6000 1821

Mining District File Summary Sheet

DISTRICT	Rosebud
DIST_NO	4010
COUNTY If different from written on document	Pershing
TITLE If not obvious	Rosebud Bulk Rock Geochemistry
AUTHOR	Mitchell; P; Ballew C; Vance R;
DATE OF DOC(S)	1998 - 1999
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Sulphur 7½'
P_M_C_NAME (mine, claim & company names)	Rosebud Mine; Newmont Exploration, Ltd
COMMODITY If not obvious	gold; silver
NOTES	Geochemistry; correspondence; handwritten notes 26p.

Keep docs at about 250 pages if no oversized maps attached
(for every 1 oversized page (>11x17) with text reduce
the amount of pages by ~25)

SS: DP 2/21/08
Initials Date
DB:
Initials Date
SCANNED:
Initials Date

Revised: 1/22/08

ROSEBUD STRATIGRAPHY

BULK ROCK GEOCHEMISTRY

60001821 4010

60001821 4010

START_OF_REPORT 1.0

---	--- ---	---	#NAME? Company Data
Company:	Newmont		
Office:	WINNEMUCCA, NEVADA		
Batch No.:			
Geologist:	MITCHELL,P		
Project:	ROSEBUD		
Project Code:			
Submittal Date:	6-Jan-99		
---	--- ---	---	#NAME? Laboratory Data
Laboratory name:	Chemex Labs		
Samples submitted at:	Sparks, Nevada		
Date samples received:	6-Jan-99		
Lab batch ID:	A9910158		
X-ref. batch ID:			
Samples prepped at:	Sparks, Nevada		
Seive units:	Tyler mesh		
Number of samples:	40		
Number of variables:	1		
Report number:	A9910158		
Report version:	52		
Report type:	COMPLETE		
Report date:	12-Jan-99		

Element	or	compou	nd name:	Se
Samples	an	alyzed	at:	Vancouver, B.C.
Laborat	ory	method	code:	16
Analyti	cal	sample	weight(g):	2.0
Reporti	ng	units:	ppm	
Convers	ion	factor	to PPM:	1.0000
Lower d	ete	ction l	imit:	0.2
Upper d	ete	ction l	imit:	100.0
Primary	di	gestion	:	EXT extraction
Seconda	ry	leach,	extraction or delivery:	
Analyti	cal	method	:	AAS

START_OF_ASSAY_DATA

Sample ID	R	Type	Size-1	S ize	d -2	Tem	ry p U	Primary prep	Secondary prep
---	-	---	---	---	--	---	---	---	---
4401 V		PULP					.2<		
4402 R		PULP						0.4	
4403 R		PULP					.2<		
4404 V		PULP					.2<		
4405 V		PULP					.2<		
4406 R		PULP						0.2	
4407 V		PULP						0.2	
4408 R		PULP						0.2	
4409 V		PULP					.2<		
4410 V		PULP					.2<		
4411 R		PULP					.2<		
4412 V		PULP						0.2	
4413 R		PULP					.2<		

4414 V	PULP		0.4
4415 R	PULP	.2<	
4416 V	PULP	.2<	
4457 R	PULP	.2<	
4458 V	PULP	.2<	
4459 R	PULP		0.2
4460 R	PULP		0.2
4461 R	PULP	.2<	
4462 R	PULP	.2<	
4463 R	PULP	.2<	
4464 R	PULP	.2<	
4465 R	PULP		0.4
4466 R	PULP	.2<	
4467 R	PULP	.2<	
4468 R	PULP		0.2
4469 R	PULP	.2<	
4470 V	PULP	.2<	
4471 R	PULP		0.4
4472 R	PULP	.2<	
4473 R	PULP		0.2
4474 R	PULP	.2<	
4475 R	PULP	.2<	
4476 R	PULP	.2<	
4477 R	PULP	.2<	
4478 R	PULP	.2<	
4479 R	PULP	.2<	
4480 R	PULP	.2<	

END_OF_ASSAY_DATA
START_OF_FOOTNOTES
END_OF_FOOTNOTES
END_OF_REPORT

START_OF_REPORT 1.0

#NAME? Company Data

Company:	Newmont
Office:	WINNEMUCCA, NEVADA
Batch No.:	
Geologist:	MITCHELL,P
Project:	ROSEBUD
Project Code:	
Submittal Date:	6-Jan-99

#NAME? Laboratory Data

Laboratory name:	Chemex Labs
Samples submitted at:	Sparks, Nevada
Date samples received:	6-Jan-99
Lab batch ID:	A9910158
X-ref. batch ID:	
Samples prepped at:	Sparks, Nevada
Seive units:	Tyler mesh
Number of samples:	40
Number of variables:	1
Report number:	A9910158
Report version:	16
Report type:	COMPLETE
Report date:	8-Jan-99

Element	or	compou	nd name:	Se
Samples	an	alyzed	at:	Vancouver, B.C.
Laborat	ory	method	code:	16
Analyti	cal	sample	weight(g):	2.0
Reporti	ng	units:	ppm	
Convers	ion	factor	to PPM:	1.0000
Lower d	ete	ction l	imit:	0.2
Upper d	ete	ction l	imit:	100.0
Primary	di	gestion	:	EXT extraction
Seconda	ry	leach,	extraction or delivery:	
Analyti	cal	method	:	AAS

START_OF_ASSAY_DATA

Sample ID	R	Type	Size-1	S ize	d -2	Tem	ry p U	Primary prep	Secondary prep
4401 V	PULP						.2<		
4402 R	PULP							0.4	
4403 R	PULP						.2<		
4404 V	PULP						.2<		
4405 V	PULP						.2<		
4406 R	PULP							0.2	
4407 V	PULP							0.2	
4408 R	PULP							0.2	
4409 V	PULP						.2<		
4410 V	PULP						.2<		
4411 R	PULP						.2<		
4412 V	PULP							0.2	
4413 R	PULP						.2<		
4414 V	PULP							0.4	
4415 R	PULP						.2<		
4416 V	PULP						.2<		
4457 R	PULP						.2<		
4458 V	PULP						.2<		
4459 R	PULP							0.2	

