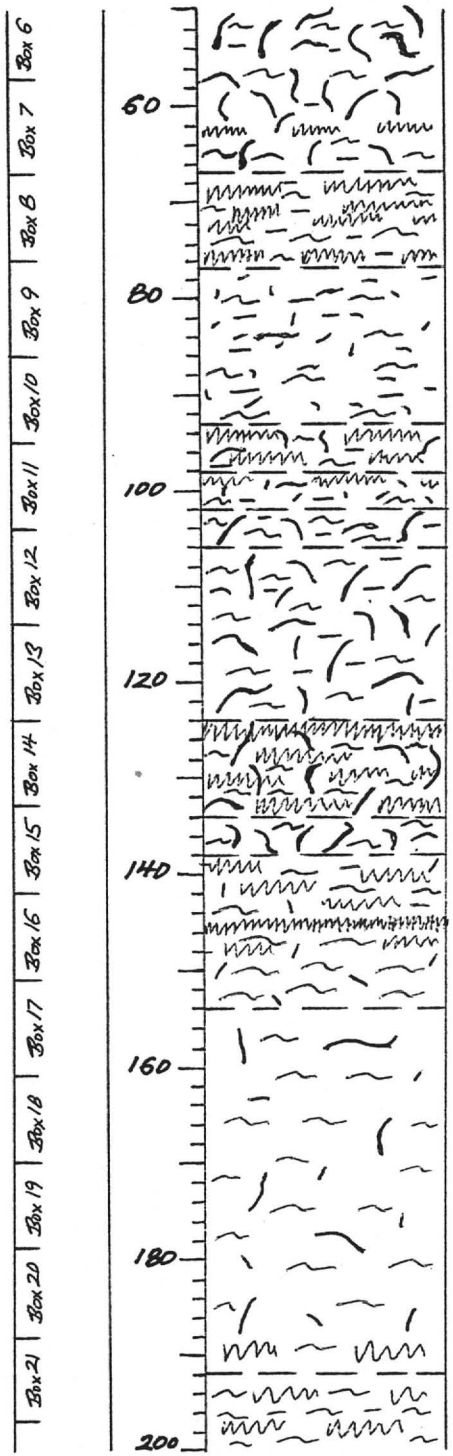
Core size	Runs & recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type (protolith)	Lithology
HQ 2.5" dia.	Box 1 Box 2 Box 3 Box 4 Box 5 ~100% core recovery thru 257'	20 40	Gradational contact						0-16' Gray and dark green, blotchy, very fine grained, massive to faintly banded qtz-chlorite-carbonate ± sericite sch. ~3% CaCO3 veinlets ≤5mm thick, plus trace disseminated CO3 Foliation ~70° to core axis H~7.0 16'-24' Dark green + purple red. Same as above plus admixed purple red jasper(?) fragments yielding speckled colors 24-33 Pale to dk green, blotchy, vfgr., massive to banded, qtz-chl-carb-ser schist. Carbonate is both calcite and siderite (≤~3%) Foliation ~60° to CA. 33-37 Same as 16'-24' 37-46 Similar to 33-37 but more massive and less CO3 ~1% CaCO3 from calcite veinlets. ~2% qtz veins ≤mm thick (separate veinlets). ~5% pink ortho. phenos. ≤5mm

Sat. 12-21

Carole + Ben,

As previously, I've forwarded one colored PP log and one not colored and hence more easily reproducible. If you need more colored copies, let me know —

Don



Carbonate and chlorite altered intermediate tuffs, flows, and pyroclastics

46-67 Same as 0-16' but more carbonate ~5% $CaCO_3$ veinlets, discontinuous, randomly oriented. H ~ 6.5

67-77 Green, v.f.gr. thin banded, well foliated, qtz-chl-ser sch. with no carbonate. Foliation ~ 75° to C.A., H ~ 6.5

77-93 Similar to 16-24' but more carbonate; not as veinlets but ~5% disseminated. H ~ 6.5

93-98 Like 67-77 plus trace $CaCO_3$ veinlets

98-102 Same as 77-93

102-106 Same as 16-24

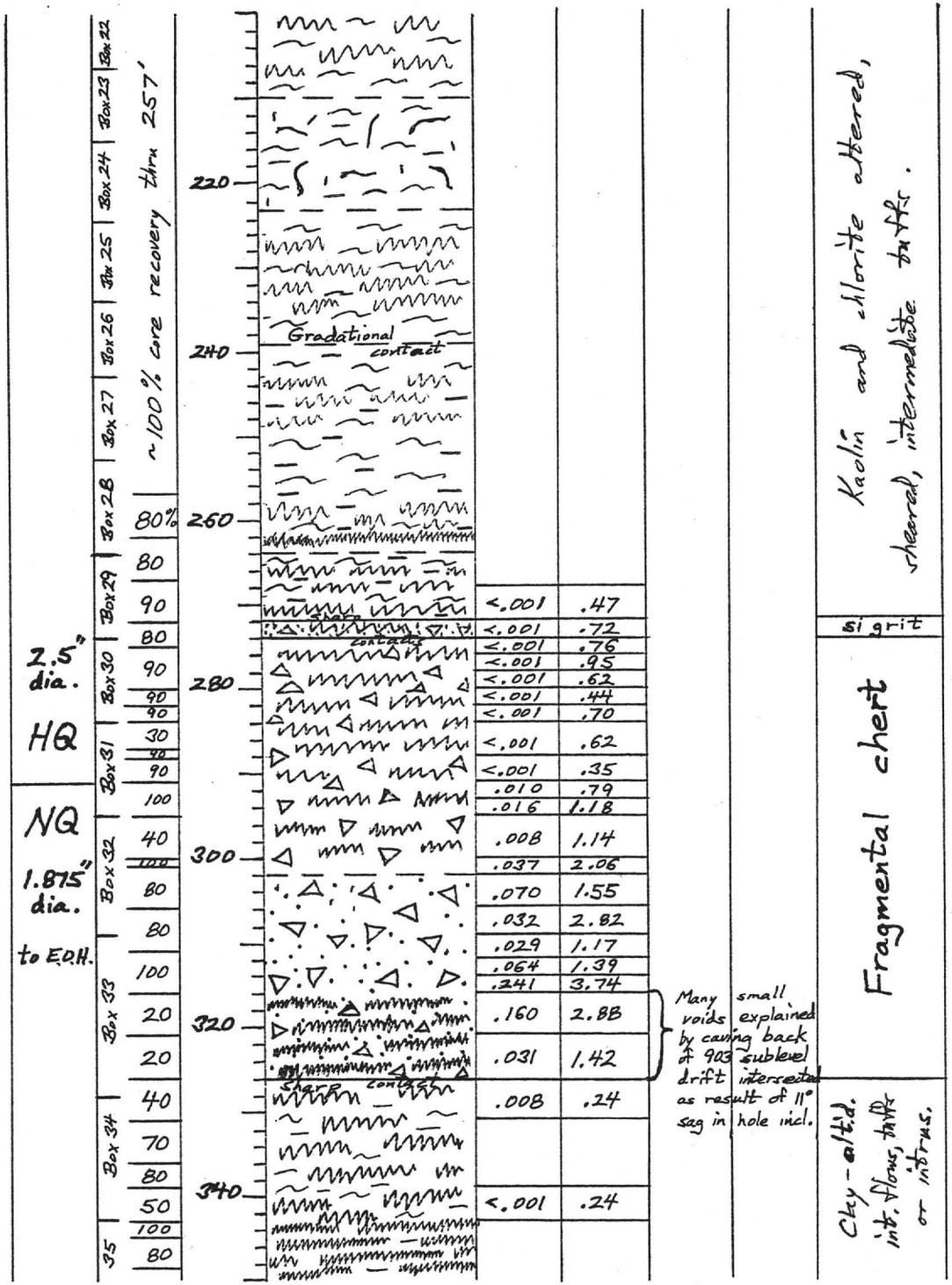
106-124 Alternating bands of 0'-16' lithology and 16'-24' lithology and combined qtz-calcite veins H ~ 6.5

124-134 Gray green, f. to m.gr., massive qtz-feld-chl. schist plus qtz-calcite-siderite veinlets H ~ 7.5

134-138 Dark green, v.f.gr., faintly banded, qtz-feld-chl-carb. sch. Fol. ~60° to C.A.

138-154 Pinkish green, f.-m.gr., massive, qtz-feld-chl sch with feld porphyroblasts ≤ 4mm Partly clay altered. Trace carbonate H ~ 7.5

154-192 Lt. + dk green, blotchy, v.f.gr., massive to faintly banded, qtz-feld-chl carbonate sch. Carbonate is ~1% as veinlets and dissemination



192-239 Gray green, v.fgr., massive to faintly banded, qtz-feld-chl rch with feldspar phenocrysts ≤ 4mm, clay altered and iron stained

H ~ 6.5 Foliation ~ 80° to C.A.
~3% non-carbonate (limonite?) veinlets (dk brown, Fe-stained)
192-210 No carbonate
210-223 Trace calcite veinlets
223 - E.O.H. No carbonate

239-264 Brick red (hematite-stained) vf.gr., clay altd qtz-feld-ser rch. No carbonate
H ~ 6.5 Foliation ~ 70° to C.A.

264-272 Purple and white, blotchy, fgr. qtz-ser rch. Well foliated. H ~ 6.5 No carbonate. Mod clay altn.

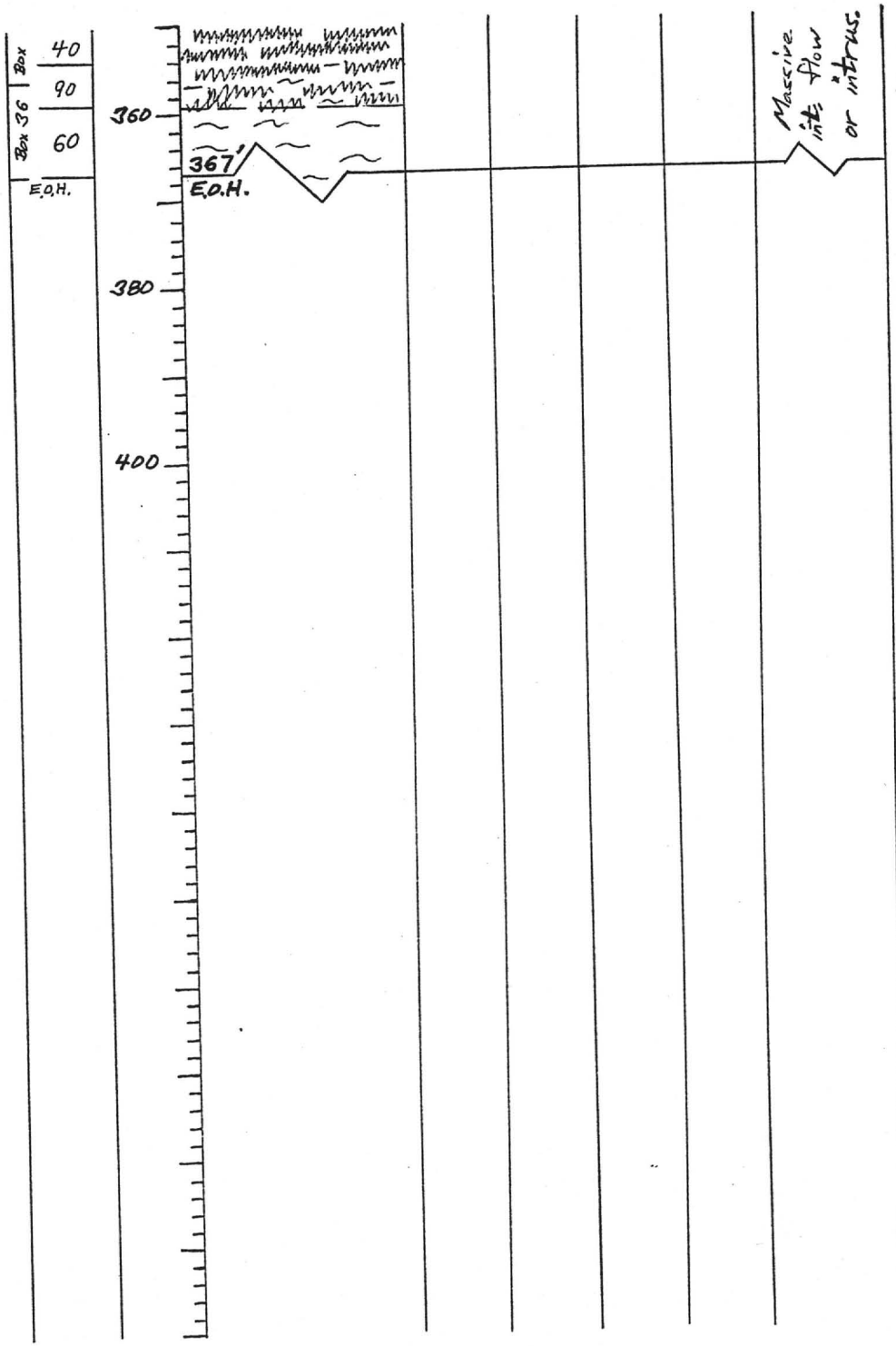
272-274 Red brown fgr. massive, hematite-cemented si grit

274-302 Chert; variously light to dark gray, red brown, yellow brown, banded and massive, matrix or clast supported ± lithic fragments (banded rhyolite) Vugs ≤ 5% and ≤ 1" No magnetite, no carbonate, H > 7.5

302-326 Mostly yellow brown, matrix supported chert breccia. Light gray, chert clasts, angular, 1/4" - 4" (x̄ ~ 1") exhibiting abundant fine, healed fractures, floating in limonite stained (?) si grit matrix.

