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Tucson, Arizona 85701
602-771-1601
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Volume 4 ; Book 6

0061

TOMBSTONE

Mining District

Cochise County

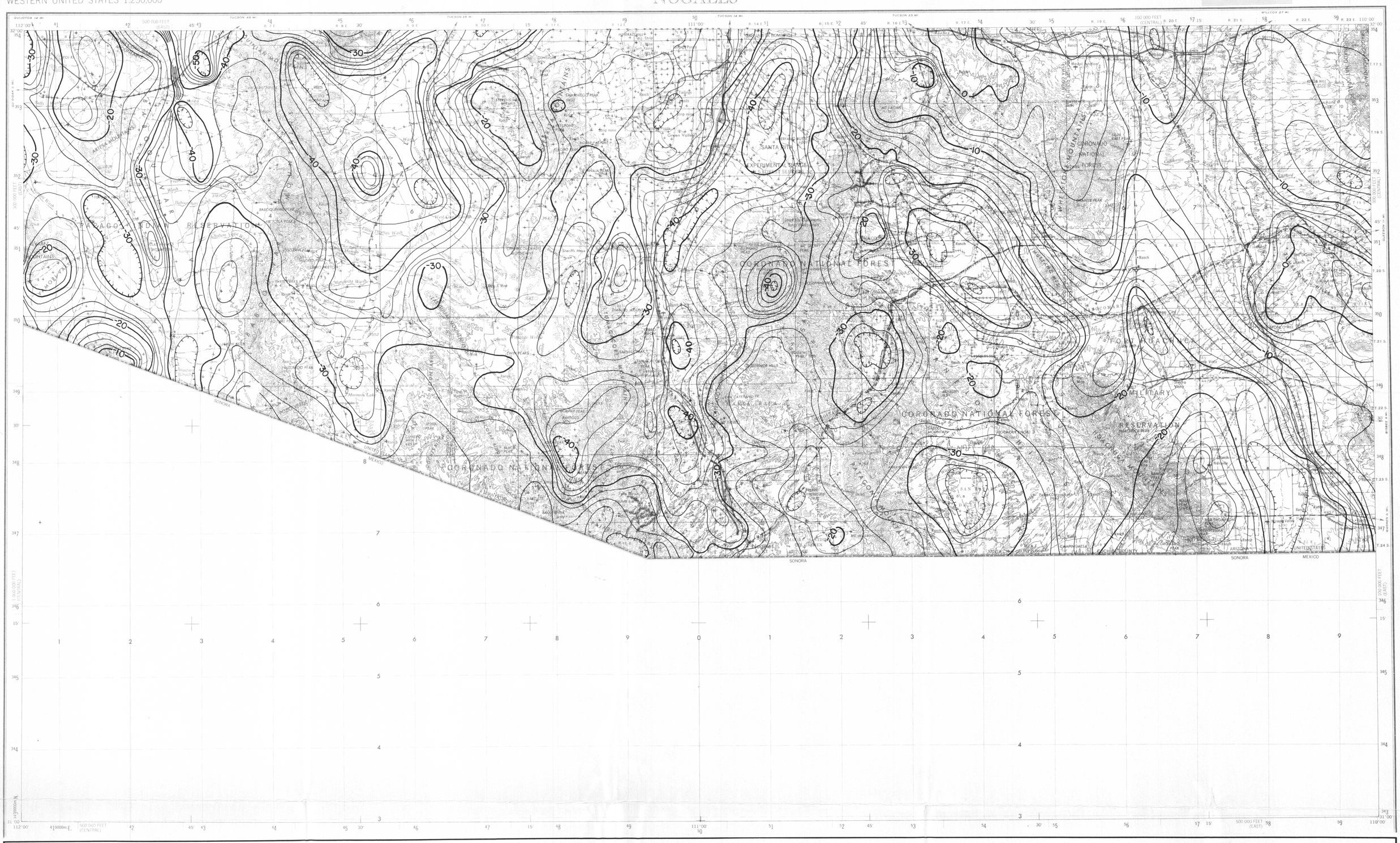
ARIZONA

Misc. TMD Maps
1980 to 1982

DREWES TECT.
MAP OF SE AZ

copy map
General T-Stone
area of interest

NOGALES



THE COMPLETE RESIDUAL BOUGUER GRAVITY ANOMALY MAP

Nogales

BY

Joseph C. Lysonski, C. L. V. Aiken, and John S. Sumner

1981

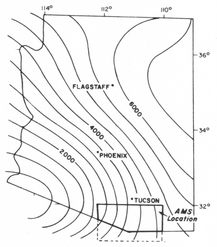
A density of 2.67g/cm³ is used for the Bouguer correction and for terrain corrections calculated by computer for a radial zone of 2.6 to 167 km. around each station. A trend surface of elevations of Arizona (Inset 1a) was used to define a regional Bouguer anomaly (Inset 2a) and to compute residual anomaly values. For a complete discussion of data sources, availability, and data reduction programs see:

Aiken, C. L. V., 1976, Analysis of Gravity Anomalies in Arizona: Ph.D. dissertation, University of Arizona, Tucson; Ann Arbor, University Microfilms Order DBJ77-02313.

Lysonski, J. C., 1980, The ISGN 71 Residual Bouguer Gravity Anomaly Map of Arizona: M.S. thesis, University of Arizona, Tucson.

Aiken, C. L. V., Lysonski, J. C., Sumner, J. S., and Hahman, W. R., Sr., 1981, A Series of 1:250,000 Complete Residual Bouguer Gravity Anomaly Maps of Arizona: Arizona Geological Society Digest, v. 13, (in press).

Financial assistance for the production of this map was provided by the U.S. Department of Energy, Division of Geothermal Energy, under contract DE-FC07-79ID12009 through the State of Arizona, Bureau of Geology and Mineral Technology, Geological Survey Branch, Geothermal Group.



Inset 1a: Regional elevation (EL_R) of Arizona.

The complete residual Bouguer gravity anomaly map was computed by using a Bouguer correction of the following form:

$$g_{BR} = -2\pi G \rho [EL_N - EL_R] + CC + TC$$

where:

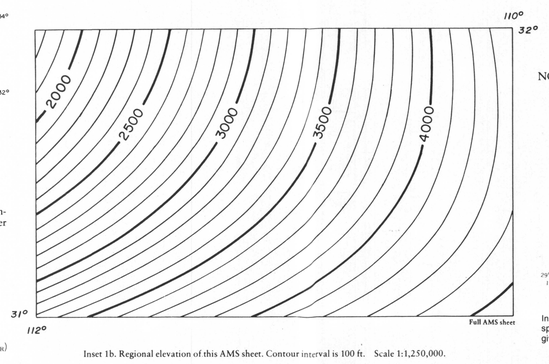
G = universal gravitational constant
ρ = 2.67 g/cm³
EL_N = station elevation
EL_R = regional elevation
CC = curvature correction using ($EL_N - EL_R$) as thickness of slab
TC = terrain correction

SCALE 1:250,000

5 0 5 10 15 20 STATUTE MILES

5 0 10 15 20 25 30 KILOMETERS

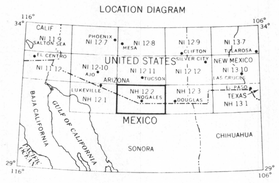
BASE PREPARED BY THE U.S. ARMY TOPOGRAPHIC COMMAND, WASHINGTON, D.C.
REVISED BY THE U.S. GEOLOGICAL SURVEY
CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS
TRANSVERSE MERCATOR PROJECTION



Inset 1b. Regional elevation of this AMS sheet. Contour interval is 100 ft. Scale 1:1,250,000.