4460 R	PULP		0.2
4461 R	PULP	.2<	
4462 R	PULP	.2<	
4463 R	PULP	.2<	
4464 R	PULP	.2<	
4465 R	PULP		0.4
4466 R	PULP	.2<	
4467 R	PULP	.2<	
4468 R	PULP		0.2
4469 R	PULP	.2<	
4470 V	PULP	.2<	
4471 R	PULP		0.4
4472 R	PULP	.2<	
4473 R	PULP		0.2
4474 R	PULP	.2<	
4475 R	PULP	.2<	
4476 R	PULP	.2<	
4477 R	PULP	.2<	
4478 R	PULP	.2<	
4479 R	PULP	.2<	
4480 R	PULP	.2<	

END_OF_ASSAY_DATA
START_OF_FOOTNOTES
END_OF_FOOTNOTES
END_OF_REPORT

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
ATTN: CHARLOTTE. BALLEW/RANDY VANCE/PETER MITCHELL
WORKORDER : A9833425 PROJECT : ROSEBUD

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P R E L I M I N A R Y D A T A O N L Y !!

*** Samples are being analyzed for: Ba ppm,Ce ppm,Cs ppm,Co ppm,Cu ppm,Dy ppm,Er ppm,Eu ppm,Gd ppm,Ga ppm,Hf ppm,Ho ppm,La ppm,Pb ppm,Lu ppm,Nd ppm,Ni ppm,Nb ppm,Pr ppm,Rb ppm, Sm ppm,Ag ppm,Sr ppm,Ta ppm,Tb ppm,Tl ppm,Th ppm,Tm ppm,Sn ppm,W ppm,U ppm,V ppm,Yb ppm, Y ppm,Zn ppm,Zr ppm

SAMPLE	2855	2501	2858	2859	2860	2502	2503	2504	2505
DESCRIPTION	Ba ppm	Ce ppm	Cs ppm	Co ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Gd ppm
NWRA-3632	1100	80.0	258	8.0	5	5.2	3.4	0.4	6.5
RS-410:1047.6	1120	170.5	11.2	2.0	<5	6.7	4.3	0.8	9.6
NWRA-2602	1085	72.5	5.5	9.5	5	5.1	3.8	0.9	5.1

START_OF_REPORT 1.0

--- --- --- --- #NAME? Company Data

Company:	Newmont
Office:	WINNEMUCCA, NEVADA
Batch No.:	
Geologist:	VANCE,R
Project:	ROSEBUD
Project Code:	
Submittal Date:	12-Oct-98

--- --- --- --- #NAME? Laboratory Data

Laboratory name:	Chemex Labs
Samples submitted at:	Sparks, Nevada
Date samples received:	12-Oct-98
Lab batch ID:	A9833425
X-ref. batch ID:	
Samples prepped at:	Sparks, Nevada
Seive units:	Tyler mesh
Number of samples:	3
Number of variables:	36
Report number:	A9833425
Report version:	99
Report type:	PARTIAL
Report date:	30-Oct-98

Element	or	compou	nd name:		Ba	Ce	Cs	Co	Cu	Dy	Er	Eu	Gd	Ga	Hf	Ho	La	Pb	Lu	Nd	Ni	Nb	Pr	Rb			
Samples	an	alyzed	at:	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver,				
Laborat	ory	method	code:		2855	2501	2858	2859	2860	2502	2503	2504	2505	2861	2842	2506	2507	2862	2508	2509	2863	2844	251				
Analyti	cal	sample	weight(g):		0.2	0.0	0.2	0.2	0.	0.0	0.0	0.0	0.0	0.	0.	0.0	0.0	0.	0.0	0.0	0.	0.	0.0	0.2	0.0			
Reporti	ng	units:	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	pp			
Convers	ion	factor	to PPM:		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.000			
Lower d	ete	ction l	imit:		0.5	0.5	0.1	0.5	5.	0.1	0.1	0.1	0.1	1.	1.	0.1	0.5	5.	0.1	0.5	5.	1.	0.1	0.2	0.1			
Upper d	ete	ction l	imit:		10000.0	10000.0	10000.0	10000.0	10000.	1000.0	1000.0	1000.0	1000.0	1000.	10000.	1000.0	10000.0	10000.	1000.0	10000.0	10000.	1000						
Primary	di	gestion	:		W.R.A. Fusion	W.R.A. Fusion	W.R.A. Fusion	W.R.A. Fusion						W.R.A. Fusion	W.R.A. Fusion			W.R.A. Fusion				W.R.A. Fusion	W.R.A. Fusion				
Seconda	ry	leach,	extraction or delivery:																								
Analyti	cal	method	:		**********	NAA**********								NAA	NAA	NAA	NAA**********			NAA	NAA**********		NAA	NAA**********			

START_OF_ASSAY_DATA

Sample ID	R	Type	Size-1	S ize	d -2	Tem	ry p U	Primary prep	Secondary prep																		
NWRA-3632	PULP						1100.0	80.0	258.	8.0	5	5.2	3.4	.4	6.5	21	4	1.3	39.5	D	.6	32.5	5	15	9.3	222.	6.3	1<	1085.
RS-410:1047.6	PULP						1120.0	170.5	11.2	2.0	5<	6.7	4.3	.8	9.6	20	6	1.4	85.5	D	.7	67.0	5	14	19.1	174.5	10.6	1<	2
NWRA-2602	PULP						1085.0	72.5	5.5	9.5	5	5.1	3.8	.9	5.1	20	9	1.1	36.0	D	.6	31.5	10	17	8.5	158.0	5.5	1<	223.

END_OF_ASSAY_DATA

START_OF_FOOTNOTES

END_OF_FOOTNOTES

END_OF_REPORT

Sm	Ag	Sr	Ta	Tb	Tl	Th	Tm	Sn	W	U	V	Yb	Y	Zn	Zr
.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,	B.C.Vancouver,
2864	2511	2865	2867	2868	2512	2869	2550	2513	2870	2871	2549	2872	2514	2873	2874	2875
0.	0.2	0.2	0.0	0.2	0.	0.0	0.	0.	0.0	0.	0.0	0.2	0.	0.2	
ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
1.	0.1	0.5	0.1	0.5	1.	0.1	1.	1.	0.5	5.	0.1	0.5	5.	0.5	
0.	1000.0	10000.0	1000.0	1000.	10000.0	10000.0	1000.0	1000.0	1000.	1000.0	10000.	10000.	1000.0	10000.	1000.0	10000.0	10000.	10000.0
	W.R.A. Fusion		W.R.A. Fusion	W.R.A. Fusion	W.R.A. Fusion		W.R.A. Fusion			W.R.A. Fusion	W.R.A. Fusion		W.R.A. Fusion		W.R.A. Fusion	W.R.A. Fusion	W.R.A. Fusion
****	NAA**********		NAA**********				NAA**********		NAA	NAA**********			NAA**********		NAA**********		

	4.5	1.0	2.0	D	.7	4	53	D	5<	3.8	33.5	D	158.5
1.	2.0	1.4	1.0	D	.5	3	14	D	5<	4.2	34.0	D	266.
	4.5	.9	.5	D	.6	3	66	D	5	4.0	30.0	D	410.

