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MEMORANDUM

ТО	Costica Vieru, Harry Mees - Thundelarra Exploration Limited
FROM	Russell Mortimer
DATE	22/01/2013
REPORT NO.	SGC2542
RE	Allamber Project - DHTEM and FLTEM Survey Documentation/Summary Results

1 INTRODUCTION

Downhole TEM (DHTEM) logging of 12 RC drillholes (**TAL055C**, **65**, **68**, **69**, **70**, **72**, **76**, **83**, **84**, **85**, **86** and **TAL087C** - 914m logging) was completed at several prospects (Ox-Eyed Herring, South Brumby and East) within the Allamber Project between the 2nd and 18th November 2012 by Outer Rim Exploration Services Pty. Ltd. (ORE) on behalf of Thundelarra Exploration Limited.

In parallel with the DHTEM programme several large fixed loop TEM (FLTEM) surveys (**OX1**, **OX3** and **OX4** loops - 22.5kms of coverage, 30 lines, 480stns) were also completed at the Ox-Eyed Herring prospect and surrounds between the 31st October and 13th November 2012 again by ORE on behalf of Thundelarra Exploration Limited.

DHTEM and FLTEM surveying was pursued for the local prospect areas of interest given the observed relationship from drilling between the intersections of copper mineralisation and presence of significant iron sulphides (pyrite-pyrrhotite).

This memorandum documents the DHTEM and FLTEM surveying completed to date and mainly focuses on the interpretation/modelling results for the primary anomalies/targets of interest.

All coordinates presented in this memorandum utilise the GDA94 Datum and MGA52 grid projection.

2 SURVEY DETAILS

The transmitter loops utilised during this DHTEM campaign (OX1, OX2, EA1 and SB1) to date have been powered by a 240V Crone transmitter working at 18-20A (single turn loops). The transmitter loops utilised during the FLTEM efforts (OX1, OX3 and OX4) were also powered by a 240V Crone transmitter working at ~20A (single turn loops). All planned transmitter loop positions were aimed at coupling well with the overall shallow to moderate dipping/plunging target sequences in the local Allamber project area. Tables 1 to 6 below provide more detailed summaries and loop locations for the DHTEM and FLTEM efforts respectively. Figures 1 and 2 highlights the overall DHTEM and FLTEM surveying completed during this programme.

Table 1: DHTEM Specifications

Surveyed By	Outer Rim Exploration Services Pty. Ltd.
Survey Date	2 nd to 18 th November, 2012
Survey Type	DHTEM
Transmitter	Crone PEM 240V
Base Frequency	5Hz (50msec time base)
Loops and Sizes	4 loops, from 150x300m to ~275x~450m dimensions
Current	18-20 Amps
Receiver	Crone PEM
Sensor/Probe	Crone 3-component dB/dt probe
Readings/Stacks	2 to 3 readings @ 256+ stacks for Z and XY surveying
Probe Noise Levels	<0.2nT/s Z, <0.5nT/s XY (noise clearly increased with electrical storm activity)
Areas Surveyed	Ox-Eyed Herring, South Brumby, East
Crew Leaders	Tom Torok

Table 2: FLTEM Specifications

Surveyed By	Outer Rim Exploration Services Pty. Ltd.
Survey Date	31 st October to 13 th November, 2012
Survey Type	FLTEM
Transmitter	Crone PEM 240V
Base Frequency	5Hz (50msec time base)
Loops and Sizes	3 loops, from ~275x~450m to 1200x1000m dimensions
Current	20 Amps
Receiver	Crone PEM
Sensor/Probe	Crone 3-component dB/dt probe
Readings/Stacks	1 to 3 readings @ 256-512 stacks for Z and XY surveying
Probe Noise Levels	<0.2nT/s Z, <0.5nT/s XY (noise clearly increased with electrical storm activity)
Areas Surveyed	Ox-Eyed Herring, Ox-Eyed Herring East, Ox-Eyed Herring West
Crew Leaders	Tom Torok

Hole ID	Tx	Tx Base	Data	Prospect Area	Survey Date	Survey	Survey	ЕОН	Coverage
	Loops	Frequency (Hz)	Components			Start (m)	End (m)	(m)	(m)
						. ,	, ,		
TALC055C	EA1	5.0	ZXY	East	18/11/2012	5	70	~73	65
TALC065C	SB1	5.0	ZXY	South Brumby	16/11/2012	5	52	~54	47
TALC068C	OX2	5.0	ZXY	Ox-Eyed Herrring West	14/11/2012	10	134	~134	124
TALC069C	OX1	5.0	ZXY	Ox-Eyed Herring	4/11/2012	5	70	~72	65
TALC070C	OX1	5.0	ZXY	Ox-Eyed Herring	4/11/2012	5	58	~60	53
TALC072C	OX2	5.0	ZXY	Ox-Eyed Herrring West	14/11/2012	10	149	~150	139
TALC076C	OX1	5.0	ZXY	Ox-Eyed Herring	3/11/2012	10	118	~120	108
TALC083C	OX1	5.0	ZXY	Ox-Eyed Herring	2/11/2012	5	82	~84	77
TALC084C	OX1	5.0	ZXY	Ox-Eyed Herring	2/11/2012	5	77	~78	72
TALC085C	OX1	5.0	ZXY	Ox-Eyed Herring	3/11/2012	5	92	~94	87
TALC086C	SB1	5.0	ZXY	South Brumby	15/11/2012	5	47	~48	42
TALC087C	SB1	5.0	ZXY	South Brumby	16/11/2012	5	40	~42	35
				Totals					<mark>914</mark>

 Table 4:
 Summary of FLTEM Acquisition

Line	Tx	Tx Base	Data	Prospect Area	Survey Date	Line Start	Line End	No.	Coverage
	Loops	Frequency	Components					Stns	
		(Hz)				(m)	(m)		(m)
3275E	OX1	5.0	ZXY	Ox-Eyed Herrring	5/11/2012	823275E,	823275E,	7	300
						8497975N	8498275N		
3325E	OX1	5.0	ZXY	Ox-Eyed Herrring	31/10/2012	823325E,	823325E,	9	400
						8497975N	8498375N		
3375E	OX1	5.0	ZXY	Ox-Eyed Herrring	31/10/2012	823375E,	823375E,	13	600
						8497975N	8498575N		
3425E	OX1	5.0	ZXY	Ox-Eyed Herrring	31/10/2012	823425E,	823425E,	13	600
						8497975N	8498575N		
3475E	OX1	5.0	ZXY	Ox-Eyed Herrring	1/11/2012	823475E,	823475E,	13	600
						8497975N	8498575N		
3525E	OX1	5.0	ZXY	Ox-Eyed Herrring	1/11/2012	823525E,	823525E,	8	350
						8498225N	8498575N		
3575E	OX1	5.0	ZXY	Ox-Eyed Herrring	5/11/2012	823575E,	823575E,	6	250
						8498325N	8498575N		
3575E	ОХЗ	5.0	Z	Ox-Eyed Herring	10/11/2012	823575E,	823575E,	22	1050
				East		8497850N	8498900N		
3675E	ОХЗ	5.0	Z	Ox-Eyed Herring	10/11/2012	823675E,	823675E,	22	1050
				East		8497850N	8498900N		
3775E	ОХЗ	5.0	Z	Ox-Eyed Herring	11/11/2012	823775E,	823775E,	22	1050
				East		8497850N	8498900N		
3875E	ОХЗ	5.0	Z	Ox-Eyed Herring	11/11/2012	823875E,	823875E,	22	1050
				East		8497850N	8498900N		
3975E	ОХЗ	5.0	Z	Ox-Eyed Herring	11/11/2012	823975E,	823975E,	22	1050
				East		8497850N	8498900N		
4075E	ОХЗ	5.0	Z	Ox-Eyed Herring	11/11/2012	824075E,	824075E,	22	1050
				East		8497850N	8498900N		
4175E	ОХЗ	5.0	Z	Ox-Eyed Herring	12/11/2012	824175E,	824175E,	22	1050
				East		8497850N	8498900N		
4275E	ОХЗ	5.0	Z	Ox-Eyed Herring	12/11/2012	824275E,	824275E,	22	1050
				East		8497850N	8498900N		

