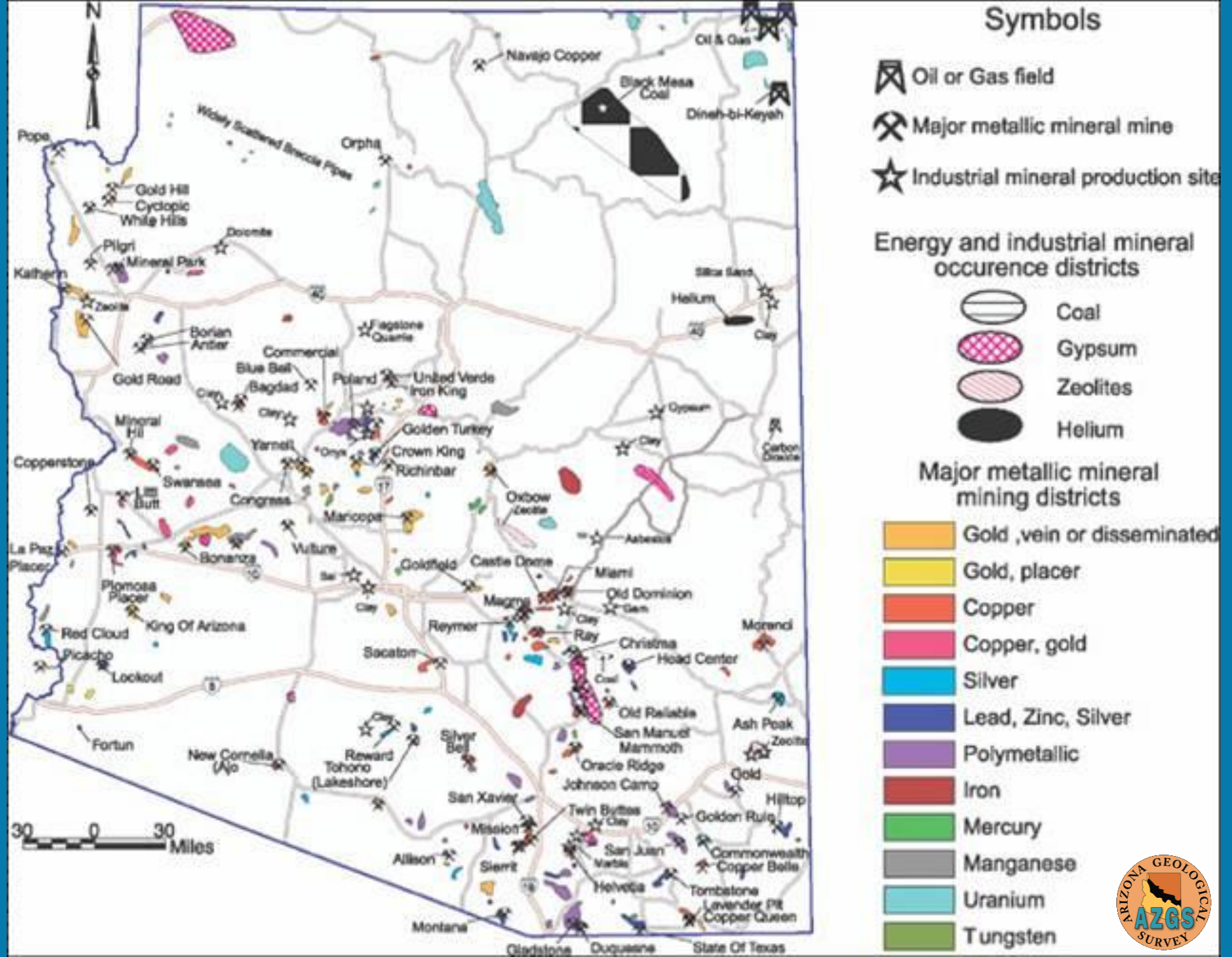
ARIZONA GEOLOGICAL SURVEY MINING SITE – LEVERAGING 100 YEARS OF MINING REPORTS, MAPS, AND PHOTOGRAPHS FOR THE NEXT 100 YEARS

Casey Brown & M. Lee Allison
Arizona Geological Survey

Geological Society of America, Vancouver, Canada, October 21, 2014

Arizona #2 mining state

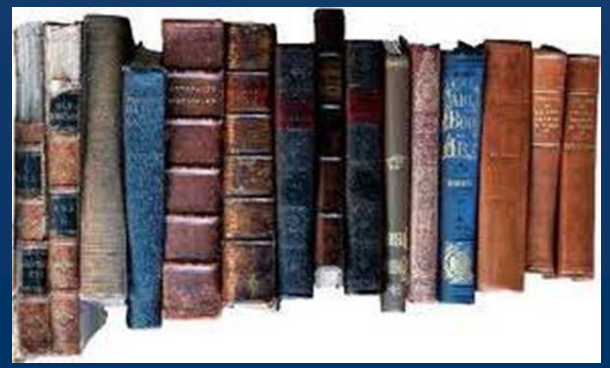


Merger with Arizona Geological Survey

2011

Arizona Geological Survey
Mining Records Digitization

- 23 Special Collections:
  - ~13,500 folders
  - 836,553 pages of records
- 6 Photo Collections: ~7,400 images
- 1 Theses Collection: 371 papers
- 1 Map Collection: ~10,000 maps