B.C.Vancouver, B.C.Vancouver, B.C.Vancouver, B.C.

START_OF_REPORT 1.0

--- --- --- --- #NAME? Company Data

Company:	Newmont
Office:	WINNEMUCCA, NEVADA
Batch No.:	
Geologist:	VANCE,R
Project:	ROSEBUD
Project Code:	
Submittal Date:	12-Oct-98

--- --- --- --- #NAME? Laboratory Data

Laboratory name:	Chemex Labs
Samples submitted at:	Sparks, Nevada
Date samples received:	12-Oct-98
Lab batch ID:	A9833423
X-ref. batch ID:	
Samples prepped at:	Sparks, Nevada
Seive units:	Tyler mesh
Number of samples:	3
Number of variables:	13
Report number:	A9833423
Report version:	99
Report type:	CERTIFIED
Report date:	29-Oct-98

Element	or	compou	nd name:	Au	Au	Ag	As	Cu	Mo	Hg	Pb	Sb	Zn	Se	F	Cl
Samples	an	alyzed	at:	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Va
Laborat	ory	method	code:	99	1700	6	13	2	3	20	4	22	5	16	21	155
Analyti	cal	sample	weight(g):	30.000	30.0000	1.0	1.	1.	1.	1.	1.	2.0	1.	2.0	0.	0.
Reporti	ng	units:	ppm oz/ton	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
Convers	ion	factor	to PPM:	1.0000	34.2857	1.0000	1.0000	1.0000	1.0000	0.0010	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Lower d	ete	ction l	imit:	0.005	0.0005	0.2	1.	1.	1.	10.	1.	0.2	1.	0.2	20.	100.
Upper d	ete	ction l	imit:	10.000	20.0000	100.0	10000.	10000.	1000.	99999.	10000.	1000.0	10000.	100.0	10000.	10000.
Primary	di	gestion	:	FIRE-ASSAY	FIRE-ASSAY	AQ digestion	AQ digestion	AQ digestion	AQ digestion	HNO3-HCL	AQ digestion	HCL-KCLO3	AQ digestion	EXT extractio		
Seconda	ry	leach,	extraction or delivery:													
Analyti	cal	method	:	FA+AAS finish	CALCULATION	AAS	AAS	AAS	AAS	AAS	AAS	AAS	AAS	AAS		NAA

START_OF_ASSAY_DATA

Sample ID	R	Type	Size-1	S ize	d -2	ry Tem	Primary p U	Secondary prep	prep											
NWRA-3632		ROCK					OTHER	OTHER	.005<	.0005<	.2	1<	3	1<	10<	10	.2<	23	.2<	230	400
RS-410:1047.6		PULP					.005<	.0005<	.2<	1<	1	1<	10<	8	.2<	7	.2	100	100<		
NWRA-2602		PULP					.005<	.0005<	.2<	1<	2	1<	10<	5	.2	44	.2<	360	100<		

END_OF_ASSAY_DATA

START_OF_FOOTNOTES

END_OF_FOOTNOTES

END_OF_REPORT

couver, B.C.Vancouver, B.C.Vancouver, B.C.

n KNO3-NA2CO3

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
WORKORDER : A9833423 PROJECT : ROSEBUD

P R E L I M I N A R Y D A T A O N L Y !!

SAMPLE	5	16	21	155
DESCRIPTION	Zn ppm	Se ppm	F ppm	Cl NAA
NWRA-3632	23	<0.2	230	400
RS-410:1047.6	7	0.2	100	<100
NWRA-2602	44	<0.2	360	<100

END OF DATA

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
ATTN: CHARLOTTE. BALLEW/RANDY VANCE/PETER MITCHELL
WORKORDER : A9833423 PROJECT : ROSEBUD

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P R E L I M I N A R Y D A T A O N L Y !!

*** Samples are being analyzed for: Au ppm FA+AA,Au oz/T calc.,Ag ppm Aqua R,As ppm,Cu ppm,Mo ppm,Hg ppb,Pb ppm,Sb ppm,Zn ppm,Se ppm,F ppm,Cl NAA ppm

SAMPLE	99	1700	6	13	2	3	20	4	22
DESCRIPTION	Au ppm	Au oz/T	Ag ppm	As ppm	Cu ppm	Mo ppm	Hg ppb	Pb ppm	Sb ppm
NWRA-3632	<0.005	<0.0005	0.2	<1	3	<1	<10	10	<0.2
RS-410:1047.6	<0.005	<0.0005	<0.2	<1	1	<1	<10	8	<0.2
NWRA-2602	<0.005	<0.0005	<0.2	<1	2	<1	<10	5	0.2

START_OF_REPORT 1.0

Company:	Newmont	#NAME?	Company Data
Office:	WINNEMUCCA, NEVADA		
Batch No.:			
Geologist:	VANCE,R		
Project:	ROSEBUD		
Project Code:			
Submittal Date:	12-Oct-98		
Laboratory name:	Chemex Labs	#NAME?	Laboratory Data
Samples submitted at:	Sparks, Nevada		
Date samples received:	12-Oct-98		
Lab batch ID:	A9833424		
X-ref. batch ID:			
Samples prepped at:	Sparks, Nevada		
Seive units:	Tyler mesh		
Number of samples:	3		
Number of variables:	15		
Report number:	A9833424		
Report version:	97		
Report type:	CERTIFIED		
Report date:	23-Oct-98		

