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Prospect and Submittal Report

(Hearst Mine)

Date: _____

Property Name: WINCHESTER MTN. JASPEROID

Township: 13S

County, State: Cochise, Arizona

Range: 23E

Date Examined: _____ By: WSD

Section: sec. 31

Reply and Date: _____

Quadrangle Name: _____

AMS Sheet: _____

Summary, Conclusions, Actions Recommended Warrants further work if siliceous ore poses no problem to production

Location and Accessibility Good to fair access

Owners and Intermediaries, Address, Phone, Zip _____

Property Description, Status _____

Terms _____

Previous Exploration and Production Several 1000 tons from open cuts - siliceous Au-Ag replacement

General Geology _____

Geology of Prospect* High contorted, faulted limestone of Pz-age, slivers of P_{eb}(?)

Mineralization* (Primary and Secondary) Silica, jarosite, minor py., hematite. Some Cu string; Mn mineralization on some fractures.

Geochem Results Good Au, low Ag. Ore very siliceous, probably flux-ore.

Exploration Recommended Test leachability.

Attachments _____

References _____

* Attach geologic map, sketch or otherwise, including examiner's observations with emphasis on mineralization and alteration and their relationships to other geological features. Other desirable attachments: Location map, property map, sample results, etc.

NICOR MINERAL VENTURES
Prospect and Submittal Report

(Hearst Mine)
Property Name: Winchester Mtn. Jasperoid Date: _____
County, State: Cochise, AZ Township: 13S
Date Examined: _____ By: WSD Range: 23E
Reply and Date: _____ Section: sec 31
Quadrangle Name: _____
AMS Sheet: _____

Summary, Conclusions, Actions Recommended Warrants further work if siliceous
ore poses no problem to production

Location and Accessibility good to fair access

Owners and Intermediaries, Address, Phone, Zip _____

Property Description, Status _____

Terms _____

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Au-Ag replacement

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Geology of Prospect* High contrasted, faulted ls of Pz-Age; silices of Pb(?)

Mineralization* (Primary and Secondary) silica, jarosite, minor py., hematite. Some Cu
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ALBUQUERQUE GEOCHEMICAL
 1000 Grove St. N.E.
 Albuquerque, N.M. 87110
 (505) 266-6713

DATE October 8, 1983

FOR Nicor

DATA SHEET

SAMPLE NO.	PPM GOLD	PPM SILVER	PPM COPPER	PPM LEAD	PPM ZINC
K- 601	.05	2.6			
602	*	1.6			
603	*	<.1	max Hat Mtn.		
604	*	<.1	/		
605	.08	3.0			
606	1.2	4.5			
607	.03	0.80	Winchester Mtns.		
608	.06	<.1			
609	*	<.1			
610	.10	<.1	/		
611	.51	2.4	Ray Pipe		
612	*	1.2	/		
613	*	<.1			
614	.06	<.1	E. swishelms		
615	*	0.2			
616	.86	0.2	/		
617	*	<.1			
618	*	0.2			
619	.05	<.1			
620	*	<.1	(Anonimo)		
621	*	<.1			
622	.03	<.1			
623	*	<.1			
624	.07	<.1			
625	*	0.2			

* Less than 0.01 ppm

WINCHESTER ROADLESS AREA, ARIZONA

By WILLIAM J. KEITH,¹ U.S. GEOLOGICAL SURVEY, and
TERRY J. KREIDLER, U.S. BUREAU OF MINES

SUMMARY

Results of geologic, geochemical, geophysical, and mining activity and production surveys in the Winchester Roadless Area in 1981 indicate little promise for the occurrence of metallic and nonmetallic or energy resources in the area. Volcanic rocks cover the area to a thickness of 1000 to 2000 ft and possibly more, thus preventing inspection and evaluation of the underlying rock.

CHARACTER AND SETTING

The Winchester Roadless Area, located in northwestern Cochise County, Arizona, consists of 22 sq mi of Coronado National Forest in the Winchester Mountains. The area lies approximately 15 mi northwest of Willcox, Arizona. Access to the boundary of the roadless area by county and ranch roads (with permission from the owners) is good on all but the west side, where roads generally end more than 1 mi from the boundary. Within the area the terrain is steep and rugged, with many vertical cliffs. Altitudes in the area range from about 5000 ft on the eastern flank of the mountains to 7631 ft at the summit of Reiley Peak. Heavy growth of manzanita inhibits accessibility at higher altitudes. Intermittent streams have incised steep-walled canyons into the volcanic rocks.