4375E	OX3	5.0	Z	Ox-Eyed Herring	12/11/2012	824375E,	824375E,	22	1050
				East		8497850N	8498900N		
4475E	ОХЗ	5.0	Z	Ox-Eyed Herring	12/11/2012	824475E,	824475E,	22	1050
				East		8497850N	8498900N		
4575E	ОХЗ	5.0	Z	Ox-Eyed Herring	13/11/2012	824575E,	824575E,	22	1050
				East		8497850N	8498900N		
4675E	ОХЗ	5.0	Z	Ox-Eyed Herring	13/11/2012	824675E,	824675E,	22	1050
				East		8497900N	8498900N		
1N	OX4	5.0	Z	Ox-Eyed Herring	8/11/2012	823111E,	822418E,	17	800
				West		8497670N	8498070N		
2N	OX4	5.0	Z	Ox-Eyed Herring	7/11/2012	823161E,	822468E,	17	800
				West		8497756N	8498156N		
3N	OX4	5.0	Z	Ox-Eyed Herring	7/11/2012	823211E,	822518E,	17	800
				West		8497843N	8498243N		
4N	OX4	5.0	Z	Ox-Eyed Herring	7/11/2012	823045E,	822568E,	12	550
				West		8498055N	8498330N		
5N	OX4	5.0	Z	Ox-Eyed Herring	7/11/2012	823095E,	822618E,	12	550
				West		8498141N	8498416N		
6N	OX4	5.0	Z	Ox-Eyed Herring	7/11/2012	823145E,	822668E,	12	550
				West		8498228N	8498503N		
6AN	OX4	5.0	Z	Ox-Eyed Herring	9/11/2012	823170E,	822693E,	12	550
				West		8498271N	8498546N		
7N	OX4	5.0	Z	Ox-Eyed Herring	7/11/2012	823195E,	822718E,	12	550
				West		8498314N	8498589N		
7AN	OX4	5.0	Z	Ox-Eyed Herring	9/11/2012	823220E,	822743E,	12	550
				West		8498358N	8498633N		
8N	OX4	5.0	Z	Ox-Eyed Herring	6/11/2012	823245E,	822768E,	12	550
				West		8498401N	8498676N		
9N	OX4	5.0	Z	Ox-Eyed Herring	6/11/2012	823251E,	822818E,	12	550
				West		8498513N	8498763N		
				Totals				<mark>480</mark>	<mark>22500</mark>

 Table 5:
 DHTEM - Transmitter Loop Coordinates

Loop	Size	Turns	Tx Corner					
			1	2	3	4	5	6
EA1	300 x 250m	1	826300E,	826600E,	826600E,	826300E,	-	-
			8498200N	8498200N	8498450N	8498450N		
SB1	300 x 200m	1	823000E,	823300E,	823300E,	823000E,	-	-
			8497425N	8497425N	8497625N	8497625N		
OX2	150 x 300m	1	822860E,	823072E,	822966E,	822754E,	-	-
			8497936N	8498148N	8498254N	8498042N		
OX1	~275 x ~450m	1	823250E,	823500E,	823575E,	823625E,	823375E,	823250E,
			8498100N	8498100N	8498250N	8498550N	8498550N	8498250N

 Table 6:
 FLTEM - Transmitter Loop Coordinates

Loop	Size	Turns	Tx Corner					
			1	2	3	4	5	6
OX1	~275 x ~450m	1	823250E,	823500E,	823575E,	823625E,	823375E,	823250E,
			8498100N	8498100N	8498250N	8498550N	8498550N	8498250N
OX3	1200 x 1000m	1	823525E,	824725E,	824725E,	823525E,	-	-
			8497875N	8497875N	8498875N	8498875N		
OX4	900 x 500m	1	822848E,	823298E,	822865E,	822415E,	-	-
			8497764N	8498543N	8498793N	8498014N		

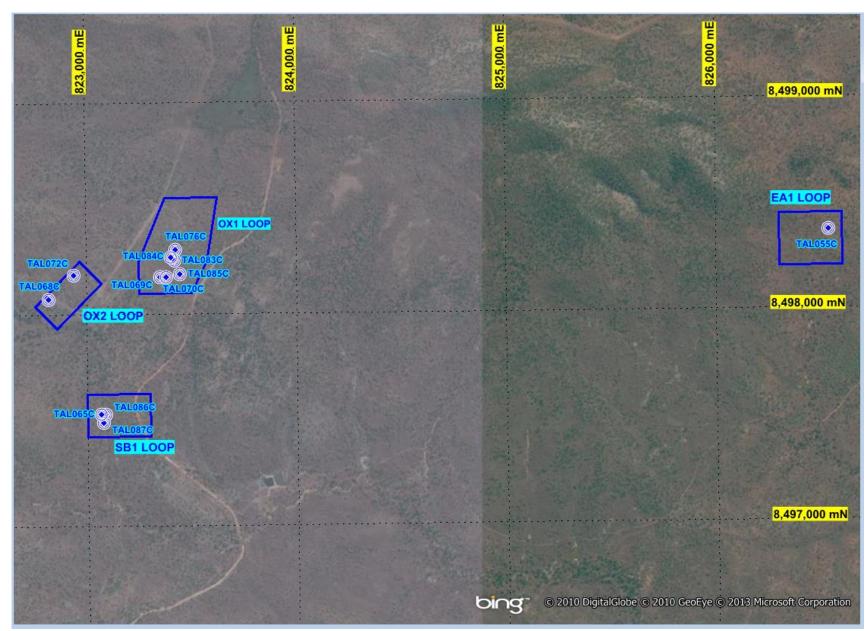


Figure 1 - Allamber DHTEM Surveys as at November 2012 - Loops and Collars

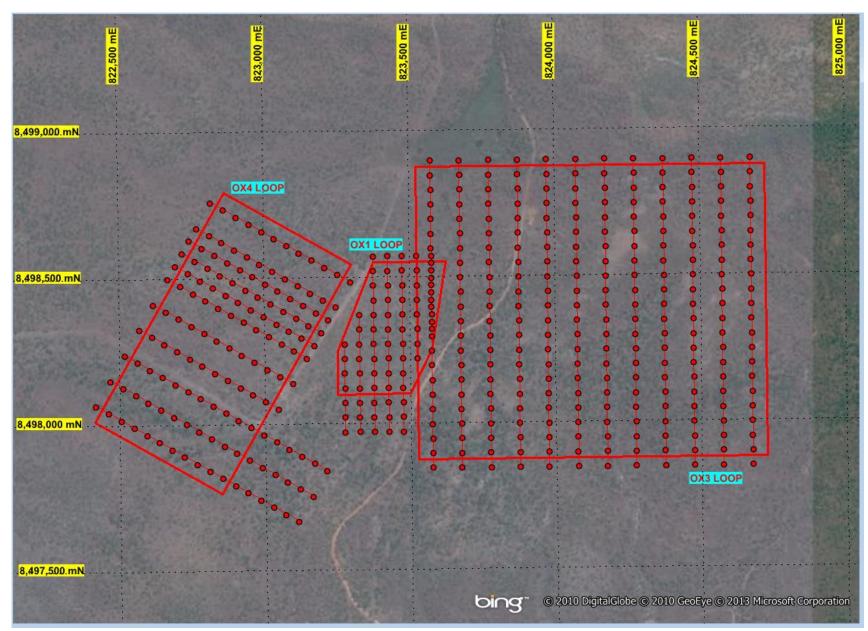


Figure 2 - Allamber FLTEM Surveys as at November 2012 - Loops, Lines and Stations

3 PROCESSING AND FINAL DATA

All DHTEM and FLTEM data were delivered by Outer Rim Exploration Services Pty. Ltd. as AMIRA format ASCII text files. All quality control and data analysis were carried out using Maxwell EM software. Final data files received from Outer Rim and also final processed SGC data files for all the surveys accompany this report. Mapinfo format data files for final survey locations (collars, lines, stations and loops) are also provided with this report.

Profiles of the final DHTEM and FLTEM data are presented in **Appendix 1** and **Appendix 2** respectively. These profile plots use both logarithmic and linear presentations to best summarise the observed data.

All final DHTEM and FLTEM model results are supplied with this report in 3D DXF, Surpac string/DTM and mapinfo 2D file formats.

4 DATA AND INTERPRETATION

This report outlines the survey parameters/specifications, production details, modelling and interpretation for the full downhole and fixed loop time-domain electromagnetic (DHTEM and FLTEM) survey programmes completed at the Allamber Project.

A total of 12 holes were surveyed with DHTEM (**TAL055C**, **65**, **68**, **69**, **70**, **72**, **76**, **83**, **84**, **85**, **86** and **TAL087C**) between the 2nd and 18th November 2012, totalling 914m of logging. DHTEM interpretation and modelling details are outlined below for each of the prospect areas.

Three moderate to large FLTEM surveys (**OX1**, **OX3** and **OX4** loops) were completed between the 31st October and 13th November 2012, totalling 22.5kms of coverage (30 lines, 480stns). FLTEM interpretation and modelling details are outlined below for each of the prospect areas.

4.1 DHTEM

DHTEM logging was performed at four prospect areas (East, South Brumby, Ox-Eyed Herring and Ox-Eyed Herring West), with primary focus being at Ox-Eyed Herring given coherent existing intersections of copper mineralisation associated with significant iron sulphides (pyrite-pyrrhotite). A detailed account of the DHTEM surveying completed, observations, modelling/interpretation for all prospects is provided in the following sections.

4.1.1 EAST PROSPECT

A single DHTEM survey (**TAL055C**) was completed at the East Prospect to detect the presence of any inhole/offhole anomalism. **TAL055C** was drilled adjacent to a westerly dipping conductive zone identified in a previous GA TEMPEST survey (L1193 between ~826250-826500mE).

