1190 0051

PONY MEADOWS PROJECT (D-82-106)

DRILL HOLE GEOCHEMISTRY

DRILL HOLE: APM-1

LAB: Barringer Resources

FOOTAGE	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	As (ppm)	Hg (ppb)
160-170			-0.1	-20		
190-200			0.1	20		
210-220			0.6	-20		
230-240			0.4	-20		
250-260			0.3	-20		
260-270			0.3	-20		
270-275			-0.1	-20		

POHY MEADOWS PROJECT (D-82-106)

DRILL HOLE GEOCHEMISTRY

DRILL HOLE: APM-3

LAB: Barringer Resources

FOOTAGE	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	As (ppm)	Hg (ppb)
80-90			-0.1	-20		
100-110			-0.1	-20		
110-117			-0.1	-20		

PONY MEADOWS PROJECT (D-82-106)

DRILL HOLE GEOCHEMISTRY

DRILL HOLE: APM-4

LAB: Barringer Resources

FOOTAGE	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	As (ppm)	Hg (ppb)
140-150			-0.1	-20		
170-180			0.5	-20		
200-210			0.2	40		
230-240			0.9	20		
260-270			2.2	20		
280-290			0.1	-20		
290-300			0.2	-20		

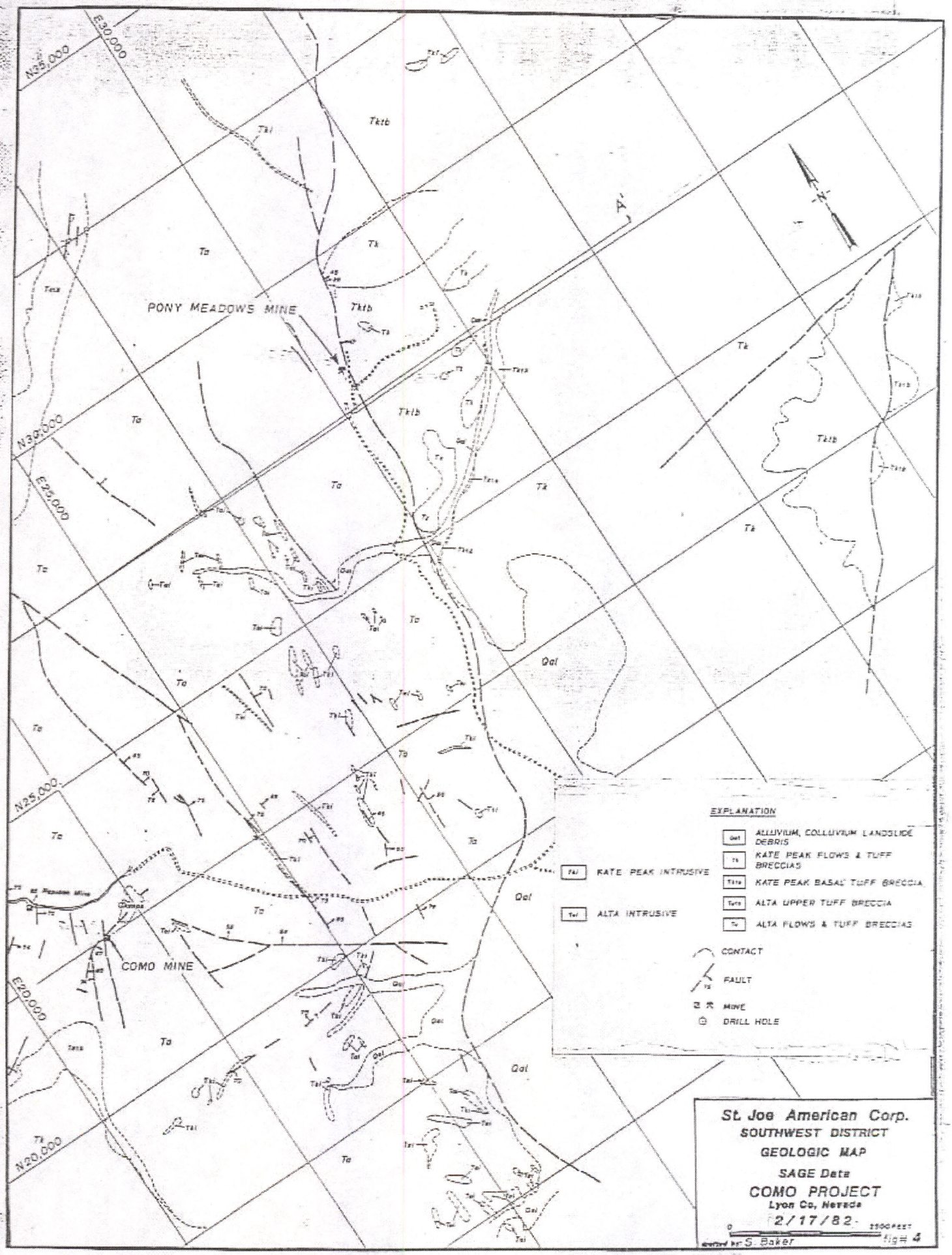
PONY MEADOWS PROJECT (D-82-106)

