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INTERIM REPORT ON
GEOLOGICAL MAPPING AND ROCK GEOCHEMISTRY
IN
THE GREAT PYRAMID MINE AREA
N.E. TASMANIA - E.L. 6/68

BY

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GEOLOGIST

AUGUST 1971

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ENCLOSURE : DRAWING 1/144 (IN POCKET)

INTERIM REPORT ON GEOLOGICAL MAPPING AND
ROCK GEOCHEMISTRY IN THE GREAT PYRAMID MINE AREA

N.E. TASMANIA - E.L. 6/68

INTRODUCTION

Follow-up work recommended in Report 1970/98 was carried out in this area, which lies to the south of the Great Pyramid Tin Mine, during the early part of 1971.

The prospect was originally geologically appraised with limited rock geochemistry in October 1970 and the results of this preliminary programme recorded in the above report.

The results were significant enough to warrant further expenditure with a number of values of interest associated with quartzitic formations to the south of the Price/Williams leases held under option by Paringa Mining Company.

PROGRAMME.

The work programme involved the dozing of nine costeans which exposed bedrock over a total footage of 1340 feet across the indicated extensions of the Great Pyramid Mine tin lode.

These costeans were geologically mapped and rock-chip sampled.

GEOLOGY.

Geological features outlined in Report 1970/98 were exposed in the costeans and enabled a closer investigation of the individual rock types and structural controls of the mineralisation and the mineralisation itself.

The dominant rock types identified were sandstones, locally altered to quartzites, siltstones, slates and mudstones of the Mathinna Beds of Silurian age.

The sandstones are found both as massive units and thin-bedded within sequences of alternating siltstones and slates and can be considered as orthoquartzites, well sorted with rounded quartz grains forming some 90% plus of the composition. They are generally soft and stained either brown or purple by iron and/or manganese compounds which coat the grains. No internal structures were obvious.

Locally they are altered to a hard grey, often glassy, quartzite, particularly in costeans to the west of the 12W grid line and north of the 6S grid line, where they show few sedimentary characteristics being massive but well fractured units.

The slates, varying in colour from grey to brown to purple, form the second dominant rock type, often highly fragmented and fissile in nature.

Gradaticns between the sandstones and slates, including siltstones, are common.

The beds vary considerably, over short distances, in strike with a general more easterly trend as one travels

in an arc from the west to the south-east across the area. To the west the strike is between 298° and 340° , trending more northerly and north-easterly over the central section and becoming almost due east-west in the south-east. No evidence of the dominating cause for this apparent radial structure is visible in the region covered by this work.

The strata are seen to be crenulated in several of the costeans and the dip varies considerably both in angle and direction suggesting tight isoclinal folding with vertical or near vertical limbs.

Faults are limited in their lateral extent and their effects on the attitude and nature of the rocks. Their position is generally marked by ferruginous gossans, often with a soft pale brown gouge filling, and silicification of adjacent rocks.

Jointing is well pronounced particularly within the quartzites and sandstones. Dominant joint sets are either parallel, or close, to the strike of the beds and vertical and/or perpendicular to the bedding usually inclined at a steep angle. These joints are often occupied by quartz or black pyritic veins ranging in width up to $\frac{1}{2}$ inch. Many veins

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particularly within the quartzites are randomly oriented with no apparent control for them. Dense networks of veins are found in certain formations.

Mineralisation is restricted to black or brown pyritic and limonitic compounds associated with quartz or merely lining the fracture planes within the rock.

Certain of these veins and joint planes are micaceous.

Cassiterite was apparent only in a few specimens associated with brown limonite in quartzites in costeans 3 and 4 and brecciated fault material in costean 9.

ROCK GEOCHEMISTRY.

Rock-chip samples (183) were recovered from the nine costeans.

No attempt was made to sample on a set spacing as during the dozing of the costeans, the irregular surface of

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the unweathered bedrocks prevented total exposure. Small tracts in each costean remained covered by soil and talus.

The samples were taken randomly with no preferred selection and all were analysed for tin.