TAL055C

TAL055C (826539E, 8498374N, 139RL, ~73m EOH) was logged from 5-70m at 5m stations (**EA1** loop) on the 18th November 2012. Noise levels in the three component data were low-moderate averaging <0.25nT/s in Z data and <0.5nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly adequate for the local environment with overburden / background conductivity conditions being low-moderate and background noise levels being reached by ~CH30-32 (~13.2-19.3msec delay).

No anomalies of significance were identified in the resultant DHTEM dataset. The observed conductive zone/feature identified in the GA TEMPEST data may represent a broader interval of lower resistivity (higher conductivity); however this unit does not appear to be strong enough to produce a recognisable DHTEM response.

4.1.2 SOUTH BRUMBY PROSPECT

Three exploration drillholes at the South Brumby prospect were logged with DHTEM (**TAL065C**, **TAL086C** and **TAL087C**). Mapping and limited drill testing to date has outlined the presence of a localised NNW-SSE striking, moderate east dipping mineralised unit/structure. DHTEM logging was aimed at defining any significant inhole/offhole anomalies relating to intersected, shallow copper mineralisation and potential depth/lateral extensions.

TAL065C

TAL065C (823066E, 8497535N, 134RL, ~54m EOH) was logged from 5-52m at 2-5m stations (**SB1** loop) on the 16th November 2012. Noise levels in the three component data were low-moderate averaging <0.25nT/s in Z data and <0.5nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was sufficient for the local environment with overburden / background conductivity conditions being low-moderate and background noise levels being reached by ~CH30-32 (~13.2-19.3msec delay).

Resultant **TAL065C** DHTEM data highlighted the presence of a localised and shallow inhole/offhole anomaly centred at ~10-15m DH (**TAL065C_1**). The related conductive source is clearly of limited dimensions and is of limited strength. No clear XY/directional information was defined by the DHTEM surveying. Observed DHTEM anomalism clearly appears coincident with intersected copper mineralisation (vein-silicification with pyrite/pyrrhotite), however the related conductive unit appears to be of very limited areal size.

TAL086C

TAL086C (823090E, 8497533N, 134RL, ~48m EOH) was logged from 5-47m at 2-5m stations (**SB1** loop) on the 15th November 2012. Noise levels in the three component data were low-moderate averaging <0.25nT/s in Z data and <0.5nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was sufficient for the local environment with overburden / background conductivity conditions being low-moderate and background noise levels being reached by ~CH30-32 (~13.2-19.3msec delay).

Resultant **TAL086C** DHTEM data defined minor anomalism at ~30-40m DH (**TAL086C_1**), with the related conductive source being of very limited dimensions and strength. No clear XY/directional information was defined by the DHTEM surveying. This minor DHTEM anomalism appears to be approximately coincident with the intersected anomalous copper zone at ~36-38m DH.

TAL087C

TAL087C (823076E, 8497493N, 134RL, ~42m EOH) was logged from 5-40m at 5m stations (**SB1** loop) on the 16th November 2012. Noise levels in the three component data were low-moderate averaging <0.25nT/s in Z data and <0.5nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly adequate for the local environment with overburden / background conductivity conditions being low-moderate and background noise levels being reached by ~CH30-32 (~13.2-19.3msec delay).

TAL087C DHTEM data defined minor anomalism at ~25-35m DH (**TAL087C_1**), with the related conductive source being of very limited dimensions and strength. No clear XY/directional information was defined by the DHTEM surveying. This minor DHTEM anomalism may be approximately coincident with an intersected, narrow zone (~1m) of copper mineralisation.

4.1.3 OX-EYED HERRING WEST PROSPECT

Two exploration drillholes at the Ox-Eyed Herring West prospect were logged with DHTEM (**TAL068C** and **TAL072C**). Limited drill testing to date below soil copper anomalies in the vicinity of a granite-metasediment contact has outlined the presence of low grade copper mineralisation within quartz-sulphide veining (**TAL067C** and **TAL072C**). DHTEM surveying was aimed at defining any significant inhole/offhole anomalies relating to copper mineralisation intersected and potential depth/lateral extensions.

TAL068C

TAL068C (822820E, 8498080N, 140RL, ~134m EOH) was surveyed from 10-134m at 4-5m stations (OX2 loop) between the 14th and 17th November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH25 (~5.1msec delay).

Resultant **TAL068C** DHTEM data highlighted the presence of several clear, inhole/offhole anomalies centred at ~30-35m, ~115-120m and ~130m+. At this stage it is unclear as to whether these anomalies relate to intersected copper mineralisation/anomalism or conductive units/horizons of limited interest (ie. sediments/graphite).

A weak inhole/offhole anomaly was apparent at ~30-35m DH (**TAL068C_1**). The associated anomaly is of limited strength and defined primarily in the early-mid channel DHTEM data. The related conductive source is clearly of limited dimensions and unlikely to be a target for further follow-up.

A well defined, localised inhole/offhole anomaly was observed at ~115-120m DH (**TAL068C_2**). This anomaly is dominant in the mid-late channel DHTEM data and of reasonable strength; however the associated source is of very limited areal extent and unlikely to be a target for further follow-up. Radial XY data indicates that the intersected conductive source is centred dominantly below and SW of the drillhole.

A broader, inhole/offhole type anomaly was defined at ~130m+ DH (**TAL068C_3**). Again this anomaly is dominant in the mid-late channel DHTEM data and of reasonable strength. It is unclear whether the drillhole has intersected the related conductive unit or it may be just beyond the current EOH depth. The associated conductive source may have reasonable areal size and is clearly centred below and NE of the drillhole.

TAL072C

TAL072C (822942E, 8498194N, 150RL, ~150m EOH) was surveyed from 10-149m at 4-5m stations (OX2 loop) on the 14th November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH25 (~5.1msec delay).

TAL072C DHTEM data defined two inhole/offhole anomalies centred at ~45-50m and ~100-130m. The upper DHTEM anomaly appears to be coincident with intersected, low grade copper mineralisation (<1% Cu) relating to quartz-pyrite-chalcopyrite veining.

A weak inhole/offhole anomaly was apparent at ~45-50m DH (**TAL072C_1**). The associated anomaly is of limited strength and defined primarily in the early-mid channel DHTEM data. The related conductive source appears to be of limited dimensions and/or electrical continuity. Radial XY data indicates that the intersected conductive source is centred above and strongly SW of the drillhole but is of limited size.

A broad, diffuse inhole type anomaly was apparent at ~100-130m DH (TAL072C_2) migrating deeper with delay time). This anomaly is dominant in the mid channel DHTEM data and of weak-moderate strength. The associated source may relate to a broad weakly conductive unit (stratigraphic sediments/graphite?) and is unlikely to be a target for further follow-up. Radial XY data indicates that this broad conductive source is centred below and NE of the drillhole and may have reasonable areal size.

4.1.4 OX-EYED HERRING PROSPECT

Six exploration drillholes at the main Ox-Eyed Herring prospect were surveyed with DHTEM (TAL069C, TAL070C, TAL076C, TAL083C, TAL084C and TAL085C) to delineate any significant inhole/offhole anomalism and guide further drill testing. Drilling to date below coincident soil copper and aeromagnetic anomalies wholly within granite has outlined the presence of significant copper mineralisation (Tarpon Lode) within quartz-sulphide veining (pyrrhotite-pyrite-chalcopyrite). DHTEM surveying was aimed at outlining any significant inhole/offhole anomalies relating to copper mineralisation intersected and potential depth/lateral extensions.

TAL069C

TAL069C (823352E, 8498179N, 144RL, ~72m EOH) was surveyed from 5-70m at 2-5m stations (**OX1** loop) on the 4th November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH30+ (~14.1msec+ delay).

A strong localised inhole/offhole anomaly was observed at ~19-21m DH (**TAL069C_1**). This clearly relates to narrow copper mineralization intersected at ~19-20m DH (~1m @ 1.1%Cu). Radial XY data clearly indicates that the associated conductive source is dominantly centred somewhat below and south of the hole. Decay curve analysis indicates that the local conductive source has a moderate time constant of ~4.5msec.

Maxwell modeling provided a robust model fit to the observed data (**Figure 3**) and confirmed the manual interpretation. The associated conductive source is defined to be ~25x25m in areal size, moderate easterly/NE dipping/plunging and of moderate conductance (~1500-2000S) indicating the presence of reasonable levels of pyrrhotite.

A weak additional inhole type anomaly was apparent at ~32-36m DH (**TAL069C_2**) in the early channel data. This appears to relate to a narrow additional zone of copper mineralization intersected at ~33-34m DH (~1m @ 0.52%Cu). XY data defines the conductive source as being centred dominantly above and south of the drillhole. The associated source is expected to be of limited areal dimensions (<15x15m) given the anomaly wavelength.

TAL070C

TAL070C (823382E, 8498180N, 144RL, $^{\sim}$ 60m EOH) was surveyed from 5-58m at 3-5m stations (**OX1** loop) on the 4th November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable

for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH30+ (~14.1msec+ delay).