Note: 316-326 series of voids, only 20% core return, 2" of wood cored at 326'; must be the top of the Gold stope; ≥ 60' higher workings than reported on stope sheets in Vanda Exploration's vault.

326-359 Pale purple and light gray, vfgr., heavily clay altered. Feldspar phenos (all clay altd) ≤ 5 mm, in fgr. groundmass Trace malachite. H ~ 6.5



359 – E.O.H. Gray green, fgr., foliated to massive soft (H ~6.5) qtz-feld-chl-ser-schist ± hematite ± malachite ± limonite. May be subvolcanic intrusive (diorite) or may be extrusive equivalent (andesite)

Hole No. 901-2

Preliminary, still drilling

11-11-85

U.V.X. Mine - 950 Level

Collar location: Mine grid 11,690N 7,750E

Inclination: -20° at collar

Azimuth: S40°W at collar

Length:

Driller: Longyear Co. - Phoenix, AZ
Pat Schoeder, driller - Jerry Rosenberg, helper.

Core recovery:

Dates: Oct 29 thru

Assayer: Iron King Assay, Inc., Humboldt, AZ
using Fire/AA and one assay ton

Logger: Don White

Remarks: Drilled with an LM-37, electric hydraulic rig.
NQ core

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type (Protolith)	Lithology
NQ 1.875" dia.	Box 1: 100 Box 2: 100 Box 3: 100 Box 4: 100 Box 5: 100 Box 6: 70 Box 7: 100 Box 8: 100 Box 9: 100 Box 10: 100 Box 11: 100 Box 12: 100 Box 13: 100 Box 14: 100 Box 15: 100 Box 16: 70 Box 17: 50 Box 18: 100 Box 19: 100 Box 20: 90 Box 21: 80 Box 22: 100 Box 23: 60 Box 24: 70 Box 25: 80 Box 26: 100 Box 27: 100 Box 28: 100 Box 29: 100	20 40 60 80 100 120 140 160 180 200 220 240 260 280 300 320 340	Gradational contact Gradational contact Gradational contact Cu Cu Cu	<.0003 .006 .016 .016 .004 .001 <.0003 <.0003 <.0003 .0003 <.0003 <.0003 .003 <.0003	.34 .29 .81 .37 .29 .15 .20 .21 .12 <.01 .13 .09 .14 .14	Cu % .174 .360 1.160 1.400 .115 1.320	Pb % .006 .065 .009 .008 .011 .004	Zn % .054 .135 .485 .625 .475 .615	intermediate tuffs to Basic Intermediate tuffs Felsic tuff Intermediate tuffs Hornfelsed + sheared intr. tuff + rel.? Massive sericite Chert Alt'd intermed. tuffs.	

Diorite on old plans + sections, but looks like massive flows (andesite?)

Thru 400'+

Hole No. 901-L

Preliminary; no assays

U.V.X. Mine - 950-Level

Collar location: Mine grid 11,690 N 7,750 E

Inclination: +11° at collar; +8° at 330'

Azimuth: 542° W at collar

Length: 358 feet

Driller: Longyear Co. - Phoenix, AZ
Pat Schroeder, driller; Jerry Rosenburg, helper

Core recovery: 96% overall; 100% thru 255'

Dates: Sept 16 thru Oct. 22, 1985

Assayer: Skyline Labs, Inc. - Tucson
using Fire/AA and one assay ton

Logger: Don White

Remarks: Drilled with an LM-37, electric-hydraulic rig.
NQ core to 335', BQ to 352', BW to 358'
N casing left in the hole from 2' to 337' to facilitate later extension with another rig.
End of casing cemented in.
Inclination test by acid etch.
36 ft/shift for first 9 shifts (to 327')
Total of 31 ft for 24 shifts thereafter; mainly spent in cementing, waiting, + down-time. [Ehn shifts]

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)	Rock type (Protolith)	Lithology
HQ collar casing	Box 1	20				Intermediate and/or tuffs	**0-90'** Pale and dark gray-green, alternating and blotchy, very fine grained, massive to faintly banded quartz-chlorite-sericite(?)-carbonate schist. Crosscut by multidirectional, discontinuous white and pink calcite veinlets up to 4 mm thick. Overall, veinlets ≤ 5% of rock. Hardness ~6.5 (barely scratched with steel nail). Carbonate throughout as effervescence with HCl is ubiquitous. Foliation: at 20', ~75° to core axis; at 70', ~85° to core axis
NQ 1.875" dia.	Box 2	40					
— 5' core barrel —	Box 3	60				Basic to intermediate flows	
	Box 4	80					
	Box 5	100					90-149 Pink-gray, fine to med. grained, massive to very faintly foliated (~75° to core axis) qtz-fold. gneiss/schist. Trace disseminated CO_3 throughout. H~7.0 (mostly harder than steel nail). 148-149 exhibits more coarse plag xls up to 4mm and ~20% of rock. Texture displayed at 91' is definitely a volcanic ignimbrite/welded tuff texture.
	Box 6	120				Intermediate to felsic tuffs	
	Box 7	140					
	Box 8	160				Felsic tuff	149-163 Same as 0-90 but no calcite veinlets, only CO_3 impregnation in the rock. Also, translucent qtz phenocrysts ≤2 mm dia., ~5% of rock, with indistinct phenocryst margins.
	Box 9	180	Gradation loss of CO_3 component			Intermediate to felsic tuffs	163-200 Same as 90-149 except that the CO_3 impregnation becomes less, grading to none by 179'
	Box 10	200	Gradational contact				
	Box 11	220				Basic to intermediate flows and/or tuffs	200-264 Variicolored, blotchy, and irregular, gray-green and pink-gray, fine grained, qtz-fold-chlorite ± sericite ± carbonate schist. Carbonate occurs as a trace impregnation ≤2% from 215-218 and 235-268. At 220', 6 inches broken, heavily iron stained, hematitic, vuggy, gossan like rock. Local traces of malachite throughout. H~7.0; non-magnetic.
	Box 12						
	Box 13						
	Box 14						
	Box 15	240					
	Box 16						
	Box 17						
	Box 18						
	Box 19						
	Box 20						
	Box 21						
	Box 22						
	Box 23						
	Box 24						
	Box 25						
	Box 26						
Core recovery ~100% thru 255'	Box 27						
	Box 28	260				Felsic tuff	264-268 Gray-green, v.f.gr., qtz-feld. sch. with ~5% tiny (~1mm) qtz phenocrysts
NQ	90 30 70 60						268-290 Pale green-gray, v.f. gr., qtz-feld sch. H~7.0
	Box 29 70 90					Intermediate tuffs	
	Box 30 90 100	280					
	100 100						
	Box 31 90 100						290-329 Pink-gray and pale brick red, f.gr., kaolinized, hematite stained, qtz-feld schist. H~6.0
	Box 32 80 50	300				Sheared & altered intermediate tuffs	Note: 288-294 - Crushed core; 298-300 - Very crushed core; 310-329 - Extremely crushed core; fault gouge.
Hole packed and cemented 307-324	Box 33 60 50 60 70	320					
Hole caving	80 Box 34			<.005		Massive chert	329-333 Dark red-brown, banded, amorphous chert and jasper. H~7.5; non-magnetic. Heavily fractured/broken (the more brittle response to the shearing that created fault gouge 310-329').
BQ 1.422" dia	Box 35 70 70 60	340		<.005 .015 .180 .110 .045 .025 .025		Fragmental chert	333-353 Mottled, buff, brown, and red brown fragmental chert. Vugs ~5% of rock contain microcrystalline qtz linings. Much iron stain. Traces of malachite throughout. 347-350, ~1% montronite (oby) linings as orange, botryoidal and earthy crusts along vugs and fractures.
	Box 36 90 100						
BW 1.655" dia	Box 37 100	358' E.O.H.		.010 .020		Massive Ferrichert.	353-358 (E.O.H.) Red brown and black, massive and banded, very hematitic chert. Very dense, ironstone.

Note: Bad caving of fractured chert from 329 feet onward to the end of the hole. Five cement jobs in various portions of that interval failed to help much. Casing to 337 feet was still not adequate. The LM-37 rig with high RPM and low torque was ill-suited to the hard drilling, fractured rock. Hole aborted at 358' with unacceptable bit carbs and advance rates. Casing left in hole in hope of later extension of hole with a more powerful drill rig.

Hole No. 901-1

Preliminary 10-24-85

No assays

U.V.X. Mine - 950-Level

Collar location: Mine grid 11,690 N 7,750 E

Inclination: +11° at collar; +8° at 330'

Azimuth: S42° W at collar

Length: 358 feet

Driller: Longyear Co. - Phoenix, AZ
Pat Schroeder, driller Jerry Rosenburg, helper

Core recovery: 96% overall; 100% thru 255'

Dates: Sept 16 thru Oct. 22, 1985

Assayer: Skyline Labs, Inc. - Tucson using Fire/AA and one assay ton

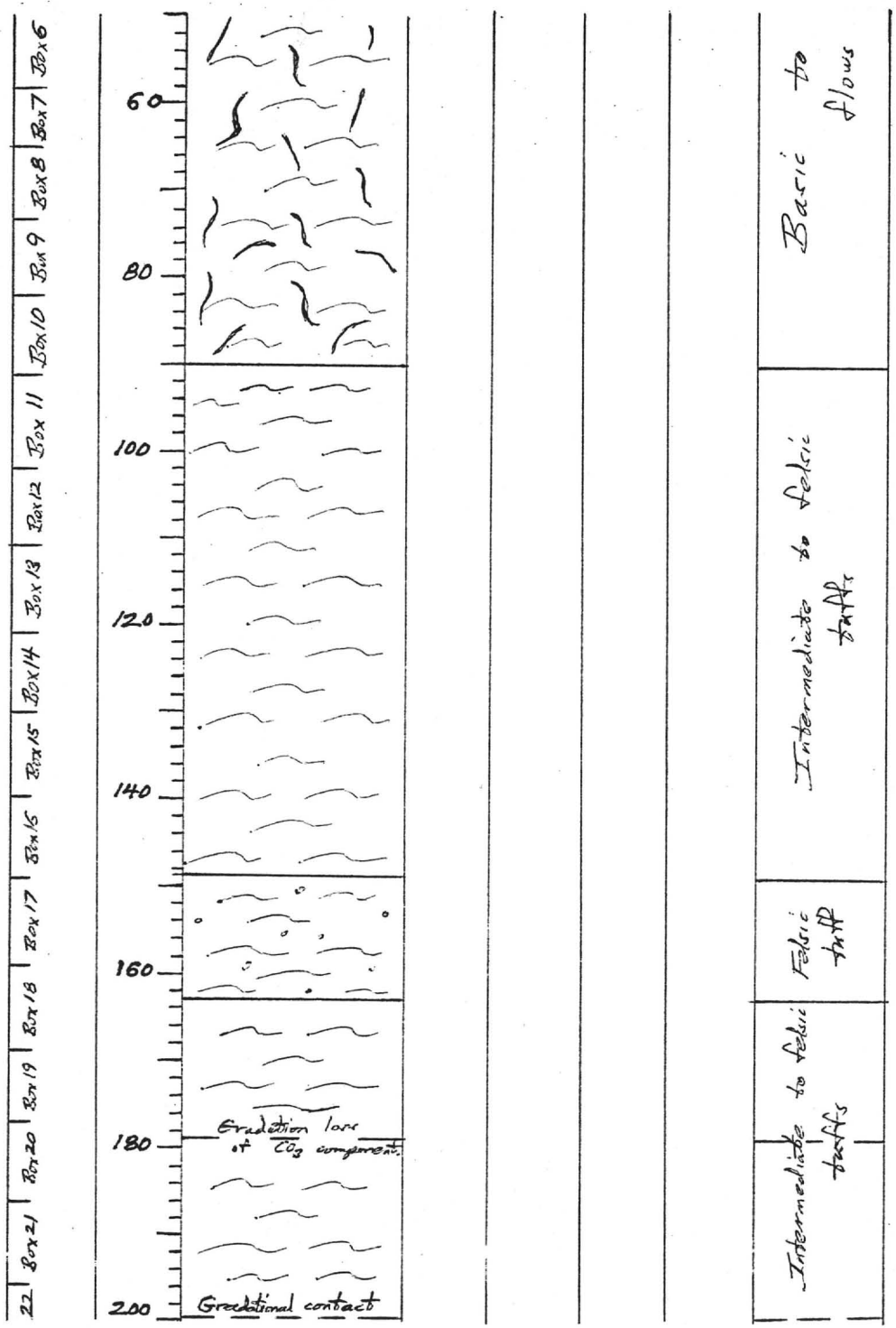
Logger: Don White

Remarks: Drilled with an LM-37, electric-hydraulic rig.
NQ core to 335', BQ to 352', BW to 358'

N casing left in the hole from 2' to 337' to facilitate later extension with another rig. End of casing cemented in.