This study consisted of (1) field checking and modification of the existing geologic maps of the area (Creasey and others, 1961, 1981), (2) field examination of all mines, prospects, and mineralized areas in and adjacent to the Winchester Roadless Area, (3) sampling of bedrock and stream sediments from drainage basins for geochemical analysis; and (4) examination and interpretation of available aeromagnetic and gravity data. The results have been published by Keith and others (1982).

Rocks of the Winchester Roadless Area consist of a sequence approximately 1000 to 2000 ft thick of silicic ash-flow tuffs and lava flows capped by basaltic lava flows. The silicic volcanic rocks are assigned to the Galiuro Volcanics (Cooper and Silver, 1964). The Galiuro Volcanics is divided into four members, two of which occur in the Winchester Roadless Area. The lower or latite member consists of undifferentiated lava flows

and tuffs that range from latite to rhyolite in composition. This member is limited to the central and eastern parts of the area and dips approximately 30° northwest. The upper or rhyolite member consists of rhyolitic lava flows, dikes, and ash-flow tuffs. The rhyolite member is found in the central and western parts of the area and appears to thicken to the west. The Galiuro Volcanics, considered to be of Oligocene and Miocene age (Creasey and Krieger, 1978) is capped by younger basalt which consists of black vesicular lava flows and is confined to the central and western parts of the roadless area.

MINERAL RESOURCES

Twenty-eight sample sites were selected as representative of the drainage basins in and around the Winchester Roadless Area. The sites were sampled for rock, stream sediment, and panned concentrates. Samples were analyzed for 31 elements by six-step semiquantitative emission spectrography and for two additional elements (zinc and gold) using atomic absorption or colorimetry. The results of the analyses indicate a generally high concentration of lanthanum, niobium, lead, and tin in the panned concentrates. The lanthanum and niobium occur in zircon, sphene, and other minerals that weather out of the Galiuro Volcanics and have no significance for the assessment of resource potential. The tin and lead anomalies, which are from drainage basins near the boundary of the roadless area, are probably related to human contamination in areas where springs have been developed and where there has been a large amount of human traffic (hunters, picnickers, or ranchers).

Geophysical data (gravity, magnetic, and audio-magnetotelluric) indicate no significant features that

¹With contributions from Ronny A. Martin, USGS.

can be confidently interpreted as being directly related to mineral deposits. The Galiuro Volcanics have generally lower magnetic susceptibilities than the overlying basalt. A magnetic high along the southern border of the roadless area possibly reflects an underlying extension of the Precambrian intrusive rocks exposed to the south that have high magnetic susceptibility but are not known to be mineralized. A broad magnetic low in the northwest corner of the roadless area probably reflects a thin basaltic cover over a thick section of rocks with low magnetic susceptibility (probably an extension of the Galiuro Volcanics). Therefore, these magnetic anomalies do not in themselves indicate the presence of significant mineralization. Reconnaissance gravity data show a broad gravity low over the central roadless area, which probably indicates the area where ash-flow tuffs and lava flows are at their maximum thickness. Resistivity contrasts between audio-magnetotelluric soundings just south of the roadless area suggest the possibility of a northwest-trending fault along the west face of the Winchester Mountains. Low resistivities at depth for two soundings and an entire low-resistivity section for another sounding plus low magnetic intensity suggest that the rocks may have been altered along the postulated fault, although there is no surface evidence of mineralization.