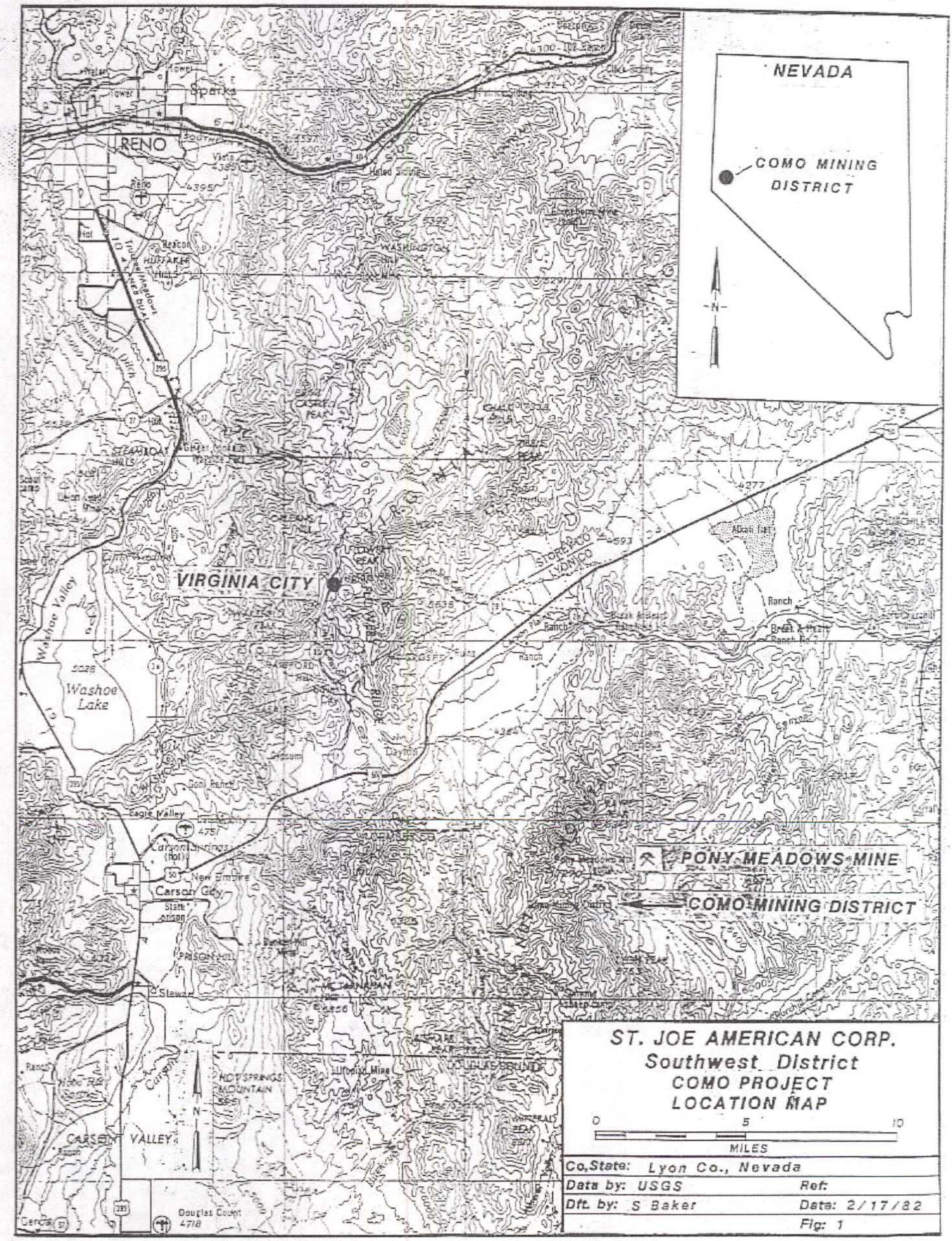
DRILL HOLE GEOCHEMISTRY

DRILL HOLE: APM-5

LAB: Barringer Resources

FOOTAGE	Pb (ppm)	Zn (ppm)	Ag (ppm)	Au (ppb)	As (ppm)	Hg (ppb)
50-60			-0.1	20		
80-90			-0.1	-20		
110-120			0.6	-20		
150-160			0.1	-20		
170-180			-0.1	-20		
190-200			-0.1	-20		
210-220			0.1	-20		
240-250			0.1	-20		


