

Search Techniques

Must be selected in order to search
in the most effective manner

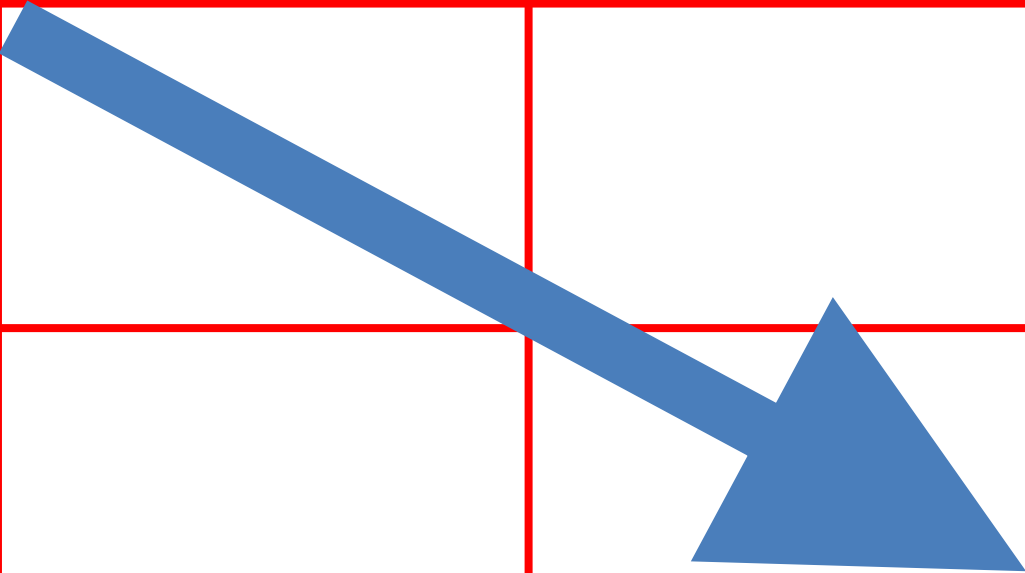


Missing Person Matrix

	Mobile	Immobile
Responsive	MR	IR
Unresponsive	MU	IU

Missing Person Matrix

	Mobile	Immobile
Responsive		
Unresponsive		

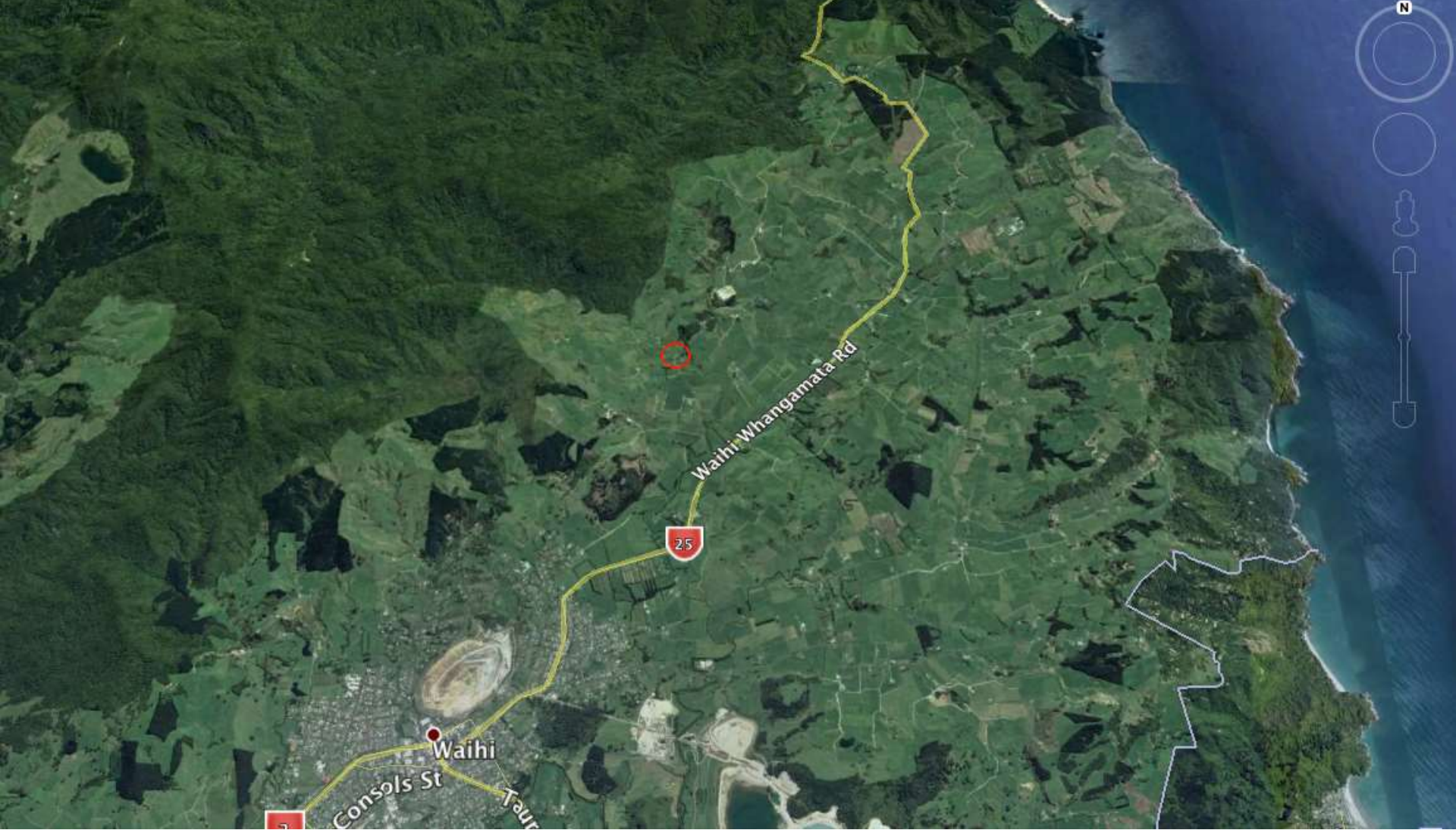


Case Study

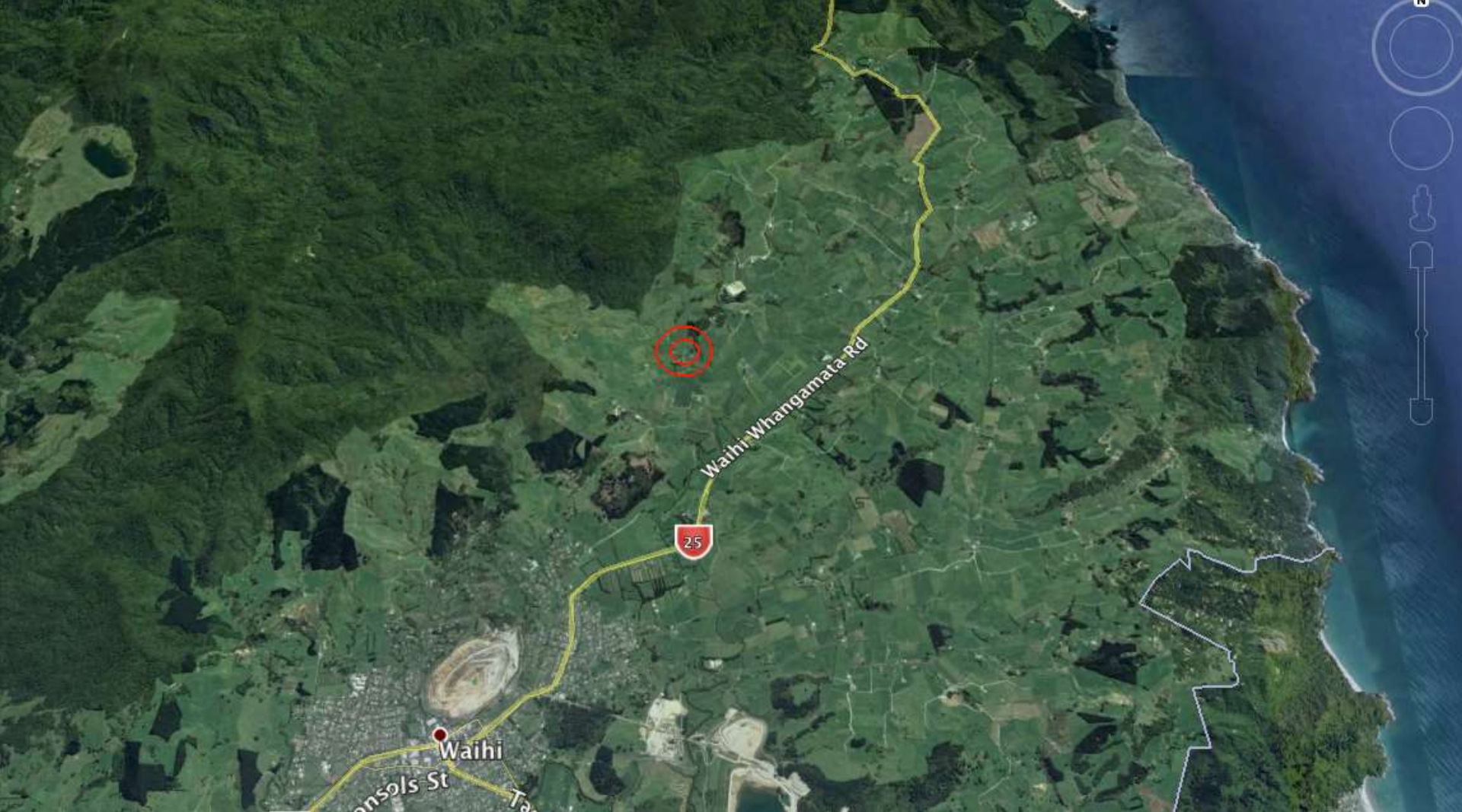
- Ground: Waihi, Coromandel
- Situation: Missing farmer, on his own land
- Mission: Locate, and assist farmer