The Winchester mining district lies approximately 3 to 4 mi south of the southern boundary of the roadless area. The district was originally worked for silver in the 1870's, but has had little or no activity since the 1920's (Keith, 1973). Gold mineralization southeast of the roadless area occurs in a sliver of Paleozoic limestone in fault contact with Precambrian granite but geologic evidence indicates that this feature does not extend into the roadless area at the surface. Geophysical data suggests

that it may extend into the roadless area in the face, buried under a thick pile of Tertiary volcanic

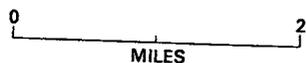
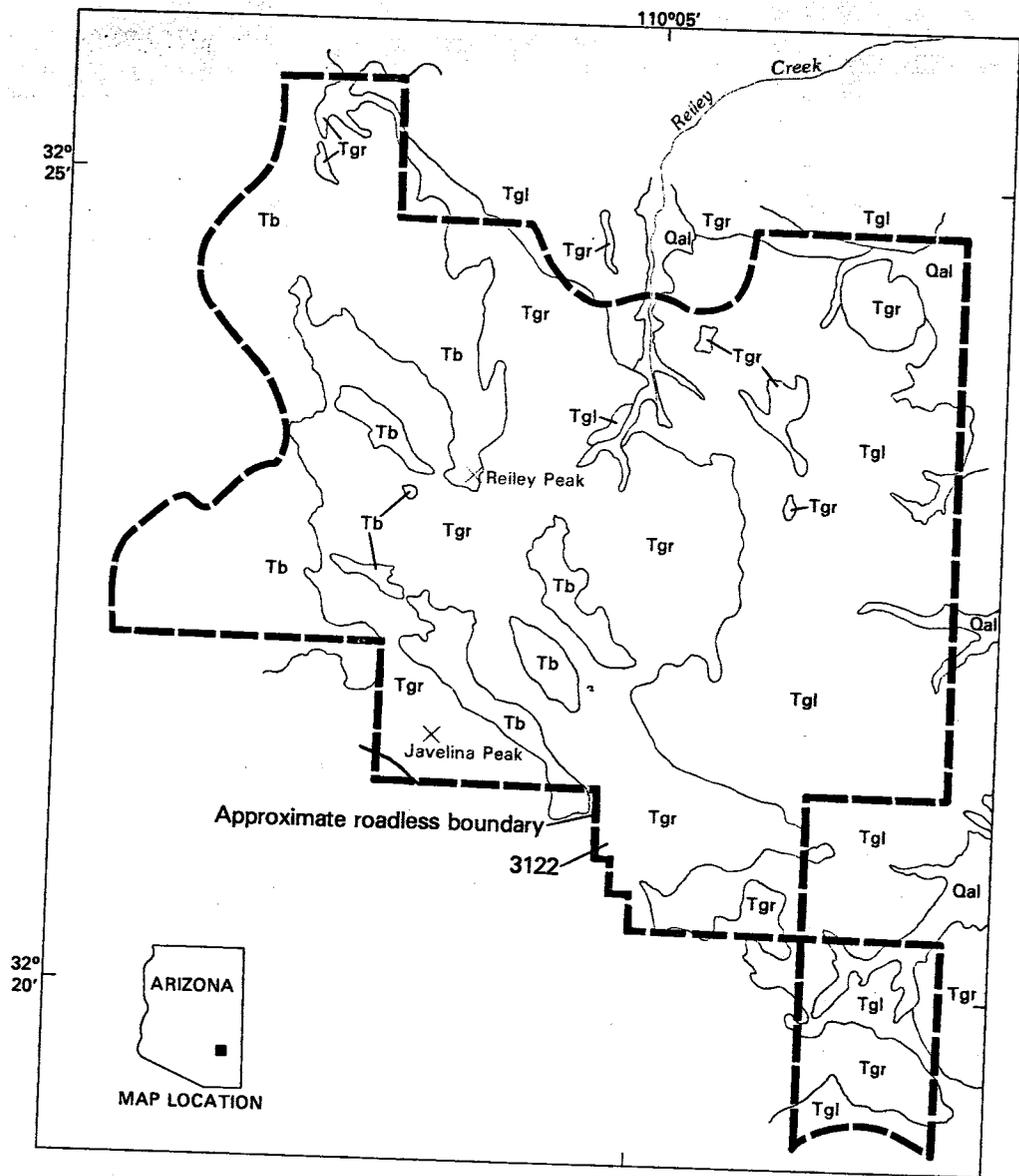
A search of the Cochise County records reveal no mining claims have been located in or near the roadless area. The only prospect in the roadless area is a small pit near the center of sec. 17, T. 12 S., R. 2 E. Mineralization was evident in the pit, which had been dug into volcanic rock.