A strong localised inhole/offhole anomaly was observed at ~20-28m DH (**TAL070C_1**). Again this clearly relates to copper mineralization intersected at ~22-26m DH (~4m @ 0.3%Cu). Radial XY data clearly defines that the associated conductive source is dominantly centred above and somewhat north of the hole. Decay curve analysis indicates that the local conductive source has a low-moderate time constant of ~2.5msec and is not the same conductive source as intersected in **TAL069C** (**TAL069C_1**).

Maxwell modeling again provided a well constrained model fit to the observed data (Figure 4) and confirmed the manual interpretation efforts. The associated conductive source is defined to be <20x20m in areal size, shallow easterly/NE dipping/plunging and of moderate-high conductance (~2000-2500S) indicating the presence of reasonable/strong levels of pyrrhotite.

A weak additional inhole type anomaly was apparent at ~31-35m DH (**TAL070C_2**) in the early channel data. This appears to relate to a narrow additional zone of copper mineralization intersected at ~31-33m DH (~2m @ 0.38%Cu). Radial XY data defines the conductive source as being centred dominantly above and south of the drillhole. The associated source is expected to be of limited areal dimensions (<15x15m) given the anomaly wavelength.

TAL076C

TAL076C (823426E, 8498309N, 145RL, ~120m EOH) was surveyed from 10-118m at 3-5m stations (**OX1** loop) on the 3rd November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH30+ (~14.1msec+ delay). A number of DHTEM anomalies have been outlined with this survey.

A strong broader offhole anomaly was apparent at ~45m DH (TAL076C_1). This anomalism clearly relates to the conductive source outlined in TAL083C (TAL083C_1 - see below) situated ~25m below and S/SW of TAL076C. Decay curve analysis indicates that the local conductive source has a moderate time constant of ~9msec which confirms it as being related to the DHTEM anomaly in TAL083C (TAL083C_1).

A local offhole anomaly was observed at ~65-70m DH (**TAL076C_2**). The associated conductive source is of limited areal size and situated <10m above and N/NE of the drillhole. Decay curve analysis indicates that the local conductive source has a low-moderate time constant of ~2msec.

A weak and localised inhole/offhole anomaly was apparent at ~80-85m DH (**TAL076C_3**). The associated anomaly is of limited strength and defined primarily in the early-mid channel DHTEM data. The related conductive source appears to be of very limited dimensions and/or electrical continuity. Radial XY data indicates that the intersected conductive source is centred above and N/NE of the drillhole but is of limited size. This anomaly appears most likely related to a narrow zone of copper mineralization intersected at ~76-78m DH (~2m @ ~1.15%Cu).

A moderate localised inhole anomaly was observed at ~105-110m DH (TAL076C_4). This appears to relate to low grade copper mineralization intersected at ~108-110m DH (~2m @ 0.26%Cu). Radial XY data clearly defines that the associated conductive source is dominantly centred below and north/NE of the hole. Decay curve analysis indicates that the local conductive source has a low time constant of ~1.2msec.

Combined Maxwell modeling provided a reasonable model fit to the observed data given the complexity of multiple sources (Figure 5 - TAL076C_2 and TAL076C_4 models displayed, TAL083C_1 response also included).

TAL083C

TAL083C (823423E, 8498258N, 145RL, ~84m EOH) was surveyed from 5-82m at 2-5m stations (**OX1** loop) on the 2nd November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH30+ (~14.1msec+ delay).

A strong inhole anomaly was apparent at ~55-60m DH (**TAL083C_1**). This anomalism clearly relates to copper mineralization intersected at ~54-60m DH (~6m @ 0.82%Cu). Radial XY data clearly defines that the associated conductive source is dominantly centred below and north of the hole. Decay curve analysis indicates that the local conductive source has a moderate time constant of ~9msec.

Maxwell modeling provided a robust model fit to the acquired data (Figure 6) and confirmed initial manual interpretation. The associated conductive source is defined to be ~30x30m in dimensions, near flat lying / shallow NE dipping/plunging and of moderate-high conductance (~2500-3000S) indicating the presence of reasonable/strong levels of pyrrhotite.

TAL084C

TAL084C (823404E, 8498272N, 145RL, ~78m EOH) was surveyed from 5-77m at 2-5m stations (**OX1** loop) on the 2nd November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH30+ (~14.1msec+ delay).

A complex/multiple strong local offhole anomaly was apparent at ~45-55m DH (TAL084C_1 combined with above TAL083C_1 broader anomaly). This anomalism clearly relates to offhole better developed extents of copper mineralization intersected at ~48-56m DH (~8m @ 0.49%Cu). XY data clearly defines that the associated conductive local source is situated <10m above and south of the drillhole. Decay curve analysis indicates that the local conductive source has a moderate time constant of ~8msec and is not the same conductive source as intersected in TAL084C (TAL084C_1).

Maxwell modeling provided a reasonably robust model fit to the observed data (Figure 7) combining two conductive sources TAL083C_1 (broader observed wavelength) and TAL084C_1. The associated conductive source (TAL084C_1) is defined to be ~30x20m in size, near flat lying / shallow NE dipping/plunging and of moderate conductance (~1500-2000S) indicating the presence of reasonable levels of pyrrhotite.

TAL085C

TAL085C (823447E, 8498193N, 140RL, ~94m EOH) was surveyed from 5-92m at 2-5m stations (**OX1** loop) on the 3rd November 2012. Noise levels in the three component data were low averaging <0.2nT/s in Z data and <0.4nT/s in XY data. The 5Hz base frequency utilized for this DHTEM survey was clearly suitable for the local environment with overburden / background conductivity conditions being low and background noise levels being reached by ~CH30+ (~14.1msec+ delay).

A strong inhole/offhole anomaly was defined at ~60m DH (**TAL085C_1**). This anomalism clearly relates to narrow well developed copper mineralization intersected at ~60-62m DH (~2m @ 1.38%Cu). Radial XY data clearly defines that the associated conductive source is of limited areal size and centred above and west of the drillhole. Decay curve analysis indicates that the local conductive source has a low-moderate time constant of ~2.2msec.

In late channels a clear broader offhole anomaly was apparent and centred at ~80-85m DH (**TAL085C_2**). XY data defines the associated conductive source as being of reasonable size and situated ~20m above and somewhat NE of the hole. Decay curve analysis indicates that the local conductive source has a moderate time constant of ~6-7msec.

Maxwell modeling of both abovementioned anomalies provided a reasonably well constrained model fit to the observed data (Figure 8) combined with both TAL083C_1 and TAL084C_1 conductive sources. The associated conductive source (TAL085C_1) is defined to be very limited in dimensions ~5x5m in size, near flat lying / shallow NE dipping/plunging and of moderate-high conductance (~2500-3000S) indicating the presence of reasonable levels of pyrrhotite. The broader offhole conductive source (TAL085C_2) is outlined as being of ~20x20m in size, near flat lying / shallow NE dipping/plunging and of moderate-high conductance (~2500-3000S) indicating the presence of reasonable levels of pyrrhotite. This source appears to be situated at a lower level than the TAL083C_1 and TAL084C_1 conductive sources.

4.1.5 OVERALL DHTEM RESULTS DISCUSSION

No anomalies of significance were identified in the resultant **TAL055C** DHTEM dataset at the East Prospect. The observed conductive zone/feature identified in the GA TEMPEST data may represent a broader interval of lower resistivity (higher conductivity); however this unit does not appear to be strong enough to produce a recognisable DHTEM response.

Weak/minor DHTEM anomalism has been noted at the South Brumby Prospect in all logged holes (TAL065C, TAL086C and TAL087C) and these appear to be coincident with intersected copper mineralisation/anomalism. All observed anomalies are of limited strength and areal size, however this could relate to a limited concentration/connectivity of iron/Cu sulphides. Local mineralisation may be more of an IP type target than an EM type target if further geophysical exploration is to be considered.

At the Ox-Eyed Herring West Prospect (**TAL068C** and **TAL072C**) resultant DHTEM data highlighted the presence of a number of inhole/offhole anomalies. Apart from the upper anomaly defined in **TAL072C** at ~45-50m (appears to relate with low grade copper mineralisation <1%) it is unclear as to whether the remaining anomalies are of potential interest (associated with copper mineralisation/anomalism) or relate to conductive units/horizons of limited interest (ie. sediments/graphite). If there is limited concentration/connectivity of iron/Cu sulphides then local mineralisation may be more of an IP type target than an EM type target if further geophysical exploration is to be considered.

Numerous moderate to strong inhole/offhole DHTEM anomalies were observed at the main Ox-Eyed Herring Prospect (TAL069C, TAL070C, TAL076C, TAL083C, TAL084C and TAL085C). DHTEM modelling provided well constrained model fits for the majority of the defined anomalies, a full compilation of the model results is presented in Figure 9. Local well developed copper mineralisation appears to be clearly coincident with the DHTEM models. The majority of the DHTEM models are of reasonably limited dimensions and the mineralised system could be more continuous between current drillholes than would appear from the DHTEM summary, however the conductive sources are likely podiform in nature / electrically disconnected local blocks/plates of well developed sulphide mineralisation.

