



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

The following file is part of the Grover Heinrichs Mining Collection

ACCESS STATEMENT

These digitized collections are accessible for purposes of education and research. We have indicated what we know about copyright and rights of privacy, publicity, or trademark. Due to the nature of archival collections, we are not always able to identify this information. We are eager to hear from any rights owners, so that we may obtain accurate information. Upon request, we will remove material from public view while we address a rights issue.

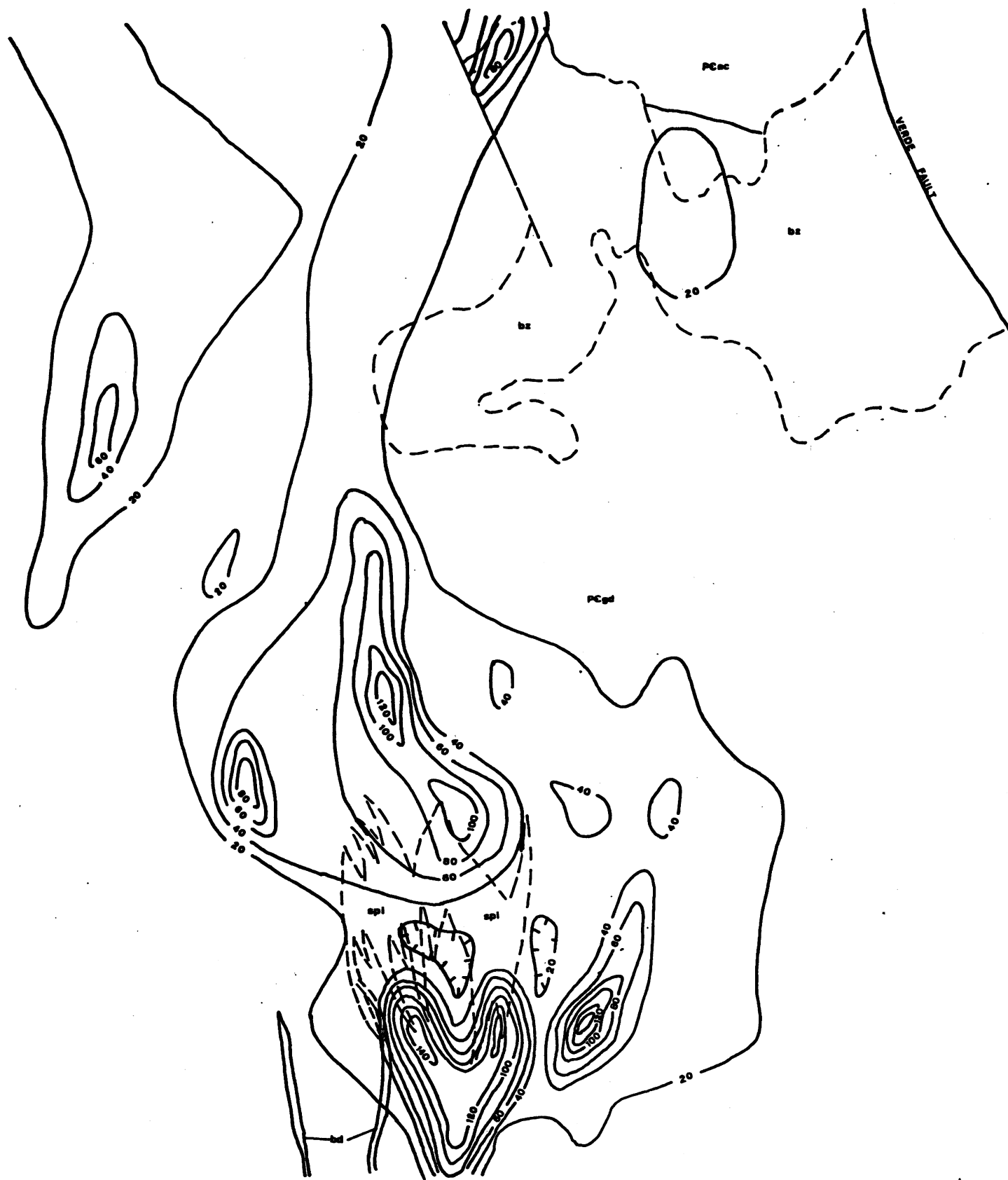
CONSTRAINTS STATEMENT

The Arizona Geological Survey does not claim to control all rights for all materials in its collection. These rights include, but are not limited to: copyright, privacy rights, and cultural protection rights. The User hereby assumes all responsibility for obtaining any rights to use the material in excess of "fair use."

The Survey makes no intellectual property claims to the products created by individual authors in the manuscript collections, except when the author deeded those rights to the Survey or when those authors were employed by the State of Arizona and created intellectual products as a function of their official duties. The Survey does maintain property rights to the physical and digital representations of the works.