Peter –
Not sure if it
printed out on Mon –
If so disregard –
J

Element	Al	Ca	Cr	Fe	K	Mg	Na	P	Si	Ti	LOI	TOTAL	Fe	S
Samples analyzed at:	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.	Vancouver, B.C.
Laboratory method code:	902	906	2590	903	908	905	1989	907	909	901	904	910	2540	451	1380
Analytical sample weight(g):	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
Reporting units:	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	% XRF	%	%	%	%
Conversion factor to PPM:	5292.5000	7147.0000	6842.0000	6994.2998	8301.5996	6031.0000	7744.5742	7418.6001	4364.2002	4674.7002	5995.1001	10000.0000	10000.0000	7773.0200	10000.0000
Lower detection limit:	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Upper detection limit:	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	105.00	100.00	100.00
Primary digestion:			W.R.A. Fusion									LECO			
Secondary leach, extraction or delivery:															
Analytical method:	**********		ICP**********					ICP**********							NAA**********

START_OF_ASSAY_DATA

Sample ID	R	Type	Size-1	Size-2	Temp	Primary Prep	Secondary Prep														
NWRA-3632	PULP					13.24	1.09	.01<	1.64	2.55	.01<	.07	4.30	.03	68.26	.09	7.79	99.06	.38	.01<	
RS-410:1047.6	PULP					.41	.01<														
NWRA-2602	PULP					.26	.01														

END_OF_ASSAY_DATA
START_OF_FOOTNOTES
END_OF_FOOTNOTES
END_OF_REPORT

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
ATTN: CHARLOTTE. BALLEW/RANDY VANCE/PETER MITCHELL
WORKORDER : A9833424 PROJECT : ROSEBUD

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PRELIMINARY DATA ONLY !!

*** Samples are being analyzed for: Al2O3 % XRF,CaO % XRF,Cr2O3 % XRF,Fe2O3 % XRF,K2O % XRF,MgO % XRF,MnO % XRF,Na2O % XRF,P2O5 % XRF,SiO2 % XRF,TiO2 % XRF,LOI % XRF,TOTAL %,FeO %,S % Total

SAMPLE	902	906	2590	903	908	905	1989	907	909
DESCRIPTION	Al2O3 %	CaO % X	Cr2O3 %	Fe2O3 %	K2O % X	MgO % X	MnO % X	Na2O %	P2O5 %
NWRA-3632	13.24	1.09	<0.01	1.64	2.55	<0.01	0.07	4.30	0.03
RS-410:1047.6	-----	-----	-----	-----	-----	-----	-----	-----	-----
NWRA-2602	-----	-----	-----	-----	-----	-----	-----	-----	-----

High-Si dacite or rhyolite (on boundary of K_2O+Na_2O/SiO_2)

Rock = unaltered ± "unoxidized", crushed and hand-picked sample-sent to the lab

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
WORKORDER : A9833424 PROJECT : ROSEBUD

P R E L I M I N A R Y D A T A O N L Y !!

SAMPLE	901	904	910	2540	451	1380
DESCRIPTION	SiO2 %	TiO2 %	LOI % X	TOTAL %	FeO %	S % Tot
NWRA-3632	68.26	0.09	7.79	99.06	0.38	<0.01
RS-410:1047.6	-----	-----	-----	-----	0.41	<0.01
NWRA-2602	-----	-----	-----	-----	0.26	0.01

END OF DATA

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
WORKORDER : A9833425 PROJECT : ROSEBUD

P R E L I M I N A R Y D A T A O N L Y !!

SAMPLE	2861	2842	2506	2507	2862	2508	2509	2863	2844
DESCRIPTION	Ga ppm	Hf ppm	Ho ppm	La ppm	Pb ppm	Lu ppm	Nd ppm	Ni ppm	Nb ppm
NWRA-3632	21	4	1.3	39.5	10	0.6	32.5	5	15
RS-410:1047.6	20	6	1.4	85.5	10	0.7	67.0	5	14
NWRA-2602	20	9	1.1	36.0	10	0.6	31.5	10	17

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

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ATTENTION : ATTN: PETER MITCHELL
WORKORDER : A9833425 PROJECT : ROSEBUD

P R E L I M I N A R Y D A T A O N L Y !!

SAMPLE	2510	2864	2511	2865	2867	2868	2512	2869	2550
DESCRIPTION	Pr ppm	Rb ppm	Sm ppm	Ag ppm	Sr ppm	Ta ppm	Tb ppm	Tl ppm	Th ppm
NWRA-3632	9.3	222	6.3	<1	1085	4.5	1.0	2.0	20
RS-410:1047.6	19.1	174.5	10.6	<1	261	2.0	1.4	1.0	22
NWRA-2602	8.5	158.0	5.5	<1	223	4.5	0.9	0.5	14

FROM : CHEMEX LABS LTD., VANCOUVER PHONE: 604-984-0221

TO : NEWMONT EXPLORATION LTD.
ATTENTION : ATTN: PETER MITCHELL
WORKORDER : A9833425 PROJECT : ROSEBUD

P R E L I M I N A R Y D A T A O N L Y !!

SAMPLE	2513	2870	2871	2549	2872	2514	2873	2874	2875
DESCRIPTION	Tm ppm	Sn ppm	W ppm	U ppm	V ppm	Yb ppm	Y ppm	Zn ppm	Zr ppm
NWRA-3632	0.7	4	53	7.5	<5	3.8	33.5	90	158.5
RS-410:1047.6	0.5	3	14	4.5	<5	4.2	34.0	70	266
NWRA-2602	0.6	3	66	4.0	5	4.0	30.0	70	410

END OF DATA

Peter FYI
10/1/98

Randy —

Here are the results of using 3 different methods of calculating normative plagioclase for Lac's whole-rock data on what Brady mapped as andesite:

1. plag = an + ab if $SiO_2 \leq 63\%$
   plag = 4* an (composition of An_{25}) if $SiO_2 > 63\%$
2. plag = an + ab
3. plag = an (ab is not included in Kspar or plag)