Inclination test by acid etch.
36 ft/shift for first 9 shifts (to 327')
Total of 31 ft for 24 shifts thereafter; mainly spent in cementing, waiting, + down-time. [8hr shifts]

Core size	Runs & recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type (Protolith)	Lithology
HQ collar casing NQ 1.875" dia.	Box 1 Box 2 Box 3 Box 4 Box 5 — 5' core barrel —	20 40						intermediate and/or tuffs	0 - 90' Pale and dark gray-green, alternating and blotchy, very fine grained, massive to faintly banded quartz-chlorite-sericite(?)-carbonate schist. Crosscut by multidirectional, discontinuous white and pink calcite veinlets up to 4 mm thick. Overall, veinlets ≤ 5% of rock. Hardness ~ 6.5 (barely scratched with steel nail). Carbonate throughout as effervescence with HCl is ubiquitous. Foliation: at 20', ~ 75° to core axis at 70', ~ 85° to core axis



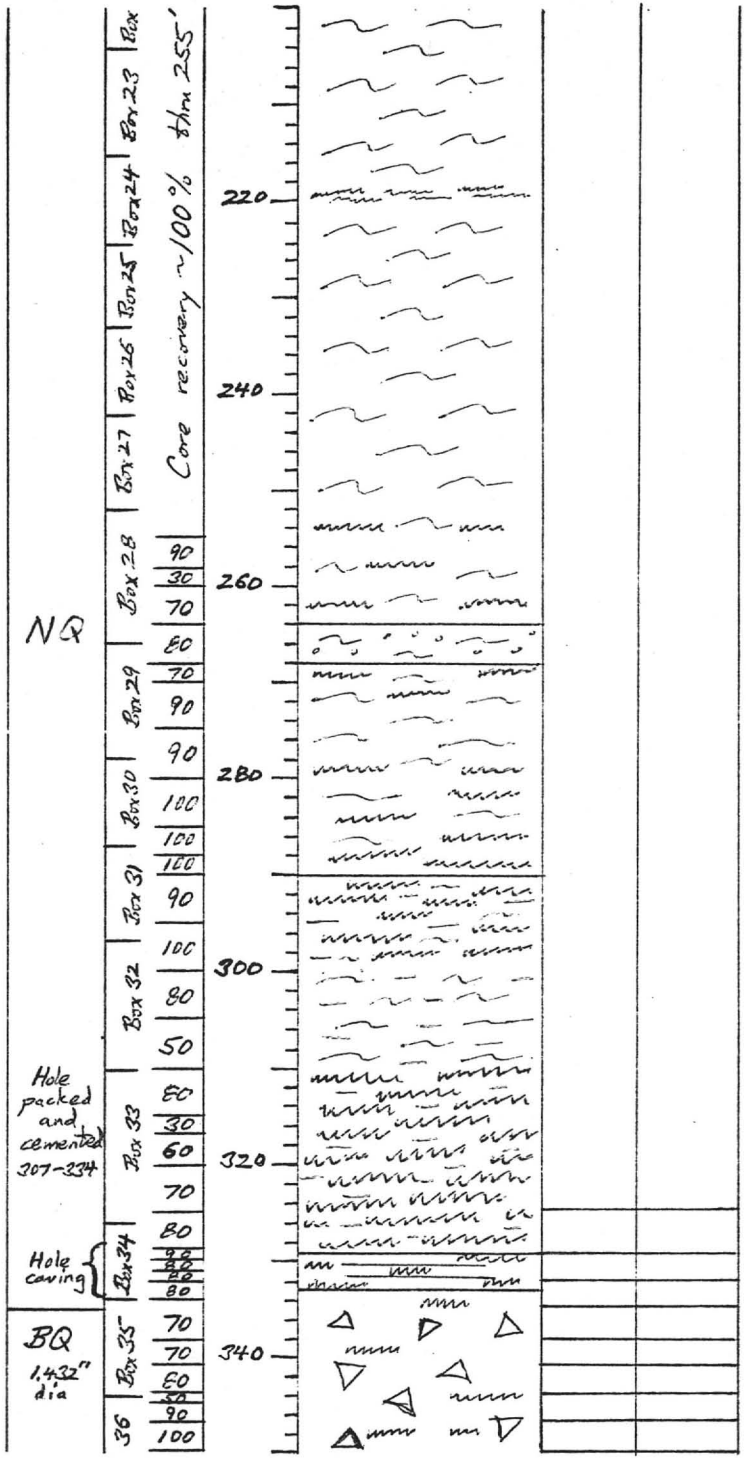
90-149 Pink-gray, fine to med. grained, massive to very faintly foliated (~75° to core axis) qtz-feld. gneiss/schist. Trace disseminated CO_3 throughout. H ~7.0 (mostly harder than steel nail)

149-149 exhibits more coarse plag xls up to 4mm and ~20% of rock.

Texture displayed at 91' is definitely a volcanic ignimbrite/welded tuff texture.

149-163 Same as 0-90 but no calcite veinlets, only CO_3 impregnation in the rock Also, translucent qtz phenocrysts ≤2 mm dia., ~5% of rock, with indistinct phenocryst margins.

163-200 Same as 90-149 except that the CO_3 impregnation becomes less, grading to none by 179'



Basic to intermediate flows and/or tuffs

Felsic tuff

Intermediate tuffs

Sheared & altered intermediate tuffs

Massive chert

Fragmental chert

200 – 264 Variedcolored, blotchy, and irregular, gray-green and pink-gray, fine grained, qtz–feld – chlorite – ± sericite ± carbonate schist. Carbonate occurs as a trace impregnation ≤2% from 215–218 and 235–268. At 220', 6 inches broken, heavily iron stained, hematitic, vuggy, gossan like rock. Local traces of malachite throughout. H ~ 7.0; non-magnetic.

264–268 Gray-green, v.f.gr., qtz-feld. sch. with ~5% tiny (~1mm) qtz phenocrysts

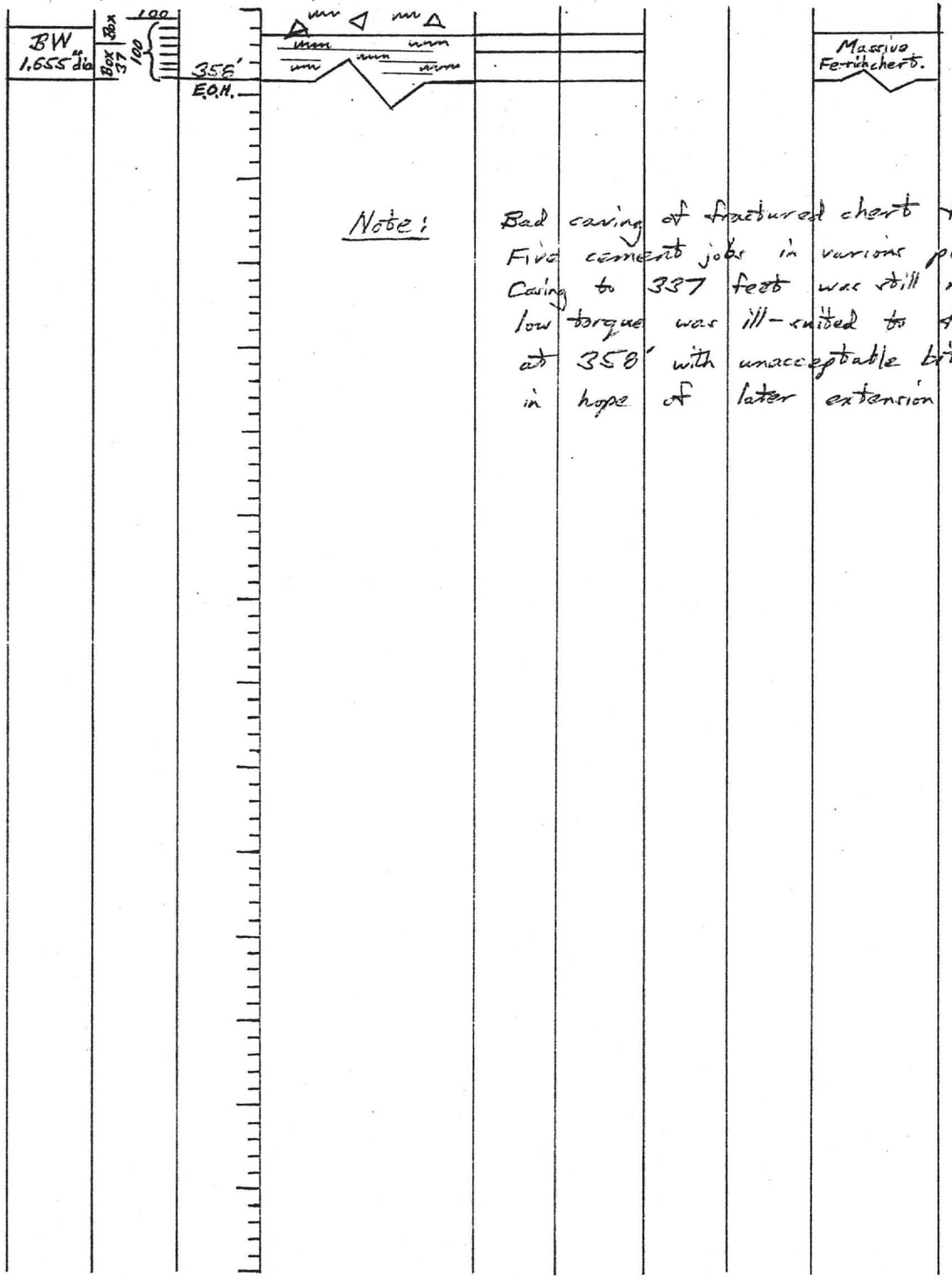
268–290 Pale green-gray, v.f. gr., qtz-feld sch. H ~ 7.0

290–329 Pink-gray and pale brick red, fgr., kaolinized, hematite stained, qtz – feld schist. H ~ 6.0

Note: 289–294 – Crushed core
298–300 – Very crushed core
310–329 – Extremely crushed core; fault gouge.

329–333 Dark red-brown, banded, amorphous chert and jasper. H ~ 7.5; non-magnetic. Heavily fractured/broken (the more brittle response to the shearing that created fault gouge 310–329').

333–353 Mottled, buff, brown, and red brown fragmental chert. Vugs ~5% of rock contain



microcrystalline qtz linings. Much iron stain. Traces of malachite throughout. 347-350, ~1% montronite (clay) linings as orange, botryoidal and earthy crusts along vugs and fractures.

353-358 (E.O.H.) Red brown and black, massive and banded, very hematitic chert. Very dense, ironstone.

Note: Bad caving of fractured chert from 329 feet onward to the end of the hole. Five cement jobs in various portions of that interval failed to help much. Casing to 337 feet was still not adequate. The LM-37 rig with high RPM and low torque was ill-suited to the hard drilling, fractured rock. Hole aborted at 358' with unacceptable bit carbs and advance rates. Casing left in hole in hope of later extension of hole with a more powerful drill rig.

Hole No. 806-1

Collar location : U.V.X. Mine - 800-Level, Mine grid ~11,890N ~7335E

Inclination : -4° at collar; -7° at 250', -8° at 350', -9° at 400', -12° at 500', -12° at 600'

Azimuth : S33.5°W at collar; S33.0°W at 400'

Length : 633 feet

Driller : Longyear Co. - Phoenix, AZ; Jack Hayslip, driller ; Bill Mills, helper

Core recovery : ~100% thru 418'; ~66% 418' to 633', ~88% overall

Dates : Dec 16, 1985 thru Jan. 29, 1986

Assayer : Iron King Assay, Inc., Humboldt, AZ using Fire/AA and one assay ton.

Logger : Don White

Remarks : Drilled with a Longyear 34, compressed air powered rig

HQ core to 259', NQ from 259' to 504'. BQ core from 504'-514'; hole then cemented and reamed NQ. NQ core resumed 514' thru workings at 594'. Workings bridged + cased off with NQ rods. BQ core from 601' to 633'. 310' HW casing abandoned in hole (from 40' to 350')

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)	Rock type	Lithology

Core size: HQ 2.5" dia. ~100% thru 418' — HQ core to 259' — NQ core 1.875" dia. — BQ core later reamed NQ — NQ core 1.875" dia. — VOID — BQ core 1.432" dia. — EOH 633'

Runs + recovery: Box 1 – Box 59; ~100% core recovery, 25' to 418'

Rock type: Intermediate tuffs and Fragmentals; Clay alt'd int. tuffs; "sil-grit"; Fragmental chert; clay-alt'd int. tuffs; Massive int. flow (andesite) or subvolcanic intrusive (diorite) [No carbonate; ~2% CaCO3, FeCO3 veinlets]; Massive andesite or diorite [~4% CaCO3, FeCO3 veinlets; Trace CO3]; Massive andesite or diorite [No CO3 except trace malachite + azurite]; Int. tuff; Chert lapilli in felsic tuff; Chert; Fragmental chert; Int. tuffs

Graphic log annotations: Gradational contact; Gradational contact; Gradational contact; Gradational contact; Sharp contact; VOID - OLD WORKINGS 903-N Drift

Assays (Au / Ag, oz/t), top to bottom:

Au	Ag
<.001	.18
<.001	.18
<.001	.85
<.001	.81
<.001	.70
<.001	.70
<.001	.67
<.001	.65
<.001	.48
<.001	.69
<.001	.86
<.001	.32
.006	.18
.001	.36
<.001	.31
.009	.31
.002	.92
.008	1.18
.005	.95
.002	.73
.003	.60
.004	.60
.070	1.34
.035	.79
.325	2.54
.140	.76
.275	2.67
.210	2.27
.205	2.54
.009	.74
.085	1.33
.060	1.48
.060	1.49
.030	1.53
.070	1.28
.065	.96
.118	1.18
.105	1.11
.129	1.15
.054	.91
.011	.66
.017	.62
.070	1.24
.059	1.39
.043	1.72
.024	1.31
.058	1.04
.221	1.05
.202	.90
.099	1.40
.095	.56
.270	.48
.061	.74
.068	2.29
.031	.96
.048	1.25
.038	1.45
.060	1.49
?	?
Nil	.14
.016	.06
.010	.75
Nil	.76
.014	.81
.009	.66
Nil	.61
Nil	.51
Not	assayed
Nil	.17
Not	assayed
.014	.30

Intercepts: 13' @ .24 Au, 2.2 Ag; 41' @ .056 Au, 1.2 Ag; 10' @ .18 Au, .9 Ag; 514'-578' = 64 ft @ .11 oz/t Au, 1.4 oz/t Ag

Lithology

Ø-20 Mottled gray-green, red-gray, + pale green fine grained, faintly foliated and fragmental qtz-feld-chl-ser. schist ± hematite + trace malachite. (Looks like clay-altered int. tuffs and fragmental)

20-48 Same but red-brown and more porous. Color results from 10-20% criss-crossing hematite veinlets ≤1cm thick, randomly oriented. Some (≤5%) limonite on vuggy surfaces.

