

GEOLOGY OF THE DIXIE LAKE AND TERESA ISLAND MAP AREA

NTS 104N/5,8
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 LOUISE MADDISON AND
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SCALE 1:50 000

LEGEND

LAYERED ROCKS

QUATERNARY
 Qu UNCONSOLIDATED GLACIAL, TILL AND ALLUVIAL SEDIMENT

TERTIARY
 Anderson Bay Basalt - Oligocene-Miocene
 TA DARK BROWN-BROWN COLUMNAR, JONSTED CLARE BASALT
 BLOOD GROUP
 Ts INTERMEDIATE TO FELIC VOLCANIC FLOW, PYROCLASTIC ROCK AND VOLCANOLASTIC SEDIMENT

LOWER JURASSIC
 LJS
 LJS1 **WESTERN BRITISH COLUMBIA** SHALE AND CONGLOMERATE INTERBEDDED WITH SANDSTONE

UPPER TRIASSIC
 UTS
 UTS1 SHALE FINELY TO MEDIUM LAMINATED IN THICK AND MEDIUM, UTS2 FROM CALCAREOUS SANDSTONE LAMINATIONS, UTS3 METACALCAREOUS SANDSTONE, UTS4 SANDSTONE

UPPER PALEOZOIC
 CACHE CREEK GROUP - (NO RELATIVE AGE IS IMPLIED BY THE POSITION OF CACHE CREEK UNFOLDS)
 CPcc1 **TRIPPLE CREEK** - INTERMEDIATE TO FELIC VOLCANIC FLOW, PYROCLASTIC ROCK AND VOLCANOLASTIC SEDIMENT
 CPcc2 **TRIPPLE CREEK** - INTERMEDIATE TO FELIC VOLCANIC FLOW, PYROCLASTIC ROCK AND VOLCANOLASTIC SEDIMENT
 CPcc3 **TRIPPLE CREEK** - INTERMEDIATE TO FELIC VOLCANIC FLOW, PYROCLASTIC ROCK AND VOLCANOLASTIC SEDIMENT
 UPcc1 **UPPER CREEK** - INTERMEDIATE TO FELIC VOLCANIC FLOW, PYROCLASTIC ROCK AND VOLCANOLASTIC SEDIMENT
 UPcc2 **UPPER CREEK** - INTERMEDIATE TO FELIC VOLCANIC FLOW, PYROCLASTIC ROCK AND VOLCANOLASTIC SEDIMENT