Case Study

- Execution



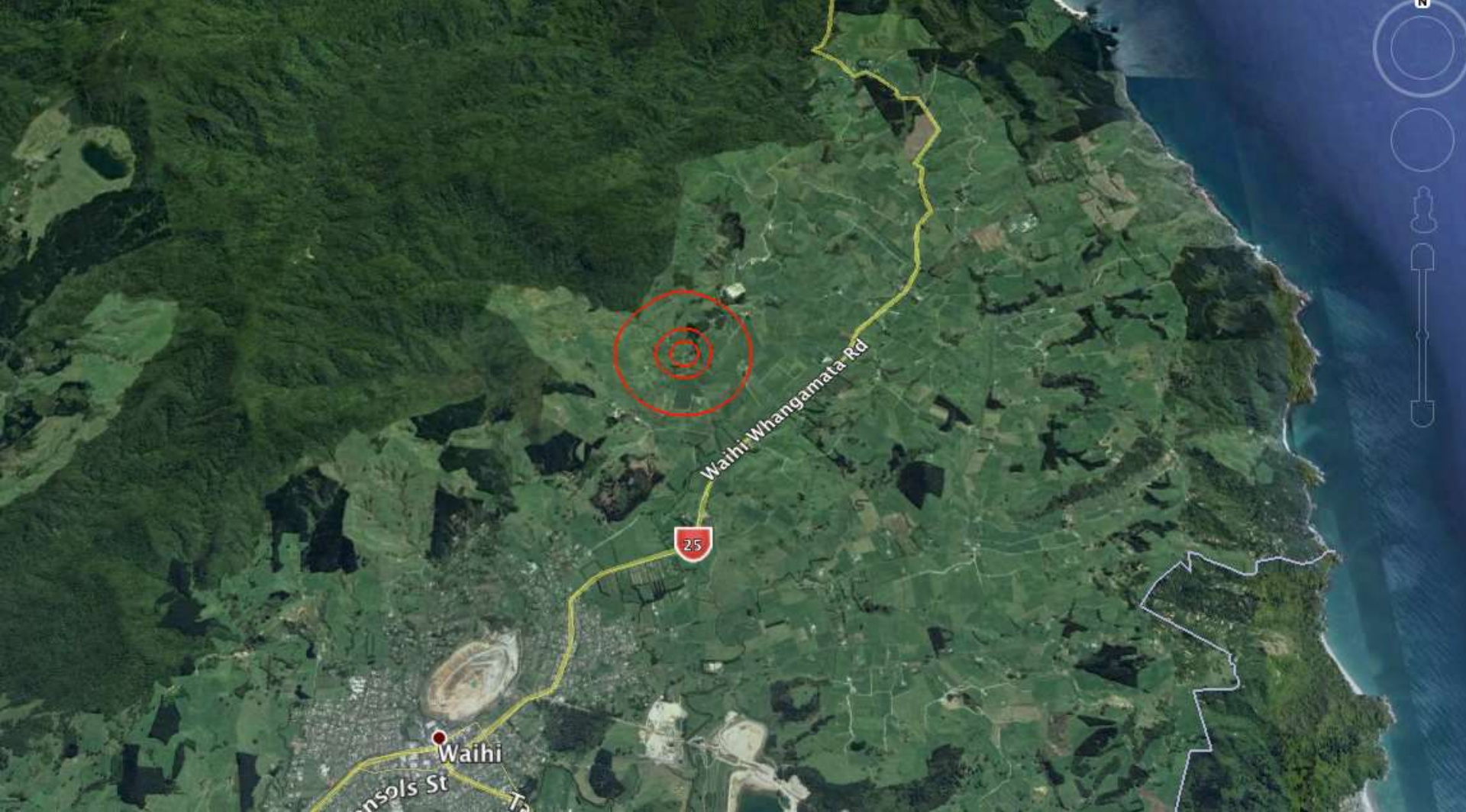
Farmer reported missing at 7pm Thursday.



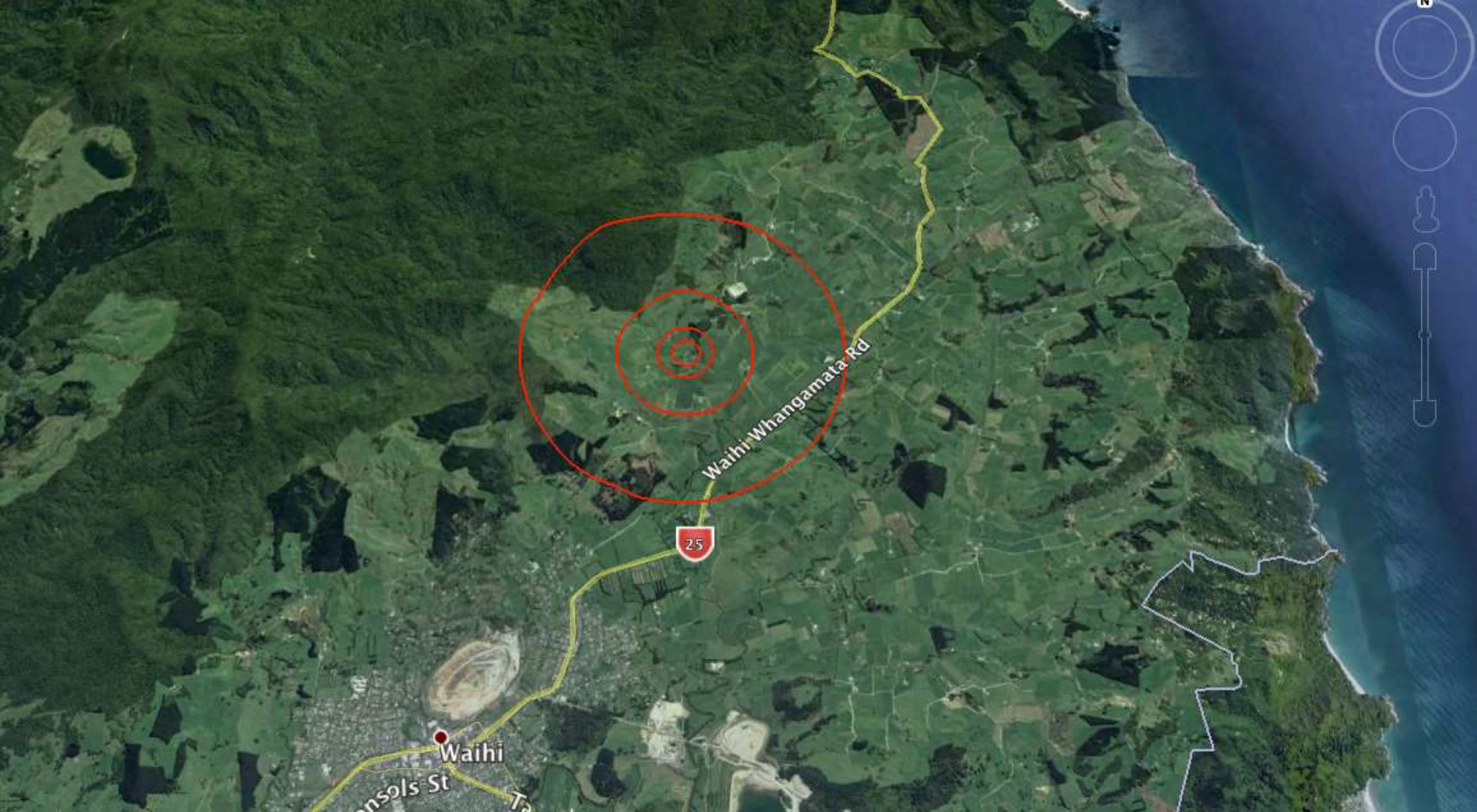
300m, and 25% area displayed.

300m concept = ?

