CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
520-770-3500
http://www.azgs.az.gov
inquiries@azgs.az.gov

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James Doyle Sell Mining Collection

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JHowell	Coe 1-4 late 62
"	Coe 5-16 early 63
"	Coe 17
"	Ede 1-12 early 63
Webb & Schultz	Twin No 1 + 2 16 Dec 62 D 339, p. 167 & 168
Webb	Sites #1 & 2. 8 Oct 63 D 364, p. 157 & 158
Miami	Melvin 1-10 early 63
"	Henry 1-10 early 63
"	Echo 1-13
"	Oak 1-10
K M	MX Summer 1964
Sequoia	MO
"	BI
"	AG
I	OS
I	~~Pole~~ Crook
M ?	Polo
I	Ghost
	Seven

Claim Name & Number	Person or Company	Location Notices				Validation (V) or Assessment (A)					
		Date Posted	Recorded			Date Completed	Recorded			For Assess. Year	Type of Work
			Date	Docket	Page		Date	Docket	Page		

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			Date	Docket	Page		Date	Docket	Page		
Crook 103 thru 113	ICC Summit Mt.	9-1-66	11-10-66	474	339 to 349						
Crook 138, 139 & 142 thru 154	"	9-1-66	11-10-66	474	350 to 358						

Claim Name & Number	Person or Company	Location Notices				Validation (V) or Assessment (A)					
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			Date	Docket	Page		Date	Docket	Page		
Coe # 1 thru # 3 (Magna List)	J.D. Lowell (Magna List)	9-18-62	9-1962	334	21 thru 23						
Coe No. 4	J.D. Lowell (Magna List)	10-21-62	4-16-63	350	117						
Cook 97, 98 114 to 137 140 to 147 incl.	ICC (Summit List)	10-21-63 et al	1-15-64	371	516 to 549 incl						
Cook # 103 thru # 113	ICC Summit List	7-22-66	7-28-66	455	588 to 598						
Cook # 138 & 139	"	7-22-66	7-28-66	455	599 to 600 incl						
Cook # 148 thru 154	"	7-22-66	7-28-66	456	1 thru 7						
Cook 1 to 102 incl	"	10-9-63 et al	1-6-64	370	340 to 459 incl.						
Corto # 18 thru # 22	"	1-16-67	2-15-67	490	341 to 345						
Corto # 42 thru # 45	"	1-16-67	2-15-67	490	346 to 349						
Corto # 61 thru # 80	"	1-16-67	2-15-67	490	350 thru 362						
Corto # 108 thru # 116	"	2-3-67 et al.	2-15-67	490	363 thru 371						

C.C. #1 6 Jan 72. N-S NE corner lies 2200'S & 2400'E of the NW corner of Sec. 9 T8S, R18

San Manuel Ariz.

C.C. #8 800'N & 1800'E .....

Galvin

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 542
PLATE I

ASARCO · HANNA JOINT VENTURE

GEOLOGIC MAP OF THE GLOBE-MIAMI DISTRICT, GILA COUNTY, ARIZONA

Scale 1:48000

1 0 1 Mile

BOHME-CORYELL PROPERTY
MIAMI DISTRICT

Base from U.S. Geological Survey
topographic quadrangles Inspiration,
1945, Globe 1945, Pinal Ranch,
1948

Geology by N.P. Peterson, C.M. Gilbert,
G.L. Quick, H.C. Pauley, J.C. McKaffie,
L. Bryner, D.W. Peterson, and J.V.N. Dorr II
1943-53
modified June 1, 1972
J.D. Sell D.C. Rees

EXPLANATION

- Castle Dome – Copper Cities basement and buttress faults.
- Internal Castle Dome – Copper Cities imbricate faults.
- Inspiration – Miami basement and buttress faults.
- Internal Inspiration – Miami imbricate faults.
- Normal (post-imbrication) faults.
- Exposed or known Root and Segment mineral deposits.
- Postulate Root and Segment mineral deposits.
- Known drill holes.
- Proposed drill holes.
- Cross sections (attachment B)
- Hanna optioned area (Bohme-Coryell Property)

EXPLANATION

QUATERNARY

- Alluvium
- Talus
- Landslide
- Basalt
- Gila conglomerate

TERTIARY AND QUATERNARY

- Later volcanic rocks
- Earlier volcanic rocks
- Whitetail conglomerate

Tsg — Schultze granite — Tgp

Main mass of Schultze granite (Tsg) is porphyritic quartz monzonite; porphyry at related outcrops at Schultze Granite is more K

Tdp — Dacite porphyry

Tlqm — Lost Gulch quartz monzonite

Tgl — Granodiorite of Gold Gulch

Twsg — Wilhelm Spring granodiorite and younger border intrusive, dotted pattern

CRETACEOUS OR TERTIARY

- Schultze granite
- Vane Limestone
- Escabrosa Limestone
- Martin Limestone
- Troy quartzite
- Naco
- Mescal Limestone
- Dripping Spring quartzite and Barnes conglomerate locally as base
- Pioneer formation and Scanlan conglomerate
- Base granite

pCmg — Granite on Manitou Hill

CAMBRIAN DEVONIAN, MISSIS. PENNSYL. AND PERMIAN

CARBONIFEROUS

- Madera diorite
- Pinal schist

Upper Precambrian

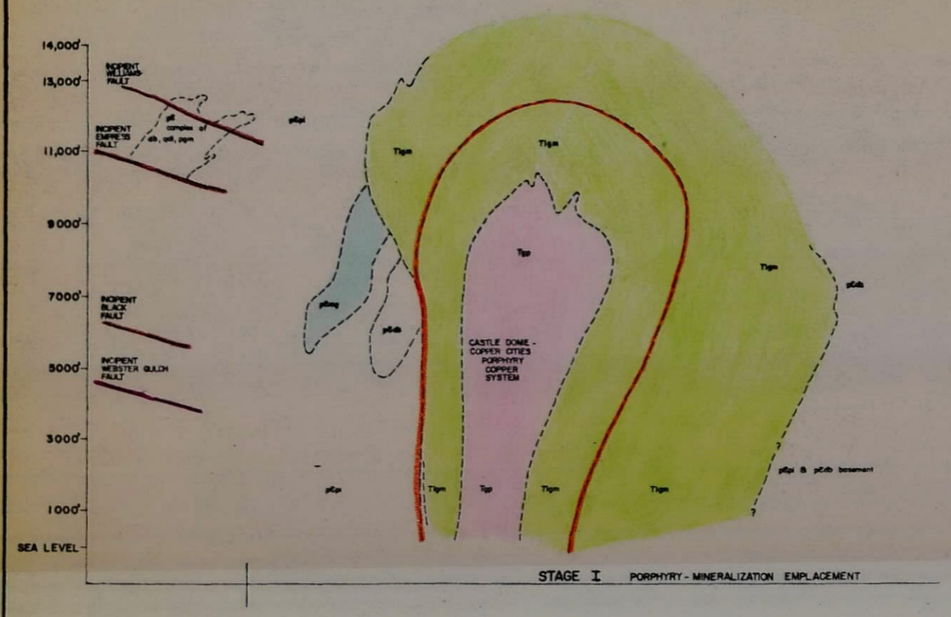
Apache group

Lower Precambrian

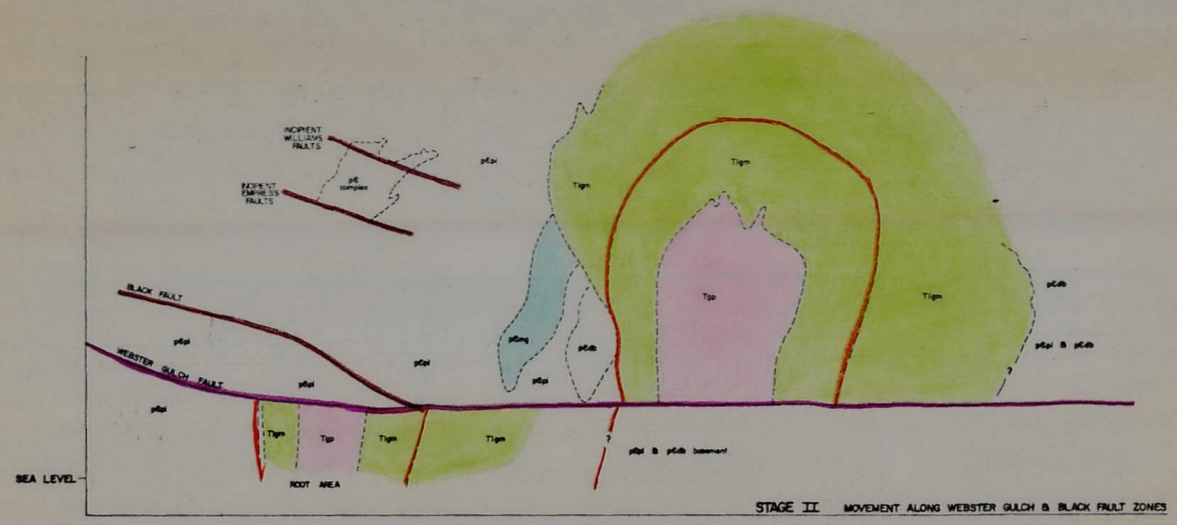
PRECAMBRIAN

- Contact, showing dip. Dashed where approximately located, dotted where concealed
- Fault, showing dip. Dashed where approximately located, dotted where concealed; ball and bar on downthrown side
- Vertical fault. Dashed where approximately located
- Thrust fault. Dashed where approximately located, dotted where concealed; teeth on upper plate
- Shear zone
- Strike and dip of beds
- Strike of vertical beds
- Horizontal beds
- Strike and dip of overturned beds
- Strike and dip of foliation
- Strike of vertical foliation
- Strike and dip of cleavage
- Shaft
- Portal of tunnel or adit
- Prospect
- Mine dump
- Outline of areas shown on plate

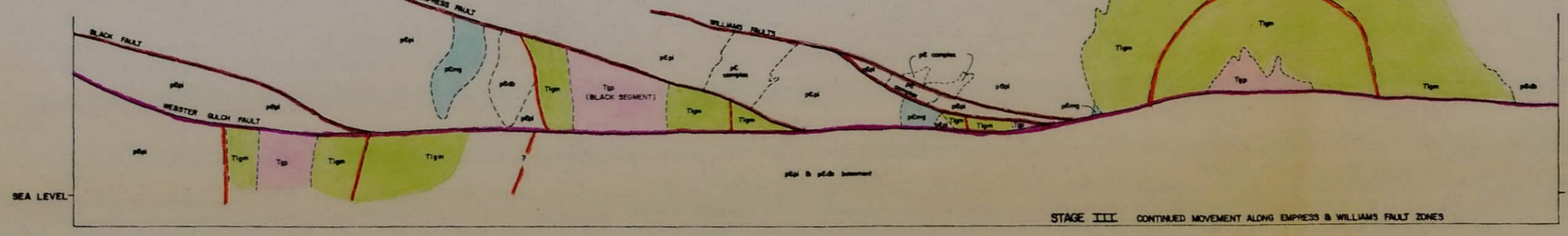
mn. 2552 DAM



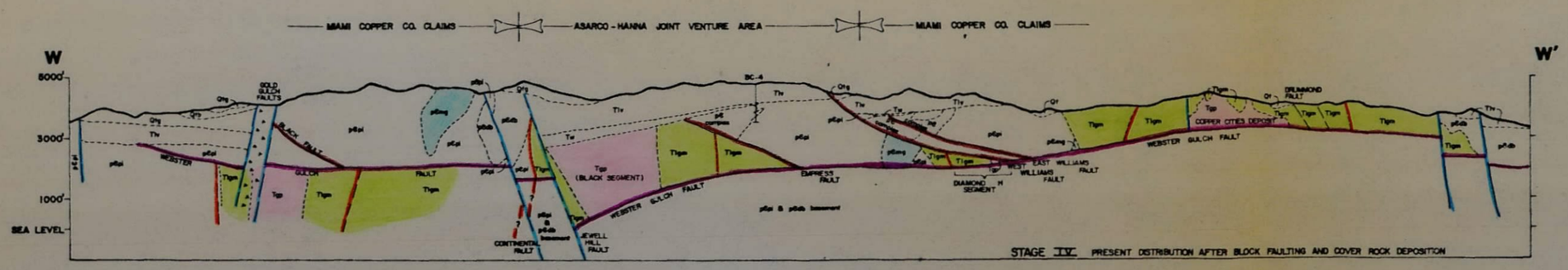
STAGE I PORPHYRY - MINERALIZATION EMPLACEMENT



STAGE II MOVEMENT ALONG WEBSTER GULCH & BLACK FAULT ZONES



STAGE III CONTINUED MOVEMENT ALONG EMPRESS & WILLIAMS FAULT ZONES



STAGE IV PRESENT DISTRIBUTION AFTER BLOCK FAULTING AND COVER ROCK DEPOSITION

EXPLANATION

(NOTE: see attachment A for rock unit designation)

- CASTLE DOME - COPPER CITIES BASEMENT FAULT
- INTERNAL CASTLE DOME - COPPER CITIES IMBRICATE FAULTS
- INSPIRATION-MIAMI BASEMENT FAULT
- INTERNAL INSPIRATION-MIAMI IMBRICATE FAULTS
- NORMAL (POST IMBRICATION) FAULTS
- EXPOSED OR KNOWN ROOT & SEGMENT MINERAL DEPOSITES
- POSTULATED ROOT & SEGMENT MINERAL DEPOSITES
- CDX-1 KNOWN DRILL HOLE

EVOLUTION OF FAULT MOVEMENT EXTENSION ALONG SECTION W-W' (MODIFIED)

