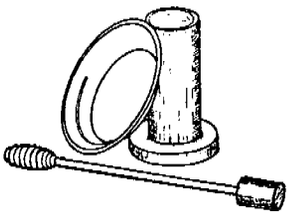

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FIRST ANNUAL AND FINAL REPORT

ON

EXPLORATION LICENCE 7351

EASTERN MCARTHUR BASIN,

NORTHERN TERRITORY,

FOR THE PERIOD

31 JULY 1991 TO 30 JULY 1992.

H.F.GIRSCHIK.

PERTH W.A.

JULY 1992

Filename ARGPHO23

SUMMARY

Previously undescribed occurrences of rock phosphate have been recognized in the Northern Territory close to where the N.T./Queensland border runs into the Gulf of Carpentaria.

Geological mapping, radiometric surveys and percussion drilling by a uranium explorer in the early 1980's encountered phosphate occurrences with grades of up to 19 % P_2O_5.

It appears that the phosphate occurs as 1 to 2 metre thick bands of semi-massive and disseminated apatite overlain by a sandstone and shale carrying disseminated phosphate. The phosphate bearing sandstone is a unit of unknown thickness within the Masterton Sandstone, which is a sandstone and minor conglomerate formation within the Tawallah Group of sediments and volcanics. The Masterton Sandstone is overlain by the Karns Dolomite.

A field inspection of the occurrences established that

(1) There are two major outcrops of the phosphate-rich material, each extending for over 800 metres along strike and over 200 metre wide, and approximately 3 kilometre apart.
There are also minor occurrences elsewhere within the Masterton Sandstone.

(2) The occurrences are significantly radioactive (10 to 100 times background in the "Total" channel).

(3) The grade and the deposit as determined by selective sampling of high grade material may well be commercial, ie, > 19%. This is equivalent to the grade of the Mt Weld phosphate deposit in W.A. Grades of up to 34.2% P_2O_5 were returned from the September 1990 sampling.

(4) Uranium and copper values are anomalous. These two elements may be useful geochemical pathfinders in future exploration.

(5) Fe_2O_3, Al_2O_3, Na_2O, K_2O, BaO, MnO, MgO, As and Cd are all low and generally within commercially acceptable limits.

No phosphate values have yet been found in the overlying Karns Dolomite.

The occurrences appear to be stratiform and organic in origin. Possibly they were originally a stromatolitic algal mat surrounding an island in the Proterozoic sea. This island is suggested by a gravity "high" indicating a shallow depth to crystalline basement.

The occurrences, as seen to date in limited exposure, are relatively thin, being of the order a few metres. By themselves these occurrences are not commercial, but they give very strong indications of the enormous potential of the host unit, i.e. the Masterton Sandstone, which covers an area of several thousand square kilometre, to host commercial deposits.

Argold Holdings Pty. Ltd. and Kriston Pty. Ltd. were granted Exploration Licence (E.L.) No 7351 of 291 graticular blocks On 31 July 1991. This E.L. covers a substantial part of the Masterton Sandstone and some of the known occurrences.

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ANNUAL AND FINAL REPORT ON EXPLORATIION LICENCE 7351
FOR THE PERIOD 31 JULY 1991 TO 30 JULY 1992

1. INTRODUCTION.

This report covers the first year of exploration on Exploration Licence (E.L.) 7351. ie from 31 July 1991 to 30 July 1992.

This E.L is located in the eastern section of the Proterozoic McArthur Basin.

The mineral commodity being sought is rock phosphate.

The rationale behind the search for this commodity are outlined below.

The import into Australia of rock phosphate as a feedstock for the manufacture of superphosphate as an agricultural fertilizer has risen from 1.45 million tonnes (at a total cost of $84.95 million) in 1986-87 to 2.24 million tonnes (at a total cost of $133.42 million) in 1988-89. The unit cost of this material varies according to certain factors of quality, the main one being the actual phosphate content of the rock, which tends to be a characteristic of the country of origin. Unit cost in 1988-89 varied from $43.49 per tonne for Florida U.S.A. sourced material to $70.25 per tonne for Nauru sourced material. With the demise of Christmas Island (Indian Ocean) as a supplier of phosphate in December 1987, the shortfall of approximately 0.4 to 0.5 million tonnes has been taken up largely by Nauru, which currently supplies 53% of the import requirements, with lesser quantities coming from Jordan, Togo, Morocco and Israel. (Data compiled from material published by the Australian Bureau of Statistics)

There is also a increasing demand for phosphates for agricultural applications in South East Asia, particularly in Indonesia and Malaysia. Rock phosphate can be applied directly to some soils in tropical areas, without the need to convert to superphosphate.

Both the demand for phosphates and the unit price are rising.

The commercial incentives to explore for and develop phosphate deposits are increasing.

A new type of phosphate occurrence recognised in the Northern Territory may be an indication that there is a phosphate-rich province which warrants detailed exploration.

The deposits are located close to the Northern Australian coastline, and hence are well situated to supply both the South East Asian and domestic markets. This material may be particularly attractive for conversion to superphosphate as it

may not suffer from some of the technical drawbacks which have characterised other indiginous occurrences, e.g. chert nodules in the rock phosphate from Duchess in Queensland, or a high carbonate content.

2. LOCATION OF THE PROSPECT, AND FEATURES OF THE AREA.

The occurrences are located in the Northern Territory of Australia approximately 860 kilometre south east of Darwin and approximately 40 to 60 kilometre inland from where the Northern Territory/Queensland border runs into the Gulf of Carpenteria. (137 degrees 40 minutes East, 16 degrees 50 minutes South)

Mount Isa, the nearest major regional centre, is located approximately 480 kilometre to the south east.

There are no roads in the area, but a major unsealed road, a "beef road", designed to carry the cattle-transporting road trains, passes within 50 kilometre to the South of the occurrence. Access into the area is via station tracks and old exploration tracks.

The area is currently under occupation by pastoral lease, but it is not stocked. The homestead for this property has an airstrip, which will accommodate light aircraft.

Streams in the area are generally dry except during the cyclonic "wet" season, but water can always be obtained from the perennial waterholes along the larger streams.

Vegetation varies from open grasslands to sparse scrubby savannah woodland, particularly over the sandstone. In places the sandstone is quite bare of vegetation.

The topography of the area is either undulating plain, or a low sandstone plateau which has been heavily dissected by a dendritic stream pattern resulting in a rugged topography.

The occurrences are favourably located with respect to potential transport. The initial discovery is located 60 kilometres from the coast. Hydrographic charts for the adjacent sea show that in places relatively deep water (4 fathoms) extends right up to the shore line. Some of the local rivers may be navigable to shallow-draught barges.

3. DISCOVERY OF THE PROSPECT.

Exploration for uranium by Australia and New Zealand Exploration Company (ANZECO) in the Northern Territory during the early 1980's recognized previously unrecorded occurrences of phosphate-rich material.