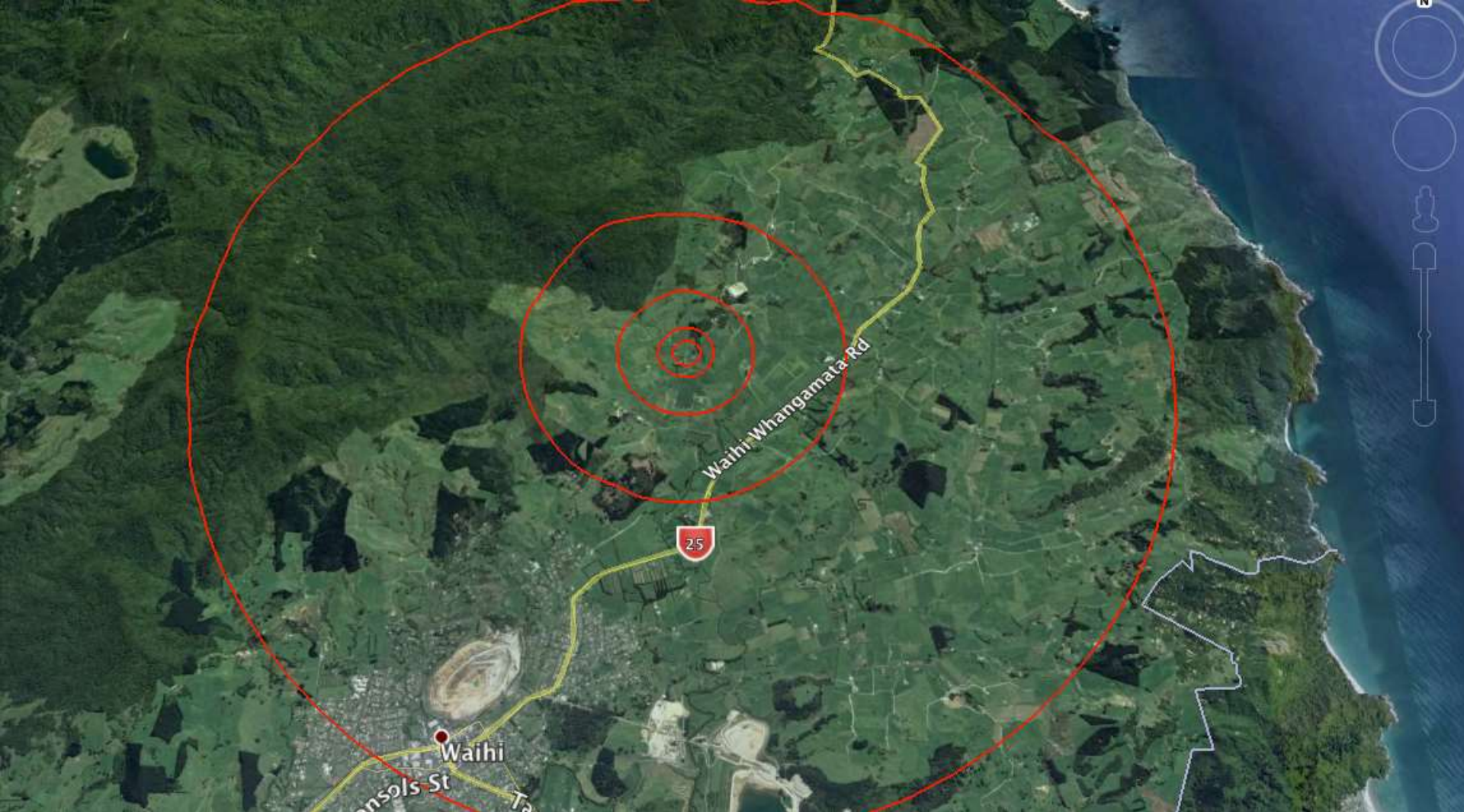
25% area = ?



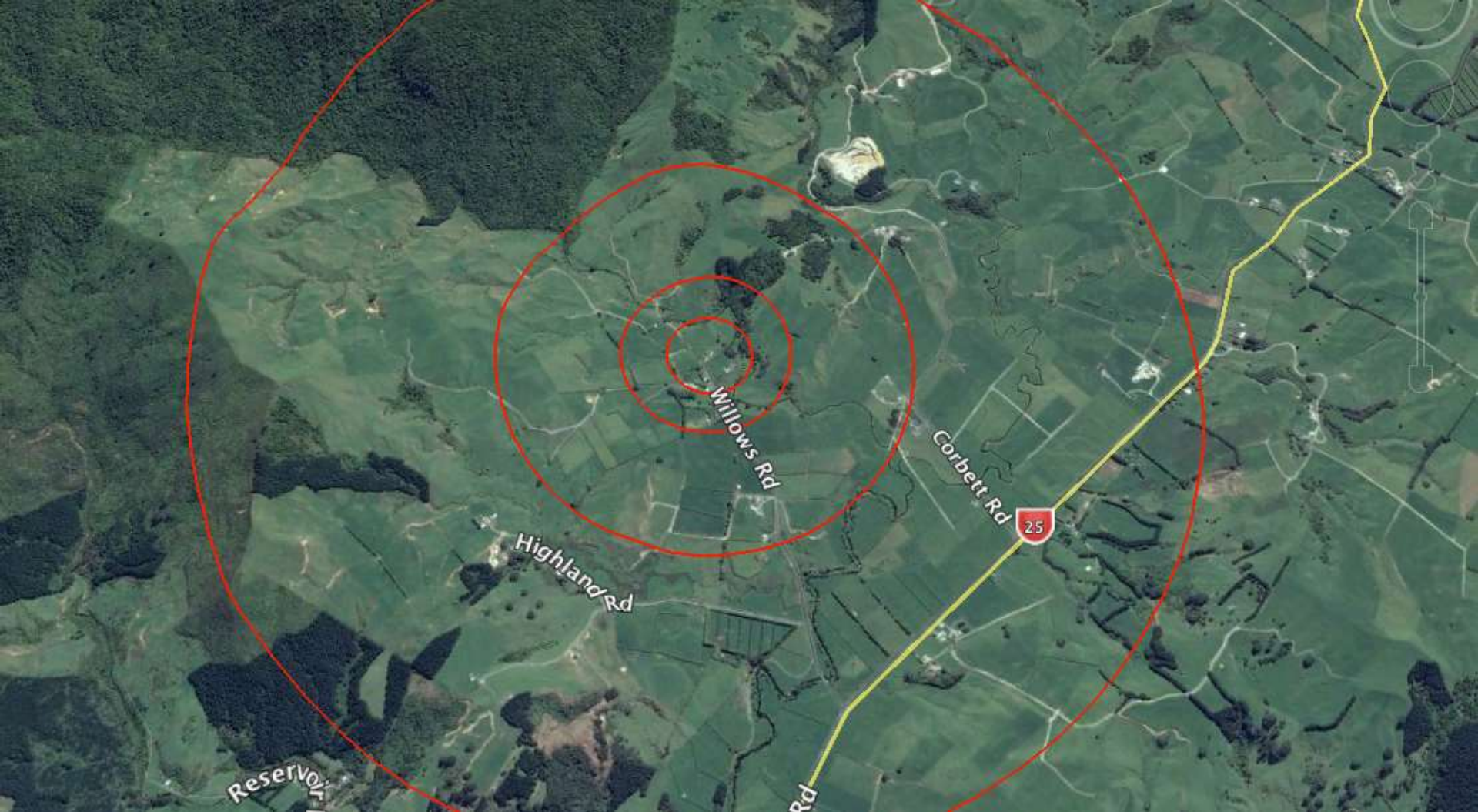
50%



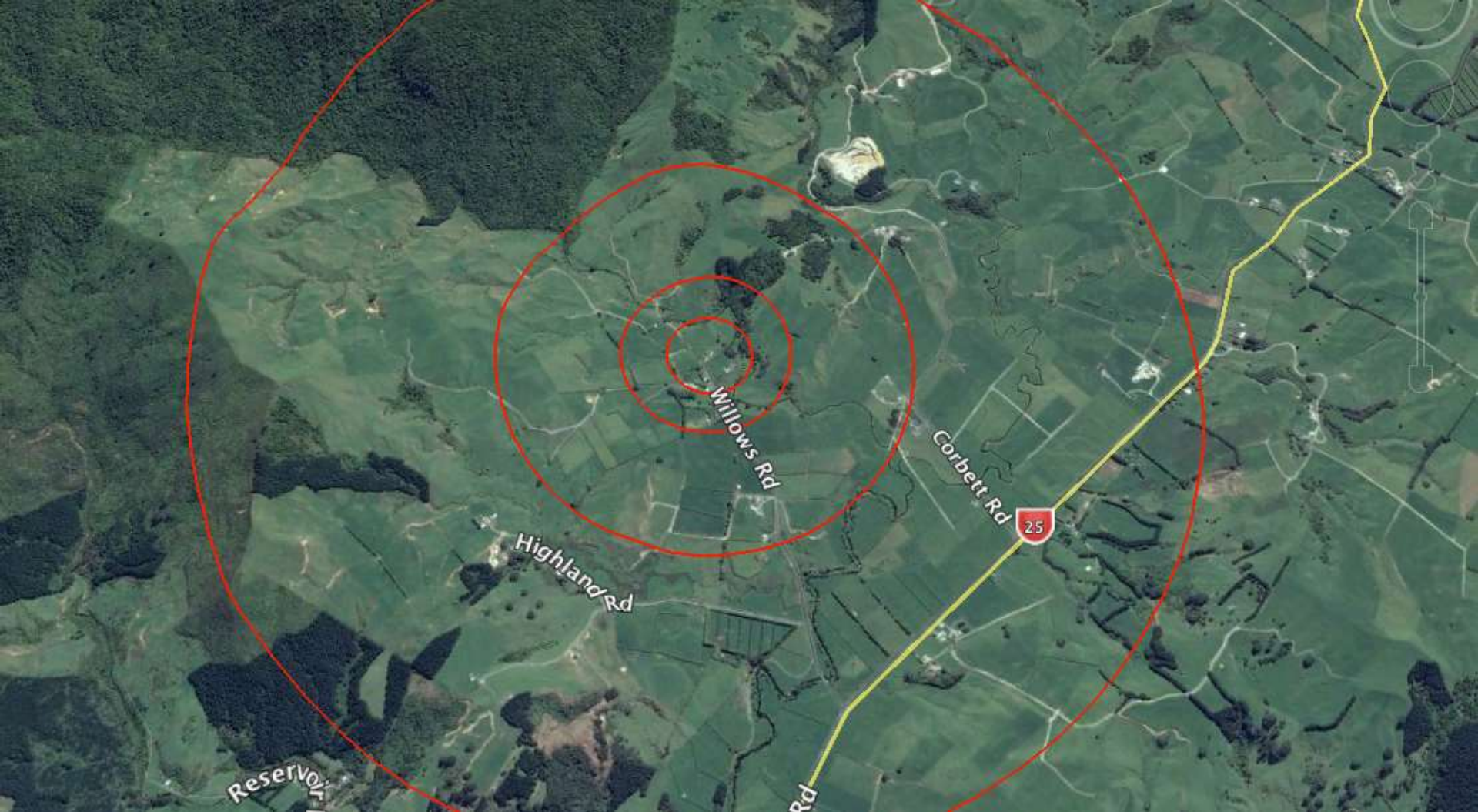
75%



95% chance of finding 'Johnny' in this search area.



