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GSA Data Repository Item 2018358

DR Spreadsheet: Raw zircon U-Pb ages of igneous samples (“raw data” tab in separate Excel file) and details of methods (“metadata” tab in separate Excel file)

Supplementary Table 1: Thin-section analysis of samples from the footwall of the Plomosa detachment fault

Supplementary Figure 1: Locations and coordinates (North American Datum of 1983, Universal Transverse Mercator zone 11N) of geochemical and geochronological samples from the northern Plomosa Mountains

Supplementary Table 1: Thin section analysis of samples from the footwall of the Plomosa detachment fault

NOTES: Unique ID: Year, month, and station number. Coordinate system: UTM NAD83 11N. Mineral abbreviations: Fld = unidentified feldspar, Plg = plagioclase, Ksp = potassium feldspar, Qtz = Quartz, Hbl = hornblende, Chl = Chlorite, Bio = biotite, Msc = muscovite, Opq = opaque minerals, Gph = graphite, Tit = titanite, Calc = calcite, Apt = apatite, Grt = Garnet, Rut = Rutile, Epi = epidote, Zrc = zircon, saus = saussurite. Modal mineralogy: (X) = X%, none stated = accessory mineral. Microstructures: Assym qtz = grain shape preferred orientation in quartz. Approx quartz re-X bins (μm): The average diameter of dynamically recrystallized quartz grains.

Unique_ID	Sample_Name	Unit	Rock_type	UTM_X	UTM_Y	Modal_Mineralogy	Mylonite_type	Sense_of_Shear	Supporting_Microstructures	Quartz_recrysitallization	Approx_quartz_re-X_bins_(μm)	Chlorite_biotite	Seritization_(intense, strong, moderate, weak, none)	Comments
2007May_49	PI-49b	NPIC	Hornblende granodiorite	770078	3758355	Fld(48), Qtz(20), Hbl(13), Chl(12), Ser(2), Epi(2), fibrous pale amphibole(2), Apt, Tit, Opq,	mylonite	Top NE	asym qtz, C'	SGR + GBM	4	Chl	strong	Fibrous pale amphibole and around epidote. Also fibrous pale amphibole(?) in fractures.
2007May_52	PI-52	Orocopia	Schist Biotite Orocopia	769776	3757214	Qtz(50), Fld(35), Biot(15), Apt, Rut, Zrc	mylonite	Top NE	asym qtz	GBM > SGR	5	Bio	weak	Biotite is dark reddish brown. Long rutiles in quartz
2007May_59	PI-59	NPIC	Granodiorite	769735	3755570	Fld(60), Qtz(25), Chl(10), Opq(3), Tit, Allanite, Apt, Zrc	mylonite	Top NE	asym qtz, sigma clasts,	SGR	2	Chl	strong	Relatively large apatites.
2007May_65	PI-65	NPIC	Quartz Monzodiorite	770039	3755507	Fld(62), Qtz(17), Chl(10), Ser(10), Opq(1), Allanite, Calcite, Apt,	mylonite	Top NE	sigma clasts,	SGR	1	Chl	strong	calcite + saussurite + chl in fractures
2015May_1	155-P1a	Marble/Qtzite	Quartzite mylonite	770522	3758266	Qtz(97), Chl(1), Opq(1), Plg, Saus	mylonite	N/A	N/A	SGR	1	Chl	moderate	
2015May_1	155-P1b	Marble/Qtzite	Marble mylonite	770522	3758266	Calc(98), Opq(1), Msc, Bio		unknown	N/A	N/A	-	Bio > Chl	N/A	
2015May_7	155-P7	Orocopia	Muscovite Biotite Orocopia	769021	3756814	Fld(50), Qtz(32), Bio(15), Msc(2), Opq, Epi	mylonite	Top NE	S-C, Mica fish, assym qtz	SGR+GBM	3	Bio > Chl	moderate	Poikiloblastic plagioclase
2015May_9	155-P9	Orocopia	Muscovite Biotite Orocopia	769577	3756600	Qtz(45), Fld(25), Bio(19), Msc(10), Opq/graphite(1)	mylonite	Top NE	S-C, Mica fish, assym qtz	SGR > GBM	2	Bio	moderate	graphitic albite
2015May_10	155-P10	Marble/Qtzite	Marble mylonite	770585	3757041	Calc(79), Trm(20), Opq(1), other?	mylonite	unknown	N/A	N/A	-	N/A	N/A	
2015May_15	115-P15	Marble/Qtzite	Marble mylonite	769950	3744963	Calc(96), Opq(4)	mylonite	unknown	N/A	N/A	-	N/A	N/A	From south of field area.