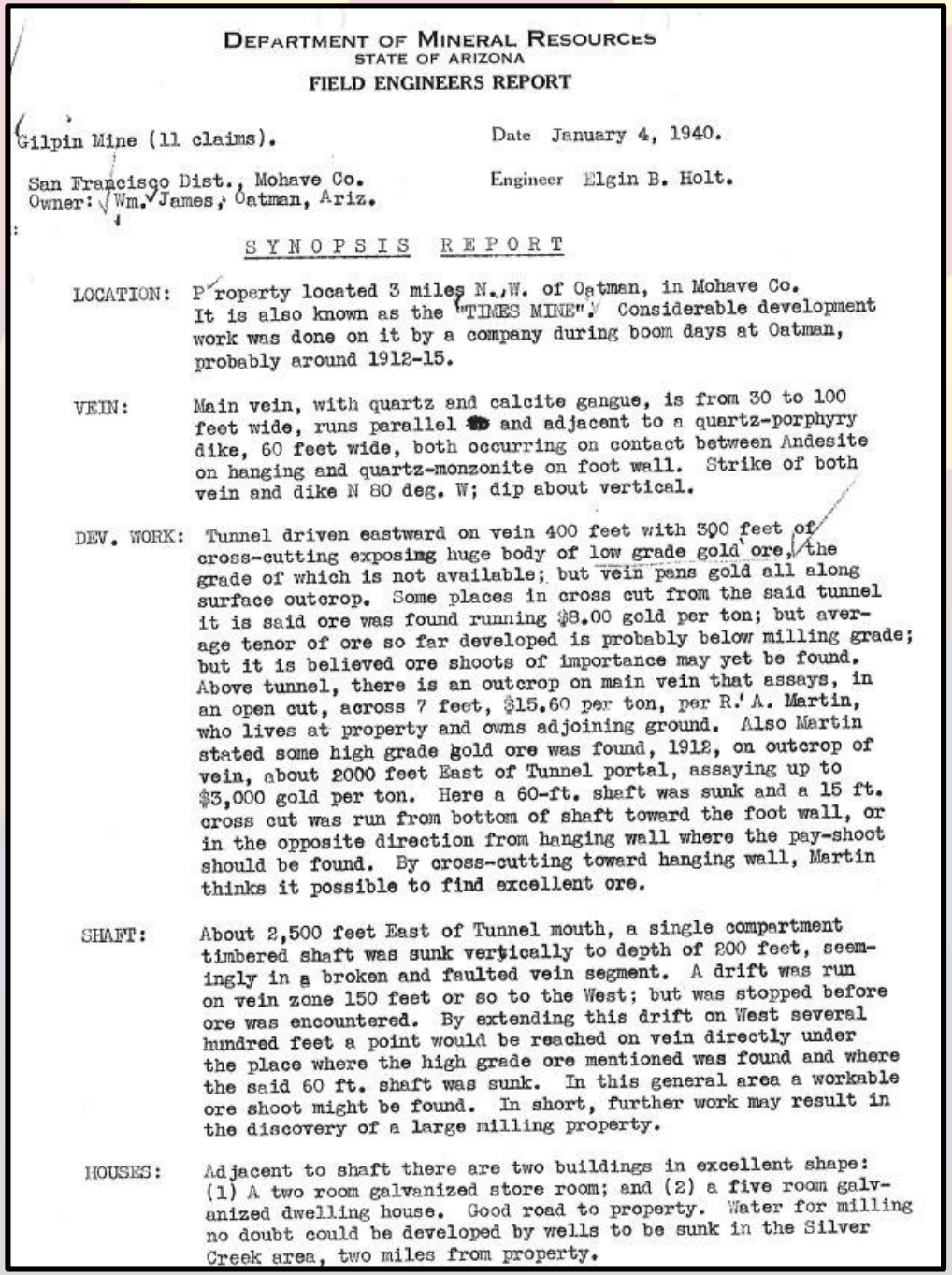



LaMesa
CALIFORNIA
QUALITY WINES
HUGGIES
Pampers
Super Mega Pack
6 GALLONS
6 GALLONS
6 GALLONS

A Sampling of Collections

- ADMMR Mine Files: 4,000 Arizona property files written by or collected by ADMMR staff
- ADMMR Maps: 5,000 Maps which may stand alone or are related to a property file
- ADMMR Photographs: 3,300 Photos from mine files, taken by staff or received as donation
- Anderson Mine Collection: Anderson Mine and Date Creek area information, 1960s - 1970s
- Cambior Exploration USA Inc.: Arizona mineral exploration files mostly for gold and copper
- Grover Heinrichs Mining Collection: Vice President of Heinrichs GEOEXploration Co., Tucson
- James Doyle Sell Mining Collection: SW Exploration Manager for ASARCO
- John Kinnison Mining Collection: Mineral Exploration Consultant during 1970s-1980s
- Reconstruction Finance Corporation Arizona records: In partnership with RFC, ADMMR performed analysis and review of applications for preliminary development loans
- Richard Mieritz Mining Collection: Worked at the Silver Bell for ASARCO during the late 1940s.