Pan concentrates of stream-sediment samples near the Winchester Roadless Area assayed no detectable gold and silver values.

Geologic, geochemical, geophysical, and mineralogical surveys of the Winchester Roadless Area indicate that there is little promise for the occurrence of any metallic or nonmetallic resources.

REFERENCES

- Cooper, J. R., and Silver, L. T., 1964, *Geology and ore deposits of the Drazon quadrangle, Cochise County, Arizona*: U.S. Geological Survey Professional Paper 416, 196 p.
- Creasey, S. C., Jackson, E. D., and Gulbrandsen, R. A., 1961, *Geologic map of parts of the San Pedro and San Pedro Valleys, south-central Arizona*: U.S. Geological Survey Investigations Field Studies Map MF-238, scale 1:125,000.
- Creasey, S. C., Jinks, J. E., Williams, F. E., and Meeves, H. C., 1970, *Mineral resources of the Galiuro Wilderness and contiguous planning areas, Arizona, with a section on Aerial survey and interpretation*, by W. E. Davis: U.S. Geological Survey Bulletin 1490, 94 p.
- Creasey, S. C., and Krieger, M. H., 1978, *Galiuro Volcanics, Graham, and Cochise Counties, Arizona*: U.S. Geological Survey Journal of Research, v. 6, no. 1, p. 115-131.
- Keith, S. B., 1973, *Index of mining properties in Cochise County, Arizona*: Arizona Bureau of Mines Bulletin 187, 98 p.
- Keith, W. J., Martin, R. A., and Kreidler, T. J., 1982, *Mineral potential of the Winchester Roadless Area, Cochise County, Arizona*: U.S. Geological Survey Open-File Report 82-1028, 7 p.



EXPLANATION

Qal	Alluvium (Holocene and Pleistocene)	Tgl	Latite member, Galiuro Volcanics (Miocene and Oligocene)
Tb	Basalt (Tertiary)	—	Contact
Tgr	Rhyolite member, Galiuro Volcanics (Miocene and Oligocene)	—	Fault

Figure 36.—Winchester Roadless Area, Arizona.

- See Coronado N.F. map for access

Winchester District - Dragon Quad - Cochise Co., AZ

- Centers ~~are~~ in the Severin Canyon
- LS replaced by jasperoid
- Shear zones in PE granite are also silicified
- erratic concentrations of Ag
- Highest Ag values in yellow "oil" stained jasperoid
- Veins cutting LS in northern part of district that carry base metal sulfides - No Ag values
- NE corner jasperoids in an echelon pattern
Ag reportedly low values

Sam Ponell Blown up
Dragon 15'
Winchester 15'

8/30/83

Sec. 32 T 23E

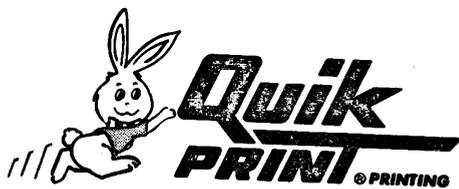
Sec. 31

Sec. 32 T 13S R 23E

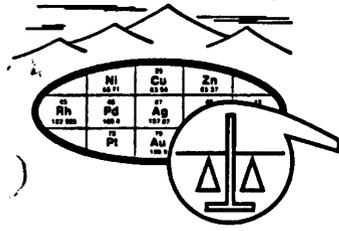
AZ State Land Office
Winchester Mtns. Taperoid
Area

- expired - Sec. 31
 - expired - Sec. 32
- } check this out

No current permits or Applications



881-2927
 5103 Menaul Blvd. NE
 Free Pick Up
 And Delivery



SKYLINE LABS, INC.
 P.O. Box 50106 • 1700 West Grant Road
 Tucson, Arizona 85703
 (602) 622-4836