2015Oct_41	1015-P41	NPIC	Granitoid	770056	3758127	Fld(65), Qtz(30), Chl(2), Opq(2), Clinozoisite, Epi	mylonite	Top NE	asym qtz,	SGR > GBM	3	Chl	strong	
2015Oct_43	1015-P43	Gneiss	Hnbl Amphibolite	769993	3758034	Hbl(90), Fld(4), Bio(3), Chl(3)		unknown	N/A	N/A	-	Bio = Chl	moderate	
2015Nov_7	1115-P7	Orocopia	Granitoid	769345	3755583	Fld(33), Qtz(29), Bio(20), Chl(15), Opq(3),	mylonite	Top NE	S-C, assym qtz,	SGR > GBM	2	Chl = Bio	strong	
2015Nov_15	1115-P15	NPIC	Granitoid	768318	3755493	Fld(60), Qtz(30), Biot(7), Chl(3), Apt	mylonite	Top NE	S-C	SGR + GBM	2	Bio > Chl	strong	has zoning in feldspars, + myrmekite
2015Nov_18	1115-P18	NPIC	Hnbl-Qtz diorite intrusion	768240	3754957	Plg(47), Hbl(30), Qtz(10), Bio(10), Ksp(3), Tit, Apt	mylonite	Top NE	sigma clasts,	SGR + GBM	2	Bio	moderate/w/weak	feldspars clearly zoned
2015Nov_20	1115-P20a	Orocopia	Schist Orocopia	767372	3753794	Bio(34), Qtz(33), Fld(28), Opq-Gph(4) Msc(0.5), Zrc	mylonite	Top NE	S-C, Mica fish, assym qtz	SGR + GBM	2	Bio	moderate	biotite rich in Ti (is red)
2015Nov_20	1115-P20b	Orocopia	Schist Orocopia	767372	3753794	Fld(31), Qtz(30), Bio(30), Chl(5), Opq-Gph(3), Msc, Zrc	mylonite	Top NE	S-C, Mica fish, assym qtz	SGR + GBM	2	Bio > Chl	moderate/w/weak	biotite more re-xtalized than 20a

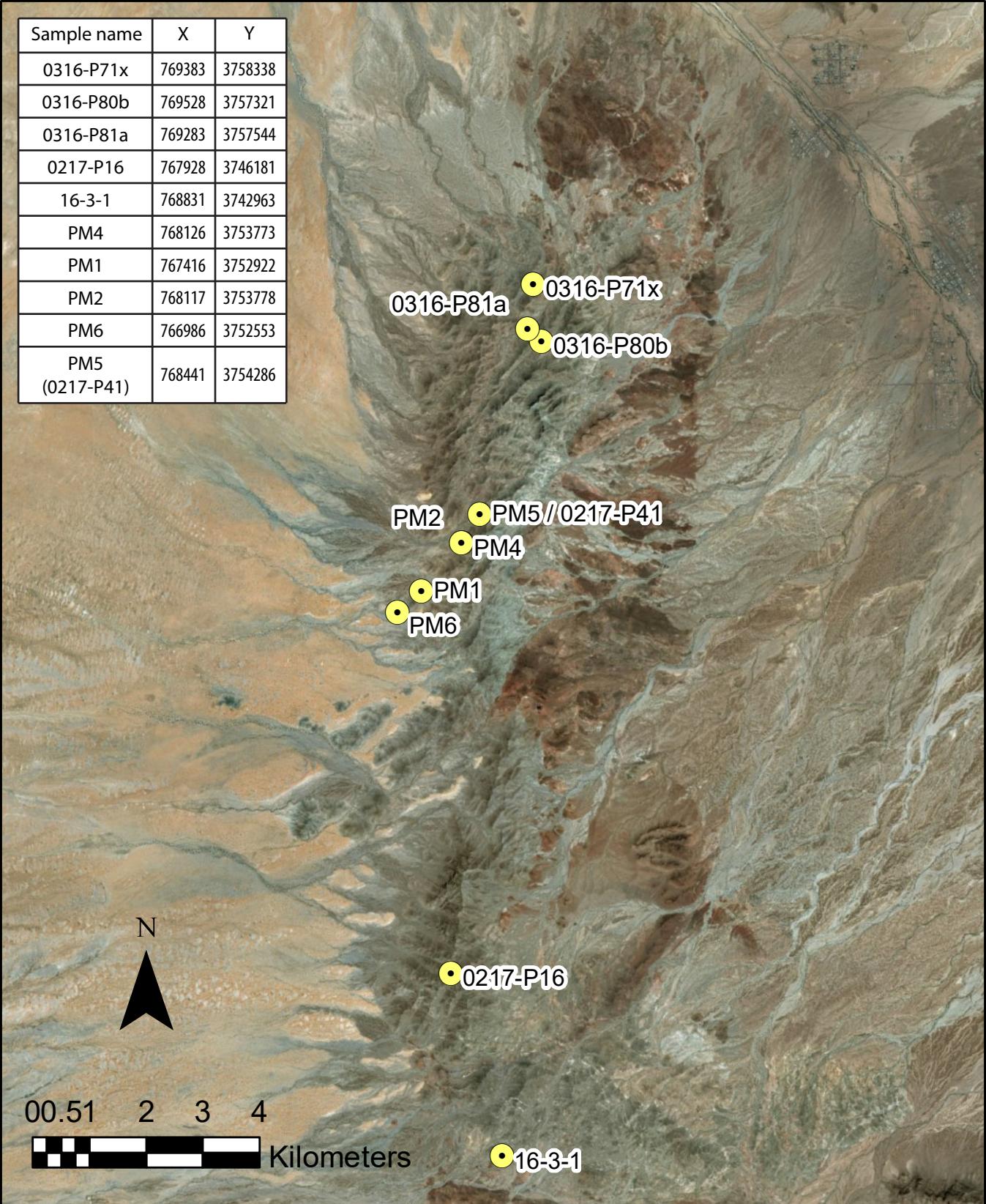
2015Nov_22	1115-P22	NPIC	Hnbl-Qtz monzodiorite	768615	3754216	Plg(45), Hbl(20), Qtz(10), Bio(10), Ksp(10), Chl(3), Opq(1) Allanite, Epi, Tit, Apt, Zrc	mylonite	Top NE	assym clasts & qtz	SGR + GBM	2	Bio > Chl	moderate/weak	
2015Nov_23	1115-P23	NPIC	Tonalite	768946	3754145	Fld(62), Qtz(20), Chl(13), Opq(3), Allanite(1), Clinozoisite, Tit, Epi	mylonite	Top NE	sigma clasts,	SGR + GBM	2	Chl	strong	completely chloritized besides perhaps very FG re-x'ed biotite
2015Nov_25	1115-P25a (1)	NPIC	Non-mylon dike	769232	3754138	Plg-phenos(10), Plg-laths/GM(50), Chl(20), Calc(12), Sauss(3), Allanite(?)3, Opq(1), Apt	non-mylon	none	N/A	N/A	-	Chl	Intense/strong	Looks like amphiboles have been pseudomorphed into calcite (core), chl (rims), and allanite.
2015Nov_25	1115-P25a (2)	NPIC	Non-mylon dike	769232	3754138	*	non-mylon	none	N/A	N/A	-	-	-	