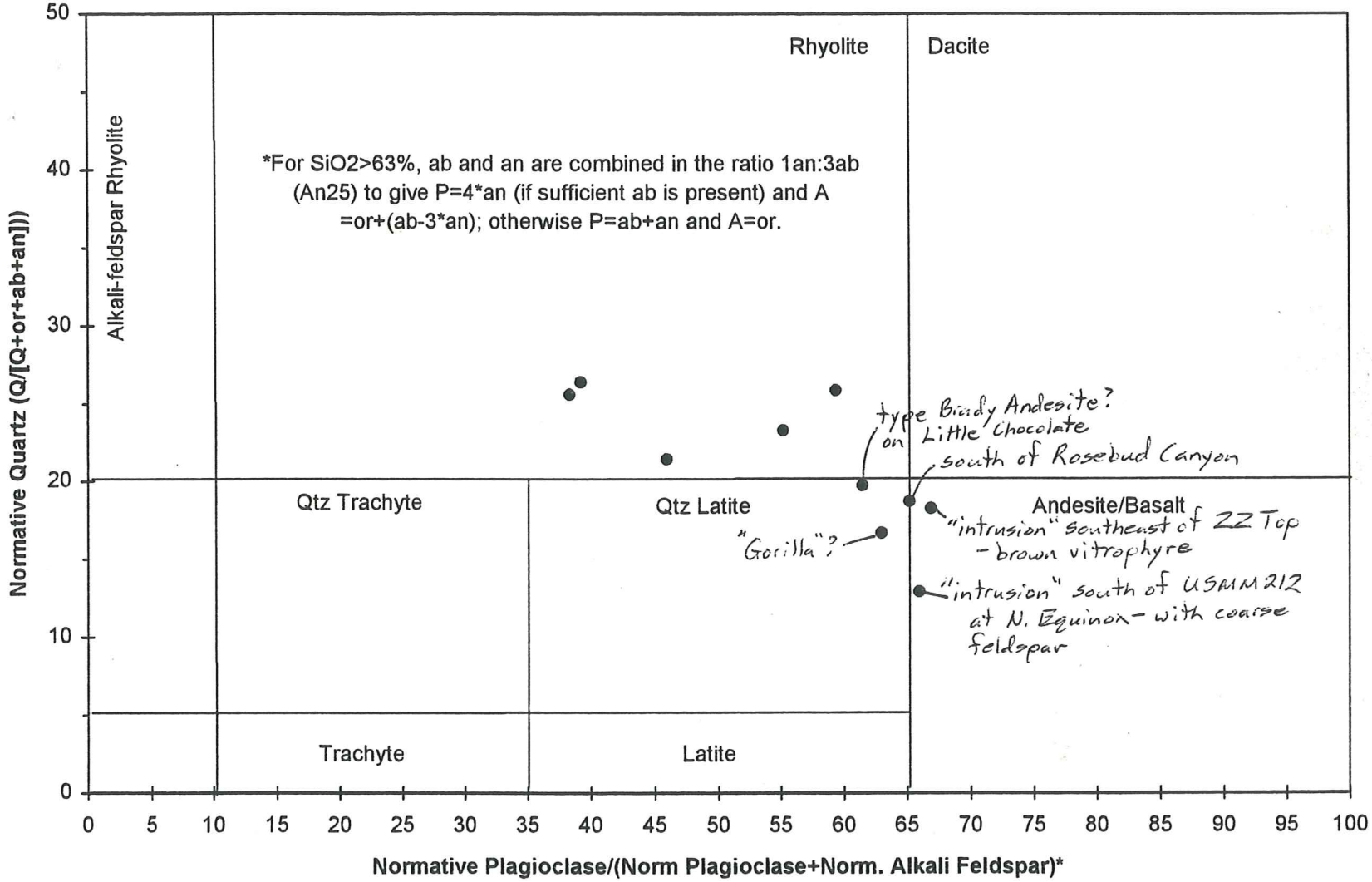
As you can see, the results are quite different. In any case, "andesite" is at best marginally andesite.

George

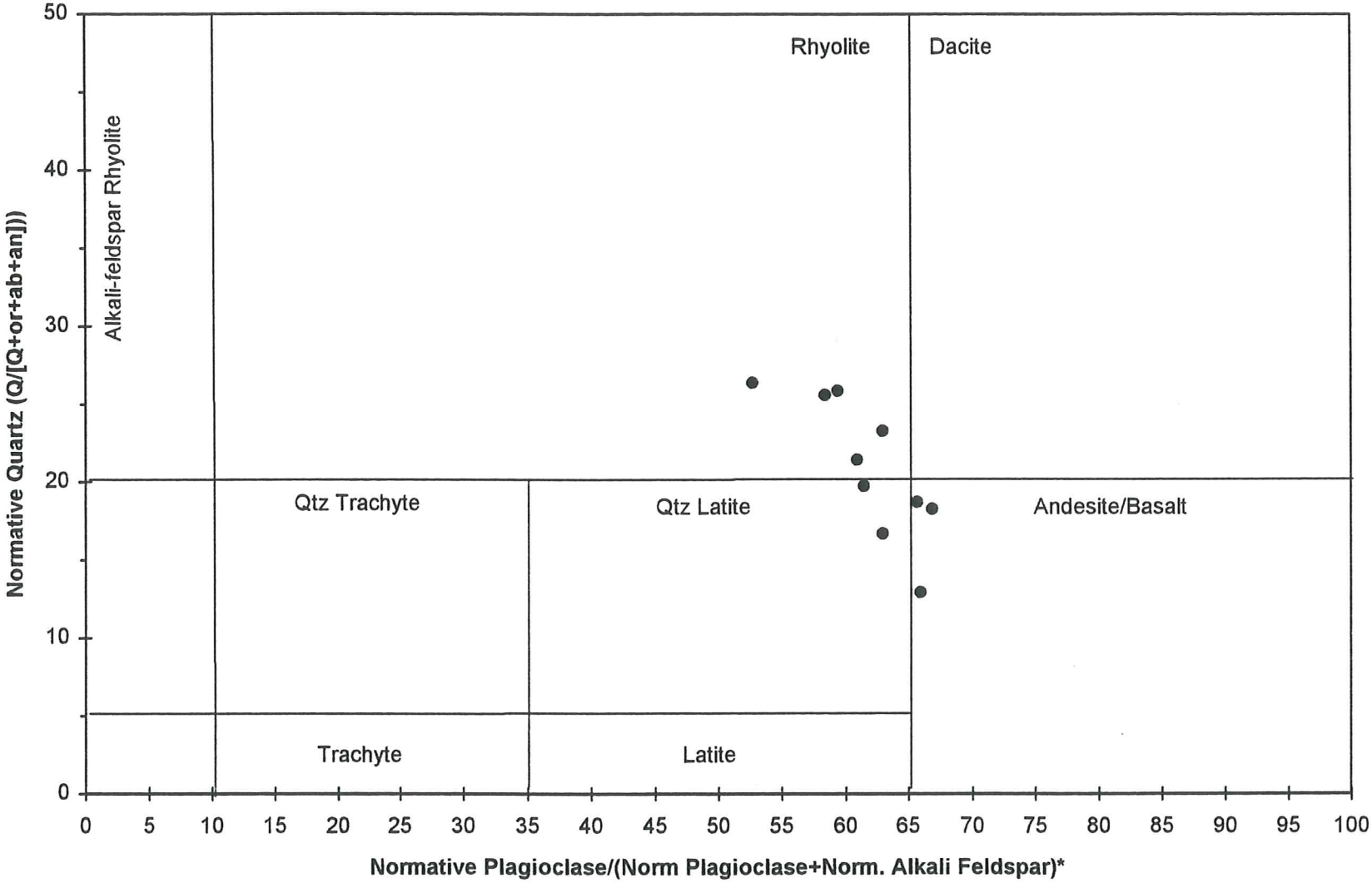
Northstate Electrical - Mechanical
635-5990