The initial discovery was made during a program of rock chip

sampling and ground radiometric survey as a follow-up to an earlier aerial radiometric survey of the exploration tenements. It was noted that a sandstone with a white matrix had a radiometric signature of up to 10 times background. Analysis of this material returned phosphate values generally in the range 2.3% to 14.6% P2O5 with a maximum of 19% P2O5. (This grade is equivalent to that of the Mt. Weld phosphate occurrences in Western Australia).

Two major outcrops of the phosphate-rich material, each extending for over 800 metres along strike, over 200 metre wide and approximately 3 kilometre apart were subsequently outlined by geological mapping.

These two radiometric/phosphate anomalies were collectively termed the South Eastern Anomalies or the Southern Area, and individually as the Camp and Eastern Anomalies, centred on 84700E 34300N and 88200E 34200n respectively. A third aerial radiometric anomaly , refered to as the North Western anomaly is centred on 67100E 64400N. This anomaly was weaker than the others, and hence was not fully tested.

Shallow rotary air blast percussion drilling in the general area of the outcrop of phosphate rich material around the Camp Anomaly intersected substantial thicknesses of up to 30 metre of "phosphatic sandstone". Analysis of the drill cuttings returned several values of between 1 and 6% P2O5, but the great majority were low.

A recent inspection of the old drill sites and the surrounding geology established that the drill holes were collared stratigraphically below the phosphate-rich unit, and hence would not show the high grades encountered during surface sampling.

4.GEOLOGICAL SETTING OF THE OCCURRENCES.

4.1 REGIONAL SETTING.

The phosphate occurrences lie in the Eastern McArthur Basin within the Proterozoic Masterton Formation, a substantially thick and widespread sandstone unit within the Tawallah Group of volcanics and sediments. The Masterton Formation may be feldspathic, and it includes beds of conglomerate and shale.

It is overlain by the Karns Dolomite, an altered, silicified stromatolitic dolomite. Near its base are bands of dolomitic conglomerate and coarse sandstone.

4.2 LOCAL SETTING.

The host rock is a sandstone. It is a yellowish red to pinkish grey to translucent "white" in colour,

well-sorted, medium-sized, angular-grained quartz sandstone. It contains variable amounts of a white matrix, which may give the rock an overall white appearance. In places, this matrix is phosphate but elsewhere it may be kaolin after feldspar. The white matrix may be distinctly radioactive, up to 10 times background, or there may be no anomalous radioactivity.

The sandstone is generally well exposed, as it forms slightly elevated but dissected plateaux above the surrounding plain, cut by a closely-spaced dendritic pattern of streams.

4.3 THE PHOSPHATE MATERIAL

The phosphate occurrences observed to date are quite distinctive units within the Masterton Sandstone.

While rock exposure in plan is very good, it is difficult to obtain a sectional view of the occurrences. They appear to be richer at the base, where there is often a semi massive white colloform material (collophane? an earthy variety of apatite) grading up to 34.2% P_2O_5 and up to 50cm thick, of distinctly nodular white material in a matrix of coarse sandstone up to 1 metre thick. Above this there may be up to 1.5 metre of a distinctive brown grey sandstone carrying variable amounts of semi-massive to disseminated white phosphatic material. The phosphate grains stand "proud" on the surface of the weathered rock. On fresh broken surfaces, the rock is uniformly pink-brown-grey, with little evidence of the phosphatic material.

Above the disseminated phosphate there is often a white shale or very fine grained sandstone carrying very finely divided phosphate.

Above this, the unit grades rapidly into a quartzite, with varying quantities of feldspar.

Copper staining is often present within the disseminated phosphate and shale, and there may also be isolated pockets or bands of an earthy phosphate-rich ferruginous material (possibly gossanous).

The disseminated phosphate occurrence is very similar in appearance to felspaphic sandstone, except that the latter retains its flecked appearance even on freshly broken surfaces.

From the point of superphosphate production, it may be possible to upgrade the phosphate content of the material by simple processes. As the phosphatic

material appears to be in a loosely bonded matrix to the sandstone, light crushing and grinding may be all that is required to liberate the phosphate from the sand, which can then be screened or cycloned out.

As the sandstone appears to be carbonate free, there should be considerably less sulphuric acid used in the conversion of the phosphate material to superphosphate.

5. POSSIBLE ORIGIN FOR THE OCCURRENCES.

Bureau of Mineral Resources (BMR) mapping shows a significant gravity "high" in the north east corner of the Eastern McArthur Basin. This "high" was confirmed by a follow-up gravity survey commissioned by ANZECO.

While the cause of this gravity "high" has not been established, one possible explanation is that it may be a function of a basement "high", which may have been an island or shallow section in the Proterozoic sea. The phosphate, which appears to be stromatoloitic in origin, would have formed as a fringing reef around this island. In view of this obvious strata-related organic origin, the phosphate can be expected to have lateral continuity, or, at least, repetition.

6. MINING TENEMENTS.

Argold Holdings Pty. Ltd. and Kriston Pty. Ltd. have jointly been granted Exploration Licence 7351 to cover a substantial section of the mapped outcrop of the favourable Masterton Formation. The Licence covers some of the known phosphate occurrences, several aerial radiometric anomalies which have not yet been ground checked, and portion of the gravity "high" mentioned above.

7. RECENT EXPLORATION.

The occurrences were inspected by the writer during a reconnaissane of the area. They were resampled, radiometric readings taken, and general observations were made on the geological setting.

7.1 RADIOMETRICS

AERIAL RADIOMETRY

Earlier exploration by ANZECO had established that there is a very strong aerial radiometric anomoly associated with the three major occurrences inspected. However it was noted on this occassion that there is a major displacement between the location of the aerial anomaly and the ground anomaly in some instances. This

displacement may be up to 1 kilometre.

GROUND RADIOMETRY

Background radioactivity as measured by a Scintrex GIS4 Spectrometer over the Masterton Sandstone is between 20-40cps (total counts).

Phosphate rich areas examined to date have much higher levels of radioactivity from 300cps to 2,400cps.

Most of the radioactivity is in the Total Channel. A typical breakdown would be as follows:

Total	K+U+Th	U+Th	Th
1,100cps	10	5	1

Numerous lesser anomalies up to 200cps were encountered while travelling around the area. Some of these were sampled.

7.2 SAMPLING

Both rock chip and stream sediment samples were collected.

Details of location, material sampled and results are given in the accompanying sample ledger in Table 1 at the back of this volume. Locations are also marked on the accompanying plans.

A summary showing the average values obtained from the various rock types analysed to date is given below:

Massive phosphate	19.8%	P_2O_5 (12 samples)
Disseminated phosphate	14.3%	P_2O_5 (14 samples)
Phosphate shale	3.7%	P_2O_5 (3 samples)
Karns Dolomite	0.23%	P_2O_5 (2 samples)

Sampling of the anomalous areas was selective to include the better grade material for each category.

