

Form 3860-10
(February 1987)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Mineral Survey Number
4816

State
Arizona

Land District
Arizona

FIELD NOTES

Of the Survey of the Mining Claim of *(name and address of claimant)*

ASARCO Incorporated
P. O. Box 5747
Tucson, AZ 85703-0747

Known as the *(name of group, if any)*

Helvetia Group

NAME OF CLAIM(S)

NAME OF LOCATION	DATE			BLM MINING CLAIM SERIAL NUMBER
	LOCATED AND AMENDED	RECORDED WITH COUNTY	RECORDED WITH BLM	
GUNSIGHT NO. 33 lode	6-26-62	7-23-62	3-15-79	A MC 36119

LOCATION OF CLAIM(S)

Mining district Helvetia			County Pima	
Section 36	Township 18 South	Range 15 & 16 East	Meridian Gila & Salt River	Survey under order dated 12-18-80, 1-23-89
Survey commenced 12-20-80		Survey completed 10-1-81	Name of Mineral Surveyor Harvey W. Smith	

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FEET

This survey was made with a Swiss Kern Theodolite, Model DKM 1, No. 77769, having horizontal and vertical circles, 50 mm. in diam. The circles are graduated in degrees and 20-minute increments. An optical micrometer, adjustable to the vertical and horizontal circles, permits the reading of angles direct to ten-second accuracy and estimating to one-second accuracy. The instrument was in good condition at the time of the survey and all adjustments were in good order.

All azimuths in this record were determined by the method of horizontal-angles-right referred to the meridian determined by the following observation:

August 27, 1981, at Cor. No. 2 of the GUNSIGHT NO. 33 lode, in latitude $31^{\circ}49'24.4''N.$, and longitude $110^{\circ}45'14.5''W.$, elevation 5,200 ft. above sea level and temperature $87^{\circ}F.$, make a series of six altitude observations on the sun for azimuth at approximately equal time intervals, three each with the telescope in direct and reversed positions, observing opposite limbs of the sun, and reading the horizontal angle right from a reference point about 600 ft. west S.E. to the sun.

Mean time of observation,
105th meridian standard
time = $7^h 43^m 49^s$ a.m.

Declination of sun at mean
time of observation = $9^{\circ}57'18.4''N.$

Mean observed vertical
angle to sun's center = $26^{\circ}56'02''$

Mean horizontal angle from
reference point clockwise
to sun's center = $182^{\circ}06'28''$

True bearing to reference
point = $N.87^{\circ}07'36''W.$

The lines were measured with a Lufkin steel tape, 300 ft. in length, graduated every foot for 299 ft. and the remaining foot graduated to tenths and hundredths: the tape was compared to an Invar standard tape at the beginning of the survey and found to be correct. In addition to the steel tape,

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FEET	
542.	Center of unimproved dirt road, 16. ft. wide, bears N.80°E. and S.80°W.
1,114.50	Center of unimproved dirt road, 16. ft. wide, bears N.45°E. and S.45°W.
1,499.50	<p>Cor. No. 2, identical with Cor. No. 4, M.S. No. 4718 GUNSIGHT NO. 34 lode.</p> <p>Found an iron post, 3/4 in. diam., 12 ins. above ground, in a concrete and rock base, with a brass cap firmly secured to the iron post, mkd. X G.34 4 U.S.M.S. 4718, to which I add marks G.33 2 U.S.M.S. 4816; from which</p> <p style="padding-left: 40px;">A wood post, 4 x 4 ins. in size, 4 ft. above ground, sets adjacent to the iron post.</p> <p>No local bearing objects or bearing trees available.</p> <p style="text-align: center;">Thence N.87°07'36"W.</p>
299.73	Lode line; discovery point bears N.2°52'30"E., 100.00 ft. dist.
332.	Center of unimproved dirt road, 16. ft. wide, bears N.43°E. and S.43°W.
487.91	Intersect line 2-3, M.S. No. 4718 SANTA RITA #28 lode, at a point from which Cor. No. 2 bears N.2°51'15"E., 1,403.20 ft. dist.
599.73	<p>Cor. No. 3.</p> <p>Set an iron post, 30 ins. long, 3/4 in. diam., 12 ins. in the ground, in a concrete and rock base, with a brass cap firmly secured to the iron post, mkd. X G.33 3 U.S.M.S. 4816; from which</p> <p style="padding-left: 40px;">A wood post, 4 x 4 ins. in size, 4 ft. above ground, sets adjacent to the iron post.</p> <p>No local bearing objects or bearing trees available.</p> <p style="text-align: center;">Thence N.2°52'30"E.</p>
620.	Center of unimproved dirt road, 16. ft. wide, bears N.66°E. and S.66°W.