QUALITY STATEMENT

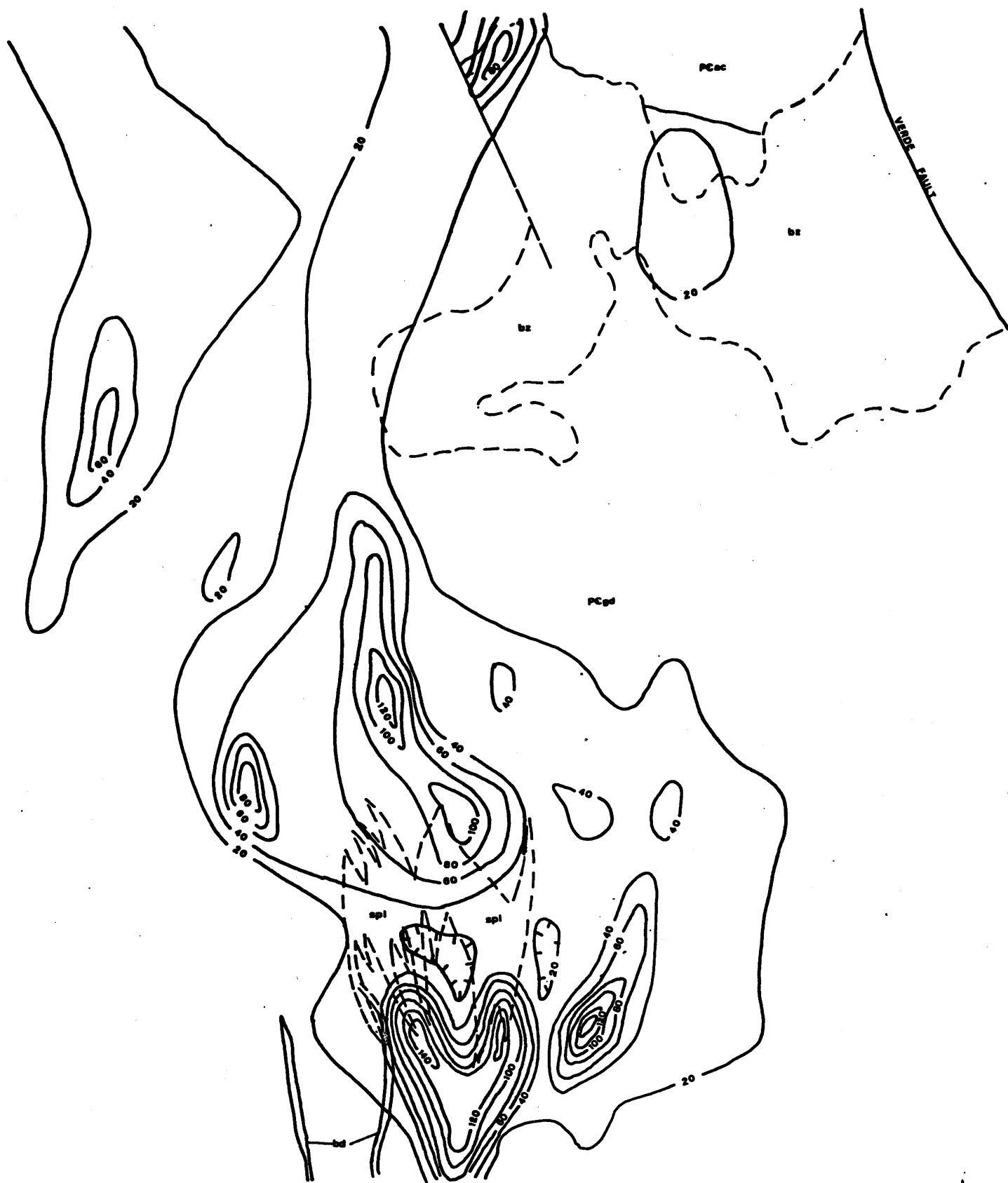
The Arizona Geological Survey is not responsible for the accuracy of the records, information, or opinions that may be contained in the files. The Survey collects, catalogs, and archives data on mineral properties regardless of its views of the veracity or accuracy of those data.



MOLYBDENUM GEOCHEMICAL CONTOUR MAP OF THE SQUAW PEAK DEPOSIT

CONTOUR INTERVAL: 20 ppm Mo

0 500 1000 ft.



MOLYBDENUM GEOCHEMICAL CONTOUR MAP OF THE SQUAW PEAK DEPOSIT

CONTOUR INTERVAL: 20 ppm Mo

0 500 1000 ft.



Topography Compiled By Photogrammetric Methods - INTERMOUNTAIN AERIAL SURVEYS, Salt Lake City, Utah - 6824 - May 1968

Revised 6-8-71

8-3-72

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Year	Number of cases
1990	10
1991	15
1992	20
1993	25
1994	30
1995	35
1996	40
1997	45
1998	50
1999	55
2000	60
2001	65
2002	70
2003	75
2004	80
2005	85
2006	90
2007	95
2008	100
2009	105
2010	110
2011	115
2012	120
2013	125
2014	130
2015	135
2016	140
2017	145
2018	150
2019	155
2020	160
2021	165
2022	170
2023	175
2024	180
2025	185
2026	190
2027	195
2028	200
2029	205
2030	210
2031	215
2032	220
2033	225
2034	230
2035	235
2036	240
2037	245
2038	250
2039	255
2040	260
2041	265
2042	270
2043	275
2044	280
2045	285
2046	290
2047	295
2048	300
2049	305
2050	310
2051	315
2052	320
2053	325
2054	330
2055	335
2056	340
2057	345
2058	350
2059	355
2060	360
2061	365
2062	370
2063	375
2064	380
2065	385
2066	390
2067	395
2068	400
2069	405
2070	410
2071	415
2072	420
2073	425
2074	430
2075	435
2076	440
2077	445
2078	450
2079	455
2080	460
2081	465
2082	470
2083	475
2084	480
2085	485
2086	490
2087	495
2088	500
2089	505
2090	510
2091	515
2092	520
2093	525
2094	530
2095	535
2096	540
2097	545
2098	550
2099	555
2100	560

1

CONTOUR INTERVAL - 20' SCALE 1" = 200'

DATE OF PHOTOGRAPHY - OCTOBER 1967

[illegible]

7	4	1
8	5	2
9	6	3

PHILLIPS PETROLEUM COMPANY
MINERALS DIVISION RENO, NEV. OFFICE
JOB NO MD 1064-1065

SQUAW PEAK DISTRICT
YAVAPAI COUNTY, ARIZONA
SHEET 6 OF 9 SHEETS

5
 B.C. N A T S.D. H.E.
 6 6B 405'40" 17'30" 464 528 437.7

Hill Side Elevations

A 7	A 25	82°41'41" 28°	110	101.26
A 25	Neg. Hill Side	177°00'07" 4°	132	131.69
Neg. Hill Side	PT 1	180° 5°	34	33.87
PT 1	PIE	" 24°	145	132.46
"	"	"		520

Laurie Elevations

Spencer Park Project

2-15-74

AEG. Hill Side B. Reid

PT 1 B. Brown

LAURE HILL Side (298.01)

515.55' witness corner Toe position + 85'

with one ctr. corner with SWC.