N35,000
E30,000
N30,000
E25,000
N25,000
E20,000
N20,000
PONY MEADOWS MINE
COMO MINE
Tktb
Tk
Ta
Qal
EXPLANATION
ALLUVIUM, COLLUVIUM LANDSLIDE DEBRIS
KATE PEAK FLOWS & TUFF BRECCIAS
KATE PEAK BASAL TUFF BRECCIA
ALTA UPPER TUFF BRECCIA
ALTA FLOWS & TUFF BRECCIAS
KATE PEAK INTRUSIVE
ALTA INTRUSIVE
CONTACT
FAULT
MINE
DRILL HOLE
St. Joe American Corp.
SOUTHWEST DISTRICT
GEOLOGIC MAP
SAGE Data
COMO PROJECT
Lyon Co, Nevada
2/17/82
S. Baker
Fig# 4


NEVADA
COMO MINING DISTRICT
N
RENO
Sparks
VIRGINIA CITY
Washoe Lake
Washoe Valley
Carson City
CARSON VALLEY
PONY MEADOWS MINE
COMO MINING DISTRICT
ST. JOE AMERICAN CORP.
Southwest District
COMO PROJECT
LOCATION MAP
0
5
10
MILES
Co,State: Lyon Co., Nevada
Data by: USGS
Ref:
Dft. by: S Baker
Date: 2/17/82
Fig: 1


N35,000
E30,000
PONY MEADOWS MINE
N30,000
E25,000
N25,000
COMO MINE
E20,000
SAMPLE INTERVAL 100'
N20,000
N
St. Joe American Corp.
SOUTHWEST DISTRICT
GEOCHEMICAL LINES
COMO PROJECT
Lyon Co, Nevada
2/17/82
S. Baker
fig # 9

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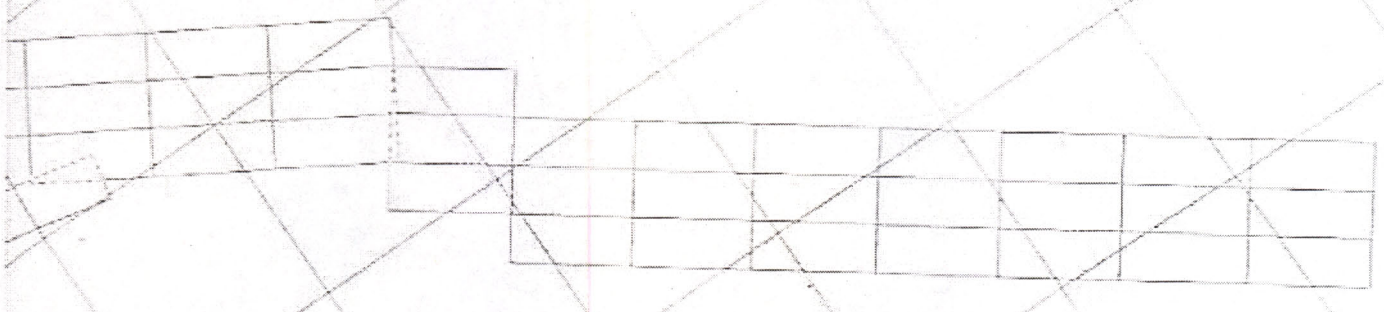
Item 28