2015Nov_25	1115-P25b	Unknown	Hnbl-tonalite	769232	3754138	Fld(46), Qtz(18), Hbl(15), Bio(10), Chl(7), Opq(2), Tit(1), Apt	mylonite	Top NE	sigma clasts, assym qtz	SGR > GBM	2	Chl = Bio	moderate	
2015Nov_26	1115-P26	Marble/Qt zite	Marble mylon	769475	3754186	Calc(97), Qtz(2), Hbl	mylonite	Top NE	sigma clasts	N/A	-	N/A	N/A	
2015Nov_47	1115-P47	Orocopia	Schisty Orocopia	769526	3757318	Qtz(43), Fld(30), Bio(15), Msc(7), Opq(4), Epi	mylonite	Top NE	S-C-C', mica fish, assym qtz	SGR + GBM	2	Bio	moderate/weak	high Ti-biotite
2015Nov_53	1115-P53	Orocopia	Biot-Tonalite	768682	3756418	Fld(42), Qtz(35), Bio(10), Chl(10), Opq(2), Rut, Epi, Msc, Apt, Zrc	mylonite	Top NE	assym qtz,	GBM > SGR	3	Chl = Bio	strong	Sagenitic biotite
2015Nov_57	1115-P57T1	Orocopia	Actinolite schist	768361	3756712	Act(98), Tlc(1), Opq	non-mylon	none	N/A	N/A	-	N/A	N/A	
2015Nov_58	1115-P58a	Orocopia	Actinolite schist	768390	3756684	Act(97), Tlc(1), Qtz(1), Chl, Plg	mylonite	unsure	N/A	GBM	4	N/A	weak	
2015Nov_58	1115-P58c	Orocopia	Talc-Actinolite schist	768390	3756684	Act(97),Opq(2) Tlc, Plg	non-mylon	unsure	N/A	N/A	-	N/A	N/A	
2015Nov_61	1115-P61a	Orocopia	Schisty Orocopia	768810	3757211	Qtz(40), Plg(24), Msc(20), Bio(3), Chl(7), Hem+Opq(5), Clinozoisite,	mylonite	Top NE	Mica fish, S-C, assym qtz	SGR+GBM	3	Chl > Bio	moderate	lots of hematite staining. Plagioclases are poikiloblastic
2015Nov_61	1115-P61b	NPIC	Quartz-diorite	768810	3757211	Plg(70), Qtz(15), Bio(8), Ksp(6), Allanite, Opq, Chl, Apt	mylonite	Top NE	S-C-C'	N/A	-	Bio > Chl	weak	
2015Nov_67	1115-P67b	Orocopia	Schisty Orocopia	769575	3757856	Qtz(39), Fld(38), Bio(12), Chl(8), Opq-Gph(2), Apt, Epi, Rut	mylonite	Top NE	assym qtz,	GBM + SGR	4	Chl = Bio	moderate	Sagenitic biotite. Graph-albite. Epidote mineralized along fractures
2016Mar_13	0316-P13	Gneiss	Hnbl-Qtz-diorite	769052	3755010	Fld(64), Qtz(10), Hbl(15), Bio(5), Bio(2), Opq(3), Tit(0.5), Calc, Allanite, Clinozoisite, Apt, Grt, Rut	mylonite	Top NE	assym qtz, sigma clast	SGR + GBM	3	Chl > Bio	strong/moderate	calcite in fracture. Some feldspars have undergone exsolution
2016Mar_24	0316-P24	NPIC	Tonalite/grano diorite	768981	3756046	Fld(65), Qtz(30), Msc(3), Chl(1), Grt(0.5), Opq, Tit, Epi	mylonite	Top NE	Mica fish	SGR + GBM	4	Chl	strong	Muscovite is chloritized and sericitized. Some garnets are chloritized, and also turned to epidote?