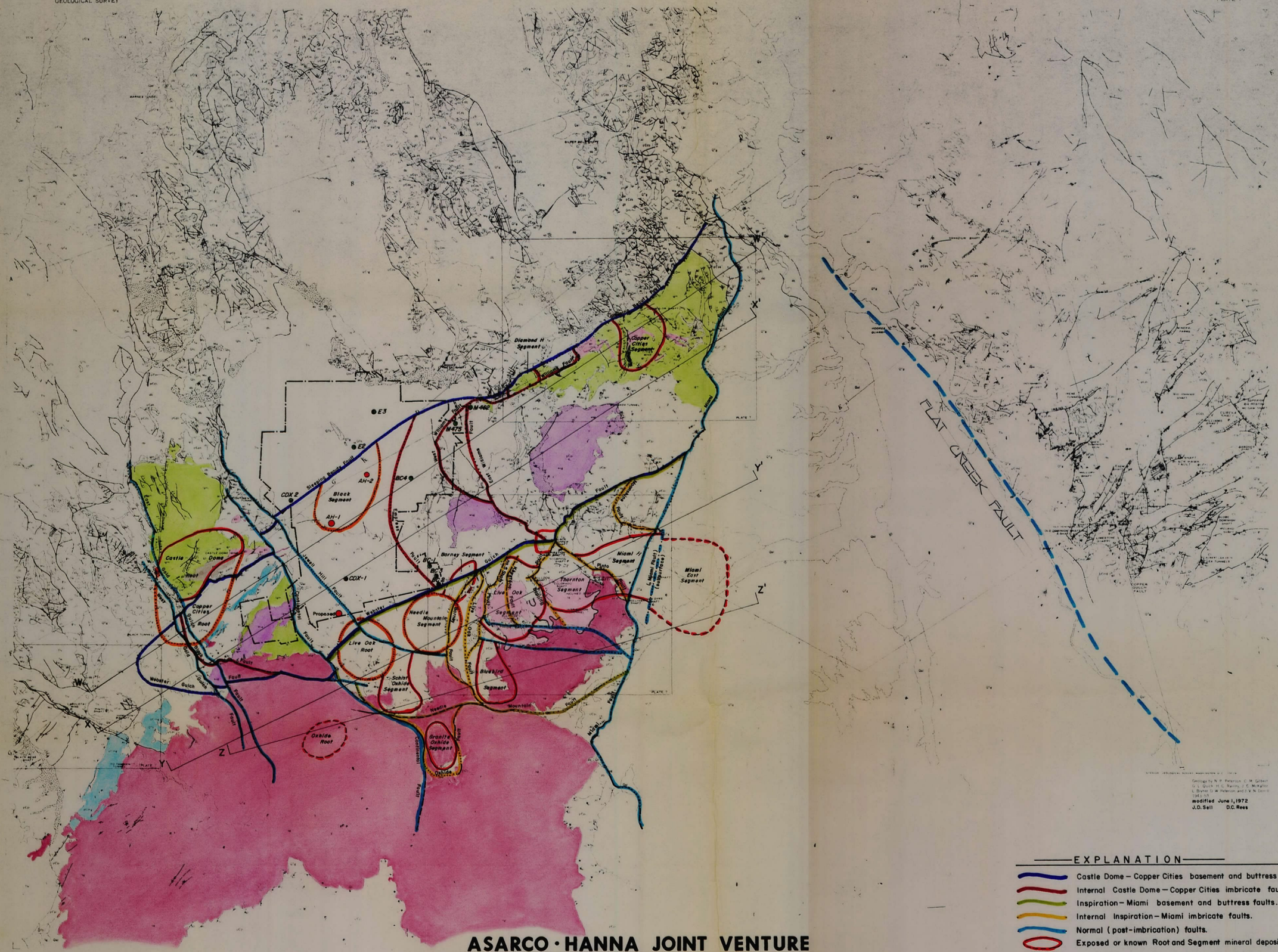
ASARCO-HANNA JOINT VENTURE

BOHME-CORYELL PROPERTY
MIAMI DISTRICT
GILA COUNTY, ARIZONA

J.D. SELL SCALE: 1:24000 JULY 31, 1972

2552-D

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Base from U. S. Geological Survey topographic quadrangles Inspiration 1945 Globe 1945 Pinal Ranch 1948

ASARCO · HANNA JOINT VENTURE

GEOLOGIC MAP OF THE GLOBE-MIAMI DISTRICT, GILA COUNTY, ARIZONA

Scale 1:48000

BOHME-CORYELL PROPERTY
MIAMI DISTRICT

Geology by N. P. Peterson, C. M. Gilbert, G. L. Quick, H. C. Rainey, J. C. McKallor, L. Bryner, D. W. Peterson and J. V. N. Dorr II 1943-53
modified June 1, 1972
J.D. Sell D.C. Rees

EXPLANATION

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- Cross sections (attachment B)
- Hanna optioned area (Bohme-Coryell Property)

EXPLANATION

Alluvium
Talus
Landslide
Basalt
Gila conglomerate
Later volcanic rocks
Earlier volcanic rocks
Whitetail conglomerate
Tsg — Tgp
Schultze granite
Tdp
Diorite porphyry
Diabase
Tlqm
Lost Gulch quartz monzonite
Tgl
Granodiorite in Gold Gulch
Twsg
Willow Spring granodiorite and younger border intrusion dotted pattern
Solitude granite
Naco limestone
Escabrosa limestone
Martin limestone
Troy quartzite
Basalt
Mescal limestone
Dripping Spring quartzite and Barnes conglomerate locally at base
Pioneer formation and Scanlan conglomerate
Rain granite
p€mg
Granite on Mamitou Hill
Madera diorite
Pinal schist
Contact, showing dip
Fault, showing dip
Vertical fault
Thrust fault
Shear zone
Strike and dip of beds
Strike of vertical beds
Horizontal beds
Strike and dip of overturned beds
Strike and dip of foliation
Strike of vertical foliation
Strike and dip of cleavage
Shaft
Portal of tunnel or adit
Prospect
Mine dump
Outline of areas shown on plate

QUATERNARY
TERTIARY AND QUATERNARY
TERTIARY
CRETACEOUS OR TERTIARY
PENNSYLVANIAN
MISSISSIPPIAN
DEVONIAN
CAMBRIAN
CARBONIFEROUS
PRECAMBRIAN
Upper Precambrian
Lower Precambrian
Apache group

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 342
PLATE I

ASARCO · HANNA JOINT VENTURE

GEOLOGIC MAP OF THE GLOBE-MIAMI DISTRICT, GILA COUNTY, ARIZONA

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BOHME-CORYELL PROPERTY
MIAMI DISTRICT

Base from U.S. Geological Survey
Topographic quadrangles reproduced
1945 Globe 1945 Pinal Ranch
1948

Geology by N.P. Peterson, G.M. Gilbert, W.L. Quick, H.E. Ransome, J.C. McKnight, L. Bryner, D.W. Peterson, and J.V.N. Dorr II
1951-1971
modified June 1, 1972
J.D. Sell D.C. Rees

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EXPLANATION

QUATERNARY
Alluvium
Talus
Landslide
Basalt
Gila conglomerate

TERTIARY AND QUATERNARY
Lower volcanic rocks
Quartz latite
Rhyolite
Whitetail conglomerate
Tsg Schultz granite
Tgp
Tdp Diabase porphyry
Tlqm Lost Gulch quartz monzonite
Tgl Granodiorite in Gold Gulch
Twsg Willow Spring granodiorite and younger border intrusion, dotted pattern

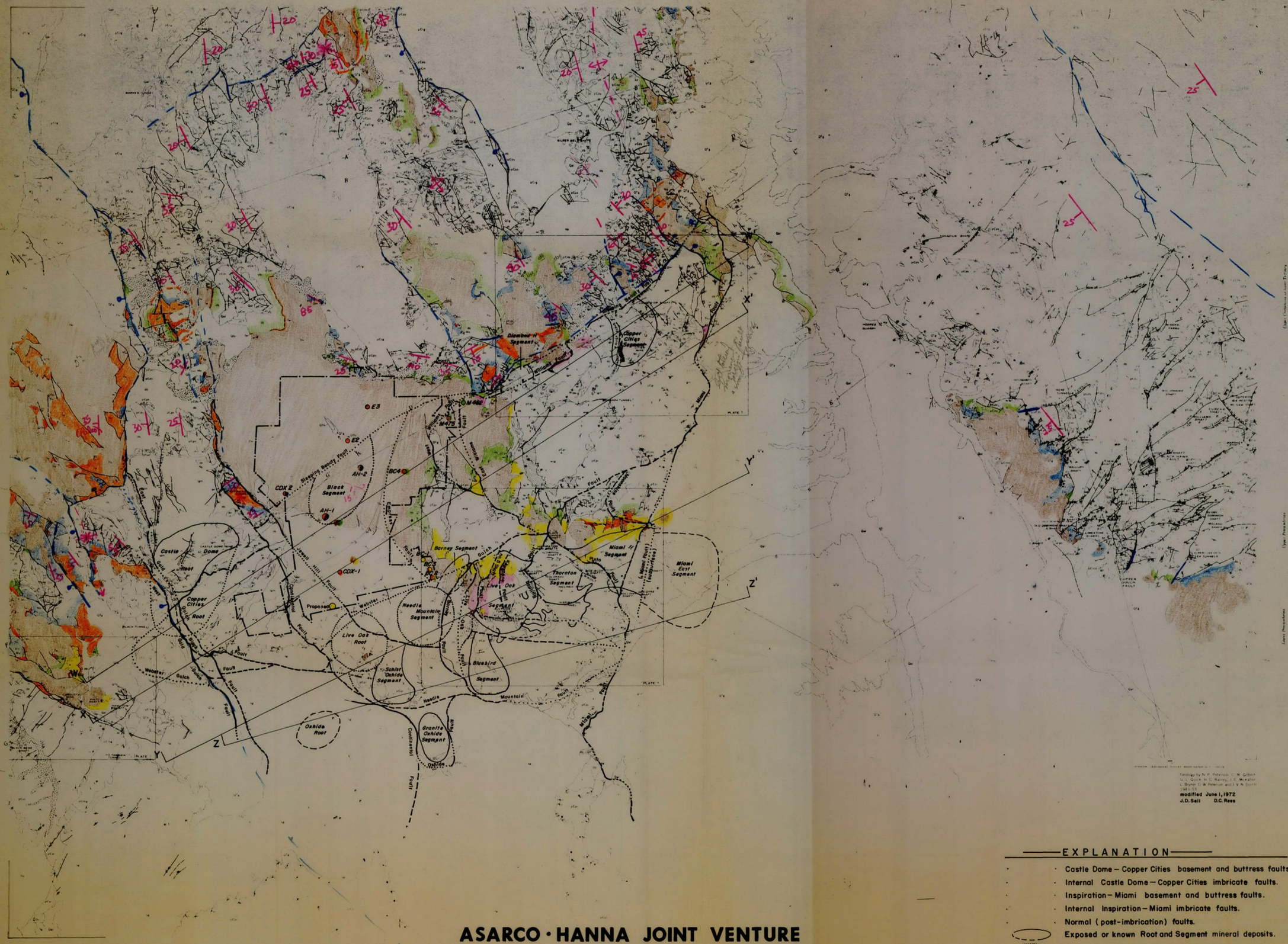
CRETACEOUS OR TERTIARY
Schultz granite
Main limestone
Escabrosa limestone
Martin limestone
Troy quartzite
Naco
Mescal limestone
Dripping Spring quartzite and Barnes conglomerate locally at base
Pioneer formation and Scanlan conglomerate

PRECAMBRIAN
Ruin granite
p€mg Granite on Mammoth Hill
Madera diorite
Pinal schist

Contact, showing dip
Dashed where approximately located, dotted where concealed
Fault, showing dip
Dashed where approximately located, dotted where concealed; U, upthrown side; D, downthrown side
Vertical fault
Dashed where approximately located
Thrust fault
Dashed where approximately located, dotted where concealed; upper plate
Shear zone
Strike and dip of beds
Strike of vertical beds
Horizontal beds
Strike and dip of overturned beds
Strike and dip of foliation
Strike of vertical foliation
Strike and dip of cleavage
Shaft
Portal of tunnel or adit
Prospect
Mine dump
Mine name
Outline of areas shown on plate

Prob. ext. of Tw deposition
& preservation
Thick Tw generally on Pn-Me
(2, 4, 6, hundreds of ft thick.
Present ext of Td outside Tw areas
& rock type under.
Paleo
Apache
SC
Laramide int.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Geology by N. P. Peterson, C. M. Gilbert, G. C. Quick, H. C. Ramey, J. C. McKallor, L. Bryner, D. W. Peterson, and J. V. N. Dorr, 1941-51
modified June 1, 1972
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ASARCO · HANNA JOINT VENTURE

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Scale 1:48000

BOHME-CORYELL PROPERTY
MIAMI DISTRICT

EXPLANATION

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Gila conglomerate
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Earlier volcanic rocks
Whitetail conglomerate
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Dashed where approximately located, dotted where concealed
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Vertical fault
Dashed where approximately located
Thrust fault
Dashed where approximately located, dotted where concealed
T, upper plate
Shear zone
Strike and dip of beds
Strike of vertical beds
Horizontal beds
Strike and dip of overturned beds
Strike and dip of foliation
Strike of vertical foliation
Strike and dip of cleavage
Shaft
Portal of tunnel or adit
Prospect
Mine dump
Outline of areas shown on plate

mp 2552 DAM

~~The general area from Sleeping Beauty Peak (VABM 5147) &~~

A small anomalous area some 3-4,000 ft diameter centered on Pinhold Gulch NW of Sleeping Beauty Peak (VABM 5147) has no Apache between Dh & Dm

Likewise further east no Mescal is known in Apache Seat. This is also true of ~~[illegible]~~ blocks N of O.D. 6 miles

Troy Qtz, a very resistant unit is missing from about [illegible] of Granite Basin eastward to Crash-up Mtns. 9 miles.

The present distribution of Paleozoic & TW suggest that a SW line of small TW basins were developed just north of the present SB fault.

Similar conditions exist in the NW fault block of Jewell Hill.

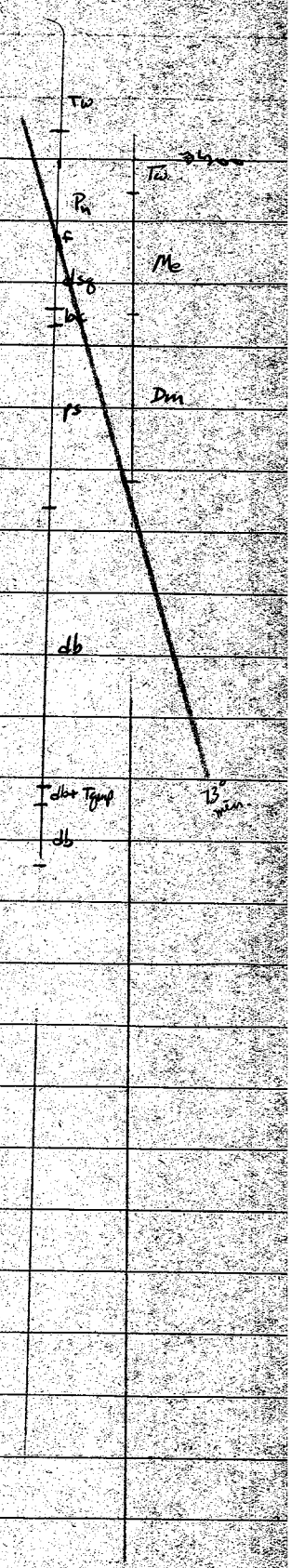
Further west, apparent extensions Paleo, Tw & Td are preserved.

Under Bohne, 5 holes have shown substantial deposits of Tw & 3 show these to rest of Paleozoic.

At OD, Paleozoic are preserved but No Tw.

Tw & Td are exposed on Db or nc on the north side at Murray Spring and in fault blocks near the towns of Dorsipatin.

S of the SB fault zone & its proj it is probable that Paleozoic were beginning to be stripped fairly early in the game


Tw
Tw
Pn
f
Me
dsg
bc
Dm
ps
db
db+ Tgmp
db
13°
min

Deformation times.

1. Pre or sim Tw
2. [illegible] sim Td
3. Post Td
4. Total district.

+ uplift
− Downdropped

A. Globe Block. Thin to No Tw, Td over Pn → dsg.

most of Paleo eroded, preserved to SW, & erod mod to db-dsg zone.