Zoomed in map. 75% is our max area for this search. Why?



Zoomed in map. 75% is our max area for this search. Why?
75% chance of finding 'Johnny' in this area. More bang for buck!



As opposed to this area!



Box indicates high POA (Probability Of Area) Johnny went to unblock the water catchment area in this location. ***(information from family)***

9:00pm - Hasty team sent up here first.

The rest of the search teams were still arriving.

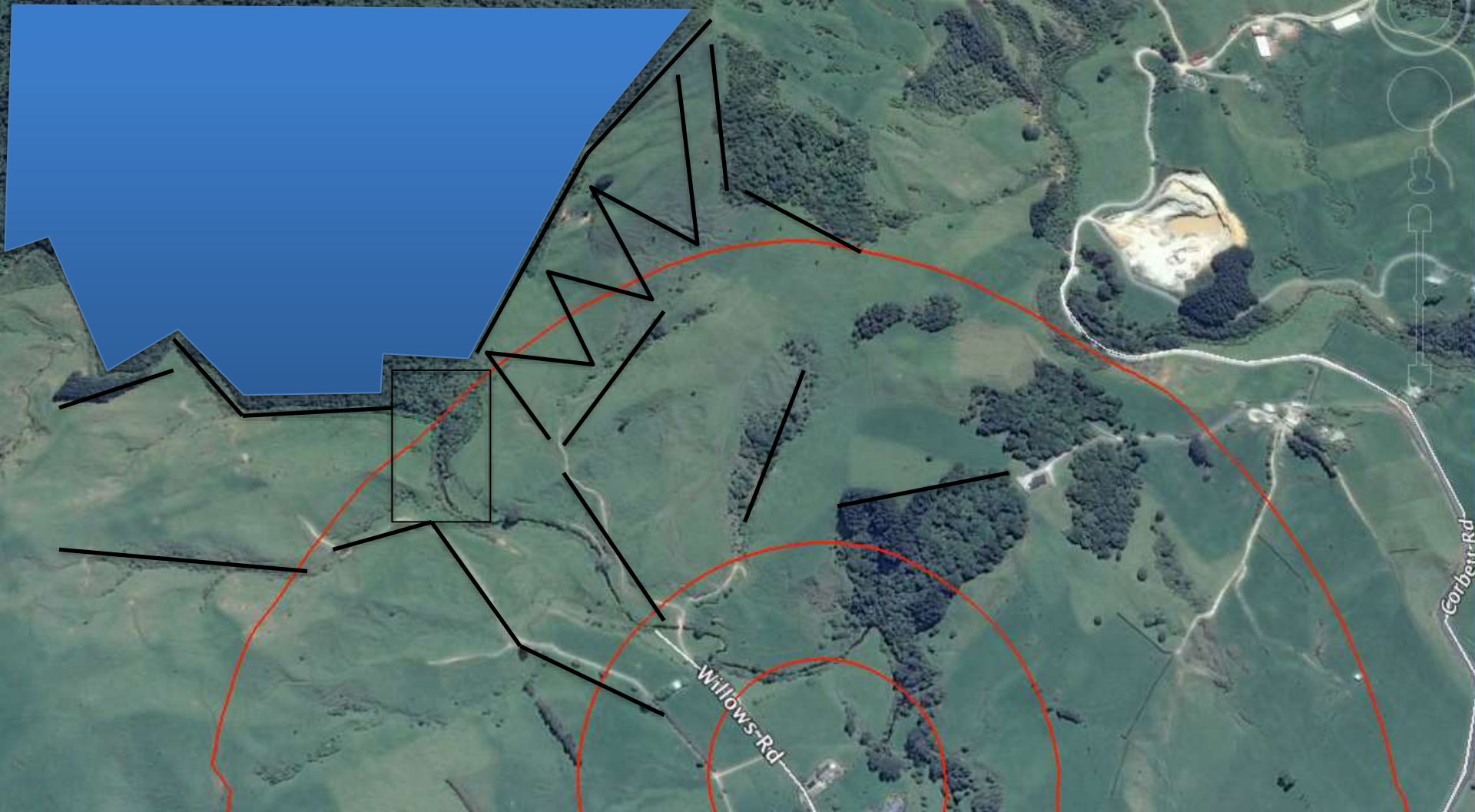


Back at IMT, 9pm, Linear features identified.

9:45pm – Additional search teams assigned to eliminate these areas first.



10:30pm - Additional search teams assigned to P.W. between the linear features.



12:00am - Teams assigned to PW between the linear features.
Why is this area not searched yet?



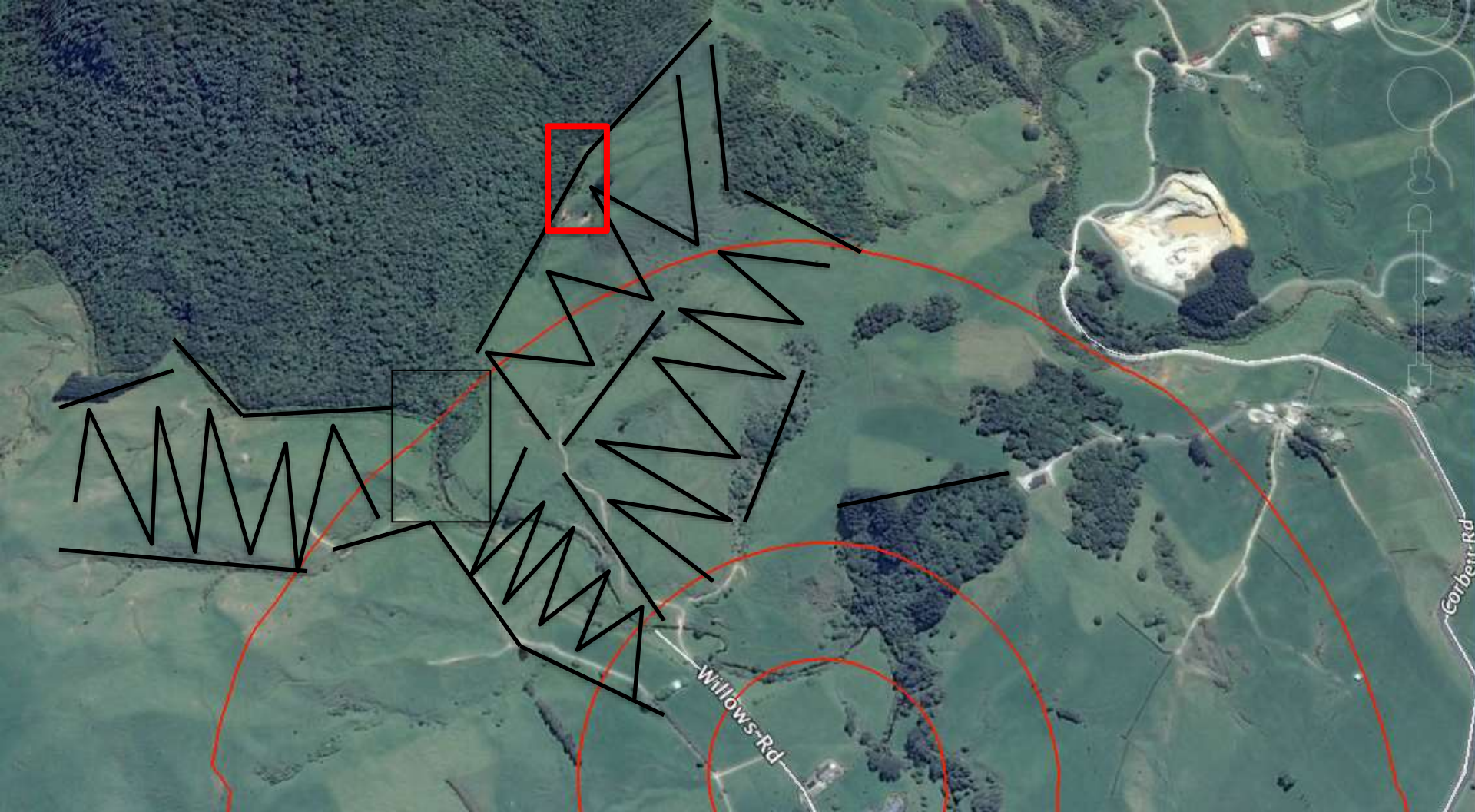
12:00am – As search teams finish initial tasking, they were re-tasked to PW between the linear features.