2016Mar_34	0316-P34	Orocopia	Schisty Orocopia	767427	3756358	Qtz(40), Fld(30), Bio(20), Msc(8), Opq-Gph(1), Epi, Apt, Rut, Zrc	mylonite	Top NE	Mica fish,	SGR + GBM	3	Bio	weak	
2016Mar_39	0316-P39a	Orocopia	Schisty Orocopia	767543	3754794	Fld(34), Qtz(31), Bio(30), Opq/Gph(1), Calc/Sauss(3),	mylonite	Top NE	Mica fish, S-C-C', assym qtz	SGR + GBM	4	Bio	weak	Poikloblastic + Graphitic albite. Calcite in fractures
2016Mar_39	0316-P39b	Orocopia	Schisty Orocopia	767543	3754794	Qtz(32), Fld(31), Bio(20), Msc(15), Opq/Gph(1), Tourmaline, Grt, Apt, Rut	mylonite	Top NE	Mica fish, S-C-C', assym qtz & folds	SGR + GBM	4	Bio > Chl	moderate/weak	Sagenitic biotite (Chl).
2016Mar_40	0316-P40a	Orocopia	Schisty Orocopia	767509	3754766	Qtz(45), Fld(38), Bio(15), Opq(1), Epi	mylonite	Top NE	assym Qtz	SGR + GBM	4	Bio	weak	
2016Mar_40	0316-P40a	NPIC	Quartz-diorite	767509	3754766	Plg(81), Qtz(10), Bio(6), Ksp(2), Clc, Rut, Apt	mylonite	unsure	N/A	N/A	-	Bio	moderate/weak	Sagenitic biotite (Chl).
2016Mar_40	0316-P40c	NPIC	Biot Qtz-Diorite	767509	3754766	Plg(76), Qtz(10), Bio(10), Ksp(2), Clc(1), Opq, Rut, Apt	mylonite	Top NE	S-C-C', mica fish	N/A	-	Bio	moderate	calcite in veins.
2016Mar_42	0316-P42	Orocopia	Schisty Orocopia	767805	3754687	Qtz(36), Fld(42), Chl(12), Bio(8), Opq-Gph(1), Apt, Rut	mylonite	unsure	N/A	SGR + GBM	4	Chl > Bio	moderate	Sagenitic biotite (Chl). Graphitic albite
2016Mar_42	0316-P42	NPIC	Tonalite/grano diorite	767805	3754687	Fld(65), Qtz(34), Chl, Opq, Epi	mylonite	unsure	N/A	SGR + GBM	-	N/A	intense	Chlorite veins
2016Mar_71	0316-P71	Orocopia	Schist	769383	3758338					GBM	5	Bio	weak	
2016Mar_80	0316-P80a	Orocopia	Schistiy Orocopia	769528	3757320	Qtz(42), Fld(37), Bio(12), Msc(5), Opq(3), Clinozoisite, Grt, Epi, Rut?, Zrc	mylonite	Top NE	Mica fish, S-C, assym qtz	SGR + GBM	4	Bio	moderate/weak	
2016Mar_80	0316-P80b	NPIC	Msc-Chl Tonalite	769528	3757320	Fld(70), Qtz(24), Chl(4), Msc(1) Rut, Apt, Zrc	mylonite	Top NE	Mica fish, assym qtz	SGR + GBM	2	Chl	intense / strong	Sagenitic Biotite (Chl). These rutile needles are shorter than normal.