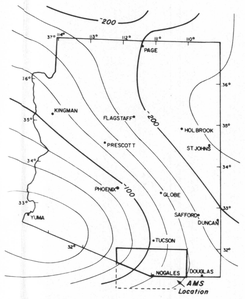
NOTE: Because gravity-station density is sparse in some areas, control is limited in drawing gravity contours.

LOCATION DIAGRAM



Information from this map may be quoted or reproduced without special permission, provided appropriate acknowledgement is given the source.

For sale by the Bureau of Geology and Mineral Technology
845 N. Park Ave., Tucson, Arizona 85719

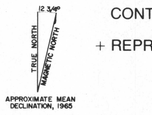


Inset 2a: Regional Bouguer anomaly (g_B) map of Arizona. Contour interval is 25 milligals.

This regional Bouguer anomaly map of Arizona was derived by multiplying the regional elevation (Inset 1a) by −0.0341 mgal/ft (the Bouguer correction for 2.67 g/cm³ density).

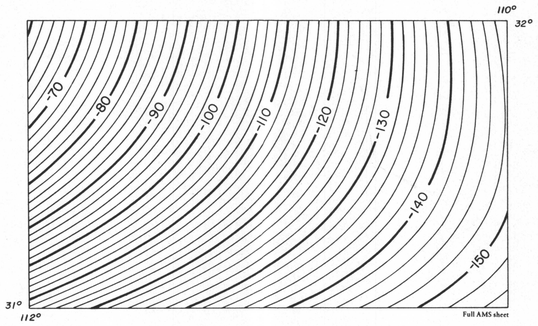
This inset shows the regional anomaly (g_R) removed from the Bouguer anomaly (g_B) by using the correction procedure shown below Inset 1a. The resulting residual values (g_{BR}) contoured on this AMS sheet can also be computed by subtracting this regional anomaly from the Bouguer anomalies.

$$g_{BR} = g_B - g_R$$

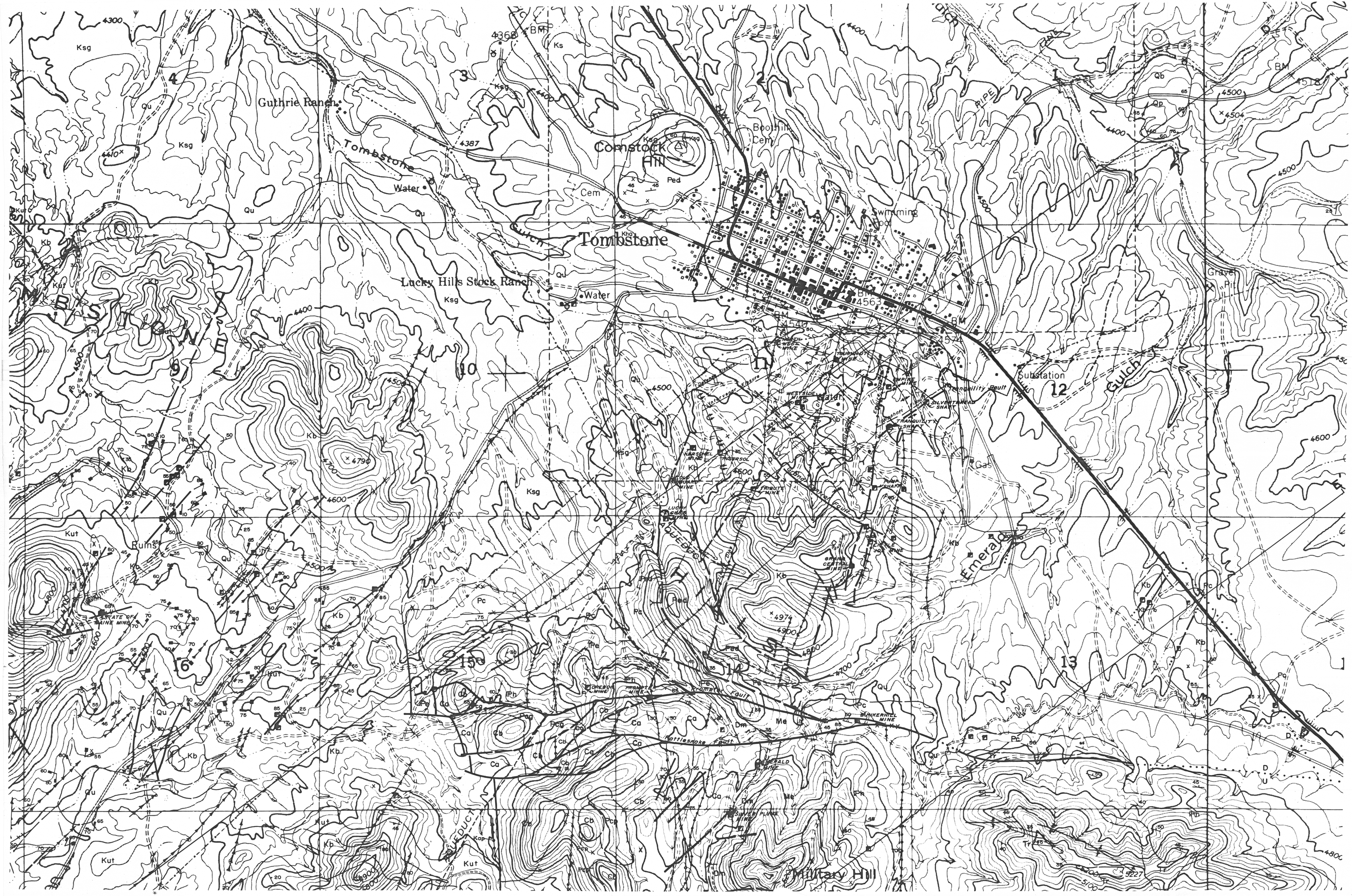


CONTOUR INTERVAL IS 2 MILLIGALS

+ REPRESENTS GRAVITY STATION LOCATION



Inset 2b. Regional Bouguer anomaly map of this AMS sheet. Contour interval is 2 milligals. Scale 1:1,250,000.