48-61 Same as Ø-20

61-73 Same as 20-48. H~6.5, No carbonate except local traces CuCO3

73-84 Purple and white, blotchy, f.gr. qtz-feld-ser. schist with kaolinized feldspar phenos. ≤5mm.

84-86 Same plus local blood red hematitic gouge and ~5% milky white chert fragments in clusters along fractures or in breccia-pipe-like shoots.

86-87 Fault gouge

87-108 Fragmental chert; variously light gray, yellow brown, or red brown fragments in red brown to gray brown chert matrix. Very hard. No carbonate, no magnetite. Trace malachite on frax. Virtually no vugs or porosity. Clay gouge zone 102'-103'

108-109 Fault gouge - kaolinitic like the tuffs below

109-125 Purple and white, blotchy, f.gr., clay-altered qtz-ser-kao sch with relict feldspar phenocrysts pseudomorphed by kaolin.

125-434 Gray green and red brown, hematite-stained qtz-feld-chl-ser schist ± trace malachite. Mapped by all predecessors as "diorite".

Notes on carbonate content —

Ø-170 No carbonate other than trace malachite

170-180 Trace calcite + possible siderite

180-275 ~2% calcite + siderite as veinlets ≤2mm thick and randomly oriented. Also some disseminated CO3.

275-348 ~4% calcite and siderite veinlets, as above

348-380 Trace very fine carbonate veinlets, but now contains ~2% quartz veinlets ≤ 2 cm thick, seemingly at the expense of the carbonate — possible carbonate-qtz alteration zonation.

222' exhibits a 1" thick pinkish gray, v.f.gr., massive, aplite dike (?) cross cutting gray green c.gr. unfoliated qtz-feld-chl-ser-lim-calcite rock. The limonite and calcite occur as veinlets, ~2% each. The feldspars are virtually unaltered. The aplite-country rock contacts are very diffuse.

434-447 Same texture and composition as above but color change from gray-green to biege and buff

447-466 Same as 125-434

464' = Occurrence of botryoidal nontronite and crusts of MnO_2 on fractures (similar to 901-1 hole in H.W. of Gold stope).

466-472 Biege and brown, f.gr., faintly foliated, fragmental tuff texture with possible slump bx features

472-481 Same as 466-472 but admixed ~20% wt. and light gray chert lapilli interbedded with the tuffs. Lapilli ≤2cm and scattered. Foliation ~60° to C.A. No carbonates, no magnetite.

481-615 Chert

Various chert breccia varieties as noted below

481-515 Banded, yellow, biege, and translucent white, eutaxitic chert; looks like petrified wood or crazy lace agate. Lapilli elongated ~6 to 1, generally ≤2 cm long, ≤2mm thick.

515-526 Matrix supported chert breccia. Lt. gray + wt. angular clasts of chert and Cleopatra qtz porphy. in mustard gold to brick red, f.gr., si-grit matrix

526-539 Clast supported chert breccia, Lt. gray, translucent to opaque, angular clasts [1mm to 2cm; x̄≈1cm] with yellow, red, + biege chert matrix. ~10% voids ≤1cm.

539-550 Matrix supported chert breccia. Lt. + dk gray to white, subrounded (tumbled-?) chert clasts in mustard yellow si-grit grading to red and hematitic beyond 549'.

550-555 Very dark, red brown, dense, f.gr., hematitic, matrix supported chert breccia. Black, manganese-coated hackly fractures make drill water return black. Fine (≤5mm) angular, lt. gray chert clasts in red-black manganiferous hematite-stained comminuted chert matrix.

555-570 Same as 550-555 except for increased clast percentage (~50%).

570-584 Light gray, pale yellow + red matrix supported, large clasts of second generation chert breccia.

584-587 Tan, very delicately banded chert. Exceedingly hard (Drills ~1 ft/hour ; ~3 ft/bit)

587-592 Similar to 570-584, but clasts are dominantly qP.

592-594 Yellow and red-brown, matrix rich chert bx. Poorly cemented, gritty

594-601 Void - old workings of 903-N drift on 903 Intermediate level.

601-615 Light gray, red, + biege, angular fragmental chert clasts in same colored eutaxitic chert matrix. Locally jaspery, hematitic +/or banded.

615-630 Pale purple and white, blotchy (from Redox colorations) f.gr., silicified, welded ~~tuff~~. Silicification decreases in intensity with separation from chert contact. Foliation ~60° to core axis.

630-632 Same as 615-630 but now includes ~50% pink + biege, coarse grained, qtz "veins" (?), ≤2", X-cutting core.

632-633 - No core return.

Hole No. 806-1

Collar location: U.V.X. Mine - 800-Level; Mine grid ~11,890N ~7335E

Inclination: -4° at collar; -7° at 250', -8° at 350', -9° at 400', -12° at 500', -12° at 600'

Azimuth: S 33.5° W at collar; S33.0°W at 400'

Length:

Driller: Longyear Co. - Phoenix, AZ; Jack Hayslip, driller; Bill Mills, helper

Core recovery:

Dates: Dec 16, 1985 thru

Assayer: Iron King Assay, Inc., Humboldt, AZ using Fire/AA and one assay ton.

Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig

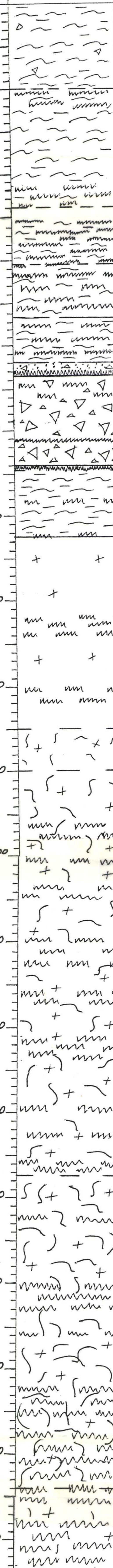
HQ core to 259', NQ from 259' to 504'. BQ core from 504'-514'; hole then cemented and reamed NQ. NQ core resumed 514' thru workings at 594'. Workings bridged + cased off with NQ rods. BQ core from

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)	Rock type	Lithology

Core size: HQ 2.5" dia. — HQ core to 259' — NQ core 1.875" dia. — BQ core later reamed + resumed NQ

Runs + recovery: Box 1: 60, 80; Box 2: 80, 90, 90; Box 3 – Box 44: ~100% thru 418' (~100% core recovery, 25' to 418'); Box 44: 50%; Box 45: 40, 40, 100; Box 46: 100, 100; Box 47: 100, 60; Box 48: 100, 100; Box 49: 100, 100, 100; Box 50: 30, 30, 40, 30, 30, 10, 40, 10; Box 51: 20, 5; Box 52: 100, 60, 70, 60, 30, 50, 100; Box 53: 50, 80, 100; Box 54: 100, 100; Box 55: 80, 70, 60, 90; Box 56: 100, 100; Box 57: 100, 50, 5, 60, 80; VOID

Footage: 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500, 520, 540, 560, 580, 600, 620, 640



Assays:

Au (oz/t)	Ag (oz/t)
<.001	.18
<.001	.18
<.001	.85
<.001	.81
<.001	.70
<.001	.70
<.001	.67
<.001	.65
<.001	.48
<.001	.69
<.001	.86
<.001	.32
.006	.18
.001	.36
<.001	.31
.009	.31
.002	.92
.008	1.18
.005	.95
.002	.73
.003	.60
.004	.60
.070	1.34
.035	.79
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.017	.62
.070	1.24
.059	1.39
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.058	1.04
.221	1.05
.202	.90
.099	1.40
.095	.56
.270	.48

13' @ .24 Au, 2.2 Ag

Rock type: Intermediate tuffs and fragmentals — Clay-alt'd int. tuffs — "Si-grit" — Fragmental chert — Clay-alt'd int. tuffs — Massive int. flow (andesite) or subvolcanic intrusive (diorite) [No carbonate / Trace CO_3 / ~2% $CaCO_3$, $FeCO_3$] — Massive andesite or diorite [~2% $CaCO_3$, $FeCO_3$ veinlets / ~4% $CaCO_3$, $FeCO_3$ veinlets / Trace CO_3 / No CO_3 except trace malachite + azurite] — Int. tuff — Chert lapilli in felsic tuff — Chert — Fragmental chert

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550-555 Very dark, red brown, dense, f.gr., hematitic matrix supported chert breccia. Black, manganese-coated hackly fractures make drill water return black. Fine (≤5mm) angular, lt. gray chert clasts in red-black manganiferous hematite-stained comminuted chert matrix.

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570-584 Light gray, pale yellow + red matrix supported, large clasts of second generation chert breccia.

584-587 Tan, very delicately banded chert. Exceedingly hard (Drills ~1 ft/hour; ~3 ft/bit)

587-592 Similar to 570-584 but clasts are dominantly gp.

592-594 Yellow and red-brown, matrix rich chert bx. Poorly cemented, gritty

594-601 Void - old workings

Core Box	Recovery	Footage	Graphic Log	Gold (oz/t)	Silver (oz/t)	Clast (c) or matrix (m) support	Clast %	Clast size	Clast color	Matrix color	Matrix composition	Vugs	Healed fractures	Remarks
Box 48	100			.006	.18									D.D.H. 806-1
	100					Gray-green, massive to foliated, qtz-chl-feld-ser. schist. Fol. ~60° to core axis.								Demonstrates gradational nature of the chert-to-"diorite" contact; not a typical "intrusive contact."
Box 49	100	467				Tan-biege, f.gr., foliated, qtz-ser-kaolin-hematite schist. Fe-stained + sericitized version of above.								
	100	470												
	100	472				Same as 467-472 but lighter color + better foliated as result of greater sericite alt'n + admixed biége chert lapilli ≤ 1"								
	100			.001	.36									
	30	480		<.001	.31									
	30	481		.009	.31									
Box 50	40			.002	.92			$\bar{x}$ = 1/2" Lapilli, ≤1/4 thick ≤1" long						
	30	490		.008	1.18	M	30*		Light gray & biege	Pink-gray, biege, & white	Chert tuff + fine lapilli	None	Few	* Chert lapilli stone, eutaxitic
	30			.005	.95									
	10			.002	.73									
	40	500		.003	.60									
	10			.004	.60									
Box 51	20	506		.070	1.34									
	5	510		.035	.79	M	30	$\bar{x}$ = 1/4" 1/10-1/2"	Mixed, red, yellow, & lt. gr.	Dirty brown-gray	Chert	≤2% ≤ 1/10"	Few	Heterogeneous clast types
	100	516		.325	2.54									
		518		.140	.76	M	50	$\bar{x}$ = 1/2" 1/10-1"	Lt. gr.	Yellow + red	Lim. + hem	≤2% ≤ 1/10"	Few	
Box 52	60	520		.275	2.67	M	30	$\bar{x}$ = 1" 1/4-2	Lt. gr. & yellow	Mustard yellow, some red	Lim. some hem.	≤5% ≤ 1"	Few	
	70	523		.210	2.27	M	60	$\bar{x}$ = 2" 1/10-6	Lt gr. q.p.	Yellow brown	Lim. some hem	≤5% ≤ 1/2"	Few	Dominant clast type is Cleopatra qtz. pphy. (ash flow)
	60	527		.205	2.54									
	30			.009	.74	C	90	$\bar{x}$ = 3" 1/2-10	Lt. gr. & biege	Biege	Chert	≤2% ≤ 1/2"	Few	Entire 4 ft may be clast of original (1st generation) breccia.
	50	530												
	100	531		.085	1.33									
Box 53	50			.060	1.48	M	60	$\bar{x}$ = 1/2" 1/10-1	Lt. gr. & some yellow	Yellow & red	L + H	≤10% ≤ 1"	Many within clasts	Very angular clasts in just enough matrix to be floated.
	80	539		.060	1.49									
		540		.030	1.53									
	100			.070	1.28									Less well cemented/silicified. Clasts exhibit rounding (?) perhaps from tumbling in vent (?)
				.065	.96	M	40	$\bar{x}$ = 1/4" 1/10-1/2	Lt. gr. & some yellow & red	Yellow, some red.	L, some H. 544-46 extra yellow	≤3% ≤ 1/4"	Some in clasts	
Box 54				.118	1.18									
	100			.105	1.11									
		550		.129	1.15									
	100			.054	.91	M	30	$\bar{x}$ = 1/2" 1/10-2	Lt. gr.	Dark red-br & black	Hem.	≤5% ≤ 1/2"	Some in clasts	Very dense, hematitic, manganiferous, chert bx. Subrounded clasts
		555		.011	.66									
				.017	.62									
Box 55	80			.070	1.24									
	70	560		.059	1.39									
	60			.043	1.72	M	50	$\bar{x}$ = 1" 1/4-4	Light gray	Dark red-brown & black	Hem.	≤5% ≤ 1/2"	Abundant within clasts	Same as above, but more & larger clasts
	90			.024	1.31									
				.058	1.04									
Box 56	100	570		.221	1.05									
				.202	.90									
	100			.099	1.40									Second generation bx. (First generation, within clasts, is like 516'-518' & banded)
				.095	.56	M	60	$\bar{x}$ = 4" 1/10-10	Lt. gr., some yellow, red, & white	Pale yellow & red	H & L chert	≤5% ≤ 1"	Some in clasts	
	100	580		.270	.48									
				.061	.74									
	50	584		.068	2.29									
Box 57	5	587		.031	.96	M	10	≤ 1/4"	Lt. gr.	Tan	Chert only	None	Few	Fine banded chemical ppt. + tuff (?) Extremely hard; one bit for 3 ft drilled.
	60	590		.048	1.25	C	80	$\bar{x}$ = 2" 1/4-6	Lt. gr.	Red & yellow	H + L	≤5% ≤ 1/4"	Few	Dominant clast type is Cleo. q.p.
		592		.038	1.45									
	80	594		.060	1.49	M	30	$\bar{x}$ = 1/2" 1/10-2	Lt. gr.	Red-br & yellow	H + L	≤5% ≤ 1/4"	Few	Gritty, poorly cemented.
	Void		Old working; probably the 903-N drift	Void	Void	?	?	—	—	—	—	—	—	Old workings
		600 601												
Box 58	10			Nil	.14									
	10			.016	.06									
	50	610		.010	.75	M	60	$\bar{x}$ = 1/2" 1/10-1"	Lt. gray, red & biege	Lt. gr. red, & biege	H + L chert	≤2% ≤ 1/4"	Few	
	10			Nil	.76									
	40	615		.014	.81									
				.009	.66									
	80	620		Nil	.61	Pale purple & white, blotchy (from Redox phenomena) f.gr., silicified, welded tuff. Silicification decreases in intensity with separation from chert contact. Foliation ~60° to core axis.								Essentially at hanging wall Verde fault
				Nil	.51									