2016Mar_81	0316-P81b	Orocopia	Orocopia metakrose	769282	3757545	Fld(69), Qtz(15), Bio(13), Chl(2), Opq, Apt, Zrc	mylonite	Top NE	Weak S-C	N/A	-	Bio > Chl	weak	
2016Mar_81	0316-P81a	NPIC	Granite	769282	3757545	Ksp(52), Qtz(32), Plg(13), Bio(1), Chl(1), Grt, Opq, Epi, Zrc	mylonite	N/A	N/A	SGR + GBM	4	Bio = Chl	Strong / Moderate	Myrmekite
2016Mar_81	0316-P81ab	-	Contact of dike and orocopia schist	769282	3757545	-	mylonite	N/A	N/A	SGR + GBM	-	Chl > Bio		Sagenitic Biotite (Chl) (very sparse)
2016Mar_82	0316-P82	Orocopia	Schisty Orocopia	769309	3758295	Fld(61), Bio(16), Qtz(15), Chl(4), Opq-Gph(3), Grt(0.5), Apt	mylonite	Top NE	S-C-C', sigma clasts	GBM > SGR	5	Bio > Chl	weak	Poikiloblastic, Graphitic albite. Minor Sagenitic Biotite (Chl)
2016Mar_94	0316-P94	Gneiss	Biotite Tonalite gneiss	768111	3748709	Fld(47), Qtz(42), Bio(7), Opq(2), Chl(1), Epi, sauss	mylonite	Top NE	Weak S-C	GBM > SGR	5	Bio > Chl	moderate	Dark brown biotite. Checker-board quartz recrystallizatoin
2016Mar_111	0316-P111	Gneiss	Hnbl-Biotite Tonalite gneiss	768978	3749813	Fld(40), Qtz(28), Hbl(10), Bio(14), Chl(1), Opq(4), Tit(2), Apt,	mylonite	Top NE	assym qtz	SGR + GBM	3	Bio > Chl	moderate / weak	
2016Mar_115	0316-P115	Gneiss	Biot Qtz-Diorite gneiss	765311	3748733	Fld(78), Qtz(12), Bio(6), Opq(2), Chl(1), Tit(0.5), Allanite, Epi, Apt	mylonite	Top NE	S-C-C', sigma clasts, assym qtz	SGR + GBM	4	Bio > Chl	moderate / weak	Sagenitic Chl (Very minor. Small needles)
2016Mar_116	0316-P116	Gneiss	Hnbl-Qtz diorite gneiss	765417	3748982	Fld(82), Qtz(8), Hbl(8), Opq(0.5), Tit(1), Epi, Chl, Apt	mylonite	Top NE	S-C-C', sigma clasts, assym qtz	SGR + GBM	3	N/A	weak	Epidote + Calcite in a fracture.
2016Mar_118	0316-P119	Dike	Biotite Rhyodacite dike	765543	3749113	Phenocrysts: Plg(14), Kspar(6), Bio(7), Qtz(7), Opq(2), Hbl(0.5), Epi, Rut, Groundmass: 62% Plg-laths()	non-mylon	N/A	N/A	N/A	-	Bio > Chl	Strong	Embayed qtz and plag. Myrmekite (qtz in plag).
2016Mar_142	0316-P142	Gneiss	Biot-Tonalite gneiss	767078	3749775	Fld(62), Qtz(30), Bio(5), Chl(1), Opq(1), Apt(0.5), Epi,	mylonite	Top NE	Sigma clasts	GBM > SGR	4	Bio > Chl	weak	relatively lots of Apatite.