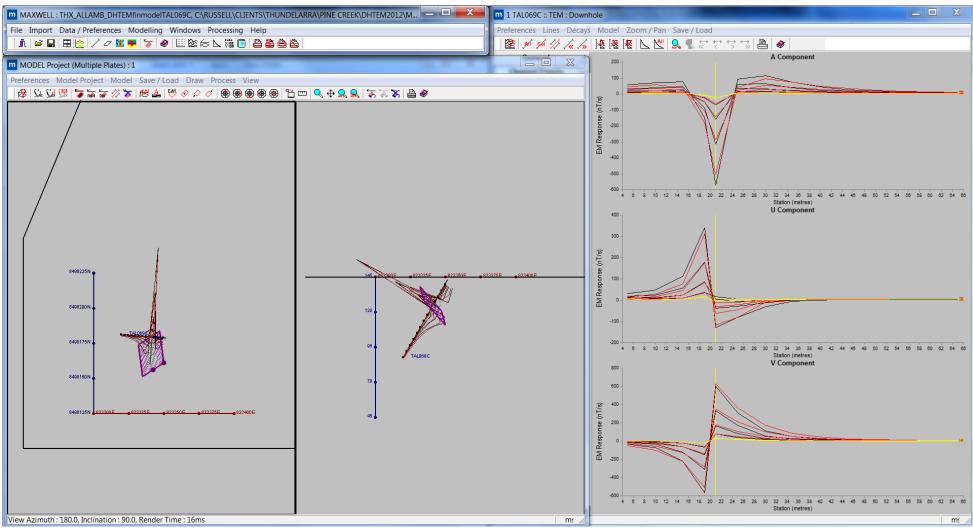


Figure 3 - Ox-Eyed Herring DHTEM Model Results - TAL069C

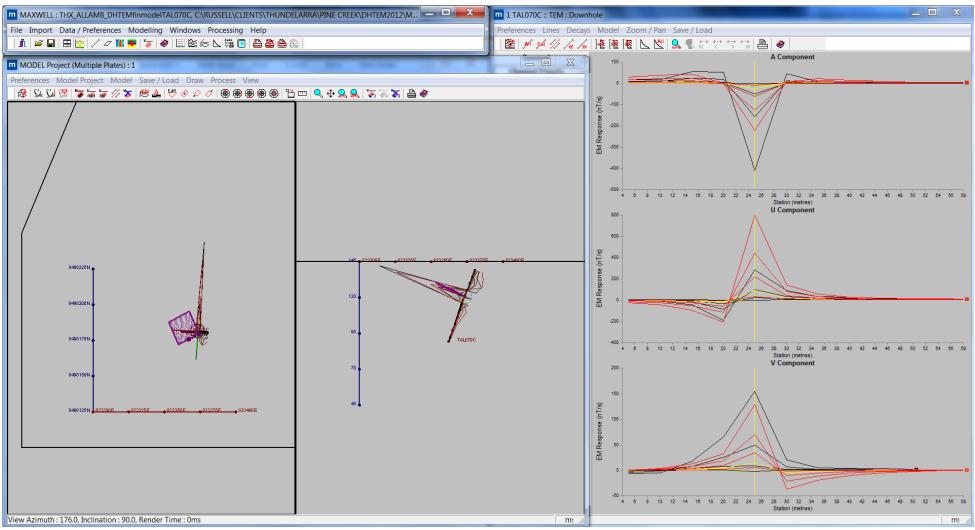


Figure 4 - Ox-Eyed Herring DHTEM Model Results - TAL070C

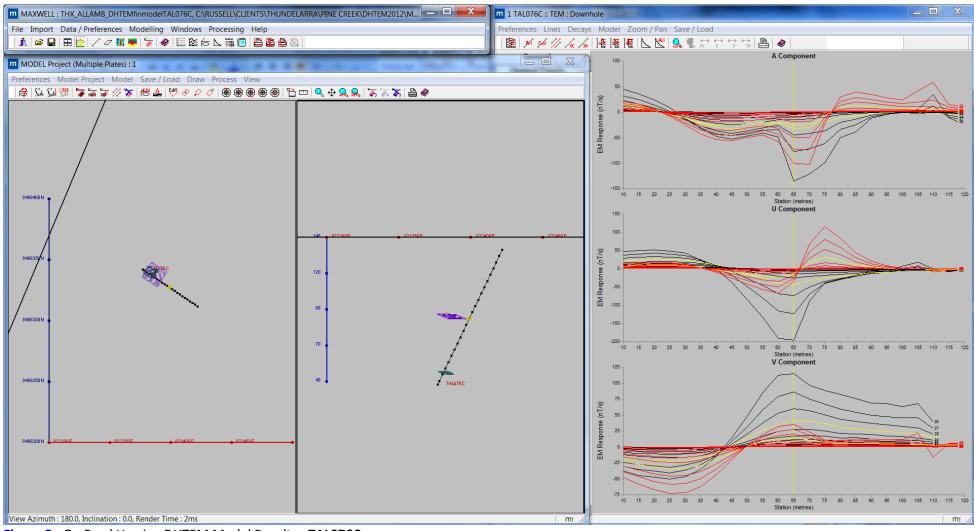


Figure 5 - Ox-Eyed Herring DHTEM Model Results - TAL076C

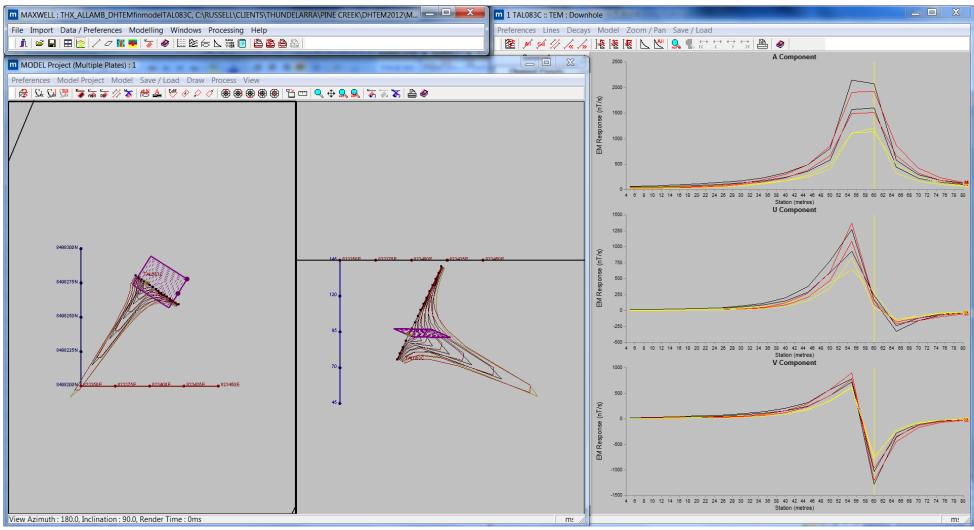


Figure 6 - Ox-Eyed Herring DHTEM Model Results - TAL083C

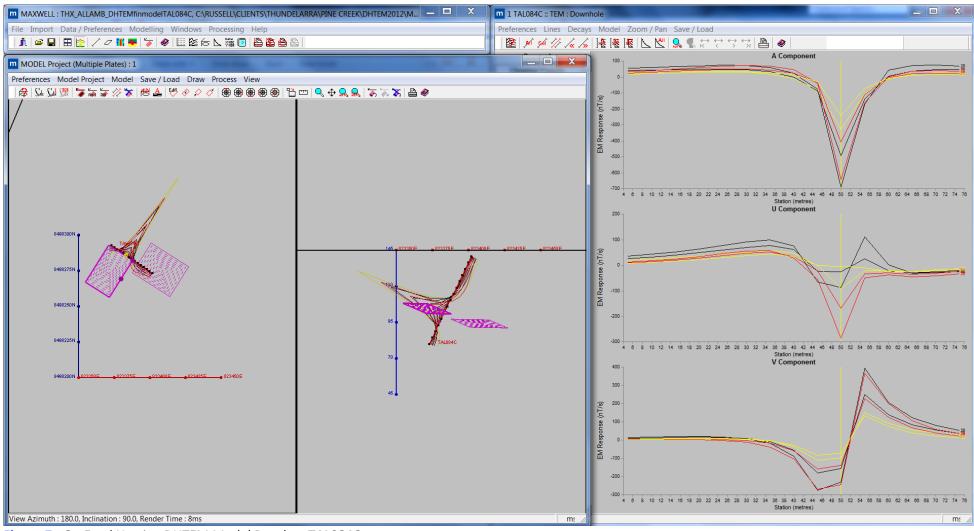


Figure 7 - Ox-Eyed Herring DHTEM Model Results - TAL084C

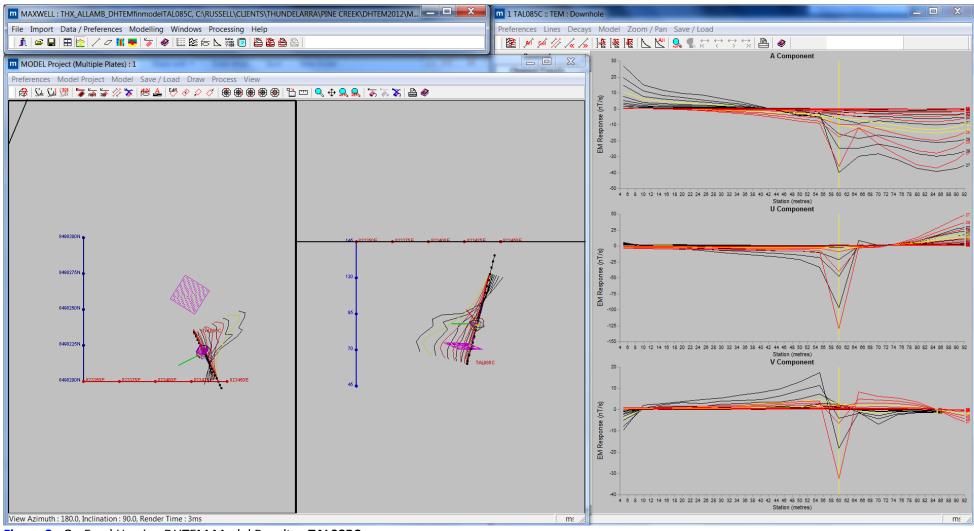


Figure 8 - Ox-Eyed Herring DHTEM Model Results - TAL085C

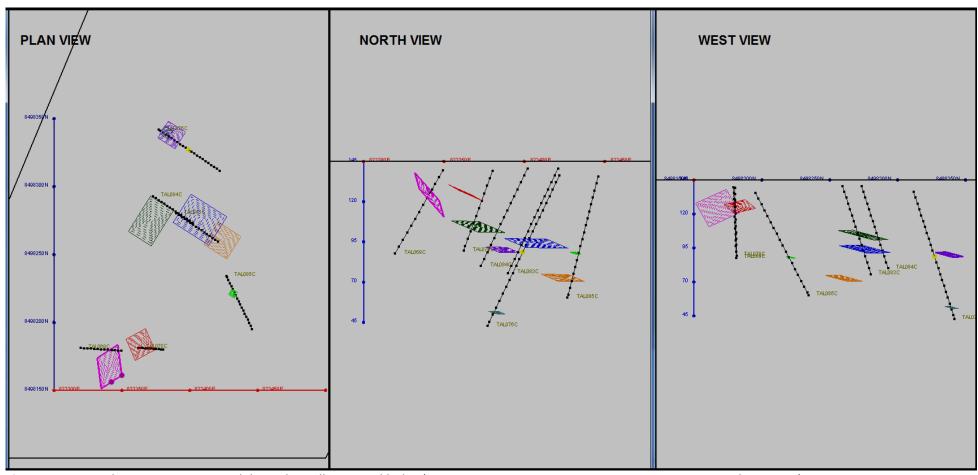


Figure 9 - Ox-Eyed Herring DHTEM Model Results - All surveyed holes (TAL069C, TAL070C, TAL076C, TAL083C, TAL084C and TAL085C)

4.2 FLTEM

FLTEM surveying was performed at three prospect areas (Ox-Eyed Herring, Ox-Eyed Herring East and Ox-Eyed Herring West - OX1, OX3 and OX4 loops), with primary focus/detailing being at Ox-Eyed Herring given coherent existing intersections of copper mineralisation associated with significant iron sulphides (pyrite-pyrrhotite). A detailed account of the FLTEM surveying efforts completed, observations, modelling and interpretation is presented in the following sections.

4.2.1 OX-EYED HERRING PROSPECT

Local/detailed FLTEM surveying was completed at the main Ox-Eyed Herring Prospect between the 31st October and 5th November 2012 (**OX1** Loop). A total of seven survey lines for a coverage of 3.1kms (69stns) were acquired with ZXY (3D) components (polarities - Z+ Up, X+ North and Y+ West). Average noise levels in the data were low at <0.2nT/s in the ZXY data acquired and the 5Hz base frequency utilized was clearly suitable for the local environment.

A number of weak to moderate strength local anomalies were observed in the resultant **OX1** loop dataset. Clearly the associated conductive sources were shallowest/near surface in the southern end and deepest in the northern end of the FLTEM survey area (**Figure 10**). A brief outline of observed local anomalies is provided below.

A localised, weak and shallow FLTEM anomaly was apparent primarily on line 3375E in the southern end (8100N) of the survey extents (**OX1_1**). The associated conductive source was expected to be <20m depth to top, of limited conductance given a time constant <1msec and reasonably limited areal dimensions. There does not appear to be any drill testing in the vicinity of this FLTEM anomaly.

An additional localised, shallow FLTEM anomaly was also observed just to the north (~8175N) of **OX1_1** and manifest along two survey lines 3325E and 3375E (**OX1_2**). The associated bedrock conductor was again expected to be shallow at <20m depth to top, of moderate conductance with a time constant of ~2.5msec and limited size. This conductive source appears to be coincident with the DHTEM models obtained from holes **TAL069C** and **TAL070C** (**TAL069C_1** and **TAL070C_1**).

A strong FLTEM anomaly was defined a little further north again (centred ~8275N) and appeared elongate/striking/dipping in an E-W manner over several survey lines (**OX1_3**). The associated conductive source was expected to be at <75m depth to top, of moderate conductance given a time constant of ~8-9msec and reasonable areal size. This conductive source appears to be coincident with the DHTEM models obtained from holes **TAL083C**, **TAL084C** and **TAL085C** (**TAL083C_1**, **TAL084C_1** and **TAL085C_2**).