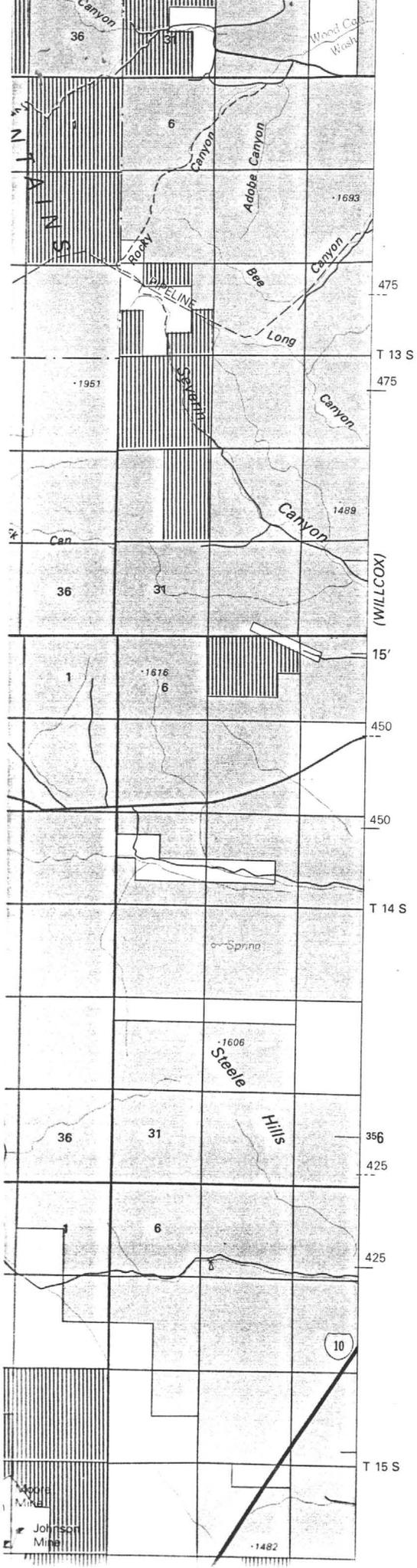
JOB NO. UGH 001
 April 22, 1982
 PAGE 2

ITEM	SAMPLE NO.	Au ppm	Ag ppm	Cu ppm	Pb ppm
26	G178	<.02	.6	<5.	155.
27	G179	.46	>350.0 * 26.8	520.	11000.
28	G180	.46	330.0	45.	470.
29	G181	.72	>350.0 * 19.9	110.	370.
30	G182	.07	.8	<5.	5.
31	G183	5.00	2.2	5.	10.
32	G184	.75	<.2	<5.	5.
33	G185	.92	.4	5.	<5.
34	G186	.05	.2	<5.	<5.
35	G187	.30	.2	<5.	5.
36	G188	.03	<.2	<5.	5.
37	G189	.53	<.2	<5.	5.
38	G190	<.02	.2	<5.	<5.
39	G191	<.02	<.2	<5.	<5.
40	G192	.03	<.2	9.7 10.	5.
41	G193	.12	80.0	2.34 10.	490.
42	G194	.08	30.0	.88 60.	230.
43	G195	.82 .024	70.0	2.04 <5.	75.
44	G196	<.02	4.6	<5.	15.
45	G197	.88 .026	330.0	9.64 300.	1300.
46	G198	<.02	.4	560.	<5.
47	G199	.76	6.0	20000.	15.
48	G200	.26	5.0	14000.	5.
49	G201	2.90	120.0	47000.	1900.
50	G202	.83	45.0	2400.	1800.

*Wore also
 assayed for
 Zn, As, Sb.*

*Winchester
 Mus.*

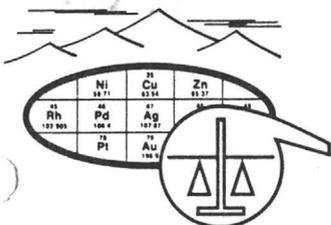
*should
 fire assay*



- Tennessee Valley Authority NONE
- Patented Lands [White Box]
- State Lands [Stippled Box]
- Water and Power Resources Service NONE
- Power Withdrawals and Classifications [Vertical Lines Box]
- Federal Agency Protective Withdrawals [Wavy Lines Box]
- Public Water Reserves NONE
- Department of Energy (DOE) NONE
- Oregon & California Lands (O&C Lands) Administered By US Forest Service NONE
- Radio & Air Facilities NONE
- Miscellaneous NONE
- State, County, City, Wildlife, Park and Outdoor Recreation Areas [Wavy Lines Box]
- Acquired Lands (By Administering Agency) NONE

MINERALS OWNED BY THE FEDERAL GOVERNMENT

- | <i>Mineral Rights</i> | <i>Symbol</i> |
|---|----------------------|
| All minerals | [Vertical Lines Box] |
| Coal only | [NONE] |
| Oil and Gas only | [Diagonal Lines Box] |
| Oil, Gas, and Coal only | [NONE] |
| Other | [NONE] |
| No symbol indicates no Federal minerals | [White Box] |



SKYLINE LABS, INC.