2016Mar_156	0316-P156	Gneiss	Biot-Tonalite gneiss	768281	3751145	Fld(64), Qtz(30), Bio(3), Chl(2), Opq(0.5), Epi, Tlc?, Apt	mylonite	Top NE	S-C-C', sigma clasts, assym qtz	SGR + GBM	4	Bio = Chl	strong	Chlorite + Calcite + Epidote + Allanite in veins
2016Mar_71	0316-P71x	NPIC	Granodiorite	769383	3758338	Plg(63), Qtz(22), Ksp(9), Bio(5), Epi, Chl, Opq, Apt, Tit, Rut, Zrc	protomylonite	unsure	N/A	GBM > SGR	4	Bio	weak	
2016Oct_37	1016-P37	Gneiss	Tonalite // Hnbl-Biot Tonalite Gneiss	768267	3752672	Leuca layer: Fld(77), Qtz(20), Chl(1), Opq(1), Tit, Allanite. Mafic Layer: Fld(44), Hbl(23), Bio(12), Qtz(15), Opq(3), Tit(2)	mylonite	Top NE	S-C-C'	SGR + GBM	2	Bio = Chl	moderate	Myrmekite. Chl + calcite in fractures. Poikiloblastic plag
2016Oct_38	1016-P38	Gneiss	Hnbl-Biotite Tonalite gneiss	768257	3752642	Fld(50), Qtz(36), Opq(5), Bio(4), Hbl(3), Chl(1), Tit, Apt	mylonite	Top NE	S-C-C'	GBM > SGR	3	Bio > Chl	weak	Poikiloblastic plag.
2016Oct_58	1016-P58a	Gneiss	Biotite Hnbl Tonalite Gneiss	766948	3751065	Fld(57), Qtz(15), Hbl(15), Bio(4), Opq(3), Epi(2), Chl(2), Tit(1), Tourmaline, Fibrous Pale Amphibole, Apt, Zrc,	mylonite	Top NE	S-C-C', assym qtz,	SGR + GBM	3	Bio > Chl	moderate	Has abundant pale fibrous amphibole in epidote and chlorite, concentrated in fractures. Hornblende has also altered to this fibrous amphibole (photo)
2016Oct_66	1016-P66	Gneiss	Biotite Hnbl Qtz Diorite Gneiss	764075	3750953	Fld(62), Hbl(18), Qtz(8), Bio(8), Opq(3), Tit(0.5), Apt, Chl, Epi,	mylonite	Top NE	S-C, sigma clasts, assym clasts	SGR + GBM	2	Bio	weak	Myrmekite. Hornblende has altered to biotite.
2016Oct_67	1016-P67	Gneiss	Biotite Tonalite gneiss	765295	3750600	Fld(67), Qtz(20), Bio(6), Chl(2), Opq(4), Tit, Tourmaline, Apt, Allanite,Zrc	mylonite	Top NE	assym qtz, S-C-C', sigma clasts.	SGR + GBM	3	Bio = Chl	Strong / Moderate	High strained. Relatively abundant and euhedral zircons
2016Oct_172	1016-P172y	NPIC	Minor Hnbl, Biotite Tonalite	768750	3754679	Plg(59), Qtz(20), Bio(12), Ksp(5), Chl(2), Hbl(1), tourmaline, Tit, Opq, Apt, Zrc, sauss,	mylonite	Top NE	S-C-C', sigma clasts, assym qtz	SGR > GBM	2	Bio > Chl	moderate/weak	
2016Oct_178	1016-P178	Orocopia	Metachert	768436	3754219	Qtz(55), Grt(40), Actinolite, Opq(4), Apt, Epi	mylonite	Top NE	assym clasts	GBM > SGR	3	N/A	N/A	Calcite + Allanite(?) + Opaques in fractures. Most garnets are zoned and have inclusions in the center.
2016Oct_188	1016-P188-uo	Orocopia	Metachert	769202	3755219	Qtz(85), Opq(10), Grt(2), Allanite?(2),	mylonite	N/A		SGR + GBM	2	N/A	N/A	Calcite + sausserite + Allanite(?) (radiating fibers, brown pleochroism) + Epidote in fractures.
2016Oct_194	1016-P194	Orocopia	Shisty orocopia	768916	3756273	Fld(42), Qtz(37), Bio(12), Chl(4), Msc(3), Opq(1), Zrc	mylonite	Top NE	S-C-C', mica fish, assym qtz, simga clasts	SGR + GBM	2	Bio > Chl	moderate	Calcite + sericitized plagioclase in fractures. Minor sagenitic chlorite.
2016Oct_233	1016-P233-uo	Orocopia	Schisty Muscovite Orocopia	768241	3753399	Qtz(33), Fld(29), Bio(18), Msc(15), Chl(4), Opq, Apt, Zrc	mylonite	N/A	Mica fish, assym qtz, S-C-C'	SGR + GBM	3	Bio > Chl	weak	Numerous plagioclase porphyroclasts with masses of apatite within. There is some K-Spar

2016Oct_235	1016-P235	Orocopia	Quartz & Plag rich Orocopia	768024	3753656	Qtz(44), Fld(44), Chl(8), Opq(2), Epi(1), Bio, Apt, Rut, Zrc	mylonite	Top NE	assym qtz	SGR + GBM	2	Chl	Strong / Moderate	Sagenitic chlorite.