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12:35am - Team P.W up this linear feature spotted some ground sign. DOT heading over a style into bush. A pooling area and pipe was discovered. This was the water catchment area we believe his family had spoken about

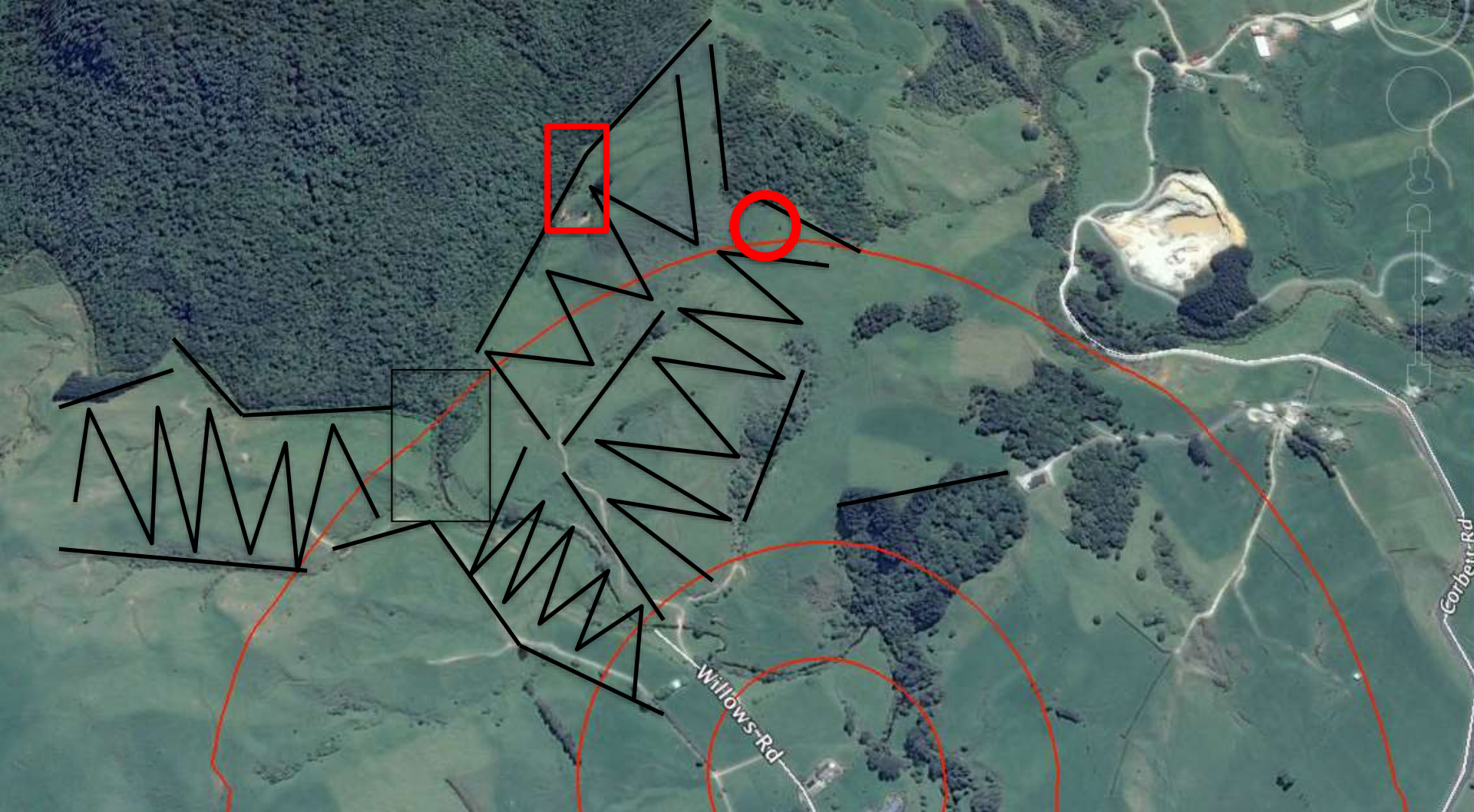


12:35am – Tracking team sent in to assist. (Hasty Search)

1:30am – Search called off for the night. Post phoned until 6am



2:00am – 3 search teams made arrangements to meet here at the top of this ridge.
Then to head down linear feature so to exit search area together.
- Eagle 1 was on route from Auckland. 'FLIR'



2:05am – Search team discovers Johnny. Status 0

Search Techniques

Investigation – underpins all search

Reconnaissance/ hasty search – High probability areas

Confinement – Stops the search area growing

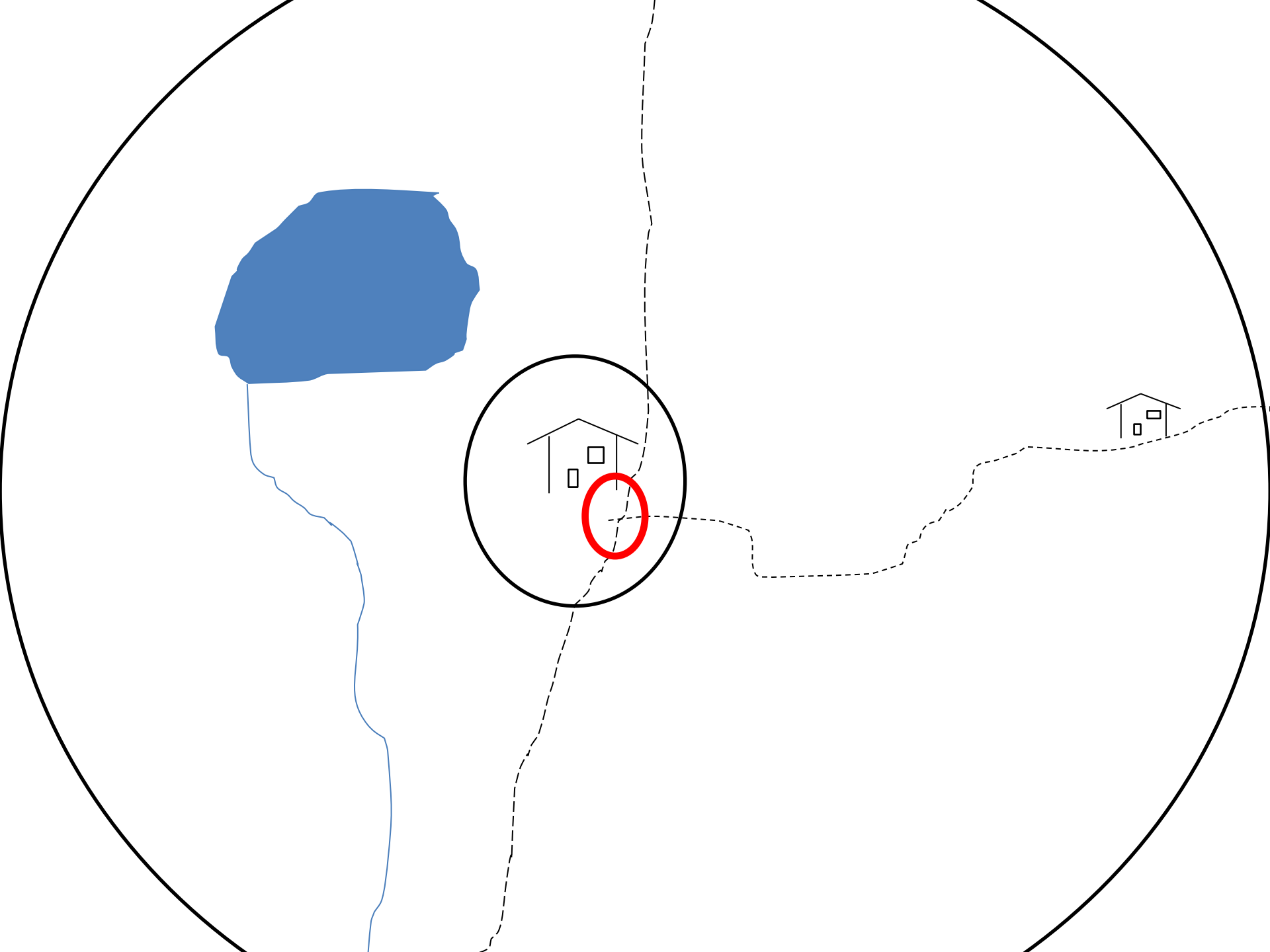
Close in phenomena (around IPP)