The following observations can be made regarding the additional and earlier data.

1. Minor phosphate values occur outside the general area of the South Eastern Anomalies, e.g. the North Western Anomaly, indicating that phosphate anomalism extends beyond that area, and hence confirming the expectation that phosphate bearing units extend throughout the Masterton Formation.

2. The small amount of stream sediment sampling conducted to date suggests that this technique cannot reliably detect phosphate occurrences.
3. Cadmium values are extremely low in the phosphate rich material, being below the limit of detection of 1 ppm.

4. Samples carrying a moderate to high grade phosphate maintain a CaO : P2O5 ratio of 1.25 - 1.35 which is consistent with the mineral apatite at 1.31 Samples which fall below this range generally have a higher Al2O3 content.

5. The Karns Dolomite has, in places, been completely leached of Ca and Mg, and replaced by silica. Any phosphates which may have been in this unit have been remobilized, any might be expected to have been reconcentrated at the water table or perhaps in the underlying Masterton sandstone.

6. The percussion drilling carried out by ANZECO on the Camp Anomaly did not penetrate the high grade phosphate units, which form small, local, topographic highs which are inaccessible to drill rigs. The holes were collared in the adjacent flat ground which is topographically and stratigraphically below the phosphate rich unit. The phosphate values intersected in the first one or two metres in some of the holes may represent a disseminated phosphate unit below the massive unit, or it may represent phosphate rich scree, or a sandstone enriched in phosphate leached out of the overlying massive material.

   Hence, the ANZECO drilling cannot be expected to show high phosphate values.

8. CONCLUSIONS

Sampling has confirmed that there are occurrences of high grade massive and disseminated phosphate material within the Masterton Formation. The occurrences appear to be of syngenetic organic origin, and can therefore be expected to occupy a specific stratigraphic facies within the Masterton, and show lateral continuity.

They are slightly to moderately radioactive (10-100 times background) and therefore near surface occurrences should be easily locatable by suitable radioactivity detecting devices.

Limited sampling of the overlying Karns Dolomite indicates that phosphate values are low. However the material analysed to date was near surface and heavily silicified, and there may be better values at depth, particularly adjacent to the lower contact.

The occurrences have substantial commercial potential, and further exploration work is warranted.

However attempts to interest existing phosphate producers and other mineral explorers have been unsucessful.

H.F. GIRSCHIK.

9. REFERENCES.

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TABLES

ARGOLD HOLDINGS PTY. LTD.
CLIENT:
SAMPLE DATA SHEETS

PROJECT: NORTHERN TERRITORY PHOSPHATE

SUB - PROJECT: PUNGALINA SAMPLING

MAP SHEETS	SCALE	NAME	NUMBER
	1 : 100 000	PUNGALINA	6364
	1 : 100 000	ROBINSON	6365
	1 : 100 000	SELBY	6464
	1 : 100 000	CALVERT RIVER	6465