RESULTS AND CONCLUSIONS.

Only 13 samples yielded tin values and these were generally low (to 0.41%). Most of these were recovered from quartzites substantiating the field observations that the mineralisation is confined mainly to the quartzitic formations.

The highest value was found within a fault gouge.

RECOMMENDATIONS.

As indicated earlier, the work carried out in this

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programme failed to establish the existence of tin mineralisation of economic value.

Although veining and fracturing within certain of the quartzite and sandstone units is dense, the mineralisation, which is seen to be associated with such occurrences in the Great Pyramid Mine to the north, was not in evidence during the geological mapping. Geochemical results substantiate this observation.

The results to date do not warrant further expenditure in this area for its evaluation as a tin prospects. There is however, another point of interest in the area. Diamond Drilling by B.H.P. revealed massive sulphides at depth. Reports circulate that Paringa have also encountered sulphide mineralisation in diamond drilling. No evidence of this mineralisation was observed during recent work but limited geochemical and/or geophysical work may be warranted in this area.

RESPECTFULLY SUBMITTED

I. MORTIMORE
Geologist.

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APPENDIX A

Geochemical Data

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GEOCHEMICAL LABORATORY REPORT 837011

FIELD SHEET No.: 001437 PROJECT No.: EL. 6/68 - TEXINS GREAT PYRAMID AREA

LAB. SHEET No.: 553/1 SAMPLE TYPE: ROCK DATE: 10th March, 1971.

SAMPLE No.	LAB. No.	Sn						
PC 1	71-B-2037	BLD						
PC 2	71-B-2038	BLD						
PC 3	71-B-2039	BLD						
PC 4	71-B-2040	BLD						
PC 5	71-B-2041	BLD						
PC 6	71-B-2042	BLD						
PC 7	71-B-2043	BLD						
PC 8	71-B-2044	BLD						
PC 9	71-B-2045	BLD						
PC 10	71-B-2046	BLD						
PC 11	71-B-2047	BLD						
PC 12	71-B-2048	0.05						
PC 13	71-B-2049	BLD						
PC 14	71-B-2050	BLD						
PC 15	71-B-2051	BLD						
PC 16	71-B-2052	BLD						
PC 17	71-B-2053	BLD						
PC 18	71-B-2054	BLD						
PC 19	71-B-2055	BLD						
PC 20	71-B-2056	0.10						
PC 21	71-B-2057	BLD						
PC 22	71-B-2058	BLD						
PC 23	71-B-2059	BLD						
PC 24	71-B-2060	BLD						
PC 25	71-B-2061	BLD						
PC 26	71-B-2062	BLD						
PC 27	71-B-2063	BLD						
PC 28	71-B-2064	0.05						
PC 29	71-B-2065	BLD						
PC 30	71-B-2066	BLD						
PC 31	71-B-2067	BLD						
PC 32	71-B-2068	BLD						
PC 33	71-B-2069	BLD						
PC 34	71-B-2070	BLD						
PC 35	71-B-2071	0.25						
PC 36	71-B-2072	BLD						
PC 37	71-B-2073	BLD						
PC 38	71-B-2074	BLD						
PC 39	71-B-2075	BLD						
PC 40	71-B-2076	BLD						
PC 41	71-B-2077	BLD						
PC 42	71-B-2078	BLD						
PC 43	71-B-2079	BLD						
PC 44	71-B-2080	BID						
PC 45	71-B-2081	BLD						
PC 46	71-B-2082	BLD						

METHODS:



This laboratory is registered by the National Association of Testing Authorities, Australia. The tests reported herein have been performed in accordance with its terms of registration.

Sn by G.R.C. No. 5

B.L.D. = Below Limit of Detection

Chief Chemist

Ray W. [Signature]

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GEOCHEMICAL LABORATORY REPORT 837012

FIELD SHEET No. 001437 PROJECT No. EL.6/68 - TEXINS GREAT PYRAMID AREA

LAB. SHEET No. 553/2 SAMPLE TYPE: ROCK DATE: 10th March, 1971.