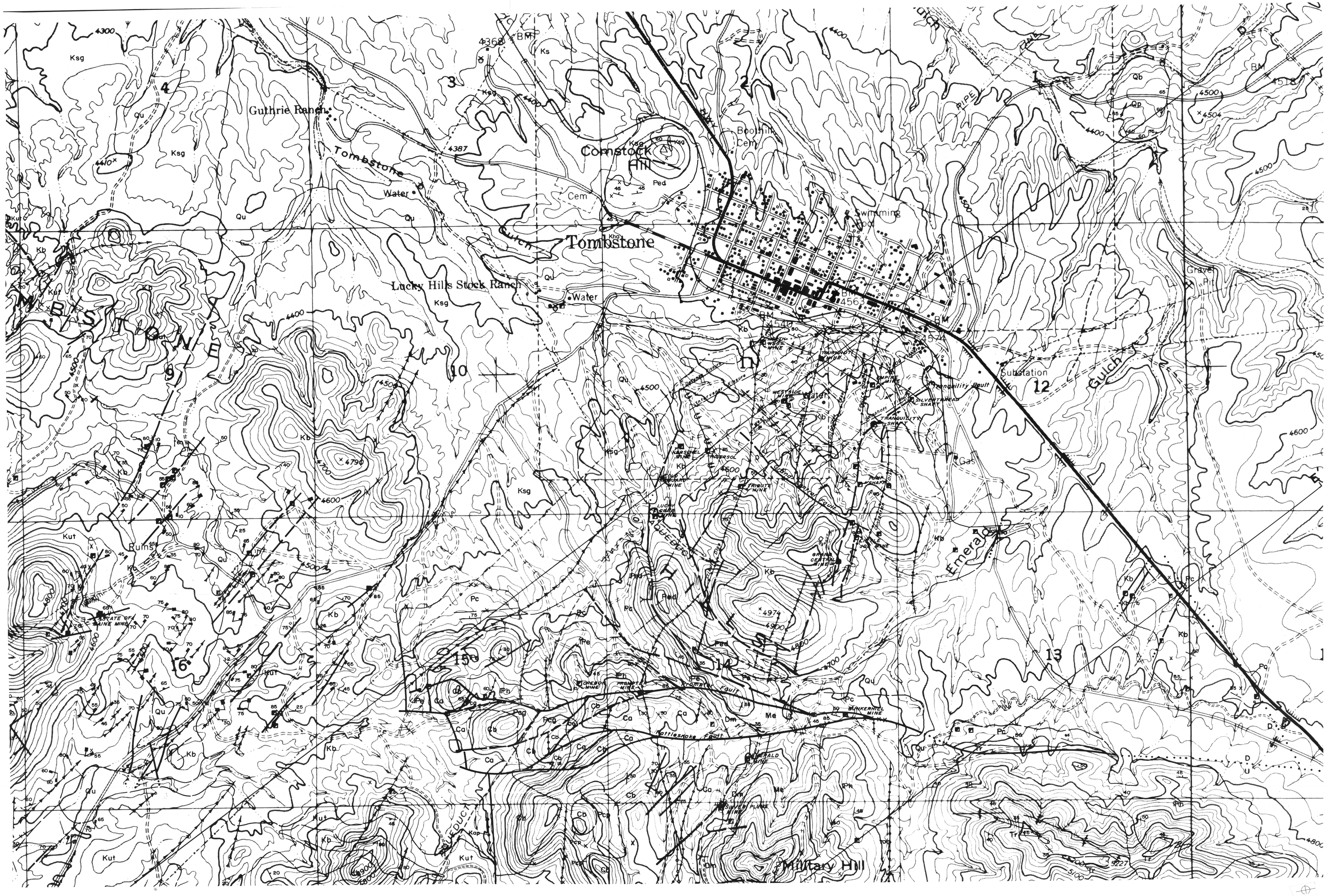
TDCS (paper copy 50% scaled)
Tombstone Geology - Mining District

COUNTRY: U.S.
STATE: Arizona
COUNTY: Cochise
MOUNTAIN RANGE: Tombstone Hills
MINING DISTRICT: Tombstone

GEOLOGY: W. Kooken Ingall
Mining Dist. Map
Scale: 1" = 500 ft.

REVISIONS					
DATE	NUMB.	BY	DATE	NUMB.	BY
DRAWN BY:					
APPROVED:					
D.N.	R.	P.	F.	LOC.	

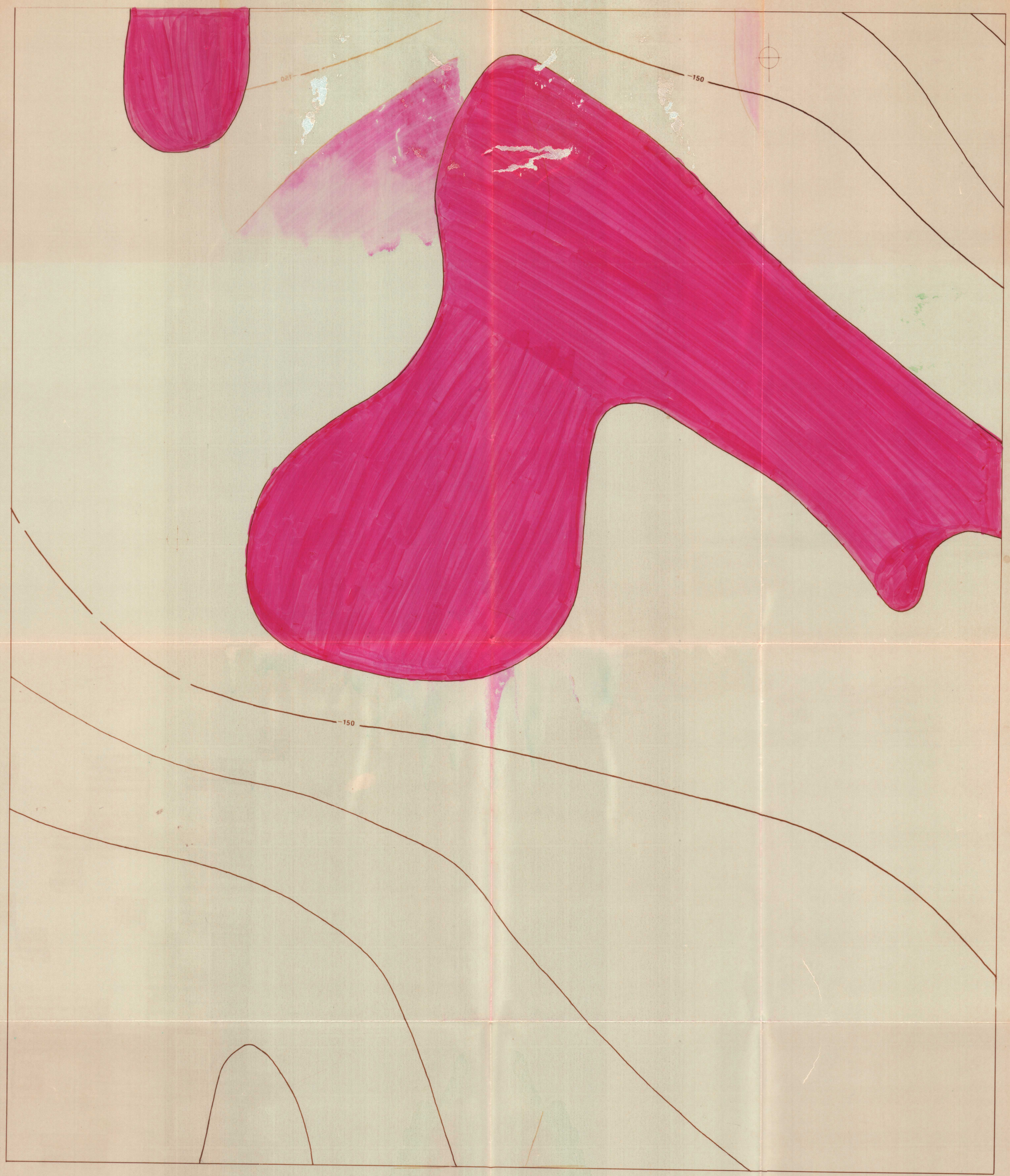
DATE: 6/2/81
DRAWN BY:
APPROVED:



TDCS (pipeline 50% sequence)
Tombstone Geology - Mining District
STATE: Arizona
COUNTY: Cochise
MOUNTAIN RANGE: Tombstone Hills
MINING DISTRICT: Tombstone
GEOLOGY: Woodward Fault Pkd, Hesselman
SCALE: 1" = 500'
DATE: 6/2/81
DRAWN BY:
APPROVED:
REVISIONS
DATE | NUMBER | BY | DATE | NUMBER | BY
DRAWING NUMBER
LOC.