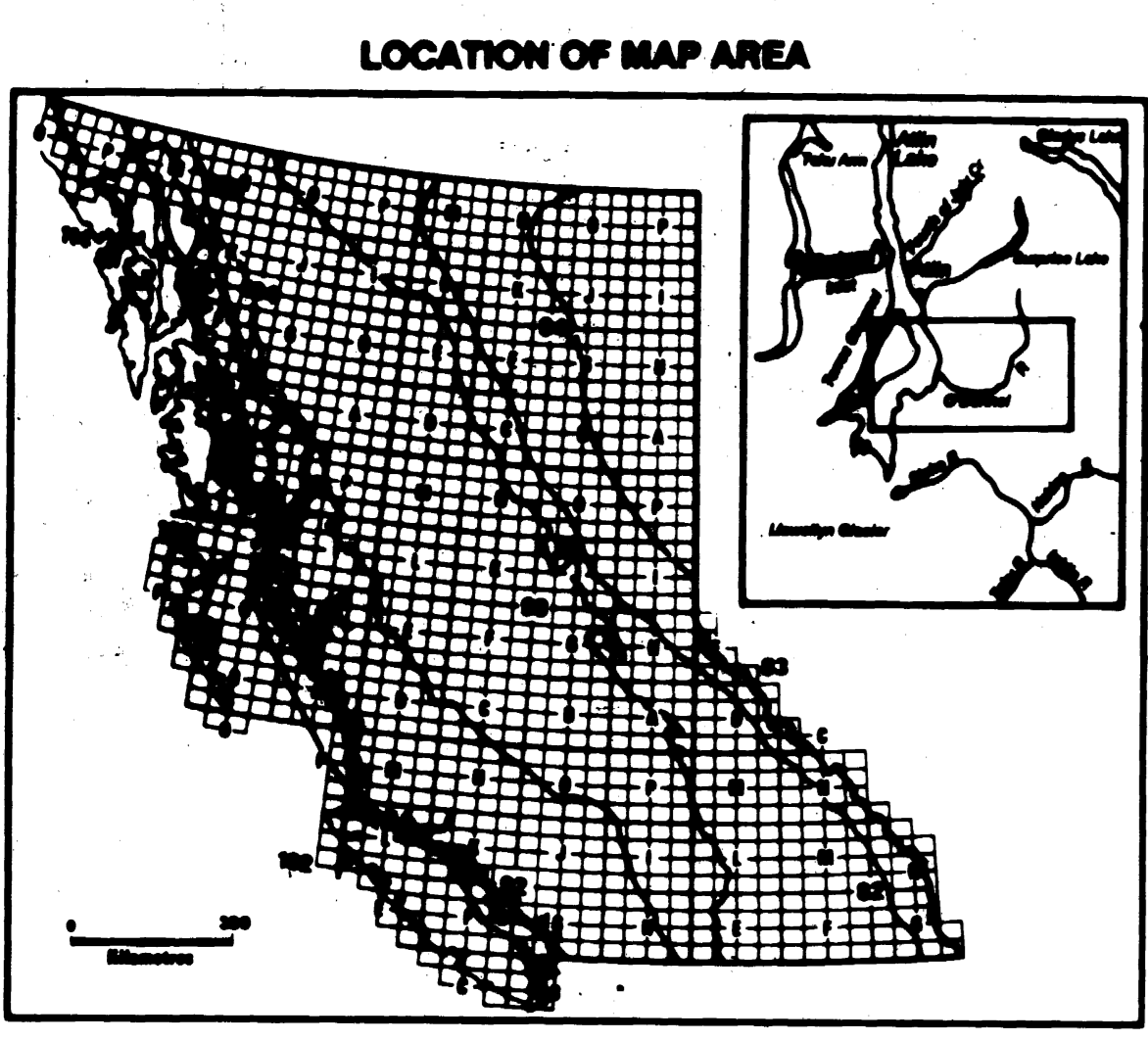
INTRUSIVE ROCKS

TERTIARY
 Ts1 BRICH MOUNTAIN PLUTON - EOCENE (?)
 Ts2 GRANITE AND GNEISS, UTS QUARTZ MONZONITE & GABBRO, DABNE
 Tr PEACE RIVER PLUTON
 Tr1 GABBRO AND DIORITE
 Tr2 PILLMAN CREEK PLUTON
 Tr3 GABBRO

MIDDLE CRETACEOUS (?)
 Mt McMASTER PLUTON
 Mt1 GRANODIORITE AND GRANITE

SYMBOLS

Limit of Quaternary deposits
 Limit of outcrop
 Isolated outcrop
 Geologic boundary (defined, approximate, assumed)
 Unconformity (approximate, assumed)
 Intrusive contact (defined, approximate, assumed)
 Fault (defined, approximate, assumed)
 Thrust fault (defined, approximate, assumed)
 Bedding - tops known (horizontal, inclined, vertical, overturned)
 Bedding - tops unknown (inclined, vertical)
 Schistosity, foliation (inclined, vertical)
 Igneous flow layering - tops unknown (inclined, vertical)
 Igneous flow layering - tops known (inclined)
 Pillows - tops unknown (inclined)
 Fracture, joint (horizontal, inclined, vertical)
 Vein (inclined, vertical)
 Antiform
 Synform
 Axis of minor fold (horizontal, inclined)
 Sill/side intrusion (horizontal, inclined)
 Intersection (vertical)
 Minor fault (inclined, vertical)
 Dike
 MINPILE occurrence and number
 Fossil locality