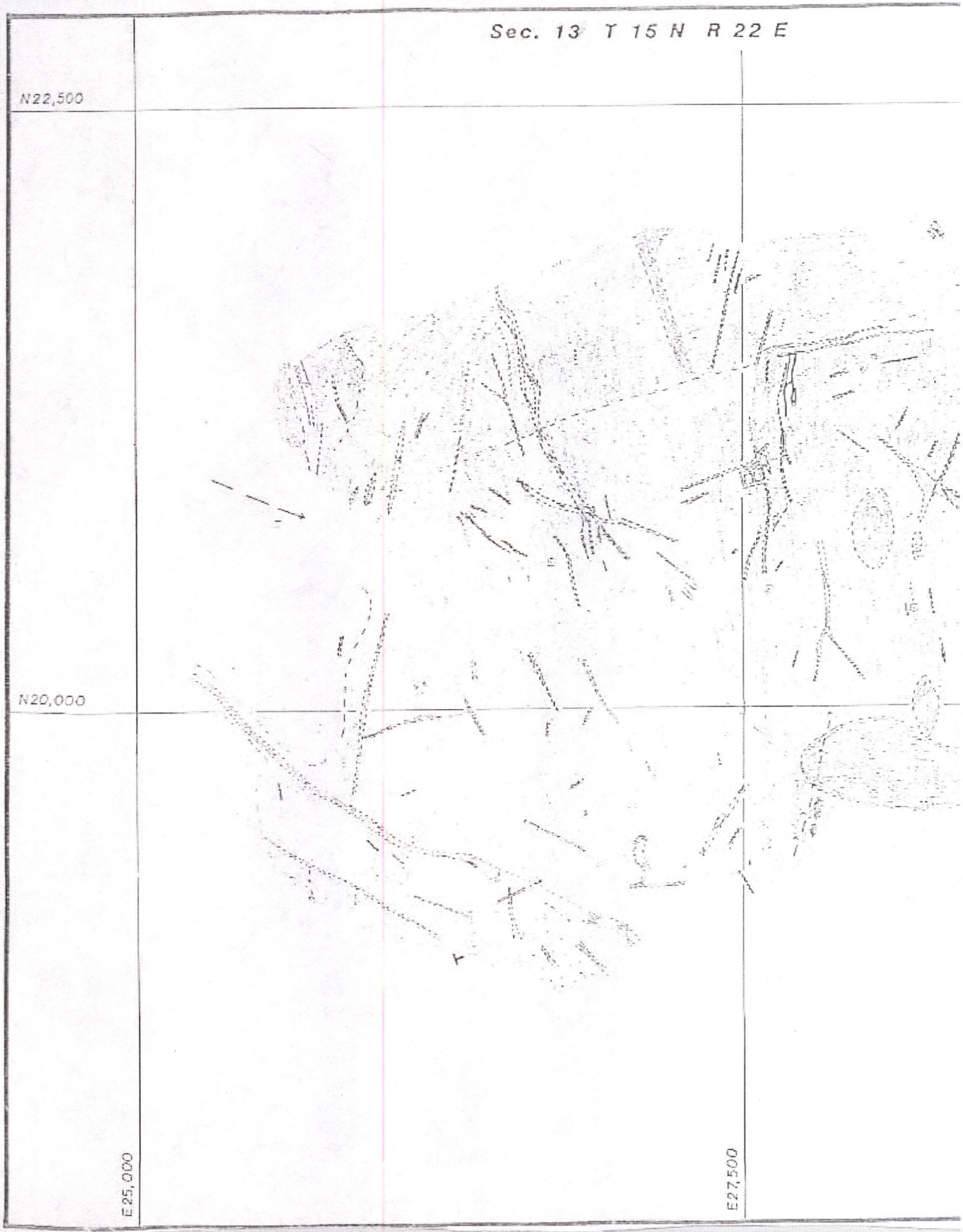


Copy 1

Copy 2


EXPLANATION
St. Joe American Corp.
SOUTHWEST DISTRICT
LAND STATUS MAP
GOMO PROJECT

Copy 3


Sec. 13 T 15 N R 22 E
N22,500
N20,000
E25,000
E27,500

E30,000

% of Silicification (quartz - diaspore)

- <10% - Argillically altered
- 10-50%
- 50-90%
- >90%

- Y Qtz. Sericite
- Prop. Alteration
- Fe-Crete

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Item 28

N

ST. JOE AMERICAN CORP.
Southwest District
COMO PROJECT
Interpretive Alteration Map
in the Alta Andesite

Co, State: Lyon County, Nevada	
Data by: F. Sousa	Ref:
Drft. by: S. B. Gaul	Date: Feb., 1982
Scale: 1" = 500'	Fig: 7


N35,000
E30,000
PONY MEADOWS MINE
N30,000
E25,000
N25,000
COMO MINE
E20,000
SAMPLE INTERVAL 100'
N20,000
St. Joe American Corp.
SOUTHWEST DISTRICT
GEOCHEMICAL LINES
COMO PROJECT
Lyon Co, Nevada
2/17/82
drafted by: S. Baker

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Item 28

Richard W. Thomssen, CPG
Consulting Geologist
P.O. Box 1656
Carson City, Nevada 89702
702 / 883-4312

August 31, 1991

David B. Hackman
SAGE Associates, Inc.
1850 W Grant Rd #108
Tucson, AZ 85745-1212

Per your instructions I have spent three days in Tucson reviewing files, reports and maps pertaining to the Pony Meadows mine, near Como, Lyon County, Nevada. In addition, I spent two days in the field reconnoitering the SUE claims covering the Pony Meadows mine area and one day reviewing core from holes drilled in the general vicinity of the Pony Meadows mine.