SAMPLE No.	LAB. No.	Sn						
PC 47	71-B-2083	BLD						
PC 48	71-B-2084	0.05						
PC 49	71-B-2085	0.05						
PC 50	71-B-2086	BLD						
PC 51	71-B-2087	BLD						
PC 52	71-B-2088	BLD						
PC 53	71-B-2089	BLD						
PC 54	71-B-2090	BLD						
PC 55	71-B-2091	BLD						
PC 56	71-B-2092	BLD						
PC 57	71-B-2093	BLD						
PC 58	71-B-2094	BLD						
PC 59	71-B-2095	BLD						
PC 60	71-B-2096	BLD						
PC 61	71-B-2097	BLD						
PC 62	71-B-2098	0.05						
PC 63	71-B-2099	BLD						
PC 64	71-B-2100	BLD						
PC 65	71-B-2101	BLD						
PC 66	71-B-2102	BLD						
PC 67	71-B-2103	BLD						
PC 68	71-B-2104	BLD						
PC 69	71-B-2105	BLD						
PC 70	71-B-2106	BLD						
PC 71	71-B-2107	BLD						
PC 72	71-B-2108	BLD						
PC 73	71-B-2109	0.36						
PC 74	71-B-2110	BLD						
PC 75	71-B-2111	BLD						
PC 76	71-B-2112	BLD						
PC 77	71-B-2113	0.14						
PC 78	71-B-2114	BLD						
PC 79	71-B-2115	BLD						
PC 80	71-B-2116	BLD						
PC 81	71-B-2117	BLD						
PC 82	71-B-2118	BLD						
PC 83	71-B-2119	0.16						
PC 84	71-B-2120	BLD						
PC 85	71-B-2121	BLD						
PC 86	71-B-2122	BLD						
PC 87	71-B-2123	BLD						
PC 88	71-B-2124	BLD						
PC 89	71-B-2125	BLD						
PC 90	71-B-2126	BLD						
PC 91	71-B-2127	BLD						

METHODS:



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Chief Chemist

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GEOCHEMICAL LABORATORY REPORT 837013

FIELD SHEET No.: 001438/9 PROJECT No.: EL. 6/68 - TEXINS GREAT PYRAMID AREA

LAB. SHEET No.: 553/3 SAMPLE TYPE: ROCK DATE: 10th March, 1971.

SAMPLE No.	LAB. No.	Sn %						
PC 92	71-B-2128	BLD						
PC 93	71-B-2129	BLD						
PC 94	71-B-2130	BLD						
PC 95	71-B-2131	BLD						
PC 96	71-B-2132	BLD						
PC 97	71-B-2133	BLD						
PC 98	71-B-2134	BLD						
PC 99	71-B-2135	BLD						
PC 100	71-B-2136	BLD						
PC 101	71-B-2137	BLD						
PC 102	71-B-2138	BLD						
PC 103	71-B-2139	BLD						
PC 104	71-B-2140	BLD						
PC 105	71-B-2141	BLD						
PC 106	71-B-2142	BLD						
PC 107	71-B-2143	BLD						
PC 108	71-B-2144	BLD						
PC 109	71-B-2145	BLD						
PC 110	71-B-2146	0.05						
PC 111	71-B-2147	BLD						
PC 112	71-B-2148	BLD						
PC 113	71-B-2149	BLD						
PC 114	71-B-2150	BLD						
PC 115	71-B-2151	BLD						
PC 116	71-B-2152	BLD						
PC 117	71-B-2153	BLD						
PC 118	71-B-2154	0.41						
PC 119	71-B-2155	BLD						
PC 120	71-B-2156	BLD						
PC 121	71-B-2157	BLD						
PC 122	71-B-2158	BLD						
PC 123	71-B-2159	BLD						
PC 124	71-B-2160	BLD						
PC 125	71-B-2161	BLD						
PC 126	71-B-2162	BLD						
PC 127	71-B-2163	BLD						
PC 128	71-B-2164	BLD						
PC 129	71-B-2165	BLD						
PC 130	71-B-2166	BLD						
PC 131	71-B-2167	BLD						
PC 132	71-B-2168	BLD						
PC 133	71-B-2169	BLD						
PC 134	71-B-2170	BLD						
PC 135	71-B-2171	BLD						
PC 136	71-B-2172	BLD						