MICROFOSSIL RESULTS - CONODONTS

P₁ None
 P₂ Late Middle - Late Triassic
 P₃ Probably Permian
 P₄ Permian (?)
 P₅ Pennsylvanian
 P₆ Late Pennsylvanian - Early Permian
 P₇ Pennsylvanian - Permian
 P₈ Late Mississippian or Early Permian
 P₉ Late Mississippian - Pennsylvanian
 P₁₀ Late Mississippian
 P₁₁ Early (?) Carboniferous
 P₁₂ Probably Carboniferous

FOSSIL AGES FROM MONGER (1975, 1977)
 (Locality approximate)

P₁ Late Permian
 P₂ Late Permian
 P₃ Late Early Permian
 P₄ Late Early Permian
 P₅ Late Early Permian
 P₆ Early Early Permian
 P₇ Early Early Permian
 P₈ Late Pennsylvanian
 P₉ Late Pennsylvanian
 P₁₀ Middle Pennsylvanian

MINPILE MINERAL OCCURRENCES

Minpile Number	Name	Commodity
086	Moffat Creek	Fluor Au
087	Pepper Creek	Fluor Au
088	Bull Creek	Fluor Au
089	Wilson Creek	Fluor Au
090	O'Donnell River	Fluor Au
091	Burdette Creek	Fluor Au
092	O'Donnell	Mt, Ls
100	Pike	Mt
104	McKee Creek	Mt
117	Harvey	Pb, Cu

Reference: Minpile Map 104N, Athl (1:250,000), British Columbia Ministry of Energy Mines and Petroleum Resources, December 1982. Mt = molybdenum, Ls = limestone.

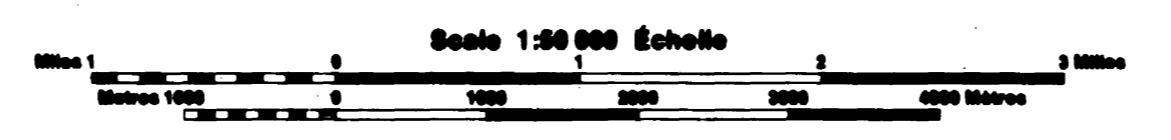
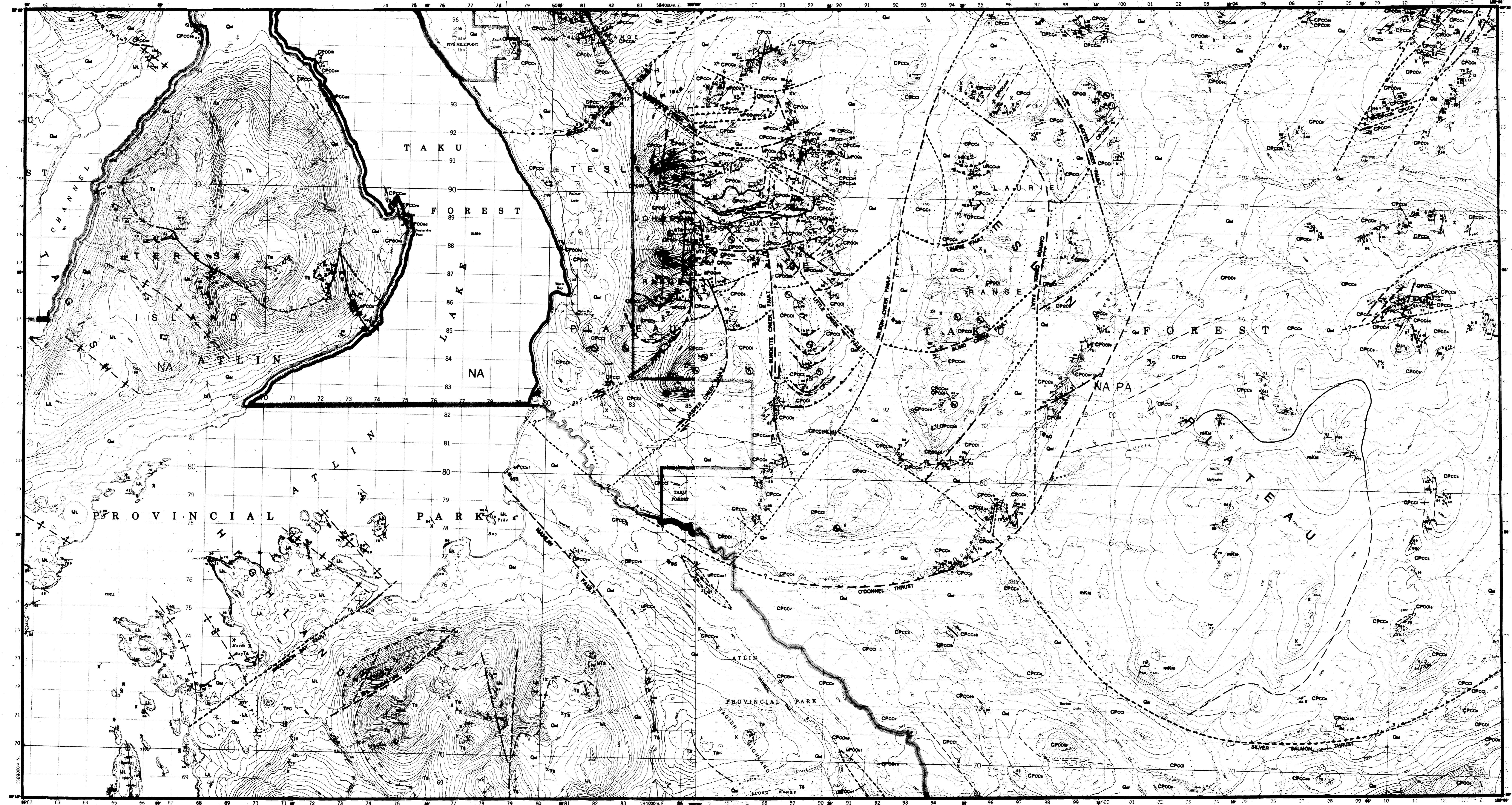
ADDITIONAL SOURCES OF GEOLOGIC INFORMATION