D.D.H. 806-1

Core Box Recovery	Footage	Graphic Log	Gold (oz/t)	Silver (oz/t)	Clast (c) or matrix (m) support	Clast %	Clast size	Clast color	Matrix color	Matrix composition	Vugs	Healed fractures	Remarks
Box 48 100			.006	.18									
Box 48 100					Gray-green, massive to foliated, qtz-chl-feld-ser. schist. Fol. ~60° to core axis.								
Box 49 100	467												
Box 49 100	470				Tan-biege, f.gr., foliated, qtz-ser-kaolin-hematite schist. Fe-stained + sericitized version of above.								Demonstrates gradational nature of the chert-to-"diorite" contact; not a typical "intrusive contact."
Box 49 100	472												
Box 49 100			.001	.36	Same as 467-472 but lighter color + better foliated as result of greater sericite alt'n + admixed biége chert lapilli ≤ 1"								
Box 49 30	480		<.001	.31									
Box 50 30	481		.009	.31									
Box 50 40			.002	.92									
Box 50 30	490		.008	1.18	M	30*	$\bar{x}$ = 1/2" Lapilli; ≤1/4 thick ≤1" long	Light gray & biege	Pink-gray, biege, & white	Chert tuff + fine lapilli	None	Few	* Chert lapilli stone, eutaxitic
Box 50 30			.005	.95									
Box 50 10			.002	.73									
Box 50 40	500		.003	.60									
Box 50 10			.004	.60									
Box 51 20	506		.070	1.34									
Box 51 5	510		.035	.79	M	30	$\bar{x}$ = 1/4" 1/10-1/2"	Mixed, red, yellow, & lt. gr.	Dirty brown-gray	Chert	≤2% ≤1/10"	Few	Heterogeneous clast types
Box 51 100	516		.325	2.54									
Box 51 100	518		.140	.76	M	50	$\bar{x}$ = 1/2" 1/10-1"	Lt. gr.	Yellow + red	Lim. + hem	≤2% ≤1/10"	Few	
Box 52 60	520		.275	2.67	M	30	$\bar{x}$ = 1" 1/4-2	Lt. gr. + yellow	Mustard yellow, some red	Lim. some hem.	≤5% ≤1"	Few	
Box 52 70	523		.210	2.27	M	60	$\bar{x}$ = 2" 1/10-6	Lt gr. Q.P.	Yellow brown	Lim. some hem	≤5% ≤1/2"	Few	Dominant clast type is Cleopatra qtz. pphy. (ash flow)
Box 52 60	527		.205	2.54									
Box 52 30	530		.009	.74	C	90	$\bar{x}$ = 3" 1/2-10	Lt. gr. & biege	Biege	Chert	≤2% ≤1/2"	Few	Entire 4 ft may be clast of original (1st generation) breccia.
Box 53 100	531		.085	1.33									
Box 53 50			.060	1.48	M	60	$\bar{x}$ = 1/2" 1/10-1	Lt. gr. & some yellow	Yellow & red	L & H	≤10% ≤1"	Many within clasts	Very angular clasts in just enough matrix to be floated.
Box 53 80	539		.060	1.49									
Box 53 100	540		.030	1.53									
Box 53 100			.070	1.28									
Box 54 100			.065	.96	M	40	$\bar{x}$ = 1/4" 1/10-1/2	Lt. gr. & some yellow & red	Yellow, some red.	L, some H. 544-46 extra yellow	≤3% ≤1/4"	Some in clasts	Less well cemented/silicified. Clasts exhibit rounding (?) perhaps from tumbling in vent (?)
Box 54 100			.118	1.18									
Box 54 100			.105	1.11									
Box 54 100	550		.129	1.15									
Box 54 100			.054	.91	M	30	$\bar{x}$ = 1/2" 1/10-2	Lt. gr.	Dark red-br & black	Hem.	≤5% ≤1/2"	Some in clasts	Very dense, hematitic, manganiferous, chert bx. Subrounded clasts
Box 54 100	555		.011	.66									
Box 54 100			.017	.62									
Box 55 80			.070	1.24									
Box 55 70	560		.043	1.72	M	50	$\bar{x}$ = 1" 1/4-4	Light gray	Dark red-brown & black	Hem.	≤5% ≤1/2"	Abundant within clasts	Same as above, but more & larger clasts
Box 55 60			.024	1.31									
Box 55 90			.058	1.04									
Box 55 100	570		.221	1.05									
Box 56 100			.202	.90									
Box 56 100			.099	1.40									
Box 56 100			.095	.56	M	60	$\bar{x}$ = 4" 1/10-10	Lt. gr., some yellow, red, & white	Pale yellow & red	H & L chert	≤5% ≤1"	Some in clasts	Second generation bx. (First generation, within clasts, is like 516'-518' & banded)
Box 56 100	580		.270	.48									
Box 56 100			.061	.74									
Box 56 50	584		.068	2.29									
Box 57 5	587		.031	.96	M	10	≤1/4"	Lt. gr.	Tan	Chert only	None	Few	Fine banded chemical ppt. & tuff (?) Extremely hard; one bit for 3 ft drilled.
Box 57 60	590		.048	1.25	C	80	$\bar{x}$ = 2" 1/4-6	Lt. gr.	Red & yellow	H & L	≤5% ≤1/4"	Few	Dominant clast type is Cleo. Q.P.
Box 57 80	592		.038	1.45									
Box 57 80	594		.060	1.49	M	30	$\bar{x}$ = 1/2" 1/10-1/2	Lt. gr.	Red-br & yellow	H & L	≤5% ≤1/4"	Few	Gritty, poorly cemented.
Void	600	Old working; probably the 903-N drift	Void	Void	?	?	—	—	—	—	—	—	Old workings
Box 58 10	601		Nil	.14									
Box 58 10			.016	.06									
Box 58 50	610		.010	.75	M	60	$\bar{x}$ = 1/2" 1/10-1"	Lt. gray, red & biege	Lt. gr. red, & biege	H & L chert	≤2% ≤1/4"	Few	
Box 58 10			Nil	.76									
Box 58 40	615		.014	.81									
Box 58 80	620		.009	.66	Pale purple & white, blotchy (from Redox phenomena) f.gr., silicified, welded tuff. Silicification decreases in intensity with separation from chert contact. Foliation ~60° to core axis.								Essentially at hanging wall Verde fault
			Nil	.61									
			Nil	.51									

Hole No. 806-1

U.V.X. Mine - 800-Level

Collar location: Mine grid ~11,890N ~7335E

Inclination: -4° at collar -7° at 250', -12° at 500', -8° at 350', -12° at 600', -9° at 400'

Azimuth: S33.5°W at collar; S33.0°W at 400'

Length: 633 feet

Driller: Jack Hayslip, driller; Bill Mills, helper

Core recovery: ~66% 418' to 633', ~88% overall ~100% thru 418'

Dates: Dec 16, 1985 thru Jan. 29, 1986

Iron King Assay, Inc., Humboldt, AZ

Assayer: using Fire/AA and one assay ton.

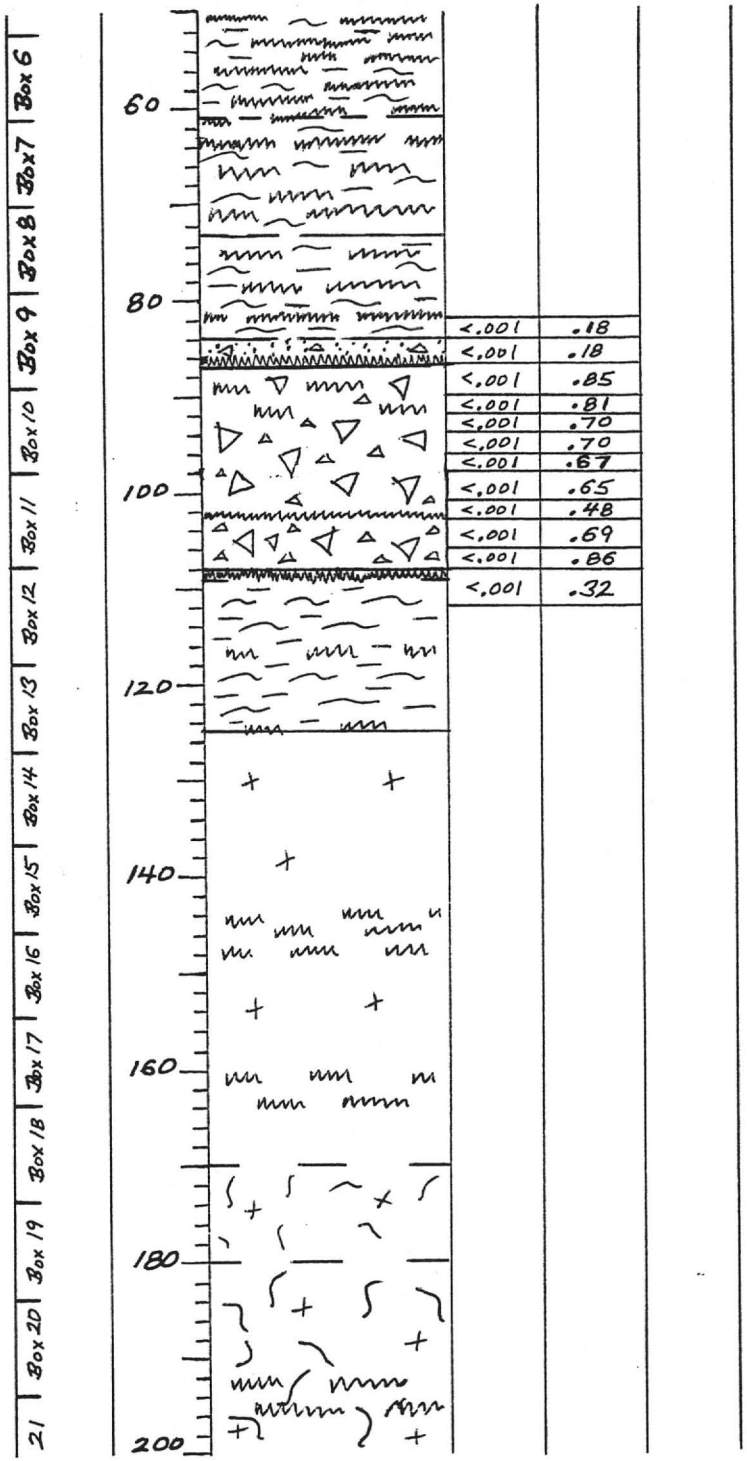
Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig

HQ core to 259', NQ from 259' to 504'
BQ core from 504'-514'; hole then cemented and reamed NQ. NQ core resumed 514' thru workings at 594'. Workings bridged + cased off with NQ rods. BQ core from 601' to 633'
310' HW casing abandoned in hole (from 40' to 350')

Longyear Co. - Phoenix, AZ

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type	Lithology
HQ 2.5" dia.	Box 1 60 Box 1 80 Box 2 80 Box 2 90 Box 3 90 Box 3 ~100% thru 418' Box 4 Box 5	20 40						tuffs and fragmentals	0-20 Mottled gray-green, red-gray, + pale green, fine grained, faintly foliated and fragmental qtz-feld-chl-ser. schist ± hematite + trace malachite. (Looks like clay-altered int. tuffs and fragmentals) 20-48 Same but red-brown and more porous. Color results from 10-20% criss-crossing hematite veinlets ≤ 1 cm thick, randomly oriented. Some (≤5%) limonite on vuggy surfaces.



