



CONTACT INFORMATION

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Arizona Department of Mines and Mineral Resources Mining Collection

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PRINTED: 01/05/2004

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: MANSFIELD MINE

ALTERNATE NAMES:

SWEET
BLACK CAP
RUBY
RUPERT
LEE

SANTA CRUZ COUNTY MILS NUMBER: 13C

LOCATION: TOWNSHIP 21 S RANGE 15 E SECTION 10 QUARTER S2
LATITUDE: N 31DEG 37MIN 02SEC LONGITUDE: W 110DEG 47MIN 49SEC
TOPO MAP NAME: PATAGONIA - 7.5 MIN

CURRENT STATUS: PAST PRODUCER

COMMODITY:

LEAD SULFIDE
SILVER
COPPER SULFIDE
ZINC SULFIDE
GOLD

BIBLIOGRAPHY:

ADMMR MANSFIELD MINE FILE
SEE ADMMR SWEET MINE FILE
ADMM "U" CARD SANTA CRUZ CU-38
AZ BUR MINES CARD FILE SANTA CRUZ CO.
SCHRADER, F.C., 1915, MINERAL PDSTS OF THE
SANTA RITA AND PATAGONIA MTNS, AZ, US GEOL
SUR BULL 582, P. 226-229
BLM MINING DISTRICT SHEET 687
TENNY, J.B., 1927-29, HISTORY OF MINING IN
ARIZONA, UNIV AZ TYPED MANUSCRIPT, PP 317-18
DREWES, H., 1972, STRUCTURAL GEOLOGY OF THE
SANTA RITA MTNS, SE OF TUCSON, US GEOL SUR
PROF PAPER 748, P. 14-15
ROHRBACHER, ROBERT G., 1964, GEOL. TEMPORAL
GULCH - MANSFIELD CANYON AREA, SANTA CRUZ
CO, AZ, UNIV OF AZ MASTERS THESIS, PP 65-73

CONTINUED ON NEXT PAGE

CONTINUATION OF MANSFIELD MINE

KIETH, S.B., 1975, INDEX OF MINING PROPERTIES
IN SANTA CRUZ COUNTY, AZ GEOL SURVEY BULL.
191, P 90

06/20/97

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES FILE DATA

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BLM MINING DISTRICT SHEET 687
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DREWES, H., 1972, STRUCTURAL GEOLOGY OF THE
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PROF PAPER 748, P. 14-15
ROHRBACHER, ROBERT G., 1964, GEOL. TEMPORAL
GULCH - MANSFIELD CANYON AREA, SANTA CRUZ
CO, AZ, UNIV OF AZ MASTERS THESIS, PP 65-73

CONTINUED ON NEXT PAGE

CONTINUATION OF MANSFIELD MINE

KIETH, S.B., 1975, INDEX OF MINING PROPERTIES
IN SANTA CRUZ COUNTY, AZ GEOL SURVEY BULL.
191, P 90

MANSFIELD MINING AND SMELTING CO.

Inc. 1906 -Commission expired 6-5-27

SWEET MINE (file) Santa Cruz Co. Cu Au Pb Ag

see news item Daily Mining Record - Denver - 11-14-10 -
"J" (file) correspondence

Mansfield Mine - See: USGS Bull. 582 P. 226

Mansfield Mine (file) 9/29/83

MANSFIELD MINING COMPANY

SANTA CRUZ

Arizona Mining Journal, 12/1/22, p. 17

Mansfield Mine (file)

MANSFIELD MINE (file)

lead, silver, copper,
zinc, gold

SANTA CRUZ COUNTY
Mansfield District
T21S R15E Sec. 10

9/29/83

Arizona AzMILS - Statewide Name Index

Cty.	No.	Ref.	aka	Primary & alternate mine names	Topographic Map	Legal Description				Commodities				
						Township	Range	Sec.	Qtr.	Cm1	Cm2	Cm3	Cm4	Cm5
Gila	213D	Z	0	MANGANESE DEPOSIT	ROCKINSTRAW MTN - 15 MIN	2 N	16 E	19 C		MN				
Pina	522A	P	0	MANGANESE DEPOSIT 1	LOOKOUT MTN - 7.5 MIN	7 S	16 E	8 NW		MN				
Pina	522B	P	0	MANGANESE DEPOSIT 2	LOOKOUT MTN - 7.5 MIN	7 S	16 E	8 NW		MN				
Pina	523D	P	0	MANGANESE DEPOSIT 3	LOOKOUT MTN - 7.5 MIN	7 S	16 E	8 SE		MN				
Pina	523E	P	0	MANGANESE DEPOSIT 4	LOOKOUT MTN - 7.5 MIN	7 S	16 E	8 SW		MN				
Mari	149			MANGANESE DEVELOPMENT		5 N	8 W	20 NE						
Sant	49A			MANGANESE GRANDE		23 S	16 E	9 N2						
Gila	200	P	0	MANGANESE KING	GLOBE - 7.5 MIN	2 N	15 E	35 SE		MN	AG			
Pina	166			MANGANESE KING		6 S	11 E	18 W2						
Lapa	4			MANGANESE KING GROUP		10 N	14 W	36 NW						
Pima	107	F	0	MANGANESE KING GROUP	GU ACHI - 15 MIN	11 S	2 E	36 NW		MN				
Moha	416A			MANGANESE NOS. 1-3		12 N	16 W	24 NW						
Pina	166			MANGANESE QUEEN		6 S	11 E	18 W2						
Coch	192	P	0	MANGANESE SILVER MINE	TOMBSTONE - 7.5 MIN	20 S	22 E	23 NE		CU	AG	AU	MN	
Lapa	7	P	0	MANGANITE MINE	ARTILLERY PEAK - 15 MIN	11 N	12 W	16 NE		MN				
Moha	365A			MANGANOSITE		11 N	13 W	6 NE						
Coch	241	F	0	MANGUM CLAIMS	PEARCE - 15 MIN	19 S	25 E	17 NW		MN				
Moha	211A	P	1	MANHATAN	GARNET MTN - 15 MIN	30 N	17 W	28 SW		AU				
Moha	86C			MANHATTAN		22 N	17 W	5 C						
Coch	19	F	3	MANHATTAN GROUP	CHIRICAHUA PEAK - 15 MIN	17 S	30 E	3 C		CU	PB	ZN	AG	AU
Pina	136			MANHATTAN PROPERTY		3 S	14 E	28 N2						
Gila	60			MANIFEST MINING CO CLAIMS		2 S	15 E	34 W2						
Coch	25			MANILA		17 S	30 E	24 NE						
Coch	124			MANILA		22 S	19 E	6 NE						
Coch	653	P	0	MANILA	FAIRBANK - 7.5 MIN	20 S	21 E	36 NE		PB	AU	AG	CU	V
Moha	278A			MANITOC		13 N	18 W	17 --						
Moha	278A	M	1	MANITOWOC MS 2825	STANDARD WASH - 7.5 MIN	13 N	18 W	17 --		UNK				
Mari	569	P	0	MANLEY BICKLE GROUP	HUMBOLDT MTN - 7.5 MIN	6 N	5 E	12 C		U	FEL	F	CA	
Pima	117			MANN		17 S	17 E	19 SE						
Mari	537B			MANNA FROM HEAVEN		6 N	3 E	6 W2						
Pima	257	F	0	MANS DREAM MINE	QUIJOTOA MTS - 15 MIN	14 S	2 E	9 SW		CU	AG			
Gree	47			MANSFIELD		4 S	29 E	16 N2						
Sant	13C	F	5	MANSFIELD MINE	PATAGONIA - 7.5 MIN	21 S	15 E	10 S2		PB	AG	CU	ZN	AU
Coco	73B	P	0	MANUEL DENETSONE NO. 2	CAMERON - 15 MIN	28 N	10 E	5 N2		U				
Yava	270			MANURIUM AND URIUM		10 N	4 W	18 S2						
Apac	180B			MANY FARMS SW NO. 1 GRAVEL P	MANY FARMS SW - 7.5 MIN	33 N	25 E	27 C		SAG				
Apac	180A			MANY FARMS SW NO. 1 PROSPECT	MANY FARMS SW - 7.5 MIN	33 N	25 E	28 E2		UNK				
Apac	182			MANY FARMS SW NO. 1 QUARRY	MANY FARMS SW - 7.5 MIN	34 N	24 E	11 NE		STN				
Apac	290	P	0	MANY FARMS-BIA PIT	CHINLE - 7.5 MIN	6 N	10 W	21 S2		SAG				
Grah	158A			MANZANITA		5 S	20 E	30 E2						
Moha	122G	F	1	MANZANITA	CHLORIDE - 7.5 MIN	23 N	18 W	11 NW		AG	AU	CU	PB	ZN
Sant	104C	P	0	MANZANITA	LOCHIEL - 15 MIN	24 S	16 E	13 C		ZN	PB	CU	AG	AU
Yava	850	F	5	MANZANITA	MINNEHAHA - 7.5 MIN	9 N	2 W	12 C		PB	CU	AU	AG	W
Yava	850			MANZANITA EXT		9 N	2 W	12 C						
Lapa	426	F	0	MAR QUET CLAIMS	SMITH PEAK NW - 7.5 MIN	10 N	12 W	27 S2		AU	AG			
Yava	1278A	Y	2	MAR-VEY PROSPECTS	BUMBLE BEE - 7.5 MIN	9.5N	2 E	29 NW		CU	FE			
Grah	99			MARAVILLA COPPER CO.		6 S	27 E	5 C						
Yuma	778	F	0	MARBLE GULLY	FORTUNA - 7.5 MIN	8 S	21 W	15 NW		STN	CA			
Pina	161			MARBLE KING		3 S	13 E	1 C						
Yava	1245			MARBLE MINE		10 N	5 E	22 NW						
Lapa	141			MARBLE MOUNTAIN		5 N	11 W	9 NW						
Pima	881			MARBLE PEAK		11 S	16 E	16 W2						
Pima	458	Z	1	MARBLE PIT NO. 2	SAHUARITA - 15 MIN	17 S	15 E	36 NW		STN	CA			
Pima	352	Y	0	MARBLE TOP MINE	PALO ALTO RANCH - 15 MIN	18 S	11 E	19 SE		STN	CA			
Coch	676	Z	0	MARCH 1 & 2	SWISSHELM MOUNTAIN - 7.5 MI	20 S	27 E	2 SE		UNK				
Yava	244B			MARCH CLAIMS		13 N	3 W	19 S2						
Coch	146	F	0	MARCH MINE	SWISSHELM MOUNTAIN - 7.5 MI	20 S	27 E	12 S2		ZN	AG	PB	CU	AU
Pima	227	F	0	MARCONI MINE GROUP	TWIN BUTTES - 15 MIN	18 S	12 E	12 NE		ZN	PB	CU	AG	AU
Grah	241	F	1	MARCOTTE BARITE	EUREKA RANCH - 7.5 MIN	8 S	21 E	13 C		BA	AU	AG	F	
Yava	441			MARCUS		10 N	5 W	26 W2						
Yava	81			MARCUS MINES		13 N	8 W	9 N2						
Grah	126	Z	0	MARDI GRAS CLAIMS	THATCHER - 15 MIN	5 S	25 E	35 N2		CU				
Yava	1042E			MARDIAN COMPANY ONYX QUAR		12 N	1 E	22 C						
Yava	386A			MARDIS		8 N	3 W	23 W2						
Coco	8			MARDUN		37 N	9 E	5 SE						
Sant	137C			MARGARET		22 S	17 E	16 NW						
Pina	773			MARGARET CLAIMS		1 S	13 E	22 SE						
Pima	684			MARGARITA GROUP	PALO ALTO RANCH - 15 MIN	17 S	10 E	35 NE		AU	AG	PB	ZN	CU
Sant	63B	F	4	MARGARITA GROUP	ORO BLANCO - 15 MIN	23 S	11 E	7 NE		AU	AG	PB	ZN	CU
Sant	63B			MARGARITE		23 S	11 E	7 NE						
Yava	134			MARGIE C		15 N	7 W	7 C						
Pina	211B			MARGUERITE LAKE MNS LTD PRO		3 S	11 E	17 S2						
Pina	212A			MARGUERITE LAKE MNS LTD PRO		3 S	11 E	20 NE						
Pina	212C			MARGUERITE LAKE MNS LTD PRO		3 S	11 E	20 E2						

MANSFIELD MINE

REFERENCES

SANTA CRUZ COUNTY

ABM Bull. 191, p. 90

BLM Mining District Sheet 687

USGS PP 748, p. 14-15

Tenney, J. B., 1927 - History of Mining in Arizona, p. 317-318

USBM "U" File Cu 38

ABM Card File - Santa Cruz County

Sweet Mine File

USGS 582, p. 226-229'

MILS Sheet sequence number 0040230275

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US Geological Survey Digital Data Series 20
Release 1 June 1996

RECNO M241330
REC_TYPE S
REP_DATE 82 05
FIL_LINK USBM 0040230275
REP CALDER, SUSAN R.
REP_AFF ABGMT
SYN SWEET, BLACK CAP, RUBY, RUPERT, LEE, MANSFIELD NO. 1 AND 2
DIST MANSFIELD DISTRICT
COUNTY SANTA CRUZ
STATE_CODE AZ
CTRY_CODE US
PHYS 12
DRAIN 15050301 LOWER COLORADO
LAND_ST 41 01
QUAD1 MT. WRIGHTSON (1958)
Q1_SCALE 62500
QUAD2 PATAGONIA (1981)
Q2_SCALE 24000
ELEV 4800 FT
UTM_N 3497800
UTM_E 519050
UTM_Z +12
TOWNSHIP 021S
RANGE 015E
SECTION 9 16 10 15
SECT_FRACT SE, 9; N2 OF NE, 16; S2, 10; N2 OF NW, 15 MERIDIAN GILA
AND SALT RIVER
POSITION 6 MILES NNW OF PATAGONIA
LOCATION IN LOWER MANSFIELD CANYON; AT INTERSECTION OF MANSFIELD
CANYON AND TEMPORAL GULCH; UTM AND GEODETIC COORDINATES
DESCRIBE CENTRAL POINT IN MINE GROUP ; INFO FROM LAND.ST
:(1979)
SITE MANSFIELD MINE GROUP
LAT 31.6169
LONG -110.7992
CTRY_NAME UNITED STATES
COMM0D CU PB AU AG ZN MN
ORE_MAT PYRITE, CHALCOPYRITE, GALENA, TETRAHEDRITE, BORNITE,
SPHALERITE
GAD ORE VALUES AVERAGED 19% PB, 22 OZ./TON AG, 2% CU, 0.1
OZ./TON AU
COMM0D_COM CHALCOPYRITE AND PYRITE OCCUR IN FINE-GRAINED, MASSIVE FORM
MAJOR CU AG PB
MINOR AU ZN
TRACE MN
PROD S
LOC_STRUCT DOMINANT STRUCTURE IN MONZONITE DIPS 35E; RHYOLITE TRAVERSED
BY A COARSE SHEETING WHICH DIPS 60W
STATUS 8
DISC JACK MANSFIELD AND CON RYAN
YR_DISC 1879

NAT_DISC B
 YRFST_PROD 1881
 YRLST_PROD 1951
 OPER BRADSHER (1951)
 EXPL_COM OWNERS AND OPERATORS INCLUDED GUNSIGHT MINING CO.
 (1883-1884), A.B. RICHMOND (1903-1906), F.P. O'NEILL, RUBY
 COPPER CO., MANSFIELD MINING AND SMELTING CO. (1906-1926),
 PIERCE (1926), LAYCOCK (1934), SOUTHERN ARIZONA MINING CO.
 (1926), CONSOLIDATED SOUTHERN ARIZONA MINING CO.; PROPERTY
 COMPRISED 40 CLAIMS, 25 OF WHICH WERE PATENTED, COVERING
 MORE THAN 3 MILES OF MANSFIELD CANYON AND TEMPORAL GULCH_
 DEP_TYPE VEIN/SHEAR ZONE
 DEP_FORM TABULAR; SHOOTS
 MAX_WID 6
 M_W_U FT
 DEP_SIZE S
 STRIKE N70E
 DIP 80S
 DDESC_COM SWEET MINE DEPOSIT LIES ON SOUTH VEIN OF A LARGE LODGE THAT
 STRIKES N70E AND DIPS 80S; BLACK CAP VEIN DIPS 70 SE AND
 AVERAGES 10 FT. WIDE; PRINCIPAL ORE VALUE OF BLACK CAP VEIN
 IS 3 FT. WIDE ORE SHOOT OR PAY STREAK
 QUAD250 NOGALES
 LEN_WK 4000+
 L_W_U FT
 DWORK_COM DEVELOPMENTS INCLUDED 360 FT SHAFT WITH LEVELS AT 150, 250,
 AND 350 FT. ON SWEET CLAIM; 300 FT. OF DRIFTS FROM LEVELS OF
 SWEET SHAFT; 140-FT SHAFT AND 200-FT TUNNEL WITH LATERALS ON
 3 LEVELS AND STOPES, TALLING ABOUT 2000 FT OF WORK ON
 BLACK CAP CLAIM; NUMEROUS SHAFTS, STOPES, AND TUNNELS ON
 OTHER CLAIMS
 MIN_AGE LCRET-TERT
 NORE_MINS QUARTZ; HORNBLende; BIOTITE; IRON-STAINING OF QUARTZ VEINS
 NEAR SURFACE; QUARTZ-CALCITE-BARITE-MANGANESE GANGUE
 ORE_CNTL PARALLEL NE-TRENDING QUARTZ VEINS CUTTING QUARTZ MONZONITE
 AND ALONG CONTACT BETWEEN MONZONITE AND RHYOLITE
 TECT_SET MOUNT WRIGHTSON FAULT BLOCK
 REG_STRUCT QUARTZ MONZONITE IS INTRUDED AND OVERLAIN BY RHYOLITE
 ALTER WALL ROCKS ARE STRONGLY ALTERED; RHYOLITE ALTERED TO QUARTZ
 CONC EPIGENETIC MINERALIZATION OF LOW-GRADE PYRITE QUARTZ VEINS
 NAME CALDER, SUSAN R.
 DATE 05/01/82
 ARU_AGE TRI|ECRET
 ARU_NAME MOUNT WRIGHTSON FORMATION|TEMPORAL FORMATION
 CONT_CODE NA
 GEOL_COM RHYOLITE IS TUFFACEOUS AND CONTAINS FRAGMENTS OF A COARSE
 ALTERED GRANITOID ROCK; GONE GOSLING CLAIM TO NW OF SWEET
 SHAFT CONTAINS SILICEOUS LEDGE CARRYING GALENA-SILVER ORE,
 WHICH DIPS STEEPLY TO SOUTH AND OUTCROPS 12 FT ABOVE SURFACE
 GEN_COM INFO.SRC : 1 PUB LIT; 2 UNPUB REPT
 REF ABGMT-USBM FILE DATA|USBM FILES, MANSFIELD MINE GROUP|ADMR
 FILE DATA, MANSFIELD MINE|BLM DISTRICT MINING SHEET 687,
 12) USGS PP 748, P. 14-15|TENNEY, JAMES B., 1927-29, HISTORY
 OF MINING IN ARIZONA; ARIZONA BUREAU OF MINES, P. 317-
 318|ROHRBACHER, ROBERT G. 1964, GEOLOGY OF THE TEMPORAL

GULCH-MANSFIELD CANYON AREA SANTA CRUZ COUNTY ARIZONA; M.S.
THESIS UNIVERSITY OF ARIZONA, P. 69|USGS BULL 582, P. 226-
229|ARIZ BUR MINES BULL 191, P. 90, 11) USGS MAP I-
614|ABGMT FILES, STANTON B. KEITH|ABGMT CLIPPINGS FILE;
MANSFIELD MINING AND SMELTING CO., RUPERT GROUP

CONT_NAME NORTH AMERICA
STATE_NAME ARIZONA
WORK_TYPE U
COMMOD_TYP M
DATE_ISSUE 95/5/18
PROF_ID 100
PROF_LOC 100
PF_COMMOD 100
PROF_EXPL 100
PFDESC_DEP 50
PFDESC_WRK 100
PROF_GEOL 85
PROF_REF 100
PROF_ALL 81
HR_AGE_MV LCRET
HR_TYPE_MV MEDIUM TO FINE GRAINED QUARTZ MONZONITE INTRUSIONS; QUARTZ
LATITE DIKES, STOCKS, SILLS, AND BRECCIA
AR_AGE_MV ECRET
AR_TYPE_MV ANDESITE AND RHYOLITE BRECCIA; TRIASSIC DACITIC AND LATITIC
FLOWS
TYPE R
AFFIL ABGMT
DEP_CODE 11200
HUC 15050301

MANSFIELD MINE

SANTA CRUZ COUNTY

MG WR 8/9/85: Visited the Mansfield mine group (Santa Cruz County). There is no activity at this property.