DATE dd	mm	SAMPLE NUMBER	CO - ORDS (METRE)	LOCATION DESCRIPTION	SAMPLE DESCRIPTION	SAMPLE TYPE	RAD'METRY TOTAL CPS	PHOSPHATE TEST	TiO2 %	MnO2 %	SO3 %	P2O5 %	BaO %	L.O.I.	H2O- %	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O ppm %	Cu ppm	U ppm	As ppm	Cd ppm	CaO/P2O5
18	9	1009	218513	NEAR CROSSING OF OLD FENCE ON MAIN ROAD	PEBBLE CONGLOMERATE AND FINE SANDSTONE. POSS CAMBRIAN	GRAB	30 - 35	NIL	0.14	0.28	<0.01	0.009	0.03	0.57	0.23	96.3	1.38	0.87	0.03	0.06	0.03	0.46	15	3	3		3.333
18	9	1010	218498	ADJACENT TO MAIN ROAD	MASTERTON S/S C WHITE FLECKS AND BLACK BANDS	GRAB	27 - 35	NIL	0.09	2.55	<0.01	0.019	0.24	2.04	0.32	89.0	3.41	2.10	0.03	0.12	0.03	0.42	20	3	7		1.579
18	9	1011	298360	NEAR START OF TRACK TO PUNGALINA HOMESTEAD	MASTERTON S/S C MINOR WHITE FLECKS	GRAB	N/R	NIL	0.07	0.02	0.01	0.008	<0.01	0.70	0.16	97.1	1.71	0.40	0.01	<0.01	<0.01	0.04	8	<3	4		1.250
18	9	1012	360387	8 KM ALONG TRACK	CHERT PEBBLE CONGLOMERATE WITHIN MASTERTON S/S	GRAB		15 N/A	0.01	0.09	0.02	0.016	0.02	0.35	0.18	98.5	0.41	0.52	0.03	<0.01	0.01	0.05	<5	<3	<1		1.875
18	9	1013	370462	16 KM ALONG TRACK	RANDOM PIECES OF MASTERTON S/S. SOME SHOW WHITE FLECKS	GRAB		24 BLUE	0.04	<0.01	0.05	0.030	0.02	0.37	0.16	97.2	0.55	1.81	0.01	<0.01	<0.01	0.37	9	<3	3		0.333
18	9	1014	381482	18 KM ALONG TRACK NEAR CREEK	RANDOM PIECES OF WHITE SILICIOUS MASTERTON	GRAB	N/R	N/A	0.04	<0.01	0.02	0.013	0.02	0.67	0.17	96.9	1.40	0.90	0.01	0.03	<0.01	0.05	10	<3	2		0.769
18	9	1015	381483	CREEK AT 18 KM	SAND EX CREEK BED	S SED		29 N/A	0.43	0.02	0.02	0.042	<0.01	3.22	0.51	85.3	4.67	6.03	0.02	0.05	0.02	0.11	15	5	10		0.476
18	9	1016	320550	26 KM ALONG TRACK	MASTERTON S/S WITH 5% WHITE FLECKS	GRAB		21 N/A	0.05	0.04	<0.01	0.010	0.01	0.53	0.14	97.8	1.22	0.37	<0.01	<0.01	<0.01	0.04	<5	<3	2		
18	9	1017	495569	CREEK AT 29 KM	SAND EX CREEK BED	S SED	N/R	N/A	0.60	0.03	0.04	0.079	0.02	16.10	1.73	72.7	6.24	3.71	0.11	0.11	0.05	0.18	19	3	5		1.392
18	9	1018	495569	29 KM ALONG TRACK	MASTERTON S/S WITH 5% WHITE FLECKS	GRAB		20 N/A	0.04	<0.01	0.01	0.015	0.01	0.50	0.15	98.0	0.76	0.66	<0.01	<0.01	<0.01	0.03	<5	<3	2		
18	9	1019	512530	33KM ALONG TRACK	WHITE FELDSPATHIC (?) SANDSTONE.	GRAB		25 WEAK YELLOW	0.03	0.04	<0.01	0.010	0.01	0.53	0.14	97.8	1.22	0.37	<0.01	<0.01	<0.01	0.04	<5	<3	2		
19	9	1020	535520	4 KM NORTH WEST OF CALVERT RIVER CROSSING	KARNS DOLOMITE, STROMATOLITIC	GRAB	N/R	N/A	0.02	0.14	0.01	0.010	0.02	0.64	0.18	97.2	0.88	0.96	0.04	0.04	0.02	0.06	30	<3	4		4.000
19	9	1021	535520	AS ABOVE	UNDERLYING MASTERTON S/S, WHITE SPOTTED	GRAB	20 - 40	CARBONATE	0.02	0.10	0.02	0.003	0.02	0.35	0.15	98.4	0.41	0.49	0.09	0.07	0.02	0.05	13	<3	1		
19	9	1022	641485	PROMINENT RIDGE ON WOLLOGORANG ROAD	MASTERTON S/S WITH 20% WHITE FLECKS	GRAB	18 - 20	N/A	0.09	0.02	0.01	0.022	<0.01	0.93	0.20	96.1	1.95	0.70	0.02	0.05	<0.01	0.08	9	<3	4		0.909
19	9	1024	771290	CREEK CROSSING ON WOLLOGORANG ROAD	RANDOM PIECES MASTERTON AND KARNS. NOT FOR ASSAY	GRAB			0.03	<0.01	0.02	0.026	0.01	0.32	0.15	98.4	0.69	0.43	0.01	0.03	<0.01	0.04	8	3	2		0.385
19	9	21025	552502	2 KM NORTH WEST OF CALVERT RIVER CROSSING	WHITE TRANSLUCENT QUARTZ SAND AND MINOR WHITE OPAQUES	S SED	20 - 30	N/A	0.46	0.04	0.02	0.059	0.01	9.24	1.02	83.7	3.82	2.25	0.14	0.10	0.02	0.17	15	I.S.	I.S.		2.373
19	9	21026	595515	2.5 KM NORTH OF PUNGALINA CROSSING	WHITE BROWN MOTTLED KNOBBLY LATERITE OVER KARNS	SPEC	N/R	BLUE	0.04	<0.01	0.01	0.044	0.01	1021.00 1.21	0.22	93.3	1.32	3.92	<0.01	0.04	0.02	0.14	30	5	7		
19	9	21027	595515	2.5 KM NORTH OF PUNGALINA CROSSING	WHITE SPOTTED OOLITIC MATERIAL (KARNS)	SPEC	N/R	BLUE	0.06	0.94	<0.01	0.149	0.25	1.82	0.32	92.0	2.74	1.93	0.04	0.05	<0.01	0.11	118	8	12		0.268