Intermediate

Clay-altd int. tuffs

"si-grit"

Fragmental chert

Clay-altd int. tuffs

~2% CaCO3, FeCO3 | Trace CO3 | No carbonate

Massive int. flow (andesite) or subvolcanic intrusive (diorite)

48-61 Same as ϕ-20

61-73 Same as 20-48
H~6.5, No carbonate except local traces CaCO3

73-84 Purple and white, blotchy, f.gr. qtz-feld-ser. schist with kaolinized feldspar phenos. ≤5 mm.

84-86 Same plus local blood red hematitic gouge and ~5% milky white chert fragments in clusters along fractures or in breccia-pipe-like shoots.

86-87 Fault gouge

87-108 Fragmental chert, variously light gray, yellow brown, or red brown fragments in red brown to gray brown chert matrix. Very hard. No carbonate, no magnetite. Trace malachite on frax. Virtually no vugs or porosity. Clay gouge zone 102'-103'

108-109 Fault gouge - kaolinitic like the tuffs below

109-125 Purple and white, blotchy f.gr., clay-altered qtz-ser-kao rck with relict feldspar phenocrysts pseudomorphed by kaolin.

125-434 Gray green and red brown, hematite-stained qtz-feld-chl-ser schist ± trace malachite

Mapped by all predecessors as "diorite".

Notes on carbonate contents —

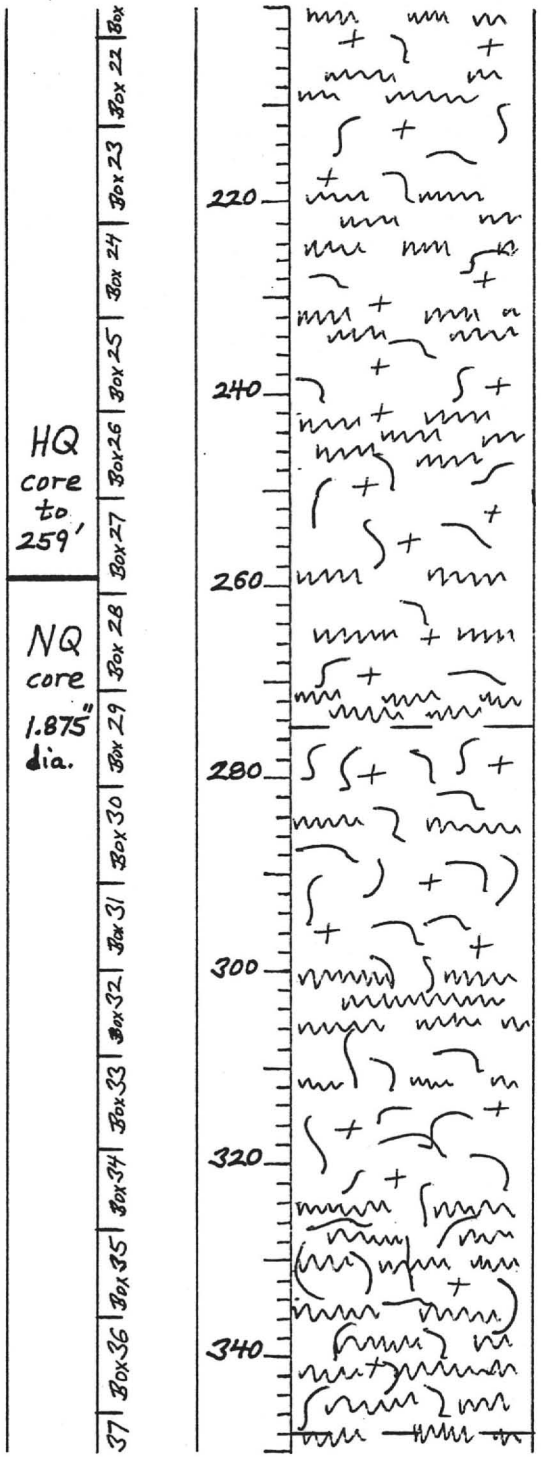
ϕ-170 No carbonate other than trace malachite

170-180 Trace calcite + possible siderite

180-275 ~2% calcite + siderite as veinlets ≤2mm thick and randomly oriented. Also some disseminated CO3.

275-348 ~4% calcite and siderite veinlets, as above

348-380 Trace very fine carbonate veinlets, but now contains ~2% quartz veinlets ≤ 2 cm thick, seemingly at the expense of the carbonate — possible carbonate-qtz alteration zonation.

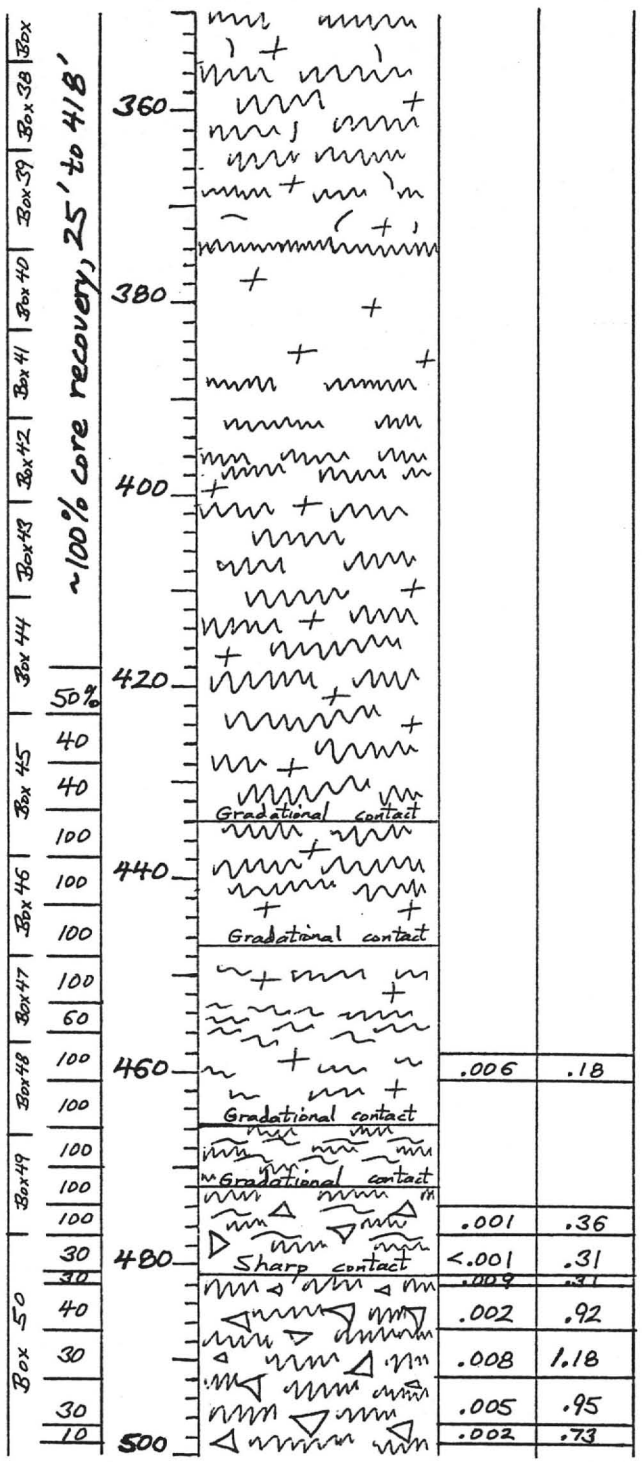


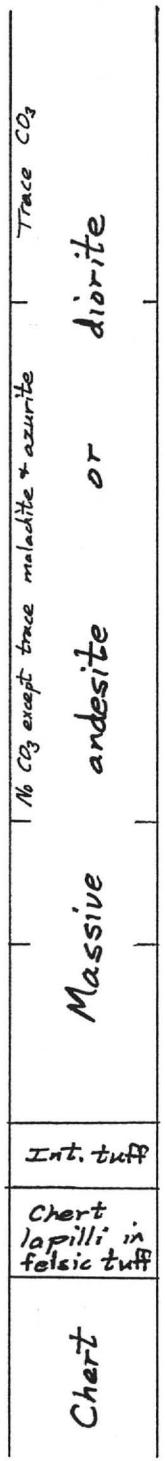
~2 % $CaCO_3$, $FeCO_3$ veinlets

~4 % $CaCO_3$, $FeCO_3$ veinlets

Massive andesite or diorite

222' exhibits a 1" thick pinkish gray, v.f.gr., massive, aplite dike (?) cross cutting gray green c.gr. unfoliated qtz-feld-chl-ser-lim-calcite rock. The limonite and calcite occur as veinlets, ~2% each. The feldspars are virtually unaltered. The aplite-country rock contacts are very diffuse.





434-447 Same texture and composition as above but color change from gray-green to biege and buff

447-466 Same as 125-434

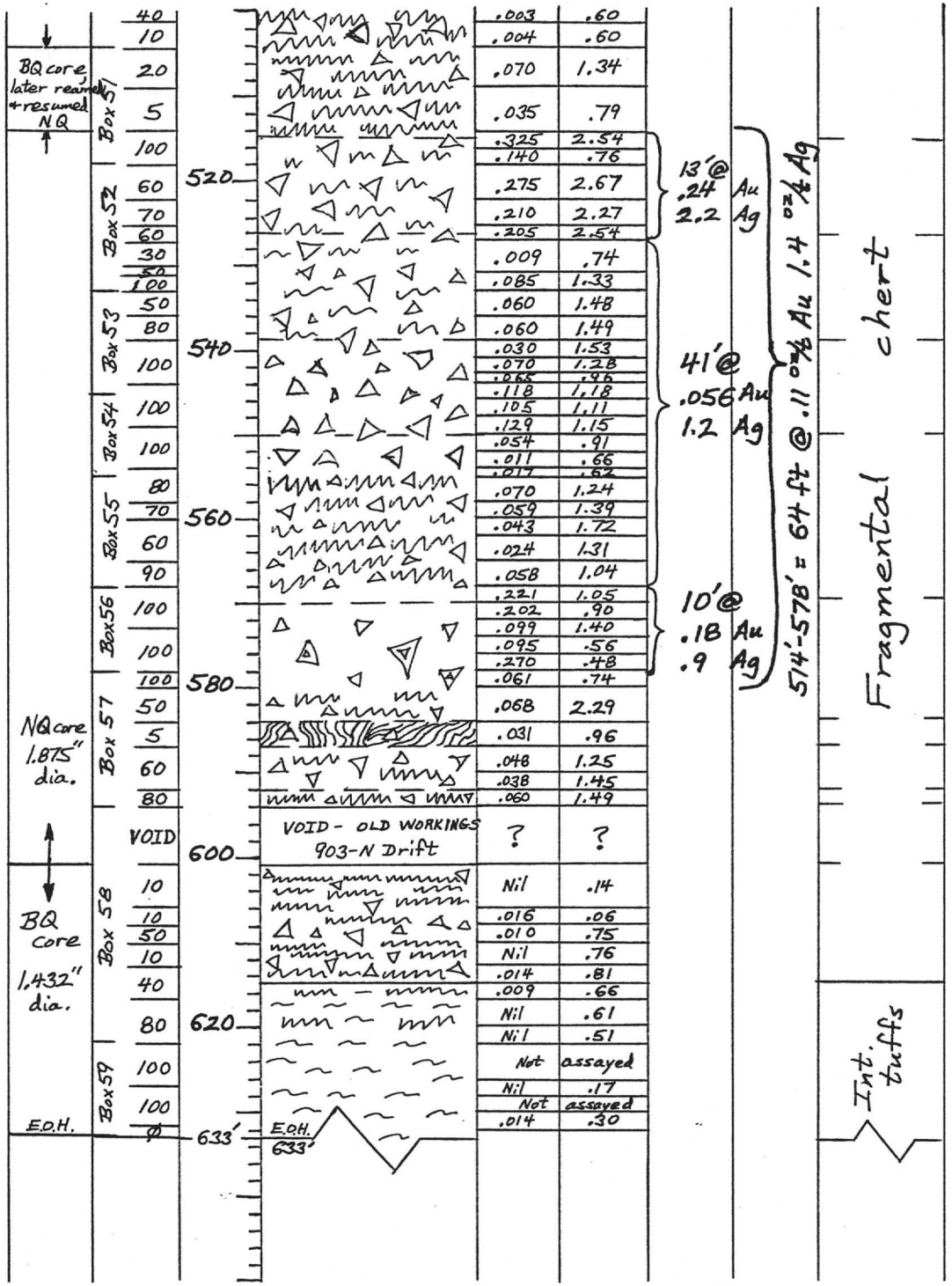
464' = Occurrence of botryoidal nontronite and crusts of MnO_2 on fractures (similar to 901-1 hole in H.W. of Gold stope).

466-472 Biege and brown, f.gr., faintly foliated, fragmental tuff texture with possible slump bx features

472-481 Same as 466-472 but admixed ~20% wht. and light gray chert lapilli interbedded with the tuffs. Lapilli ≤ 2cm and scatterred. Foliation ~ 60° to CA. No carbonates, no magnetite.