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FEET	
1,412.24	Intersect line 1-2, M.S. No. 4718 SANTA RITA #28 lode, common with line 3-4 SANTA RITA #15 lode of the same survey, at a point from which Cor. No. 2, identical with Cor. No. 3 of the SANTA RITA #15 lode, bears S.82°28'49"E., 111.67 ft. dist.
1,499.50	<p>Cor. No. 4.</p> <p>Set an iron post, 30 ins. long, 3/4 in. diam., 12 ins. in the ground, in a concrete and rock base, with a brass cap firmly secured to the iron post, mkd. X G.33 4 U.S.M.S. 4816; from which</p> <p>Cor. No. 3, M.S. No. 4718 SANTA RITA #15 lode, identical with Cor. No. 2, SANTA RITA #28 lode of the same survey, bears S.46°15'29"E., 147.18 ft. dist.</p> <p>A wood post, 4 x 4 ins. in size, 4 ft. above ground, sets adjacent to the iron post.</p> <p>No local bearing objects or bearing trees available.</p> <p style="text-align: center;">Thence S.87°07'36"E.</p>
114.54	Intersect line 3-4, M.S. No. 4718 SANTA RITA #16 lode, at a point from which Cor. No. 3 bears S.9°02'W., 51.62 ft. dist.
121.83	Intersect line 2-3, M.S. No. 4718 SANTA RITA #15 lode, at a point from which Cor. No. 3, identical with Cor. No. 2 of the SANTA RITA #28 lode of the same survey, bears S.9°06'52"W., 96.88 ft. dist.
300.00	Lode line; discovery point bears S.2°52'30"W., 1,399.50 ft. dist.
599.73	Cor. No. 1, and place of beginning.
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AREAS Acres	
Total area, GUNSIGHT NO. 33 lode ----- 20.645	
Area in conflict with:	
M.S. No. 4718 SANTA RITA #15 lode ----- 0.246	

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FEET	AREAS	Acres
	M.S. No. 4718 SANTA RITA #16 lode -----	2.065
	M.S. No. 4718 SANTA RITA #16 lode, exclusive of its conflict with SANTA RITA #15 lode of the same survey -----	2.056
	M.S. No. 4718 SANTA RITA #28 lode -----	3.605
	LOCATION	
	This survey is located in the NW and SW 1/4s sec. 31 and NE and SE 1/4s sec. 36, T.18 S., Rs.15 & 16 E., G.& S.R.M.	
	The survey of the GUNSIGHT NO. 33 lode is identical with the respective location as marked on the ground.	
	EXPENDITURES	
	The improvements and the value of the labor and improvements made upon or for the benefit of each of the lode locations embraced in said mining claim by the claimant or its grantors are as follows:	
No. 1	The discovery point of the GUNSIGHT NO. 33 lode is on the lode line, 100. ft. from a point on line 2-3, 299.73 ft. from Cor. No. 2, a post and notice. Value, None.	
	OTHER IMPROVEMENTS	
	Access roads traverse the common group of 50 claims M.S. No. 4815 and M.S. Nos. 4817, 4818, 4819, 4820 and 4821, (all unapproved) and provide access to the lode of this survey. Claimant herein	
	OTHER CORNER DESCRIPTIONS AND SUPPLEMENTAL DATA	
	M.S. No. 4718 GUNSIGHT NO. 34 lode: Cors. Nos. 1 and 4, identical with Cors. Nos. 1 and 2 respectively of the GUNSIGHT NO. 33 lode of this survey, described above. Lines 1-2 and 3-4 are correct as approved. Line 4-1, common with line 1-2 GUNSIGHT NO. 33 lode of this survey, described above.	