File R+E Santa Cruz Co. Ariz

CONTINENTAL MATERIALS CORPORATION

Mining Division Office: Suite 101, 2002 N. Forbes Blvd. • P.O. Box 50726, Tucson, Arizona 85703 Phone (602) 882-4144

March 21, 1978

Dr. LeRoy Scharon
Director of Exploration
NL Industries, Inc.
5926 McIntyre Street
Golden, Colorado 80401

Dear Dr. Scharon:

Our land man, Harold M. Smithson, has discussed with you the interest of Continental Materials Corporation in examining the Mansfield and Joplin claims of NL Industries, Inc. in Santa Cruz County, Arizona. I learn from our counsel, Sidney M. Gunther, that NL Industries appears to be able to give us all surface rights we need to explore and to mine. We anticipate these claims would make up a portion of an exploration tract we are attempting to assemble in the area.

Continental would like to examine, with a view to acquiring, the claims on the following basis:

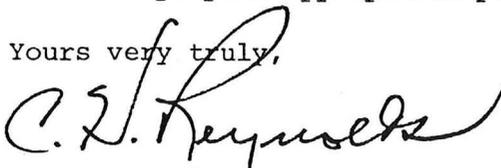
Expenditure. So long as Continental holds the claims it will expend an average of at least \$25,000 per year on the exploration tract.

Royalty. Continental will pay NL Industries a royalty of 5% of net smelter returns on all ore it mines from the claims. This royalty will cease if Continental purchases the claims.

Purchase. NL Industries will grant to Continental an option to purchase all twenty-four (24) patented claims (subject only to the surface rights of Dr. Duane M. Kline) and such rights, if any, as NL Industries may have in the ten (10) unpatented claims for \$120,000.

The operation would be conducted by Continental's wholly owned Arizona subsidiary, Continental Copper, Inc.

If this arrangement is satisfactory, please let me know, and I will ask Mr. Gunther to work with David L. Nelson to prepare appropriate papers.

Yours very truly,

C. H. Reynolds

CHR/lk

cc: Harold M. Smithson
Sidney M. Gunther

4/11/78 Dr. Scharon call - a.k. send proposal.

- REFERENCE 1 F1 < ABGMT- USBM E DATA
 - REFERENCE 2 F2 < USBM FILES, MANSFIELD MINE GROUP
 - REFERENCE 3 F3 < ADMR FILE DATA, MANSFIELD MINE
 - REFERENCE 4 F4 < BLM DISTRICT MINING SHEET 687
- F12 < DREWES, H., 1972, USGS PROFESSIONAL PAPER 748, p. 14-15 >

L110 < LAYCOCK (1934) SOUTHERN ARIZONA MINING CO. (1926) CONSOLIDATED SOUTHERN ARIZONA MINING CO.; PROPERTY COMPRISED 40 CLAIMS 25 OF WHICH WERE PATENTED, COVERING MORE THAN 3 MILES OF MANSFIELD CANYON AND TEMPORAL GULCH >
 M220 < WORK ON BLACK CAP CLAIM; NUMEROUS SHAFTS, STOPS AND TUNNELS ON OTHER CLAIMS >
 M110 < OF BLACK CAP VEIN IS 3 FT. WIDE ORE SHOOT OR PAY STREAK >
 K18 < DIKES, STOCKS, SILLS, AND BRECCIA >
 K4 < QUARTZ-CALCITE-BARITE-MANGANESE GANGUE >
 K5 < CONTACT BETWEEN MONZONITE AND RHYOLITE >

N70 < COARSE SHEETING WHICH DIPS 60W >

N85 < CARRYING GALENA-SILVER ORE, WHICH DIPS STEEPLY TO SOUTH AND OUTCROPS 12 FT ABOVE SURFACE >

- F5 < TENNEY JAMES B., 1927-29, HISTORY OF MINING IN ARIZONA; ARIZONA BUREAU OF MINES, p. 317-318 >
- F6 < ROHRBACHER ROBERT G., 1964; GEOLOGY OF THE TEMPORAL GULCH - MANSFIELD CANYON AREA, SANTA CRUZ COUNTY, ARIZONA. M.S. THESIS, UNIVERSITY OF ARIZONA, p. 69 >
- F7 < SCHRADER F.C., 1915, USGS BULL. 582, p. 226-229 >
- F8 < KEITH, S.B., 1975, ABM BULL. 191, p. 90 >
- F9 < ABGMT FILES, STANTON B. KEITH >
- F10 < ABGMT CLIPPINGS FILE, MANSFIELD MINING AND SMELTING CO., RUPERT GROUP >
- F11 < DREWES, H., 1971, USGS MAP I-614 (1:48000) >

U.S. CRIB-SITE FORM

RECORD IDENTIFICATION

RECORD NUMBER B10 < 82405 > RECORD TYPE B20 < X.I.M > DEPOSIT NUMBER B40 < >
 REPORT DATE G1 < 82405 > INFORMATION SOURCE B30 < 1,2 > FILE LINK IDENT. B50 < USBM-0040230275 >
 REPORTER (SUPERVISOR) G2 < CALDER, SUSAN R. > (last, first, middle initial) (last, first, middle initial)
 REPORTER AFFILIATION G5 < ABGMT > SITE NAME A10 < MANSFIELD MINE GROUP >
 SYNONYMS A11 < SWEET, BLACK CAP, RUBY, RUPERT, LEE, MANSFIELD NO. 1 AND 2 >

LOCATION

MINING DISTRICT/AREA A30 < MANSFIELD DISTRICT >
 COUNTY A60 < SANTA CRUZ > STATE A50 < AZ > COUNTRY A40 < U.S. >
 PHYSIOGRAPHIC PROV A63 < 1,2 >
 DRAINAGE AREA A62 < 15,050,301 < LOWER COLORADO >
 QUADRANGLE NAME A90 < MT. WRIGHTSON > (1958) LAND STATUS A64 < 41,01 < (1979) >
 SECOND QUAD NAME A92 < PATAGONIA > (1981) QUADRANGLE SCALE A100 < 162,500 >
 ELEVATION A107 < 4,800 < FT. > SECOND QUAD SCALE A91 < 24,000 >

JTM
 NORTHING A120 < 3,497,800 >
 EASTING A130 < 5,190,500 >
 ZONE NUMBER A110 < 12 >
 *ACCURACY
 ACCURATE ACC (circle)
 ESTIMATED EST < >
 GEODETIC
 LATITUDE A70 < > N
 LONGITUDE A80 < > W

CADASTRAL
 TOWNSHIP(S) A77 < 0215 > RANGE(S) A78 < 015E >
 SECTION(S) A79 < 9 > 16 10 15
 SECTION FRACTION(S) A76 < SE, 9; N2 OF NE 16; S2, 10; N2 OF NW, 15 >
 MERIDIAN(S) A81 < GILA AND SALT RIVER >

POSITION FROM NEAREST PROMINENT LOCALITY A82 < 6 MILES NNW OF PATAGONIA >
 LOCATION COMMENTS A83 < IN LOWER MANSFIELD CANYON, AT INTERSECTION OF MANSFIELD CANYON AND TEMPORAL GULCH; UTM AND GEODETIC COORDINATES DESCRIBE CENTRAL POINT IN MINE GROUP >

ESSENTIAL INFORMATION
 ESSENTIAL SOMETIMES OR HIGHLY RECOMMENDED

Nyal

1/2/03

Enclosed are copies of letters
& report requesting Termination of
the Mansfield Canyon CERCLA action.
I doubt if the Forest Service will pay
any attention to it, but it might
generate some interest from the EPA.
The more publicity - the better
chance to change things.

After you get a chance to review,
I would appreciate any thoughts you
might have on the situation.



RUSSELL M. CORN

Registered Geologist

Dec. 22, 2002

8425 DESERT STEPPES DR.

TUCSON, ARIZONA 85710

PHONE 520 - 298-1770

Cert. Mail - Article No.
7001 0320 0003 1994 7194

Mr. Mark Rey
Under Secretary for Natural Resources & Environment
Department of Agriculture
Room 217E Whitten Building
Washington, D. C. 20250

Re: Request For Termination
Mansfield Mines Site CERCLA Action
Coronado National Forest, AZ

Dear Mr. Rey:

This letter and the accompanying report are intended as a Formal Request for the termination of the Forest Service Mansfield Mines Site CERCLA Action, EPA ID No. 000 200 1857 and its removal from the Superfund Program List. The accompanying report substantiates the complete misrepresentation of site conditions at Mansfield Canyon by the Forest Service. The report has also been sent to officials with the Environmental Protection Agency since they have advisory responsibility for the Superfund Program.

Mansfield Canyon is an ephemeral watercourse draining a large area of pervasive mineralization and abundant disseminated pyrite. Ore was never processed in the drainage and the old small mines, which have been abandoned or inactive since the 1930's, are located on veins exterior to the large area of disseminated pyrite. The nearest town is seven miles distant and statements by the Forest Service that there was a permanent resident in the vicinity of Mansfield Canyon were false. The entire Mansfield Canyon watershed was designated by the Forest Service as a Hazardous Waste Facility although prior scientific data and reports from experienced professionals indicated that the limited acid drainage was derived naturally from the widespread pyritic alteration and did not pose a risk to humans, livestock or wildlife. Instead, the Forest Service relied on imaginary tailings, a fictitious permanent resident and other inaccurate and fabricated data obtained from incompetent, non professional consultants to justify the CERCLA designation and the removal action. I urge you to thoroughly review the report and seriously consider my request to terminate this CERCLA action.

The Forest Service has known since before the PRP meeting in November, 1996, that I and others also designated as Potential Responsible Parties (PRPs) did not cause any contamination and were not owners or operators of a mine, but instead were only past mining claimants who had conscientiously followed the law years ago, located and later abandoned unpatented mining claims. Evidently the Forest Service believes that mining claimants are just as liable or perhaps more so than actual mine owners or operators. The Forest Service

policy toward mining claimants was stated in a letter dated Dec. 13, 1999 from Coronado National Forest Supervisor John McGee to Senator Jon Kyl. Mr. McGee stated that "under the 1872 Mining Law, mining claims on public lands are "owned" or "operated" by mining claimants." This statement is inaccurate and not consistent with the law or the way most people understand the Mining Law and the way it has been applied for the past 130 years. Unpatented mining claims are not property and are exempt from all taxes, including transfer taxes. A mining claimant does not own claims, but instead holds claims through annual assessment work or payment of maintenance fees. A claimant does not have an ownership right until there is a valid discovery. Until then, the claim can be overstaked by others, and if they make the discovery, they will have ownership of the claim and the mineral deposit. Unless the mining claimant has obtained operating permits and/or expressed his intention to operate, he is not an operator. Under the Mining Law, claimants who are not operators are not subject to joint and several liability provisions as are the actual owners and operators of a mine. This relationship was reaffirmed in the recently revised Bureau of Land Management 3809 mining regulations.

Also enclosed is a copy of a letter from Mr. James Furnish, Deputy Chief for National Forest Systems, to Richard Hahman, dated July 18, 2001. In his letter, Mr. Furnish states that I had been assured several times that "the USDA Forest Service intends to take no action at the Site(s) to endanger my financial well being or standard of living." In my opinion this often repeated phrase is meaningless and is used just to keep myself and other Potential Responsible Parties from complaining about the Forest Service actions. Unfortunately, the Forest Service actions already have significantly impacted my financial well being. My direct contacts with Forest Service officials concerning their intentions to use their CERCLA authority to enforce retroactive liability charges against myself and other citizens who they also knew were only past claimants and not owners or operators of a mine include:

1. A direct, face to face presentation at the Mansfield Canyon PRP meeting in November, 1996 where the Forest Service representatives, including a representative from OGC, DOA, stated that the PRPs would be responsible for all the costs of the CERCLA removal action, including the removal costs on the private land acquired by the Forest Service. They also stated that it would be "more expensive, much more expensive" for the PRPs if the Forest Service conducted the removal action.
2. Telephone conversations with Forest Service officials in Missoula, Montana and other regions in which I specifically asked that, if I located mining claims but did not conduct any operations, would I be retroactively liable for CERCLA charges? The answer was that this was Forest Service policy and that it could be very expensive for me if I located the claims.

3. The direct statement of Forest Supervisor John McGee in his letter of Dec. 13, 1999 to Senator Kyl that claimants may be "pursued to perform or pay for all or a portion of a cleanup".
4. In a letter written on Jan. 4, 2001, but dated Jan. 4, 2000, replying to my letter of Sept. 18, 2000, Mr. Steve Silverman, OGC, DOA, indicated that I did have liabilities and stated that the Forest Service would be glad to discuss settlement "of my potential liabilities at Mansfield Canyon".

In my opinion, these direct contacts constituted an implied threat that claimants like myself, who were never owners or operators of a mine, could and would be pursued. This was confirmed by Mr. Silverman's indication that I did have liabilities at Mansfield Canyon. In Dec., 1999, when Forest Supervisor McGee wrote to Senator Kyl stating that mining claimants may be pursued to perform or pay for the cleanup, the Forest Service had proposed spending an estimated \$427,000 of public funds to remove mining waste dumps from private land in the same Hazardous Waste Facility as part of an ecosystem restoration project to be carried out in conjunction with the CERCLA removal action. In effect, this proposal would have rewarded the actual owners of the mines on private land, while I and others who were never owners or operators of a mine would be liable for the CERCLA charges of between \$4,000,000 and \$11,000,000 estimated in the EE/CA Report. Mr. McGee and other Forest Service officials should also have been aware at this time that the CERCLA designation and the removal action were based on fabricated and fictitious data. I learned later through FOIA requests that in January, 2001, when Mr. Silverman wrote his letter indicating that I did have liabilities, he and other Forest Service officials were also aware that the Forest Service had decided in April, 2000 not to proceed with the Mansfield Canyon project.

As a result of the direct contacts described above, I am convinced that the Forest Service intended to pursue PRPs who were only past mining claimants for retroactive liability charges or place us in a position where we could be easily sued by others, regardless of responsibility or the validity of the CERCLA designation and investigative reports. If the Forest Service did not intend to pursue or cause financial harm to the past mining claimants, why would they list us Potential Responsible Parties and tell us that we would be responsible for all CERCLA charges? Why would they force us to live under a cloud of financial uncertainty, suffering from continuing legal expenses and other financial problems for more than six long years? This question is even harder to answer when the actual owners of mines on private land in the same Hazardous Waste Facility were to be financially rewarded through the ecosystem proposal and partnership arrangements and/or were never listed as PRPs (Cote).

In July, 2001 when he wrote to Mr. Hahman, Mr. Furnish should have been aware of the problems with the validity of the investigations and the Forest Service decision not to proceed with the removal action at Mansfield Canyon. When the verbage and legalese is carved away from his letter, Mr. Furnish is defending the Forest Service practice of using fabricated and fictitious data obtained by technically incompetent, non professional consultants to justify CERCLA actions. The Forest Service defended this practice before the Arizona Board of Technical Registration by asserting that their consultants were legally considered Forest Service employees and as such did not have to meet the same standards of integrity, competence and professionalism required of a consultant for any ordinary citizen. Mr. Nyal Niemuth who was Chairman of the Technical Advisory Committee of the Arizona Board of Technical Registration at the time, can be contacted for more information about the investigation of the Forest Service's consultants at (602) 255-3791.

The statements by Mr. Furnish are completely different from the findings of the Inspector General, DOA, as stated in the letter from the Inspector General incorporated in the accompanying report. The Forest Service practices expressed and defended by Mr. Furnish are analogous to having a High School drop out diagnose medical problems and then tell the surgeon how and where to operate.