P.O. Box 50106 • 1700 West Grant Road
 Tucson, Arizona 85703
 (602) 622-4836

JOB NO. UGH 001
 April 22, 1982
 PAGE 2

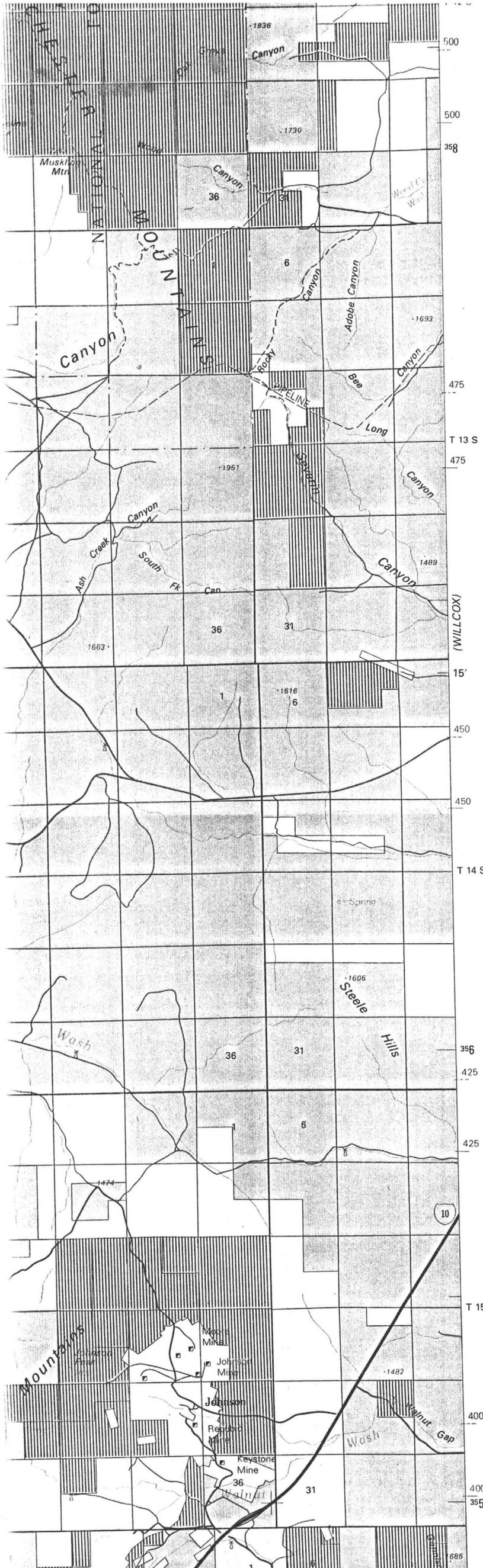
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29	G181	.72	>350.0 * 19.9	110.	370.	
30	G182	.07	.8	<5.	5.	
31	G183	5.00	2.2	5.	10.	
32	G184	.75	<.2	<5.	5.	
33	G185	.92	.4	5.	<5.	
34	G186	.05	.2	<5.	<5.	
35	G187	.30	.2	<5.	5.	
36	G188	.03	<.2	<5.	5.	
37	G189	.53	<.2	<5.	5.	
38	G190	<.02	.2	<5.	<5.	
39	G191	<.02	<.2	<5.	<5.	
40	G192	.03	<.2	10.	5.	
41	G193	.12	80.0	2.34	490.	
42	G194	.08	30.0	.88	230.	
43	G195	.82	.024	70.0	2.04	75.
44	G196	<.02	4.6	<5.	15.	
45	G197	.88	.026	330.0	9.64	1300.
46	G198	<.02	.4	560.	<5.	
47	G199	.76	6.0	20000.	15.	
48	G200	.26	5.0	14000.	5.	
49	G201	2.90	120.0	47000.	1900.	
50	G202	.83	45.0	2400.	1800.	