2016Oct_259	1016-P259	Orocopia	Schistose tremolite Orocopia	768005	3755486	Qtz(26), Bio(25), Fld(25), Trm/Act(20), Opq(2), Rut, Apt, Zrc	mylonite	Top NE	S-C-C', assym qtz,	SGR + GBM	4	Bio	weak	Sagenitic biotite. Poikiloblastic plagioclase.
2016Oct_274	1016-P274-uo	Orocopia	Metachert	768437	3754288	Qtz(69), Grt(15), Trm/Act(9), Opq(4), Bio(1), Apt(1)	mylonite	N/A	N/A	SGR + GBM	4	Bio	N/A	
2016Oct_278	1016-P278a-uo	NPIC	Brecciated & Cataclastic granodiorite	768550	3754008	Fld(-), Qtz(-), Allanite(-), Epi(-), Zrc	Cataclastic & brecciated mylonite	N/A	N/A	SGR > GBM	-	Chl	moderate / weak	
2016Oct_278	1016-P278b	Gneiss	Hornblende granodiorite gneiss	768550	3754008	Fld(47), Hbl(24), Qtz(12), Bio(11), Opq(3), Chl(2), Tit, Apt	mylonite	Top NE	assym qtz, S-C-C', sigma clasts.	SGR + GBM	2	Bio > Chl	weak	
2016Oct_300	1016-P300a	Orocopia	Quartz & Plag rich Orocopia	766962	3752530	Qtz(44), Fld(46), Chl(7), Bio(1), Opq(1), Epi, Sauss, Apt, Rut,	mylonite	Top NE	S-C-C', sigma clasts	SGR + GBM	2	Chl	moderate	Sagenitic Chlorite. Calcite in a vein.
2016Oct_323	1016-P323	Gneiss	Minor Hnbl, Biotite Granodiorite Gneiss	767041	3749990	Fld(50), Qtz(38), Bio(8), Chl(1), Opq(2), Hbl, Apt, Epi, Zrc	mylonite	unsure	N/A	GBM > SGR	4	Bio > Chl	weak	myrmekite
2016Oct_368	1016-P368-uo	NPIC	Granodiorite	768391	3753062	Fld(57), Qtz(35), Opq(5), Chl(2), Tit, Tourmaline, Apt, Epi	mylonite	N/A	N/A	SGR + GBM	3	Chl	intense	
2016Oct_499	1016-P499	NPIC	Quartz-monozodiorite	769519	3755997	Plg(53), Ksp(18), Qtz(12), Bio(7), Hbl(3), Chl(3), Opq(3), Apt, Zrc,	mylonite	Top NE	S-C-C', sigma clasts	SGR + GBM	2	Chl = Bio	weak	Sagenitic Chlorite + Biotite. Relatively lots of zircons.
2016Nov_4	1116-P4	Orocopia	Garnet Porphyroblasts meta-arkose	769352	3758324	Fld(69), Qtz(12), Bio(9), Grt(5), Opq(3), Apt(1), Epi	mylonite	Top NE	assym qtz, S-C-C', sigma clasts.	SGR > GBM	2	Bio	moderate / weak	Lots of Apatite disseminated throughout.
2016Nov_7	1116-P7	NPIC	Hornblende Quartz Diorite	768240	3754950	Plg(44), Hbl(35), Ksp(6), Qtz(4), Bio(10), Tit(0.5), Opq, Chl, Sauss, Apt,	mylonite	Top NE	S-C-C'	SGR + GBM	2	Bio	moderate	Well zoned and twinned poikiloblastic feldspars.
2016Nov_8	1116-P8b-uo	NPIC	Hornblende Biotite Quartz monozodiorite	768237	3754931	Plg(47), Ksp(24), Qtz(15), Hbl(5), Bio(5), Chl(2), Tit(1), Tourmaline, Opq, Sauss, Apt,	mylonite	N/A	N/A	SGR + GBM	2	Bio > Chl	weak	Well zoned and twinned feldspars.
2016Nov_9	1116-P9	Orocopia	Quartz & Plag rich Orocopia	768210	3754491	Qtz(44), Plg(42), Bio(12), Opq-Gph(1), Chl, Epi, Tit, tourmaline, Apt, Zrc	mylonite	Top NE	assym qtz, S-C-C', sigma clasts.	SGR + GBM	3	Bio	moderate/w eak	Zircon grain looks detrital (rounded).