Sum. NO. 9 - SWC, 561°06'54" W 298'

S.E. N 61°06'54" E 298'

Laurie Elevations

LAURE CORNER - 561°06'54" W 35' NE

LAURE 561°06'03" W 240' NWC LAURE.

(Common with SWC. Hill Side)

LAURE N 61°06'54" E 240' NWC LAURE.

ANNEX NO. 1 (SEE LAURE) 561°06'54" W

240' SWC LAURE - SEE LAURE N 61°06'54" E

240' SEG LAURE.

Location Monument is 10' South of

SEG. OF Granite Quartz

DDH #7

INTERVALS AVERAGED

<u>Interval</u>	<u>% Cu</u>	<u>% MoS₂</u>	<u>% Mo</u>	<u>Oz. Ag</u>	<u>^{Cu/Mo}</u>	<u>Oz. Au</u>
8 - 80	0.31	0.017	.010	Tr	31	Tr
80 - 255	0.27	0.033	.020	Tr	13.5	Tr
255 - 350	0.17	0.011	.006	Tr	28	Tr
350 - 500	0.13	0.011	.006	Tr	22	Tr

INTERVALS AVERAGED
DDH #8

<u>Interval</u>	<u>% Cu</u>	<u>% Mo</u>	<u>% MoS₂</u>	<u>Cu/Mo</u>	<u>Au</u>	<u>Ag</u>
0 - 285	0.16	.005	0.008	32	Tr.	Tr.
285 - 375	0.28	.011	0.018	25	Tr.	Tr.
380 - 486	0.12	.004	0.007	30	Tr.	Tr.

DDH # 9

INTERVALS AVERAGED

<u>Interval</u>	<u>% Cu</u>	<u>% MoS₂</u>	<u>% Mo</u>	<u>Oz. Au</u>	<u>Oz. Ag</u>	<u>% WO₃</u>
0 - 105	0.21	0.0069	.0041	Nil	Tr	
105 - 340 235'	0.42	0.0293	.0176	Nil	Tr	
340 - 425 85'	0.28	0.0195	.0117	Nil	Tr	
425 - 535 115'	0.70	0.0276	.0166	Nil	Tr	
535 - 665 130'	0.44	0.0115	.0069	Nil	Tr	
665 - 822 155'	0.23	0.0053	.0032	Nil	Tr	

Cu/Mo

0-105

51

105-340

24

340-425

24

425-535

42

535-665

64

665-822

72

DDH #10

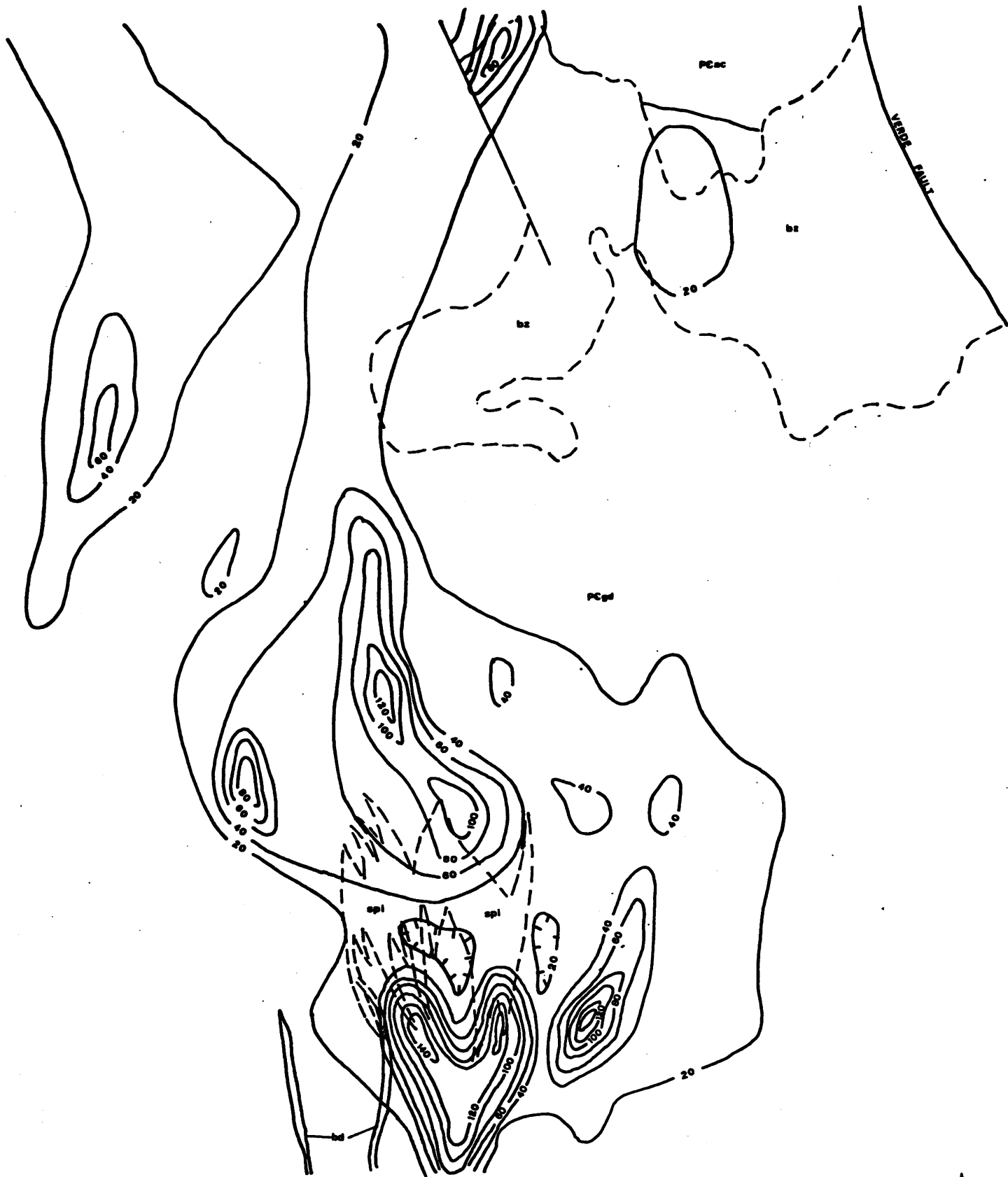
<u>Int.</u>	<u>% Cu</u>	<u>% MoS₂</u>	<u>% Mo</u>	<u>Cu/Mo</u>
6-175	.08	.0124	.0074	11
175-280	.04	.0008	.0005	80
280-365	.05	.0048	.0029	17
365-440	.04	tr		
440-495	.08	.0020	.0012	67
495-650	.04	.0014	.0008	50