\+ 1. Uplifted block in Tw time with strong NE faulting pre Td.

2. ? Isopach suggest fairly thick Td over entire area.

\+ 3. Uplift & erosion of Td, preserved to SW. Slide blks in Td

\+ 4. Uplift 2 large NW fault zones.

B. Spal Block. Thin to no Tw, Td over db-dsg-sc.

All? of Paleo removed & mod to deep into db-dsg-sc zone.

\+ 1. Uplifted block in Tw time, some faulting to get Td over dsg & sc ?

2. As A-2 above.

\+ 3. Uplift & variable erosion of Td − prob preserved in N & E.

− 4. Downdropped by Miami Flt (W) & Pinal Creek fault (E). △ Shaped. 6 miles & 6 miles.

C. N Qal Block. No info Thin Tw? or none Td over db.

Overall suggestion is that the Qal covered block is a NW extension of the Globe block. and the various faults merge

\+ 1.

2.

\+ 3.

\+, + 4. Downdrop in comparison to A & D, but strongly uplifted in respect to C.

D. E of Ruin basin. No to thin Tw (on the South). Td from S to N on Tw. Pn → dsg.

Paleo preserved Pn → Pm on South & decrease to N on E side of block. Rest mod eroded to dsg-db zone.

\+ 1. Uplifted block in Tw time with increased Tw in S side over me.

2

\+ 3. NNW fault help preserve Td on E, but cont. stripping on W & for N. Block faulting to W.

\+, + 4. Up to C on East, down in relation to blocks on S.

E. Rein basin. No Tw noted, Td over Me → dk., S to N.

\+ 1. Uplifted block stripping Paleo on north & exposing Rein core. Some Paleo on south.

2

\+ 3. Stripping patches of Td on S & all on N.

\- 4. Weak block faulting to W. Same as D level, with down in respect to S bl

F. Flat Top. Mod Tw on south, more central, & same to north. Td over Tw, Dm

\+ 1. Uplifted block stripping Paleo from central part, some preservation & N & esp. S with fault preserved Paleo on east. Best Tw preservation on south

2

\+ 3. Stripping of Td in general.

\- 4. Wk block fault to W, Same as D & E level, with down in respect to S bl

Distribution of features:

1. Isopach studies suggest Dm +350', Me +300', Pn +400' over entire general area.
2. Present studies (see below) suggests Tw in restricted basins, mainly in Bohme area and Horral Ranch area.
3. Studies by DWP suggest Td extended over entire GM quadrant

A. Globe Block:

a. Pn → Dm at Old Dominion w/ Me → Dm both N & S. all restricted to dip slope (southwesterly) next to Pinal Creek fault and in near proximity to Td cover.

b. Remainder of block eroded to db level w/ some ps & dsg; extreme NE corner area has some Dm & much Et cover suggesting another NNW structure in the block.

c. Tw apparently missing along edge of Td in contact with Paleozoics — suggesting no deposition in Globe block, or complete removal during Pre Td erosion.

d. Td cover contact from Pn → dsg attesting to strong structural adjustment in ± Tw time. Main elements appear to be NE trending Irene, New Dominion, Old Dominion, & Albert Lea faults.

B. South Qal Block

a. Paleozoics stripped on extension of OD vein section, minor apache & db left. Amico drilling suggests schist only left east of Miami; Oxy, Miami & ICC drilling suggests schist only left along front northward past smelter. Oxy & ICC drilling east of County Club [illegible] qtz badly broken — Cont. [illegible]

and db. Suggesting — 1) continued erosional slope from Apache on east side to schist on west side or 2) a NNE down Russell Creek (& NNE Reid), (ie Major axial valley drainage) with sc only on west & Apache + db on east.

b. Only thin Tw known on Apache next to OD area, thins to east. Quirico & others (?) drilling suggest little or no Tw on west side of area. On north end of area at narrows. No Tw in isolated block of Td on db.

c. Main drilling suggests no Td (?), NPP shows no Td on cross-sections; ICC drilling to North & Smelter has 600 feet of Td, but apparently is very variable. Td shown, 100-200 exposed (& resting on db) at north end at narrows. Td + 1000' under OD area

d. Area apparently strongly eroded of Paleozoic cover & fairly deep into Apache-db (similar to main part of Globe block) on north & east side of area with little or no Tw preserved under thick +600 - 1000' of Td. On southwesterly, Dripping Spring side, apparently no Apache-db but sc only with no Tw & no Td

c. North pal Block

a. No info.

b. Outcrops on west show No Tw, but Td resting on Apache-db & minor Dm.

c. Suggestion of Reid Creek fault intersecting with axial fault and forming tight zone with Main fault adjacent to west side of area. East side probably continuation of db-Apache zone of Globe block.

D. North of Sleeping Beauty f & E. of Ruin Basin.

a. Paleozoics Pn → Dm in southern area adjacent to SB fault & extending northward on east side. Anticlinal structure with preservation of some (Dm) on east - north side. Stripped to db with ps-dsq on central (axial) & west sides.

b. Thin to no Tw exposed, remnant on south only on top of Me.

c. Td on easterly side resting on Tw, Pn → dsq from south to north suggesting erosional (Tw time) truncation of Paleozoics from south to north (may be little axial plunge of anticline) prior to Td outfall. Td preserved on eastern side where downdropped by northerly trending fault zone, east of anticlinal axis & west of Miami f extension.

d. Suggestive of fault on west side adjacent to east side of Ruin basin, projecting thru db or at Me-db contact and into fault zone separating Td on east from ps on west.

E. Ruin Basin area & SSE to SB fault

a. Continuation of homoclinal westward dip of Paleozoic units (Me & Dm) in uplifted block from eastern anticline previously (D-a) described. Paleozoics & most of Apache stripped northward to expose Ruin core.

b. No Tw noted under Td cap which rests on Me → db going south to north.

F. Flat Top Mtn area, NNE from SB fault.

a. Complexly faulted block with partially suggestive of anticlinal structure such as in D above, but mostly westerly & southerly dipping blocks. Paleozoics Pn → Dm [illegible]

scraps Me → Dm on east side next to fault separating Ruin gr. Remainder of block in complex of Apache with floor of db in bare peak of Ruin granite intrusive exposed in central axial zone (and questionable on westerly side).

b. Tw of some substantial thickness, +200' on south resting on Pn → db, none in central part with Dm exposed, then thin +100 to moderate (?) on north end resting on dsg → db.

c. Scattered Td along length with largest exposures on north & south ends. North exposures on Tw, & db; Southern exposures on Dm, dsg, db. Central area have rare Tw (only on south side) and rest on Dm → mescal, dsg & db.

d. Faults on west side & east side ajacent to Ruin gr contact. Paleozoics truncated to north with dominated west dip information but overall trend of questionable anticline or a dome zone near Giacoma camp to bring up Ruin granite. Again probable parallel zone on east side to preserve Paleozoics in band. Plus 200' of Tw on south side suggesting preserved basin next to SB fault. Increase in Tw also on north suggest dormal development in Tw time and truncation to sub-level horizon for Td surface to fallout on.

G. Granite Basin area and area of gr to NW. Bottom portion of area extending in arc from Mezberg basin on SE, thru Grapevine spr, Walnut spr & Ripper Spring toward Hornel Range (stopping at fault on pE Ruin-gal contact.)

a. No Paleozoic included in block. Slightly arched

Ruin granite contact w/ db with complex faulted Apache group (mescal → ps → db) in central area. Some Apache basalt on mescal on south central part

b. NNW faults separating Apache blocks.

c. In central zone around Barnes Peak are a number of diorite porphyry dikes (Tertiary) also NNW, cutting below ps & filling fault zones.

H. Paleozoics of Myberg basin & north of SB projected.

a. Apparent fault blocked patches of Me → Dm on dsg & db blocks dip south

b. Probably located between 2 faults (NW) with abundant talus cover.

c. May include small patch of Dm east of Webster Mtn.

d. No Tw mapped on east side.

e. Td rests on Dm & dsg and covers over traces of both faults.

I. Apache Group of Horse Basin

a. Southwesterly homoclinal dip in complex NW faulting of blocks of Apache basalt → mescal → dsg in db.

b. Similar basalt in block G above, on trend.

c. Very thin Tw on db surrounding basin on E, S, & W.

d. Td fairly thick in subhorizontal attitude on thin Tw or db.

e. Pattern overall suggestive of belonging to G above.

J. Paleozoics north of Eastwater Spring (N of CD).

a. Me → Dm → Et in general homoclinal SW dip. In all places in fault contact on west with Apache basalt [illegible]

b. Apparent thick +300? sections of Tw on Me.

c. Abundant landslide & talus material in block.

d. Td on Tw or Me, often talus covered edge.

K. Apche-Db zone west of Paleozoics (N. of CD).

a. In fault contact w/ Paleozoics to east as well as small Dm block on west. West homoclinal dip. Apache mesocal & dsg on db.

b. Apparent uplifted block on Castle Dome horst

L. Dacite-Qal Harrel Ranch area.

a. Several Dm block on outer edge in fault contact with north trending West Branch of Gold Gulch fault zone.

b. Thick +500 sections of Tw with central zone of NW fault repetition & other fault blocks

c. Thick sections of Td, with probable slope dip to north east & onlap of Qal

d. Fault contact from db on south to Rein gr on north end.

e. Overall suggestion of deep Tw basin +400' resting on Paleozoics with relatively thick Td +600 (& Tev) cover.

M. Paleozoics west of CD, North of Cactus

a) Paleoz Pn → Dm in northwest anticlinal form & cut by NW faults.

b. relatively thin +100 preserved remnants of Tw resting on Pn

c. Patchy Td cover over Tw, Pn

d. Crosssection suggest most of Td & [illegible]

side & later filled with Quat. Gila sgl & basalt. Only area mapped with Quat basalts.

N. Cactus-Carlota.

a. Slide block of unknown extent & source.

b. Mapping suggests several blocks involving sc & db

c. Blocks override Tw which apparently rest on Sc under Cactus area.

d. Total suggestion of source area from area stripped of Polvo cover and having thin Tw & moderate Td & resting on stripped area down to sc-db w/ thin patchy Tw.

O. Eder South area.

a. Area stripped of Polvo, down to sc-db.

b. Thin or no Tw

c. Full Td section to west.

d. Few gravity type faults as at N above, i.e. sc-db resting on Tw or sc-db.

e. Suggestion as under N-d above.

P. Manitou Hill area.

a. Area stripped to pc sc & intrusive level.

b. No Tw known

c. Fairly deep (?) level of Schultze exposed intruded into area.

d. Patchy Quat-basalt & sgl cover.

Q. Castle Dome block.
a. Area apparently eroded to sc level
b. No Tw or Td known
c. Intruded by batholith.
d. Part of K area above

R. Castle Dome South
a. Part of CD block zone
b. No Tw, Td — all eroded to sc level
c. Intruded by several batholith masses.

S. Needle Mtn area.
a. No Paleoz left.
b. Eroded to sc level
c. Thin patchy Tw (?) & thin patchy (?) Td
d. Covered by part of
e. Intruded by Schultz on south as in blocks O, P, Q, & R.

T. Greater Miami Mine area
a. No Paleoz remains
b. Eroded to sc level
c. Thin patchy Tw & Td, mostly preserved in fault cusps.
d. Some Qual of cover to west.
e. Intruded by Schultz & granites on south as above.
f. Miami fault on east.

U. Conyer Cite Area south to Greate Miami area.

a. No Paleoz.

b. Area eroded to sc – db level w/ rare ps blocks

c. Limited by Laramide on north.

d. Small block on NE part of name shows minor ps on db. ~~db~~

e. No Tw under Td cover.

f. Td rests on ps & db.

g. Miami fault on east

h. Sleeping Beauty fault zone on north. Not: Probable complex zone, if db is ps & not Laramide, the fault strand should also separate db from all Paleozoic units with exception of Dm on north central side

V. Dry Peaks area. Area extends to SW and similar terrain to SE at Moonshine Hills area.

a. No Paleo.

b. Eroded to dominant sc level with mod amt of db & few ps remnants.

c. On SE – thin patchy Td with? Tw patchy under

d. On SW – thin patchy Tw w/ thin patchy Td finally containing with main Td sheet to west.

W. Jewell Hill area.

a fault block bounded with full Paleoz Pn → Dm on Goche & db. May have E-W synclinal fold of Paleo w/ Tw cover

b. Thick +400? Tw section similar to ↓ above

c. No Td on block

X. Bohme Ranch Area

I. AH-3, AH-4, CDX-1 ICC zone

a. Thick +700' of Quat fill

b. Thick +1000' Td, except possibly in ICC section where comments suggest variable Td cover.

c. Thin to no Tw

d. Schist & diabase, strongly brecciated — Paleozoic No nor Apache

II CDX-2 zone

a. Thick +1000' Td

b. Thick Tw +800'

c. Paleozoic Me → Dm

d. Apache group

III AH-1, AH-2 zone

a. Thick Td +1000'

b. Northern end w/ Tev +500 Td +700 Tev

c. Extra Thick Tw + 2500'

d. Paleozoic Me → Dm) sub horizontal ± 15°

e. Apache group

IV BC-4, M-462, M-475 zone

a. Mod thick +500 Td

b. no or thin Tw

c. No Paleozoic

d. thin ? Pioneer

e. Schist & db w/ dio pass. intrusive broken or pass gm.

V E-2, E-3 zone

a. mod to thick Td +500 to +900 ; b. Thick(?) Tev +200.

c. Thick to extra? Thick Tw + 900 - 1100 & bottomed in Tw

d. Unknown preserved.

Bohme Critique

Q. What is the mode of formation of the restricted (?) block of subhorizontal limestone unit, with its conformable whitetail ash unit, as found in AH-1, 2, & 5. ??