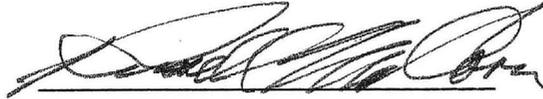
Unfortunately, Mansfield Canyon appears to be just the "tip of the iceberg" reflecting problems with Forest Service CERCLA actions. Judging from Mr. Furnish's defense of their practices and the Forest Service actions at both the Mansfield Canyon and Sabino Canyon sites, there apparently are no requirements that Forest Service CERCLA or Superfund designations must be based on definitive criteria and accurate data or that CERCLA investigations should be carried out by technically competent professionals. As a result, there are probably many more Forest Service CERCLA actions that, like Mansfield Canyon, are also based on inaccurate or fabricated data obtained by incompetent, non professional consultants. A thorough, objective and honest review of the Forest Service CERCLA policies and practices and a complete review of the validity of other Forest Service CERCLA actions where these same practices have been employed is long overdue.

The Forest Service has been investigating the Mansfield Canyon site for more than 10 years. This investigation and the policies and practices employed by the Forest Service have resulted in invalid, worthless reports, anger, bitterness and resentment on the part of those named unjustly as PRPs, a Forest Service reputation for deceit and duplicity and a significant waste of time, effort and public funds. In her letter to the Chief, dated April 10, 2000 that is incorporated in the report, the Regional Forester stated that "many critical legal, social and technical issues remain unresolved" at Mansfield Canyon. The Forest Service has never been forthright about these issues and it is evident that Mansfield Canyon should never have been designated as a CERCLA or Superfund site.

I respectfully request that the Forest Service terminate the Mansfield Canyon CERCLA action and release the Potential Responsible Parties from their retroactive liabilities.

I would appreciate a reply.

Sincerely,

A handwritten signature in black ink, appearing to read "Russell M. Corn", written over a horizontal line.

Russell M. Corn

cc: Senator Jon Kyl
Senator John McCain
Representative Jim Kolbe
Dale Bosworth, Chief, USDA Forest Service
Karl Fingerhood, DOJ
Richard Hahman

RUSSELL M. CORN

Registered Geologist

8425 DESERT STEPPES DR.
TUCSON, ARIZONA 85710
PHONE 520 - 298-1770

December 7, 2002

Richard Tobin II
Acting Director,
Arizona Dept. of Environmental Quality
1110 West Washington
Phoenix, AZ 85007

Re: Request For Termination
Mansfield Mines Site CERCLA Action

Dear Mr. Tobin:

Enclosed is a copy of a letter sent to EPA Administrator Whitman requesting Termination of the Mansfield Canyon CERCLA Action together with a report substantiating the complete misrepresentation of site conditions by the U. S. Forest Service. ADEQ was involved in this misrepresentation through the actions of Mr. Robert Oldfield who was a long-term employee of the Forest Service prior to his employment with ADEQ. Mr. Oldfield placed his correspondence with the inaccurate or false statements about ore processing and the presence of tailings at Mansfield Canyon in the Forest Service Administrative Record when he left ADEQ. I am still puzzled as to why he was so insistent that ore had been processed and that there were tailings from this processing at Mansfield Canyon.

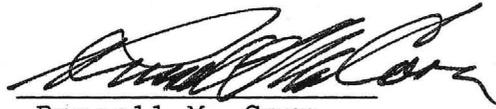
Also enclosed is a copy of a letter from ADEQ Director Schafer, dated Nov. 7, 2000, stating that the Forest Service should have used an Arizona licensed laboratory and that ADEQ was attempting to resolve this issue. I have not heard whether or not the issue has been resolved. As you are probably aware, Environmetrics, the laboratory used by the Forest Service for samples from both the Mansfield Canyon and the Sabino Canyon Shooting Range CERCLA actions, was not certified as competent to perform the required analyses by either Arizona or Missouri. A copy of a letter from the Missouri Dept. of Natural Resources stating that Environmetrics was only certified for drinking water analysis is also enclosed.

I have also enclosed a copy of a letter from Mr. James Furnish, Deputy Chief for National Forest Systems, to Richard Hahman dated July 18, 2001, defending the Forest Service policies and practices at both Mansfield Canyon and Sabino Canyon. When the verbage is sliced away, Mr. Furnish is restating the Forest Service policy and position that they do not have to use competent, certified laboratories and that their consultants do not have to meet the same standards of integrity and technical competence that would be required of a consultant for any ordinary citizen. The statements by Mr. Furnish about the qualifications of the Forest Service contract consultants differ significantly from the findings of the Inspector General, DOA, as stated in his letter incorporated in the report.

The Forest Service policy expressed by Mr. Furnish is analogous to a High School drop out diagnosing medical problems and then telling the surgeon how and where to operate. In view of this Forest Service policy, it is probable that there are many other Forest Service CERCLA actions in Arizona that, like Mansfield Canyon, are similarly based on inaccurate or fabricated data and fictitious permanent residents.

I have been unable to determine why the Forest Service initially designated Mansfield Canyon as a CERCLA or Superfund site and why they planned to complete the removal action in the year 2000. Any information that you could provide would be greatly appreciated. In my opinion, ADEQ was also a victim of Forest Service duplicity and I would appreciate the opportunity to visit with you about their actions. Mansfield Canyon should never have been designated a Superfund site and I would be grateful for any assistance ADEQ could provide in terminating this CERCLA action.

Sincerely,



Russell M. Corn

cc: Dr. Moses Olady

RUSSELL M. CORN

Registered Geologist

8425 DESERT STEPPES DR.
TUCSON, ARIZONA 85710
PHONE 520 - 298-1770

November 29, 2002

Ms. Christine Whitman
Administrator, Environmental Protection Agency
1200 Pennsylvania Ave. NW / 1101 A
Washington, D. C. 20460

Re: Request for Termination
Mansfield Mines Site CERCLA Action

Dear Administrator Whitman:

This letter and the accompanying report are intended as a Formal Request for the removal of the Mansfield Mines Site, EPA ID No. AZ 000200 1857 from the Superfund Program list and termination of this CERCLA removal action. Although the Mansfield Mines Site is a Forest Service Non Time Critical CERCLA action, it is my understanding that the EPA does have CERCLA advisory and oversight responsibility and is responsible for the listings in the Superfund program. The Forest Service completely misrepresented conditions at the Mansfield Canyon site and based the CERCLA designation and proposed removal action on inaccurate and fabricated data and invalid investigations by incompetent, non professional consultants.

Mansfield Canyon is an ephemeral watercourse draining a large area of pervasive mineralization and abundant disseminated pyrite. Ore was never processed in the drainage and the old small mines, which have been inactive since the 1930's, are located on veins exterior to the large (four square mile) area of pervasive mineralization and disseminated pyrite. The nearest town is seven miles distant and statements by the Forest Service that there was a permanent resident in the vicinity were false. The entire Mansfield Canyon watershed was designated by the Forest Service as a Hazardous Waste Facility although prior scientific data and reports from experienced professionals indicated that the limited surface and sub-surface acid drainage was naturally derived from the widespread pyritic alteration and did not pose a risk to humans, livestock or wildlife.

The Forest Service ignored the previous scientific reports and data and instead relied on a non existent, fictitious "permanent resident" and inaccurate and fabricated data obtained by a technically incompetent, non professional consultant to justify the Superfund designation and proposed removal action. Judging from the Forest Service statements and actions at Mansfield Canyon and elsewhere in the southwest, there are no requirements that CERCLA designations should be based on objective, accurate data or that CERCLA investigations should be carried out by qualified, technically competent professionals. As a result, there are probably many more Forest Service CERCLA actions that, like Mansfield Canyon, are based on false presumptions and inaccurate or fabricated data. The use of inaccurate

or fabricated data, fictitious residents and false statements in CERCLA investigations and actions makes the Superfund program a sham and results in bitterness and anger directed toward all agencies and everyone involved in the Superfund program.

The Forest Service has been investigating Mansfield Canyon for more than ten years. They have spent substantial time, effort and public funds in their investigations and have caused significant financial problems for citizens named unjustly as Potential Responsible Parties simply because they conscientiously followed the laws concerning mineral exploration 20 or 30 years ago. In April, 2000, the Regional Forester stated in a letter to the Chief Forester that "many critical legal, social and technical issues remain unresolved" at Mansfield Canyon. The Forest Service has not been forthright about these issues and it is evident that Mansfield Canyon should never have been designated as a CERCLA or Superfund site. The Forest Service insists that the project is active and continuing and in February, 2001, the project received a Preliminary Assessment Review from the Environmental Protection Agency.

The concerns expressed in this letter and report have been voiced many times by myself and others to the Forest Service, to no avail, which is why I am bringing them to your attention. I am not familiar with the criteria necessary to justify the designation of an entire watershed as a Hazardous Waste Facility and a Superfund site. However, since there were no permanent residents in the vicinity and the limited acid drainage is naturally derived and is not a threat to humans, livestock or wildlife, a realistic and honest appraisal of the factual data on the site conditions should indicate that the Mansfield Canyon Mines Site should be removed from further consideration as a CERCLA or Superfund site.

I am not certain as to where this Request and Report should be sent or what procedure should be followed. I ask for your assistance in directing this Request to the correct individual or Department and ensuring that it receives serious consideration. I would appreciate the courtesy of a reply.

Sincerely,



Russell M. Corn

cc: Senator Jon Kyle
Senator John McCain
Representative Jim Kolbe
EPA Region 9 Admin, Wayne Nastri
Acting Director ADEQ, Richard Tobin



GOVERNOR
Lone Dee Hull

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

• 3033 North Central Avenue • Phoenix, Arizona 85012-2809 •
• (602) 207-2300 • www.adeq.state.az.us •



DIRECTOR
Jacqueline E. Schafer

November 7, 2000

Russell M. Corn, R.G.
8425 Desert Steppes Drive
Tucson, AZ 85710

RE: United States Forest Service Sampling at the Mansfield Mines Site

Dear Mr. Corn:

This letter responds to your inquiry concerning whether the United States Forest Service (USFS) must utilize Arizona licensed laboratories when conducting analysis of samples to determine compliance with Arizona environmental statutes and rules. Pursuant to A.R.S. § 36-495 et seq. the USFS is obligated to use an Arizona licensed laboratory when conducting environmental compliance testing unless the testing laboratory is exempt from licensing under A.R.S. § 36-495.02 or federal law. Contrary to the statement contained in paragraph 48 of the USFS "Response to Comments" concerning the Mansfield Canyon Mines cleanup (Mansfield Canyon), it is not the Arizona Department of Environmental Quality's (ADEQ) position that USFS sampling is exempt from Arizona's laboratory licensing statutes.

You may be interested to know that the USFS has informed ADEQ that it is not proceeding with the cleanup activity at the Mansfield Canyon site. As a result of this USFS decision, the issue of whether USFS must utilize an Arizona licensed environmental laboratory for analyzing Mansfield Canyon samples is moot. Nevertheless, ADEQ is currently investigating why the USFS has taken the position that this sampling is exempt from the Arizona laboratory licensure statutes. When ADEQ resolves that issue, it can determine whether the USFS is required to use an Arizona licensed laboratory for purposes of environmental compliance sampling. When ADEQ takes a position on this issue, you will be notified.

Sincerely,

Jacqueline E. Schafer
Director

JES/MRS/ld

cc: John Timko, Director, Administrative Services Division
Mark R. Santana, Administrative Counsel
Catherine R. Eden, Director, Arizona Department of Health Services

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

Bob Holden, Governor • Stephen M. Mahfood, Director

DIVISION OF ENVIRONMENTAL QUALITY

P.O. Box 176 Jefferson City, MO 65102-0176

March 13, 2001

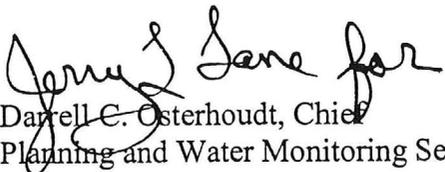
Mr. Dick Hahman
Hahman & Associates
Geological Consultants
321 N. Longfellow Ave
Tuscon, AZ 85711-2835

Dear Mr. Hahman:

In regards to your inquiry of the status of Environmetrics Laboratory in Mary Heights, MO, enclosed is a copy of their last Certified Parameter List and Certificate of Approval. Their Certificate of Approval expired September 13, 1999. They were reinspected on June 13, 2000, but they have not responded to the deviations. Therefore at this time their status is uncertified with the state of Missouri.

Sincerely,

PUBLIC DRINKING WATER PROGRAM


Darrell C. Osterhoudt, Chief
Planning and Water Monitoring Section

DCO:bw

Enclosures

State of Missouri
Department of Natural Resources

Certificate of Approval
for Chemical Laboratory Service

This is to certify that

Environmetrics

is hereby approved to perform the analysis of drinking water as specified on the Certified Parameter List, which must accompany this certificate to be valid.

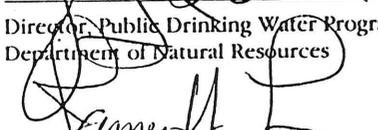
Certification No. 00910

Date Issued September 13, 1996

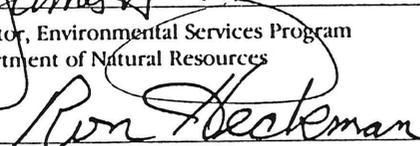
Expiration Date September 13, 1999



Director, Public Drinking Water Program
Department of Natural Resources



Director, Environmental Services Program
Department of Natural Resources



Evaluation Officer, Environmental Services Program
Department of Natural Resources

MISSOURI DEPARTMENT OF NATURAL RESOURCES

DRINKING WATER LABORATORY

CERTIFIED PARAMETER LIST

This is to certify that the

Environmetrics

Laboratory

located at

2345 Millpark Drive, Maryland Heights, MO 63043-3529

has been approved to perform the indicated procedures on drinking water under the Missouri Public Drinking Water Regulations (10 CSR 60-5.020). Specific method numbers or references are included in parenthesis when appropriate.

METALS

Aluminum (EPA 200.7), Antimony (EPA 200.9), Arsenic (EPA 200.9), Barium (EPA 200.7), Beryllium (EPA 200.7), Cadmium (EPA 200.7), Calcium (EPA 200.7), Chromium (EPA 200.7), Copper (EPA 200.7), Lead (EPA 200.9), Magnesium (200.7), Manganese (EPA 200.7), Mercury (EPA 245.1), Nickel (EPA 200.7), Selenium (EPA 200.9), Silver (EPA 200.7), Sodium (EPA 200.7), Thallium (EPA 200.9), and Zinc (EPA 200.7).

INORGANIC NONMETALLIC CONSTITUENTS

Bromide (EPA 300), Chloride (EPA 300) & (EPA 325.3), Cyanide (SM4500CN-c,g,e), Fluoride (EPA 300) & (EPA 340.2), Nitrate (EPA 300) & (EPA 353.3), Nitrite (EPA 300) & (EPA 353.3), pH (EPA 150.1), Phosphate (EPA 300), and Sulfate (EPA 300) & (EPA 375.4).

ORGANIC COMPOUNDS AND CONSTITUENTS

Chlorinated Pesticides (EPA 508), Chlorophenoxy Herbicides (EPA 515.1), TTHM's (EPA 524.2), Volatile Organic Compounds (EPA 524.2).

PHYSICAL AND AGGREGATE PROPERTIES

Acidity (EPA 305.1), Alkalinity (SM2320B), Conductivity (SM2510B), Hardness (EPA 130.2), and TDS (EPA 160.1).

Expiration Date: September 13, 1999
Certificate No.: 00910



File Code: 2160

Date: JUL 18 2001

Mr. W. Richard Hahman
Hahman & Associates Geological Consultants
321 North Longfellow Avenue
Tucson, AZ 85711

Dear Mr. Hahman:

Thank you for your letters to President Bush dated February 18, 2001, and to the Secretary of Agriculture dated February 7, 2001, expressing concerns about the investigations of environmental conditions at the Mansfield Canyon Mine Site and Sabino Canyon Shooting Range Site by the United States Department of Agriculture (USDA) Forest Service. Your letters were referred to the USDA Forest Service Washington Office Engineering Staff for review and response.

The Washington Office Engineering Staff have reviewed the reports, contract information, and previous letters between you and the USDA Forest Service regarding the accuracy and integrity of the investigations. Your comments generally fall into three categories: (1) technical issues regarding the Mansfield Canyon investigation, (2) technical issues regarding the Sabino Canyon investigation, and (3) general concerns about the USDA Forest Service exercise of authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9601, et. seq. at these sites.

Mansfield Canyon Investigation

The Regional Forester in the Southwestern Region (Region 3) issued a CERCLA Non-Time Critical Removal Action Memorandum on September 9, 1996, documenting and explaining the rationale for initiating the response action at the Mansfield Canyon Mine Site, Nogales Ranger District, Coronado National Forest. The Action Memorandum was issued pursuant to the Regional Forester's authority under Section 104(a) of CERCLA, 42 U.S.C. 9604(a), Executive Order 12580, and 7 C.F.R. 2.60(a)(39), to respond to releases and potential releases of hazardous substances on or affecting the National Forest System lands and resources under her jurisdiction. This authority supports the USDA Forest Service's mission to protect the public health and welfare and to protect and restore National Forest System lands and resources.

In accordance with the National Contingency Plan (NCP), 40 C.F.R. Part 300, the USDA Forest Service, through a contract with Camp, Dresser, and McKee (CDM), conducted an Engineering Evaluation/Cost Analysis (EE/CA) for the Non-Time Critical Removal Action at Mansfield Canyon. An EE/CA (40 CFR 300.415(b)(4)(i)) is conducted on Non-Time Critical Removal Actions. As described in the "Guidance on Conducting Non-Time Critical Removal Actions under CERCLA," a publication by the U.S. Environmental Protection Agency, the goals of the EE/CA are to:



- Satisfy environmental review requirements for removal actions;
- Satisfy administrative record requirements for improved documentation of removal action selection; and
- Provide a framework for evaluating and selecting alternative technologies;

An EE/CA identifies the objectives of the removal action and analyzes the effectiveness, implement ability, and costs of various alternatives that may satisfy these objectives. At this time, the EE/CA has been completed, but a decision regarding the chosen removal alternative has not been reached.