- original reports by field engineers
- promotional materials
- consulting engineer reports
- maps
- correspondence
- newspaper clippings



DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Gilpin Mine (11 claims). Date January 4, 1940.

San Francisco Dist., Mohave Co. Engineer Elgin B. Holt.
Owner: Wm. James, Oatman, Ariz.

SYNOPSIS REPORT

LOCATION: Property located 3 miles N.W. of Oatman, in Mohave Co. It is also known as the "TIMES MINE". Considerable development work was done on it by a company during boom days at Oatman, probably around 1912-15.

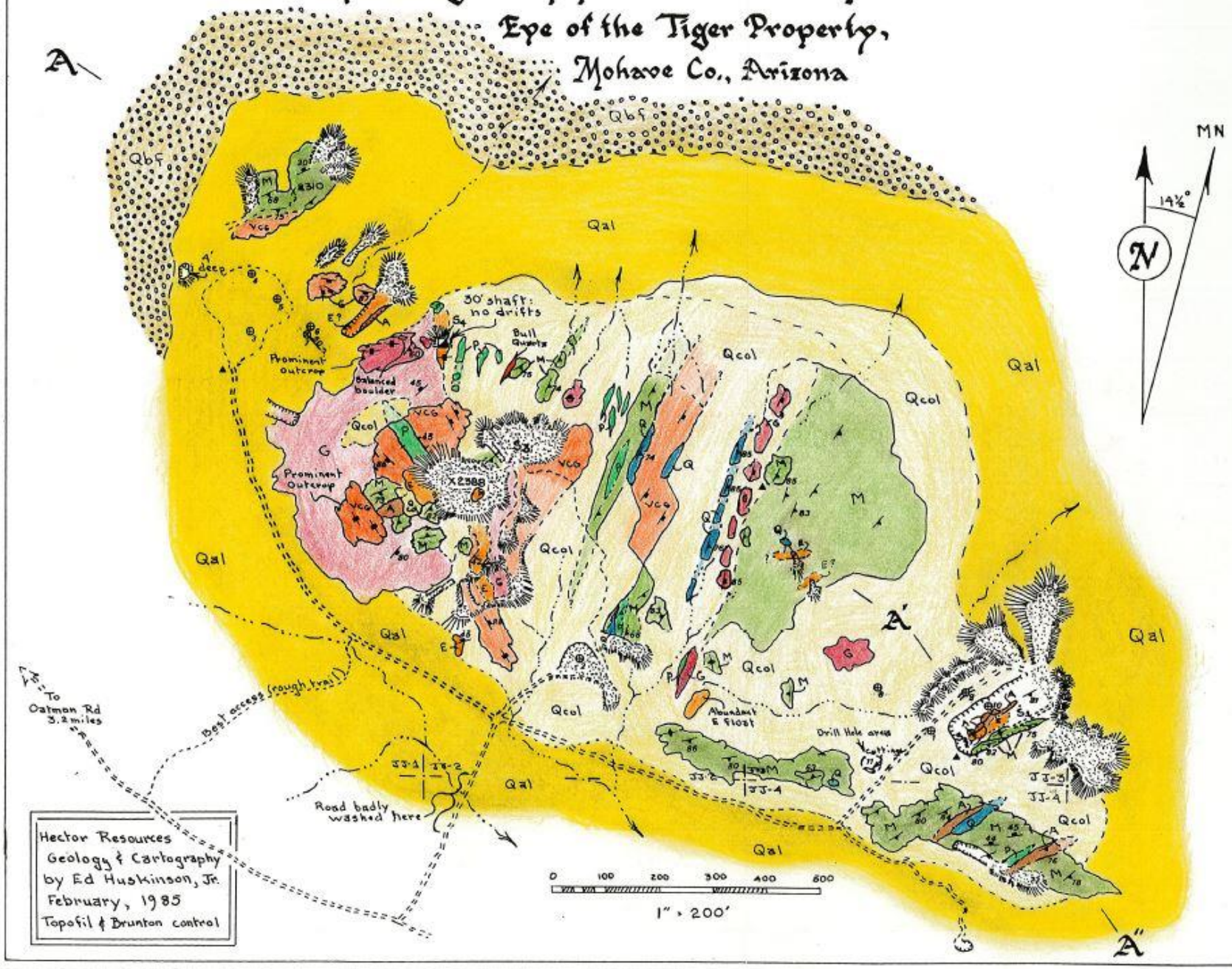
VEIN: Main vein, with quartz and calcite gangue, is from 30 to 100 feet wide, runs parallel and adjacent to a quartz-porphyry dike, 60 feet wide, both occurring on contact between Andesite on hanging and quartz-monzonite on foot wall. Strike of both vein and dike N 80 deg. W; dip about vertical.