Based on premineral outcrop info it is suggestive that a structural high area completely surrounds the Bohme sheet, ranging from 4300 to 5300 feet elevation, possible southeasterly tilt to present ground surface (Note: not to geol. unit

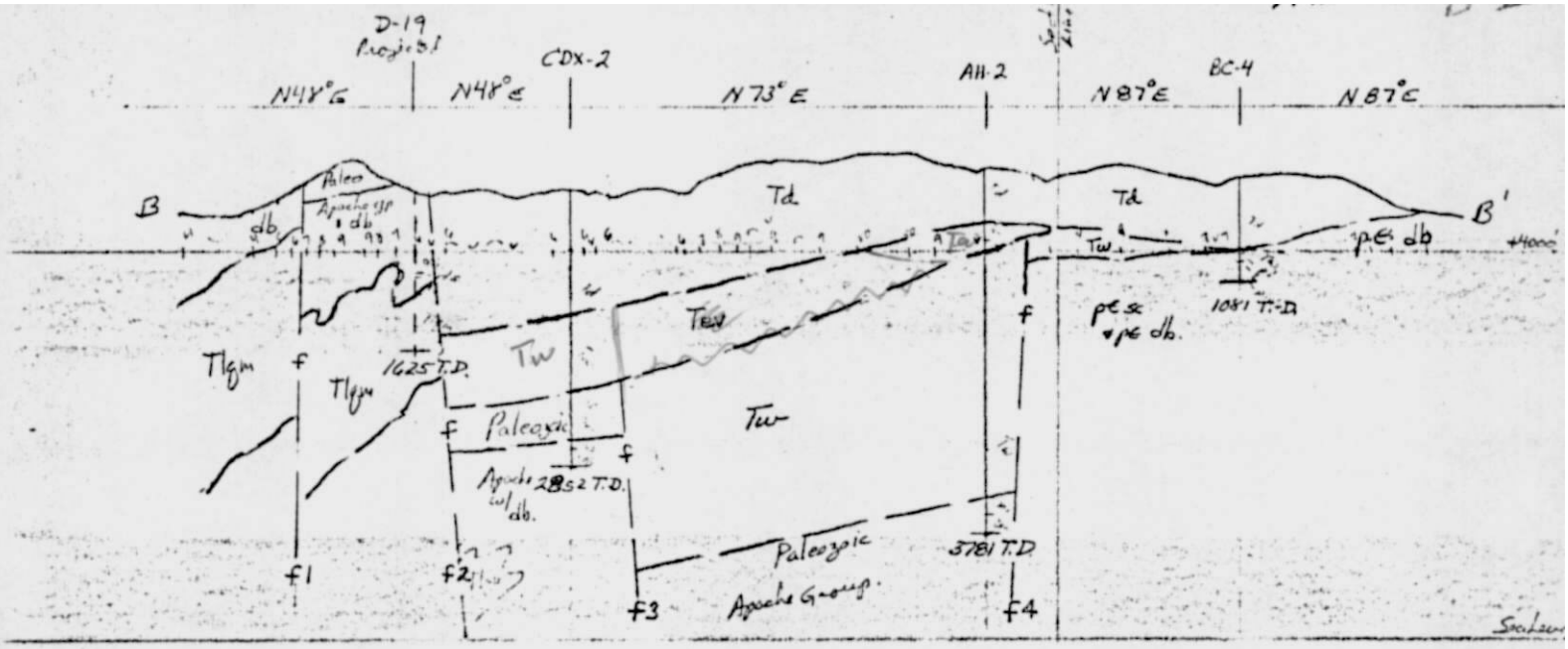
Based on known mapped faults, faults suggested by drilling, & projection of structures, three patterns are suggestive:

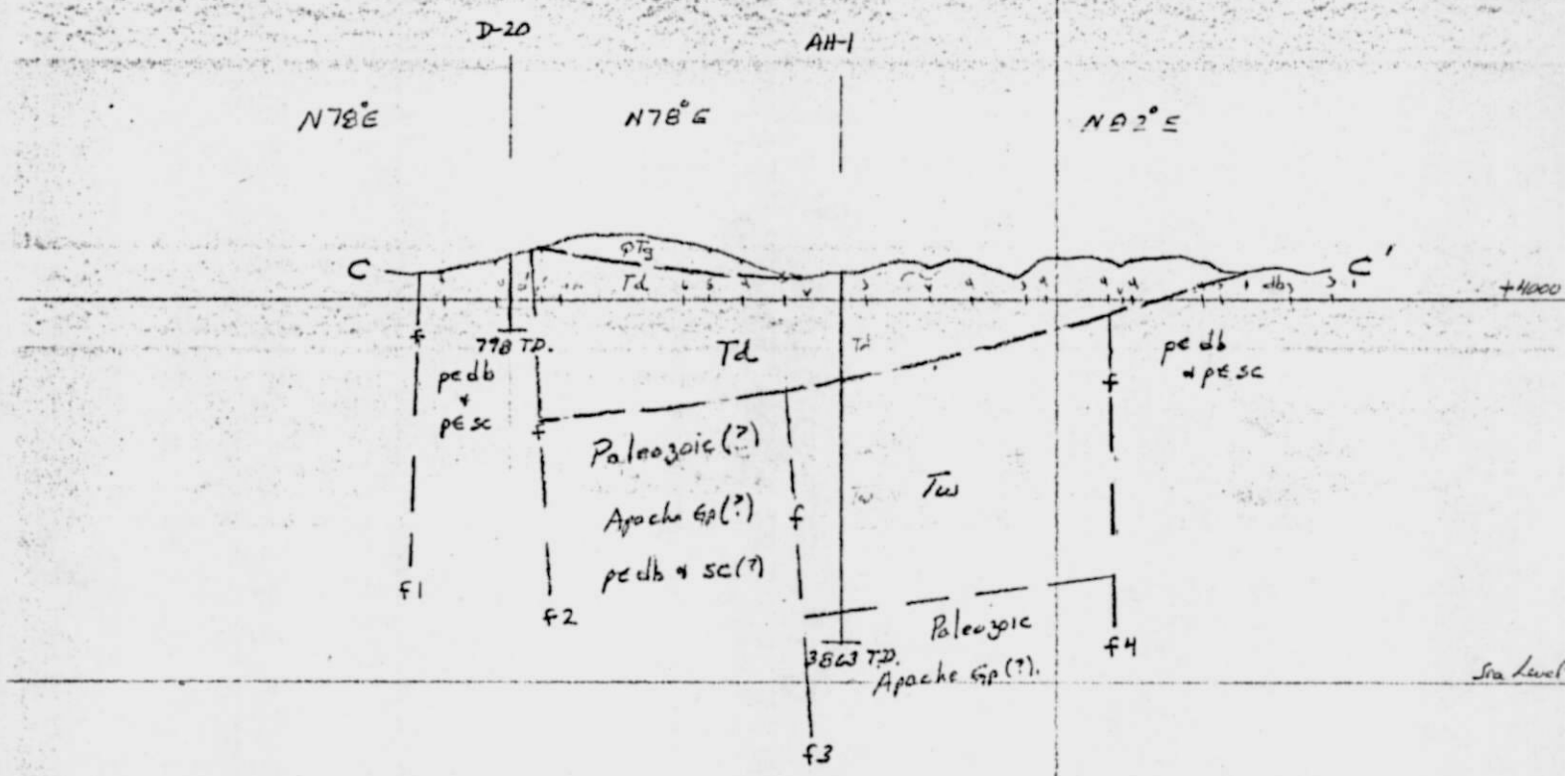
1. (Map 1). a. High plateau border as above stated, at elevation of 4300 to 5300 feet. (brown) b. Central deep down dropped block (pink) at elevation of 700-1400 feet, as shown by holes AH-1, 2, & 5. c border intermediate blocks (green) one on west at 2200-2500 feet as shown by holes AH-3, 4, CDX-1, & 2, & Montezuma rumor drilling, & an northeastern block at 2500-2700 elevation as suggested by holes E-2 & 3. Outlined by basic border faults & those suggested by drilling.

2 (Map 2). a High plateau border (brown) as above. b Central deep down dropped block (pink) as before with northern cut off by projected fault (NE) up Juniper Flat canyon. c border of intermediate blocks (green) surrounding on northerly side plus or minus "ring" zone of 3000+ feet in width.

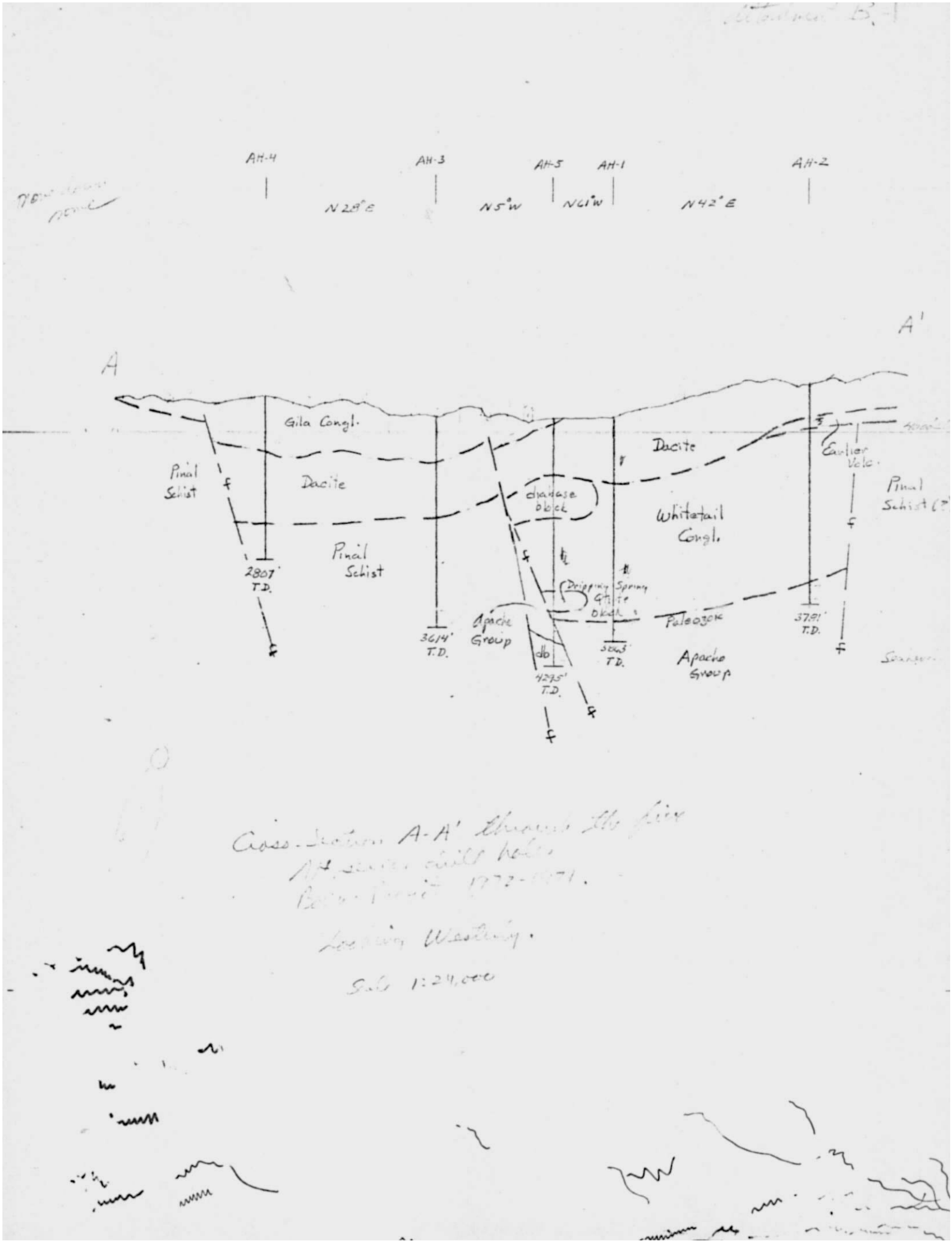
3. (Map 3). a High plateau border (brown) ...

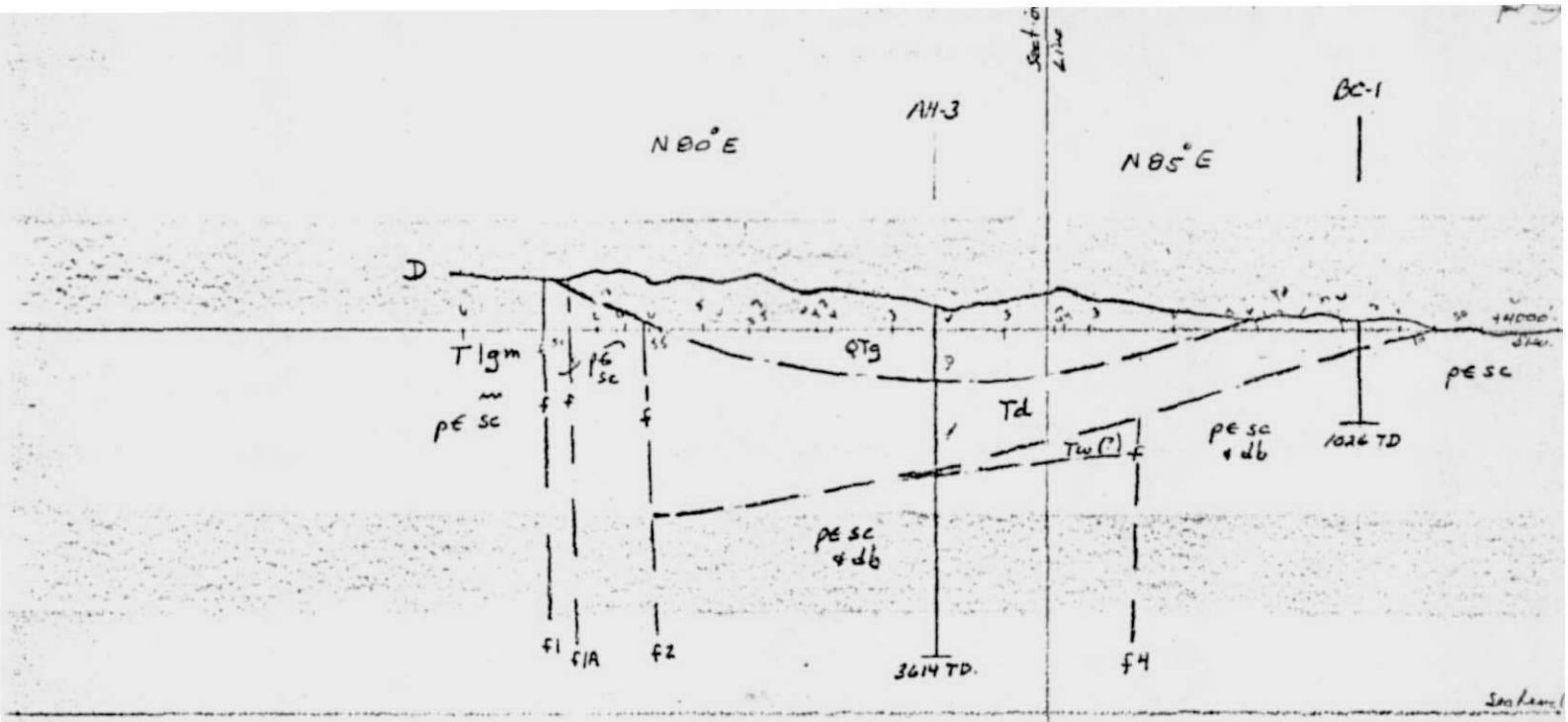
b. Central deep down dropped block (pink) restricted even more by cut off on north side by projection of Sleepin Beauty fault zone. c expansion of intermediate border zone (green) to fill entire northern area, with zone extending along southwesterly side as before.