1
1,000
2
900
3
800
4
700
5
600
6
500
7
400
8
300
9
200
10
100

Plate 17



ANOMALOUS GRAVITY HIGH

ANOMALOUS GRAVITY LOW

SCALE - 1" = 1 MILE 1:62,500

DATE: July 1971	REVISIONS					
DRAWN BY: D.H.	DATE	NUMB.	BY	DATE	NUMB.	BY
APPROVED:						
DRAWING NUMBER						
D.N.	R.	P.	F.	LOC.		

TOMBSTONE AREA TRACING OF GRAVITY MAP
PLATE 1 - REPORT OF INVESTIGATION #3 - OIL & GAS CONSERVATION COMMISSION - 1974

COUNTRY: U.S.A.
STATE: ARIZONA
COUNTY: COCHISE
MOUNTAIN RANGE: TOMBSTONE HILLS
MINING DISTRICT: TOMBSTONE

GEOPHYSICS BY: SUMNER ET AL

ANOMALOUS MAGNETIC HIGH

MAG

ANOMALOUS MAGNETIC LOW

SCALE - 1" = 1 MILE 1:62,500

TOMBSTONE AREA TRACING OF AERO-MAGNETIC MAP OF ARIZONA

DATE: July 81	REVISIONS					
DRAWN BY: D.H.	DATE	NUMB.	BY	DATE	NUMB.	BY
APPROVED:						

DRAWING NUMBER				
D.N.	R	P	F	LOC.

COUNTRY: USA

STATE: ARIZONA

COUNTY: COCHISE

MOUNTAIN RANGE: TOMBSTONE HILLS

MINING DISTRICT: TOMBSTONE

GEOPHYSICS BY: SUMNER ET AL

COLOR GUIDE SHEET

1 of 2 sheets

Project # Tombstone

Map For Geology of 1"=500' + 1"=mile maps

9/21/82

Description of Area to Color		Sample Color	Brand	Number
QTgu or Qu	Color Pencil Color Pen			
QTb or Qb	Color Pencil Color Pen		Prismacolor	915
Tc	Color Pencil Color Pen			916
Tva	Color Pencil Color Pen			928
Tv	Color Pencil Color Pen			934
Tlc	Color Pencil Color Pen			942
Tlv	Color Pencil Color Pen			940
Tr or TKp	Color Pencil Color Pen	Light		917
TKp or Tr	Color Pencil Color Pen	DARK		917
Kha	Color Pencil Color Pen			945
Krd	Color Pencil Color Pen			948
Kg	Color Pencil Color Pen			944
Kr or Kut	Color Pencil Color Pen			910
Ka	Color Pencil Color Pen			911
Kib	Color Pencil Color Pen			912
Kb	Color Pencil Color Pen			913
Ksg or Klg	Color Pencil Color Pen			909
Kap	Color Pencil Color Pen			907
Kbls	Color Pencil Color Pen			905
Kbn - Kbg	Color Pencil Color Pen		Flesh color	939