In response to your comments concerning acid mine drainage in Mansfield Canyon, a review of the water quality test results shows a high correlation of low pH/high metals content wherever man-made waste rock piles with high net acid generating potential contact surface water.

Your comments on the Mansfield Canyon investigations generally encompass the qualifications of the personnel and laboratories that did the work, and the conclusions of their reports. The USDA Forest Service believes that we have objectively defined the problem at Mansfield Canyon, and will identify the appropriate remedies by considering all the information available to make a sound decision.

In response to your comments about the qualifications of the contractor, the following presents more detailed information about the qualifications requirements in the USDA Forest Service contracts. The intent of the contract with CDM (Contract No. 53-8371-2-70) was to procure Professional Architect-Engineer Environmental Services for three task areas, Area 1, 2 and 3 of consideration. The Scope of Work for the EE/CA is described under Section C – Description/Specification/Work Statement, Area 1, of the contract. The scope of work for task Area 1 is to perform preliminary assessment/site inspections (PA/SIs), remedial investigations/feasibility studies (RI/FSSs), and EE/CAs. Under task Area 1, it is not required that the work be performed by or under the supervision of a licensed professional engineer, as in Area 2 of the Scope of Work. The scope of work for task Area 2 is to perform environmental engineering remedial design. Task Area 2 of the Scope of Work does require work to be performed by or under the direct supervision of a professional engineer, licensed in the appropriate state. The scope of work for task Area 3 is to review environmental engineering work done by others for use by the Government.

Based on this, your comments stating that the CDM contract required Arizona-state registrations for the conduct of this site investigation work are not correct. Following the completion of the EE/CA, there is a public comment period, followed by a response to comments, and an Action Memorandum, which describes the selected alternative. Thereafter, an engineered design is developed for the selected alternative. Since no alternative for the Mansfield Canyon Mine Site has yet been selected or approved, there has not been any design work developed for the site. A licensed professional engineer is neither required nor necessary to conduct an EE/CA. However,

when the design work is conducted, a licensed professional engineer will be required of the contractor.

Information regarding your concerns about the Arizona state licensing of laboratories is included in the section on Sabino Canyon below.

Sabino Canyon Shooting Range Investigations

We appreciate your comments regarding the best method for removing contaminated soil at the range. The USDA Forest Service is currently working on the design specifications for removal of the clay pigeon debris and contaminated soil at the range. Some of the design work entails the use of vacuum techniques and recycling, which you referenced in your comments. An Arizona state-registered professional engineer is supervising the design work.

In regards to the use of laboratories not certified by the State of Arizona:

The Mansfield Canyon and Sabino Canyon EE/CAs performed by the USDA Forest Service were conducted pursuant to Section 104(a) of CERCLA and the NCP, 40 C.F.R. Part 300. CERCLA and the NCP generally require the USDA Forest Service to comply with applicable State substantive, but not procedural, requirements. CERCLA response activities conducted onsite by the USDA Forest Service are exempt from all permitting requirements. The contracts between the USDA Forest Service and CDM/Dynamac Corporation were issued under the Federal Acquisition Regulations (FAR), 48 C.F.R. 1000, et seq., which govern Federal procurement of goods and services. Under the terms of the contracts and the FAR, the laboratories used were determined to be qualified to perform the sample analyses that were performed. The laboratories used had been certified by EPA to perform the testing and had demonstrated a track record of providing legally defensible analysis. It is not clear that the State's licensing law can be applied to these Federal contractors under these circumstances.

The question of whether the State's licensing requirements can be enforced against these contractors under these circumstances is not relevant to whether the data obtained is valid. The analysis that was conducted by all of the laboratories conforms to the applicable substantive scientific standards and there is no indication that the results reported were inaccurate. Therefore, the USDA Forest Service has determined that it is appropriate to consider this data in the EE/CA in its evaluation of the site.

Regarding your comments on the qualifications of the Dynamac Corporation staff:

Contract 1422-N660-C98-3003 was executed on December 12, 1997, between the Bureau of Land Management (BLM) and the firm of Dynamac Corporation for technical assistance in the Hazardous Materials Management program. To foster "One Stop Shopping," USDA Forest Service, Southwestern Region, joined with the BLM in the contract award and contract usage. In this respect, the contract allows the USDA Forest Service to place their own task orders, administer them, and process applicable payments. Like the original CDM contract, the Dynamac contract does not require professional registrations for site investigation work.

With respect to personnel, the contract specifications, paragraph C-4a. states: "The TAC (Technical Assistance Contractor) shall assure that all personnel working as its employees, agents, or subcontractors performing work under this contract have received current training appropriate for them to provide the services." Further, the contract contains a "key personnel" clause and further expands on the definition of key personnel for two categories entitled geologist and engineer. Dynamac Corporation's key personnel listing include both categories and each of the named individuals has the appropriate professional registrations. In order to win the contract, Dynamac was required to compete with other contractors on such issues as staff qualifications, corporate experience, and proposed technical approach for conducting this type of work. The lack of Arizona state certifications does not have any bearing on the technical qualifications and competence of either the CDM or Dynamac contractor staffs.

The CERCLA process has been designed to solicit comments from the community, and comments have been solicited and responded to by the USDA Forest Service throughout this process. At no point have comments been ignored because they were made by non-registered persons.

Regarding your comments on the sampling techniques employed by Dynamac:

The sampling techniques conducted at Sabino Canyon Shooting Range by Dynamac Corporation followed EPA national, standardized guidelines.

Regarding your comments on "mythical" and "fictitious" residents, and "fantasizing" about lead exposure:

The issue regarding the "lead blood levels" has previously been addressed in the Technical Response to Comments report, Sabino Canyon Shooting Range, dated July 2000.

It is standard practice in EPA risk assessments, for sites without current residents or exposures, to evaluate the potential threats to hypothetical future residents or exposures. This is discussed in EPA's *Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual, Section 6.2.2*. This is because the land use may change in the future. While it is acknowledged that this is a conservative assessment of risk, it is standard practice, and a necessary first step towards determining if a site presents even the potential for a threat to human health. The magnitude and likelihood of that threat are issues that are considered in the evaluation of public comments on the EE/CA. In addition, the USDA Forest Service's actions will not be solely based on the calculation of the human health threat. The possible impact on ecological receptors will also be considered.

Regarding your comments about several Arizona state agencies awaiting a response from the USDA Forest Service, and the Arizona state boards having information about the contractors:

The USDA Forest Service has received no communication from any Arizona state agency regarding concerns about these investigations. If such communication is received in the future, it will be responded to.

General Comments about the USDA Forest Service's use of CERCLA

In your letter, you state that USDA Forest Service actions have "brought unwanted financial expense, worry, and anxiety to Arizona citizens. We express no opinion whether any potentially responsible party (PRP) at this site acted "conscientiously" or not; rather, our focus, to the extent we decide to pursue PRPs at all, is premised on the liability provisions of CERCLA itself. CERCLA clearly provides that an operator "shall be liable for . . . all costs of removal or remedial action incurred by the United States Government . . . not inconsistent with the national contingency plan" for releases of hazardous substances that occurred during the time that they operated the facility in question (42 U.S.C. §9707(a)). Past operators are potentially liable under CERCLA for such releases regardless of whether they believed they were operating in a legal or "conscientious" fashion. See United States v. Mexico Feed & Seed Co. 980 F.2d 478, 484 (8th Cir. 1992) ("the lawfulness of the acts of persons causing the contamination [is] simply not [an] available defense [] according to the plain language of the statute.")

The USDA Forest Service has not made any final decision to pursue any PRPs at the site at this time. Likewise, no parties have been released from liability, including the parties who have exchanged land with the USDA Forest Service at the site.

Finally, your letter asserts that the USDA Forest Service's actions at this site constitutes a "misuse and abuse" of its CERCLA authority. We regret that you have this impression. We believe that we have acted professionally to serve the public interest in this matter. We will continue to work hard to build confidence with the public. Hopefully, some of the differences of opinion that we currently have about this project can be bridged through continued communication.

It is not the policy of the USDA to provide a release of CERCLA liability to any party absent a formal settlement agreement, which requires the concurrence of the Department of Justice. Any responsible party interested in discussing settlement of potential liabilities at the Mansfield Site may contact Steve Silverman at (303) 275-5551. Any responsible party interested in discussing settlement of potential liabilities at the Sabino Site may contact Thomas R. Fox at (202) 720-6715.

I would briefly like to discuss another point raised in your letter. First, you allege that "the USDA Forest Service has stated that all club members, present and past from 1953 forward will be charged as environmental criminals and made responsible for the costs of the environmental cleanup." This is not, and never has been, our intention. I am aware that the USDA Forest Service explicitly has provided reassurance to Mr. Russell Corn on more than one occasion that it intends to take no action at the Site(s) to endanger his financial well being or standard of living or that of any other party. As we have also stated to Mr. Corn, it is the policy of the USDA Forest Service to seriously consider any claim of inability to pay before exercising its CERCLA enforcement authorities. Moreover, the USDA Forest Service will not use its CERCLA authorities to undermine the fundamental financial well being of any party.

In closing, let me reiterate that if the foregoing reassurances are insufficient to provide you with the response that you seek, then perhaps the best course of action is to meet with the USDA Forest Service. If you have any further questions, please contact Ben Martinez, Regional Environmental Engineer, Southwestern Region, at (505) 842-3854.

Sincerely,



 JAMES R. FURNISH
Deputy Chief for National Forest Systems

Meeting Summary
Southwestern Regional Environmental Response and Restoration Council (RERRC)
January 24, 2000
1:00-4:00 PM
Albuquerque, New Mexico

In attendance:

Ellie Towns	Mike Linden
Jim Gladen	Bobbi Baca
Art Briggs	Penny Luehring
Al Koschmann	
Wayne Thornton	
Steve Silverman	

303-275-5551

Here are my notes from the First Southwestern Regional Environmental Response and Restoration Council. Use them as you see fit to modify your summary.

1. Penny presented bullet statements on the duties and responsibilities of the RERRC.
2. Bobbi Baca discussed the current organizational structure of the HazMat Program and the staff. It was mentioned that the Region has a HazMat Com which originally met formally which was very similar to the RERRC.
3. Penny and Bobbi discussed the AML program.
4. Bobbi discussed the proposed Executive Order regarding the Grenning of the Federal Government and Environmental Management Systems, how they are a new way of approaching and achieving environmental compliance. There is a need for more people to understand what EMS are and there use.
5. Plans already underway for most projects. Make sure that the National Environmental Response and Restoration Council understands that they will not see a "Work Plan" from this region until the end of March, after the National Budget Meeting in Tucson.
6. Copies of all Minutes and the agenda will be sent to everyone, all members and staff of the NERRC, RERRC, and Janet Potts.
7. Current list of projects displayed show approximately 28 projects, need to make sure that Molycorp is added as a project on the Carson.
8. Regarding the development of a Southwestern Region Database which would then produce the spreadsheet desired by the Department, emphasis was made that we must make sure that whatever is done reflects all the same information that the Department needs. However, there was support to move ahead to get beyond the massive spreadsheet currently being used. Need to simplify the spreadsheet at a National Level.
9. Steve Silverman indicated that the ERRC's are an evolving process. No one knows precisely what the process is. He intends to attend the first couple of RERRC meetings in each of the regions he has been assigned, after that it would be on an as needed basis. He indicated that there were projects on the list that he had never heard of or seen before.
10. Regarding RCRA, there is a need to address the immediate health and safety concerns associated with RCRA. Suggestions were made to work closely with Health and Safety, include a "Tips" box in the Southwestern News, perhaps find a 15-20 minute Safety video which could be widely distributed. The information needs to be shared with John Bedell who is working with James Rawlinson regarding safety. Need to find simple 2-3 items that can be addressed this year to address the lack of knowledge issue. It was also mentioned that the RCRA Specialist currently in Region 2 will be available after the training is completed up there, the Southwestern Region has expressed a desire to tap into his expertise and utilize it down here.
11. Mansfield Canyon Update. Penny Luehring and Steve Silverman shared the attached flowcharts regarding the project and who needs to approve what. Approval with conditions has been received from Terry Harwood, Executive Director of the Hazadous Materials Policy

Council, regarding treatment off-site. [redacted]
[redacted] Steve mentioned that he had discussed the issue with Joe Tieger, EPA-WO, on January 6, 2000 (at the EPA Region 9 - Section 106 meeting). [redacted]

[redacted]

Ex (b) 5

[redacted] stated that if necessary that she could be in reserve to contact Felicia Marcus, EPA Region 9 Regional Administrator, if necessary. [redacted]

- 12. Sabino Canyon Update. Bobbi Baca stated that Tom Fox, OGC-WO, and Bradley O'Brien, DOJ-San Francisco, along with Eli Curiel, Bill Lewis, and Bobbi Baca visited the site December 16, 1999. The conclusion was that the Forest Service would develop a Statement of Work (SOW) for our preferred differential removal option which would be independent of any facility to be constructed. Once the statement of work is completed then the Regional Forester could approve a Removal Action Memo implementing and the design work could begin so that firm cost estimates could be obtained. In the meantime Brad would continue to work with the DOJ to determine cost recovery options.
- 13. Molycorp Update. It was discussed that the proposed listing of the site as a National Priorities List (NPL) site would have major ramifications and a separate meeting is probably necessary just on this site.
- 14. Ellie Summarized the meeting and major items:
 - a. Need to have a one page summary indicating to Terry Harwood how grateful we are to all the time and energy he has put into this and to get enough concern nationally to organize the Councils. The region recognizes the tremendous volume of work ahead.
 - b. After March a work plan will be formulated. Preference being to flowcharts similar to that prepared by Penny for Mansfield would be helpful.
 - c. Clarification is needed from the NERRC regarding what is meant by "spreadsheet" or who, what, when, where, and how these are to be submitted.
 - d. There is a tremendous need to coordinate with the WO. Terry, Bettina, Steve, Kirk, the Forest Supervisors, and hazmat coordinators need to be cc'd everything.
 - e. Next meeting will have a shorter agenda and the Forest Supervisor's who have projects should be invited to attend.
 - f. More thought needs to go into how to interface with Safety and the emerging relationship with OSHA in this region.

- Attachments
- Agenda
- RERRC Bullet Statements
- Mansfield Flowcharts

November 24, 1952

Mr. Horace L. Mann
1461 Hampstead Road
Penny Wynne,
Philadelphia 31, Pa.

Dear Mr. Mann:

In reply to your letter of November 19th the Mansfield Mining and Smelting Company was incorporated under the laws of the State of Arizona in 1906 and their charter expired July 5, 1927 due to failure to file a report. The company is no longer legally in existence.

Very truly yours,

R.I.C. Manning,
Director.

RICH:LP

C
O
P
Y

1461 Hampstead Road
Penn Wjane, Pinta 31, Pa.

November 19, 1952

Bureau of Mines
State of Arizona
Phoenix, Arizona



Gentlemen:

My mother, Eva M. Mann, died Nov 3, 1952, and in her effects I found certificate #4770 for one hundred (100) shares of Capital Stock in the Manasfield Mining and Smelting Company, incorporated under the laws of the State of Arizona (1906). The shares were purchased by my Father (deceased), June 15th, 1907. (Lancelot Mann)

as executor of my mother's estate, I would be interested to know if such company still exists and if said stock is of any value.

Thanks for your kind consideration.

Very truly yours,
Grace L. Mann

July 5, 1927

REQUEST FOR TERMINATION

MANSFIELD MINES SITE CERCLA ACTION
CORONADO NATIONAL FOREST, ARIZONA

EPA ID No. AZ 0002001857

RUSSELL M. CORN

Registered Geologist

8425 DESERT STEPPES DR.

TUCSON, ARIZONA 85710

PHONE 520 - 298-1770

REQUEST FOR TERMINATION

**MANSFIELD MINES SITE CERCLA ACTION
CORONADO NATIONAL FOREST, ARIZONA**

EPA ID No. AZ 0002001857

by

Russell M. Corn

Registered Geologist, Arizona No. 8885

November, 2002

RUSSELL M. CORN

Registered Geologist

8425 DESERT STEPPES DR.
TUCSON, ARIZONA 85710
PHONE 520 - 298-1770

REQUEST FOR TERMINATION

**MANSFIELD MINES SITE CERCLA ACTION
CORONADO NATIONAL FOREST, ARIZONA**

I respectfully request that the Mansfield Canyon Mines Site CERCLA Action, EPA ID No. AZ 000200 1857 be removed from the Superfund list and the CERCLA Action terminated because the site conditions were completely misrepresented by the Forest Service and the data used as criteria and justification for both the CERCLA designation and the action were inaccurate or fabricated. The limited acid drainage at Mansfield Canyon is derived naturally from an extensive area of disseminated pyrite and the proposed expensive removal action would be ineffective. I am intimately familiar with Mansfield Canyon. I have conducted several geologic investigations in the area and have visited the area annually for more than 40 years. This report is intended to refute the inaccurate and fabricated data presented by the Forest Service, to accurately describe the site conditions at Mansfield Canyon and to also describe the biased and abusive actions of the Forest Service since they initiated the CERCLA investigation.