I have reached two conclusions regarding the geology of the eastern portion of the Como district which are at variance with conclusions stated by others in reports on work accomplished in the Pony Meadows mine area. These have some bearing on the conduct of any future exploration which may be undertaken in the area and, therefore, will be discussed further.

Your concept of the Pony Meadows fault being a listric normal fault along the lines postulated by John Profett for the Yerington district some 20 miles to the southeast has much to commend it. As I mentioned briefly to you in Tucson, I feel that it does not go as far as the regional geology warrants. The problem of providing space for the downward displaced blocks disappears if they are moving easterly into a caldera. It seems likely to me that this is the situation to the east of the arcuate Pony Meadows fault. Topography indicates that the fault blocks of volcaniclastic Kate Peak rocks in the hanging wall of the Pony Meadows fault extend for several miles easterly. A similar situation is portrayed by McKee for the Northumberland volcanic center in his article in Report 19 of the Nevada Bureau of Mines and Geology. The first and most obvious implication for exploration is that the entire circumferential fault or faults around such a structure become highly prospective. It is significant that at least five miles of the Pony Meadows fault zone is continuously mineralized and that only one half mile has <u>any</u> drill holes through it!

The second point bears on the age of the pyritic, calcareous and carbonaceous shale/argillite penetrated by two of the drill holes (C-2 and APM 7) in the footwall of the Pony Meadows fault under Alta volcanics. The section in drill hole C-2 was cut from 632' to 1089'TD including three sections of Alta dikes. In APM-7 the shale was intersected at 681' and continued to 720'TD. These two holes are situated 1,000' apart in a northeast-southwest direction. Adjacent drill holes were not drilled deep enough to penetrate the Pony Meadows fault and the Alta volcanics and, consequently, did not penetrate the shale.