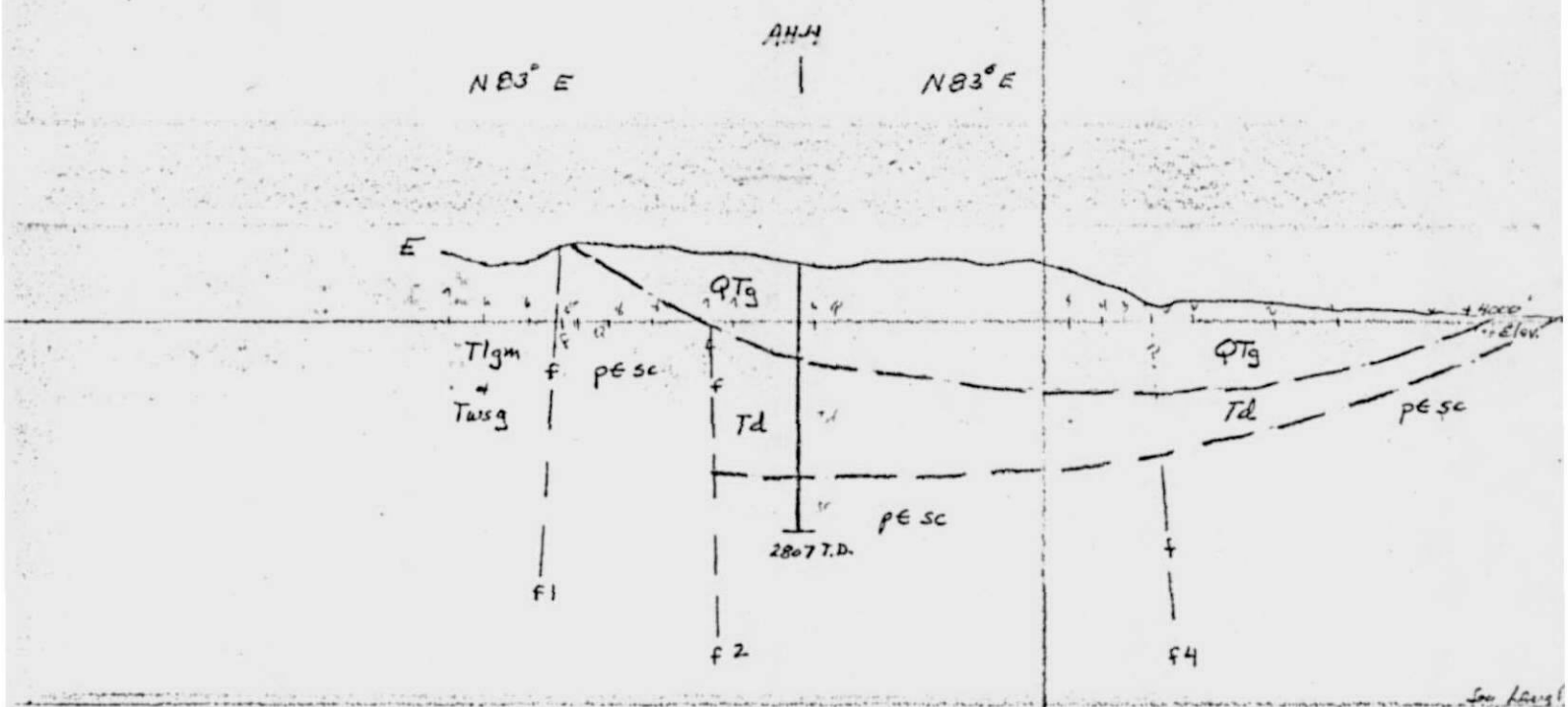




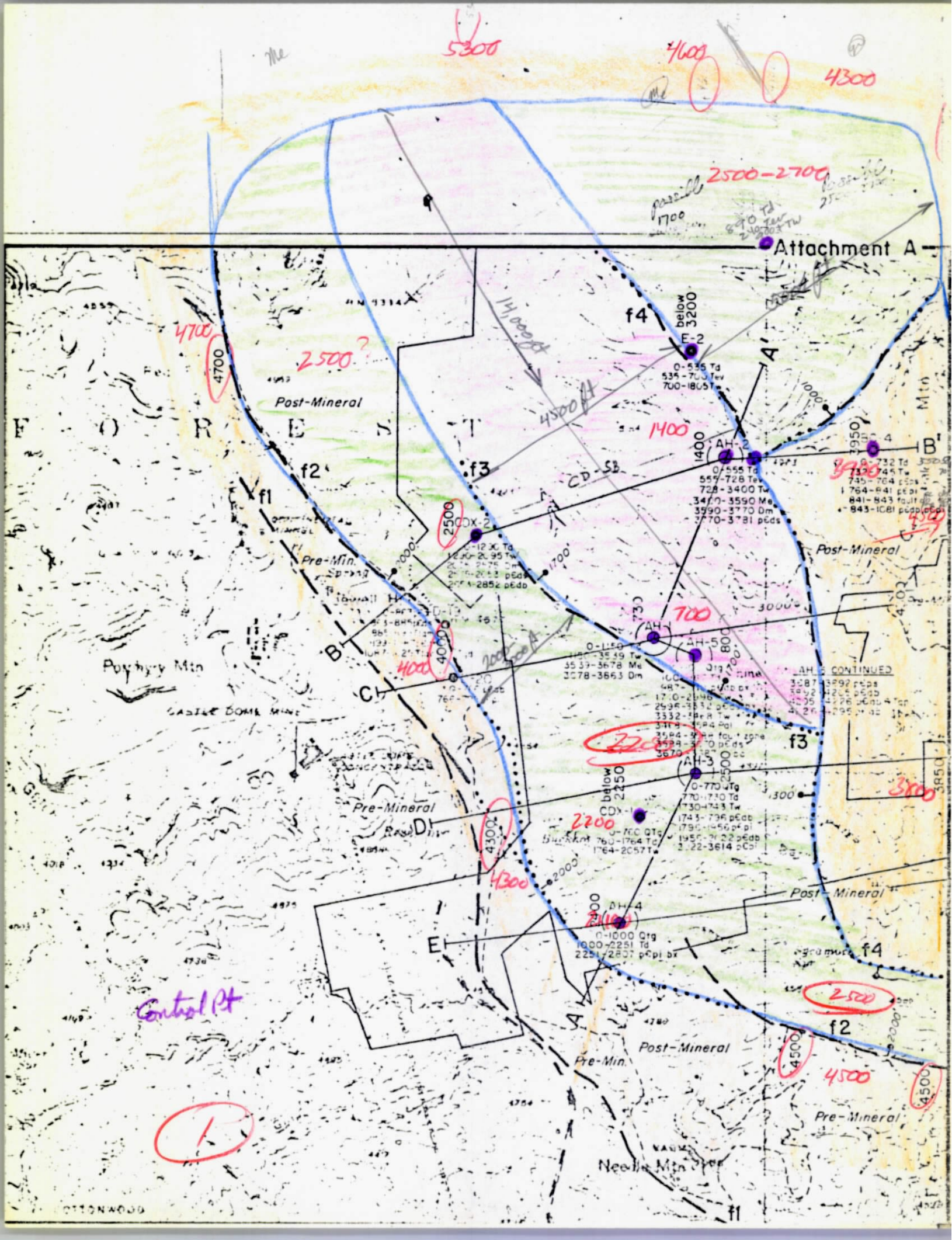
Cross-Sections B-B' & C-C' through Bolino Project
Looking Northerly
Scale 1:24,000


AH-4
AH-3
AH-5
AH-1
AH-2
N28°E
N5°W
N61°W
N42°E
A
A'
Gila Congl.
Dacite
Pinal Schist
Dacite
diabase block
Whitetail Congl.
Earlier Volc.
Pinal Schist (?)
Pinal Schist
2807' T.D.
3614' T.D.
Apache Group
Dripping Spring Qtite block
Paleozoic
Apache Group
3763' T.D.
4295' T.D.
3791' T.D.
f
Cross-Section A-A' through the pier
Loading Westerly.
Scale 1:24,000

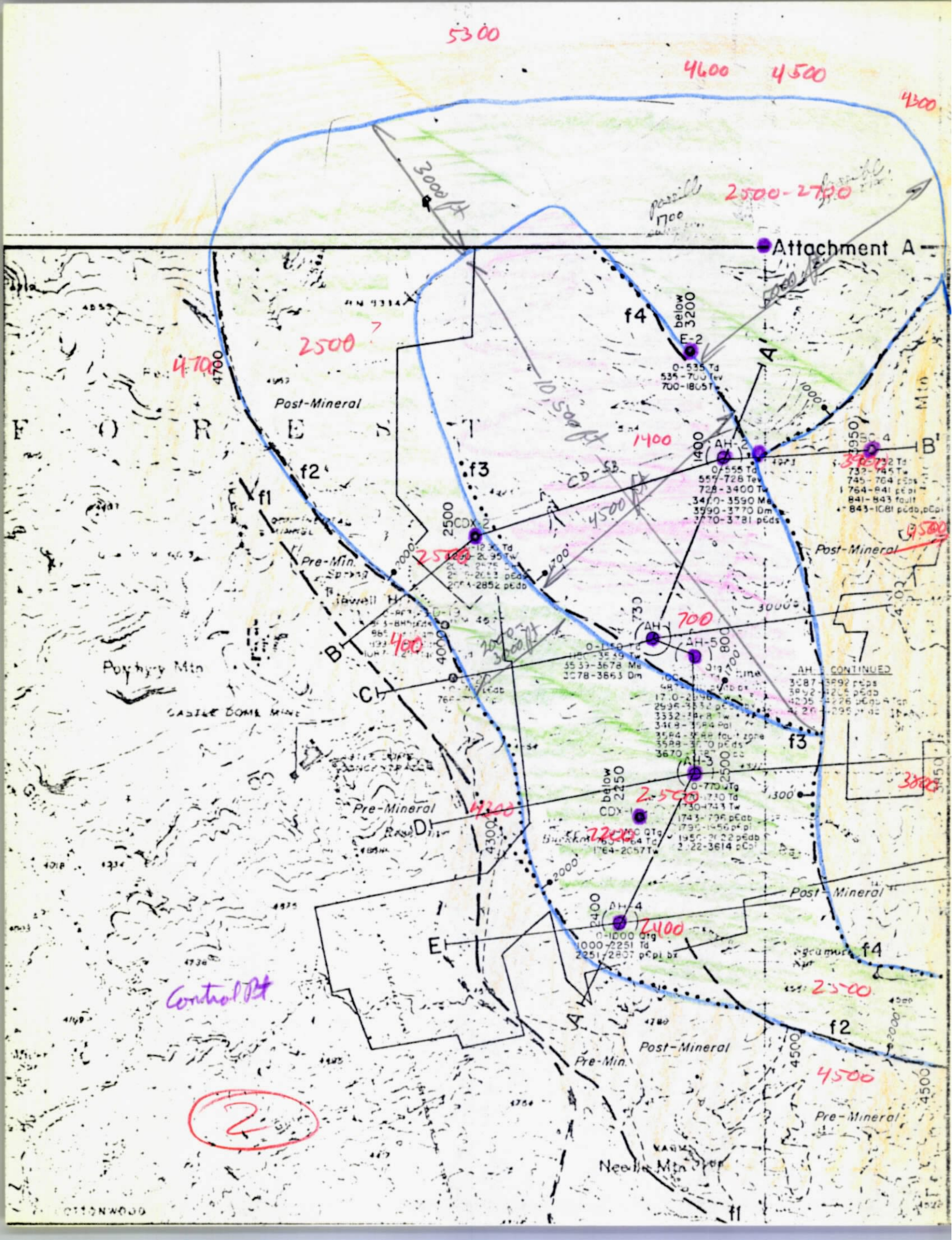




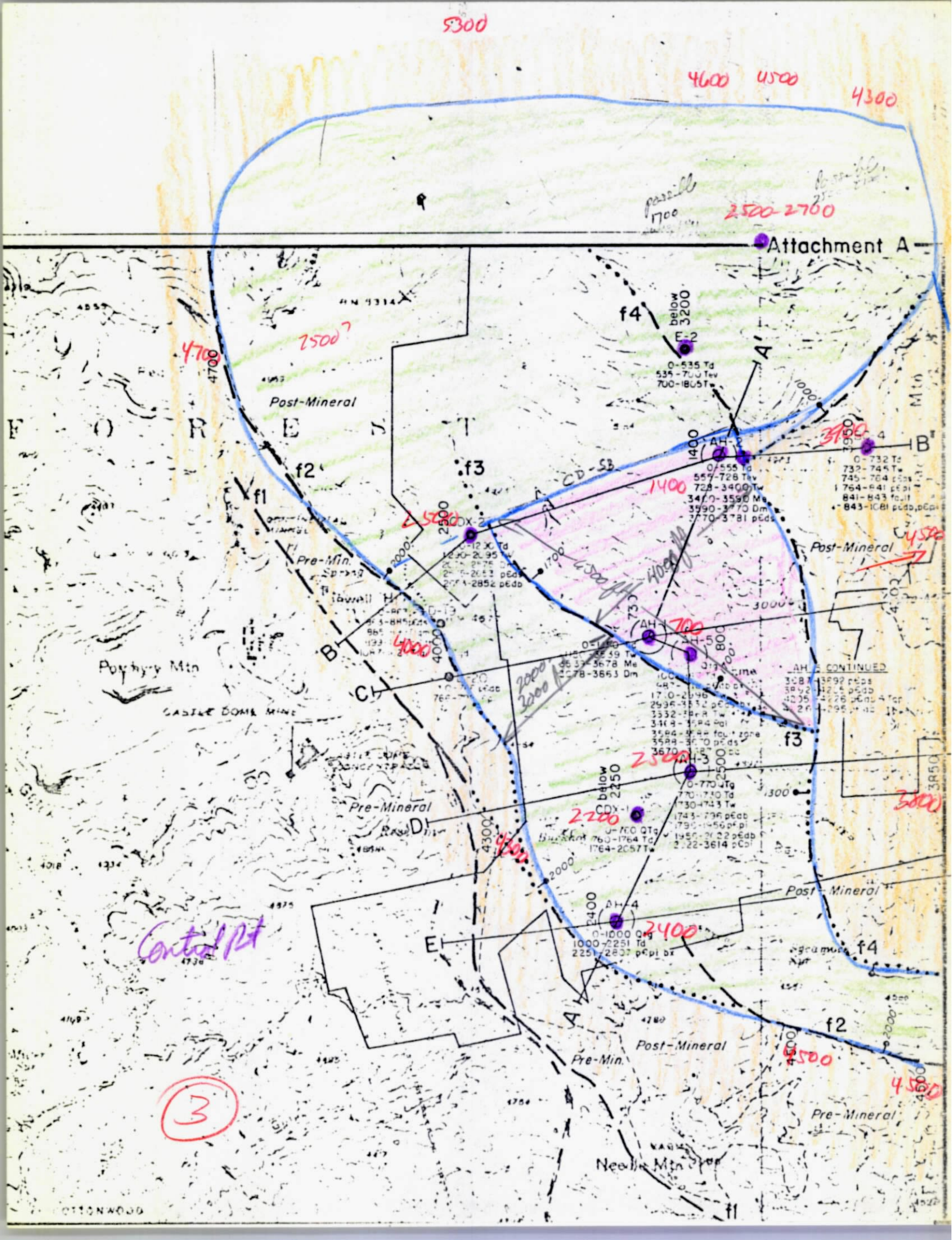
Cross Section D-D' & E-E' through Bohme Project
Looking Northerly
Scale 1:24,000