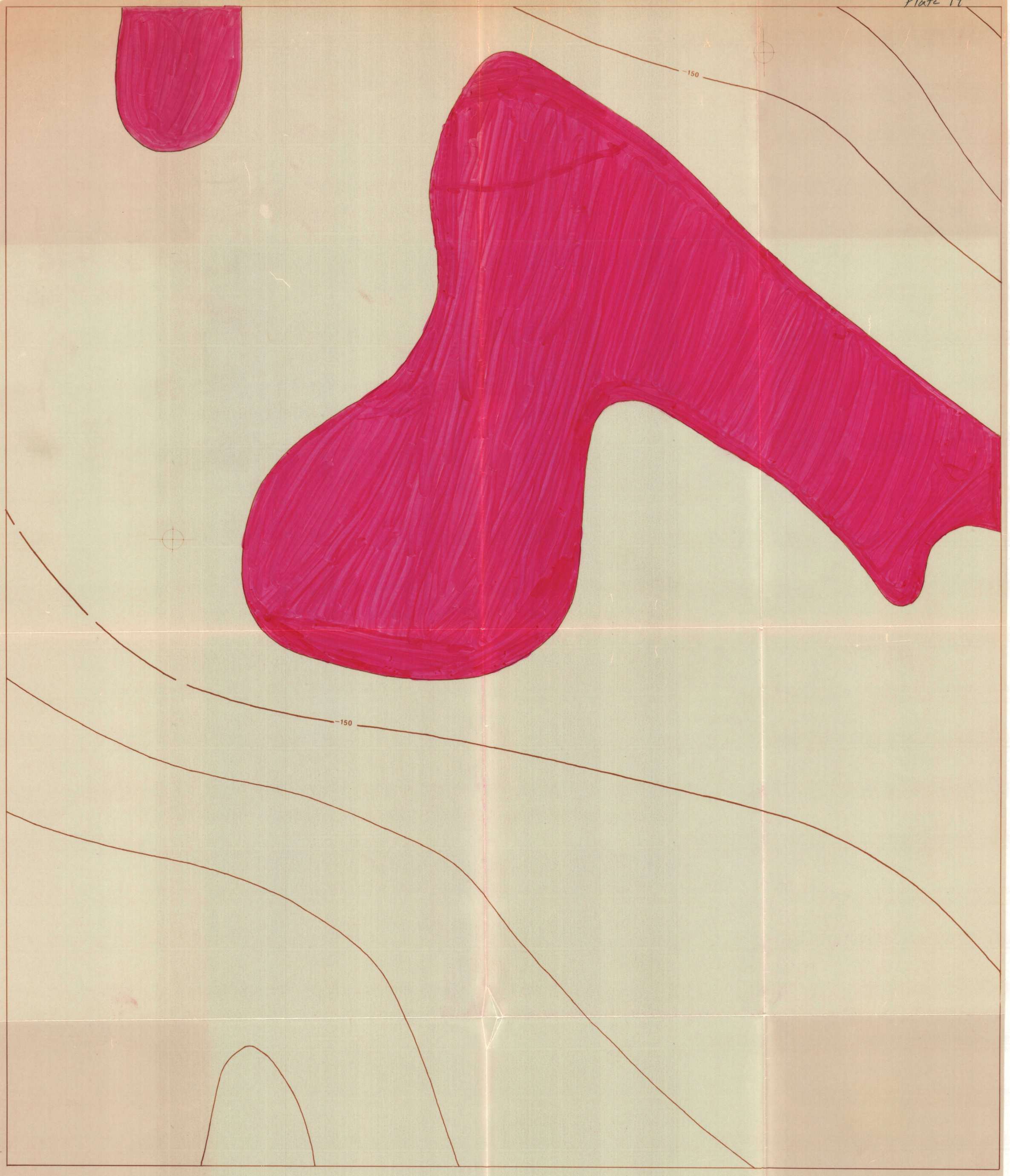
COLOR GUIDE SHEET

Project # Tombstone

Map For Geology of 1"=800' + 1"=Mile Maps

Description of Area to Color		Sample Color	Brand	Number
Klg	Color Pencil Color Pen			943
Khd	Color Pencil Color Pen			946
Jg	Color Pencil Color Pen			920
Pcn	Color Pencil Color Pen			906
Pzs	Color Pencil Color Pen			932
PIIs or Ped	Color Pencil Color Pen			919
Pc	Color Pencil Color Pen			904
IPe	Color Pencil Color Pen			903
IPh	Color Pencil Color Pen			963
MDs or Me	Color Pencil Color Pen			933
Dm	Color Pencil Color Pen			956
O€s	Color Pencil Color Pen			925
€s or €a	Color Pencil Color Pen			921
€b	Color Pencil Color Pen			929
P€g or Yg	Color Pencil Color Pen			937
P€p or Xp	Color Pencil Color Pen			941
	Color Pencil Color Pen			
	Color Pencil Color Pen			
	Color Pencil Color Pen			
	Color Pencil Color Pen			

Plate 17



ANOMALOUS GRAVITY HIGH

ANOMALOUS GRAVITY LOW

SCALE - 1" = 1 MILE 1:62,500

TOMBSTONE AREA TRACING OF GRAVITY MAP
PLATE 1 - REPORT OF INVESTIGATION #3 - OIL + GAS CONSERVATION COMMISSION - 1974

DATE: July 1977	REVISIONS						
	DATE	NUMB.	BY	DATE	NUMB.	BY	
DRAWN BY: D.H.							
APPROVED:							
DRAWING NUMBER							
D.N.	R	P.	F.	LOC.			