A broad, strong FLTEM anomaly was also apparent further north (centred ~8400N) and again appeared elongate/striking/dipping in an E-W manner over several survey lines (**OX1_4**). The associated conductive source was expected to be at <100m depth to top, of moderate conductance given a time constant of ~9-11msec and reasonable areal size. No drill testing of this anomaly was completed at the time of the FLTEM surveying; however subsequent targeting of this FLTEM target has confirmed the presence of significant iron sulphides (pyrrhotite) at the approximate target depth.

Maxwell modelling was completed with all anomalies/models incorporated and this provided a robust fit to the observed FLTEM dataset given the use of the full 3D data (ZXY components). Note all model results have utilised a surface RL level of 145 to match the DHTEM model outcomes (Figure 11). OX1_1 was confirmed as being consistent with the presence of a near sub-cropping, moderate-steep easterly dipping/plunging conductive source, of low conductance (~150-200S) and <50x50m in size - somewhat elongate in an N-S manner. OX1_2 was defined as being consistent with the presence of a shallow (<15m depth to top), moderate easterly dipping/plunging conductive source, of moderate conductance (~800-

1100S - modelling both mid channel (**OX1_2M**) and late channel (**OX1_2L**) data) and ~30x30m in size. **OX1_3** was constrained as being consistent with the presence of a moderate depth (~50m depth to top), near flat lying conductive source, of moderate conductance (~1000-1900S - modelling both mid channel (**OX1_3M**) and late channel (**OX1_3L**) data) and ~25x150m in size - elongate/striking in an E-W manner. **OX1_4** was confirmed as being consistent with the presence of a moderate depth (~60m depth to top), moderate easterly dipping/plunging conductive source, of moderate conductance (~400-900S - modelling both mid channel (**OX1_4M**) and late channel (**OX1_4L**) data) and ~50x250m+ in areal size - elongate/striking in an E-W manner.

4.2.2 OX-EYED HERRING EAST PROSPECT

FLTEM surveying was performed immediately east of the main Ox-Eyed Herring Prospect over several target geological/aeromagnetic features between the 10th and 13th November 2012 (OX3 Loop). A total of twelve survey lines for a coverage of 12.6kms (264stns) were acquired with Z component only. Average noise levels in the data were low at <0.2nT/s in the ZXY data acquired and the 5Hz base frequency utilized was clearly adequate for the local electrical environment.

Several weak to moderate strength anomalies were delineated in the resultant OX3 loop dataset. A broad/extensive stratigraphic type conductor dominates this dataset from early channels through to the late channels and runs ~NE-SW in the NW quadrant of the survey coverage (Figure 12). In the latest channels a strong, localised anomaly is apparent in the middle section of the westernmost survey line 3575E (OX3_2). The associated conductive source is likely related to eastern extents/influence of the OX1_3 and OX1_4 conductors within the main Ox-Eyed Herring Prospect. Remaining possible FLTEM anomalies observed are weak and very localised and unlikely to be of exploration significance. A brief discussion of the observed FLTEM anomalies is provided in the following paragraphs.

A broad, stratigraphic type conductive unit is clearly apparent in the OX3 loop dataset throughout all the delay times/channels (OX3_1) and strikes ~NE-SW over at least 1km of extent. The associated conductive source likely outcrops/subcrops in the NW corner/quadrant of the FLTEM survey coverage and may be related to a thick, weakly conductive sequence. In late channels the NE-most defined section of this stratigraphic conductor is best defined / highest amplitude, however this still does not appear to represent a separate/differing target for follow-up at this stage.