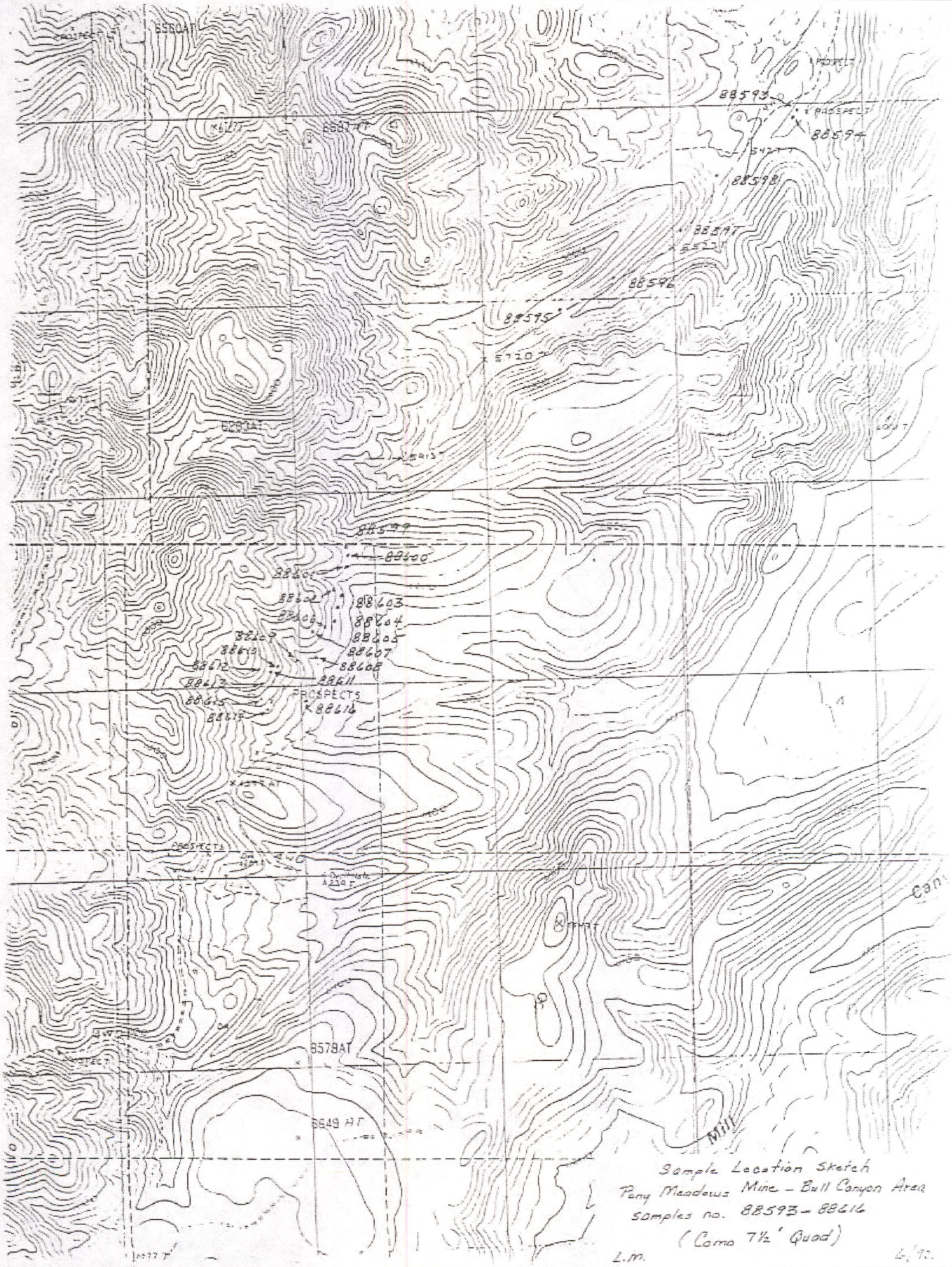
This sedimentary unit has been correlated with the Jurassic Gardnerville formation described by Noble (1962) in the southern Pine Nut Mountains. The descriptions of the Gardnerville from the Buckskin Mountains some seven miles to the southeast of the Pony Meadows mine indicates that in this area the formation is a locally pyritic, calcareous siltstone with no mention of carbon. The Mesozoic age of this unit indicates that it has been subjected to varying degrees of regional metamorphism and, locally, contact metamorphism. The carbonaceous shales penetrated in the two drill holes are unmetamorphosed. It can be argued that there is a facies change between the two localities, but the lack of metamorphism, in particular regional metamorphism, is much more difficult to explain. I would rather consider a Tertiary age for this unit; a moat sediment in an Alta or pre-Alta caldera. I have found a nearly identical rock ranging in thickness from zero up to 400' within a half mile in the Bullfrog caldera interbedded with crystal tuffs.

Here again there are interesting exploration implications with the possible existence of additional Tertiary volcanic units occurring <u>below</u> the shale in the Pony Meadows mine area. These could include more Alta volcanics or Hartford Hill Rhyolite, as well as Oligocene tuffs similar to those described by Profett in the Singatse Range to the southeast. The plastic nature of the shales as demonstrated in the core where numerous carbon-coated slicks are present renders this unit relatively imprevious to hydrothermal solutions and any underlying volcanic rocks would be likely hosts for mineralization. Without a drill hole intersecting the shale, it would be unwise to conclude that the drill holes have bottomed in pre-Tertiary rocks and even with such a penetration, assigning a Mesozoic age without further data would not be justified.

I believe that these two concepts add significant dimensions to the exploration potoential of the Pony Meadows mine area and the SUE claims. It will require some considerable additional geological work to fully evaluate the implications and define targets for additonal work. However, the rewards could be most impressive.

Yours very truly,

Rick Thomsen



Sample Location Sketch
Pony Meadows Mine – Bull Canyon Area
samples no. 88593 – 88616
(Como 7½' Quad)

L.M.