Allen, J.D. (1988). Athl Map Area, British Columbia, 104N. Geological Survey of Canada, Memoir 207, 89 pages, accompanied by Map 102A.

Bullman, T.R. (1970). Geology and Tectonic History of the Whitehorse Trough West of Athl, British Columbia. Unpublished Ph.D. thesis, Yale University, 284 pages.

Monger, J.W.H. (1977). Upper Paleozoic Rocks of Northwestern British Columbia. Geological Survey of Canada, Report of Activities, Paper 77-1A, pages 255-262.

Monger, J.W.H. (1978). Upper Paleozoic Rocks of the Athl Terrane. Geological Survey of Canada, Paper 74-47, 83 pages.

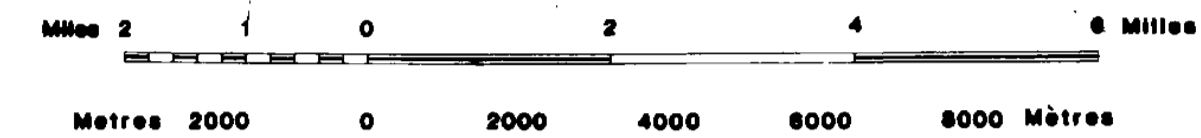


**DIXIE LAKE AND TERESA ISLAND
 MAP AREA**

**SAMPLE LOCATION MAP
 AND ANALYTICAL DATA**

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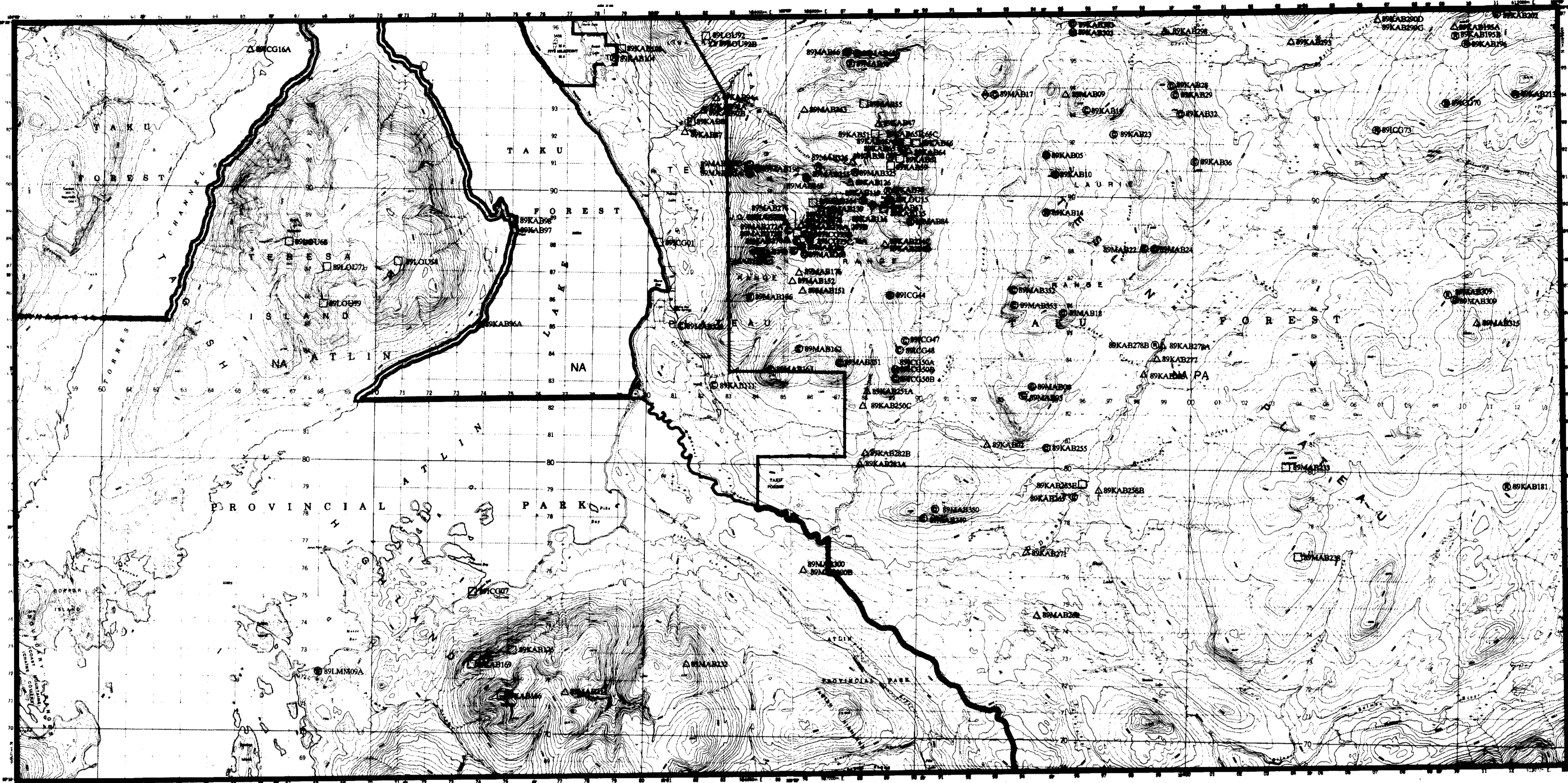
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UTM (ZONE 8)

LEGEND

- FOSSIL**
- ⊙ MICROFOSSIL - CONODONT
 - ⊙ MICROFOSSIL - RADIOLARIA, AGE NOT YET DETERMINED
 - ⊙ MACROFOSSIL, AGE NOT YET DETERMINED
- LITHOGEOCHEMISTRY**
- △ ASSAY
 - WHOLE ROCK
- GEOCHRONOLOGY**
- ◆ U-PB, ZIRCON
 - ◆ K-AR, MUSCOVITE
- 89MAB121 YEAR OF COLLECTION, COLLECTOR'S PREFIX, STATION NUMBER