23	9	21048	580511	2 KM NORTH OF PUNGALINA CROSSING	KARNS DOLOMITE NOT FOR ASSAY	SPEC	N/R	N/A	0.12	0.03	0.03	0.006	<0.01	0.12	0.15	99.1	0.24	0.30	<0.01	<0.01	<0.01	0.01	9	5	<1		
23	9	21049	580511	AS ABOVE	KARNS DOLOMITE. WHITE MATERIAL EX STROMATOLITES	GRAB	N/R	N/A	0.02	0.13	<.01	0.028	0.01	5.31	0.16	88.9	0.27	0.57	3.16	1.86	<0.01	0.07	17	4	2		112.857
23	9	21050	580511	AS ABOVE	KARNS DOLOMITE GREY MATERIAL BETWEEN STROMATOLITES	GRAB	N/R	N/A	0.02	0.22	0.02	0.018	<0.01	43.50	0.15	6.2	0.42	1.22	28.40	19.60	<0.01	0.22	34	4	2		1577.778
23	9	24803	580511	AS ABOVE	FERRUGINOUS BANDS WITHIN KARNS DOLOMITE	GRAB	N/R	N/A	0.04	0.49	0.17	0.238	0.05	4.46	0.38	48.0	0.81	45.50	0.08	0.10	<0.01	0.06	335	25	230		0.336
23	9	24804	580517	3 KM NORTH OF HOMESTEAD	QUARTZ / FROM WITHIN KARNS DOLOMITE	GRAB	N/R	N/A	<0.01	0.03	0.46	0.018	0.02	0.64	0.15		0.09	0.47	0.54	0.16	<0.01	0.01	98	<3	1		30.000
					WHITE NODULES EX KARNS DOLOMITE	GRAB	N/R	N/A	0.01	0.10	0.04	0.071	0.01	0.90	0.22	96.6	0.44	1.39	0.22	0.19	0.02	0.07	27	<3	45		3.099
SOUTH WESTERN GROUP OF ANOMALIES																											
20	9	1025	835348	CREEK DRAINING FAR WESTERN (ORIGINAL) ANOMALY	SAND EX CREEK	S SED	N/R	N/A	0.34	0.02	0.02	0.136	0.01	7.46	0.77	87.5	2.96	1.18	0.13	0.08	0.02	0.16	33	9	4		0.956
CAMP ANOMALY																											
20	9	1026	849346	30 METRE SOUTH OF OLD CAMP	FLAGGY PHOSPHATIC SANDSTONE	GRAB		100 NIL	0.03	<0.01	0.02	0.026	0.01	0.32	0.15	98.4	0.69	0.43	0.01	0.03	<0.01	0.04	8	<3	2		0.385
20	9	1027	850356	100 METRE EAST OF OLD CAMP NEAR SMALL OUTCROP	WHITE PHOSPHATIC SANDSTONE	GRAB	300 - 500	YELLOW	0.04	0.05	0.08	14.200	0.02	1.10	0.17	63.8	1.16	0.26	19.00	0.06	0.08	0.12	65	400	5		1.338
20	9	1028	853345	50 METRE SOUTH OF DRILL HOLE 6	WHITE PHOSPHATIC SANDSTONE	GRAB		700 YELLOW	0.06	0.05	0.14	24.100	0.03	1.43	0.17	38.9	1.10	0.35	32.50	0.07	0.19	0.13	135	220	6		1.349
20	9	1029	835345	NEAR 1028	WHITE EARTHY COLLOFORM PHOSPHATE	GRAB		1650 YELLOW	0.08	0.05	0.08	29.300	0.03	1.83	0.36	26.8	2.08	0.93	38.20	0.05	0.12	0.11	125	310	9	<1	1.304
20	9	1030	833345	ADJACENT TO DRILL HOLE 9 (OR 8?)	FERRUGINOUS SANDSTONE WITH LOCAL WHITE FLECKING	GRAB		320 NIL	0.08	0.03	0.03	1.100	0.03	3.64	0.68	69.1	2.16	23.60	0.05	0.04	<0.01	0.06	520	230	230		0.045
20	9	1031	854345	50 METRE SOUTH EAST OF DRILL HOLE 6	FERRUGINOUS SANDSTONE WITH TRACES OF COPPER	GRAB		1400 N/A	0.10	0.04	1.00	7.200	0.09	9.89	0.76	31.2	6.10	43.90	0.33	0.06	0.20	0.30	5100	590	310		0.046
20	9	1032	855345	50 METRE EAST OF 1031	COLLOFORM WHITE PHOSPHATE AND WHITE SPECKLED SANDSTONE TRACES OF MALACHITE AND AZURITE.	GRAB		600 N/A	0.21	0.03	0.09	24.600	0.11	6.48	1.94	32.5	6.35	3.27	22.90	0.09	0.25	0.22	1110	370	30	<1	0.931
20	9	1033	850354	CREEK DRAINING CAMP ANOMALY	SAND EX CREEK	S SED	N/R	N/A	0.47	<0.01	0.02	0.033	0.01	3.30	0.40	92.8	2.16	0.99	0.04	0.06	0.02	0.11	15	4	4		1.212
EASTERN ANOMALY																											
20	9	1035	878345	NORTH WEST OF EASTERN ANOMALY	WHITE FLECKED SANDSTONE SHOWING COPPER	GRAB		1200 YELLOW	0.05	<0.01	0.03	2.980	0.05	1.56	0.34	90.8	1.80	0.97	1.80	0.04	0.02	0.08	1600	100	14		0.604
21	9	1034	884340	SOUTH EAST OF HELIPAD	WHITE PHOSPHATIC SANDSTONE WITH TRACES OF COPPER	GRAB		1400 YELLOW	0.06	0.02	0.10	20.000	0.01	1.60	0.27	48.7	1.58	0.76	26.50	0.04	0.12	0.09	407	270	30		1.325
21	9	1036	883337	RIDGE 300 METRE SOUTH OF ANOMALY	V FINE GRAINED SILICIOUS SANDSTONE, SHOWS WHITE BLOOM	GRAB		20 N/A	0.05	<0.01	0.01	0.036	<0.01	0.45	0.15	97.8	1.01	0.55	<0.01	0.02	<0.01	0.05	74	7	5		