6/90

CLIENT: Cordex Exploration Co. DATE: June 30,1992 RMGC Job No.: 92-49-10

SAMPLE NO.	oz/ton Gold	oz/ton Silver	ppb Gold	ppm Silver	ppm Arsenic
88593	-0.005	0.67			
88594	-0.005	0.38			
88595	0.032	0.22			
88596	0.010	7.08			
88597	-0.005	-0.10			
88598	0.006	0.19			
88599	0.036	-0.10			
88600	0.010	-0.10			
88601	-0.005	-0.10			
88602	-0.005	-0.10			
88603	-0.005	-0.10			
88604	-0.005	-0.10			
88605	-0.005	-0.01			
88606	0.005	0.20			
88607	-0.005	-0.10			
88608	-0.005	-0.10			
88609	0.056	-0.10			
88610	-0.005	-0.10			
88611	-0.005	-0.10			
88612	-0.005	-0.10			
88613	-0.005	-0.10			
88614	0.006	-0.10			
88615	0.005	-0.10			
88616	-0.005	0.13			
~~88617~~	~~0.536~~		~~2500+~~	~~26.~~	~~1225~~

Pony Meadows / Bull Canyon Area Samples

sample #	type	description
88593	outcrop in dry wash	strongly bleached, oxidized + altered andesite w/ dark gray pyrite quartz stringers
88594	outcrop	same as # 88593 w/ flat dipping veinlets – probably in hangingwall of zone. Some alunite on fractures.
88595	float	bleached, silicified + brecciated andesite w/ abun. fine-grained qtz veining + oxid. pyrite.
88596	float	same as # 88595
88597	float	" " "
88598	suboutcrop	chip sample from fairly large angular boulders of rusty vein material replacing andesite. V. strong oxidized pyrite.
88599	suboutcrop	oxidized, pyritized vein material @ or near contact of Alta andesite and rubbly Kate Pk. conglomerate.
88600	suboutcrop	same as # 88599 – rusty, oxidized vein material.
88601	outcrop	same
88602	outcrop in prospect	same
88603	outcrop	rusty, highly altered Alta and. w/ sparse to mod. comb + fine-grained qtz veining. Approx. 100' further toward east or hangingwall side than previous sample

88604	outcrop	same as # 88603 - also from hangingwall side of trend.
88605	subcrop	rusty, vuggy cockade qtz w/ common bladed qtz after calcite texture sample is from back towards footwall of zone which is possibly 100' or more wide in this area.
88606	float chip	oxidized vein material from area covered + masked by rubbly, unconsolidated Kate Peak Fm.
88607	float chip	tan-grey fine grained + chalcedonic qtz w/ sparse oxid. pyrite.
88608	outcrop in shallow prospect pit	weathered, iron-stained + strongly altered andesite w/ abun. cockade structured qtz.
88609	float chip	rusty, silicified andesite fragment w/ abun. vein qtz - hillside is masked by rubble from Kate Peak Fm.
88610	subcrop	very rusty, gossany andesite w/ abun. vuggy, spongy qtz.
88611	subcrop	rusty, sugary strongly oxidized vein qtz.
88612	float (subcrop?)	crudely banded, crustiform white sugary qtz w/ dark grey streaks. V. abun. oxid. pyrite.
88613	subcrop	vuggy, rusty silicified andesite - common qtz veining.

88614	subout crop	rusty andesite + vein qtz just east of old prospect. Near contact w/ hornblende, biotite porphyry dike.
88615	subout crop	same as # 88614
88616	float	rusty vein material mixed w/ Kate Pk rubble near base of hill.

USB CORPORATION
DRILL LOG SUMMARY

PROJECT PONY MEADOWS ANOMALY (Magnetic ?)

Lyon, NV
COUNTY STATE

GENERAL:
DRILL HOLE NO. PM-6 TOTAL DEPTH 245'
COLLAR ELEVATION COORDINATES N. E.
BEARING N30W INCLINATION 44° LOGGED BY K. Downing
REASON FOR TERMINATION Passed through fractured altered andesite and stopped due drilling through soft propylitic andesite

DRILL DATA: (ROTARY) (REV. or CONV.) CORE
DRILLER Stiefel Peterson - Boyles Bros.
DATE STARTED 5-12-89 DATE COMPLETED 5-13-89
FOOTAGE PER SHIFT
DRILLING PROBLEMS (Summarize)
None

GEOLOGIC SUMMARY:
0-190' Argillic-altered andesite
- trace pyrite
- minor spotty silicification
oxidized zone from 150-190'
190-245' Propylitic andesite
- 2-30% pyrite
- minor oxidation
- fracturing at 205-215'
- Groundwater at 220

SAMPLE DATA:
SAMPLE NO. SEQUENCE CO-3, 0-245

NO. OF SAMPLES 49
INTERVAL SAMPLED 5' samples from 0-245'

MINERALIZED INTERVAL:

FROM	TO				

PM-6

Project Como Drill Hole CD-3 Bearing N30W Angle 44° Total Depth 245' Sheet 1 of ___