INTERVALS AVERAGED
DDH - 13

Interval	% Cu	% Mo	% MoS ₂	Cu/Mo
0 - 35'	0.24	.003	0.005	80
35 - 245'	0.05	.001	0.002	50
245 - 300'	0.13	.012	0.02	11
300 - 360'	0.07	.005	0.009	14
360 - 395'	0.15	.010	0.016	15
395 - 525'	0.06	.001	0.001	60
525 - 595'	0.22	.006	0.011	37
595 - 710'	0.04	.010	0.016	4
710 - 730'	0.10	.013	0.022	8
730 - 980'	0.07	.010	0.017	7
980 - 1000'	0.16	.064	0.107	2.5
1000 - 1123'	0.06	.013	0.023	5

DDH 13

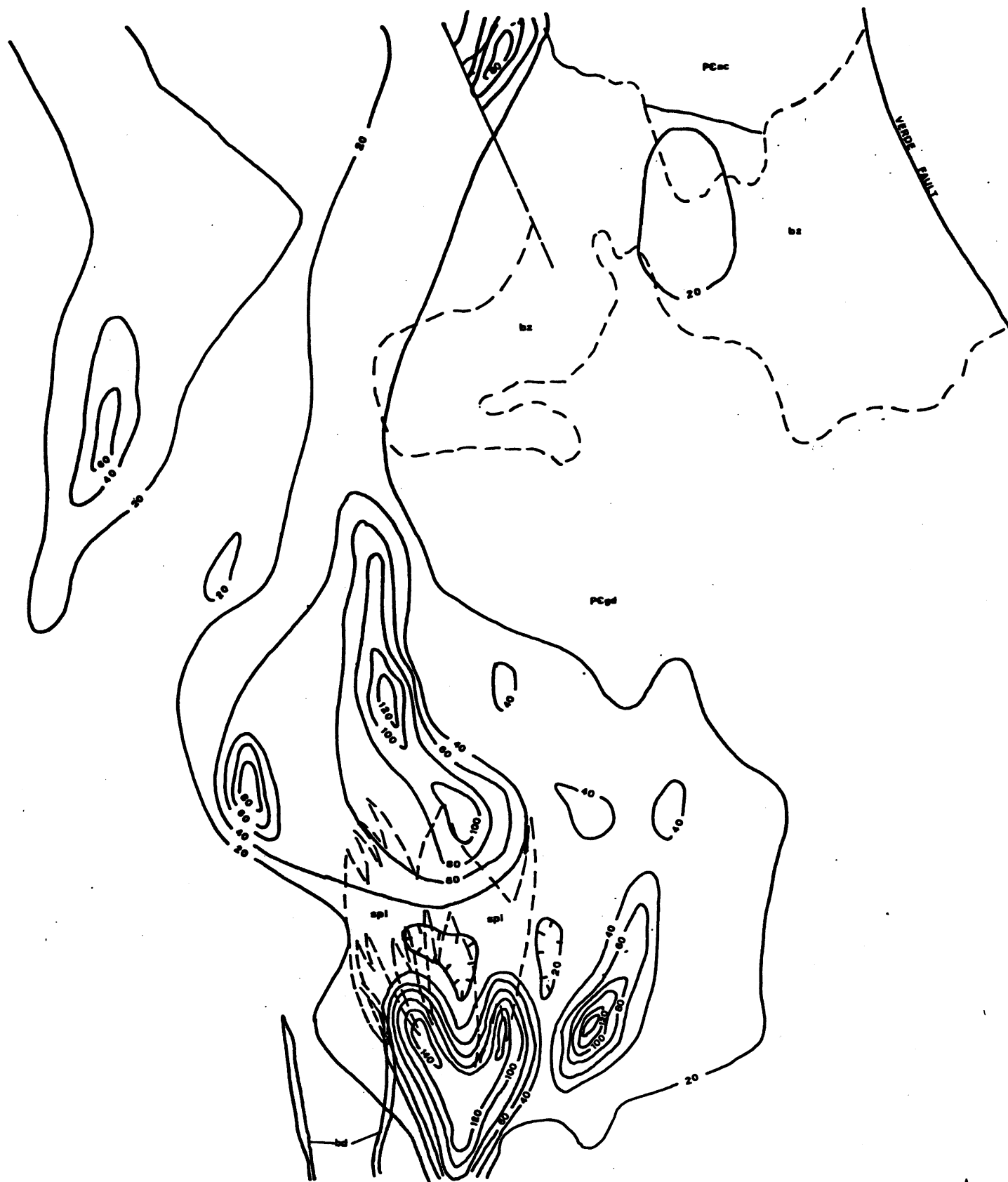
	% Cu	% Mo	Cu : Mo
0-50	0.18	.0006	300
50-100	0.04	.0013	31
100-150	0.06	.0020	30
150-200	0.04	.0006	67
200-250	0.04	.0028	15
250-300	0.09	.0133	7
300-350	0.07	.0043	16
350-400	0.14	.0168	8
400-450	0.03	.0014	21
450-500	0.05	.0176	3
500-600	0.18	.0052	35
600-700	0.04	.009	4
700-800	0.07	.006	12
800-900	0.06	.006	10
900-1000	0.09	.02	4.5
1000-1123	0.05	.02	2.5