DEV. WORK: Tunnel driven eastward on vein 400 feet with 300 feet of cross-cutting exposing huge body of low grade gold ore, the grade of which is not available; but vein pans gold all along surface outcrop. Some places in cross cut from the said tunnel it is said ore was found running $8.00 gold per ton; but average tenor of ore so far developed is probably below milling grade; but it is believed ore shoots of importance may yet be found. Above tunnel, there is an outcrop on main vein that assays, in an open cut, across 7 feet, $15.60 per ton, per R. A. Martin, who lives at property and owns adjoining ground. Also Martin stated some high grade gold ore was found, 1912, on outcrop of vein, about 2000 feet East of Tunnel portal, assaying up to $3,000 gold per ton. Here a 60-ft. shaft was sunk and a 15 ft. cross cut was run from bottom of shaft toward the foot wall, or in the opposite direction from hanging wall where the pay-shoot should be found. By cross-cutting toward hanging wall, Martin thinks it possible to find excellent ore.

SHAFT: About 2,500 feet East of Tunnel mouth, a single compartment timbered shaft was sunk vertically to depth of 200 feet, seemingly in a broken and faulted vein segment. A drift was run on vein zone 150 feet or so to the West; but was stopped before ore was encountered. By extending this drift on West several hundred feet a point would be reached on vein directly under the place where the high grade ore mentioned was found and where the said 60 ft. shaft was sunk. In this general area a workable ore shoot might be found. In short, further work may result in the discovery of a large milling property.

HOUSES: Adjacent to shaft there are two buildings in excellent shape: (1) A two room galvanized store room; and (2) a five room galvanized dwelling house. Good road to property. Water for milling no doubt could be developed by wells to be sunk in the Silver Creek area, two miles from property.

Preliminary Geological Map of the southern part of the claims at the Eye of the Tiger Property, Mohave Co., Arizona



Hector Resources
Geology & Cartography
by Ed Huskinson, Jr.
February, 1985
Topofil & Brunton control

Explanation

Culture

- JJ-2 / JJ-3 / JJ-1 = Claim post, with sideline directions
- = Access road
- = Area covered by 'dozer rubble
- ▲ = Station: Topofil & Brunton control
- x 2388 = Elevation: USGS 7.5' Quadrangle, Warm Springs SW, Mohave Co., Arizona
- = Shaft
- S_3 = Sample location
- D_2 = Drill hole (vertical) and number
- = Drill hole (angle hole), with bearing & angle
- = Dump and trench at adit; underground workings dashed
- = Prospect pit &/or dump
- = Drainage and direction

Geology

Quaternary (9-10 my or less)

- Qbf = Boulder field: mostly basalt boulders in alluvial fanglomerate
- Qcol = Colluvium: essentially in-place slope cover
- Qal = Alluvium: mixed soil, fanglomerate, etc.

Unconformity

Cretaceous (?) (poss. app. 125 my old)

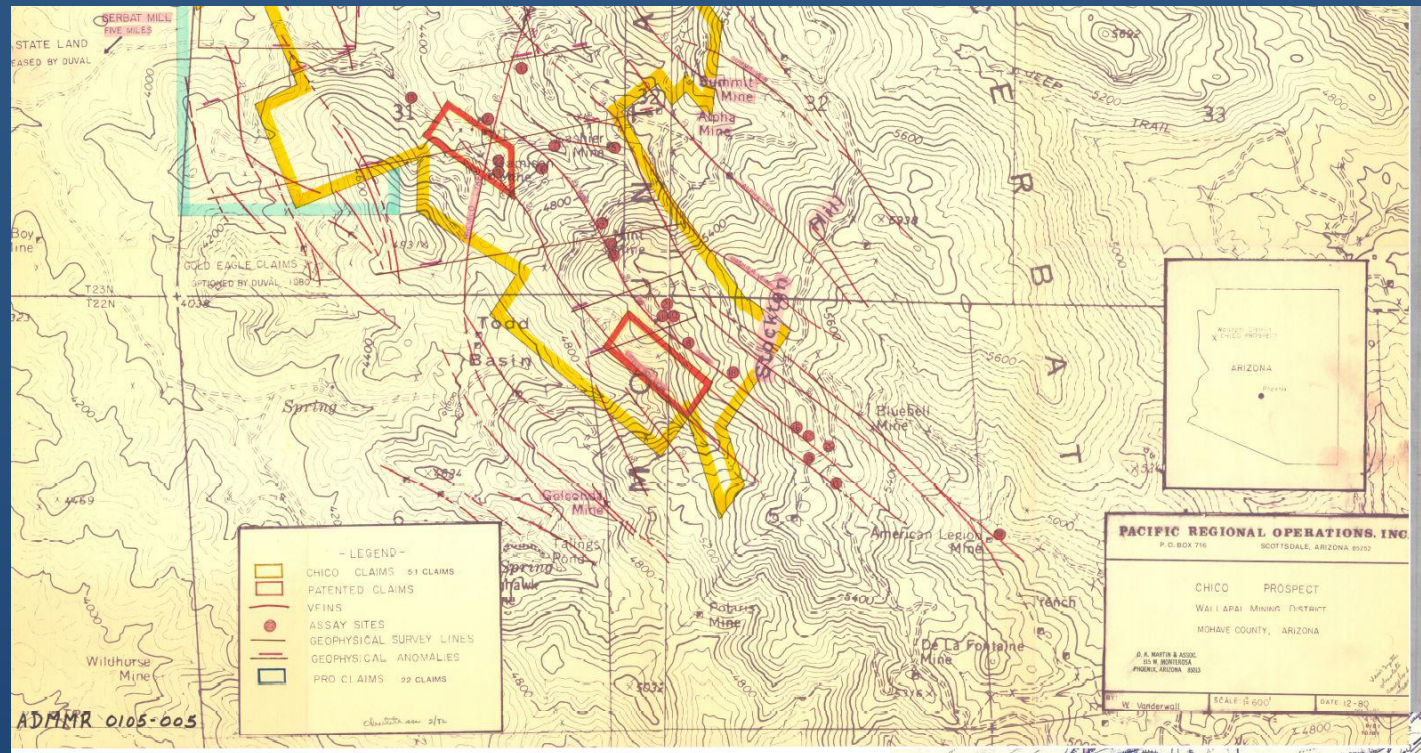
- E = Epiogenite (host rock for the gold)
- = Bull quartz (late stage ... poss. Tertiary?)