Collar Elev. ___ Co. Lyon State NV T. ___ R. ___ Sec. ___ Coordinates ___, ___

Quad. Como Contractor Boyles Bros Drill Rotary reverse Started 5-12-89 Completed 5-13-89 Geologist K. Downing

Footage	Recovery	% Fines	% FeOx	% SiO2	% Ca	% Clay		Graphic	% Py			Graphic	Frac	Graphic	Color (d)	Color (w)	GEOLOGY Rock Type	Graphic	REMARKS	ppm Au	ppm
	ALTERATION								SULFIDES				STRUCTURE								
0-5	100	70	1	20	–	40			–						bra	dark bra	altered andesite		oxidized silicified		
5-10		70	1	30	–	40			–						"	"	"		"		
10-15		70	tr	tr	–	40			–						"	gray bra	"				
15-20		70	tr	–	–	40			–						tr	gray bra	"				
20-25		70	tr	–	–	30			–						"	gray gray	"				
25-30		90	tr	–	–	50			–						bra gray	"	"				
30-35		70	tr	–	–	30			–						"	"	"				
35-40		60	tr	–	–	20			–						"	"	"				
40-45		50	tr	–	–	40			–						"	white gray	"		FeO_2 on fractures		
45-50		50	tr	–	–	40			tr						gray	"	"		FeO_2 on fractures		
50-55		40	1	–	–	30			tr						"	gray gray	"				
55-60		50	tr	–	–	30			tr						"	"	"				

Project Como Drill Hole ~~CO-3~~ PPP-6 Bearing N30W Angle 44° Sheet 2 of 4

Footage	Recovery	% Fines	% FeOx	% SiO_2	% Ca	% Clay		Graphic	% Py			Graphic	Frac	Graphic	Color (d)	Color (w)	GEOLOGY Rock Type	Graphic	REMARKS	ppm Au	ppm Ag
60-65	100	60	2	—	—	30			—						bri.	bri. tan	altered andesite		basic drilling FeO2 on fractures		
65-70		60	3	—	—	30			—						"	"	"		FeO2 on fractures		
70-75		50	tr	—	—	20			tr						"	bin. gray	"		FeO2 on fractures		
75-80		60	1	—	—	30			tr						"	gray-bin.	"		FeO2 on fractures		
80-85		60	tr	—	—	30			—						"	"	"		FeO2 on fractures		
85-90		60	1	10	—	20			—						orange-brn	gray-brn	"		FeO2 on fractures silicification		
90-95		60	2	2	—	20			—						"	"	"		"		
95-100		60	2	—	—	30			—						"	"	"		"		
100-105		50	tr	—	—	20			—						"	"	"		"		
105-110		50	1	—	—	20			—						"	"	"		"		
110-115		50	2	—	—	30			—						"	tan-brn	"		"		
115-120		60	1	—	—	40			—						"	gray-brn	"		"		
120-125		60	tr	5	—	40			—						"	tan-brn	"		" silicification		
125-130		60	5	tr	—	40			—						"	"	"		"		

PM-6

Project Como Drill Hole CO-3 Bearing N30W Angle -44° Sheet 3 of 4

Footage	Recov	% Fines	% FeOx	% SiO_2	% Ca	% Clay		Graphic	% Py			Graphic	Frac	Graphic	Color (d)	Color (w)	GEOLOGY Rock Type	Graphic	REMARKS	ppm Au	ppm Ag
	ALTERATION								SULFIDES				STRUCTURE								
130-135	100	70	tr	—	—	40			—						dark gray	gray brown	altered andesite		easy drilling. Chlorite on fractures		
135-140		60	tr	—	—	30			—						"	light gray green	"		"		
140-145		60	tr	—	—	30			—						"	gray dark	"		" stop drilling for today		
145-150		60	tr	—	—	30			—						"	"	"				
150-155		70	2	—	—	40			—						"	brn dark	"				
155-160		50	3	—	—	50			—						gray brn	"	"		argillic alteration		
160-165		90	8	—	—	70			—						"	"	"		"		
165-170		90	15	—	—	70			—						"	"	"		"		
170-175		90	5	—	—	60			—						"	gray dark	"		"		
175-180		90	tr	—	—	70			—						orange brn	orange brn	"		" extreme oxidation		
180-185		90	30	—	—	70			?						"	gray brn	"		trace oxidized pyrite		
185-190		90	10	—	—	60			tr						orange brn	"	"		fresh pyrite		
190-195		70	tr	—	—	50			2						gray	gray	propylitic andesite		fresh pyrite		
195-200		70	—	—	—	40			5						"	"	"		"		