Lac's whole-rock data
may include altered rocks

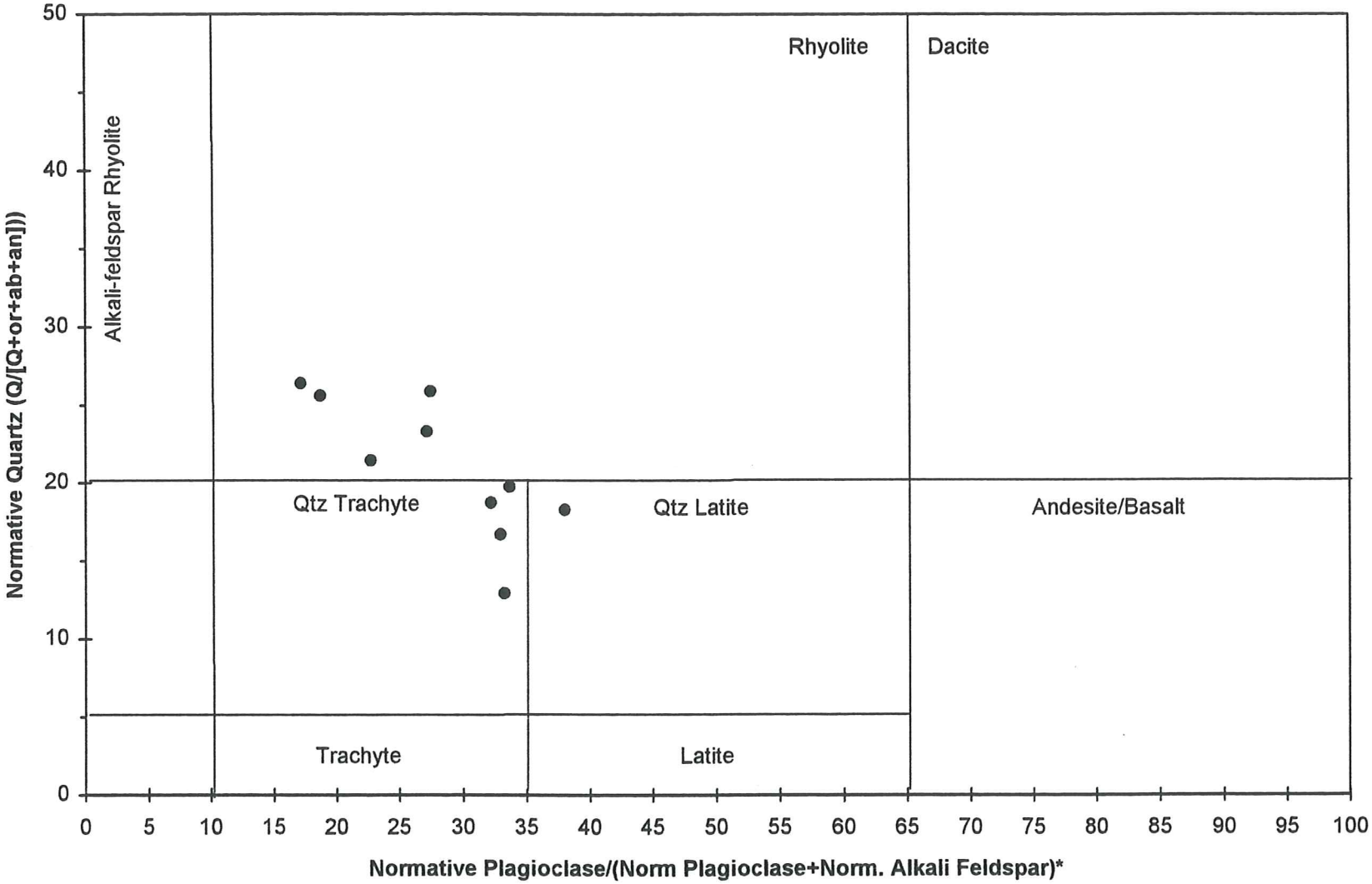
QAP Classification Using Normative Minerals (Volume Percent) for Brady's Andesite, Rosebud



QAP Classification Using Normative Minerals (Volume Percent)
for Brady's Andesite, Rosebud- plag=an+ab



QAP Classification Using Normative Minerals (Volume Percent)
for Brady's Andesite, Rosebud- plag=an (ab ignored)