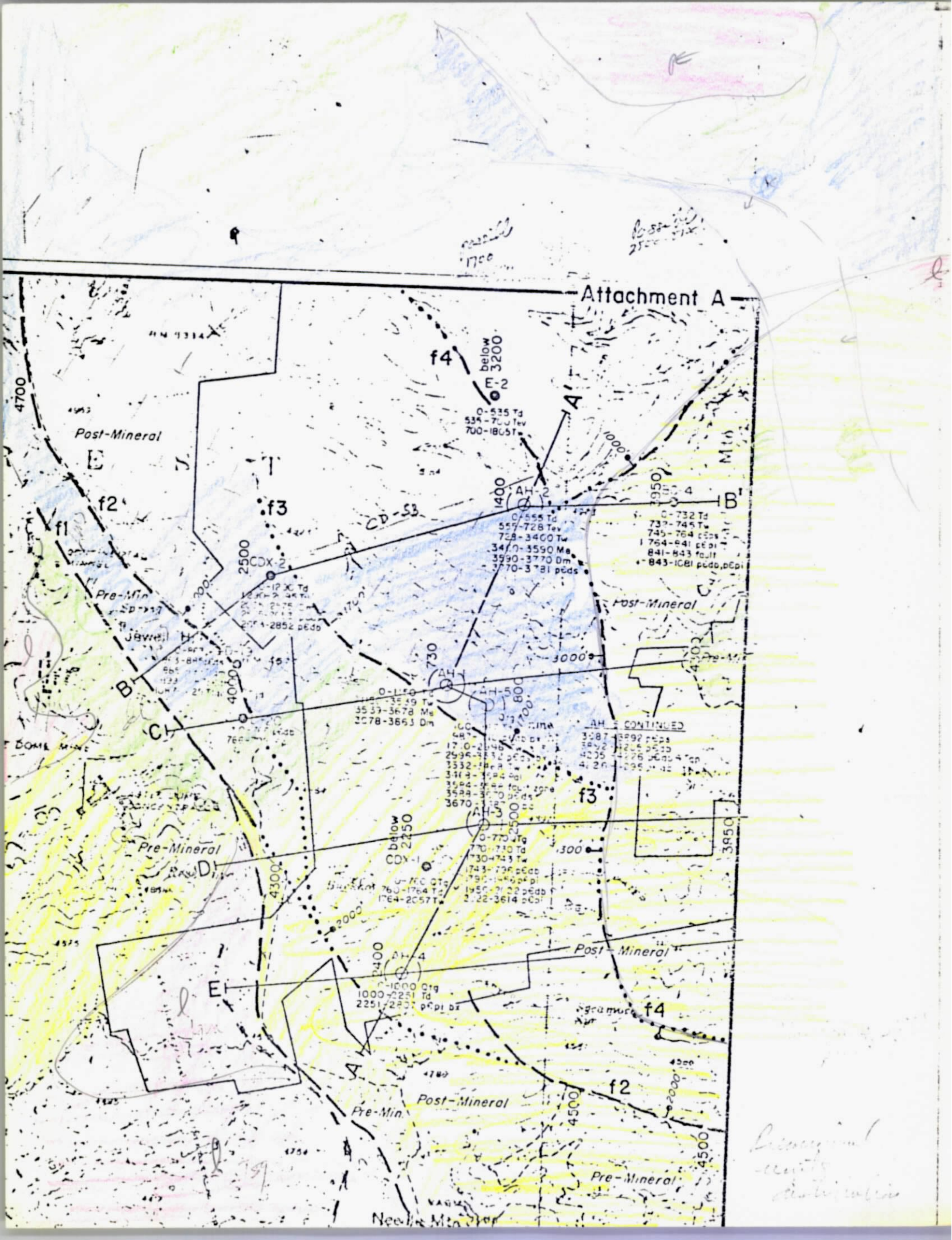
Attachment A
5300
4600
4300
2500-2700
4700
2500?
Post-Mineral
F O R E S T
f1
f2
f3
f4
below 3200
E-2
0-535 Td
535-700 Tev
700-1805 Tw
14,000 ft
4500 ft
1400
AH-2
0-555 Td
555-728 Tev
728-3400 Tw
3400-3590 Me
3590-3770 Dm
3770-3781 pЄds
CD-SB
B'
A'
2500
CDX-2
Pre-Min.
Post-Mineral
700
AH-1
AH-5
0-1150
1150-3539 Tw
3539-3678 Me
3678-3863 Dm
B
C
4000
Porphyry Mtn
CASTLE DOME MINE
AH-5 CONTINUED
2200
AH-3
below 2250
CDX-1
0-770 QTg
770-1730 Td
1730-1743 Tw
1743-1796 pЄdb
1796-1956 pЄpl
1956-2022 pЄdb
2022-3614 pЄpl
D
4300
Pre-Mineral
Post-Mineral
AH-4
0-1000 Qtg
1000-2251 Td
2251-2807 pЄpl bx
E
Control Pt
A
2500
f2
Post-Mineral
Pre-Min.
4500
Pre-Mineral
Needle Mtn
f1

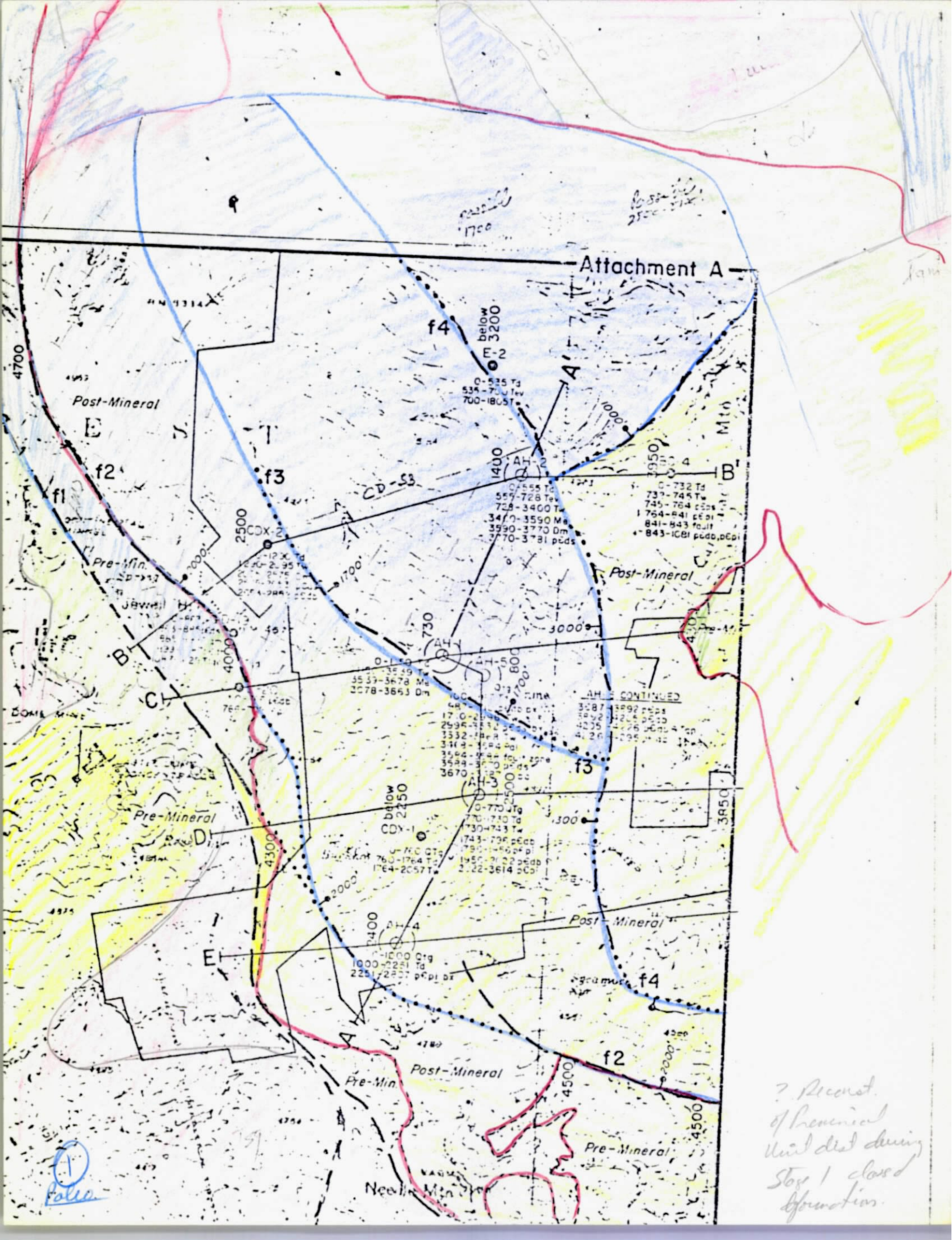


5300
4600
4500
4300
2500-2700
Attachment A
3000 ft
10,500 ft
4500 ft
2500
4700
Post-Mineral
F O R E S T
f4
below 3200
E-2
0-535 Td
535-700 Tev
700-1805 Tw
A
1400
AH-2
0-555 Td
555-728 Tev
728-3400 Tw
3400-3590 Me
3590-3770 Dm
3770-3781 pЄds
B'
3950
SC-4
732-745 Tw
745-764 pЄps
764-841 pЄpl
841-843 fault
843-1081 pЄdb, pЄpl
f2
f3
f1
CD-53
CDX-2
2500
Pre-Min.
Jewell H
B
400
2000
3000 ft
AH-1
700
AH-5
3539-3678 Me
3678-3863 Dm
AH-5 CONTINUED
3087-3892 pЄps
3892-4205 pЄdb
4205-4226 pЄdb & Tcp
4226-4295 pЄdb
Porphyry Mtn
CASTLE DOME MINE
C
f3
AH-3
below 2250
CDX-1
2500
2200
Pre-Mineral
D
4300
3800
Post-Mineral
AH-4
2400
0-1000 Qtg
1000-2251 Td
2251-2807 pЄpl bx
E
f4
2500
Control Pt
A
f2
Post-Mineral
Pre-Min.
4500
Pre-Mineral
Needle Mtn
f1
2

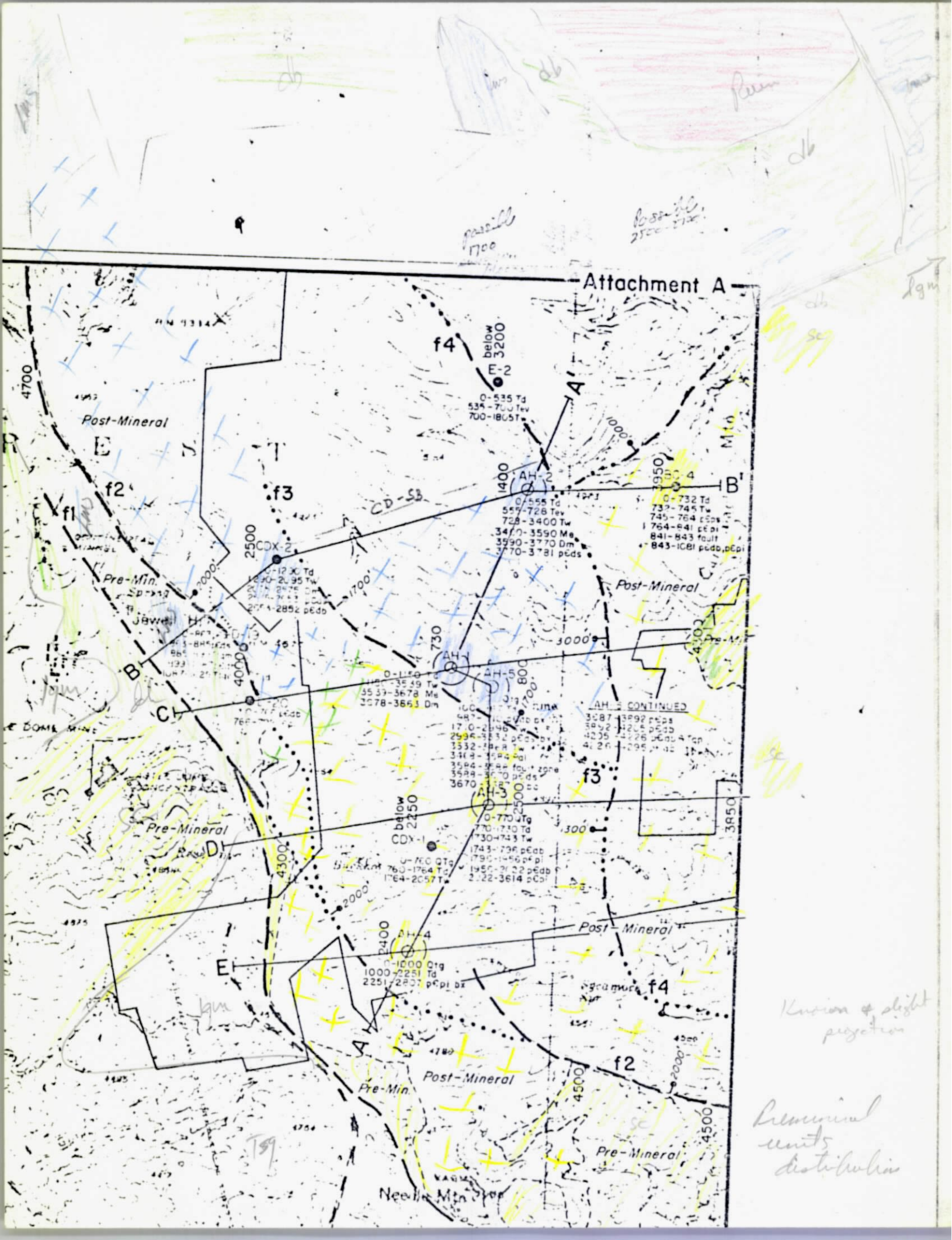


5300
4600
4500
4300
2500-2700
Attachment A
f4
below 3200
E-2
0-535 Td
535-700 Tev
700-1805 Tw
A'
B'
AH-2
0-555 Td
555-728 Tev
728-3400 Tw
3400-3590 Me
3590-3770 Dm
3770-3781 pEds
0-732 Td
732-745 Tw
745-764 pEps
1764-841 pEpi
841-843 fault
843-1081 pEdb, pEpi
3900
1400
Post-Mineral
4500
f2
f3
f1
CD-SB
CDX-2
2500
Pre-Min.
4000
B
C
AH-1
700
AH-5
AH-5 CONTINUED
f3
AH-3
2500
below 2250
CDX-1
2200
0-760 QTg
760-1764 Td
1764-2057 Tw
3800
Pre-Mineral
D
Post-Mineral
AH-4
2400
0-1000 Qtg
1000-2251 Td
2251-2807 pEpi bx
E
A
f4
f2
Post-Mineral
Pre-Min.
4500
4500
Pre-Mineral
Needle Mtn
f1
Control Pt
3