481-615 Chert

Various chert breccia varieties are noted below



481-515 Banded, yellow, biege, and translucent white, cutaxitic chert; looks like petrified wood or crazy lace agate. Lapilli elongated ~ 6 to 1, generally ≤ 2 cm long, ≤ 2mm thick.

515-526 Matrix supported chert breccia. Lt. gray & wh. angular clasts of chert and Cleopatra qtz porty. in mustard gold to brick red, f.gr., si-grit matrix

526-539 Clast supported chert breccia, Lt. gray, translucent to opaque, angular clasts [1mm to 2cm; X≤1cm] with yellow, red, + biege chert matrix. ~10% voids ≤ 1cm.

539-550 Matrix supported chert breccia. Lt.+dk gray to white, subrounded (tumbled-?) chert clasts in mustard yellow si-grit grading to red and hematitic beyond 549'.

550-555 Very dark, red brown, dense, f.gr., hematitic, matrix supported chert breccia. Black, manganese-coated hackly fractures make drill water return black. Fine (≤ 5mm) angular, lt. gray chert clasts in red-black manganiferous hematite-stained comminuted chert matrix.

555-570 Same as 550-555 except for increased clast percentage (~50%).

570-584 Light gray, pale yellow + red matrix supported, large clasts of second generation chert breccia.

584-587 Tan, very delicately banded chert. Exceedingly hard (Drills ~1 ft/hour; ~3 ft/bit)

587-592 Similar to 570-584 but clasts are dominantly qtz.

592-594 Yellow and red-brown, matrix rich chert bx Poorly cemented, gritty

594-601 Void - old workings of 903-N drift on 903 Intermediate level

601-615 Light gray, red, + biege, angular fragmental chert clasts in same colored cutaxitic chert matrix. Locally jaspery, hematitic +/or banded.

615-630 Pale purple and white, blotchy (from Redox colorations) f.gr., silicified, welded tuff, Silicification decreases in intensity with separation from chert contact Foliation ~ 60° to core axis.

630-632 Same as 615-630 but now includes ~50% pink + biege, coarse grained, qtz "veins"(?), ≤ 2", X-cutting core.

632-633 — No core return.

Hole No. 806-1

BFD

Collar location: U.V.X. Mine - 800-Level; Mine grid ~11,890N ~7335E

Inclination: -3° at collar; -7° at 255', -8° at 360', -10° at 380' } acid-etch inclination surveys

Azimuth: S 34° W at collar

Length:

Driller: Longyear Co. - Phoenix, AZ; Jack Hayslip, driller; Bill Mills, helper

Core recovery:

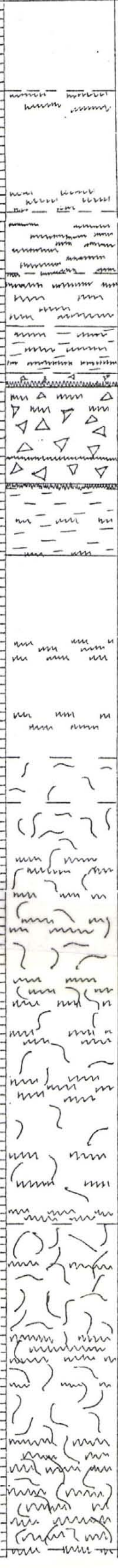
Dates: Dec 16, 1985 thru

Assayer: Iron King Assay, Inc., Humboldt, AZ using Fire/AA and one assay ton.

Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig. HQ core to 259', NQ from 259' to 402'; H casing then reamed to

Preliminary 1-5-86
Hole still drilling

Core size	Runs + recovery	Footage	Graphic log	Au (oz/t)	Ag (oz/t)			Rock type
HQ 2.5" dia.	Box 1–Box 2: 60, 80, 80, 90, 90; Box 3 onward: ~100% thru	0–340		<.001	.18			Intermediate tuffs and fragmentals (0–73)
				<.001	.18			Clay-alt'd int. tuffs (73–86)
				<.001	.85			Fragmental chert (86–108)
				<.001	.81			Clay-alt'd int. tuffs (108–125)
				<.001	.70			Massive int. flow (andesite) or subvolcanic intrusive (diorite) (125–); No carbonate; Trace CO_3; ~2% $CaCO_3$, $FeCO_3$
				<.001	.70			~2% $CaCO_3$, $FeCO_3$ veinlets; Massive andesite or diorite
				<.001	.67			~4% $CaCO_3$, $FeCO_3$ veinlets; Massive andesite
				<.001	.65			
				<.001	.48			
				<.001	.69			
				<.001	.86			
				<.001	.32			

Box numbers: Box 1 – Box 37. HQ core to 259'; NQ core 1.875" dia.

Lithology

Ø-20 Mottled gray-green, red-gray, + pale gray, fine grained, faintly foliated and fragmental qtz-feld-chl-ser. schist ± hematite + trace malachite. (Looks like clay-altered int. tuffs and fragmentals)

20-48 Same but red-brown and more porous. Color results from 10-20% criss-crossing hematite veinlets ≤ 1cm thick, randomly oriented. Some (≤5%) limonite on vuggy surfaces.

48-61 Same as Ø-20

61-73 Same as 20-48. H~6.5, No carbonate except local traces $CuCO_3$

73-84 Purple and white, blotchy, f.gr. qtz-feld-ser. schist with kaolinized feldspar phenos. ≤ 5mm.

84-86 Same plus local blood red hematitic gouge and ~5% milky white chert fragments in clusters along fractures or in breccia-pipe-like shoots.

86-87 Fault gouge

87-108 Fragmental chert; variously light gray, yellow brown, or red brown fragments in red brown to gray brown chert matrix. Very hard. No carbonate, no magnetite. Trace malachite on frax. Virtually no vugs or porosity. Clay gouge zone 102'-103'

108-109 Fault gouge - kaolinitic like the tuffs below

109-125 Purple and white, blotchy, f.gr., clay-altered qtz-ser-kao sch with relict feldspar phenocrysts pseudomorphed by kaolin.

125- Grey green and red brown, hematite-stained qtz-feld-chl-ser schist ± trace malachite. Mapped by all predecessors as "diorite".

Notes on carbonate content —

Ø-170 No carbonate other than trace malachite

170-180 Trace calcite + possible siderite

180-275 ~2% calcite + siderite as veinlets ≤2mm thick and randomly oriented. Also some disseminated CO_3.

275-348 ~4% calcite and siderite veinlets, as above

348- Trace very fine carbonate veinlets

222' exhibits a 1" thick pinkish gray, v.f.gr., massive, aplite dike (?) cross cutting gray green c.gr. unfoliated qtz.-feld-chl-ser-lim-calcite rock. The limonite and calcite occur as veinlets, ~2% each. The feldspars are virtually unaltered. The aplite-country rock contacts are very diffuse.

Hole No. 1104-2

Preliminary; incomplete assays

Collar location: UVX Mine - 1100-Level - 1104 Drift; Mine grid 11,310 N 8110 E
Inclination: +15° at collar, +18° at 520', +21° at 710'
Azimuth: S63°W at collar
Length: 730 feet
Driller: Longyear Co. - Phoenix, AZ; Jack Hayslip, Driller; Bill Mills, Helper
Core recovery: 90% overall
Dates: Sept. 17 thru Oct. 28, 1985

Assayer: Skyline Labs, Inc. - Tucson, using Fire/AA and one assay ton
Logger: Don White
Remarks: Drilled with a Longyear 34, compressed air powered rig. NQ core to 587', BQ to E.O.H. (730')

All casing recovered from hole.

Inclination tests by acid etch technique. 20 ft/shift (total of 36 8-hr shifts) including bit changes, pulling rods + casing, etc.

Log columns: Core size | Runs + recovery | Footage | Graphic log | Au (oz/t) | Ag (oz/t) | Rock type (Protolith) | Lithology

Core size: NQ core, 1.875" dia. (0–587'); BQ 1.432" dia. (587'–E.O.H.); BQ to end of hole.

Runs + recovery: Box 1 – Box 70; 5' core barrel; Recovery of core ~100% from 0 to 175'; thereafter recovery per run 30–100%; VOID at ~719–722'. E.O.H. 730.

Graphic log notes: Gradational contact (~44'); Gradational contact (~102'); Gradational contact (~130'); Gradational contact (~408'); Gradational contact (~458').

Rock type (Protolith): Rhyolite agglomerate (0–44); Rhyolite tuff; Dacite tuff; Rhyolite tuff; Rhyolite/Dacite tuff, agglom.; Intermediate tuffs; Altered intermediate tuffs; Basal chert frag. cgl.; Fragmental chert; Altered intermediate tuffs; si. grit; Fragmental chert; si. grit; Altered intermediate tuffs; Heavily altered volcs; Altered intermediate tuffs; Altered intermediate tuffs; Altered basic to int. tuffs; Heavily alt'd + sheared int. tuffs; Frag. chert + silica grit; Massive chert; Rhyolite flow; Fragmental chert; Heavily alt'd volc's-?; Altered intermediate tuffs with chert fragments; Massive chert.

Assays (in order down hole, ~209'–349')

Au (oz/t)	Ag (oz/t)
.010	
.050	.58
.050	.71
.105	.64
.030	.83
.070	.58
.065	.47
.015	.45
.070	.33
.040	.33
.050	.40
.045	.29
.210	.53
.230	.44
.135	.20
.115	.42
.085	.45
.120	.28
.110	.37
<.005	.16
.065	.55
<.005	
<.005	
<.005	
<.005	.46
.005	.43
.025	.38
.015	.48
<.005	.48
<.005	.35
.005	.34
<.005	.47
<.005	.45
<.005	.60
<.005	.69
.005	.71
.005	.83
<.005	.32
<.005	.31
.005	.95
<.005	.61
<.005	.62
.010	.71
.010	.70
<.005	.40
<.005	.53
.010	.84
.010	.62
.040	1.87
.090	.59
.080	.42
.050	.43
.010	.60
<.005	.39
<.005	.55
<.005	.74
<.005	.58
<.005	.48
<.005	.44
<.005	.43
<.005	.18

Annotations: 209–252' A3 0.098; 14' true @ .14 oz/t Au, .4 oz/t Ag

Assays (in order down hole, ~520'–625', Au oz/t)

Au (oz/t)
<.005
.060
.040
.010
.030
.010
.005
.010
.010
<.005
.005
.010
<.005
<.005
.030
.035
.045
.070
.030
<.005
<.005
.010
.080
.040
.160
.045
.015
.010
.110
.040
<.005
<.005

Annotation: 0.075

Lithology

0–56' Pink-gray, mottled, fine to med. grained, coarse fragmental qtz-feld-sericite (meta-rhyolite) with jasper fragments. Clast ≤4" dia., equidimensional, subrounded, feldspar porphyry with feldspar phenocrysts 1–4mm (pink, orthoclase-?) constituting ~10% of rock. Some (~10%) blood red, aphanitic, jasper fragments and some red-brown jaspery matrix between all clast types. No carbonate, non-magnetic, very hard (H≥7.5). Beyond 44', grades to smaller clasts, less jasper, and more tuffy matrix.

56–60' Greenish gray, v.f. to m.gr., massive, qtz-feld. porphy. with clear qtz phenos ≤2mm, pink ortho. phenos ≤6mm

60–80 Pink gray, mottled, v.f.gr., thin foliated qtz-feld sch.
Note: 60–74' – ~2% Calcite veinlets ≤2mm thick

80–89 Green-gray, mottled, f.gr., qtz-feld-chlorite sch. with pink feld. porphyroblasts ≤2mm.
Note: 83–110' – ~1% Calcite veinlets ≤2 mm thick

89–102 Same as 60–80. H still ~7.0 except for calcite veinlets.

102–132 Green gray, mottled, f.-m.gr. faintly banded qtz-feld-sericite porphyry. Qtz phenos ≤1mm, ~5%. Feldspar (pink orthoclase-?) phenos ≤4mm, and scattered uniformly ~15% of rock. Trace calcite, as above. Grades more iron stained, more kaolinitic, hence softer, into the more altered rock below.

132–209 Brick red, gray, and white, alternating and mottled, f.gr., faintly banded, qtz-ser. sch; kaolinized and iron stained. Locally brecciated and healed with fine gray, anastomosing qtz veins (≤1mm)

Note: 153–167 Blotchy green-gray, pink gray, and brick red, f.gr., coarse fragmental. H~6.5 for both clasts and matrix

167–209 White and pale gray, more heavily kaolinized than above, locally sericitized (especially 207–209) qtz-feld-sericite sch. Wet surface still reveals original fragmental texture with clasts from 2mm to ~3 cm, H~6.5 No carbonate.

209–214 Orange-red, f.gr., gritty, hematitic silica sand matrix with ~60% buff, angular, amorphous, chert fragments, matrix supported.

214–254 Fragmental chert. Top is biege/buff as with fragments in overlying cgl. Remainder dark and light brown, red brown, gray brown, yellow brown, banded, mottled, and fragmental. Generally tight silica healed but locally porous and gossanous. Traces of $CuCO_3$ as botryoidal malachite linings and spots within vugs. Clear, resinous, qtz eyes generally ~1mm but up to 10 mm dia. occur locally within dense chalcedonic chert. H~7.5. No carbonate other than the trace malachite.