Peter FYI
10/1/98

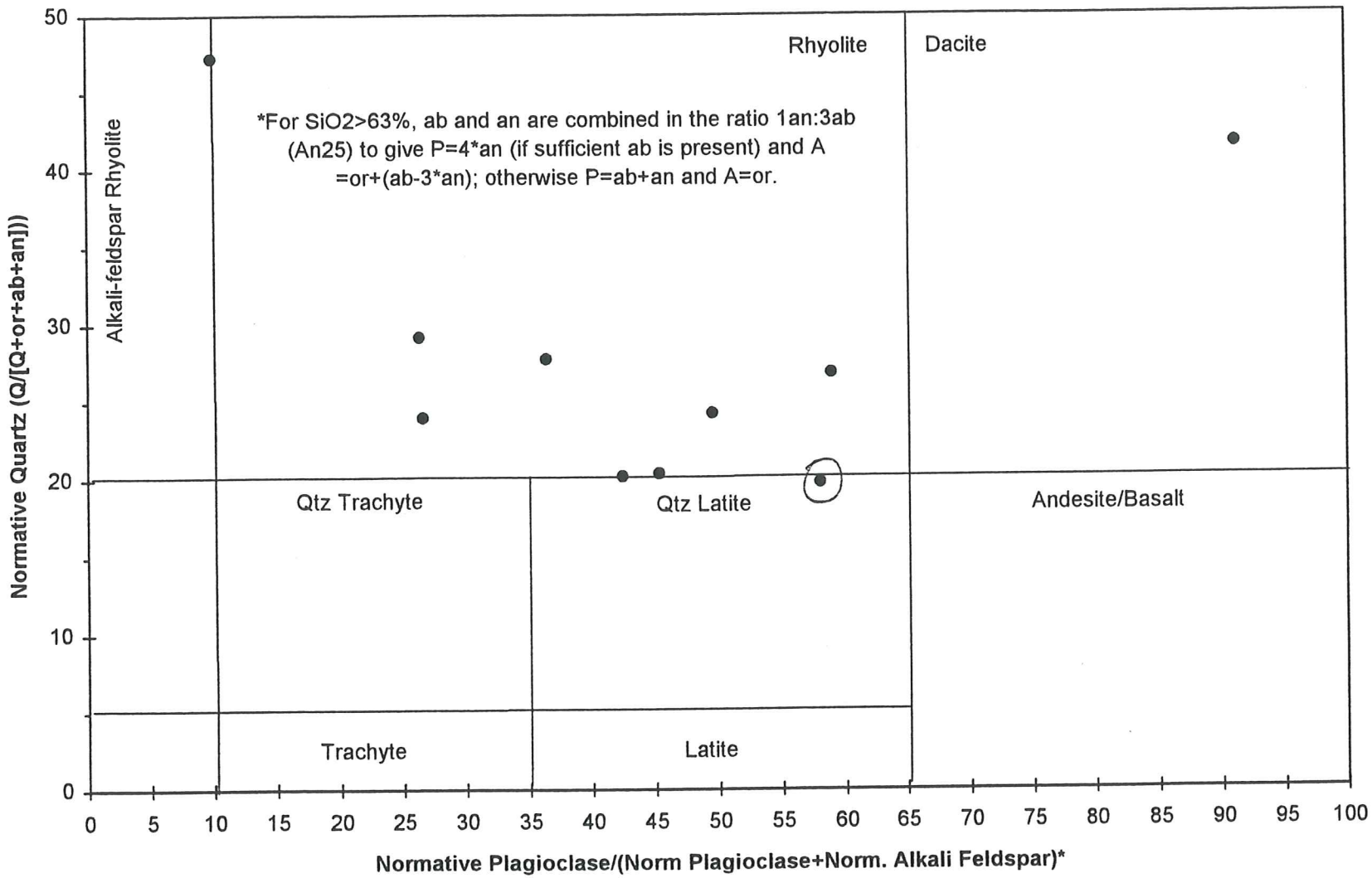
Randy –

Another problem with normative calculations is the effect of the atomic ratio Fe^{3+}/Fe^{2+}, as Peter M. has pointed out to me. Fe^{3+} is assigned to magnetite or hematite and Fe^{2+} is assigned to a mafic silicate, which uses up SiO_2. Thus, the higher the Fe^{3+}/Fe^{2+}, the more iron there is in the oxides and the more SiO_2 is left to make quartz. These 3 graphs illustrate that the effect of changing Fe^{3+}/Fe^{2+} from .15 to .7 (the ratio is not known from XRF analyses and is usually changed from the original magmatic ratio in ~~oxidized~~ weathered volcanic rocks anyway) is negligible, probably because the amount of total iron in most Rosebud volcanic rocks is very low (usually <4 wt.% Fe_2O_3).