MOLYBDENUM GEOCHEMICAL CONTOUR MAP OF THE SQUAW PEAK DEPOSIT

CONTOUR INTERVAL: 20 ppm Mo

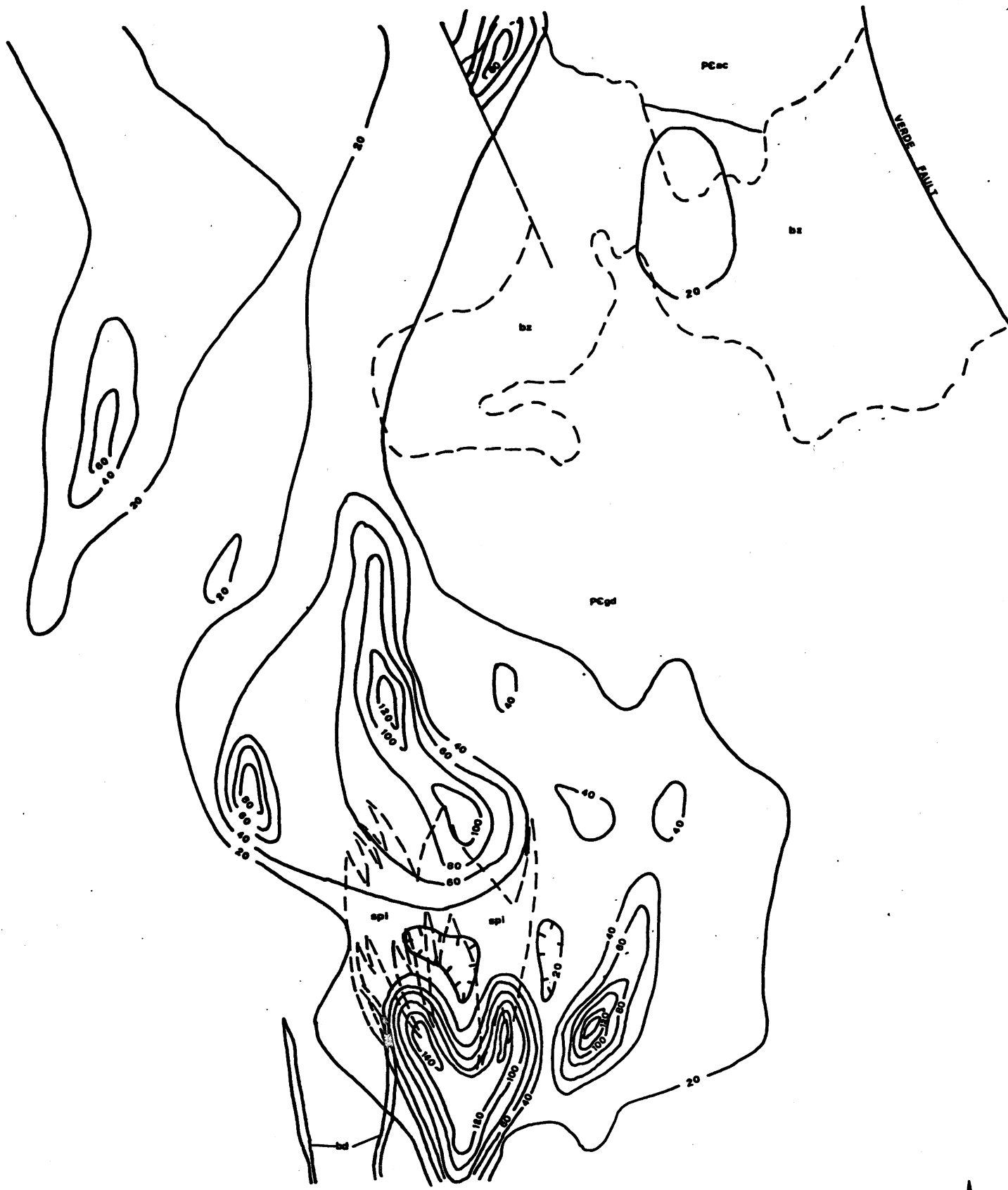
0 500 1000 ft.



MOLYBDENUM GEOCHEMICAL CONTOUR MAP OF THE SQUAW PEAK DEPOSIT

CONTOUR INTERVAL: 20 ppm Mo





MOLYBDENUM GEOCHEMICAL CONTOUR MAP OF THE SQUAW PEAK DEPOSIT

CONTOUR INTERVAL: 20 ppm Mo

0 500 1000 ft.