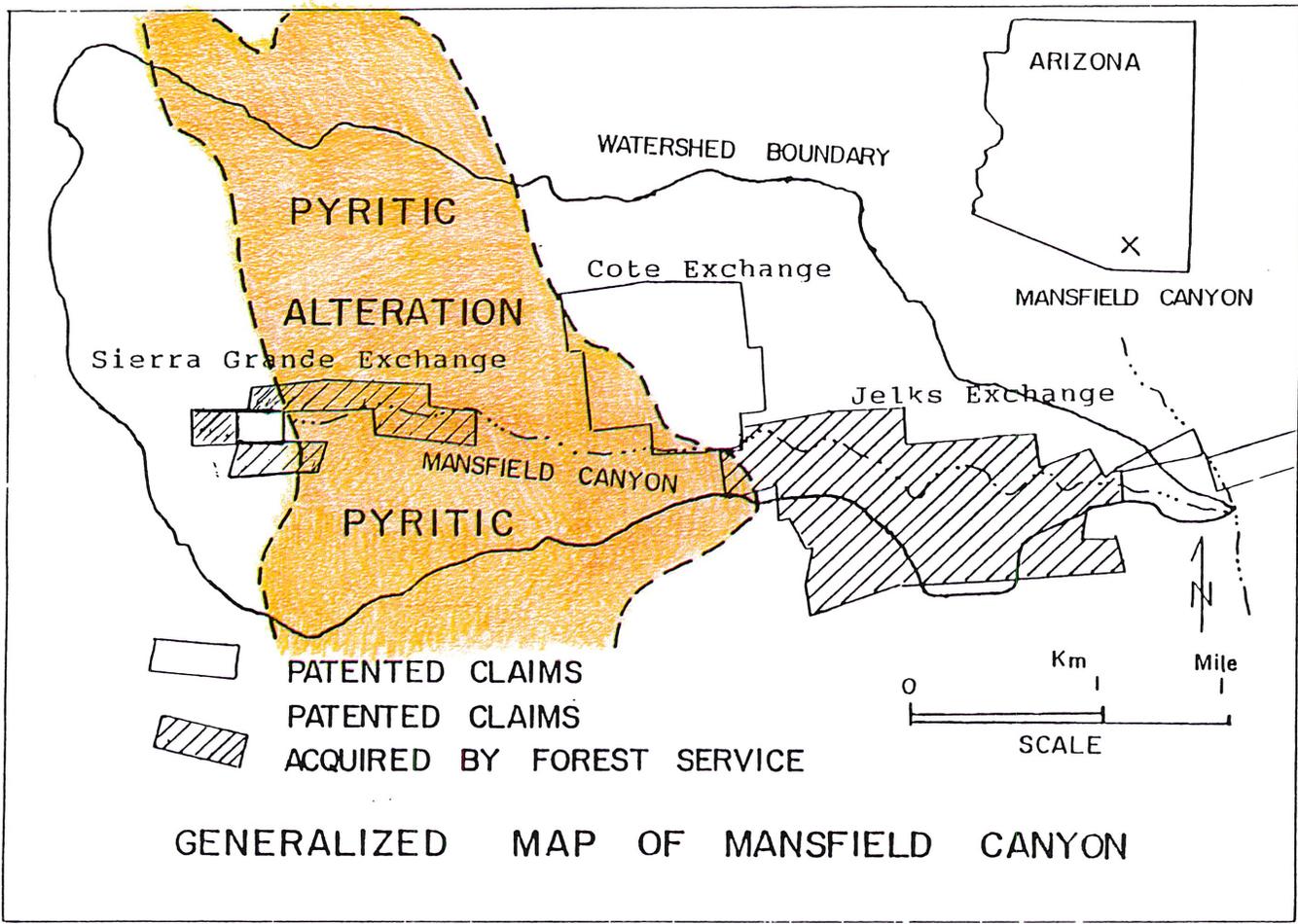
Background

The Forest Service initiated their CERCLA investigation more than ten years ago and designated Mansfield Canyon as a CERCLA or Superfund site on the basis of a fictitious permanent resident and inaccurate and fabricated data obtained by technically incompetent, non professional consultants. They completely ignored prior scientific data and reports and the opinions of experienced, competent professional engineers and geologists indicating that the widespread pyritic alteration and pervasive mineralization at Mansfield Canyon was the natural source of the limited acid drainage in the watershed. The Forest Service planned to carry out the proposed CERCLA removal action during the latter part of 2000 without ever having a technically competent, registered professional determine the source of the acid drainage or determine whether the proposed expensive removal action would have any appreciable effect on the limited acid drainage in the ephemeral watercourse. Incorporated in this report is a copy of a Flow Chart prepared for the Jan. 24, 2000 meeting of the SW Regional Response and Restoration Council of the Forest Service indicating that the CERCLA removal action was planned for the latter part of 2000. Also incorporated in this report is a copy of a letter from the Regional Forester to the Chief Forester dated April 10, 2000 stating that, at Mansfield Canyon, "many

critical legal, social and technical issues remain unresolved". The Forest Service still insists that the data obtained by their non professional, technically incompetent consultant is valid and appropriate. They received a Preliminary Assessment Review of the project from the Environmental Protection Agency in February, 2001 and have stated that the project is active and continuing.

Mansfield Canyon is an ephemeral watercourse draining a highly mineralized area that contains numerous old small mines and prospects that have been inactive since the late 1930's. The old mines are on veins exterior to a large area of pyritic alteration and pervasive mineralization that is shown on both the accompanying sketch map and on USGS Map I-614 (Drewes, 1971). A portion of Map I-614 that covers Mansfield Canyon is incorporated in this report. The pervasive mineralization and abundant disseminated pyrite extends over almost half of the watershed that was designated by the Forest Service as the Hazardous Waste Facility. This large area of disseminated pyrite and pervasive mineralization is the natural source of the limited acid drainage in Mansfield Canyon. The small mining waste rock dumps in the area are insignificant in comparison and Forest Service data show that the old mines and waste rock dumps are not the source of acid drainage. The Forest Service statement that there was a permanent resident in the vicinity was False. It is seven miles to the nearest town and the limited surface and subsurface acid drainage in the ephemeral watercourse does not pose a risk to humans, livestock or wildlife.

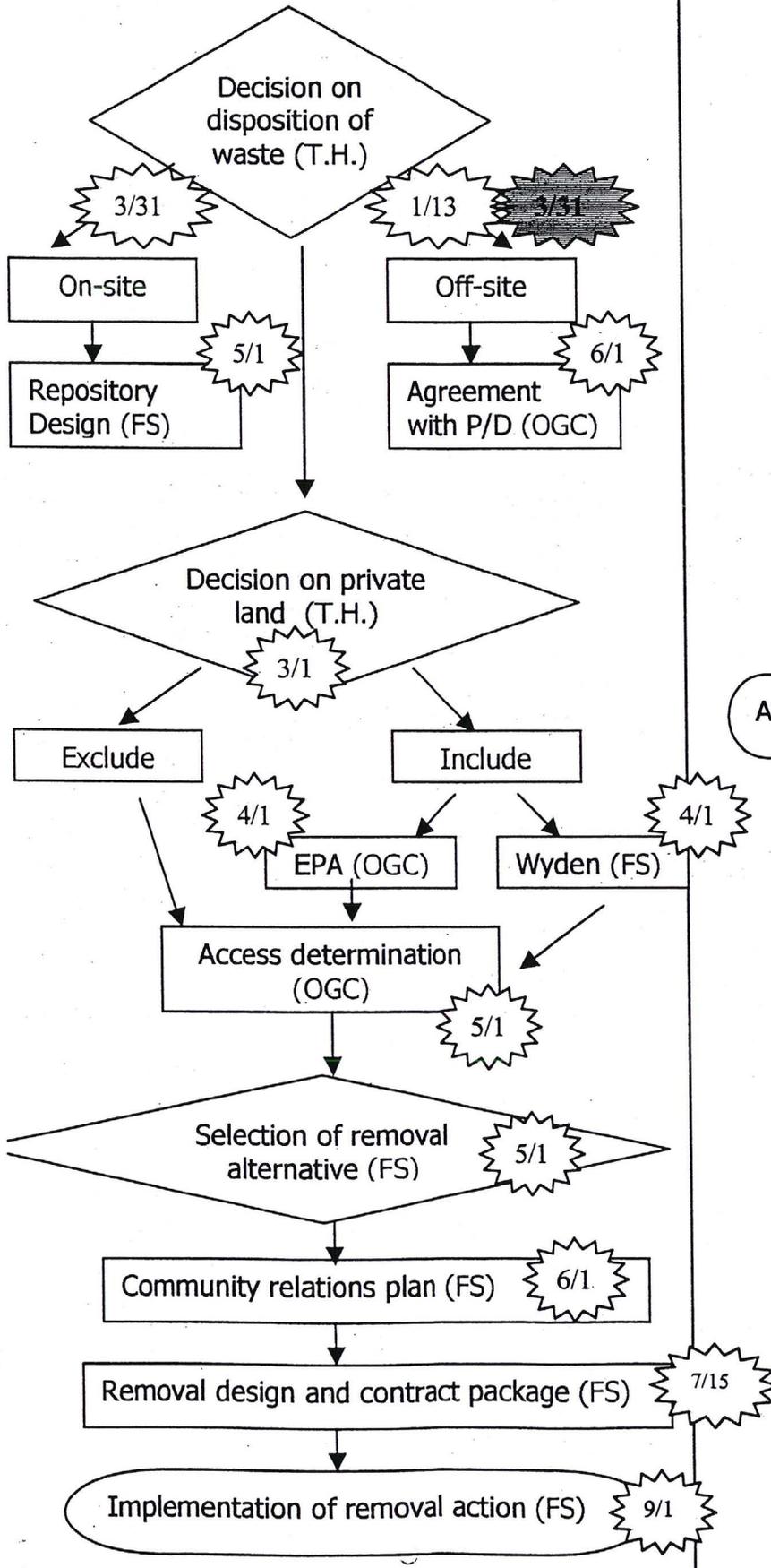
The larger old mines in the watershed (the Hazardous Waste Facility) are on private land (patented mining claims) that the Forest Service either has acquired or is attempting to acquire as shown on the accompanying sketch map. Citizens who were not owners or operators of any mine and who were not responsible for any contamination or any acid drainage, but who had only staked and later abandoned mining claims long before the CERCLA investigation, were designated as Potential Responsible Parties by the Forest Service. These citizens were informed that they would be retroactively liable for all CERCLA costs, including the costs of the CERCLA removal action on the private lands acquired by the Forest Service. In contrast, the actual owners of the old mines on private land in the same Hazardous Waste Facility were either never listed as Potential Responsible Parties (Cote) or were given "sweetheart" land exchange agreements (Sierra Grande). As indicated by the Regional Forester's letter to the Chief, the owners of mines on private land were also considered for potential "partnership" arrangements with the Forest Service. Incorporated in this report is a copy of a letter dated March 18, 2001 stating that the partnerships mentioned in the Regional Forester's letter to the Chief referred to cost sharing partnerships between the Forest Service and the owners of mines on the private land whereby the Forest Service would pay for the removal of the waste dumps from the private land.



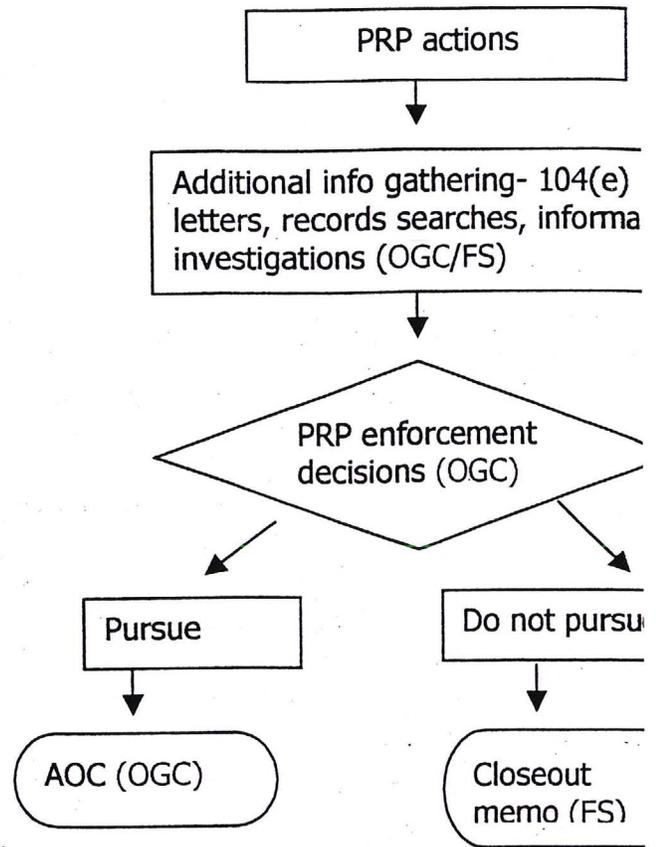
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Mansfield Canyon - Sequence of Events (April, 2000)

Actions that must follow a definite order:



Actions that can occur at any time:



- Critical due date
- Decision made
- Decision retracted

Note: Primary responsibility color coded in parentheses:
 TH- Terry Harwood
 OGC- Office of General Counsel
 FS- Forest Service



United States
Department of
Agriculture

Forest
Service

Southwestern
Region

517 Gold Avenue, SW
Albuquerque, NM 87102-0084
FAX (505) 842-3800
V/TTY (505) 842-3292

File Code: 1930
Route To: 2160/2520/2800

Date: April 10, 2000

Subject: Mansfield Watershed Abandoned Mine Cleanup

To: Chief

In fiscal year 1998, the first year of the Abandoned Mine Land (AML) Initiative, this region received \$750,000 to implement the cleanup of approximately 32 small abandoned and inactive mines on the Coronado National Forest in Mansfield Canyon near Patagonia, Arizona. In the two fiscal years since then, we have received additional AML funding targeted for the cleanup. To date, no on-the-ground work has occurred.

In 1994, when water sampling indicated the possibility of a hazardous substance "release" at this site, we began following Forest Service CERCLA procedures. As part of this process, a Preliminary Assessment, Potential Responsible Party (PRP) Search, Site Operational History, PRP financial information requests and an Engineering Evaluation/Cost Analysis (EE/CA) have been accomplished over the past six years.

Unanticipated technical and administrative problems precluded any cleanup activities in 1998 and 1999 and current considerations indicate little chance of initiating the project this year. The Mansfield Canyon cleanup has the potential to be a showcase watershed restoration project featuring functional coordination, threatened & endangered habitat protection, and partnerships, in addition to the original objective of environmental restoration. Unfortunately, many critical legal, social and technical issues remain unresolved, with complete resolution not anticipated for several years.

We intend to continue working on resolving the outstanding issues as opportunities arise. However, we do not foresee being in a position to proceed with on-the-ground project implementation for several years. In light of this, we are returning the AML funding so it can be made available to be used elsewhere to meet the original intent of the Abandoned Mine Land Initiative.

/s/ JAMES T. GLADEN for
ELEANOR S. TOWNS
Regional Forester

cc: T. Harwood, USDA
L.Gadt, MGM
J.Holtrop, WSA
V.Stokes, ENG
J.McGee, Coronado
E.Curiel, Coronado
S.Silverman, OGC





United States
Department of
Agriculture

Forest
Service

R3 Regional Office

333 Broadway SE
Albuquerque, NM 87102
FAX (505) 842-3800
V/TTY (505) 842-3292

File Code: 6270-1-1

Date: MAR 18 2002

Russell M. Corn
8425 Desert Steppes Dr.
Tucson, AZ 85710

RE: Freedom of Information Act (FOIA) Request – Control No. 2002-012

Dear Mr. Corn:

This responds to your Freedom of Information Act (FOIA) request dated January 6, 2002 addressed to FOIA Officer Joe Sedillo wherein you request records related to: *“possible partnerships ...between the Department of Agriculture, U.S. Forest Service and the Nature Conservancy, Audubon Society, or other special interest non—government organization in the Mansfield Canyon – Temporal Gulch area, Nogales Ranger District...”*

After conducting a reasonable search for responsive records both with the regional Engineering Staff and the Engineering Staff on the Coronado National Forest, we have concluded that neither unit has any responsive records such as transcripts of meetings, reports, letters, memos, notes or e-mail which refer to possible partnerships in the area requested. The term “partnerships” referred in the Regional Forester letter dated April 10, 2000 concerning the Mansfield Watershed project refers to the potential cost-sharing opportunities with landowners whose private inholdings in Mansfield Canyon contained mining waste rock material similar to that located on the national Forest. There are no records of meetings, reports, letters or e-mail between the Forest Service and nature Conservancy, Audubon Society or any other special interest non-governmental organization.

When requested items are not found or they are withheld from disclosure, the Freedom of Information Act requires us to provide you with a standard notice of your right to appeal such finding. The following paragraph contains that notice.

The Freedom of Information Act provides you the right to appeal my decision. Appeals must be made in writing, within 45 days from the date of this letter, to:

USDA, Forest Service
Attn: Chief’s Office
Stop 1143
1400 Independence Avenue, SW
Washington, D.C. 20250 – 1143



Validity of Forest Service Reports

The Forest Service CERCLA investigations are not valid. The investigations were carried out by technically incompetent, non professional personnel from CDM Federal Programs Corp. acting as consultants for the Forest Service. The investigative reports contain inaccurate and fabricated data. Analytical data for the CDM investigations were obtained from a laboratory in Missouri that was not certified as competent to perform the required analyses by either the State of Arizona, as required under Arizona environmental laws or the State of Missouri. Although the Forest Service consulting contract with CDM specified that the CERCLA investigations at Mansfield Canyon were to be carried out by or under the supervision of a registered professional, this contract provision was completely ignored by the Forest Service. Instead, the lead consultant for the CERCLA investigation at Mansfield Canyon was a technically incompetent, non professional that the Forest Service falsely described as a Certified Professional Geologist in their Response to Comments on the EE/CA Report (USDA Forest Service, 1999, Comment No. 112, p. 26). An investigation by the Technical Advisory Committee of the Arizona Board of Technical Registration determined that the Forest Service's consultant lacked technical competence and was not a professional as claimed. The Forest Service stated at that time that, since the consultant was legally considered a Forest Service employee, he was not required to meet the Arizona standards of technical competence, integrity and professionalism necessary for these investigations. In a letter dated Jan. 22, 2001, describing the preliminary results of his investigation, the Inspector General, Department of Agriculture, reported that Forest Service officials had agreed, that for the Mansfield Canyon CERCLA investigation, "contract language required a professional engineer to be the lead employee" and that the Forest Service's statement that the "lead employee was a registered geologist was incorrect". A copy of the Inspector General's letter is incorporated in this report.

Apparently, there are no requirements that the investigations on which the CERCLA designation and action will be based must be objective and conducted by or under the supervision of a technically competent, registered professional. The Forest Service still insists that their consultant at Mansfield Canyon was qualified and that his data and the results of his investigations are appropriate and valid. When the investigation is not conducted by a technically competent professional and when the investigative reports contain inaccurate and fabricated data and describe a fictitious "permanent resident", then the entire investigation should be discarded and dismissed as invalid.