COUNTRY: U.S.A.
STATE: ARIZONA
COUNTY: COCHISE
MOUNTAIN RANGE: TOMBSTONE HILLS
MINING DISTRICT: TOMBSTONE

GEOPHYSICS BY: SUMNER ET AL

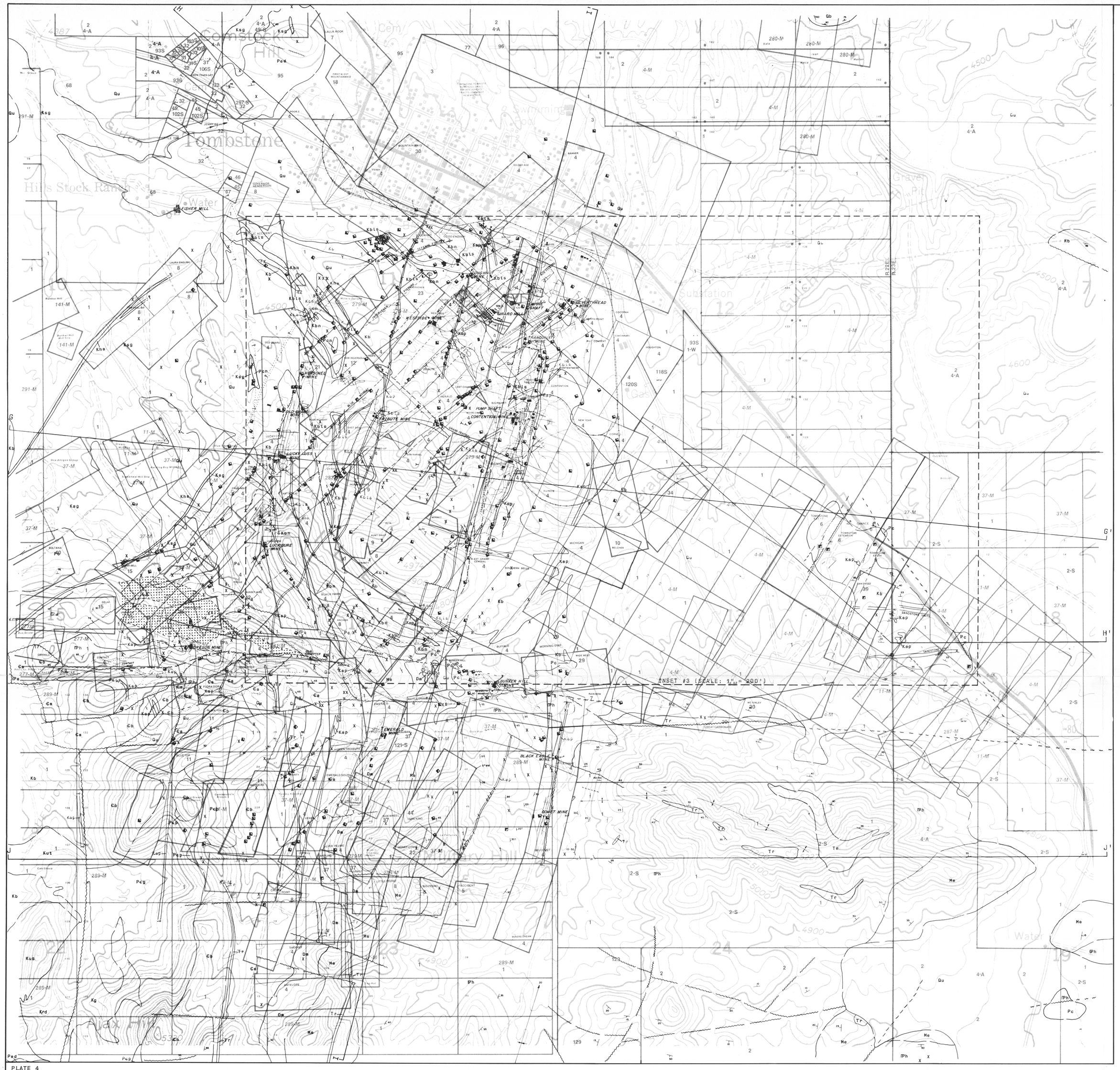


PLATE 4

PROPERTY MAP EXPLANATION

PATENTED PROPERTY OWNERSHIP

1	United States of America
2	Arizona, State of
3	Tombstone Townsite National Historical Monument
4	Tombstone Development Company
5	Escapule, Charles B. & Louis W.
6	Will, Douglas J. (estate) Wurth, Leo F.
7	Lewis, Mary M. et al.*
8	Houston Mining Resources, Inc. et al.*
9	Escapule, Florence
10	Thomas, Tracy R.
11	Hudgson, Kenneth P. & Rita J.
12	Ingersoll Consolidated Mining Co.
15	St. Louis University
17	Tombstone Restoration Commission
18	Fotopulos, Gus Geary, Eugene W. (Trustee)
20	Frankovich, Gerald J.
21	Pass City Mining Co.
22	Wyrick, Daniel & Linda
23	Castello, John M. et al.*
25	Goode, Jack J. et ux.
28	Hudson, Norman G.
29	Crites, R. B. & Evelyn
30	Powell, Marie Barnartz
31	Escapule, Ernest H. et ux.
32	Spilstrom, Warren E. (Trust) c/o Reidy, J. Leslie
34	Valley National Bank of Phoenix
37	Winters, Wayne
39	San Diego Mining Co.
40	Culpepper, Glen E., Mosley, Murray B. (Co.& Trustee)
48	Arizona Board of Regents
44	Deckerow, William
45	Hatamoto, Elwyn G. & Evelyn J. Ward, Raymond E. & Bernice A.
46	Hatchweiler, James & Joyce
47	Independent Order of Odd Fellows,Tombstone Rebekah Lodge
49	Randolph, Charles J. & Gloria L.
68	Pioneer Trust Company of Arizona
77	Goos, Martens E.
93	Tombstone, City of c/o City Clerk
95	West, Helen J.
96	Madigovich, Sam V. et ux.
102	Medella, Peter & Gloria
103	Hamlin, Katherine H.
104	Wellingford, William L. & Claudia
105	Findling, Ralph H. & Alice M.
106	Scott, George J. & Laura B.
107	Opat, Gill
108	Miles, Barbara J.
109	Hatcher, Charles & Edna
110	Eaton, John S. & Barbara D.
111	Spangler, Oscar D. & Patricia W.
112	Blanford, John H. & Betty R.
113	Gray, John W. & Mary B.
114	Tobias, Harry (Family Trust)
115	Curtis, Earl V. & Mary E.
116	Johnson, Leslie & Doris Marie
117	Bankson, Allen A. & Wilma C.
118	Brown, John D. & Margaret E. Johnson, Theron R. & Palma, C.
120	Auskring, Bette G.
121	Fry, Harold & Dorothy S.
129	Cochise Ranchland Association
297	Burnek, Tony J.

UNPATENTED PROPERTY OWNERSHIP

4	Tombstone Development Company
11	Hudgson, Kenneth P. & Rita J.
37	Winters, Wayne
141	Tiew, Steve
277	Can-American Mining Company, Inc.
279	Winters, Wayne Lewis, Scott
280	Nutsell, Jean M. Burk, Keith M. et al.*
281	Clark, Arthur
282	DeWeldey, Sue M.
287	Chadwick, Paul
288	Akers, James Franks, Jack
289	International Mining & Metals, Inc. et al.*
291	Escapule, E. M. Escapule, F. B.
294	Clark, Adeline

EXPLANATORY NOTES

Property data are from Cochise County Courthouse records, U.S. Bureau of Land Management (BLM) records, and Tombstone Development Co., Inc. data provided by Thomas E. Wright, Jr. The data have been plotted as closely as records would permit on the U.S.G.S. 7 1/2 minute topographic map, Tombstone Quadrangle, 1962 edition. The data are Tombstone Patented Claims and land parcels in 7 1/2 minute quadrangles - see Plate 3. The data from Plate 3 were plotted on Plate 4 using the 1:24,000 scale topographic map enlargement of the Tombstone 7.5 minute topographic map, photo revision, 1979. The plate data was re-drafted and adjusted to fit the topographic map to be redrawn. No field checking of this data has been done.

Location of mine shafts were taken from the 1908 U.S.G.S. 1" = 400' topographic map. Geology of the Tombstone Basin area has been plotted directly from the 1937 vintage map noted in the referenced Stoll and Bryant report. Geology outside the basin is taken from the 1937 map, updated according to the well-regarded work by Hewett and Creasey, as interpreted by James A. Briggs.

This map was prepared using the overlay drafting method. The topographic base map is taken from the U.S.G.S. Tombstone 7.5 minute quadrangle, dated to 1962, on-line updated and mine shafts and workings are shown undressed.

Plate 4, the property map, and Plate 5, the geologic map, are actually the same map, for presentation purposes. Plate 4 is colored to show the various property ownerships, while Plate 5, the geology is colored to show the geologic relationships. So, the geology is colored to show the geologic relationships.

NOTE: NUMBER FOLLOWED BY LETTER INDICATES TYPE OF OWNERSHIP

M — Mining Claim (unpatented)
S — Surface Ownership Only
W — Withdrawal—no mineral entry
P — State Prospecting Permit
L — State Mineral Lease
A — State Prospecting Permit Application

*Note: For more complete ownership information, please see Numerical Owner Index List.

N

CONTOUR INTERVAL 25 FEET

500 0 500 1000 Feet

Scale 1" = 500'

DATE- 8/11/92	REVISIONS					
	DATE	NUMB.	BY	DATE	NUMB.	BY
DRAWN BY: H.L.R						
APPROVED:						

DRAWING NUMBER				
D.N.	R.	P.	F.	LOC.

PLATE 4 & 5

GEOLOGY AND LAND STATUS MAP

COUNTRY: U.S.A.
STATE: Arizona
COUNTY: Cochise
MOUNTAIN RANGE: Tombstone Hills
MINING DISTRICT: Tombstone

Tombstone Development Company Inc.

Prepared by James A. Briggs Thomas E. Wright, Jr.
James A. Briggs & Associates Tucson, Arizona

PLATE 5

GEOLOGY MAP EXPLANATION

ROCK TYPES

CENOZOIC

TERTIARY QUATERNARY

- Qb — BASALT INTRUSIVE
- Qu — QUATERNARY UNDIVIDED
- Tr — RHYOLITE PLUG AND ASSOCIATED DIKES (AGE: 63 M.Y.)

MESOZOIC

CRETACEOUS

- Kha — HORNBLENDE ANDESITE PLUG AND ASSOCIATED DIKES
- Krd — RHYODACITE
- Kg — GRANOPHYRE
- Kut — UNCLE SAM TUFF; (AGE: 71.9 ± 2.4 M.Y.)
- Ksg — SCHIEFFELIN GRANODIORITE (AGE: 72 M.Y.)
- Kap — ANDESITE PORPHYRY DIKES

Unconformity

- Kb — BISBEE FORMATION
- Kbls — LIMESTONE – INCLUDES BLUE 12 FOOT AND 6 FOOT LINE OF LOCAL USAGE
- Kbn — NOVACULITE – SILICIFICATION CHARACTERIZES THIS UNIT (PROBABLY EQUIVALENT OF THE GLANCE CONGLOMERATE) AND RESULTS IN THE "NOVACULITE" TEXTURE

PALEOZOIC

PENNSYLVANIAN – PERMIAN, NACO GROUP

Unconformity

- Pcn — CONCHA LIMESTONE
- Ped — EPITAPH DOLOMITE
- Pc — COLINA LIMESTONE
- ℙe — PERMIAN-PENNSYLVANIAN EARP LIMESTONE
- ℙh — HORQUILLA LIMESTONE

MISSISSIPPIAN

Disconformity

- Me — ESCABROSA LIMESTONE

DEVONIAN

Disconformity

- Dm — MARTIN LIMESTONE

CAMBRIAN

Disconformity

- Ꞓa — ABRIGO LIMESTONE
- Ꞓb — BOLSA QUARTZITE

PRECAMBRIAN

Unconformity

- Pꞓg — GRANITE
- Pꞓp — PINAL SCHIST

HORNFELS

SYMBOLS

a. b.

a. ANTICLINE b. SYNCLINE
Showing trace of axial plane

CONTACT
Dashed where approximately located, dotted where concealed or interpreted

FAULT
Dashed where approximately located, dotted where concealed

VEINS
INCLUDES THE SO CALLED "FISSURES" OF LOCAL USAGE

a. b.
STRIKE AND DIP
a. Bedding trends
b. Joint trends
(= vertical dip)

FLOW STRUCTURE
Indicating strike and dip
(= vertical dip)

UNDERGROUND WORKINGS

SHAFT

ADIT PORTAL

X
PROSPECT PIT

REFERENCES – GEOLOGY

Creasey, Harold, 1960, Tectonic Map of Southeast Arizona, U.S. Geological Survey Map I-1328.