Unconformity

Precambrian (pr. Proterozoic: 700 my+)

- A = Amphibolite
- P = Pegmatite
- VCG = Granite: very coarse-grained
- G = Granite
- Q = Metaquartzite lens & pods
- M = Migmatite
- 45 = Lithologic contact, with direction and degree of dip where possible; dashed where covered or inferred.
- 69 = Strike and dip of foliation
- = Strike of vertical foliation
- 66 = Strike and dip of joint(s) or fracture set
- = Strike of vertical joint or fracture

Prepared for
Hector Resources Texas, Inc.



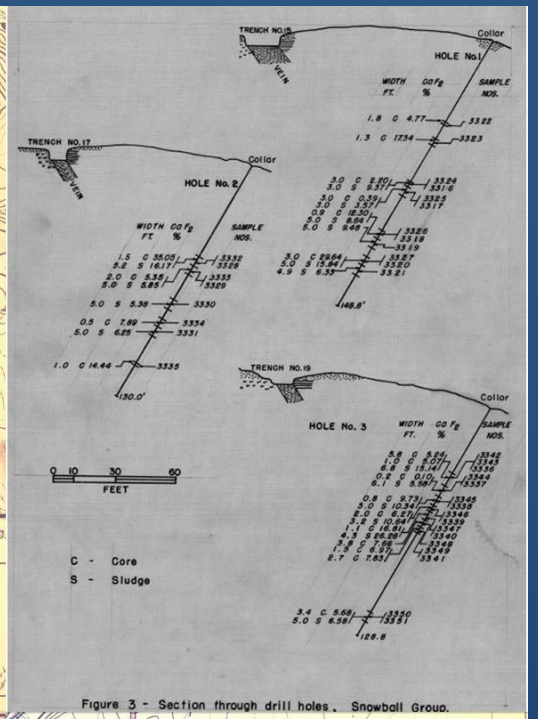
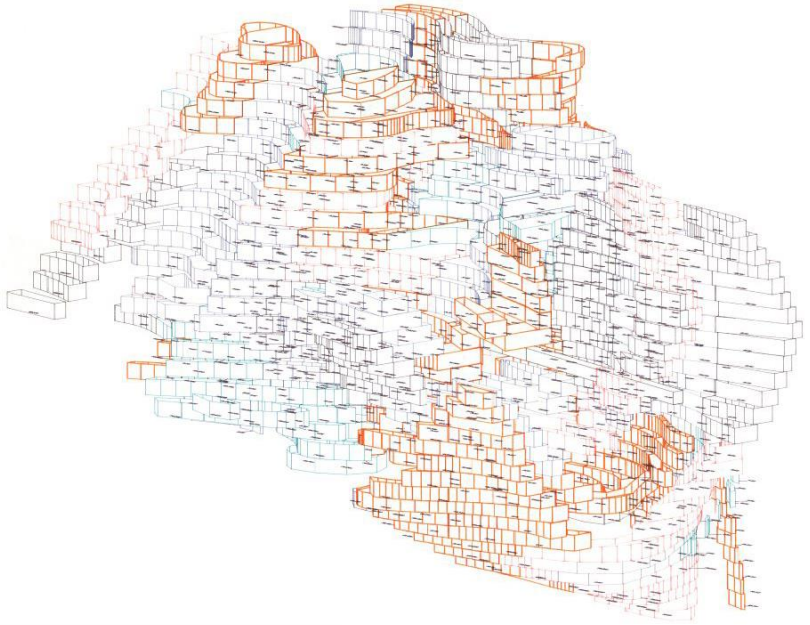
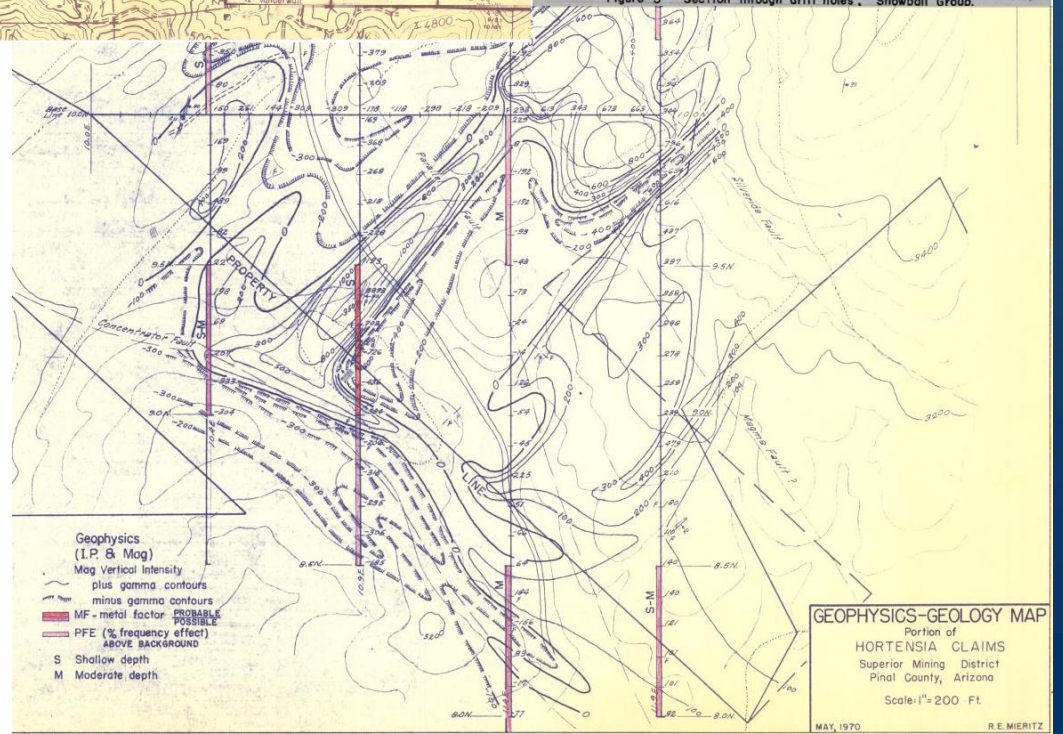