UNITED STATES DEPARTMENT OF AGRICULTURE

OFFICE OF INSPECTOR GENERAL

Washington, D.C. 20250



January 22, 2001

Mr. Russell M. Corn
8425 Desert Steppes Drive
Tucson, AZ 85710

Dear Mr. Corn:

We have made preliminary inquiries to address the concerns set forth in your letter of October 6, 2000. Forest Service (FS) officials tell us that they have communicated with you regarding these issues. Your primary concerns related to the qualification of the lead contract employee and the laboratory used to test samples taken from the Mansfield Mine.

Regarding the lead employee, FS officials agreed that contract language required a professional engineer to be the lead employee. They also agreed that the "draft" letter stating that the lead employee was a registered geologist was incorrect. However, FS officials contend that the lead employee was qualified to perform the work, even if he did not meet the technical requirements of the contract.

FS officials also agreed with your contention that the lab being used to test the samples was not certified in Arizona. However, they asserted that this was a technicality and did not relate to the competency of the lab.

According to FS officials, the contractor's work was only part of the information used to formulate conclusions regarding the contamination level at the mine site. They stated that they have done independent testing at the site, as has the Bureau of Mines. This information, along with data from the contractor, was used to arrive at an overall conclusion regarding the contamination level.

FS officials confirmed that all actions regarding this mine site have been halted. No further action is planned at this time.

Sincerely,

A handwritten signature in black ink, appearing to read "Roger C. Viadero".

ROGER C. VIADERO
Inspector General

Forest Service Criteria

Judging from the Mansfield Canyon example, a CERCLA or Superfund designation and action does not have to be based on objective standards and definitive criteria. My review of the various Assessment reports on Mansfield Canyon indicates that a site can be designated as a CERCLA Hazardous Waste Facility based on little more than assumptions and unsubstantiated opinions that there is a "potential threat to humans or to the environment".

The Mansfield Canyon Acid Mine Drainage Investigation by Forest Technician Ray Wiggins was initiated in August, 1992 as part of the Forest Service's CERCLA Discovery Program and the data collected in this investigation was the primary source of material for the later CDM Assessment reports, the CERCLA designation, and the proposed CERCLA removal action. The stated purpose of the Wiggins study was only to identify sites possibly contributing acidic water to the ephemeral watercourse of Mansfield Canyon. Although the pyritic alteration was not recognized or mentioned, this study did find that there was acid drainage within and in the near vicinity of the large area of pervasive mineralization and pyritic hydrothermal alteration in the upper part of Mansfield Canyon. The study also found that Piper Gulch, the major tributary of Mansfield Canyon that is located east of the pyritic altered area, contained neutral or alkaline water despite the presence of large mines and pyritic waste rock dumps (Wiggins, 1992, p. 57). Subsequent water sampling by Forest Service personnel confirmed this data (Bolin Labs, 1999), showed that the overwhelmingly acidic results reported in the EE/CA Report were inaccurate, and should have sufficed to indicate that the mining waste rock dumps were not the source of the acid drainage. Tailings were not mentioned in the Wiggins report and Mr. Wiggins specifically stated that many of the mining sites "were not considered to be a potential problem impacting water quality" (Wiggins, 1999, p. 1). It is difficult to understand how the data and observations in the Wiggins report could be transformed into the CERCLA project recommendation that the entire watershed should be designated as a Hazardous Waste Facility and that all waste rock dumps in the watershed caused acid drainage, were hazardous, and should be removed.

Hazardous substances identified at Mansfield Canyon were the copper, zinc, arsenic and manganese that exceeded Arizona water quality standards in some of the water samples taken during the Wiggins study. These elements are natural constituents of both the numerous mineralized veins in the drainage and the large area of pervasive mineralization and disseminated pyrite and they would be expected to occur naturally in water in the drainage.

As indicated by both the Preliminary Assessment Report (CDM, Jan. 31, 1994) and the Preliminary Assessment Screen (CDM, Dec. 30, 1994), prepared for the Forest Service by CDM Federal Programs Corp. without ever visiting the site, the CERCLA designation was based on the following inaccurate or fabricated and fictitious statements.

1. Large volumes of tailings and waste rock were generated by past mining activity and have produced acid leachate.
2. There are three permanent residents living within $\frac{1}{4}$ mile of the site.
3. Ground water contamination exists in the area because of water filled adits and shafts.
4. The domestic well used by the three permanent residents is hydraulically connected to the suspected contaminated water on the site.
5. Endangered bats and other species would be impacted by the acidic contaminated water and there may be a potential threat to the sensitive Sonoita Creek Preserve, seven miles distant.

The Forest Service Action and Approval Memorandum of Sept. 9, 1996 initiating the CERCLA action, stated that "large volumes of waste rock and mine tailings were generated in and along stream tributaries of Mansfield Canyon" by past mining activity and that the threat to public health, welfare and the environment was the result of the "tailings and acid mine drainage". (USDA Forest Service, 1996). The objectives of the CERCLA action were to mitigate the risks resulting from the acid mine drainage and the exposed tailings (USDA Forest Service, 1996, p. 4).

The permanent residents were fictitious, the tailings were imaginary, and the other assumptions and statements were also either inaccurate or fabricated. A detailed discussion of these criteria and the fabricated data used by the Forest Service to justify the CERCLA designation and the removal action follows.

Imaginary Tailings:

The Forest Service and their consultants stated, in various reports and at the PRP meeting in November, 1996, that large volumes of waste rock and tailings in the Mansfield Canyon drainage produced acid leachate and were the source of acid drainage (CDM, Jan., 1994) (CDM, Dec., 1994) (USDA Forest Service, 1996). The statements indicating and implying that there were large volumes of tailings in addition to mining waste rock and that the tailings produced acid leachate appear to have been made in an attempt to justify the CERCLA designation and the removal action. There are no tailings in Mansfield Canyon; there never have been any tailings, and there has never been a mill in the drainage that could process ore and generate tailings. Tailings or a former mill were never described in any records of the Arizona Dept. of mines and Mineral Resources, or by the U. S. Geological Survey, the U. S. Bureau of Mines, or by Ray Wiggins in their reports on the area. Registered Professional Geologist W. E. Heinrichs, Jr. specifically stated in his report that he did not observe any tailings (Heinrichs, 1991, p. 2).

The imaginary tailings were first mentioned in the Assessment reports prepared by CDM Federal Programs Corp. for the Forest Service in January, 1994 although CDM personnel had never visited Mansfield Canyon. Robert Oldfield, a former Forest Service employee, explicitly stated in correspondence directed to me in the spring and summer of 1999 and later placed in the Forest Service Administrative Record, that "ore had been processed for many years and that there were tailings at Mansfield Canyon" (USDA Forest Service Administrative Record, Items No. 307, 333, 334). I had never observed any tailings in the area and made several trips to examine the specific sites where Mr. Oldfield stated that he had observed tailings, but could not find either tailings or the ruins of a mill that could have produced tailings at these sites. Mr. Oldfield later admitted that he had been mistaken and that his statements about tailings were inaccurate.

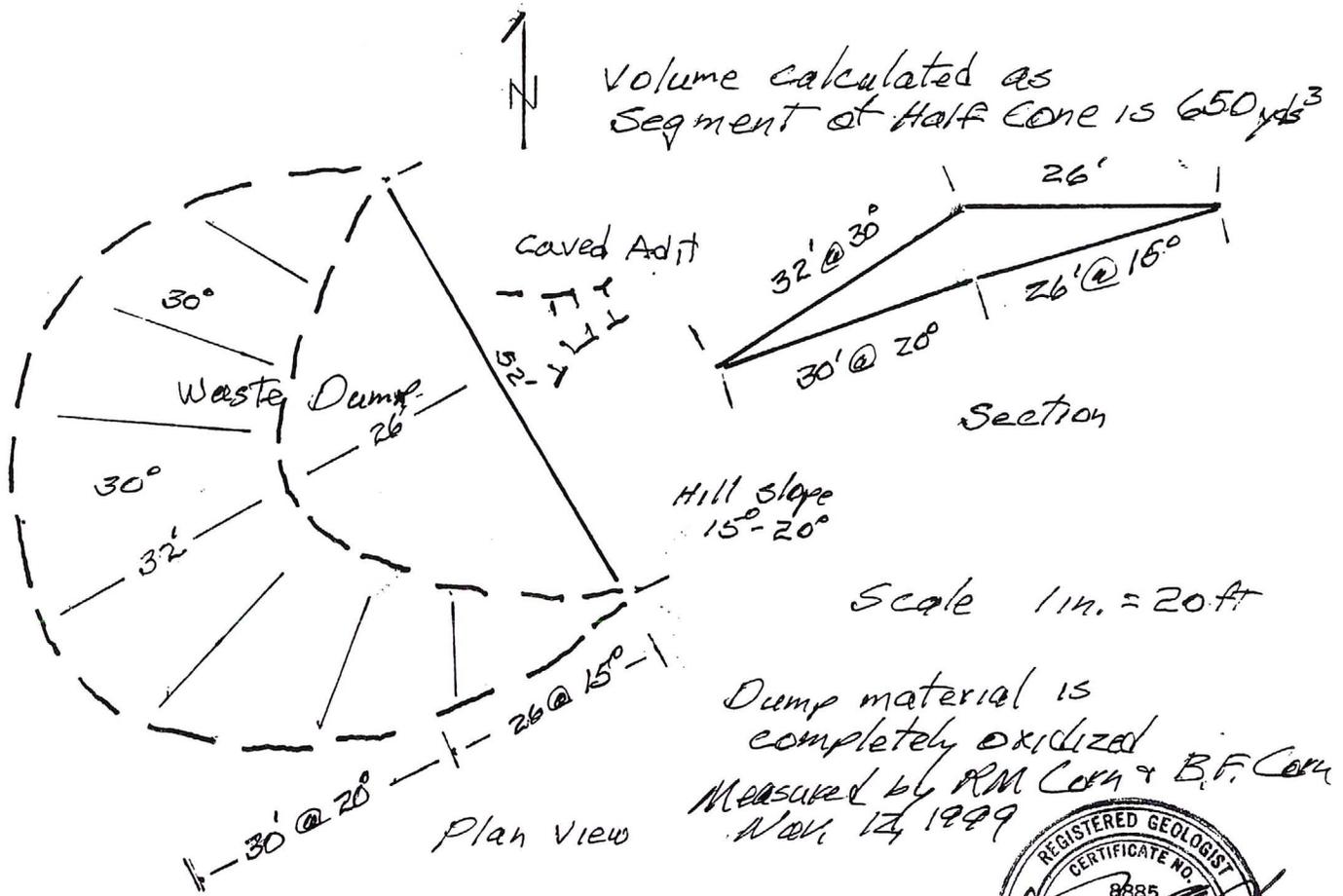
After it was pointed out that there had never been a mill to process ore and produce tailings, the Regional Forester, in a letter dated Jan. 20, 1999, agreed that there were no tailings in Mansfield Canyon and that statements about tailings were inaccurate. However, the statements in the earlier reports referred to both mine waste and tailings indicating that the writers definitely intended to convey the impression that ore had been processed and that there were tailings in addition to mine waste. I have no idea why Forest Service personnel, the former Forest Service employee Mr. Oldfield, and CDM Federal Programs Corp. personnel all attempted to establish that ore had been processed at Mansfield Canyon and that there were tailings in the drainage.

Large Volumes of Waste Rock:

CDM Federal Programs Corp. and the Forest Service repeatedly used the inexact phrase "large volumes of waste rock" in reports and memos. My rough estimate, based on volume estimates in previous Forest Service reports and my re-measurement of several waste dumps, is that the waste rock volumes reported in the Final EE/CA Report may be one to two orders of magnitude larger than the actual waste rock volumes. As an example, one waste dump was initially estimated at a volume of 1,000 cubic yards by a Forest Service geologist in July, 1992. Less than six years later, in the Final EE/CA Report, this same waste dump had grown to a volume of 34,071 cubic yards (CDM, 1998, p. 2-7) (Corn, 2000, p. 2).

I personally re-measured several of the waste dumps and came to the conclusion that the volumes reported in the Final EE/CA Report had no relationship to reality. This data was submitted to the Forest Service and placed in the Administrative Record. A photograph of one of the dumps is incorporated in this report. The volume of this dump was reported at 2,110 cubic yards in the Final EE/CA Report (CDM, 1998, p. 2-7) My measurements indicated that the volume of the dump was 650 cubic yards. The waste rock is

MANSFIELD CANYON - SITE 25



completely oxidized. There is no moisture on the dump or drainage from the caved adit. An oak tree is growing from the top of the dump, and yet the Forest Service and their consultant believe that this waste rock dump causes acid drainage and should be removed as part of the CERCLA removal action (CDM, 1998, p. 2-8).

When queried about the extreme discrepancies in the estimates of waste dump volumes, the Forest Service stated in the Response to Comments on the Final EE/CA Report, that the volume estimates did not matter and that the actual amount of waste material would become known when the project was completed (USDA Forest Service, Feb., 1999, Comment No. 39, p. 10). They also stated, that among other reasons why the waste dumps should be removed, was that the waste dumps were of a different color and less well vegetated than the natural surroundings (USDA Forest Service, Feb., 1999, Comment No. 54, p. 14). Just because a waste dump has less vegetation or is a different color than its surroundings does not justify either considering the dump as hazardous material or the CERCLA removal action.

The rock on the waste dumps represents sub-surface material exterior to the concentrated metal values in the vein that was mined. During mining operations, the concentrated sulfides and metal values of the vein were selectively sorted out and shipped elsewhere for processing. As a result, the waste rock dump has an overall lower metal and sulfide content than the equivalent portions of the vein and adjacent waste material that were never mined. U. S. Geological Survey studies identified a swarm of approximately 300 veins, typically 5 feet wide and 2,000 feet long, centered on the area of pervasive mineralization and disseminated pyrite at Mansfield Canyon (Drewes, 1972, p. 26). A rough, order of magnitude, calculation of the area of the surface expression of these 300 veins, including a 10 foot width of adjacent wallrock comparable to the waste rock on the dumps, is approximately 200 acres. This 200 acres is in addition to the approximately 2,560 acre (four square miles) area of pervasive mineralization and abundant disseminated pyrite with its associated base metal values. In comparison, the surface area, volume, sulfide and metal content and acid generating potential of the small waste rock dumps at Mansfield Canyon are insignificant. In view of the far more extensive area of naturally occurring pyrite and base metal mineralization, there has never been any realistic basis for the Forest Service's contention that the small waste rock dumps represent a significant hazard or a potential threat to humans or the environment.

Fictitious Permanent Resident:

The three permanent residents described in the Assessment Reports and the one permanent resident and permanent residence described in the Final EE/CA Report (CDM, 1998, pp. 2-19 and 2-20) were entirely fictitious. Incorporated in this report is a copy of a letter from the Santa Cruz County Assessor stating that there is



COUNTY ASSESSOR
SANTA CRUZ COUNTY

FRANK G. SALOMON
ASSESSOR

July 17, 1998

Mr. Russell M. Corn
8425 Desert Steppes Drive
Tucson, Arizona 85710

Re: Parcel No. 110-35-001

Dear Mr. Corn:

Upon receipt of your letter dated July 10, 1998, I instructed two of my appraisers to field check the above mentioned parcel, to ascertain if indeed there was an improvement on the Rupert Lode Mining Claim.

There is in fact a Quonset Type Building measuring 1267 Sq. Ft. of floor area. The building was empty and does not appear to be a residence. No resident or caretaker was encountered during the appraisal of the building.

If you have further questions, or if we may be of any assistance to you pertaining to this or any other parcel in Santa Cruz County, please do not hesitate to contact us.

Sincerely,

Frank G. Salomon
Assessor

no permanent resident and no permanent residence at the location described in the Forest Service's Final EE/CA Report. After the fictitious "permanent resident" was called to her attention, the Regional Forester stated that the term "permanent residence" was an inadvertent error and the Final EE/CA Report should have stated that there was a "permanent structure" at the location. It is difficult to understand how the limited acid drainage in an ephemeral watercourse $\frac{1}{4}$ mile from the Quonset type shed that was the "permanent structure" could be considered a potential threat to the shed sufficient to justify either the CERCLA designation or the proposed removal action. The site described as the "permanent residence" is adjacent to the main road in Temporal Gulch. Forest Service personnel and the Forest Service consultants drove past the site innumerable times and it is inconceivable that they or anyone else would consider the site a permanent residence. I am certain that if the County Assessor had not been kind enough to investigate, the Forest Service would still claim that there was a permanent resident in the area.

Since the permanent resident is fictitious, there is little likelihood that acidic or contaminated groundwater in Mansfield Canyon would be a threat to his health as stated in the Assessment Reports and in the Final EE/CA Report (CDM, 1998 p. 2-20).

Endangered Species and Sensitive Environment:

There is no factual basis for the Forest Service's concern over the potential threat to either endangered species or the "sensitive environment" at the Batagonia - Sonoita Creek Preserve as expressed in the Forest Service Action and Approval Memorandum (USDA Forest Service, 1996, p. 3), in the Preliminary Assessment Report (CDM, 1994, pp. 3-6 and 4-6) and at the PRP meeting. The concern over the potential threat to endangered species and the Sonoita Creek Preserve appears to be similar to the concern expressed over the health risk to the fictitious permanent resident.

A previous biological assessment by Forest Service wildlife biologist Charles Kennedy, in his appraisal of the Jelks Land Exchange, found that there were no Federally listed species at Mansfield Canyon and that the area had higher wildlife values than that selected for exchange (USDA Forest Service, 1984). The Forest Service recently analyzed the condition of threatened, endangered and sensitive species in the Mansfield Canyon - Temporal Gulch area as part of a grazing management evaluation. A summary of possible effects on eleven threatened, endangered and sensitive species in the area was presented as part of the Environmental Assessment and Proposal to remove waste dumps from private land at Mansfield Canyon in conjunction with the CERCLA removal action (USDA Forest Service, Nov., 1999, pp. 24 and 25). Most of the species listed are not known to occur in the Mansfield Canyon watershed. A comparison of the differences between the No Action Alternative and the proposed removal of waste dumps shows that there is no difference in effects and that the small waste dumps do not adversely affect any threatened or endangered species.