Sound line and sweep

Sound light line and sweep

Purposeful wandering

Grid search



Investigation

Underpins all search

Search Techniques

Initial Response

- Investigation

- Reconnaissance/hasty search

- Dogs

- Around IPP /LKP

- Confinement

... continued

- Investigation

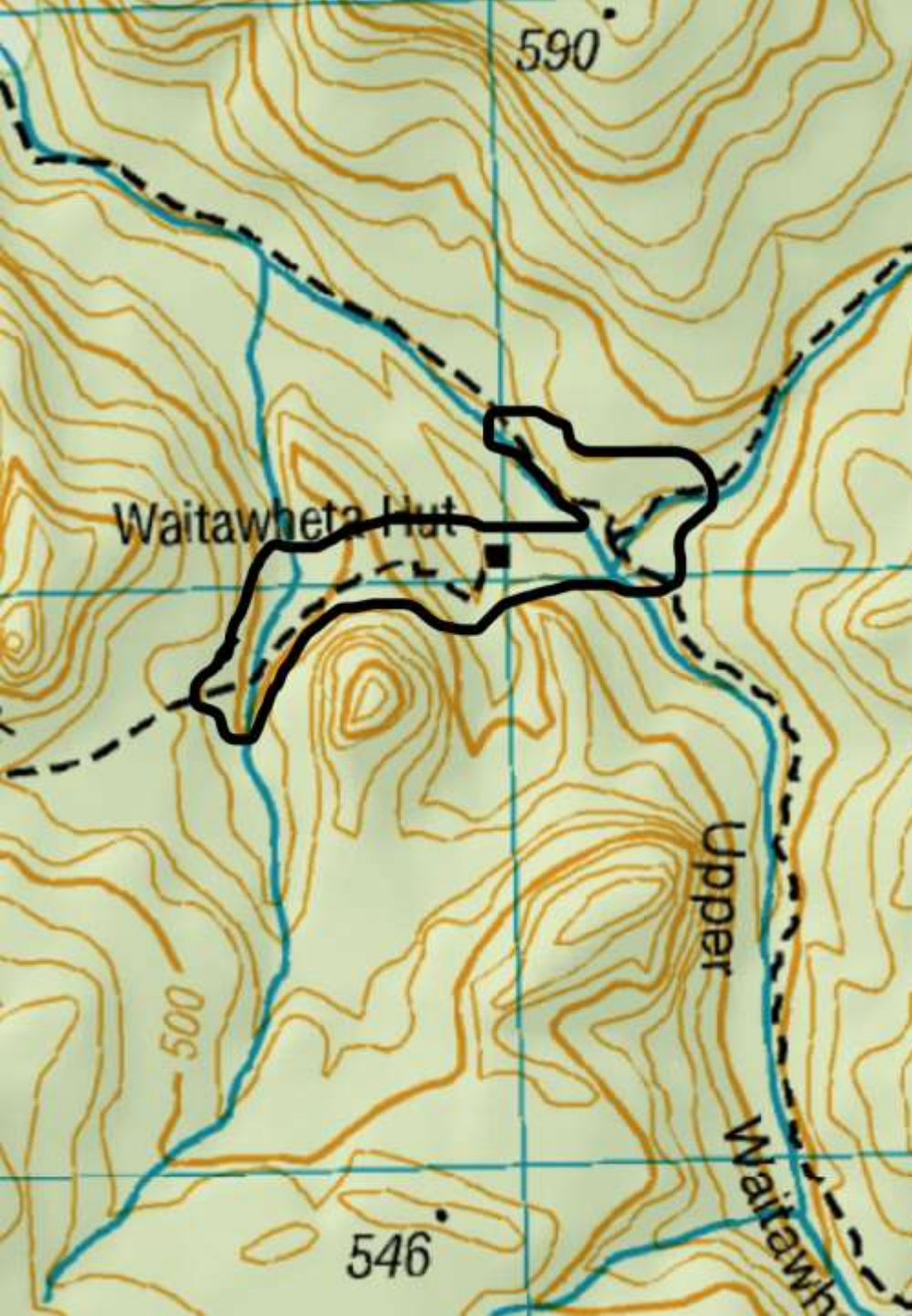
- Dogs

- Sound line/sweep

- Sound and light line/sweep

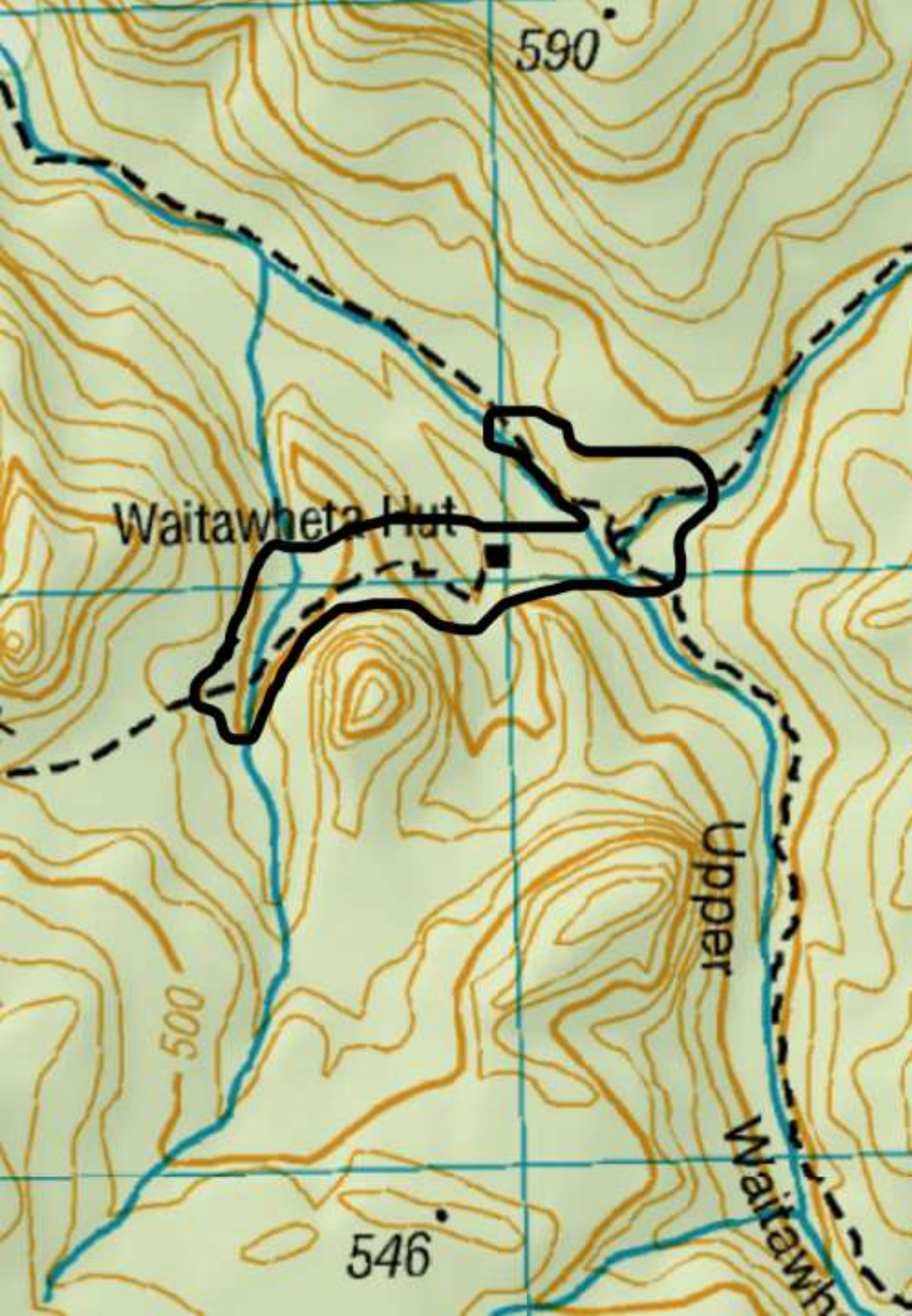
- Purposeful wandering

- Contact search (grid)



Close in phenomena

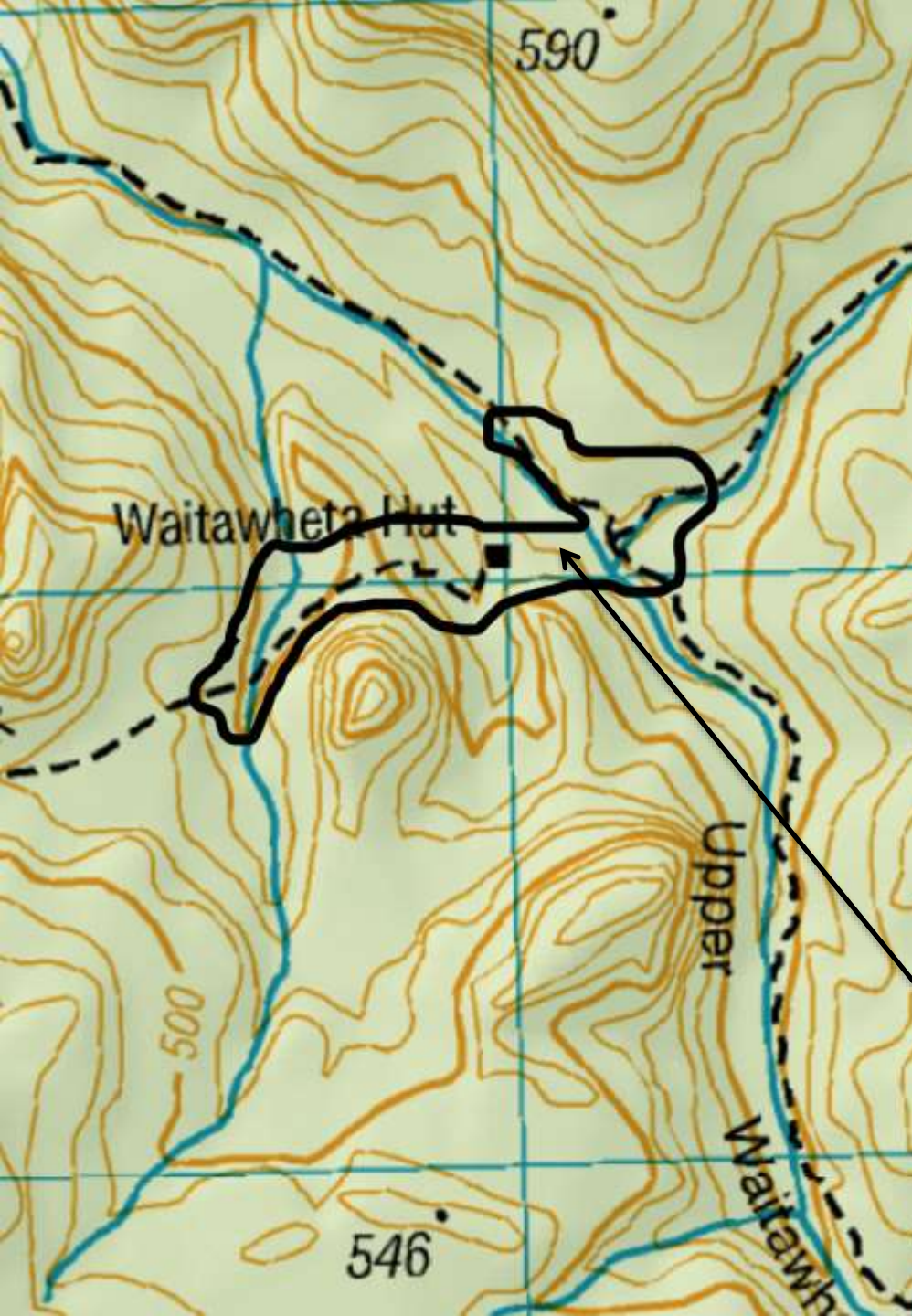
Waitawheta Hut
is the IPP



Close in phenomena

The area around the Initial Planning Point (IPP) is generally Clue rich.