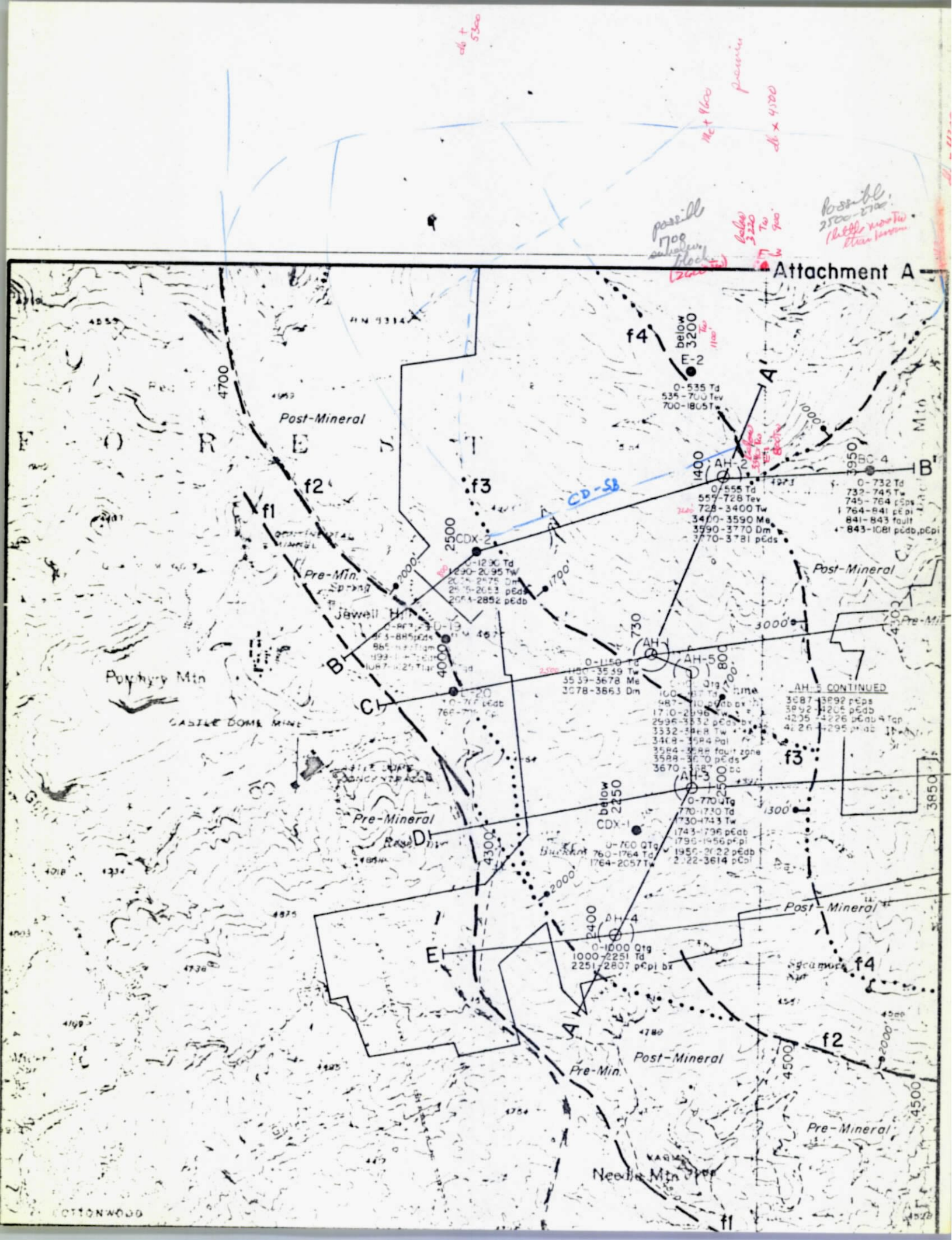

Attachment A
f4
below 3200
E-2
0-535 Td
535-700 Tev
700-1805 Tw
A'
4700
Post-Mineral
E
S
T
f2
f3
f1
CD-53
1400
AH-2
0-555 Td
555-728 Tev
728-3400 Tw
3400-3590 Me
3590-3770 Dm
3770-3781 pEds
3950
B'
0-732 Td
732-745 Tw
745-764 pEps
1764-841 pEpi
841-843 fault
843-1081 pEdb, pEpi
2500
CDX-2
Pre-Min
Post-Mineral
Jewell H
B
730
AH-1
AH-5
800
3000
4000
C
AH-3
2500
below 2250
CDX-1
Pre-Mineral
D
4300
2000
AH-4
2400
0-1000 Qtg
1000-2251 Td
2251-2807 pEpi bx
E
Post-Mineral
f4
A
f2
Post-Mineral
Pre-Min
4500
Pre-Mineral
Needle Mtn



? Reconst. of Preminical Unit dist during Stage 1 closed deformation.


Attachment A
Post-Mineral
Pre-Min.
Pre-Mineral
Post-Mineral
Post-Mineral
Pre-Min.
Pre-Mineral
Needle Mtn Stop
f1
f2
f3
f4
A
A'
B
B'
C
D
E
E-2
0-535 Td
535-700 Tev
700-1805 Tw
below 3200
AH-2
0-555 Td
555-728 Tev
728-3400 Tw
3400-3590 Me
3590-3770 Dm
3770-3781 pEds
BC-4
0-732 Td
732-745 Tw
745-764 pEps
764-841 pEpi
841-843 fault
843-1081 pEdb, pEpi
CDX-2
0-1290 Td
1290-2095 Tw
2095-2852 pEdb
AH-1
0-1150 Td
1150-3539 Tw
3539-3678 Me
3678-3863 Dm
AH-5
AH-5 CONTINUED
AH-3
0-770 QTg
770-1730 Td
1730-1743 Tw
1743-1796 pEdb
1796-1956 pEpi
1956-2022 pEdb
2022-3614 pEpi
below 2250
CDX-1
0-760 QTg
760-1764 Td
1764-2057 Tw
AH-4
0-1000 Qtg
1000-2251 Td
2251-2807 pEpi bx
CD-SB
Jewell H
Knoxon & slight projection
Preminerial units distribution

Attachment A



3441 East Milber

Phone 889-5787

AMERICAN ANALYTICAL and RESEARCH LABORATORIES

ASSAYERS - CHEMISTS - METALLURGISTS

TUCSON, ARIZONA 85714

SAMPLE SUBMITTED BY American Smelting & Refining Company

DATE July 22, 1974

SAMPLE MARKED	GOLD OZ./TON	SILVER OZ./TON	PPM COPPER	PPM LEAD	PPM ZINC	PPM MOLYBDENUM	PERCENT IRON	Percent Zinc
B-5			228	107	2000+	57		1.10

W. G. K.

JUL 23 1974

Invoice # 11153

CHARGES $ 7.75

REGISTERED ASSAYER CERTIFICATE NO. 6852 PETE S. FLORES Date Signed 7/22/74 Arizona U. S. A.

ASSAYER - CHEMIST

ICC key

Master #3 ID # 3322

hold HC-13 side just above the tunnel area.

HOLE NO. & MONTH →	Acct. No
A	521 - 100
	- 200
	- 400
	- 600
	- 750
	- 800
B	580 - 100
	- 400
see F	- 750
	- 800
C-1	530 - 100
	- 200
	- 400
	- 600
	- 800
	550 - 750
	610 - 100
	- 200
	- 600
C-2	540 - 100
	- 150
	- 200
	- 400
	- 600
	- 750
	- 800
C-3	610 - 390
	- 400
	- 500
	- 780
	- 800
D	620 - 100
	- 150
	- 200
	- 400
	- 800
	- 950
	641 - 400
	- 800
E	502 - 950
	620 - 500
	- 600
	- 750
F	580 - 100
	- 400
see B	- 750
	- 800
G	507 - 100
	- 400
	- 600
	- 750
	570 - 100
	- 200
	- 400
	- 600
	- 800

Acct Found 1/1/77

HOLE No. & MONTH →	Acct. No.
A	521-10
	-15
	-20
	-25
	-29
	-34
	-35
	-40
	-48
B see F	580-10
	-25
	-29
	-35
C-1	530-10
	-20
	-29
	-35
	-40
	550-25
	610-10
	-29
	-35
C-2	540-10
	-20
	-25
	-29
	-35
	-40
C-3	610-20
	-25
	-30
	-40
D	620-10
	-15
	-20
	-35
	-40
	-48
	641-49
	641-80
E	502-48
	620-25
	-29
	-30
F see B	580-10
	-25
	-29
	-35
G	507-10
	-20
	-25
	-29
	-35
	-40
	570-10
	-20
	-29
	-35
Pre	1/1/77 form OLD.

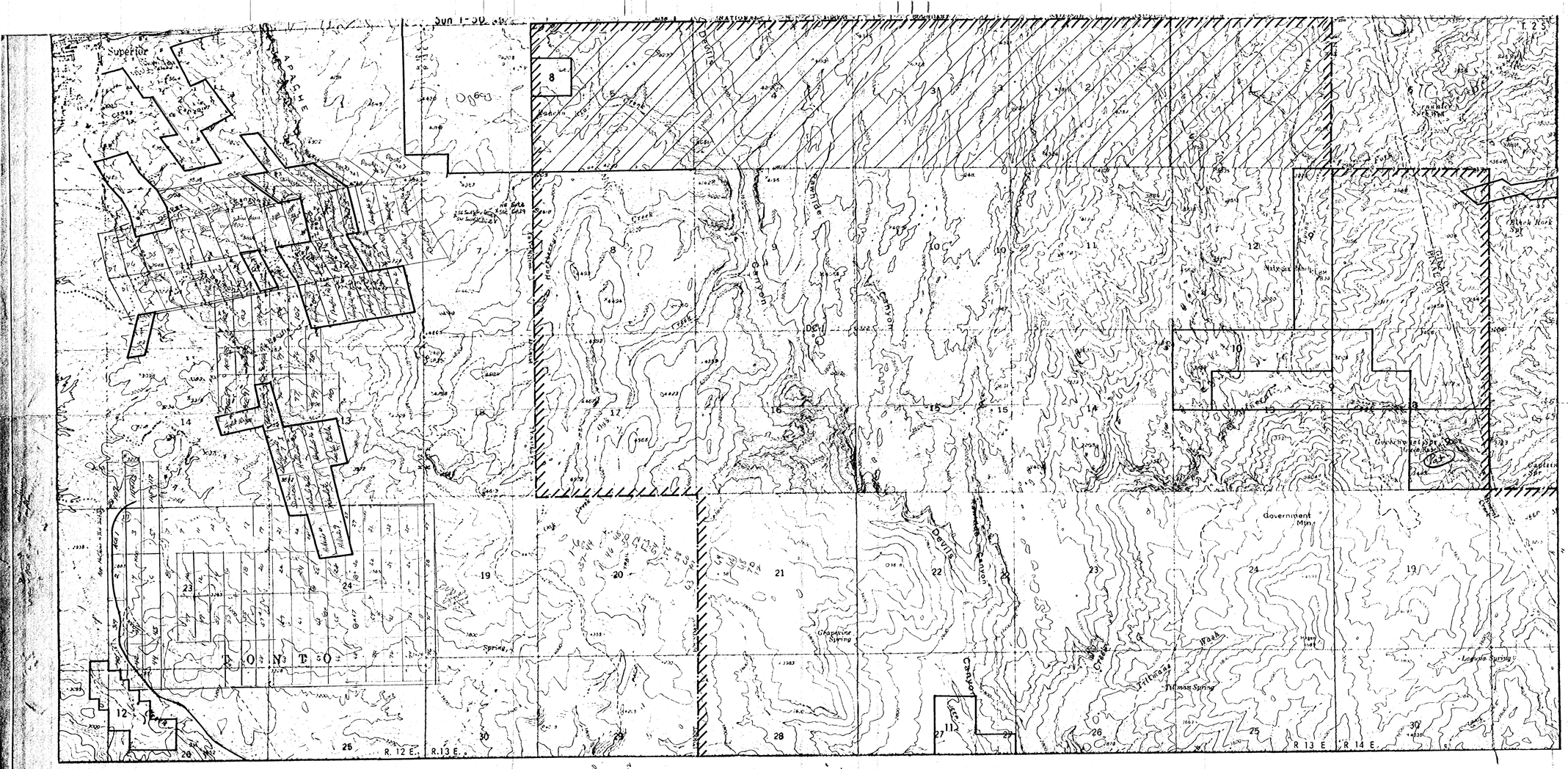
Throw away to rock pile: — SAVE Boxes

Skeleton To:

	A-11		
3071	A-13	Tev. 2036	Box 1 thru 172 to USGS Box 173 Thru NC box 220 (2030½)
3841	A-14	Tev 2289	Rot to 1535 ii Box 1 " NC box 85 (2277½)
1337	A-8		
	A-9		
	A-10		
2616	AI-2	1780	Box 1-174 to USGS Box 175 Thru NC box 203 (1763)

A- Assay. sheet

Unit	Assay Number	Footage	Feet				



OUTLINE OF APACHE PLATEAU

DCA-3 ○ KNOWN DRILL HOLES

PRELIMINARY LAND STATUS

SUPERIOR EAST PROJECT

Globe, Superior, & Surrounding Area

GILA & PINAL COUNTY, ARIZONA

JDS May, 1970

0 500 1000 2000 4000 6000

1:24000

2273

ATTACHMENT A

HC-Series ICC-Spring Summer 1970
Rotary cuttings, then DDH additional
Logged & "spoke at B.R.

HC-5 heavy coal in Arg
HC-6
HC-7 Coal, wood carbonized, no sulfs. pepi
HC-8 " " " " "
HC-9 " , blk-white pepi, vein with Fe stain
no oxidized Cu; no sulfs.
HC-10 Coal.

EXPLANATION

Quaternary
- Qal, Qtg, Qtb — Cover

Tertiary
- Td — Dacite, 20 m.y.
- Ti — Intrusive, 20 m.y.
- Tev — Early Volcanics
- Tw — Whitetail Conglomerate, 32 m.y.

Laramide
- TKgr, Tqm, Tlgm, Tgd-Tdp — Intrusives (Tkgr), 58-60 m.y.; (Tqm), 60-63 m.y.; (Tlgm), 62 m.y.; (Tgd-Tdp), 70-72 m.y.(?)
- Tox — Mineralized Breccia Known only from underground workings

Paleozoic
- Pal, Ps, Me-Dm — Undifferentiated Sediments (Pal), Supai (Ps); Naco (Pm); Escabrosa (Me); Martin (Dm)
  - (a) Replacement ore in Devonian Horizon
  - (b) Stacked Replacement Ore in Devonian Thru Pennsylvanian

Precambrian
- pC + Au, db — Sediments & Associated Diabase
- sc, db — Pinal Schist & Associated Diabase

A-1 — Drill Hole (showing lowermost unit encountered)

ALL RED NUMBERS INDICATE SUPERIOR GRAVITY SURVEY

Surface trace of faults

0 500 1000' 2000' 4000' 6000'

DRILL DATA

Plan Map and Generalized Geology

SUPERIOR EAST PROJECT

GLOBE–SUPERIOR DISTRICT

Pinal & Gila Counties, Arizona

SCALE 1:24000

J.D.S. DRILL DATA May 1970

Modified 3-5-71

~~Revised 1/5/72~~ ~~Updated 8/27/74~~

~~Revised 3/21/72~~ Updated 1/1/76

2271

F O R E S T

N A T I O N A L

T O N T O

GILA and SALT RIVER BASELINE

15 Margaret claims(dotted) have been relinquished in accordance with ASARCO--INSPIRATION agreement

EXHIBIT A

U.S. FOREST SERVICE OAK FLAT WITHDRAWAL

J-I RANCH grazing lease boundary

NATIONAL FOREST BOUNDARY

ICC CRENSHAW PAT.