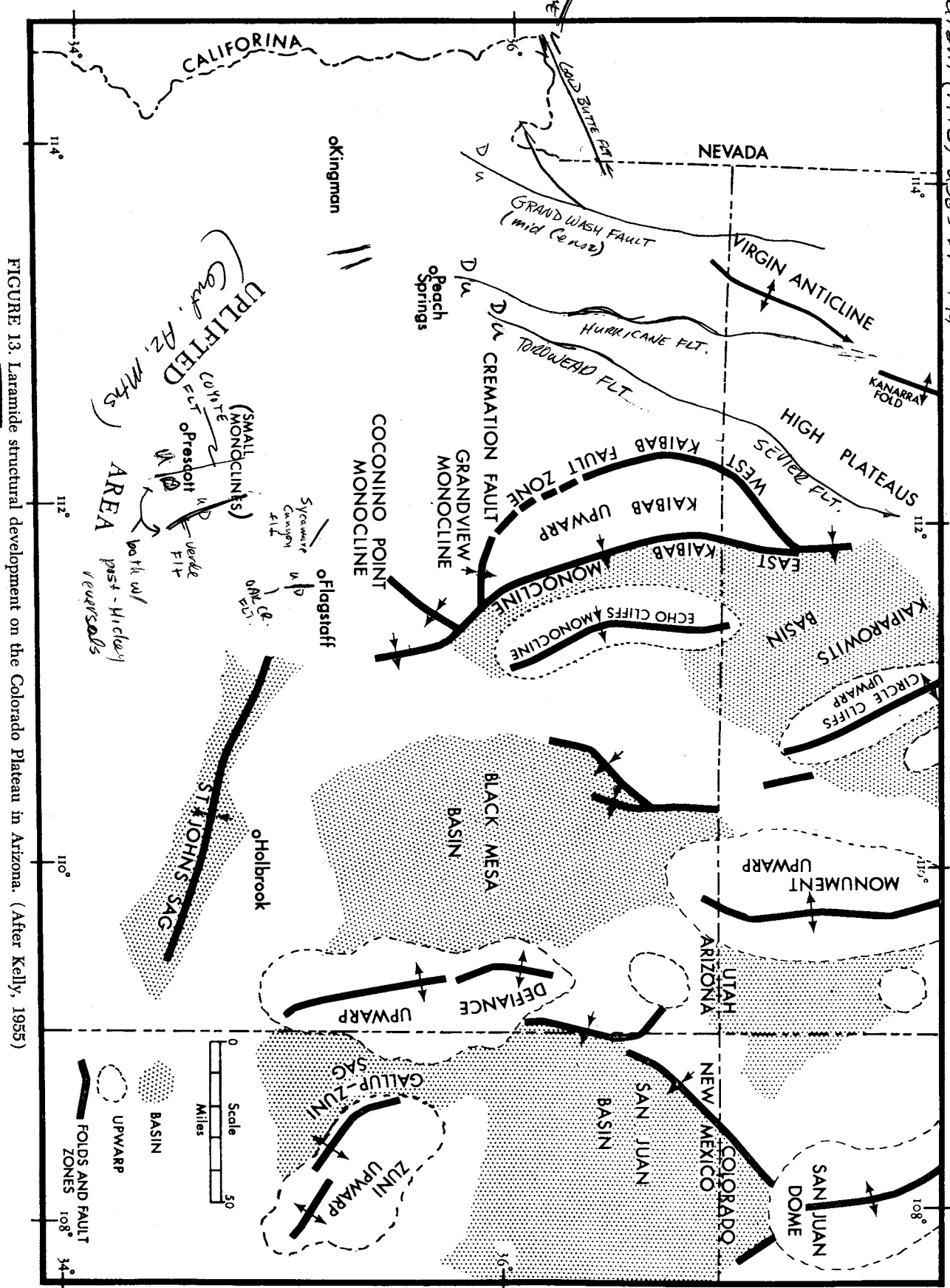
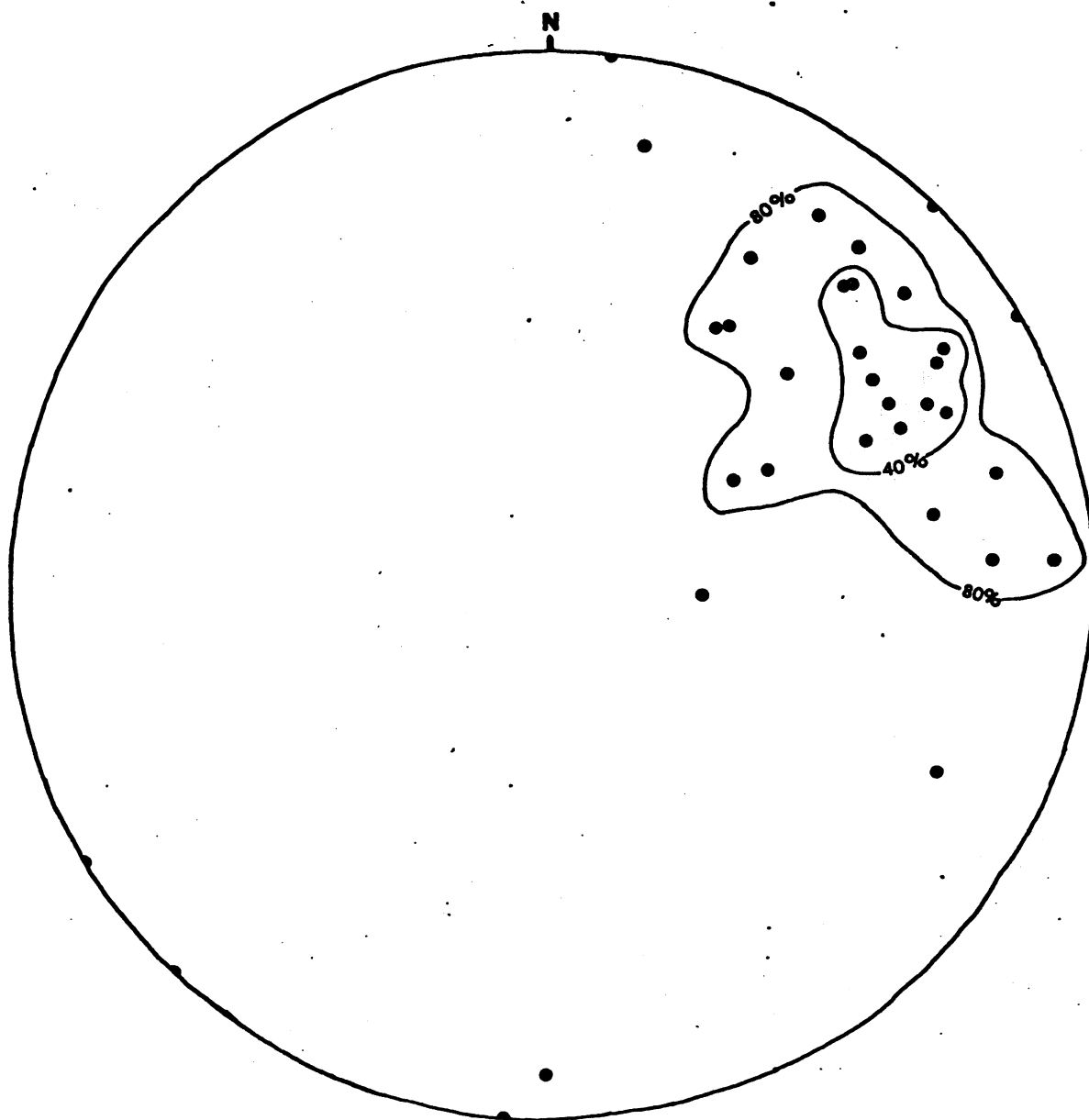