Hewett, Roger A., 1974, Exploration Geology and Geochemistry, of the Tombstone - Charleston Area, Cochise County, Arizona, Plate 2, Stanford University Ph.D. Dissertation.

Unknown, circa 1963? Probable a Hewmont Mining Co. Geologic and Alteration map, with surface projection, "Geochemical and Alteration map, Tombstone District, Cochise County, Arizona and Vicinity, Topographic Map, 1:600, reprinted 1:300, contour interval: 10 feet. From the files of the Tombstone Development Company, Inc.

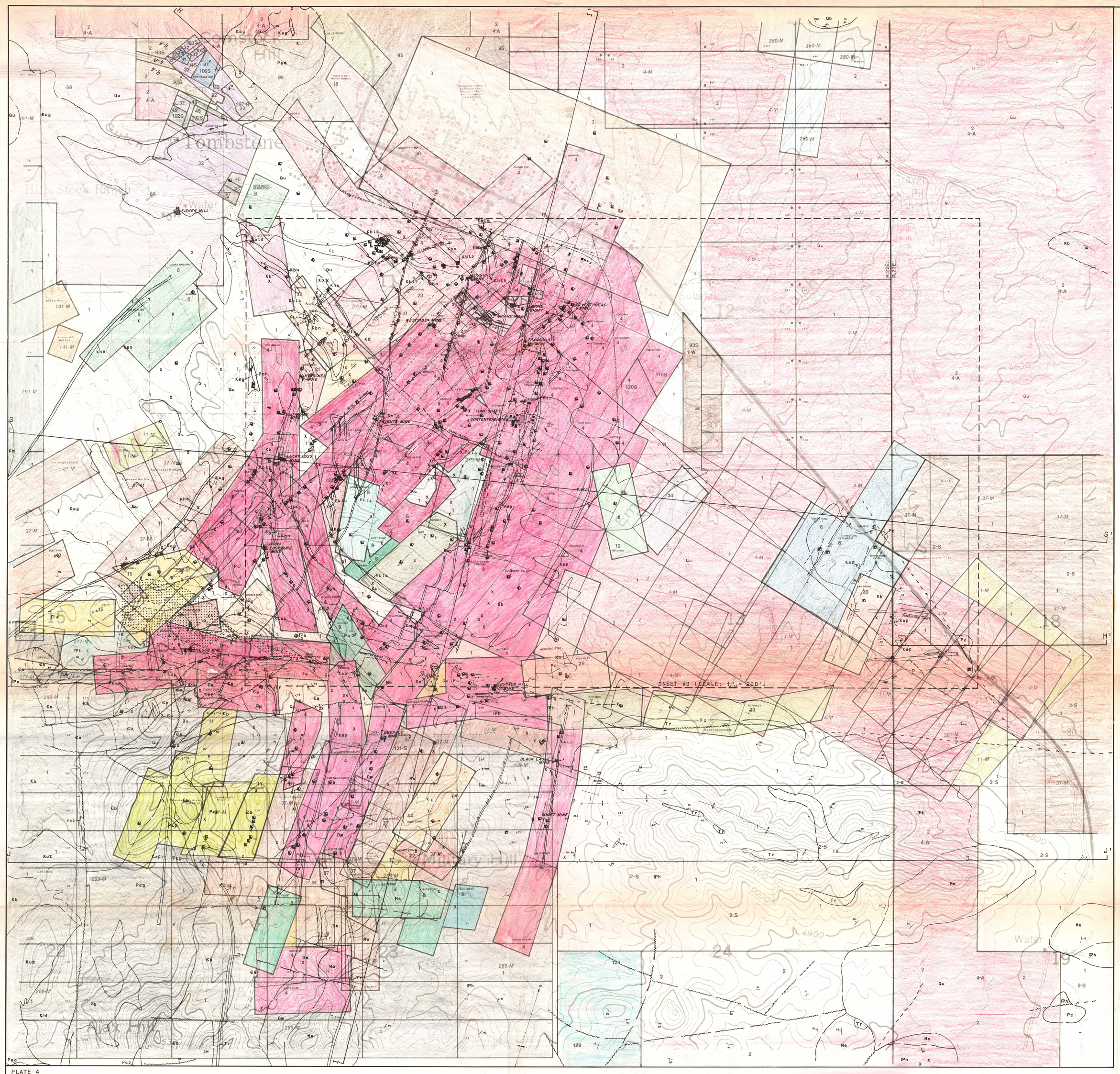


PLATE 5

GEOLOGY MAP EXPLANATION

ROCK TYPES

CENOZOIC

- TERTIARY QUATERNARY
  - Qb — BASALT INTRUSIVE
  - Qu — QUATERNARY UNDIVIDED
  - Tr — RHYOLITE PLUG AND ASSOCIATED DIKES (AGE: 63 M.Y.)

MESOZOIC

- CRETACEOUS
  - Kha — HORNBLENDE ANDESITE PLUG AND ASSOCIATED DIKES
  - Krd — RHYODACITE
  - Kg — GRANOPHYRE
  - Kut — UNCLE SAM TUFF; (AGE: 71.9 ± 2.4 M.Y.)
  - Ksg — SCHIEFFELIN GRANODIORITE (AGE: 72 M.Y.)
  - Kap — ANDESITE PORPHYRY DIKES
  - Unconformity
  - Kb — BISBEE FORMATION (Undivided)
  - Kbls — LIMESTONE – INCLUDES BLUE 12 FOOT AND 8 FOOT LIME OF LOCAL USAGE
  - Kbn — NOVACULITE – SILICIFICATION CHARACTERIZES THIS UNIT (PROBABLY EQUIVALENT OF THE GLANCE CONGLOMERATE) AND RESULTS IN THE "NOVACULITE" TEXTURE

PALEOZOIC

- PENNSYLVANIAN – PERMIAN
  - NACO GROUP
  - Unconformity
  - Pcn — CONCHA FORMATION
  - Ped — EPITAPH DOLOMITE
  - Pc — COLINA LIMESTONE
  - IPe — PERMIAN-PENNSYLVANIAN EARP LIMESTONE
  - IPh — HORQUILLA LIMESTONE
- MISSISSIPPIAN
  - Disconformity
  - Me — ESCABROSA LIMESTONE
- DEVONIAN
  - Disconformity
  - Dm — MARTIN LIMESTONE
- CAMBRIAN
  - Disconformity
  - €a — ABRIGO LIMESTONE
  - €b — BOLSA QUARTZITE

PRECAMBRIAN

- Unconformity
- Pcg — GRANITE
- Pcp — PINAL SCHIST

ALTERATION

- HORNFELS

SYMBOLS

a. b.

a. ANTICLINE b. SYNCLINE
Showing trace of axial plane

CONTACT
Dashed where approximately located, dotted where concealed or interpreted

FAULT
Dashed where approximately located, dotted where concealed

VEINS
INCLUDES THE SO CALLED "FISSURES" OF LOCAL USAGE

a. 23 b. 23
STRIKE AND DIP
a. Bedding trends
b. Joint trends
(= vertical dip)

23
FLOW STRUCTURE
Indicating strike and dip
(= vertical dip)

UNDERGROUND WORKINGS

SHAFT

ADIT PORTAL

X
PROSPECT PIT

REFERENCES – GEOLOGY

Drewes, Harald, 1980, Tectonic Map of Southeast Arizona, U.S. Geological Survey Map I-1100.