- Identify
- Protect
- Process



Close in phenomena

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- Protect
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What is missing here?

Close in Phenomena

Techniques

Stop, think, observe, plan then process, evaluate and report. STOPPER.

Segment area into manageable parts bordered by natural boundaries.

Hit the high probability areas first.

Protect and preserve clues, mark your sign.

Evaluate, record and report.

Search Methods table- assume responsive subject

	Linear Features – tracks, shelter belts, waterways, ridges.	Search segments – bush, forestry.
Day		
Night		

Don't forget other search techniques

Search Methods

Sound line and sweeps

Sound light line and sweeps

Purposeful wandering

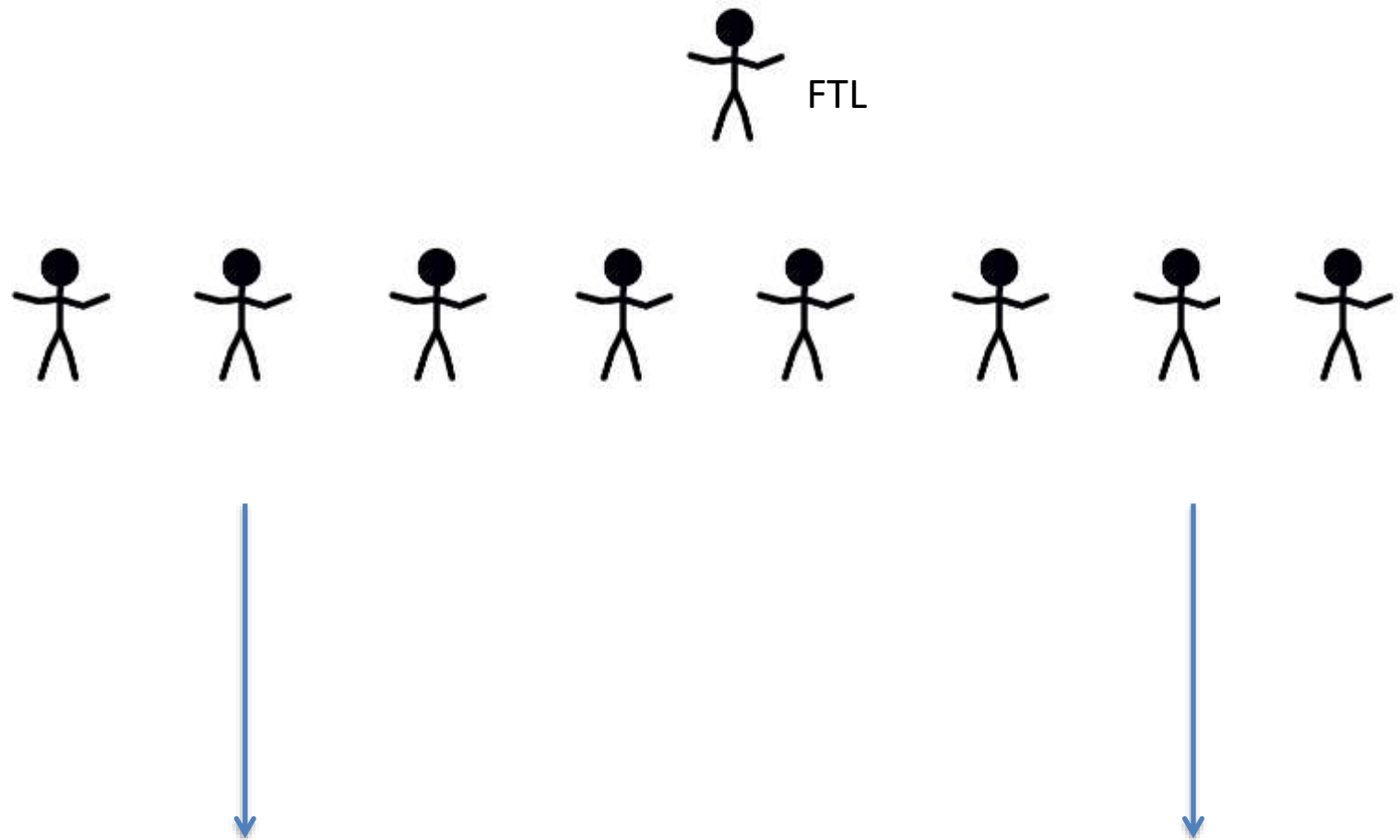
Contact Search

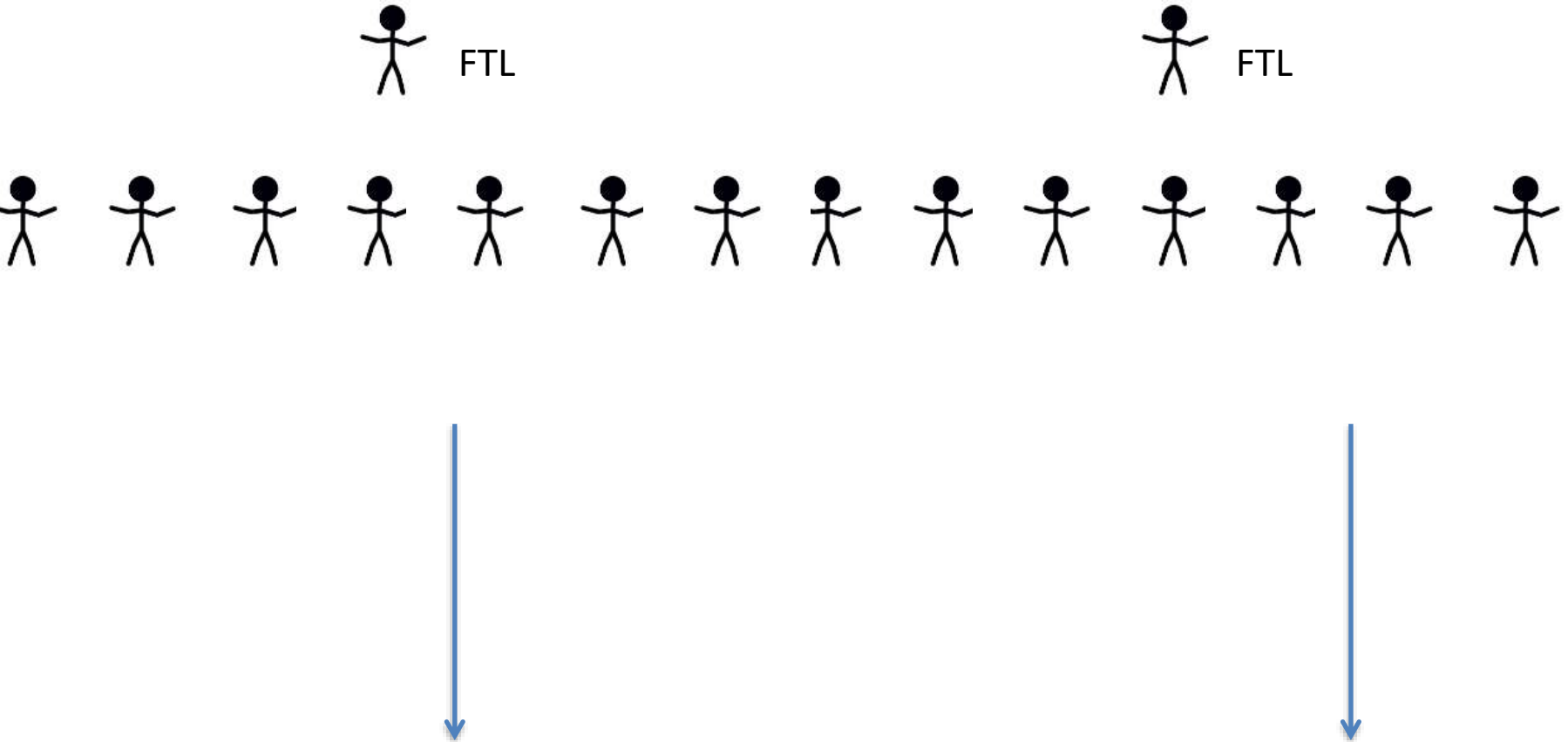
Contact Search











Scenario

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- Where on the missing person matrix would you expect to find Colin Carter?