FOSSIL DETERMINATIONS - CONODONTS

STATION NUMBER	GSC NUMBER	UTM EASTING	UTM NORTHING	MAP CODE	AGE
89CG44	168218	588920	6586150	CP00a	barren
89CG47	168217	588480	6584520	CP00a	not yet determined
89CG49	168219	588310	6584400	CP00a	fish
89CG250B	168220	589200	6583510	CP00a	Late Pennsylvanian - Early Permian
89CG75B	167788	585650	6588650	CP00a	barren
89KAB05	143239	594660	6591510	CP00a	barren
89KAB10	143238	594850	6590825	CP00a	barren
89KAB19	143240	595950	6593280	CP00a	barren
89KAB23	143230	597100	6592400	CP00a	ramiforms - indeterminate
89KAB28	143236	596100	6594070	CP00a	barren
89KAB29	143244	595200	6593250	CP00a	barren
89KAB32	143237	596100	6592975	CP00a	Late Mississippian or Early Permian
89KAB36	143243	596995	6591810	CP00a	Late Mississippian through Pennsylvanian
89KAB35	143245	588450	6591780	CP00v	Early Carboniferous
89KAB111	168206	582480	6582925	CP00a	barren
89KAB202	167772	610700	6597100	CP00a	not yet determined
89KAB255	168213	594800	6590900	CP00a	barren
89KAB265	167770	595750	6579000	CP00a	not yet determined
89KAB269	167789	595500	6594450	CP00a	not yet determined
89MAB01	168207	589400	6572260	UL	barren
89MAB03	143232	593775	6582875	CP00a	not yet determined
89MAB04	143231	594220	6582995	CP00a	Permian??
89MAB17	143241	592580	6593740	CP00a	barren
89MAB18	143234	592575	6585750	CP00a	Probably Permian
89MAB22	143242	592225	6588095	CP00a	barren
89MAB24	143233	596150	6588140	CP00a	fragments - indeterminate
89MAB50	143235	587290	6594860	CP00a	Late Mississippian
89MAB56	143248	587130	6595100	CP00a	Late Mississippian
89MAB68	143247	587840	6595220	CP00a	barren
89MAB84	143248	588675	6596040	CP00a	Late Mississippian
89MAB144	168203	585500	6588010	UTa	Norian
89MAB182	168204	585550	6584225	CP00a	Pennsylvanian - Permian
89MAB183	168205	584550	6583540	CP00a	barren
89MAB186	168202	583800	6586090	CP00v	ramiforms - indeterminate
89MAB192B	168214	583740	6590975	CP00a	not yet determined
89MAB268	167773	585500	6588450	CP00v	not yet determined
89MAB272	167767	585250	6588750	UTa	ramiforms - indeterminate
89MAB272A	168215	585250	6588750	UTa	fish
89MAB272B	168216	585250	6588750	UTa	Late Middle - Late Triassic
89MAB309	167771	609500	6586700	CP00a	not yet determined
89MAB328	167774	581500	6585200	CP00a	not yet determined
89MAB349	167776	590350	6579800	CP00a	Probably Carboniferous
89MAB350	167777	590700	6579450	CP00a	barren
89MAB351	167778	587050	6583900	CP00a	barren
89MAB352	167778	593475	6586550	CP00a	not yet determined
89MAB353	167792	594700	6586050	CP00a	fish