METHODS:



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Chief Chemist

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GEOCHEMICAL LABORATORY REPORT 837014

FIELD SHEET No.: 001439/40 PROJECT No.: EL.6/68 - TEXINS GREAT PYRAMID AREA

LAB. SHEET No.: 553/4 SAMPLE TYPE: ROCK DATE: 10th March, 1971.

SAMPLE No.	LAB. No.	Sn %				
PC 137	71-B-2173	BLD				
PC 138	71-B-2174	BLD				
PC 139	71-B-2175	BLD				
PC 140	71-B-2176	BLD				
PC 141	71-B-2177	BLD				
PC 142	71-B-2178	BLD				
PC 143	71-B-2179	BLD				
PC 144	71-B-2180	BLD				
PC 145	71-B-2181	BLD				
PC 146	71-B-2182	BLD				
PC 147	71-B-2183	BLD				
PC 148	71-B-2184	BLD				
PC 149	71-B-2185	BLD				
PC 150	71-B-2186	BLD				
PC 151	71-B-2187	BLD				
PC 152	71-B-2188	BLD				
PC 153	71-B-2189	BLD				
PC 154	71-B-2190	BLD				
PC 155	71-B-2191	BLD				
PC 156	71-B-2192	BLD				
PC 157	71-B-2193	BLD				
PC 158	71-B-2194	BLD				
PC 159	71-B-2195	BLD				
PC 160	71-B-2196	BLD				
PC 161	71-B-2197	BLD				
PC 162	71-B-2198	BLD				
PC 163	71-B-2199	BLD				
PC 164	71-B-2200	BLD				
PC 165	71-B-2201	0.05				
PC 166	71-B-2202	BLD				
PC 167	71-B-2203	BLD				
PC 168	71-B-2204	BLD				
PC 169	71-B-2205	BLD				
PC 170	71-B-2206	BLD				
PC 171	71-B-2207	BLD				
PC 172	71-B-2208	BLD				
PC 173	71-B-2209	BLD				
PC 174	71-B-2210	BLD				
PC 175	71-B-2211	BLD				
PC 176	71-B-2212	BLD				
PC 177	71-B-2213	BLD				
PC 178	71-B-2214	BLD				
PC 179	71-B-2215	BLD				
PC 180	71-B-2216	BLD				
PC 181	71-B-2217	BLD				

METHODS:



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Chief Chemist

Ray W. Gerbys

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GEOCHEMICAL LABORATORY REPORT 837015

FIELD SHEET No.: 001440 PROJECT No.: EL.6/68 - TEXINS GREAT PYRAMID AREA

LAB. SHEET No.: 553/5 SAMPLE TYPE: ROCK DATE: 10th March, 1971.