There is no data to suggest that acid drainage in the ephemeral watercourse of Mansfield Canyon would have any impact on the Sonoita Creek Preserve, seven miles distant. An assessment of water quality in Temporal Gulch approximately $\frac{1}{2}$ mile below the confluence of Mansfield and Temporal, showed that the downstream water met all water quality standards (USDA Forest Service, Nov., 1999, p. 20). The U. S. Bureau of Mines reported that "in April, 1994, the AMD from Mansfield was neutralized and nearly all metals precipitated within 300 meters after flowing into Temporal Gulch, due to dilution by the greater water flow in Temporal Gulch." (U. S. Bureau of Mines, 1994, p. 8). This observation was later confirmed by analytical data from water samples taken by Forest Service personnel (Bolin Labs, 1999).

The Sonoita Creek Preserve is located in proximity to the extensive areas of pyritic alteration and pervasive mineralization at Red Mountain and the northern Patagonia Mountains and is approximately one mile from the naturally generated acid drainage in Aztec Gulch as illustrated in Photograph No. 6. Terrace gravels along Highway 82 adjacent to Sonoita Creek are irregularly impregnated with iron and manganese oxides derived from metalliferous acid water and have a prominent base metal content. These terrace gravels offer mute testimony that metal-rich acidic surface and ground water from the adjacent mineralized terrain drained into Sonoita Creek for millions of years, long before there was any mining activity in the area (Drewes, 1972, p. 60).

Permanent Water

The only significant permanent water in Mansfield Canyon is mine drainage that discharges from the American Boy adit in the bottom of Mansfield Canyon (Cote Land Exchange). This previously unknown water source was encountered when the adit was driven and has been utilized by both livestock and wildlife since the early 1900's. The water was described as potable with a flow rate of 30 gpm (Schrader, 1915, p. 229), and supported a healthy, reproducing population of goldfish in a pond at the adit portal from 1934 to the mid 1990's (Forrest Gross, personal communication).

The acidic water that surfaces approximately 300 yards down canyon below the Hosey Mine appears to be a natural spring and is not directly associated with mine workings. The water surfaces 50 feet down canyon from the toe (end) of a waste rock dump and is located on the western, upstream edge of the large area of pyritic alteration. The flow rate of the spring is 0.5 liters per minute (0.13 gallons per minute) and the metal-rich acidic discharge is comparable, both in terms of pH and metal content, to the naturally derived acid water of the spring in Aztec Gulch on the northwest side of the area of pyritic alteration and pervasive mineralization at Red Mountain (U. S. Bureau of Mines, 1994, Table 1, p. 5) (Gray, 2000, p. 422). At the time of his visit, Ray Wiggins noted that the water level in the shaft 160 feet from the spring was significantly higher than the adjacent canyon bottom. He also noted that the flow rate of the

spring did not diminish after the end of the rainy season (Wiggins, 1992, p. 33). My observations over the past 40 years are that the discharge is uniform and does not fluctuate with the seasons, and that the acidic water sinks back into the subsurface within approximately 300 yards. Limonite cemented fanglomerate along the canyon walls testifies to the former presence of acidic, iron-rich water long before there was any mining activity in the area.

There is a small seep of acidic, iron-rich water associated with the Black Cap mine, down canyon from the American Boy adit and on the private land (patented claims) acquired by the Forest Service as part of the Jelks Land Exchange. Other small seeps of acid water are associated with the stock pond dams in the upper part of Mansfield Canyon. The dams at the Hosey mine and on the 10 acres excluded from the Sierra Grande Land Exchange were both constructed with pyritic waste rock, either by the Forest Service or with the approval of the Forest Service and were not the result of past mining activity. These dams do not retain water for more than a few months and instead serve primarily to flood the subjacent underground mine workings, add to the acidic ground water of the area and raise the water table. The spillway at the Hosey stock pond was channelled directly into the mine shaft and overflow floods the underground workings. Prior to the dam construction, the natural ground water level at the Hosey mine was reported to be 50 feet below the surface (Schraeder, 1915, p. 231). The Hosey stock pond dam is owned by the United States (Forest Service) and both stock pond dams were probably constructed at the time that Forest Road 4091 was constructed down into the upper part of Mansfield Canyon from Forest Road 72A (Lee Kuhn, personal communication). Both stock ponds are west of and upstream from the area of pyritic alteration. The surficial acidic seeps below the dams disappear when the ponds are dry and are insignificant in comparison to the natural acid water derived from the large area of pyritic alteration and pervasive mineralization.

The only significant permanent water in the Mansfield Canyon watershed is the potable water that occurs as mine drainage from the American Boy adit. Ironically, it was the past mining activity, the same activity that the Forest Service now denounces as so environmentally destructive, that resulted in the discovery of this water source that has been extremely beneficial to wildlife, livestock and the environment.

Pyritic Alteration

The major geologic feature at Mansfield Canyon is the extensive area of pervasive mineralization and pyritic alteration in the center of the designated Hazardous Waste Facility. This hydrothermally altered area is the upper portion of a porphyry copper type alteration system similar to that at Red Mountain. Red Mountain is located approximately eight miles south of Mansfield Canyon and both Mansfield Canyon and Red Mountain were mapped as the same type of hydrothermal alteration and pervasive mineralization by the

U. S. Geological Survey (Drewes, 1971). Aztec Gulch, located on the northwest side of Red Mountain exhibits acid drainage that is naturally derived from the widespread pyritic alteration (Gray, 2000, p. 422). At Mansfield Canyon the pyritic altered area covers almost half of the watershed and is estimated to contain eight to ten percent disseminated pyrite. Like all porphyry copper alteration systems, it is also characterized by disseminated base metals and associated elements that vary in amounts from less than one hundred parts per million to as much as several thousand parts per million (Chaffee, 1982) (Corn, 1975, p. 1446). Weathering and oxidation of the disseminated pyrite not only generates acidic water, but also solubilizes and mobilizes some of the associated base metals and other elements.

A rough, order of magnitude calculation indicates that at Mansfield Canyon, the upper ten feet of the near-surface pyritic rock beneath the thin zone of complete oxidation, contains approximately ten million tons of pyrite (FeS_2), which is more than sufficient to generate huge amounts of acid water during normal oxidation and weathering. Rocks in the hydrothermally altered area have been converted to quartz, sericite, and other non-reactive minerals that do not neutralize the acid water produced during the oxidation of the pyrite. The topography is mountainous, relief varies up to 1,000 feet, and as indicated by exploration data, the depth of complete oxidation varies from 60 feet at higher elevations near the ridge tops to several feet or less along the floor of the canyon. Mansfield Canyon is actively eroding the pyritic altered rocks and the near-surface acid ground water generated by the oxidation of the disseminated pyrite migrates down slope and discharges as springs and seeps along the canyon floor. The extensive area of pyritic alteration has discharged naturally derived acid water into Mansfield Canyon for millions of years and will continue to do so in the future. The accompanying photographs illustrate pyritic altered rocks along the floor of the canyon (Photographs 1 and 2) and the topography in the area (Photographs 4 and 5). The limonite cemented fanglomerate in Photograph No. 3 is evidence that iron-rich acid water was generated by the pyritic alteration.

The Forest Service ignored the abundant evidence and data indicating that acid drainage at Mansfield Canyon was the result of natural processes and was derived from the extensive area of pyritic alteration. Although the generation of acid water by oxidation of disseminated pyrite has been known since antiquity, the Forest Service attorney stated at the PRP meeting that there was no scientific basis to attribute the acid drainage at Mansfield Canyon to the extensive area of pyritic alteration. Consequently, the area of pervasive mineralization and abundant disseminated pyrite was never mentioned in investigative reports by either the Forest Service or their consultants. The Forest Service and their consultants ignored both professional reports and the U. S. Geological Survey Map I-614 (Drewes, 1971) indicating that the extensive area of pyritic alteration was the natural source of acid water at Mansfield Canyon. Professional engineers with the U. S. Bureau of Mines stated, in reference to Mansfield Canyon, that "the naturally acid ground water (due to

No. 1

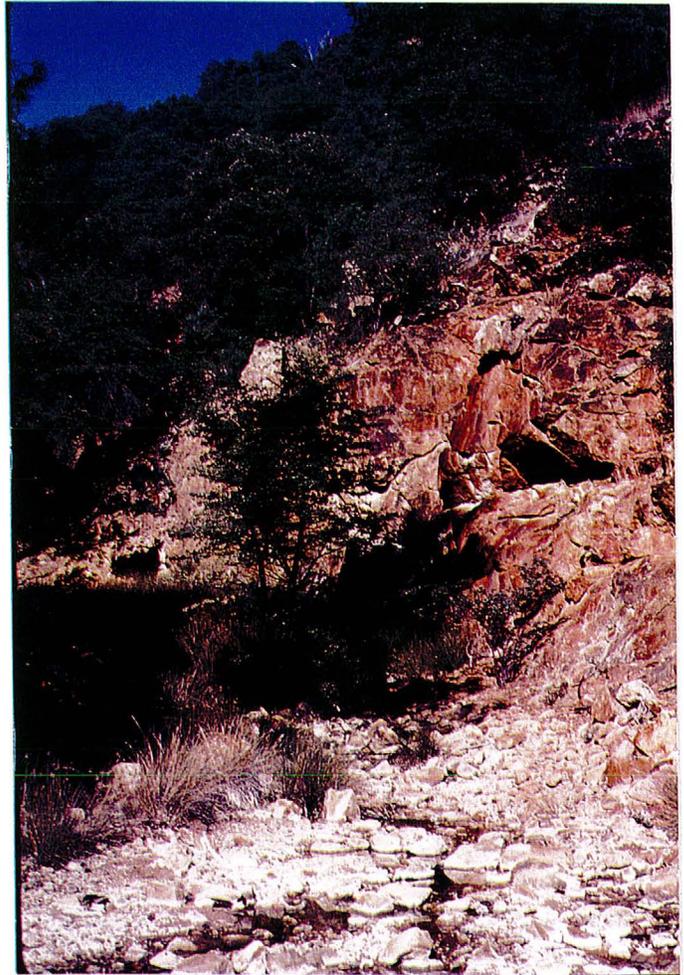
Photographs 1 and 2

Pyritic altered rock exposed along the bottom of Mansfield Canyon in the extensive area of pyritic alteration and pervasive mineralization.

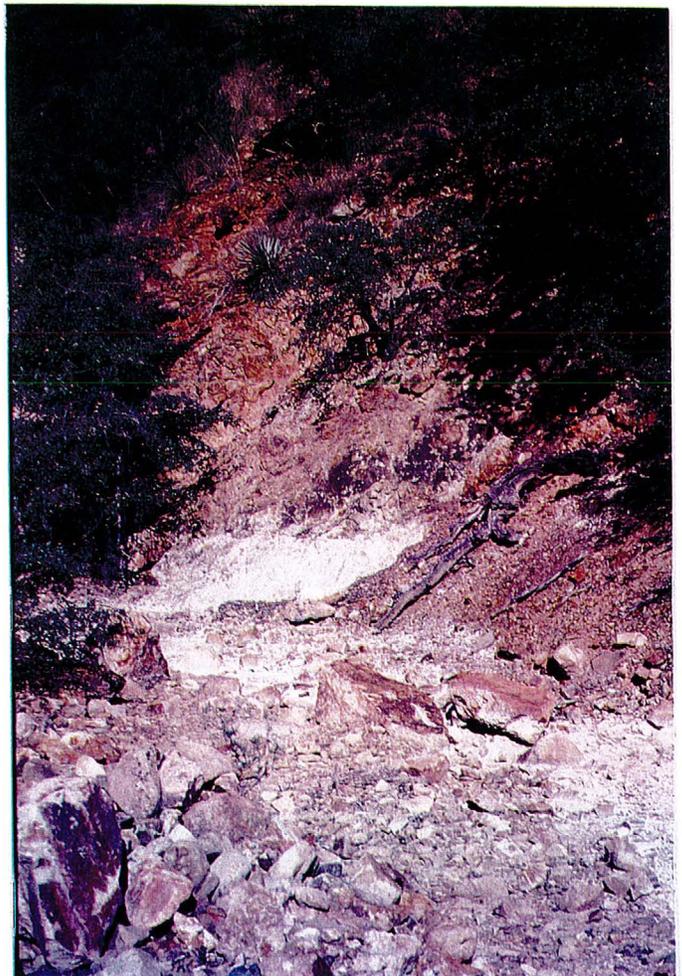
The altered rock contains introduced base metals, arsenic and antimony in addition to the abundant disseminated pyrite.

The red coloration results from iron oxides derived from the disseminated pyrite.

November, 1999



No. 2



Photograph No. 3



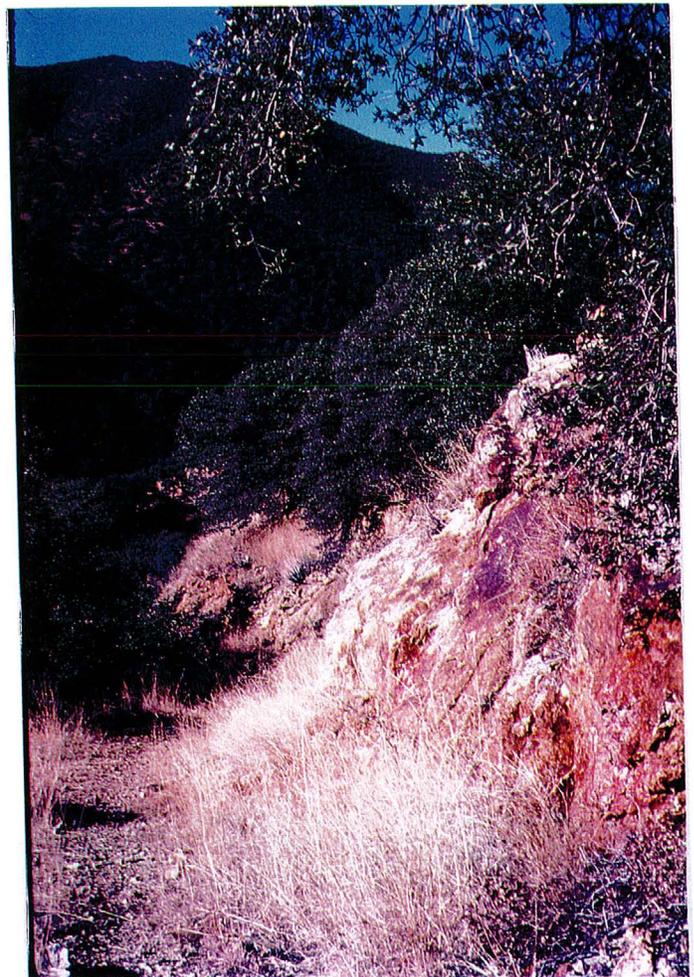
Road cut in pyritic altered and pervasively mineralized rock showing overlying limonite-cemented fanglomerate indicative of naturally acidic water containing ferrous sulfate.
November, 1999

Photograph No. 4

Road cut on the east side of the extensive area of pyritic alteration and pervasive mineralization at Mansfield Canyon.

The red coloration results from iron oxides derived from the disseminated pyrite.

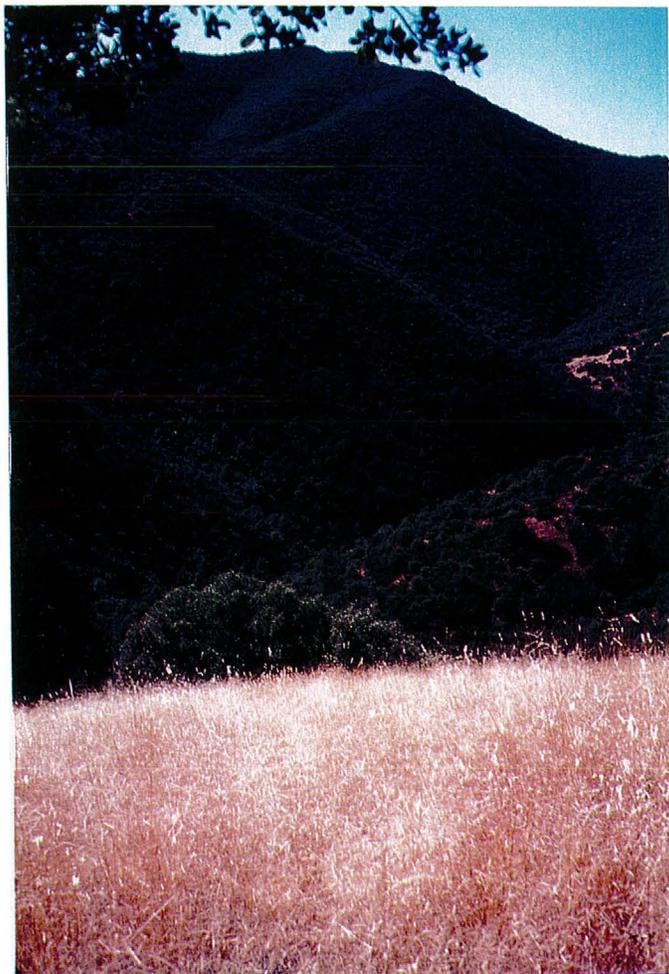
November, 1999



Photograph No. 5

Photograph illustrating the topography and relief of the pyritic altered area at Mansfield Canyon.

November, 1999



Photograph No. 6

April, 2002



View down Aztec Gulch illustrating the pyritic alteration and pervasive mineralization. The spring discharging acid water is located at the bend in the gulch just beyond the reddish outcrops. Sonoita Creek is reflected by the zone of darker vegetation at the top of the photograph.

abundant pyrite in the rocks) enters the creeks through springs" (U. S. Bureau of Mines, 1994, p. 8). In his initial report on the Sierra Grande claims at Mansfield Canyon, Registered Professional Geologist W. E. Heinrichs, Jr. stated that "the acid and heavy or toxic metals contribution from the small mines and prospects on the SGR claims is trivial when compared to the sulfuric acid naturally generated from the weathering of the very large (greater than four square miles) area of major pyritic alteration" (Heinrichs, 1990, p. 2). In his later letter report on the area, Mr. Heinrichs again emphasized the insignificance of the small mines and prospects in comparison to the extensive area of pyritic alteration (Heinrichs, 1991, p. 2).