Figure 3 - Section through drill holes. Snowball Group.





Photographs

Search title and description

Search | Reset

Use filters to narrow results


Alpha Mine 1-10


Alpha Mine 1-11


Alpha Mine 153-25


Alpha Mine 153-26


Alpha Mine 153-27


Alpha Mine 153-28


Alpha Mine 153-29


Alpha Mine 1-8


Alpha Mine 1-9


Alvarado 7-10


Alvarado 7-4


Alvarado 7-5

Filter by collection:

- (-) ADMMR

Filter by theme keywords:

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- buildings (773)
- copper, sulfide (721)
- gold (584)
- adults (485)
- surface mining (479)
- dumps and tailings (382)
- machinery (360)
- shafts and adits (303)
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- silver (226)
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- power shovels (207)
- mining equipment (179)

Show more

Mineral Data Preservation Project

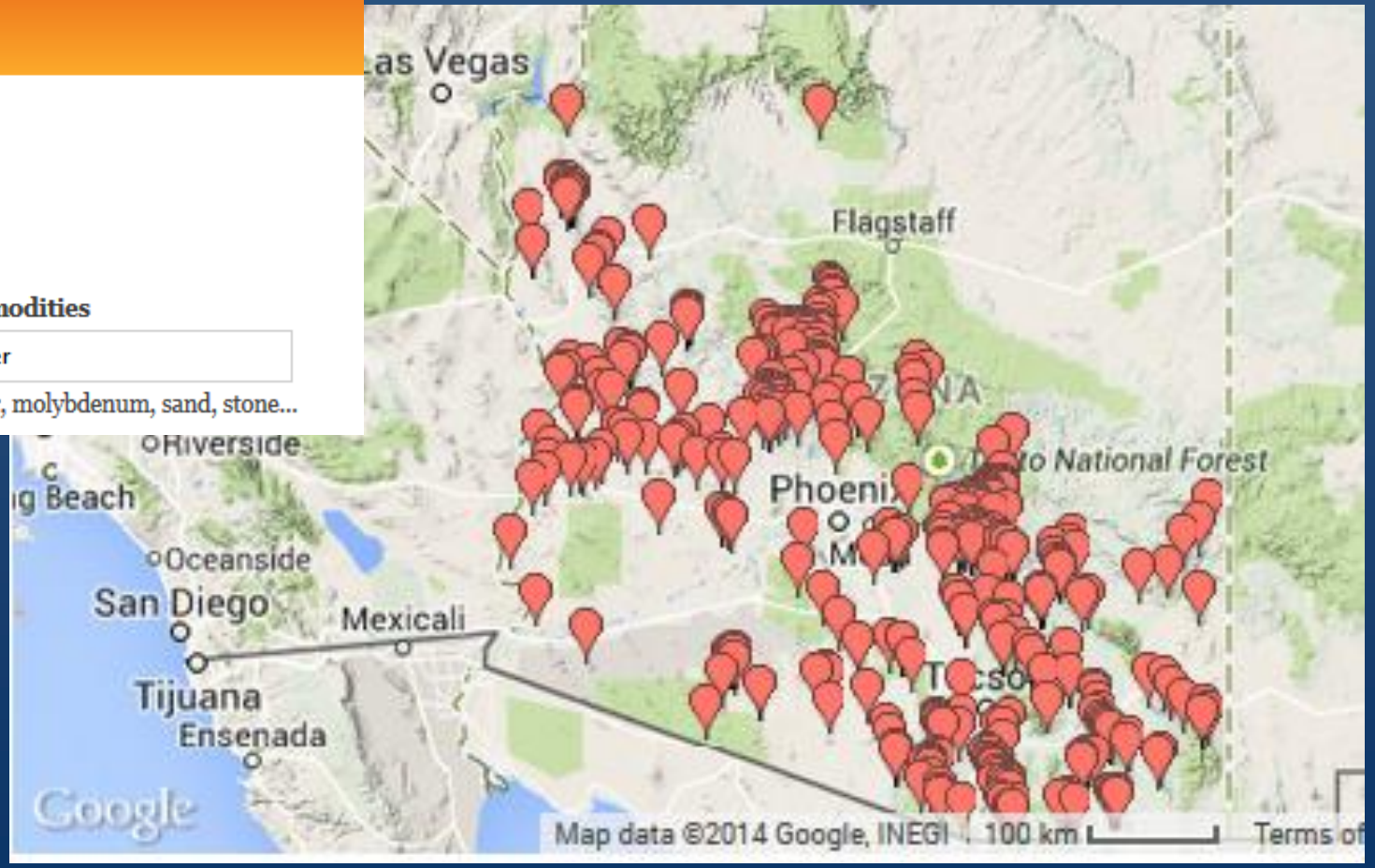
Arizona Geological Survey Mining Data

Home | Search | Map Search | Photos | About | Help

Home

Map Search (scroll down for results)

Title	Place Keywords	Commodities
		copper
mine names	counties, quads, alternate names ...	copper, molybdenum, sand, stone...