SAMPLE No.	LAB. No.	Sn %							
PC 182	71-B-2218	BLD							
PC 183	71-B-2219	BLD							

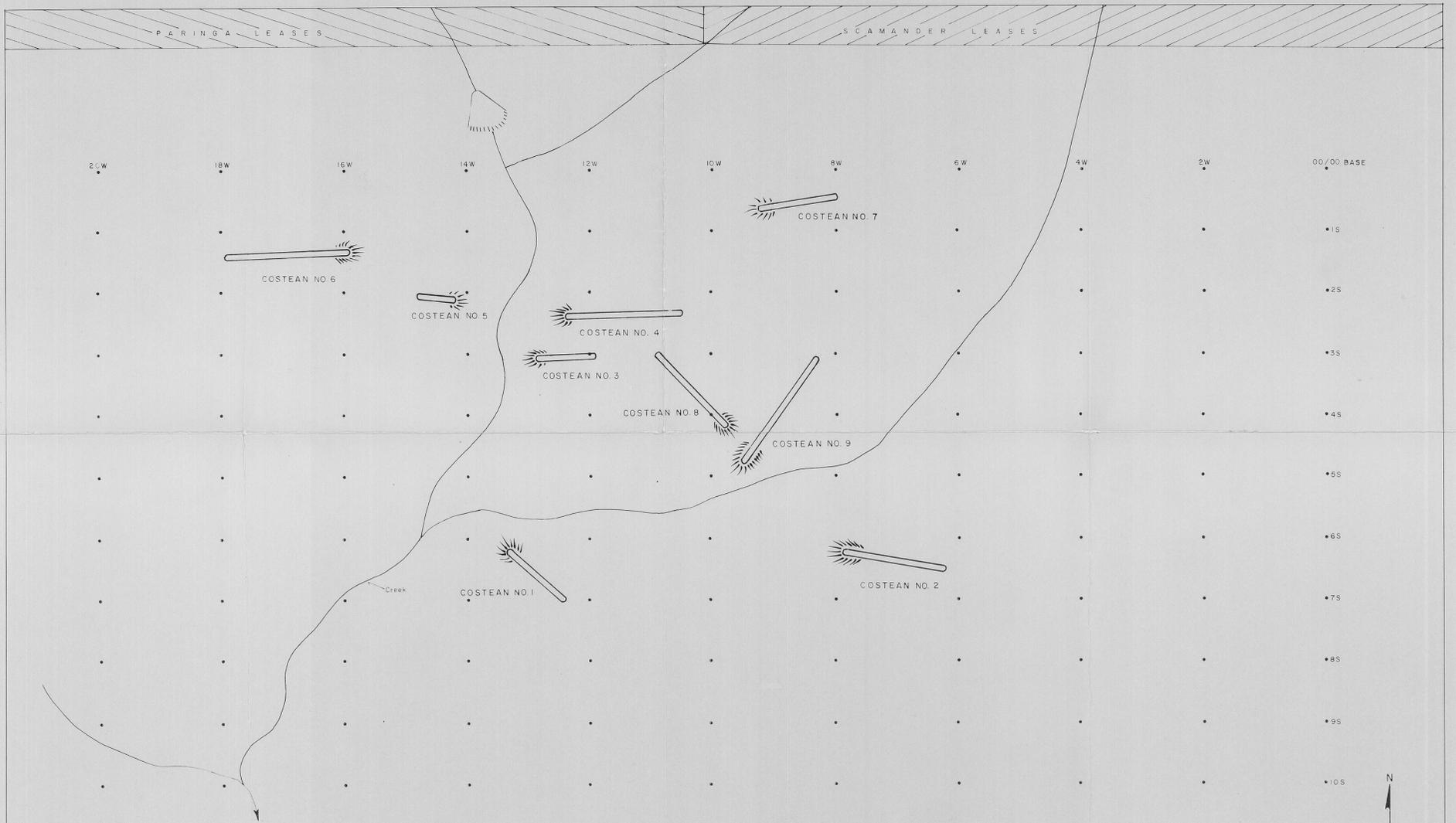
METHODS:



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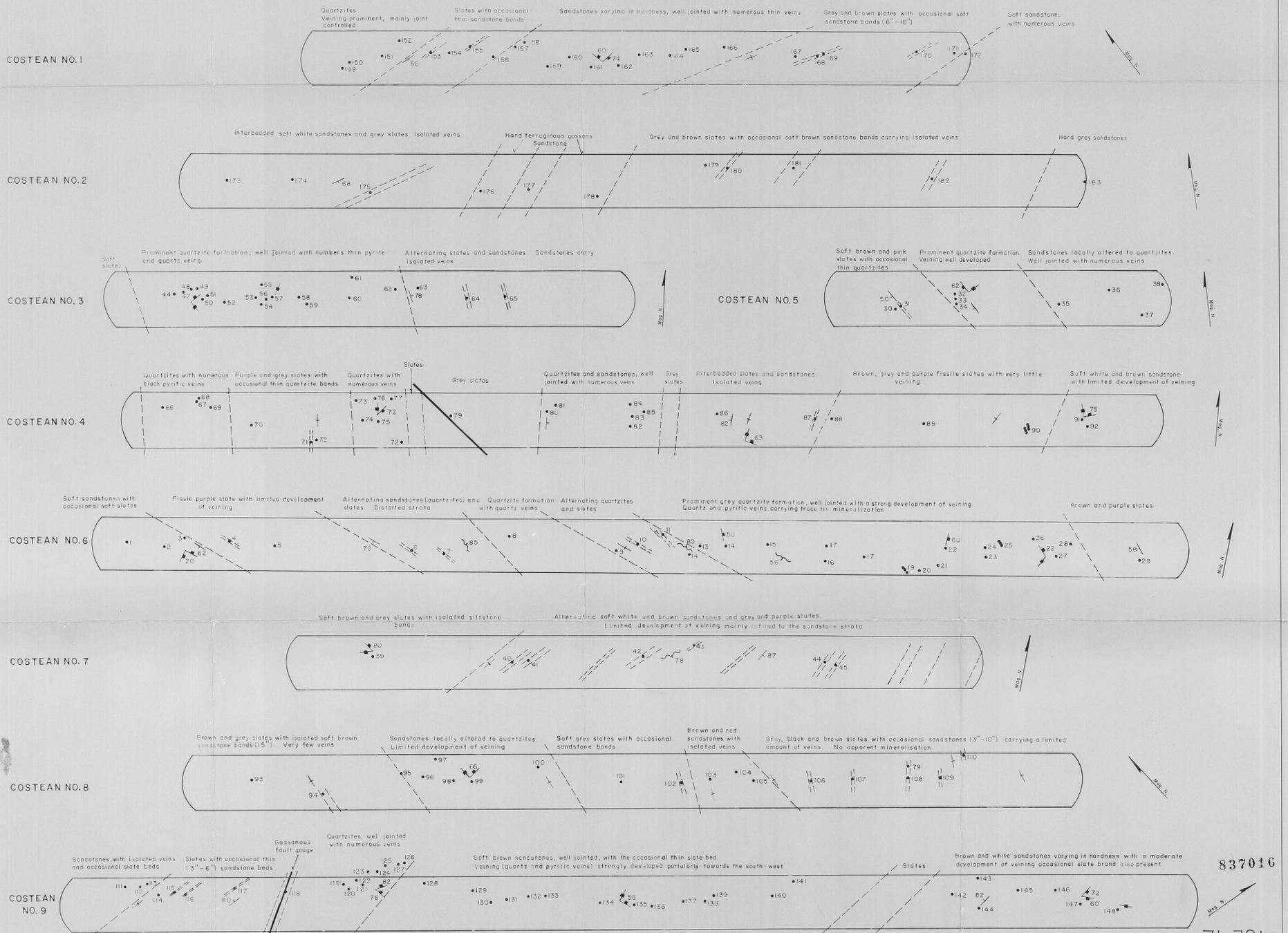
Chief Chemist

Ray W. M. [Signature]



PLAN OF COSTEANS

SCALE 1" = 100'



GEOLOGY AND SAMPLE POINTS

SCALE 1" = 10'

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TEXAS INSTRUMENTS INCORPORATED
SCIENCE SERVICES DIVISION
GEOPHOTO RESOURCES CONSULTANTS
BRISBANE AUSTRALIA

DRAWN: []
 CHECKED: G. Henderson, Mar '71
 CHECKED: []
 GEOLOGIST: []
 APPROVED: []

SCALE
 1" = 100'
 1" = 10'

REVISIONS: []

PROJECT: 6/68 DRAWING NO.: 1/144

TEXINS DEVELOPMENT PTY. LTD.
E.L. 6/68 NORTH EAST TASMANIA
**GREAT PYRAMID AREA
GEOLOGY AND SAMPLE POINTS
OF COSTEANS**