ARGOLD HOLDINGS PTY. LTD.
CLIENT:

SAMPLE DATA SHEETS

PROJECT: NORTHERN TERRITORY PHOSPHATE

SUB - PROJECT: PUNGALINA SAMPLING

MAP SHEETS	SCALE	NAME	NUMBER
	1 : 100 000	PUNGALINA	6364.000
	1 : 100 000	ROBINSON	6365.000
	1 : 100 000	SELBY	6464.000
	1 : 100 000	CALVERT RIVER	6465.000

DATE dd mm	SAMPLE NUMBER	CO - ORDS (METRE)	LOCATION DESCRIPTION	SAMPLE DESCRIPTION	SAMPLE TYPE	RAD'METRY TOTAL CPS	PHOSPHATE TEST	TiO2 %	MnO2 %	SO3 %	P2O5 %	BaO %	L.O.I.	H2O- %	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	Cu ppm	U ppm	As ppm	Cd ppm	CaO/P2O5
EASTERN ANOMALY CONTINUED																										
21 9	1037	882341	IN SADDLE, SOUTH EAST OF EASTERN ANOMALY	COARSE GRAIN SANDSTONE WITH WHITE FLECKS AND Cu STAIN	GRAB	550	N/A	0.06	<0.01	0.05	9.950	0.03	1.47	0.72	75.1	1.54	0.55	11.20	0.04	0.05	0.11	49	90	3		1.126
21 9	1038	882341	AS ABOVE	WHITE AND BROWN MOTTLED COLLOFORM MATERIAL Cu STAINED	GRAB	550	N/A	0.27	0.04	0.02	7.090	0.10	6.01	0.67	70.0	9.09	5.24	0.99	0.08	0.21	0.24	1870	130	120		0.140
21 9	1039	881341	NEAR SPRING IN GULLY	COARSE GRAINED SANDSTONE WITH VERY WHITE BLOOM	GRAB	540	N/A	0.09	0.05	0.09	17.300	0.03	1.44	0.27	54.9	1.38	0.93	22.70	0.08	0.10	0.19	136	130	50		1.312
21 9	1040	881341	AS ABOVE	FERRUGINOUS PHOSPHATIC MATERIAL	GRAB	540	N/A	0.07	0.14	0.05	11.600	0.03	2.68	0.37	60.7	2.07	7.61	14.50	0.05	0.05	0.14	437	100	190		1.250
21 9	1041	879342	50 METRE SOUTH OF HELIPAD	WHITE PHOSPHATIC SANDSTONE	GRAB	600	N/A	0.06	0.03	0.11	17.800	0.03	1.53	0.27	53.8	1.60	0.63	23.50	0.04	0.10	0.10	70	150	20		1.320
21 9	1042	879343	RANDOM PIECES ACROSS WIDTH OF HELIPAD	WHITE PHOSPHATIC SANDSTONE	GRAB	600	N/A	0.06	0.02	0.10	18.300	0.03	1.44	0.30	53.5	1.23	0.44	24.00	0.05	0.10	0.14	80	140	35		1.311
21 9	1043	879343	WEST END OF HELIPAD	COLLOFORM PHOSPHATIC MATERIAL	SELECT	600	N/A	0.06	<0.01	0.07	14.900	0.05	2.35	0.48	60.0	2.14	1.12	18.20	0.04	0.07	0.13	43	110	13		1.221
21 9	1044	881343	EAST END OF HELIPAD NEAR PALMS	COLLOFORM PHOSPHATE & FLECKLED S/STONE WITH Cu STAIN	GRAB	1700	N/A	0.12	0.03	0.11	16.000	0.03	2.94	0.51	57.8	3.96	0.82	17.40	0.04	0.07	0.13	237	320	12		1.087
21 9	1045	879342	WEST OF HELIPAD	WHITE PHOSPHATIC SANDSTONE WITH ABUNDANT Cu STAIN	GRAB	1600	N/A	0.06	0.03	0.13	20.600	0.02	1.61	0.32	48.3	1.13	0.71	27.10	0.05	0.12	0.14	147	320	19	<1	1.316
21 9	1046	878342	WEST OF HELIPAD	WHITE BIOFORMS (STROMATOLITES?) PHOTO LOCATION	GRAB	1600	N/A	0.07	0.03	0.11	25.000	0.03	1.87	0.42	37.1	2.03	0.62	32.50	0.04	0.11	0.11	98	370	18		1.300
21 9	1047	878342	WEST OF HELIPAD	WHITE PHOSPHATIC SANDSTONE WITH STRONG COPPER STAIN	GRAB	2400	N/A	0.02	0.06	0.11	17.700	0.06	3.45	0.58	47.2	4.01	4.10	21.90	0.06	0.13	0.18	343	400	60	<1	1.237
21 9	1048	882343	EAST OF HELIPAD	WHITE PHOSPHATIC SANDSTONE	GRAB	1000		0.08	0.02	0.09	14.600	0.02	1.75	0.31	61.8	1.79	1.02	18.50	0.04	0.09	0.12	153	140	19		1.267
21 9	1049	884340	30 METRE SOUTH OF ANZECO'S EASTERNMOST ANOMALY	WHITE SANDTONE, WEAKLY PHOSPHATIC	GRAB	340	N/A	0.08	<0.01	0.06	1.050	0.01	1.50	0.25	93.2	1.91	1.97	0.04	0.04	<0.01	0.10	189	30	14		0.038
21 9	1050	884340	AS ABOVE	"BISCUIT LIKE " PHOSPHATIC MATERIAL	GRAB	340	N/A	0.64	<0.01	0.01	11.900	0.08	12.10	2.40	45.0	14.30	14.40	0.90	0.16	0.18	0.51	1500	280	250		0.076
21 9	21022	883343	EAST FLOWING CREEK	SAND EX CREEK	S SED	N/R	N/A	0.25	0.02	0.02	0.080	0.01	8.66	0.93	86.2	2.38	1.76	0.13	0.06	0.02	0.10	25	4	4		1.625
21 9	21023	876342	WEST FLOWING CREEK	SAND EX CREEK	S SED	N/R	N/A	0.55	0.02	0.03	0.247	0.02	12.20	1.76	79.6	6.02	1.46	0.12	0.10	0.03	0.20	33	11	6		0.486
21 9	21024	878342	NEAR 1046	FERRUGINOUS SANDSTONE WITH LICHEN LIKE GROWTHS.	SPECIMEN	N/R	WEAK YELLOW	0.31	0.02	0.02	4.250	0.06	5.74	1.19	63.6	8.78	16.40	0.38	0.11	0.02	0.16	204	190	90		0.089
ANOMALY TO SOUTH WEST OF CAMP																										
22 9	21028	847340	EASTERN SIDE OF LOW RISE	SHALE/V FINE GRAINED FLAGGY SANDSTONE, WHITE TO PINK	GRAB	190	N/A	0.27	0.25	0.06	1.310	0.06	1.80													
22 9	21029	847341	SOUTHERNMOST ANZECO ANOMALY	STRONGLY PHOSPHATIC SANDSTONE	GRAB	800	N/A	0.06	0.02	0.04	7.130	0.04	1.25	0.30	85.5	5.53	1.75	0.98	0.16	0.06	2.82	330	20	120		0.748
22 9	21030	847333	200 TO 300 METRE SOUTH OF GRID	CROSS CUTTING VERTICAL FERRUGINOUS BAR (GOSSAN?)	GRAB	200 - 300	N/A	0.23	<0.01	0.04	0.213	0.01	4.75	0.18	80.1	1.59	0.51	8.43	0.03	0.03	0.11	318	280	9		1.182
22 9	21031	845343	SMALL ISOLATED OUTCROP OF SANDSTONE. PHOTO LOCATION	PHOSPHATE NODULES FROM N.W. CORNER	GRAB	1100	N/A	0.07	0.04	0.15	34.200	0.02	1.26	0.65	63.1	6.80	24.70	<0.01	0.04	<0.01	0.09	10	18	65		
22 9	21032	845343	AS ABOVE	STRONGLY WHITE FLECKED S/STONE IMMEDIATELY ABOVE 21031	GRAB	1100	N/A	0.05	0.07	0.07	13.500	0.05	1.53	0.16	14.3	1.17	0.49	47.00	0.06	0.19	0.25	97	390	18	<1	1.374
22 9	21033	845343	3 METRE WEST OF 21032	SHALE AND F.G. SANDSTONE, COPPER STAINED	GRAB	1100	N/A	0.40	0.03	0.03	12.200	1.90	8.39	0.29	64.6	1.46	1.04	17.00	0.05	0.07	0.12	236	240	30	<1	1.259
22 9	21034	845343	SOUTH EASTERN CORNER OF OUTCROP	WHITE FLECKED PHOSPHATIC SANDSTONE	GRAB	1100	N/A	0.05	0.06	0.12	17.600	0.05	1.54	1.47	51.8	11.80	11.10	0.60	0.12	0.02	0.39	8100	490	60		0.049
22 9	21035	845343	WESTERN END OF OUTCROP	RANDOM PIECES OF PHOSPHATIC NODULES	SPEC	1100	N/A	0.06	0.03	0.12	30.100	0.02	1.27	0.27	54.9	1.24	0.74	22.50	0.06	0.10	0.09	195	340	15		1.278
														0.18	24.1	1.10	0.47	41.00	0.06	0.19	0.29	158	240	12		1.362

ARGOLD HOLDINGS PTY. LTD.
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SAMPLE DATA SHEETS

PROJECT: NORTHERN TERRITORY PHOSPHATE

SUB - PROJECT: PUNGALINA SAMPLING

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	1 : 100 000	PUNGALINA	
	1 : 100 000	ROBINSON	
	1 : 100 000	SELBY	6364.000
	1 : 100 000	CALVERT RIVER	6365.000
			6464.000
			6465.000