USGIN

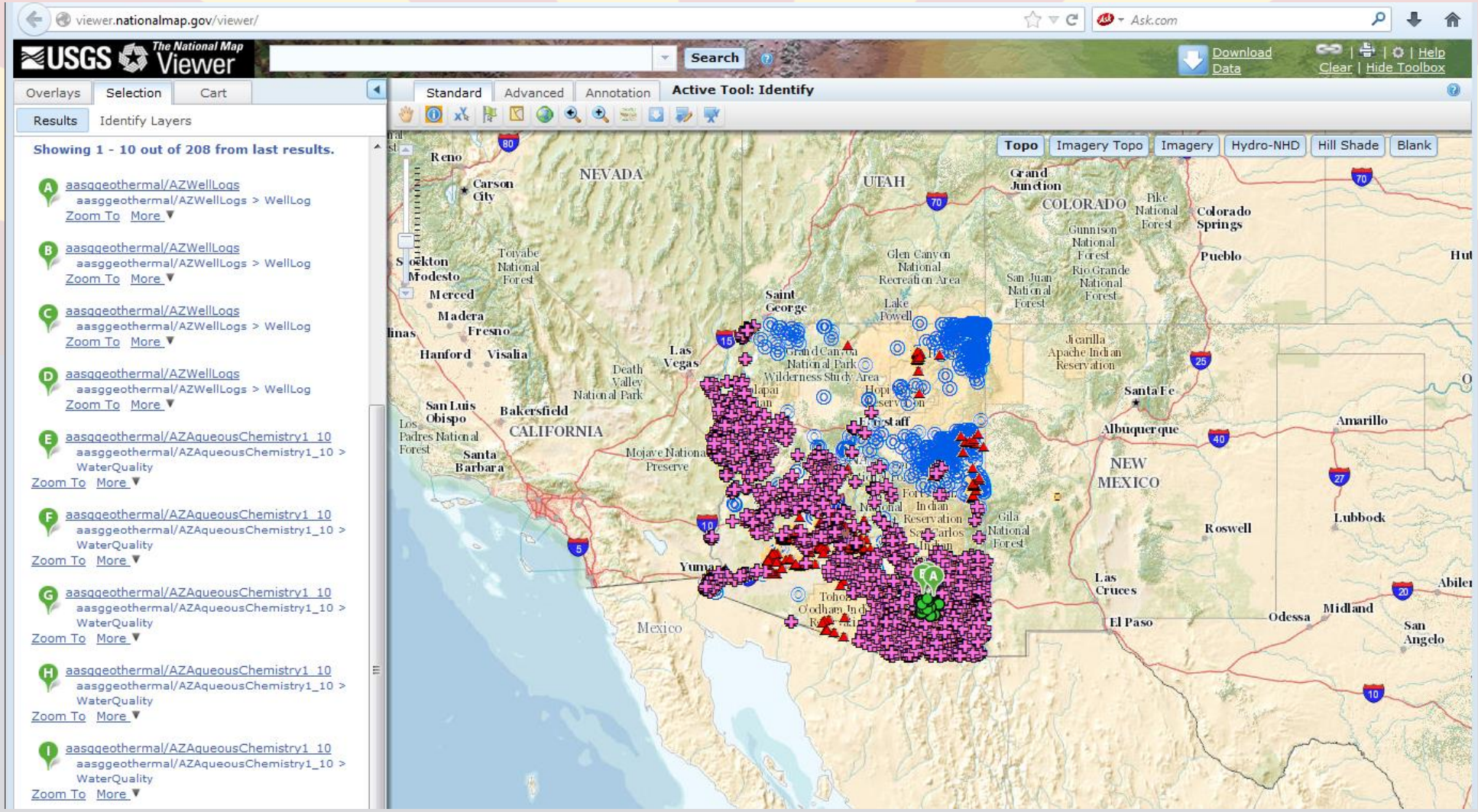
US Geoscience Information Network

Data integration framework
Open source, open access, interoperable
Nationwide federal-state-university partnership
Powering the National Geothermal Data System

USGS