*Wore also
assayed for
Zn, As, Sb.*

*Winchester
Mtns.*

*should
fire assay*

WT



- Indian Lands or Reservations
- Military Reservations and Withdrawals
Corps of Engineers
- Wildlife Refuges NONE
- Bankhead-Jones Land Use Lands
(L.U. Lands) NONE
- Tennessee Valley Authority NONE
- Patented Lands
- State Lands
- Water and Power Resources Service NONE
- Power Withdrawals and
Classifications
- Federal Agency Protective
Withdrawals
- Public Water Reserves NONE
- Department of Energy
(DOE) NONE
- Oregon & California Lands (O&C
Lands) Administered By US Forest
Service NONE
- Radio & Air Facilities NONE
- Miscellaneous NONE
- State, County, City, Wildlife,
Park and Outdoor Recreation Areas
- Acquired Lands
(By Administering Agency) NONE

**MINERALS OWNED BY
THE FEDERAL GOVERNMENT**

- | <i>Mineral Rights</i> | <i>Symbol</i> |
|--|--|
| All minerals | |
| Coal only | NONE |
| Oil and Gas only | |
| Oil, Gas, and Coal only | NONE |
| Other | NONE |
| No symbol indicates no
Federal minerals | |

NOTE TO MAP USERS



GRAHAM CO
COCHISE CO

T 12 S

500

500

T 13 S

(TUCSON)

15'

450

450

T 14 S

356

T 15 S

36

31

36

31

1

6

1

6

1304

1309

1291

1282

1277

1296

1374

1735

Square Mtn

Winchester Mts

Pine Canyon

PIPELINE

Cochise County Airport

666

10

Red Bird

Hills

TRAIL

S

U

T

H

U

R

Spike-E

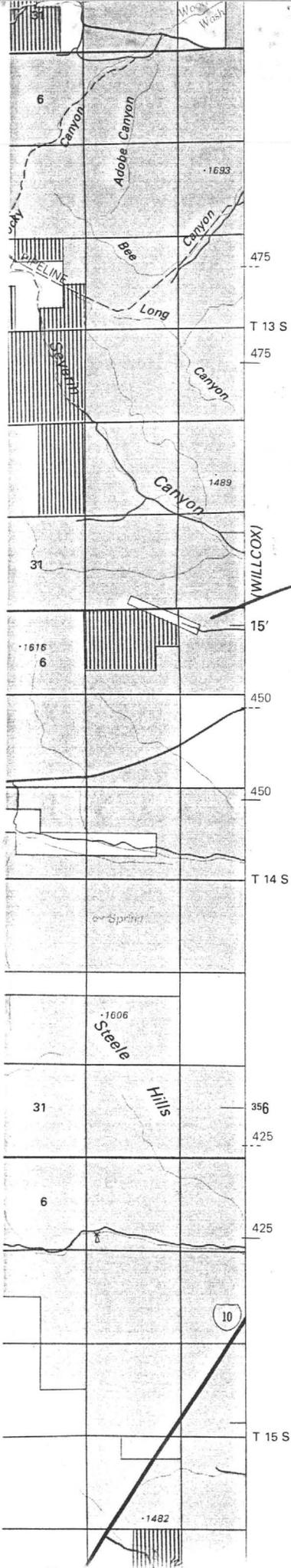
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WILCOX

WILCOX

DOMING TRAIL



Patented Lands	
State Lands	
Water and Power Resources Service . .	
Power Withdrawals and Classifications.	
Federal Agency Protective Withdrawals	
Public Water Reserves	
Department of Energy (DOE).	
Oregon & California Lands (O&C Lands) Administered By US Forest Service	
Radio & Air Facilities	
Miscellaneous	
State, County, City, Wildlife, Park and Outdoor Recreation Areas. .	
Acquired Lands (By Administering Agency)	

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<i>Mineral Rights</i>	<i>Symbol</i>
All minerals	
Coal only	
Oil and Gas only	
Oil, Gas, and Coal only	
Other	
No symbol indicates no Federal minerals	