254–274 Yellow white and pale purple, blotchy, v.f.gr., kaolinized, qtz-feld-ser sch. with obvious fine fragmental (welded tuff/ignimbrite) texture. Foliation ~90° to core axis.

274–275 Red brown, f.gr., banded silica grit.

275–349 Fragmental chert. Same as 214–254
excepting: 285–286, 303–307, 328–334 – Dense, pale chestnut brown, non-fragmental (unless frags are too large to see with NQ core). 328–334 contains clear (translucent) qtz/chert fragments, very angular.

286–287, 291–292 – One-foot voids; lost drill circulation.

No carbonate, no magnetite.

349–350 Yellow-red, banded, v.f. gr. silica grit. H~7

350–387 Pale purple and white, blotchy, v.f. gr., qtz-feld-ser. sch with some kaolin. Color and relict fragments up to 5 mm suggest intermediate tuff protolith.
Note: 369–377 Crushed zone

387–391 White, v.f.gr., heavily sheared and broken sericite-kaolin. H~5

391–410 Same as 350–387
Note: 393–405 Crushed zone

410–458 Orange and red-grey, alternating, v.f.gr., soft (H~5.5) kaolinized, locally sheared, broken, qtz-feld-ser. sch.
Note: 426–429 Trace disseminated calcite.

458–496 Dark brown-red, v.f.gr., soft (H~5) locally gougy, often broken, heavily kaolinized; Protolith only conjecturable as basic to int. tuff.
Note: 464–466 Crushed zone

496–503 Same but pale yellow-brown and gray-brown.
Note: 499–501 Crushed zone

503–513 Same as 350–387 excepting 506–507 is red-brown fault gouge and mylonite.

513–519 Same but more pink

519–521 Same but more red and white and brick red; much more heavily sheared and kaolinized.

521–526 Light yellow brown to amber, f. gr. fragmental chert in silica grit matrix. Locally poorly cemented. No carbonate. H~7.0

526–553 Red brown, amorphous, generally massive chert. Faint color banding in various orientations and small silica-healed fractures, sometimes exhibiting small (≤1cm) offsets. No carbonate H~7.5

553–563 Blotchy, pale purple, brick red, and white, f.gr., kaolinized qtz-feld-sericite schist. H~5.5 Bottom two feet, 561–563, reveal less altered protolith which may apply to entire interval. It is a light gray, v.f.gr. qtz-ser. matrix with ~50% white, kaolinized orthoclase(?) phenocrysts ~1–5mm. No favored orientation or alignment of phenos. May have been rhy. flow.

563–569 Dark red, massive chert with some faint fragments (obscured by silica flooding-?). ~10% tiny vugs (<1mm to 1cm). Trace of malachite.

569–572 Tan massive chert; may be a single, large clast (since color + texture match that of fragments below).

572–587 Tan, massive chert occurring as angular fragments up to 10 cm in red brown, ferruginous chert matrix. Fragments are matrix supported but neighboring frags. match like jigsaw puzzle pieces. Hydro-fractured-?

587–601 Red and tan fragmental chert. Tan, banded chert may be very large clasts or alternate bands with red brown bx. chert. Much hematite. Traces malachite.

601–642 Tan, red brown, and translucent white qtz/chert fragments all sizes up to 20 cm (obvious clasts) and possibly two feet (613–615). Looks much like an angular qtz-pebble cgl. with very ferruginous cement. Traces malachite. Very hard (drills about 1 ft/hour despite rod pressure adequate to collapse rod couplings in upon themselves). No carbonate, no magnetite.

642–650 White and pale gray, v.f.gr., heavily kaolinized and altered rock. Protolith may be c.gr., massive diorite or coarse intermediate tuffs and fragmentals.

650–706 Brick red to pale purple, v.f.gr., kaolinized and altered and mildly silicified(?) intermediate tuff. Now a kaolin-qtz-sericite schist. Interval 660–670 exhibits 2–20 cm dia. chert clasts, matrix supported, probably deposited as bombs within a tuff.

706–710 Red brown but otherwise the same as 650–706; heterogeneous fragment types in tuff matrix. Biege chert blebs 5mm to 4cm.

710–712 Dark red brown, much iron stain, trace malachite; otherwise as above.

712–730+ Biege and light gray massive chert. Very hard (slow drilling) and extremely fractured (poor recovery, blocked core barrels, etc.) [Void, 719–722]

Note: Hole originally intended to end in the hanging wall of the Verde Fault at ~750'. The last 20 feet of core, however, was intensely broken (repeatedly blocking core barrel) circulation was lost (in a void, 719–722) necessitating pulling the rods for greasing to drill beyond 730'. Also, bit costs are high in caving chert. So rather than persevere in rock conditions ill suited to mining, the hole was terminated.

BFD, III

Hole No. 1104-1

Collar location: U.V.X. Mine - 1100 level - 1104 drift; Mine grid 11,310 N 8110 E

Inclination: +5° at collar; +2° at 300′; +4° at 567′

Azimuth: S 63° W at collar

Length: 567 feet

Driller: Longyear Co. - Phoenix, AZ; Jack Hayslip, driller; Bill Mills, helper

Core recovery: 92% overall; 95% for first 540′

Dates: Aug. 12 thru Sept 16, 1985 → 21 ft/shift (total of 27 shifts) including down-time, pulling rods + casing, etc. (8-hr shifts)

Assayer: Skyline Labs, Inc. - Tucson using Fire/AA and one assay ton

Logger: Don White

Remarks: Drilled with a Longyear 34, compressed air powered rig. HQ core to 324′, NQ to end of hole

All casing recovered from hole; none left (not even collar pipe).

Inclination tests by acid etch technique

Core size: HQ 2½″ dia. (0–324′); NQ 1.875″ dia. to end (2.5″ dia. at changeover)

Runs + recovery: 5′ (one barrel); Recovery ~100% through 177′

Graphic log

Assays

Au (oz/t)	Ag (oz/t)	Note
<.005	<.01	Grab of matrix / jasper from 14′
<.005	<.01	Grab from 148′
.065	.44	
.040	.42	
.070	.35	
.110	.36	
.045	.43	
.050	.41	
.010	.74	
.005	.63	
.025	.57	
.105	.57	15′ true @ .11 oz/t Au ≈ .5 oz/t Ag
.115	.42	
.115	.59	
.055	.33	
.010	.54	
<.005	.31	
.015	.31	
.105	.23	
.050	.12	
.015	.19	
<.005	.30	
<.005	.29	
.010	.43	
<.005	.50	
<.005	.35	
<.005	.34	
<.005	.33	
<.005	.40	
<.005	.07	
<.005	.10	
.020	.58	
.010	.50	
.030	.54	
.055	.62	
.050	.46	
<.005	.25	
.015	.32	
.015	.25	

Rock type

- Rhyolite agglomerate
- Rhyolite tuff
- Dacite tuff
- Rhyolite tuff
- Dacite agglom.
- Rhyolite tuff
- Intermediate tuffs
- Altered intermediate tuffs
- Basal tuffy cgl.
- Fragmental chert
- Banded si with jasper
- Hematite si grit
- Banded si
- Fragmental chert
- si grit
- Fragmental chert
- si grit
- Altered int. to acid tuffs
- Fragmental chert
- Heavily altered (sheared + kaolinized) intermediate to acid tuffs (?)
- Fault gouge + much intense alteration that postdates a unconformable...

Lithology

0–50′ Pink-gray, mottled, fine to med. grained, coarse fragmental qtz-feld-sericite (meta-rhyolite) with jasper fragments. Clasts vary from 1″ to 4″ dia., often equidimensional. Dominant clast are ~4″ subrounded, pink-gray, aphanitic to med. gr. feldspar porphyry with 1-4mm pink orthoclase (?) phenocrysts constituting about 10% of rock, subordinate clast type (≤10%) is blood red aphanitic jasper, often more angular than the rhyolite clasts. Jasper fragments often have wispy corners that trail off into a red +/or brown iron-stained, jaspery matrix. Matrix ≤10% of core. No carbonate, very hard (H > 7.5) non-magnetic. Traces of malachite on fractures, especially at 35′. Beyond 35′, grades to smaller clasts, less jasper, and more tuffy matrix.
Foliation not very distinct but ~80° to core axis

50–54 Greenish gray, v.f.-m.gr. massive qtz-feld. porphyry with clear qtz phenocrysts ≤2mm, pink ortho(?) phenos. ≤6mm

54–70 Pink-gray, mottled, v.f. gr., thin foliated qtz-feld sch.

70–75 Green-gray, mottled, f.gr., qtz-feld-chl. schist with pink feldspar porphyroblasts up to 2mm dia.

75–99 Same as 54–70

99–131 Green-gray, mottled, f.-m.gr., faintly banded qtz-feld-sericite porphyry. Qtz phenocrysts ≤1mm and ≤5% of rock. Feldspar (pink orthoclase-?) phenos. ≤4mm and scattered uniformly, ~15% of rock.
99′–10.5′ contains ~10% x-cutting calcite veins ≤1cm
More iron stain with depth; also grading softer with depth (ie, more altered, as unit below).

131–192 Brick red and gray, alternating and mottled, f.gr., faintly banded qtz-ser. sch.; kaolinized + iron stained. Locally brecciated and healed with fine (<1mm) gray, anastomosing qtz. veins. Probably altered as a result of proximity to main orebody +/or Florencia fault.
137–139 – Brown, limonitic, with Liesgang banding.

134–137, 160–162, 164–167, 172–182, 185–187 } Broken core intervals; much gouge and kaolin.

Hardness ~5. No carbonate. Foliation ~80°–90° to core axis.

192–193 Brick red matrix (~50%) of hematite stained + cemented qtz grains (fine to med. sand size) carrying buff and gray, aphanitic chert fragments (~50%) which are very hard, angular, and matrix supported.

193–331 Chert, as detailed below. Variously fragmental, massive, jaspery, banded, milky, and sandy. Traces of malachite scattered thruout. No other carbonate. H>7.5

193–224 Pale gray, translucent, cryptocrystalline, massive, quartz (chert) with yellow-brown and red-brown iron staining on multitudes of qtz-hematite healed fractures. Larger fractures not fully healed, leaving vugs lined with v.f. gr. drusy qtz xl crusts. Vug linings locally, in turn, coated with malachite (only trace Cu overall).

224–242 Same as above but more dark red + maroon iron staining. Poor core recovery where most broken.

242–261 Same as 193–224

261–265 Gray and red, banded, cryptocrystalline, jasper/chert. Very dense and hard. Banding perpendicular to core axis.

265–271 Brick red, f.gr., gritty, sandy textured hematite-stained and cemented qtz. Very poor core recovery because of loose cementing and vulnerability to water.

271–274 Same as 261–265 but less red jasper.

274–280 Same as 193–224

280–283 Gray-white, sugary, massive chert

283–286 Orange-yellow and white mottled, porous, banded chert. Banding 90° to core axis.

286–290 Brick red, more dense, banded chert

290–299 Chocolate brown + dark red-brown, dense, hard, massive + locally fragmental chert.

299–312 White, massive, coarsely fragmental chert with much brown iron staining on fracture surfaces.

312′ – Prominent, sharply defined angular unconformity between red and yellow stained chert bands; each with fragments of the same chert types within their matrix.

312–314 Pale brown and buff, dense, hard, non-fragmental chert

314–319 Pale brown, f.gr., sandy, very poorly cemented silica grit. Locally better cemented + as hard as overlying chert. Otherwise H~6.5. Malachite ~2% on fractures, 318′–319′.

319–327 Brown + mustard yellow, massive, healed frag. chert.

327–331 Brick red, orange, + mustard yellow, f.g., sandy + silty, poorly cemented silica grains. Very crumbly, disintegrates in water. Some bx textures (healed) + chalcedonic veins (≤2mm) at 329′.

331–362 Various colored, v.f.gr., kaolinized, qtz-ser.-schist.

331–338 Pale purple with white blotches (leached-?)

338–342 White and orange-red

342–358 Same as 331–338

358–360 2 feet of open space; nature unknown.

360–362 Same as 331–338 and 342–358.

362–362.5 Tan, v.f.gr., thin laminated and poor cemented siliceous tuff. Brick red stained on fractures.

362.5–413 Brown, red-brown, and biege, cryptocrystalline, iron stained, fragmental chert. Often vuggy with v.f.gr. drusy qtz linings. Exhibits rapid color changes. Malachite on fractures from 393–400 (trace Cu only). Extremely hard drilling (burned out 3 bits 388′–404′).

413–438 Blotchy white and pale purple, soft (H~5) heavily kaolinized, with pale red iron stain. Very broken core. May be fault gouge. May have been an intermediate to acid tuff with angular rock fragments.

438–462 Pale red, iron stained, kaolinized, heavily sheared. May have been intermediate tuff and fragmental.

462–477 Light orange variant of 438–462

477–490 Red-brown, more iron stained, but otherwise the same as above.

490–512 Pink color; otherwise same as 413–490.

512–527 Same pink but now containing shears ~1mm thick carrying traces of azurite and malachite.

527–528 Same rock type but sheared, broken, + angular fragments surrounded by a red mud matrix. Slickensided surfaces are lined with sheared chlorite.

528–534 Light orange, iron stained version of 413–438

534–545 Pale purple and buff, v.f.gr., heavily altered/kaolinized rock; original rock type unknown.

545–552 Seven foot void

552–558 Light orange, iron stained, f.gr. gritty gouge

558–EOH Red-brown fault gouge returned in core barrel as mud with a few gritty pea-gravel sections; mostly loose mylonite.

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