science for a changing world

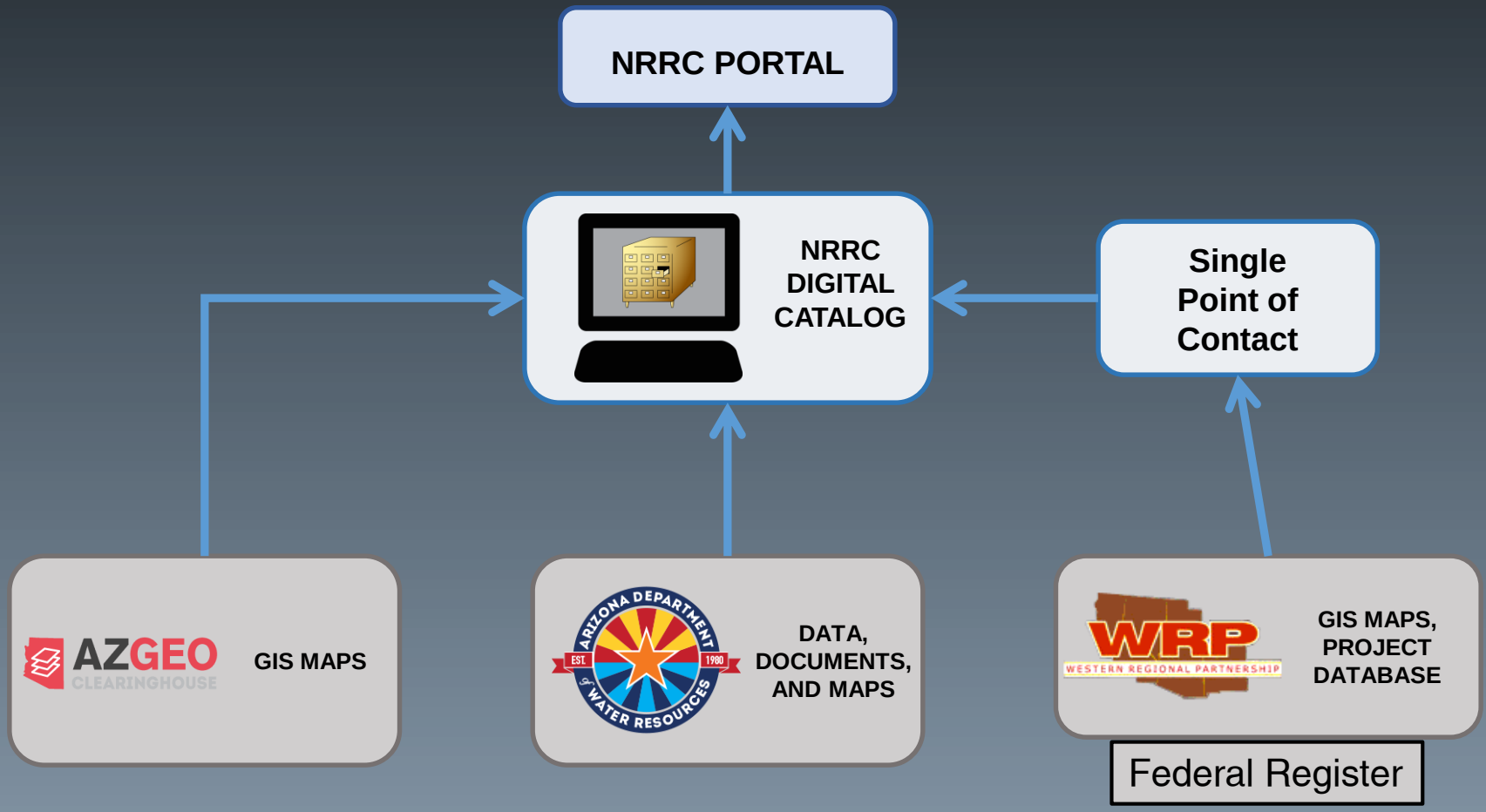
AASG
Association of American State Geologists

User Interface



Arizona Natural Resources Review Council Decision Support System

powered by USGIN



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