WHOLE ROCK ANALYSES FROM TERESA ISLAND AND DIXIE LAKE MAPSHEETS

STATION NUMBER	UTM EASTING	UTM NORTHING	MAP CODE	SiO2 %	TiO2 %	Al2O3 %	Fe2O3 %	MnO %	MgO %	CaO %	Na2O %	K2O %	P2O5 %	LOI %	TOTAL %
89CG01	580400	6588050	CP00a	47.31	0.74	15.19	10.07	0.17	8.73	11.75	2.28	0.33	0.08	2.80	99.41
89KAB01	578200	657325	Ta	46.22	1.47	14.08	13.24	0.19	8.46	9.41	2.95	0.81	0.18	0.36	99.17
89KAB51	588200	6592050	CP00a	49.80	1.58	14.31	12.79	0.24	6.69	7.11	4.17	0.20	0.13	2.70	99.69
89KAB59	588775	6591050	CP00a	52.92	1.12	15.33	9.53	0.22	4.86	8.06	5.13	0.64	0.12	1.67	99.60
89KAB66	588575	6591875	CP00a	49.07	2.53	16.18	11.84	0.20	4.32	4.23	5.34	1.69	0.77	3.06	99.03
89KAB67	588700	6588800	CP00a	47.68	0.88	13.63	11.93	0.21	8.33	11.43	2.53	0.35	0.07	2.50	99.54
89KAB69	581425	6592500	CP00a	49.97	0.94	13.96	9.94	0.17	9.12	8.41	3.43	0.53	0.08	2.97	99.42
89KAB87	575075	6588495	CP00a	39.81	1.86	14.59	14.16	0.20	10.52	2.97	2.07	0.25	0.20	2.50	99.13
89KAB98	575010	6589725	UP00a	35.00	0.01	0.21	8.58	0.15	38.54	0.84	0.03	0.02	0.01	14.58	99.75
89KAB103	578790	6585500	CP00a	45.23	0.54	12.22	10.26	0.21	11.25	14.05	1.47	0.11	0.05	3.19	99.58
89KAB115	588475	6589600	CP00a	47.74	0.99	13.44	12.27	0.22	7.94	10.01	3.37	0.15	0.08	3.13	99.34
89KAB186	574750	6571400	Ta	66.04	0.54	15.85	4.44	0.12	0.54	1.89	5.20	4.05	0.13	1.07	99.87
89KAB196	573850	6572540	Ta	57.30	1.03	17.14	8.04	0.19	2.17	5.52	4.36	1.80	0.53	1.45	99.52
89KAB176	575150	6573100	Ta	60.00	0.63	16.81	5.92	0.08	2.78	4.61	4.17	1.81	0.20	2.64	99.65
89KAB263E	595980	6579175	CP00a	37.96	2.05	10.66	11.09	0.19	9.97	15.01	1.55	2.97	0.38	7.53	99.00
89LOU54	570950	6587325	Ta	89.99	0.34	15.11	2.95	0.05	0.37	1.23	4.72	4.81	0.09	0.66	100.00
89LOU68	596950	6589050	Ta	89.45	0.28	14.88	2.76	0.06	0.15	0.74	5.38	4.84	0.05	0.49	99.06
89LOU71	598150	6587200	Ta	59.06	0.84	16.12	7.21	0.09	3.37	4.54	4.72	2.30	0.22	0.42	99.29
89LOU79	590900	6585650	UL	68.83	0.36	15.17	3.68	0.02	0.16	0.28	4.16	4.87	0.08	0.21	99.71
89LOU82	581900	6590700	CP00a	42.76	1.76	12.35	13.68	0.26	7.79	6.61	2.28	0.68	0.15	8.85	99.17
89MAB55	588700	6593350	UP00a	47.84	2.80	14.71	12.65	0.22	5.62	6.46	3.94	1.52	0.53	3.11	99.39
89MAB153	584475	6587825	CP00a	50.62	1.28	15.30	11.17	0.20	6.72	9.26	3.60	0.16	0.12	1.28	99.71
89MAB164	586100	6589500	CP00a	47.66	1.04	14.34	11.85	0.19	7.80	11.15	2.62	0.32	0.09	2.31	99.17
89MAB233	603580	6590250	mKa	88.33	0.50	15.96	2.81	0.04	0.80	3.38	4.05	2.31	0.15	0.90	99.23
89MAB238	604100	6578825	mKa	88.50	0.54	15.87	3.44	0.07	1.11	3.62	3.64	2.63	0.17	0.11	99.70
89MAB276	585400	6588550	UP00a	39.22	1.29	13.11	10.72	0.21	6.40	16.27	0.28	1.67	0.12	7.92	99.21

ANALYTICAL TECHNIQUES
 Whole rock analysis by ICMEMPR Analytical Sciences Section, determined by wavelength dispersive sequential X-Ray fluorescence spectrometry. Calibration done by using international geological standard reference materials.