FIGURE 13. Laramide structural development on the Colorado Plateau in Arizona. (After Kelly, 1955)

[30]



PROPOSED RAW MATERIAL PROGRAM

ESSEX INTERNATIONAL, INC.

Paul I. Eimon

June 1, 1973

OBJECTIVE

To provide assured, long term copper supplies.

METHODS

1. EXPLORATION. Exploration for large copper deposits is recommended in the United States and Canada using the existing Essex geological staff. Properties and exploration targets will be selected by use of extensive experience, files, and contacts of the staff. Primary targets will be those areas that indicate the potential for sustained production of 20,000 tons of copper or more per year, and may include porphyry, massive sulfide, and stratabound types of deposits. Standard, proven exploration methods will be utilized, and will be conducted in a well-defined sequence. Imminent major changes in the public land and mining laws will be closely studied in an attempt to gain a competitive edge on larger exploration groups less able to react quickly.

The existing staff is adequate to handle the current level of activity and expenditures. If an accelerated program is considered additional experienced geologists may be added for target generation purposes and increased use could be made of consultants for area studies, regional expertise and advice, and geophysical evaluation. Temporary help or junior employees could be added for drilling projects, if necessary.

The proposed budget covers fixed costs of the existing staff and facilities and may necessitate increased travel expense that will result from a more intensive search for exploration targets. Variable expenses such as the cost of property options, mining claim location, drilling and geophysics will be covered by an RFA for each project.

The present technical staff as listed below consists of eight people including geologists at Milford and Safford, a geological assistant, a surveyor, and a laborer, and is supported by two office personnel.

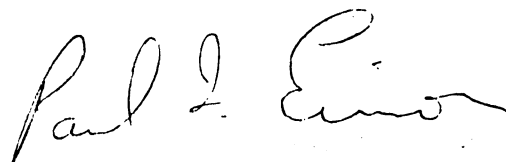
<u>Name</u>	<u>Location</u>	<u>Duties</u>
P.I. Eimon	Tucson	Coordination, supervision of program, target generation.
E.G. Heinrichs	Tucson	Mining law review, land acquisition, supervision of office and survey staff.
J.K. Jones	Tucson	Target generation and evaluation project supervision.
D.C. Temple	Tucson	Target generation and evaluation.
J.W. Wilson	Milford	Project management, target generation.
B. Helming	Safford	Project management, target generation.
W. Brown	Tucson	Geological, geophysical, and surveying assistance, drilling management.
B. Reid	Tucson	Surveying, land status investigation.
T. Davis	Tucson	Accounts, office.
A. Cross	Tucson	Drafting.
J. Morales	Safford	Sampling, surveying assistant.

2. COPPER RESERVE ACQUISITION. This program is recommended to investigate the possibility of acquiring developed reserves and operating mines or mining companies by purchase, joint venture development, or other methods. Thorough, coordinated investigation is essential to determine financial status, ore reserves, exploration potential, and opportunity. Investigations will be directed by the Tucson office and will be conducted by W. Hoskins and Lyall Lichty. Ore reserves and exploration potential will be evaluated by the geological staff, and financial advice will be provided by R. Kelly and J. Biteman. Consultants such as Harry Winters, Kay Pincock, and J. David Lowell will be used as needed.
3. INTERNATIONAL COPPER SUPPLIES. Analysis of developments outside the U.S. that could supply copper to Essex foreign and domestic plants will be continued. In view of the several known undeveloped ore deposits for which technical assistance, markets,

and financing are being sought, Essex can consider low risk participation in consortiums to develop such deposits. Examples of undeveloped deposits are:

La Verde, Mexico
La Caridad, Mexico
Cerro Verde and others, Peru
Phillipine Island deposits
Colombia, S.A. deposits
Iran deposits

Investigation will be maintained by P.I. Eimon and Lyall Lichty with occasional assistance from consultants and the Tucson staff.

A handwritten signature in cursive script, reading "Paul I. Eimon". The signature is written in dark ink on a white background.