DATE dd	mm	SAMPLE NUMBER	CO - ORDS (METRE)	LOCATION DESCRIPTION	SAMPLE DESCRIPTION	SAMPLE TYPE	RAD'METRY TOTAL CPS	PHOSPHATE TEST	TiO2 %	MnO2 %	SO3 %	P2O5 %	BaO %	L.O.I.	H2O- %	SiO2 %	Al2O3 %	Fe2O3 %	CaO %	MgO %	Na2O %	K2O %	Cu ppm	U ppm	As ppm	Cd ppm	CaO/P2O5
ANOMALY TO WEST OF CAMP																										
22	9	21036	836345	SAME AS ANZECO 10103	THIN 2-3 CM BAND OF COLLOFORM PHOSPHATE. COPPER STAIN	GRAB	395	N/A	0.38	<0.01	0.03	9.910	0.07	7.62	2.29	67.7	10.70	1.74	0.63	0.26	0.03	0.97	122	110	20	<1	0.064
22	9	21037	836345	30 METRE SOUTH OF 21036	SCATTERED, ABUNDANT PIECES OF PHOSPHATE RICH MATERIAL	GRAB	149	N/A	0.13	0.08	<.01	1.420	0.04	2.86	0.46	79.3	8.20	0.28	1.31	0.02	0.04	6.62	13	17	3		0.923
22	9	21038	837349	100 METRE SOUTH OF 21036	MASSIVE, NODULAR PHOSPHATE, IN SITU	GRAB	215	N/A	0.07	0.02	0.08	22.300	0.05	1.16	0.30	44.5	2.51	0.46	27.70	0.05	0.08	0.26	173	490	3	<1	1.242
22	9	21039	837349	AS ABOVE	SANDSTONE WITH DISSEM WIDESPREAD GREEN STAIN	GRAB	215	N/A	0.04	<0.01	0.05	1.600	0.03	1.20	0.19	93.8	1.24	1.84	0.08	0.02	<0.01	0.06	2900	30	15	<1	0.050
22	9	21040	837340	LOCAL FLAT TOPPED RISE	WHITE BANKD FROM WITHIN SHALE	GRAB	10 - 80	N/A	0.34	0.03	0.03	1.660	0.06	1.59	0.34	86.6	5.56	0.39	0.74	0.18	0.06	2.71	35	15	9		0.446
22	9	21041	?830343	POSSIBLY 100 - 150 METRE SOUTH OF D.H.2	SHALE WITH COPPER STAIN	GRAB	250	N/A	0.26	0.02	0.06	2.840	0.06	2.07	0.28	83.7	4.88	2.61	1.05	0.15	0.04	2.17	2700	75	260		0.370
22	9	21042	840343	W OF DH 1, PROMINENT OUTCROP WITH PALMS	MASSIVE PHOSPHATE 1 - 1.5 METRE THICK	SEMI CHANNEL	1100	N/A	0.06	0.03	0.05	17.400	0.04	2.88	0.46	55.4	3.43	0.34	20.40	0.06	0.05	0.20	83	310	4		1.172
22	9	21043	840343	AS FOR 21042	SANDSTONE WITH FLECKS OF PHOSPHATE. 1 METRE THICK	CHIP	1100	N/A	0.04	<0.01	0.07	8.970	0.04	1.18	0.31	77.0	1.00	0.28	11.20	0.02	0.05	0.14	289	310	9	<1	1.249
22	9	21044	841343	MIDWAY BETWEEN DH1 AND DH2	WHITE FLECKED RED SHALE	GRAB	N/R	N/A	0.10	0.08	0.05	8.310	0.02	1.79	0.37	72.6	2.50	2.70	10.60	0.09	0.06	0.88	394	40	130		1.276
22	9	21045	840344	80 METRE NORTH WEST OF DH1	PROMINENT N.W. STRIKING BAND OF GOSSANOUS MATERIAL	GRAB	100	N/A	0.14	2.22	0.13	2.820	0.33	7.67	0.57	40.5	3.37	42.30	0.24	0.05	<0.01	0.25	670	350	130		0.085
22	9	21046	840344	100 METRE NORTH WEST OF DH1, N OF N50E STRIK'G FAULT	SHALE CARRYING MASSIVE PHOSPHATE	GRAB	100	N/A	0.16	0.03	0.01	0.152	0.02	0.87	0.22	89.1	5.57	0.14	0.14	0.02	0.02	4.36	13	10	4		0.921
22	9	24814	848349	BETWEEN DRILL HOLES AND MAIN CREEK	RANDOM PIECES OF SANDSTONE	GRAB	N/R	N/A	0.05	<0.01	0.02	0.056	0.02	0.59	0.17	97.3	1.25	0.58	0.01	0.03	<0.01	0.07	58	7	2		0.179
22	9	21047	848348	NEAR MAIN CREEK	WHITE SAND FROM AROUND ANT HILL	GRAB	N/R	N/A	0.10	0.02	0.02	0.100	0.02	1.55	0.30	96.4	1.01	0.67	0.04	0.02		0.09	45	6	6		0.400
22	9	24815	835343	WEST FLOWING CREEK DRAINING WESTERN ANOMALY	SAND EX CREEK	S SED	N/R	N/A	0.34	0.03	0.03	0.530	0.03	5.72	0.58	88.9	2.82	0.79	0.43	0.07	0.03	0.27	13	19	3		0.811
22	9	24816	843347	EAST FLOWING CREEK DRAINING WESTERN ANOMALY	SAND EX CREEK	S SED	N/R	N/A	0.39	0.02	0.03	0.195	0.05	7.99	0.77	85.4	4.55	0.96	0.10	0.12	0.02	0.22	94	19	5		0.513
NORTHWESTERN ANOMALY																										
23	9	24805	667609	8.6 KILOMETRE ALONG TRACK	FINE GRAINED MASSIVE SANDSTONE	GRAB	80 - 100	N/A	0.15	0.02	0.05	0.660	0.13	1.20	0.21	89.4	4.36	1.46	0.31	0.12	0.05	2.02	311	30	1		0.470
23	9	24806	667615	9.0 KILOMETRE ALONG TRACK	ANOMALOUS FINE GRAINED SANDSTONE (BACKGROUND 20 CPS)	GRAB	100	N/A	0.15	0.33	0.05	0.353	0.14	1.25	0.28	88.3	4.31	2.63	0.20	0.12	0.05	2.21	1	110	25	<1	0.567
23	9	24808	667601	7.5 KM ALONG TRACK	PEBBLE CONGLOM. WITH PIECES OF WHITE CHERTY DOLOMITE	GRAB	80	N/A	0.02	0.05	0.02	0.003	0.02	0.38	0.19	98.5	0.52	0.43	0.03	0.03	<0.01	0.06	13	<3	2		10.000
23	9	24809	667601	7.5 KM ALONG TRACK	MASSIVE KARNS DOLOMITE	GRAB	40	N/A	0.01	0.05	<0.01	0.002	0.01	0.56	0.23	98.1	0.48	0.79	0.01	0.02	<0.01	0.01	75	<3	4		5.000
23	9	24810	667620	TRACK TO N.W. ANOMALY	FINE GRAINED SANDSTONE WITH COPPER STAIN	GRAB	80	N/A	0.12	<.01	0.04	1.280	0.10	1.53	0.23	89.9	3.33	1.34	0.22	0.17	0.05	1.77	1760	35	30	<1	0.172
23	9	24811	682625	TRACK TO N.W. ANOMALY	MASSIVE KARNS DOLOMITE	GRAB	N/R	WEAK YELLOW	0.06	0.06	<0.01	0.007	0.10	1.26	0.25	95.0	2.44	1.00	0.05	0.07	<0.01	0.12	9	<3	5		7.143
23	9	24813	667638	CREEK DRAINING N.W. ANOMALY	SAND EX CREEK	S. SED	40	N/R	0.31	0.03	0.04	0.078	0.02	11.40	1.13	63.2	3.19	0.82	0.22	0.14	0.03	0.64	31	6	3		
DRILL SITES																										
24	9	24812	788548	DRILL SITES	MASSIVE SANDSTONE AND MINOR CARBONATE	COMP	20 - 40	N/R	0.06	<0.01	0.02	0.014	0.01	0.84	0.22	97.3	1.21	0.44	0.02	0.03	<0.01	0.07	<5	<3	1		1.429
MISCELLANEOUS																										
22	9	24807	667620	CROSSING OF RUNNING CREEK	FLOAT OF BISCUITY DOLOMITE CONGLOMERATE	SPEC	N/R	N/A	0.10	1.61	0.01	0.114	0.09	2.50	0.34	87.6	3.50	3.77	0.05	0.14	0.02	0.56	129	11	30		0.439

PLANS.