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M.S. No. 4718 SANTA RITA #15 lode: Cors. Nos. 2, 3 and 4 are monumented with 3/4 in. pipe with a brass cap, 1 ft. above ground, firmly set, properly mkd. Lines 2-3 and 3-4 are correct as approved.

M.S. No. 4718 SANTA RITA #16 lode: Cors. Nos. 2, 3 and 4 are monumented with 3/4 in. pipe with a brass cap, 1 ft. above ground, firmly set, properly mkd. Lines 2-3 and 3-4 are correct as approved.

M.S. No. 4718 SANTA RITA #28 lode: Cors. Nos. 1, 2 and 3 are monumented with 3/4 in. pipe with a brass cap, 1 ft. above ground, firmly set, properly mkd. Lines 1-2 and 2-3 are correct as approved.

 MEMORANDUM

None

 FIELD ASSISTANTS

Name	Capacity
Kent Miller	Assistant Instrumentman
Eric O'Neil	Rodman-Chainman

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CERTIFICATE OF SURVEYOR

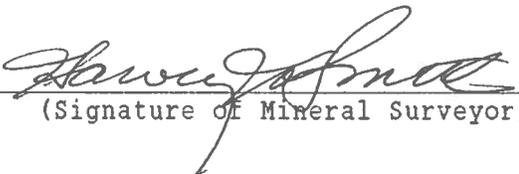
Name of Mineral Surveyor	Date
Harvey W. Smith	February 26, 1990

I HEREBY CERTIFY That in pursuance of an order received from the Arizona State Office, Bureau of Land Management, at Phoenix, Arizona, dated December 18, 1980 and amended January 23, 1989, I have carefully executed the survey of the claim of ASARCO Incorporated, known as the GUNSIGHT NO. 33 lode, situated in surveyed sections 36 and 31, Townships 18 South, Ranges 15 and 16 East (respectively), Gila and Salt River Meridian, in the State of Arizona.

This survey, designated as number 4816, has been executed by me and under my direction and has been made in strict conformity with said order, the Manual of Instructions for the Survey of Public Lands of the United States, and in specific manner described in the foregoing field notes.

I FURTHER CERTIFY That the labor expended and improvements made upon and for the benefit of the GUNSIGHT NO.33 lode location embraced in the said mining claim by claimant(s) or its grantors are fully stated in my report. The character, extent, location, and itemized value are specified in full detail. No portion of, or interest in, said labor and improvements so credited to this claim has been included in the estimate of expenditures upon any other claim.

Scottsdale, Arizona
(Location)


(Signature of Mineral Surveyor)

Title 18, U.S.C. section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

CERTIFICATE OF APPROVAL

Arizona State Office
Phoenix, Arizona
September 12, 1990

The foregoing field notes of mineral survey number 4816, in surveyed sections 36 and 31, Townships 18 South, Ranges 15 and 16 East (respectively), Gila and Salt River Meridian, in the State of Arizona, executed by Harvey W. Smith, Mineral Surveyor, under order dated December 18, 1980 and amended January 23, 1989, having been critically examined and the necessary corrections made prior to their certification by the surveyor, the field notes and the survey therein described are hereby approved.

James P. Kelley
(Authorized Signature)

Chief Cadastral Surveyor of Arizona
(Title)

~~CERTIFICATE OF TRANSCRIPT~~

~~I HEREBY CERTIFY That the foregoing transcript of field notes of the above-described mineral survey number 4816 is a true copy of the original field notes.~~

~~_____
(Authorized Signature)~~

~~Chief Cadastral Surveyor of Arizona
(Title)~~