Paul I. Eimon

PIE:td
June 1, 1973



MEDIAN ATTITUDE OF
MIN'LIZED VN:
N 29°W B4°SW

31 poles to min'lized planes

△ Squaw Peak

36
36

QTb

QTb

△14

△13

△15

QTb

△16

QTb

□12

△11

△9

△17

△18

△10

△19

△20

△21

□23

△22

□8

△7

△6

△24

△25

26A

△27

△5

△3

△2

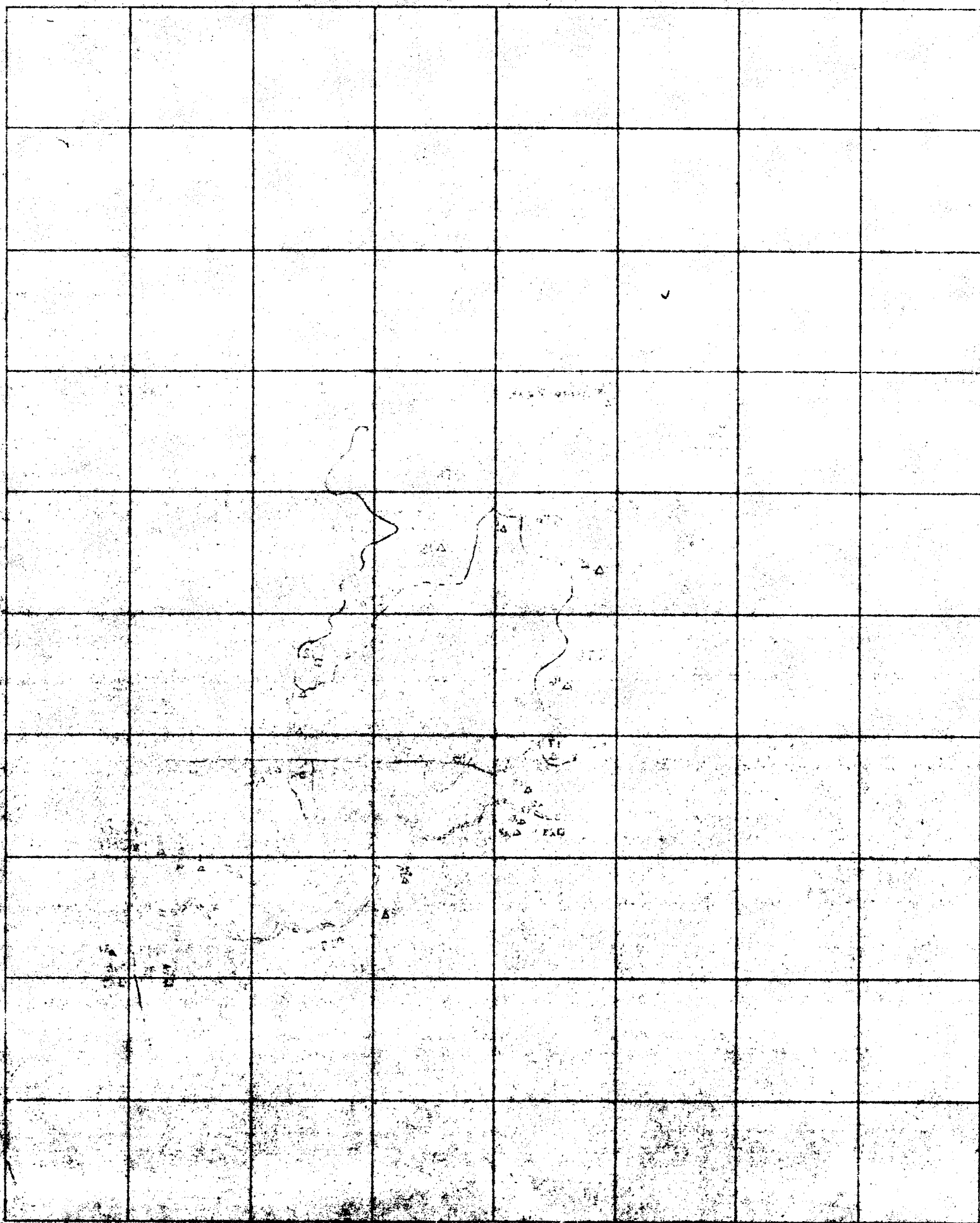
14 CC-1

28

△31

△30

△29



INTERVALS AVERAGED
DDH - 13

Interval	% Cu	% MoS ₂
0 - 35'	0.24	0.005
35 - 245'	0.05	0.002
245 - 300'	0.13	0.02
300 - 360'	0.07	0.009
360 - 395'	0.15	0.016
395 - 525'	0.06	0.001
525 - 595'	0.22	0.011
595 - 710'	0.04	0.016
710 - 730'	0.10	0.022
730 - 980'	0.07	0.017
980 - 1000'	0.16	0.107
1000 - 1123'	0.06	0.023

Intervals Averaged

<u>Cu/Mo</u>	<u>Interval</u>	<u>Mo/Cu</u>	<u>% Cu</u>	<u>% Mo</u>	<u>% MoS₂</u>
57	0 - 30(6)	.018	0.51	.017 {	0.0158
75	30 - 50(4)	.013	0.15		0.004
20	50 - 155(21)	.050	0.46		0.038
25	(0 - 155)	.040	0.43	.017	0.029
15	155 - 200	.066	0.32	.021	0.035
39	200 - 315	.026	0.27	.007	0.011
36	315 - 365	.028	0.36	.010	0.017
33	365 - 515	.030	0.23	.007	0.012
47	515 - 650	.021	0.14	.003	0.005
15	650 - 685	.065	0.20	.013	0.021
14	685 - 750	.070	0.10	.007	0.012
30	750 - 862	.033	0.03	.001	0.002

.17% Mo = .34% Ag

0.47 oz. Ag