The Forest Service stated in the Response to Comments on the EE/CA Report, that they were conducting investigations to determine the "contribution to acid drainage from the natural seeps, springs and surface exposures in the watershed, including the altered and mineralized zones identified by Drewes" (USDA Forest Service, Feb., 1999, Comment No. 36, p. 8). They also stated that "the USGS was investigating the natural acid generating potential of the large area of pyritic alteration in Mansfield Canyon" (USDA Forest Service, Feb., 1999, Comment No. 63, p. 15). There are no reports or notes in the Administrative Record from the U. S. Geological Survey on this investigation or any indication that this investigation was ever carried out. The Forest Service's plan to complete the CERCLA removal action during the latter part of the year 2000, as shown on the Flow Chart incorporated in this report, suggests that the Forest Service never had any intention to have competent professionals conduct a thorough investigation of the actual source of the acid drainage or the acid generating potential of the widespread pyritic alteration.

Incorporated in this report are excerpts from U. S. Geological Survey Map I-614 that extend from Mansfield Canyon south to Red Mountain and illustrate that Dr. Drewes mapped both the Aztec Gulch - Red Mountain area of pyritic alteration and that at Mansfield Canyon as the same type of pervasive mineralization and hydrothermal alteration. Although the small red crosses symbolizing hydrothermally altered and pervasively mineralized rock do not show well against a dark background, it is clear from Section E - E' that Dr. Drewes considered both Mansfield Canyon and the Red Mountain area near Aztec Gulch as the same type of hydrothermal alteration and pervasive mineralization (Drewes, 1971). Photograph No. 6 illustrates the pyritic alteration at Aztec Gulch. Recent studies of the acid water discharging as a spring in Aztec Gulch on the northwest slope of Red Mountain show conclusively that acid water is derived naturally from the pyritic altered, pervasively mineralized rock and is not the result of past mining activity (Gray, 2000, p. 422). Consequently, there is no factual or scientific basis for the Forest Service's contention that the acid drainage at Mansfield Canyon has to be the result of past mining activity instead of being derived naturally from the extensive pyritic alteration.

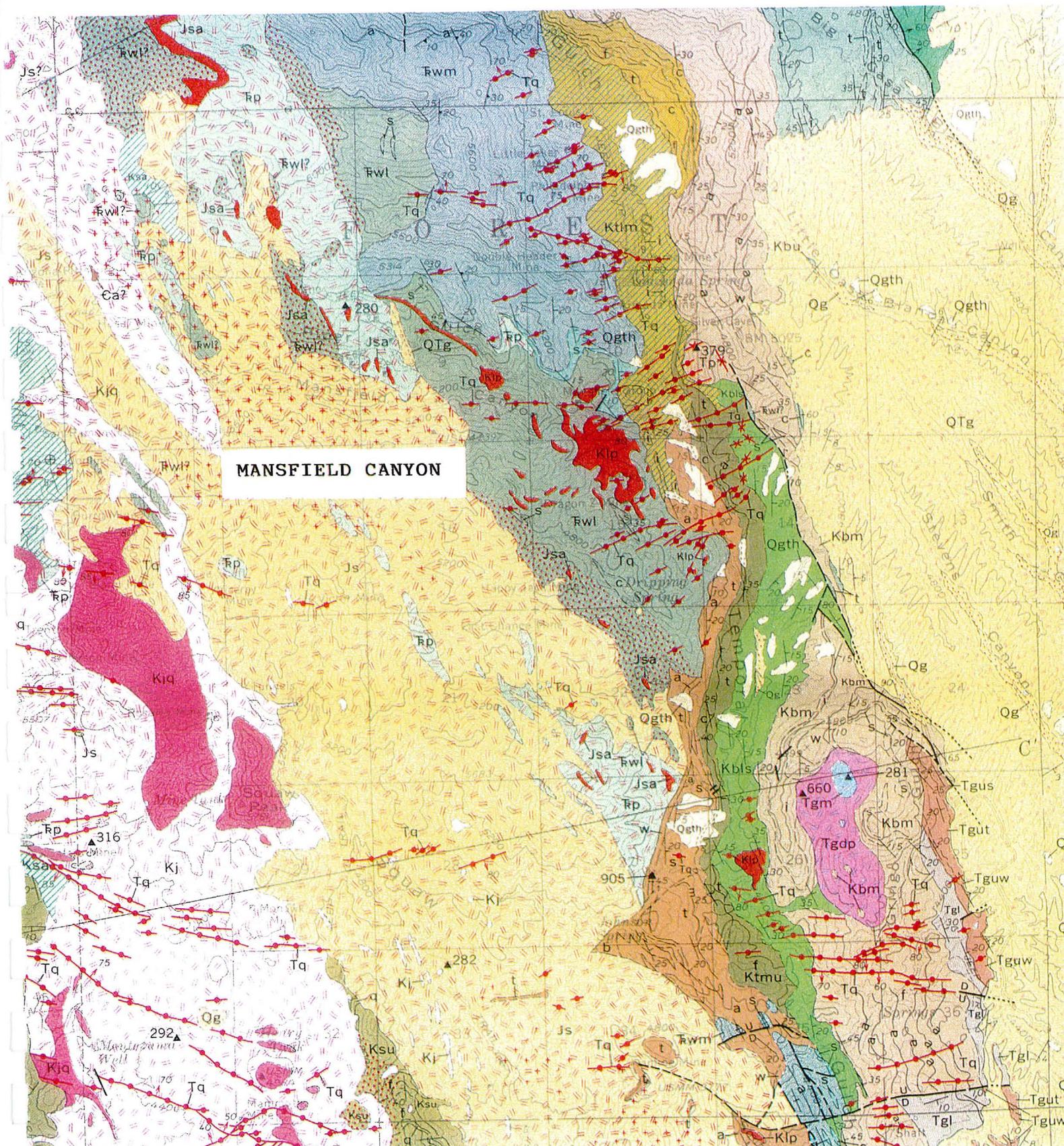
Excerpt from USGS Map I-614 (Drewes, 1971)

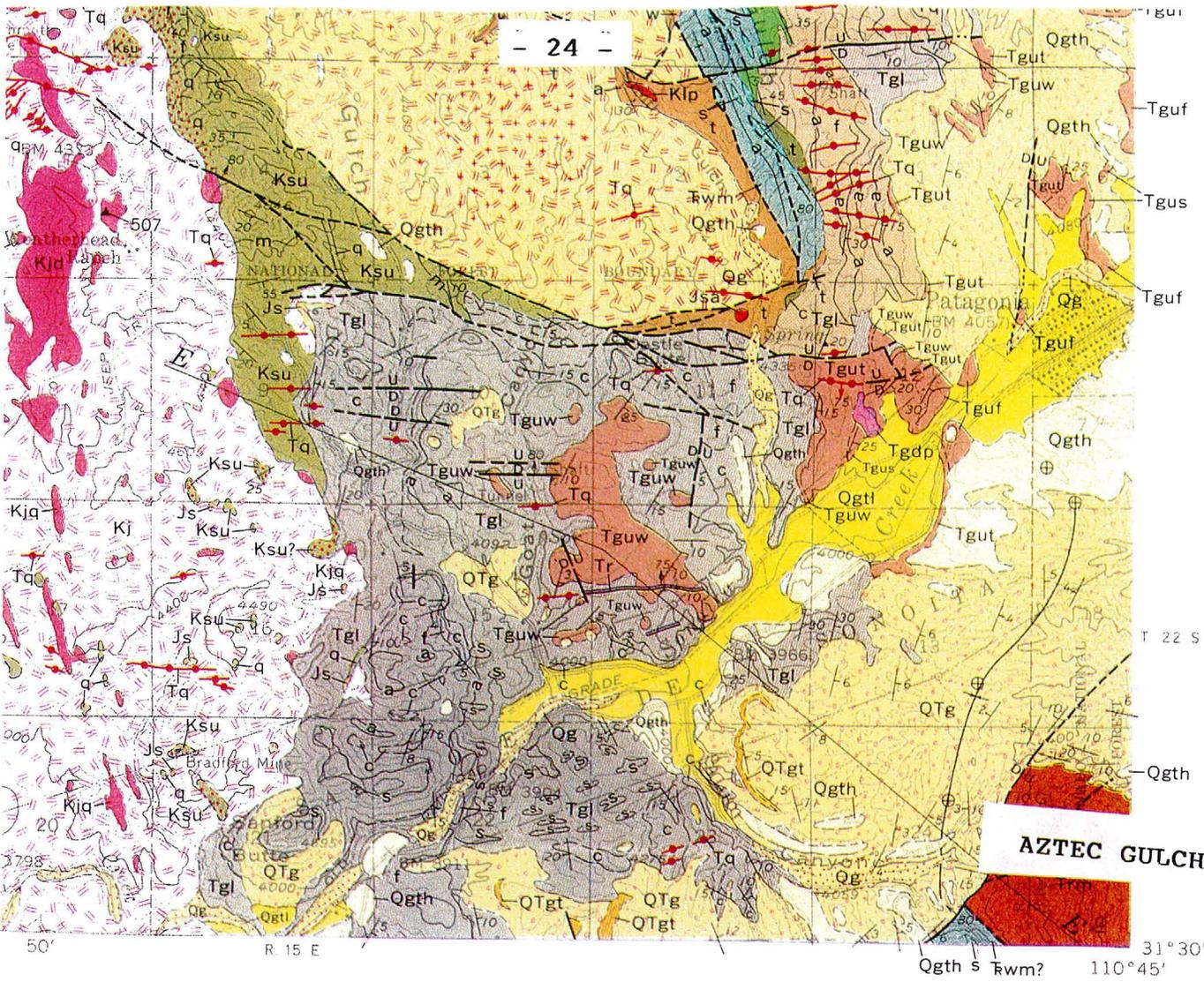
Illustrating the Pyritic Alteration and Pervasive Mineralization at Mansfield Canyon.



Altered rock

Hydrothermally altered and pervasively mineralized rock

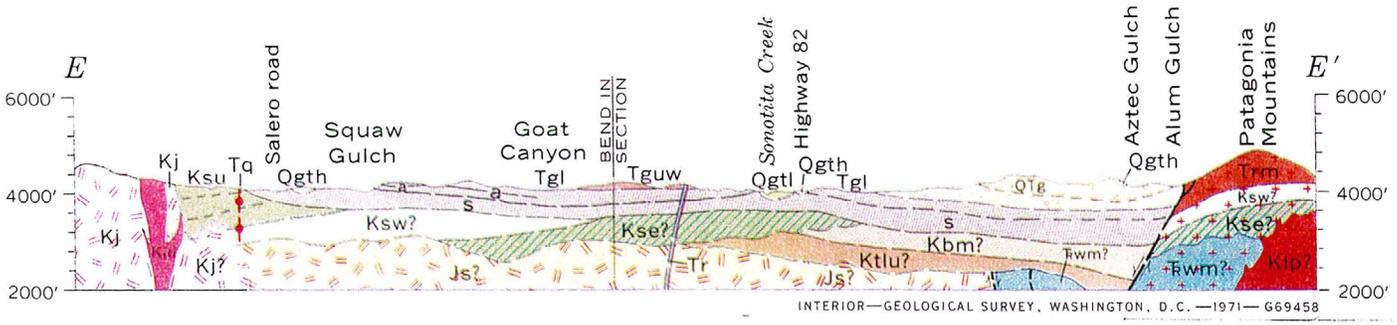




AZTEC GULCH

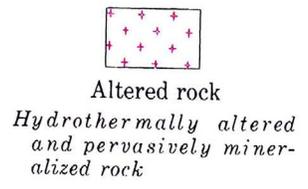
Geology by Harald Drewes, 1963-66, assisted by G. C. Cone, Bruce Hansen, C. W. Norton, J. R. Riele and R. A. Rohrbacher

(LOCHIEL)



Excerpt from USGS Map I-614 (Drewes, 1971)

Illustrating the Pyritic Alteration and Pervasive Mineralization near Aztec Gulch.



Conclusion

The Forest Service completely misrepresented site conditions at Mansfield Canyon in their designation of the Superfund site and in the CERCLA investigations and the proposed removal action. They used inaccurate, false and fictitious data obtained by unqualified, technically incompetent, non professional consultants as the basis for the CERCLA designation and the proposed CERCLA removal action. The Forest Service ignored the extensive pervasive mineralization and pyritic alteration that comprises almost half of the watershed, prior scientific data, and the statements of experienced professionals that the area of pyritic alteration and pervasive mineralization was the source of the limited acid drainage. Instead, they have insisted that the acid drainage is the result of past mining activity. In contrast to Forest Service statements, ore was never processed at Mansfield Canyon and there are no tailings in the watershed. The small mining waste rock dumps are not hazardous and are insignificant in comparison to the four square mile area of pyritic alteration. The pervasive mineralization and pyritic alteration at Mansfield Canyon was mapped by the U. S. Geological Survey as the same type of hydrothermal alteration as that in the vicinity of Aztec Gulch (Drewes, 1971). Acid drainage in Aztec Gulch occurs as a natural spring that is comparable to the acid drainage at Mansfield Canyon and is not related to past mining activity (Gray, 2000, p. 422) (U. S. Bureau of Mines, 1994).

There was never any factual evidence supporting the Forest Service's contention that the old small waste rock dumps constituted a threat to human health or to the environment sufficient to justify the CERCLA designation or the proposed expensive CERCLA removal action. Their permanent resident was fictitious, the tailings were imaginary and other data and assumptions presented in the CERCLA investigations and reports were inaccurate or fabricated. Cost estimates presented in the Final EE/CA Report for the removal action were approximately \$4,000,000 to approximately \$11,000,000. These estimates do not compare favorably with my estimate that the approximately 20 acres that would be reclaimed would result in an additional \$4.40 per year in grazing lease receipts (based on figures reported in the Temporal Allotment Environmental Assessment, Nov., 1999, pp. 34 and 35). The cost/benefit ratio for the proposed removal action seems a little excessive.

There is no excuse for the Forest Service's use of a fictitious permanent resident in an attempt to justify the CERCLA designation and removal action or for the false statement made in the Response to Comments on the EE/CA Report, that their lead consultant was a Certified Professional Geologist. As a result, the Forest Service has lost any credibility they previously had, their data can not be believed, and the time, effort and funds expended on the project have been wasted.

I have been particularly disturbed by the Forest Service practice of charging citizens who they knew were not responsible for the acid drainage or any contamination and who they knew were not owners or operators of a mine as Potential Responsible Parties, retroactively liable for all CERCLA costs. These citizens were forced to spend substantial funds on legal and other expenses simply because 20 or 30 years ago they conscientiously followed the laws concerning mineral exploration on public lands. Although the Forest Service has known that I was never the owner or operator of a mine, but only staked and later abandoned mining claims, they have indicated that I do have retroactive liabilities at Mansfield Canyon. In contrast, the actual owners of mines on private land in the same "Hazardous Waste Facility" were either never listed by the Forest Service as Potential Responsible Parties (Cote) or were involved in a land exchange with the Forest Service (Sierra Grande).

As mentioned in the Regional Forester's letter to the Chief, dated April 10, 2000, the Forest Service apparently had considered "sweetheart" cost sharing partnership arrangements with the owners of mines on private land. The Forest Service also proposed using public funds to remove the waste rock dumps from the private land as described in the Temporal Allotment Ecosystem Restoration Project, but these proposals were never consummated. Although the partnership and ecosystem restoration funds would not have been under CERCLA, the net effect is that the actual mine owners would be rewarded financially and probably reimbursed for any CERCLA charges, while those citizens who were never owners or operators would be charged with the significant retroactive CERCLA liabilities. The land exchanges are straight forward, equal value land exchanges. It is difficult to understand why the owners of the mines on private land would ever agree to a land exchange with the Forest Service, if by so doing they would then be subject to the CERCLA retroactive liabilities, unless they were assured that they would be exempted from these liabilities or would be fully reimbursed from other funding sources and through other arrangements for any financial losses. In either case, the "sweetheart" proposals emphasize again the deliberate discrimination directed against those citizens who, in the past, only conscientiously followed the laws concerning mineral exploration on public lands. This Forest Service practice of financially persecuting citizens simply because they followed the law in the past, combined with the Forest Service's use of fabricated and fictitious data to justify the CERCLA action is reprehensible and should not be allowed to continue.

Judging from my experiences with the Forest Service CERCLA investigations at Mansfield Canyon and elsewhere in the southwest, there are no requirements that the CERCLA or Superfund designations must be based on factual data or objective criteria. According to the Forest Service's Deputy Chief of Forest Operations, James Furnish, the CERCLA investigations do not have to be carried out by a technically competent, registered professional and their consultants for these investigations do not have to meet the same standards of integrity, competence and professionalism required of a consultant conducting the same type of investigation for a private citizen. Consequently, Mansfield Canyon may be just the "tip of the iceberg"

and there may be many more Forest Service CERCLA actions that are similarly based on false, inaccurate and fabricated data obtained by technically incompetent non professional consultants. American citizens should be able to expect that CERCLA or similar investigations will be honest and objective and carried out by qualified, technically competent professionals.

The Forest Service completely misrepresented conditions at the Mansfield Canyon Mines Site. They ignored scientific data and earlier statements from professionals and instead based the CERCLA designation and the proposed CERCLA removal action on the false presumption that the limited acid drainage had to be the result of past mining activity. They then attempted to justify the CERCLA designation and action with biased investigations conducted by unqualified, technically incompetent, non professional consultants and the use of fabricated data and a fictitious "permanent resident". They still insist that the data collected by their consultant was appropriate and valid and that the project is active and continuing. Since the site conditions were completely misrepresented and the investigations were invalid, I respectfully request that the Mansfield Mines Site CERCLA Action be terminated, the site removed from the EPA Superfund List, and the Potential Responsible Parties be released from any retroactive liabilities.

Respectfully Submitted



Russell M. Corn
Registered Geologist, Arizona No. 8885

8425 Desert Steppes Dr.
Tucson, Arizona 85710



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