Hewett, Roger A., 1974, Exploration Geology and Geochemistry, of the Tombstone Hills Mining District, Cochise County, Arizona, Ph.D. Stanford University, Stanford, Calif.

Unknown, Circa 1965? Probably a Newmont Mining Co. Geologic and Alteration map, with surface projection of underground mine workings. Plotted on U.S.G.S. 7½' Quad. "Tombstone, Ariz." Scale 1" = 200'. Contains 10 foot contours. Contour interval, 10 feet. From the files of the Tombstone Development Company, Inc.

PLATE 4

PROPERTY MAP EXPLANATION

PATENTED PROPERTY OWNERSHIP

1	United States of America
2	Arizona, State of
3	Tombstone Townsite National Historical Monument
4	Tombstone Development Company
5	Escapule, Charles B. & Louie W.
6	Will, Douglas J. (estate) Wurth, Leo F.
7	Lewis, Mary M. et al.*
8	Hewston Mining Resources, Inc. et al.*
9	Escapule, Florence
10	Thomas, Tracy R.
11	Hudgson, Kenneth P. & Rita J.
12	Ingersoll Consolidated Mining Co.
15	St. Louis University
17	Tombstone Restoration Commission
18	Fotopoulos, Gus Geere, Eugene W. (Trustee)
20	Frankovich, Gerald J.
21	Pace City Mining Co.
22	Wyrick, Daniel & Linda
23	Costello, John M. et al.*
25	Goode, Jack J. et ux.
28	Hudson, Norman G.
29	Crist, R. B. & Evelyn
30	Powell, Marie Harnartz
31	Escapule, Ernest H. et ux.
32	Sullivan, Warren E. (Trust) c/o Baldo, J. Lutich
34	Valley National Bank of Phoenix
37	Winters, Wayne
39	San Diego Mining Co.
40	Culpepper, Olen E., Mackey, Murray B. (Co.E Trustee)
43	Escapule, Charles B. et ux.
44	Deckerow, William
45	Hetmanek, Elwyn C. & Evelyn J. Ward, Raymond E. & Bernice A.
46	Hatabuechar, James & Joyce
47	Independent Order of Odd Fellows, Tombstone Rebekah Leg.
49	Randolph, Charles J. & Gloria L.
68	Pioneer Trust Company of Arizona
77	Goos, Harlens E.
93	Tombstone, City of c/o City Clerk
95	West, Helen M.
96	Medigovich, Sam V. et ux.
102	Madella, Peter & Gloria
103	Hamlin, Katherine M.
104	Wallingford, William L. & Claudia
105	Fiendling, Ralph H. & Alice M.
106	Scott, George J. & Laura B.
107	Opat, Gill
108	Miles, Barbara J.
109	Hatcher, Charles & Edna
110	Eaton, John S. & Barbara D.
111	Spangler, Oscar D. & Patricia W.
112	Blanford, John H. & Betty B.
113	Gray, John W. & Mary B.
114	Tobias, Harry (Family Trust)
115	Curtis, Earl V. & Mary E.
116	Johnson, Lunita & Doris Marie
117	Bankson, Allen A. & Milee C.
118	Brown, John O. & Margaret E. Johnson, Theron R. & Palma, C.
120	Auskring, Betty G.
121	Fry, Harold & Dorothy S.
129	Cochise Ranchland Association
297	Burnek, Tony J.

UNPATENTED PROPERTY OWNERSHIP

4	Tombstone Development Company
11	Hudgson, Kenneth P. & Rita J.
37	Winters, Wayne
141	Tims, Steve
277	Cam-American Mining Company, Inc.
279	Winters, Wayne Lewis, Scott
280	Hutsell, Jean M. Burk, Matle M. et al.*
281	Clark, Arthur
282	DeHaiday, Sue M.
287	Chadwick, Paul
288	Akers, James Franks, Jack
289	International Mining & Metals, Inc. et al.*
291	Escapule, E. M. Escapule, F. B.
294	Clark, Adeline

EXPLANATORY NOTES

Property data are from Cochise County Courthouse records, U.S. Bureau of Land Management, and the Tombstone Development Co., Inc., researched by James A. Scarbro. The land data was plotted as closely as records could permit on the U.S.G.S. 7½' Quadrangle, "Tombstone, Ariz." Mining claims and other data are "Tombstone, Ariz." Fairbank and Lewis Springs 7½' minute quadrangles – see Plate 5, for data from these areas. Mining claims are from the Tombstone Hills Mining District enlargement of the Tombstone 7.5 minute quadrangle, 1962, photo revision, 1970. The claim data was recorded and adjusted to the Tombstone Hills Mining District, using field sketching of this data has been done.

Location of mine shafts were taken from the 1200 U.S.G.S. 1" = 200' topographic map, Geology of the Tombstone Basin area, has been plotted directly from the 1957 vintage map noted in the Bibliography. The 1957 map was made by Newmont Mining from geology from the 1950's and was updated according to the work report work by Hewett and Drewes, as interpreted by James A. Scarbro.

This map was prepared using the overlay drafting method. The Property map, and Plate 4, Property Map Explanation, are at a 1" = 500' to the patented claims to 200' with the geology and mine shafts and workings are shown underneath.

Plate 4, the property map, and Plate 5, the geologic map, are actually the same map. For presentation purposes, the property map is shown on the geologic map, Plate 5, in red. The geology is colored to show the geologic relationships.

NOTE: NUMBER FOLLOWED BY LETTER INDICATES TYPE OF OWNERSHIP

M — Mining Claim (unpatented)
S — Surface Ownership Only
W — Withdrawal—no mineral entry
P — State Prospecting Permit
L — State Mineral Lease
A — State Prospecting Permit Application

*Note: For more complete ownership information, please see Numerical Owner Index List.

N

CONTOUR INTERVAL 25 FEET
500 0 500 1000 Feet
Scale 1" = 500'

PLATE 4 & 5

GEOLOGY AND LAND STATUS MAP

COUNTRY: U.S.A.	Tombstone Development Company Inc.
STATE: Arizona	
COUNTY: Cochise	
MOUNTAIN RANGE: Tombstone Hills	Prepared by James A. Scarbro Thomas E. Waldrip, Jr.
MINING DISTRICT: Tombstone	James A. Scarbro & Associates Tucson, Arizona

DATE: 8/11/82	REVISIONS								
	DATE	NUMB.	BY	DATE	NUMB.	BY			
DRAWN BY: H.L.R.									
APPROVED:									
	DRAWING NUMBER								
D.N.	R.	P.	F.	LOC.					