ASSAY RESULTS FROM TERESA ISLAND AND DIXIE LAKE MAPSHEETS

STATION NUMBER	UTM EASTING	UTM NORTHING	MAP CODE	AU ppm	AG ppm	CU ppm	PB ppm	ZN ppm	NI ppm	MO ppm	HG ppm	AS ppm	SB ppm
89CG16A	565465	6596150	CP00a	3	<0.5	54	2	238	37	<8	319	2	<0.5
89KAB02	592500	6580750	CP00a	35	<0.5	32	<4	34	5	<10		<1	0.6
89KAB47	588430	6592650	CP00a	29	0.5	56	12	12	3	<10		<1	9
89KAB84	589230	6591750	CP00a	<2	<0.5	233	<4	134	4	<10		<2	0.6
89KAB87	581400	6592420	CP00a	<2	0.5	52	<4	143	148	<10		<1	9
89KAB92A	582010	6593100	CP00a	<2	0.5	28	<4	88	545	<10		<1	3
89KAB92B	582010	6593100	CP00a	35	<0.5	37	<4	51	91	<10		<1	2
89KAB94	582300	6593500	CP00a	287	<0.5	79	8	72	31	<10		<4	2
89KAB96A	573840	6585050	UP00a	809	1	22	4	45	15%	<10		<30	22
89KAB126	587300	6590500	CP00a	<2	<0.5	17	3	13	8	<8	48	3	0.9
89KAB165A	609800	6586225	CP00a	3	<0.4	45	8	69	20	<8	28	7	1
89KAB224C	588750	6588200	CP00a	<2	<0.4	54	8	63	31	8	<20	<1	<0.5
89KAB224D	588750	6588200	UP00a	7	<0.5	5	6	6	108	<8		<1	<0.5
89KAB290C	587975	6582300	CP00a	26	0.8	52	18	69	13	42		<16	3
89KAB291A	587975	6582575	CP00a	<2	<0.4	37	10	48	18	13	83	3	<0.5
89KAB290B	582010	6593100	CP00a	17	0.7	87	34	54	25	<8		<3	2
89KAB290C	609800	6593750	CP00a	<2	<0.5	54	8	54	10	13		<1	0.8
89KAB271	594010	6578875	CP00a	<2	<0.5	54	8	54	10	13		<1	0.8
89KAB275	598200	6583500	CP00a	4	0.5	71	6	58	17	<8		<3	0.7
89KAB277	582100	6584020	CP00a	2	<0.5	62	10	46	11	6		<1	0.8
89KAB278A	598825	6584500	CP00a	15	0.5	61	16	42	12	<8		<4	<0.5
89KAB282B	588150	6580460	CP00a	<2	<0.5	61	14	34	17	<8		<4	0.5
89KAB283	587850	6580250	CP00a	<2	<0.5	25	10	52	15	<8		<4	0.5
89KAB290D	609800	6596750	CP00a	2	0.5	70	10	46	13	<8		<4	0.9
89KAB290E	609800	6597350	CP00a	2	<0.5	79	18	62	18	<8		<6	1
89KAB293	632775	6595680	CP00a	<2	0.7	43	30	37	5	24		<11	4
89KAB296	598750	6595250	CP00a	5	0.5	43	14	34	10	<8		<6	0.9
89LOU92B	581900	6595700	CP00a	<2	<0.4	176	<4	213	57	<8		<24	2
89MAB09	595100	6593750	CP00a	2	<0.5	4	4	17	5	<10		<1	1
89MAB139	582550	6											