(Tze Watershed)

Pinal Ranch

CARLOTA GROUP

Government Hill

Government Mtn

Five Point Mountain

Fortuna Rk

Queen Creek

Devils Canyon

Pinto Creek

Gun Joanna Group

ANACONDA DRILL HOLES

DRAGGS-NEUMANN

NORANDEX MICHELLE GROUP

BANNER ACE 1-76

ACE 88-107

EXTENTION 1-32

SUN 1-5I

SUN 52-7I

J1 FEE

J1 SUR

Grapevine Spring

Tillmans Spring

Longvale Spring

Superior

Miami

Globe

R.12E. R.13E.

R.13E. R.14E.

T.1S.

T.2S.

NORTH

CLAIM MAP

SUPERIOR EAST PROJECT

GLOBE, SUPERIOR and SURROUNDING AREA

GILA and PINAL COUNTIES, ARIZONA

August, 1975 R.B.C.

Scale 1 : 24,000

2000 1000 0 2000 4000 6000

FEET

mn 2886 dom

ATTACHMENT A

Plan Map and Generalized Geology

SUPERIOR EAST PROJECT

GLOBE–SUPERIOR DISTRICT

Pinal & Gila Counties, Arizona

SCALE 1:24000

J.D.S. May 1970

Modified 3-5-71
Revised 1/6/72
Revised 3/21/72

MSK 2271

EXPLANATION

Quaternary
- Qal, Qtg, Qtb — Cover

Tertiary
- Td — Dacite, 20 m.y.
- Ti — Intrusive, 20 m.y.
- Tev — Early Volcanics
- Tw — Whitetail Conglomerate, 32 m.y

Laramide
- TKgr, Tqm, Tlgm, Tqd-Tdp — Intrusives (Tkgr), 58-60 m.y. (Tqm), 60-63 m.y.; (Tlgm), 62 m.y.; (Tqd-Tdp), 70-72 m.y.(?)
- Tdx — Mineralized Breccia. Known only from underground workings

Paleozoic
- Pcl, Ps, Th, Me, Dm — Undifferentiated Sediments (Pal), Supai (Ps), Naco (TPn), Escabrosa (Me), Martin (Dm). (a) Replacement ore in Devonian Horizon (b) Stacked Replacement Ore in Devonian Thru Pennsylvanian.

Precambrian
- pC + Au, db — Sediments & Associated Diabase
- sc, db — Pinal Schist & Associated Diabase

A-1 — Drill Hole (showing lowermost unit encountered)

0 500 1000' 2000' 4000' 6000'

LAND STATUS LEGEND

- ASARCO claims
- ASARCO state lease
- FEE — ASARCO fee land
- CONTINENTAL COPPER MARGARET CLAIMS (under option to ASARCO)
- INSPIRATION COPPER CROOK & OS CLAIMS (under joint-venture with ASARCO)
- INSPIRATION COPPER claims
- MAGMA COPPER claims
- FOREST SERVICE WITHDRAWAL
- FEE LAND (others)
- FEDERAL CLAIMS and/or PATENT (others)
- STATE LEASE LAND (others)

EXPLANATION

Quaternary
- Qal, Qtg, Qtb — Cover

Tertiary
- Td — Dacite, 20 m.y.
- Ti — Intrusive, 20 m.y.
- Tev — Early Volcanics
- Tw — Whitetail Conglomerate, 32 m.y.

Laramide
- Tgr, Tqm, Tlqm, Tgd-Tdp — Intrusives (Tgr), 58-60 m.y.; (Tqm), 60-63 m.y.; (Tlqm), 62 m.y.; (Tgd-Tdp), 70-72 m.y.(?)
- Tbx — Mineralized Breccia. Known only from underground workings

Paleozoic
- Pal, Ps, Ph, Me-Dm (a, b) — Undifferentiated Sediments (Pal), Supai (Ps); Naco (Pn); Escabrosa (Me); Martin (Dm). (a) Replacement ore in Devonian Horizon. (b) Stacked Replacement ore in Devonian thru Pennsylvanian

Precambrian
- pEAu, db — Sediments & Associated Diabase
- pEsc, db — Pinal Schist & Associated Diabase

A-1 ○ 2128 TD-pEsc — Drill Hole (showing depth T.D. and rock type)

ASSAY DATA KEY
depth-length-%Cu
4317'-623'-0.31

○ Drill by ASARCO

○ Drill by other companies

QDC-1 ○ 1456 TD-pEdb

NORTH

SUPERIOR EAST PROJECT

GILA and PINAL COUNTIES, ARIZONA

January, 1977 J.D.S.

Scale 1 : 24,000

2000' 1000' 0 2000' 4000' 6000'
FEET

R 12 E R 13 E

R 13 E R 14 E

F O R E S T

T O N T O N A T I O N A L F O R E S T

Government Hill

Ball Basin

Haunted Canyon

Tonto Ranch

Canyon Day Ranch

Brizzie Mt.

Grizzly Mtn

Powers Gulch

Pinto Creek

Pinto Valley Wash

Cottonwood Tailings Pond

Manila Hill

Pinto Valley

Fortuna Pk

Kay

Margaret

Queen Creek

Kings Crown Peak

Final Ranch

Five Point Mountain (The Watershed)

Hutton Pk

Ash

Oak

Sun 53-71

Sun 1-50

East 1-15

Dacite

Superior

Devils Canyon

Hackberry Wash

Government Mtn

Black Rock Spr

Trilobite Spring

Tillman Spring

Longhorn Spring

EXTENSION +33 (Magma)

ACC 1-76 Banner Mining Co.

DCA-1 DCA-2 DCA-3 DC-1 CE-1 CE-2 CE-3 CE-4 CE-5 I-1 I-2 I-3 I-4

OF-1A

WT-1 WT-2 WT-3

QS409

SN2

-EXPLANATION-

- STATE LAND (ALL OTHER LAND IS WITHIN TONTO NATIONAL FOREST)
- PROPOSED ASARCO CLAIM GROUPS
- ASARCO LEASE & APPLICATION
- FEE LAND *
- FOREST SERVICE WITHDRAWAL
- MAGMA COPPER COMPANY CLAIMS (NORTHERN EDGE NOT VERIFIED)
- CONTINENTAL EXPLORATION CLAIMS (EXACT LOCATION NOT VERIFIED)
- MINERAL SURVEY CLAIMS, OWNERS UNKNOWN

* OWNERS

1. HELEN COLE, SUTTON SUMMIT SUBDIVISION (Joe P. Sutton)
2. WILLARD SHOECRAFT
3. GERALDINE CRAIG
4. ETHEL M. HENDERSON
5. ROBERT P. CRAIG
6. GERALD CRAIG
7. THOMAS CLARY
8. MILO C. WEBB deceased 12/5/70
9. THELMA HAGEN
10. HARRY HAGEN
11. KENNECOTT COPPER CORP.
12. OSCAR F. GRONLAND
13. ~~UNKNOWN~~ Mrs. Ann Taylor (Superior).
14. Craig Subdivision: a) Harvey Hayes; b) Pattie Spurlock; c) Belle McClinton; d) Kenneth C. Knight; e) Travis L. Grant; f) Gerald Craig.
15. NERANDEX, Inc.
16. ASARCO
17. PAVED OR GRADED ROAD
- UNIMPROVED ROAD
- PROPOSED ROAD FOR LOCATION DRILLING
- OUTLINE OF DACITE PLATEAU

DCA-3 ○ KNOWN DRILL HOLES

○ Butcher paper on ground

Corrections & Additions

PRELIMINARY LAND STATUS

SUPERIOR EAST PROJECT

Globe, Superior, & Surrounding Area

GILA & PINAL COUNTY, ARIZONA

J.D.S May, 1970

0 500 1000 2000 4000 6000

1:24000

T 11 N
T 15

	3
	2
	1

126	127
124	125
122	123
118	121
114	116
110	112
106	108
102	104
98	100
94	96
90	92
86	88
82	84
Cop 139	38 40
Ghost 16	Ghost 32

53	86		
51	84		
49	82	81	
47	80	79	115
45	78	77	113
43	76	75	111
41	74	73	109
39	72	71	107
37	70	69	105
35	68	67	103
33	66	65	101
31	64	63	99
29	62	61	97
27	144	143	95
140	142	141	93
131	136		
132	134		
133	134		

Ghost 127

	Cop 130				
Tip Top No 7	Rim Rock No 6	Cop 131	Eden 11	Eden 10	Hortenshall No 2
Tip Top No 1	Tip Top No 3	Tip Top No 4	Rim Rock	CA Extension	Hortenshall
Eden 12	Rim Rock No 2	Rim Rock No 1	Denver	C4	Rim Rock No 7
Tip Top	Rim Rock No 8	Rim Rock No 4	Rim Rock No 5	Lewis	Spearfish	Sussex
	Eden 13	Denver No 7	Brenton	Spearfish Facies	Distillery
	Denver No 6	Denver 5	Denver 3		

Spring Lake

CA Extension

Eastern Tri State Area

N

14 15 16 13 12

POLE GROUP
(MIAMI)
128 + Claims

MELVIN (M)

BI (Supco)

ALPHA

HENRY (M)

AG (Supco)

ECHO (M)

WEBB
PAT

MO (Supco)

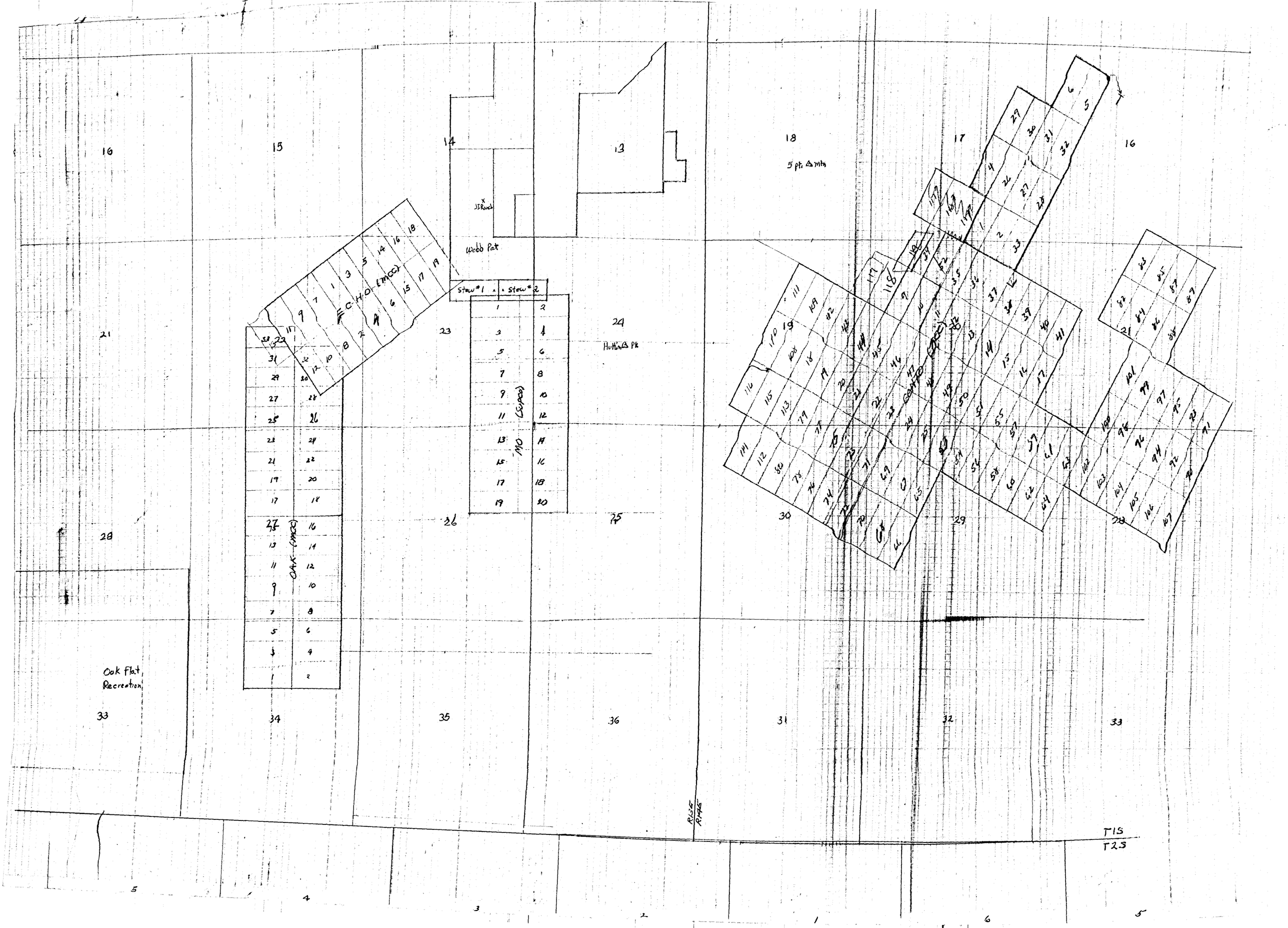
OAK (M)

MIAMI
- MELVIN 1-10
- HENRY 1-10
- ECHO 1-19 (13 missing?)
- OAK 1-33
- POLE (?) 1-128+ (134?) around edge

Supco
- Ag 1-12
- Bi 1-15 (?)
- Mo 1-20

National Forest Boundary

16
15
14
13
18
17
16
21
22
23
24
19
20
21
28
27
26
25
30
29
28
33
34
35
36
31
32
33
5
4
3
2
1
6
5
T1S
T2S
Wobb Pt.
ECHO Cmice
OAK Cmice
Oak Flat
Rec. Area
CROOK
&
OS
Groups
of Ice
CONTO
Crook 1
Mutton Pond #1
Mutton Pond #2
R13E
R14E



16
15
14
13
18
17
16
5 pt. △ mtn
Webb Pat
Stew #1
Stew #2
ECHO (MCC)
MO (SUPCO)
OAK (MCC)
CONTO (MCC)
Hutton △ Pk
21
23
24
19
21
28
26
25
30
29
28
Oak Flat Recreation
33
34
35
36
31
32
33
R13E
R14E
T1S
T2S
5
4
3
2
1
6
5