Additional weak and localised possible FLTEM anomalies were also apparent along lines 3675E (8175N), 4375E (8700N), 4575E (8500-8600N) and 4675E (8300N and 8650N). However unless these are of direct geological interest / have associated soil anomalism then they are unlikely to warrant any further investigation.

Maxwell modelling was attempted but given the complexity and likely thick nature of the stratigraphic sequence no reasonable model fits/results were achieved. This broad, stratigraphic type conductor is unlikely to be of exploration interest going forward in any case. **OX3_2** and the other weak, localised possible FLTEM anomalies did not warrant modelling efforts. **OX3_2** is clearly related to the already well constrained FLTEM conductors within the main Ox-Eyed Herring Prospect area.

4.2.3 OX-EYED HERRING WEST PROSPECT

FLTEM surveying was also carried out immediately west of the main Ox-Eyed Herring Prospect over an additional target geological sequence between the 6th and 9th November 2012 (OX4 Loop). Limited drill testing to date below soil copper anomalies in the vicinity of a mapped granite-metasediment contact has outlined the presence of low grade copper mineralisation within quartz-sulphide veining A total of eleven survey lines for a coverage of 6.8kms (147stns) were acquired with Z component only. Average noise levels

in the data were low at <0.2nT/s in the ZXY data acquired and the 5Hz base frequency utilized was clearly adequate for the local electrical environment.

Two well defined FLTEM anomalies were defined in the resultant OX4 loop dataset (Figure 13). A strong, localised FLTEM anomaly was apparent in the NE section of the FLTEM survey area (dominant along lines 6AN and 7N). A second broader/deeper FLTEM anomaly was delineated in the SE quadrant of the survey coverage completed. A brief discussion of the observed FLTEM anomalies is provided below.

A strong, localised FLTEM anomaly was defined along several lines in the NE section (**OX4_1**), striking approximately NE-SW. The associated conductive source was expected to be at <50m depth to top, of high conductance given a time constant of >12msec and reasonably limited strike extent. Additional infill surveying (lines 6AN and 7AN) clearly assisted delineation of this anomaly. No drill testing of this anomaly has been completed to date.

A broad, strong FLTEM anomaly was also apparent in the SE quadrant of the survey area (**OX4_2**), striking again approximately NE-SW. The bedrock conductive source was expected to be at >150m depth to top, of moderate conductance given a time constant of >11msec and reasonably large dimensions. No drill testing of this anomaly has been completed to date.

Maxwell modelling was completed for both anomalies (**OX4_1** and **OX4_2**) and this provided well constrained model fits to the observed FLTEM dataset. Note all model results have utilised a surface RL level of 145 to match the DHTEM model outcomes (**Figure 14**). **OX4_1** was confirmed as being consistent with the presence of a reasonably shallow (~30-40m depth to top), moderate E/SE dipping/plunging conductive source, of high conductance (>10000S - seems very high - modelling both mid channel (**OX4_1M**) and late channel (**OX4_1L**) data), short strike length (~20m) and reasonable depth/plunge extent (~200m+). At such high conductance levels the **OX4_1** conductive source is believed to be consistent with the presence of a massive sulphide unit with significant pyrrhotite. **OX4_2** was defined as being consistent with the presence of a deep (~200m depth to top), moderate SE dipping/plunging conductive source, of moderate conductance (~300-900S - modelling early channel (**OX4_2E**), mid channel (**OX4_2M**) and late channel (**OX4_2L**) data) and large areal size (>100x400m).

If the **OX4** 1 and **OX4** 2 are of geological interest then the following drill targets are recommended:

OX4_1 - 823040E, 8498370N, 60dip > 300az, target zone ~50-100m DH, ~125-150m EOH

OX4_2 - 822875E, 8497900N, 75dip > 300az, target zone ~250-350m DH, ~375-400m EOH

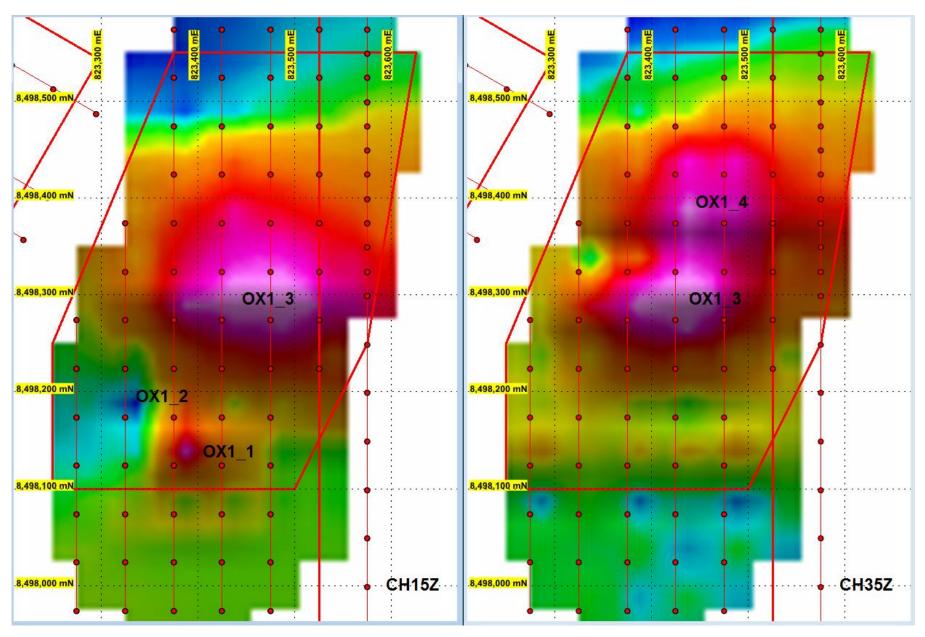


Figure 10 - Ox-Eyed Herring (OX1 Loop) FLTEM Survey Results - Early Channel CH15Z (left) and Late Channel CH35Z (right)

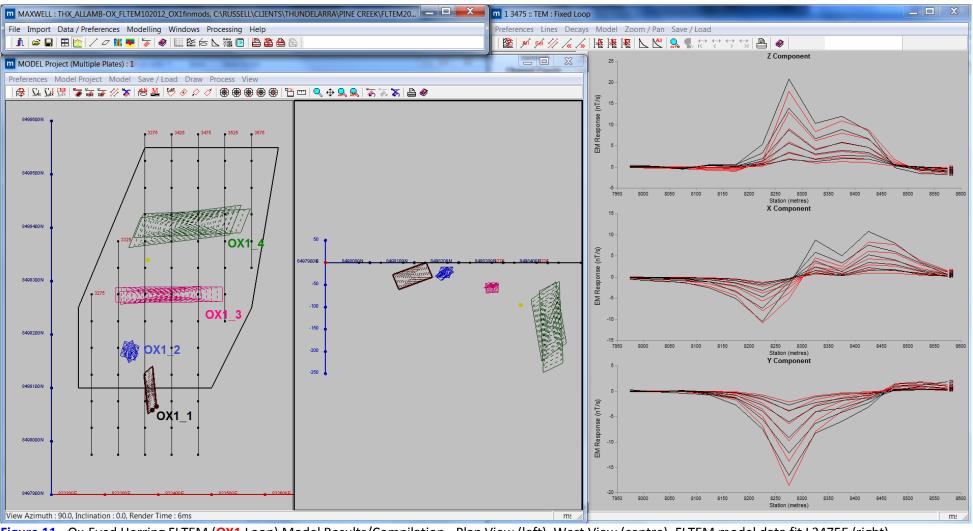


Figure 11 - Ox-Eyed Herring FLTEM (OX1 Loop) Model Results/Compilation - Plan View (left), West View (centre), FLTEM model data fit L3475E (right)

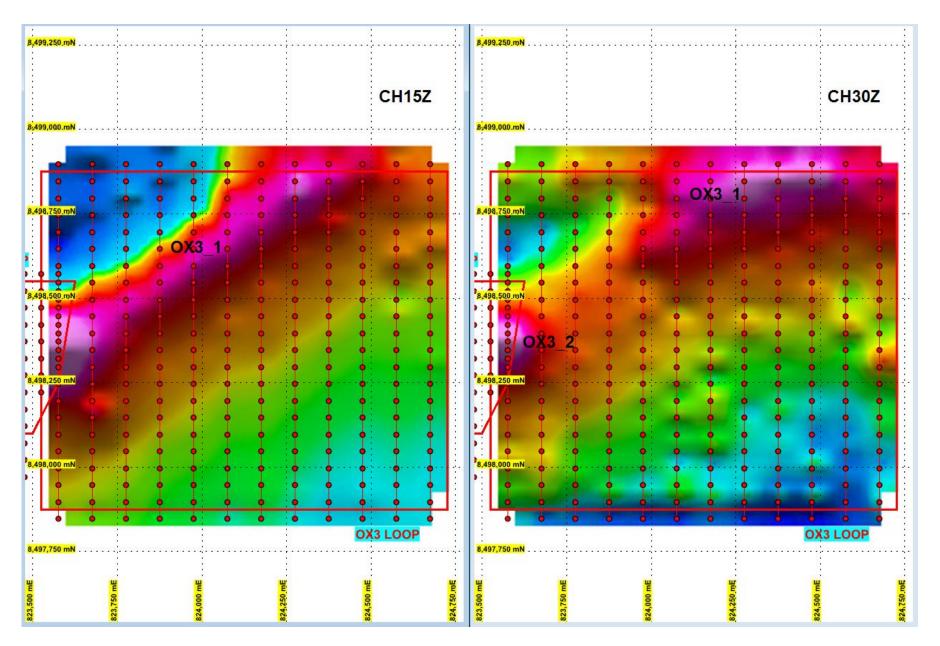


Figure 12 - Ox-Eyed Herring East (OX3 Loop) FLTEM Survey Results - Early Channel CH15Z (left) and Late Channel CH30Z (right)