40000E 60000E 80000E 00

GULF OF CARPENTARIA

CARPENTARIA

RIVER

Approximate

To Seven Emu Station & Borroloola

CALVERT

Creek

60000N

OLD PUNGALINA HOMESTEAD (nothing left)

BS

Sandy

Creek

Mountain

Creek

24813
24811
24810
24806
24805
24808/09

60000N

Location

1017/18

RIVER

1016

1019

approximate

1020/21

fence

24803/04

21026

21048/49/50

21025

fence

NEW PUNGALINA HOMESTEAD

Perrenial spring

1022

DRILL HOLES 24812.5

Position approximate

Sandy

P?

Woologorang Creek

approximate

1015

1014

1013

Location

AIRSTRIP (location approximate)

CALVERT

Running

BS

40000N

1012

1011

1023

24807

CAMP

P

SEE SEPARATE PLAN FOR SAMPLING IN THESE AREAS

To Borroloola MAIN ROAD To Woologorang

Track continues to Woologorang

1024

N

20000N

Boundary of EL7351

Boundary of former ANZECO tenements

Extent of Aerial radiometric and magnetic data

Extent of detailed gravity data

Radiometric anomaly broad

Radiometric anomaly local

Local radiometric anomalies checked on ground:

BS Black soil

P Phosphate

? Source indeterminate

Drill holes 1982

Areas of detailed radiometric surveys, mapping and sampling 1980/81

•1036 Rock chip sampling 1990

Tracks definite 1990

Tracks vague/overgrown 1990

Roads

Gravity high

Approximate boundary of veneer of Karns dolomite

Basement rock is Masterton Sandstone

0 2 4 6 8 10 Kms

SCALE 1:100,000

LOCATION MAP

INDEX TO ADJOINING 1:100,000 SHEETS

WEARYAN | ROBINSON | GULF of CARPENTARIA | CALVERT RIVER | POELSCHE | PUNGALINA | SELBY | MASSACRE INLET | SURPRISE CREEK | CALVERT HILLS | WOLLOGORANG | WESTMORELAND

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ARGOLD HOLDINGS PTY. LTD. and KRISTON PTY. LTD.

PLAN OF REGION SHOWING POSITION OF EL7351 REGIONAL GEOLOGY AND EXISTING EXPLORATION DATA

Prepared: H.F. GIRSCHIK | Drawn: J.L. MONTGOMERIE

Date: August, 1991 | Grid: AMG

35000N

34000N

87100E

88000E

89100E

AREA OF DETAILED RADIOMETRIC SURVEY

1035 3·0%

1044 16·0%

19·1% P_2O_5 Rock chip

18·3% 1042
14·9% 1043

1047 17·7%

TAGGED PEG

HELIPAD

20576
20577
20578
20579
20580

21022 0·08%

1048 14·6%
1050 11·9%

21023 0·25%

1046 25·0%

21024 4·2%

1041 17·8%

1034 20·0%

1049 1·05%

1045 20·6%

17·3% 1039
11·6% 1040

9·9% 1037
7·1% 1038

1036 0·04%

creek

gully

0 100 200 300 400 500 Metres

SCALE 1:5,000

N

- Flaggy bed (some phosphate)
- Phosphatic bed
- Scarp slope
- Dip
- Shear
- Fold Axis
- Bed contact
- Bed contact (interpreted)
- ⊙ Diamond drill hole
- Fe Ferruginous
- Cu Turquoise
- U High U channel counts
- ⊙3 2·99% / 5m — Drill hole assay result % P_2O_5 / metre
- • 21042 17·4% — Rock chip sample number and P_2O_5 value 1990 sampling
- x 20579 9·16% — Rock chip sample number and P_2O_5 value (where available) 1981/82 sampling
- ⊡ 24816 0·19% — Stream sediment or soil sampling P_2O_5 value 1990 sampling

Adapted from E Davies & D Jack, ANZECO 1981

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ARGOLD HOLDINGS PTY. LTD.
and KRISTON PTY. LTD.

GEOLOGICAL AND SAMPLING PLAN
SOUTHERN AREA
EASTERN ANOMALY

Prepared: H.F. GIRSCHIK	Drawn: J.L. MONTGOMERIE
Date: August, 1991	Grid: AMG

35000N

34500N

34000N

33500N

83000E

84000E

85000E

N

BOUNDARY OF EL

AREA OF DETAILED RADIOMETRIC SURVEY

CAMP ANOMALY

Creek

CAMP

1027 14·2%

1026 0·02%

1033

1030 1·1%

1031 7·2%

24·1% 1028

29·3% 1029

1032 24·6%

F ?

0·19% 24816

21047 0·1%

24814 0·06%

21036 9·9%

2·7% 5·0m

10105

10102

10101

10103

10104

21037 1·4%

24815 0·53%

0·1% 21048

21045 2·8%

0·8% 2·0m

21038 22·3%

21039 1·6%

21044 8·3%

20596 5·42% 4·0m

20592 14·6%

17·4% 21042

21043 9·0%

21041 2·84%

21040 1·7%

10252 0·14%

3161 0·39%

3162 2·13%

20590 1·58%

0·1% 5·0m

3164 9·16%

3163 1·76%

0·1% 3·0m

13·5%

30·1%

12·2%

210031/32/35

21033

21034 17·6%

34·2%

21029 7·1%

21028 1·3%

21030 0·21%

2·99% 5·0m

A

B

C

1

2

3

X

Y

Z

Dip

Shear

Fold Axis

Bed contact

Bed contact (interpreteted)

Alluvium

Z Y X — Sandstone beds (variable laterally) above phosphatic units

1 2 3 — Flaggy phosphatic beds

Phosphatic sandstone

C B A — Sandstone beds (variable laterally) below phosphatic units

Diamond drill hole

Fe Ferruginous

Cu Turquoise

U High U channel counts

Breccia

Track

⊙4 2·99% / 5m Drill hole assay result % P_2O_5 / metre

•21042 17·4% Rock chip sample number and P_2O_5 value 1990 sampling

x 3164 9·16% Rock chip sample number and P_2O_5 value (where available) 1981/82 sampling

⊡24816 0·19% Stream sediment or soil sample P_2O_5 value 1990 sampling

0 100 200 300 400 500 Metres

SCALE 1:5,000

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ARGOLD HOLDINGS PTY. LTD.
and KRISTON PTY. LTD.

GEOLOGICAL AND SAMPLING PLAN SOUTHERN AREA CAMP ANOMALY

Compiled: H.F. GIRSCHIK | Drawn: J.L. MONTGOMERIE

Date: August, 1991 | Grid: AMG

Adapted from E Davies & D Jack, ANZECO 1981