2016Nov_62	1116-P62-uo	Orocopia	Metachert	768119	3753749	Qtz(91), Hbl(3), Opq(3), Grt(2), Apt(0.5),	mylonite	N/A	assym qtz	SGR + GBM	4	N/A	N/A	
2016Nov_144	1116-P144	NPIC	Biotite Tonalite / Granodiorite	769067	3757000	Fld(52), Qtz(36), Chl(7), Bio(3), Opq(1), Epi, Zrc,	mylonite	Top NE	assym qtz,	SGR + GBM	4	Chl > Bio	intense / strong	
2016Nov_157	1116-P157	Orocopia	Schistose Biotite Orocopia	768085	3757354	Fld(40), Qtz(36), Bio(20), Opq-Gph(3), Grt, Apt, Zrc,	mylonite	Top NE	S-C-C', sigma clasts	GBM > SGR	4	Bio	weak	Poikiloblastic and Graphitic plagioclase. Orangish-red biotite.
2016Nov_185	1116-P185-uo	NPIC	Biotite Quartz Mondodiorite	769859	3758129	Plg(39), Ksp(34), Qtz(16) ,Chl(8), Bio(2), Opq, Tourmaline, Zrc,	protomylonite	N/A	N/A	SGR + GBM	4	Chl > Bio	moderate / weak	Sagenitic Chlorite + Biotite
2016Nov_187	1116-P187e	NPIC	Diorite	769482	3754801		non-mylon	N/A	N/A	N/A	-	Chl	strong	Pale fibrous amphibole
2017Feb_8	0217-P8		gneiss	767218	3747377						3			myrmekite. South of map area.
2017Feb_13	0217-P13		Hnbl-bearing protomylonite	767231	3746893			Top SW			3			South of map area.
2017Feb_16	0217-P16		Med-grained diorite	767928	3746181									South of map area.
2017Feb_20	0217-P20		High-strain S-tectonite	768874	3746464			Top NE			4			South of map area.

2017Feb_22	0217-P22	Gneiss	Leucocratic gneiss	766960	3752508	Fld(70), Hnbl(18), Qtz(12), Tit, Tourm, Apt	Mylon	Top NE	all listed	SGR	2	N/A	moderate / strong	
2017Feb_25	0217-P25	Gneiss	gneiss	767272	3752569	Fld(70), Hnbl(12), Chl(4), Apt, Qtz(8), Opq(2), Bio(2), Tit(1)	Proto	unsure	-	SGR + GBM	2	Chl > Bio	moderate	
2017Feb_28	0217-P28	Orocopia	Metachert	767419	3752922	Qtz(84), Hnbl(5), Grt (5), Opq (5), Apt,	Mylon	Top NE	assym clasts	SGR + GBM	3	N/A	N/A	
2017Feb_30	0217-P30	Orocopia	Mica-poor schist	767648	3753333	Fld(76), Qtz(18), Chl(5), Opq, Msc, Apt, Tit	Mylon	Top NE	all listed	SGR + GBM	2	Chl	moderate / weak	sagenitic.
2017Feb_33	0217-P33	Orocopia	Metachert	768116	3753779	Qtz(80), Hnbl(8), Grt(6), Opq(6)	Mylon	unoriented	N/A	SGR + GBM	2	N/A	N/A	
2017Feb_41	0217-P41	Orocopia	Metabasalt	768441	3754286	Hnbl(77), Plg(15), Qtz(6), Tit(2), Biot, Chl, Grt, Epi, sauss,	not mylonitic	N/A	N/A	static?	-	N/A	moderate / weak	Plagioclase generally has well defined twinning. Quartz has undulose extinction. Has relict garnets that have turned into Plag + Biot + Epi + Hnbl(?).
2017Feb_43	0217-P43	NPIC	Leucocratic intrusion	769064	3753950	Fld(80), Qtz(16), Opq(1), Chl(2), Tourm, Sauss, Zrc	Proto	Top NE	all listed	SGR > GBM	2	Chl	Intense	plagioclases are destroyed with sausserite in fractures.
2017Feb_47	0217-P47	NPIC	L-tectonite leucocratic intrusion	766959	3752598	Fld(76), Qtz(16), Chl(4), Opq(3), Zrc, Apt,	Mylon	Top NE	S-C	SGR + GBM	3	Chl	Strong	
blank	0217-PM4	Orocopia	Meta basalt			Hnbl(62), Plg(29), Qtz(5), Tit(3), Cpx?, Opq, Epi, Apt	not mylonitic	N/A	N/A	SGR then static?	-	N/A	moderate / weak	Plagioclase generally has well defined twinning. Quartz has undulose extinction.

Sample name	X	Y
0316-P71x	769383	3758338
0316-P80b	769528	3757321
0316-P81a	769283	3757544
0217-P16	767928	3746181
16-3-1	768831	3742963
PM4	768126	3753773
PM1	767416	3752922
PM2	768117	3753778
PM6	766986	3752553
PM5 (0217-P41)	768441	3754286



Supplementary Figure 1: Locations and coordinates (NAD83 UTM zone 11 N) of geochemical and geochronological samples from the northern Plomosa Mountains