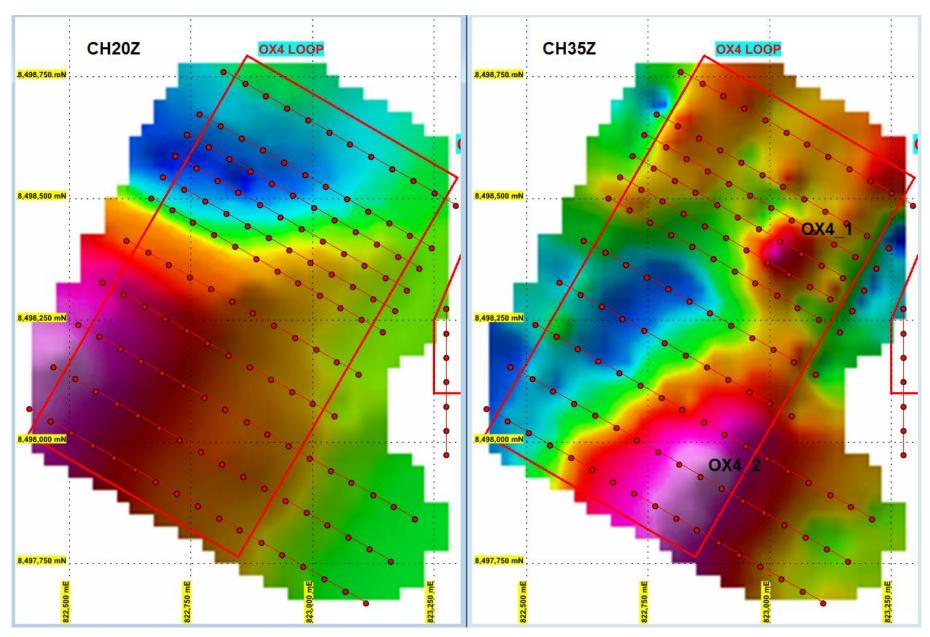


Figure 13 - Ox-Eyed Herring West (OX4 Loop) FLTEM Survey Results - Early Channel CH20Z (left) and Late Channel CH35Z (right)

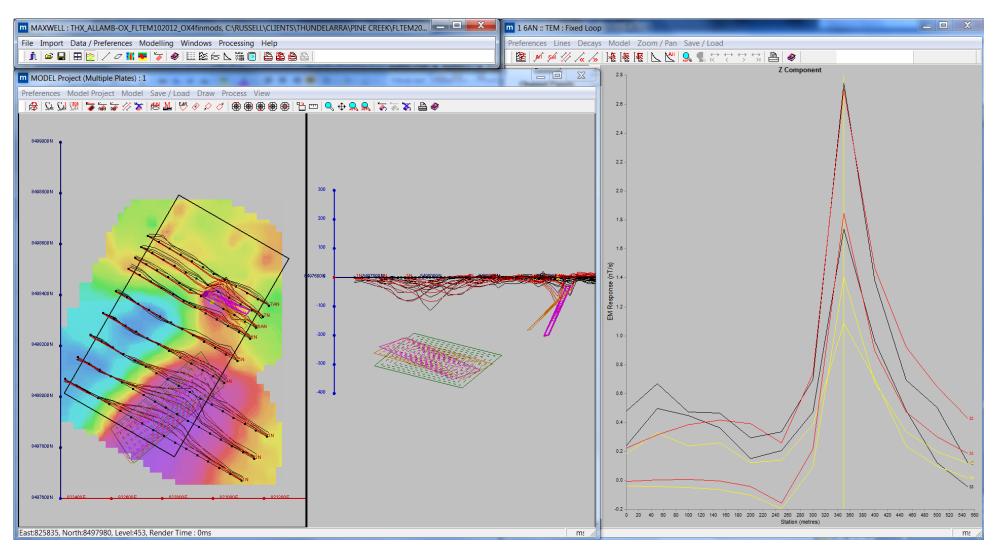


Figure 14 - Ox-Eyed Herring FLTEM (OX4 Loop) Model Results/Compilation - Plan View (left), West View (centre), FLTEM model data fit L6AN (right)

5 CONCLUSIONS AND RECOMMENDATIONS

- Downhole TEM (DHTEM) logging of 12 RC drillholes (TAL055C, 65, 68, 69, 70, 72, 76, 83, 84, 85, 86 and TAL087C 914m logging) was completed at several prospects (Ox-Eyed Herring, South Brumby and East) within the Allamber Project between the 2nd and 18th November 2012 by Outer Rim Exploration Services Pty. Ltd. (ORE) on behalf of Thundelarra Exploration Limited.
- No anomalies of significance were identified in the resultant TAL055C DHTEM dataset at the East Prospect.
- At the South Brumby Prospect weak/minor DHTEM anomalism has been noted in all logged holes (TAL065C, TAL086C and TAL087C) and these appear to be coincident with intersected copper mineralisation/anomalism. All observed anomalies are of limited strength and areal size, however this could relate to a limited concentration/connectivity of iron/Cu sulphides.
- At the Ox-Eyed Herring West Prospect (**TAL068C** and **TAL072C**) resultant DHTEM data highlighted the presence of a number of inhole/offhole anomalies. Apart from the upper anomaly defined in **TAL072C** at ~45-50m (appears to relate with low grade copper mineralisation <1%) it is unclear as to whether the remaining anomalies are of potential interest (associated with copper mineralisation/anomalism) or relate to conductive units/horizons of limited interest (ie. sediments/graphite).
- At the main Ox-Eyed Herring Prospect numerous moderate to strong inhole/offhole DHTEM anomalies were
 observed (TAL069C, TAL070C, TAL076C, TAL083C, TAL084C and TAL085C). DHTEM modelling provided well
 constrained model fits for the majority of the defined anomalies and local well developed copper
 mineralisation appears to be clearly coincident with the DHTEM models.
- If there is limited concentration/connectivity of iron/Cu sulphides (Ox-Eyed Herring West and South Brumby Prospects) then local mineralisation may be more of an IP type target than an EM type target if further geophysical exploration is to be considered.
- Three moderate to large FLTEM surveys (OX1, OX3 and OX4 loops totalling 22.5kms of coverage, 30 lines, 480stns) were completed between the 3^{1st} October and 1^{3th} November 2012 by Outer Rim Exploration Services Pty. Ltd. (ORE) on behalf of Thundelarra Exploration Limited.
- A number of weak to moderate strength local FLTEM anomalies were observed in the resultant **OX1** loop dataset for the main Ox-Eyed Herring Prospect (**OX1_1**, **OX1_2**, **OX1_3** and **OX1_4**). At this stage only the shallow **OX1_1** anomaly does not appear to have been tested by drilling.
- Several weak to moderate strength anomalies were delineated in the resultant OX3 loop dataset for the Ox-Eyed Herring East Prospect (OX3_1 and OX3_2). OX3_1 appears to be related to a broad/extensive stratigraphic type conductor and OX3_2 is likely related to eastern extents/influence of the OX1_3 and OX1_4 conductors within the main Ox-Eyed Herring Prospect.
- Two well defined FLTEM anomalies were defined in the resultant OX4 loop dataset (OX4_1 and OX4_2). A strong, localised FLTEM anomaly was apparent in the NE section of the FLTEM survey area (dominant along lines 6AN and 7N). A second broader/deeper FLTEM anomaly was delineated in the SE quadrant of the survey coverage completed. No drill testing of these anomalies has been completed to date and so if the OX4_1 and OX4_2 are of geological interest then the following drill targets are recommended:
 - **OX4_1** 823040E, 8498370N, 60dip > 300az, target zone ~50-100m DH, ~125-150m EOH **OX4_2** 822875E, 8497900N, 75dip > 300az, target zone ~250-350m DH, ~375-400m EOH
- DHTEM and FLTEM surveying are clearly effective exploration tools in the local Allamber Project area given the resistive nature of the local environment and correlation between copper mineralisation with significant iron sulphides (pyrite/pyrrhotite).

APPENDIX 1

DOWNHOLE TEM PROFILES

APPENDIX 2

FIXED LOOP TEM PROFILES