George

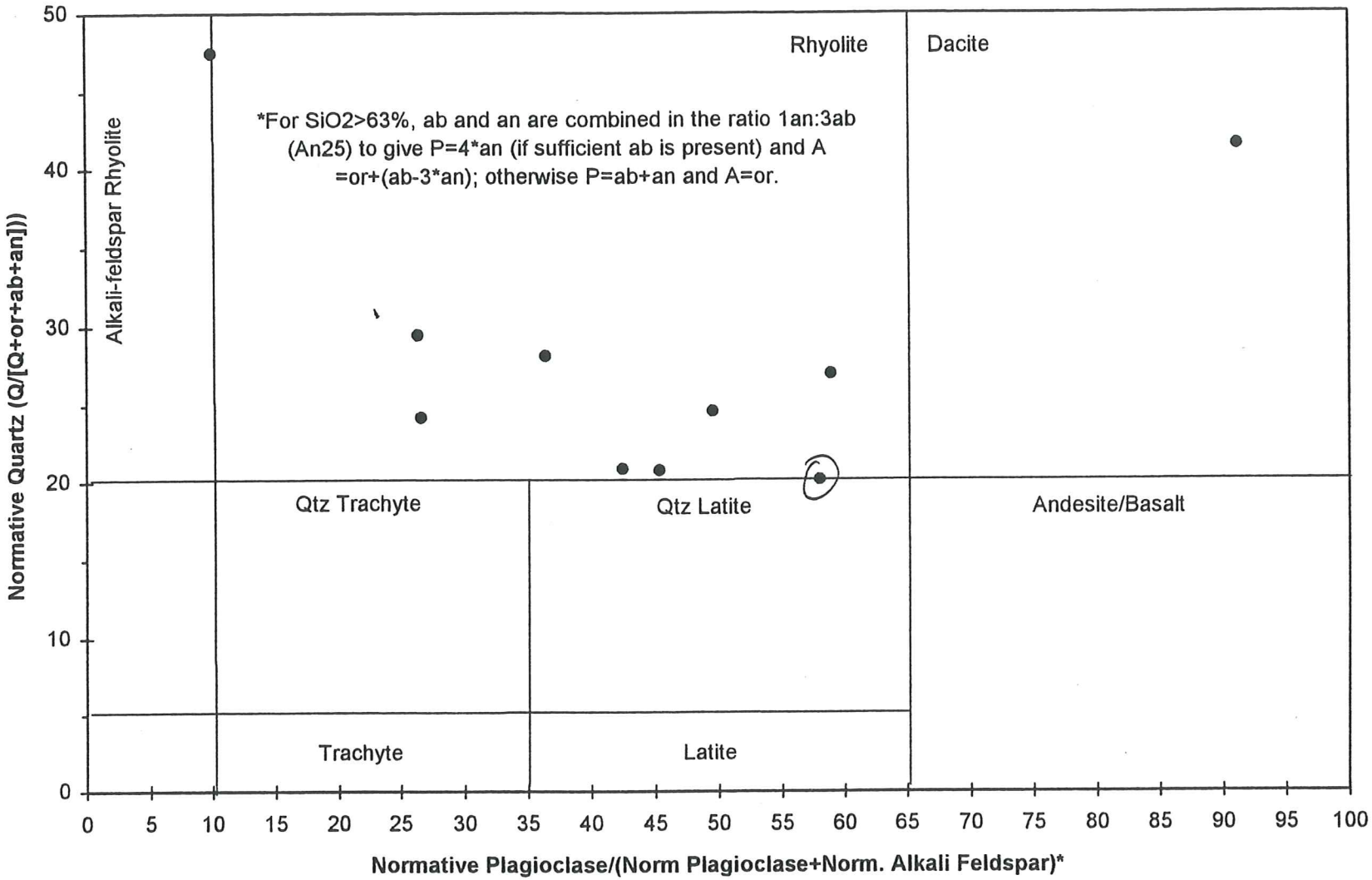
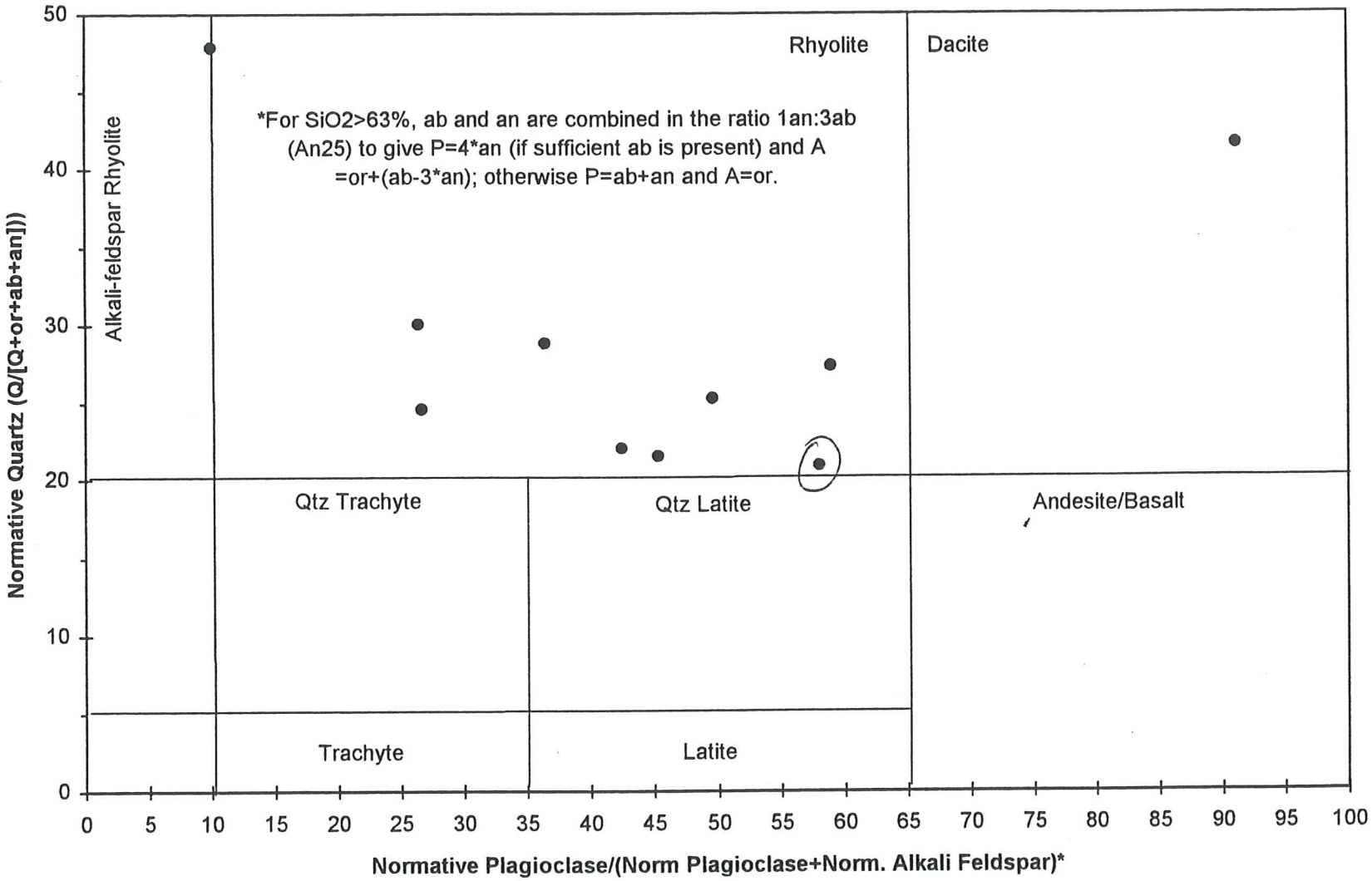
$\frac{Fe^{3+}}{Fe^{2+}} = .15$

QAP Classification Using Normative Minerals (Volume Percent) for Brady's Chocolate Fm., Rosebud



$\frac{Fe^{3+}}{Fe^{2+}} = .3$

QAP Classification Using Normative Minerals (Volume Percent) for Brady's Chocolate Fm., Rosebud



QAP Classification Using Normative Minerals (Volume Percent) for Brady's Chocolate Fm., Rosebud (Fe3+/Fe2+=.7)