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Immobile unresponsive

- *What do you think your tasking will be?*
- *What core technique would be most effective?*

Practical

- Sound Calibration

Sound

Responsive subject

Coordinated sound

Competent field team leadership (FTL)

Team spaced at maximum distance to allow members to hear FTL signal whistles



The sound does the searching

Searchers require good hearing





Signal Whistles

1. Two short loud blasts from FTL – Team Stops.
2. All team members countdown 5,4,3,2,1..
3. All team members blow one loud blast 3-5 sec.
4. Team remains stationary – listening, 10–15 sec.
5. Investigate possible contact. Re-blow if unsure.
6. Gather on me, found something – 3 Short sharp blasts.
7. One short loud blast from FTL – resume walking.







Scenario – Operation Bryant

Sharon left her home early this morning. She borrowing some equipment from friends and set out for a day tramp. She was due back 4 hours ago. She has some experience in the bush, no other information is available at this stage.

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Sharon left her home early this morning. She borrowing some equipment from friends and set out for a day tramp. She was due back 4 hours ago. She has some experience in the bush, no other information is available at this stage.

- Where on the missing person matrix would you expect to find Sharon?

Scenario – Operation Bryant

Sharon left her home early this morning. She borrowing some equipment from friends and set out for a day tramp. She was due back 4 hours ago. She has some experience in the bush, no other information is available at this stage.

Mobile & Responsive

- What core technique would be most effective?







Containment

- Passive – string lines, track traps, cones and notes
- Attraction - sound and light
- Active – vehicle based confinement and attraction
- Covert – observation posts

Caution: take care not to attract subject into dangerous ground.

Searching at night



Effective Hardware

What makes an effective light attractant?



Lumen Level



Movement



Surface Area



Colour



RED Light



GREEN Light



BLUE Light



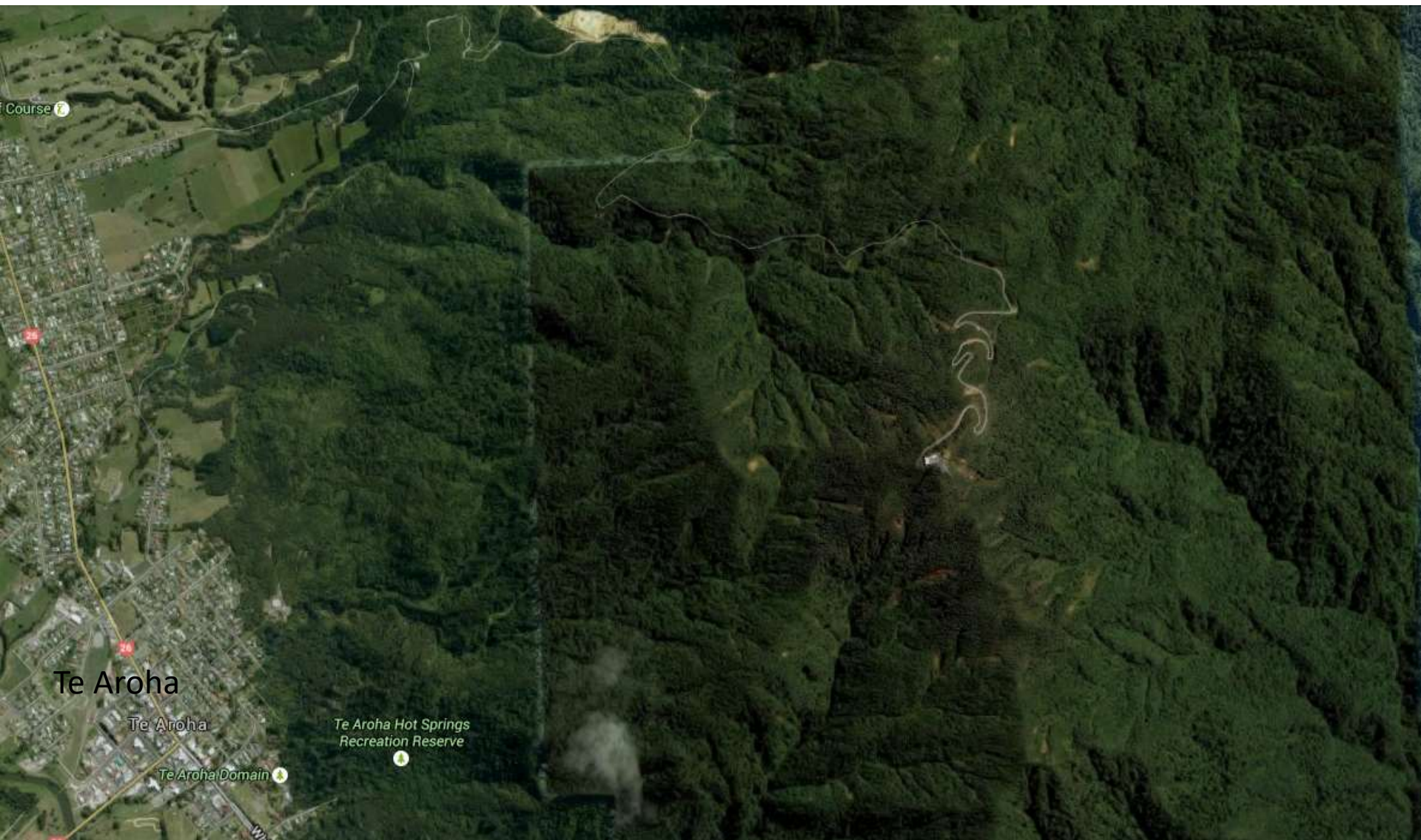
WHITE Light

Advantages

Disadvantages

Signals for Night Searching

- Whistle signals remain the same
- All lights off when listening
- Slow figure of eight with torch while walking
- Best results with slow '8' and bright torch
- Try to maintain normal walking pace.



6pm: Facebook posting, “Lost near Mt Te Aroha”
- Friend called the police.

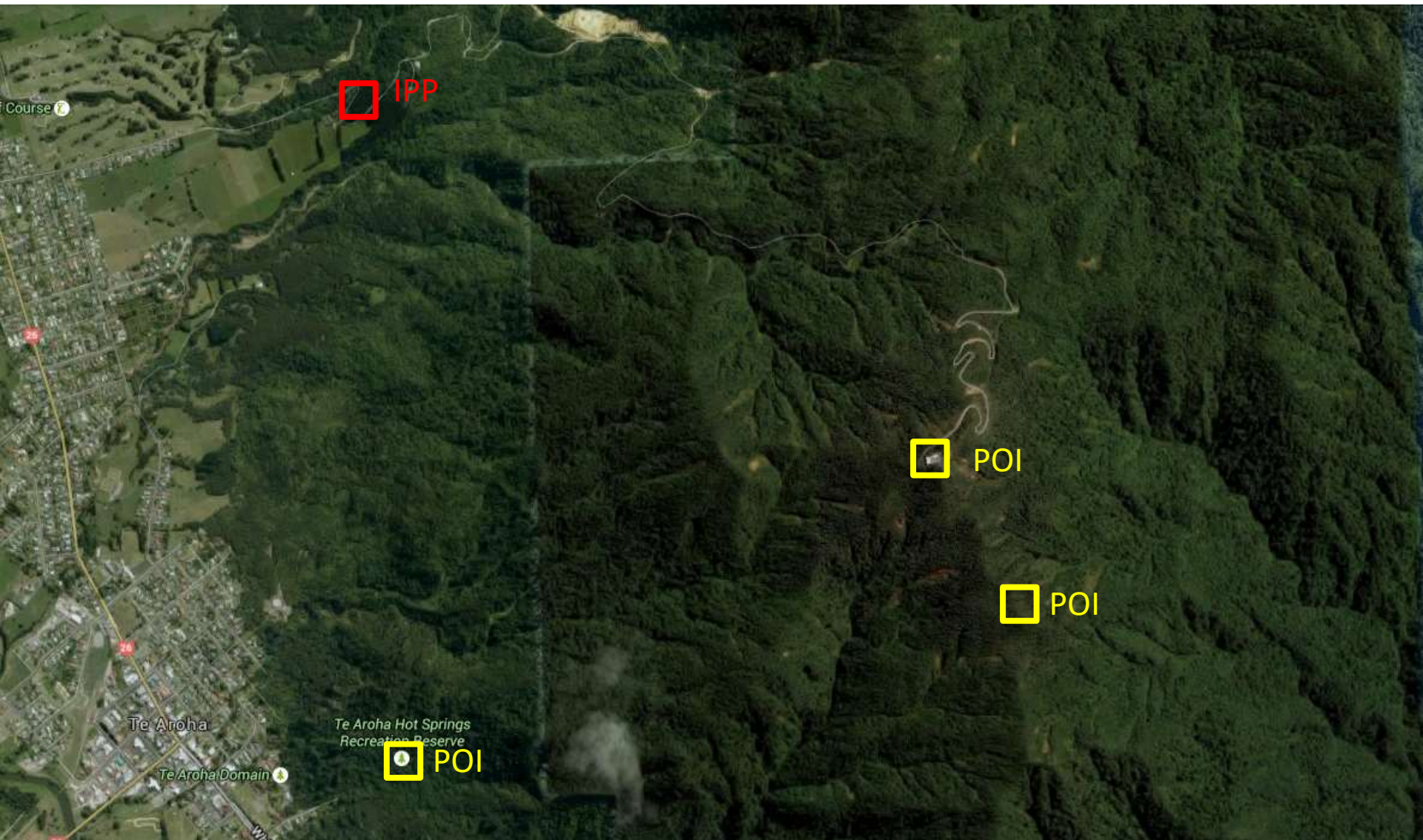


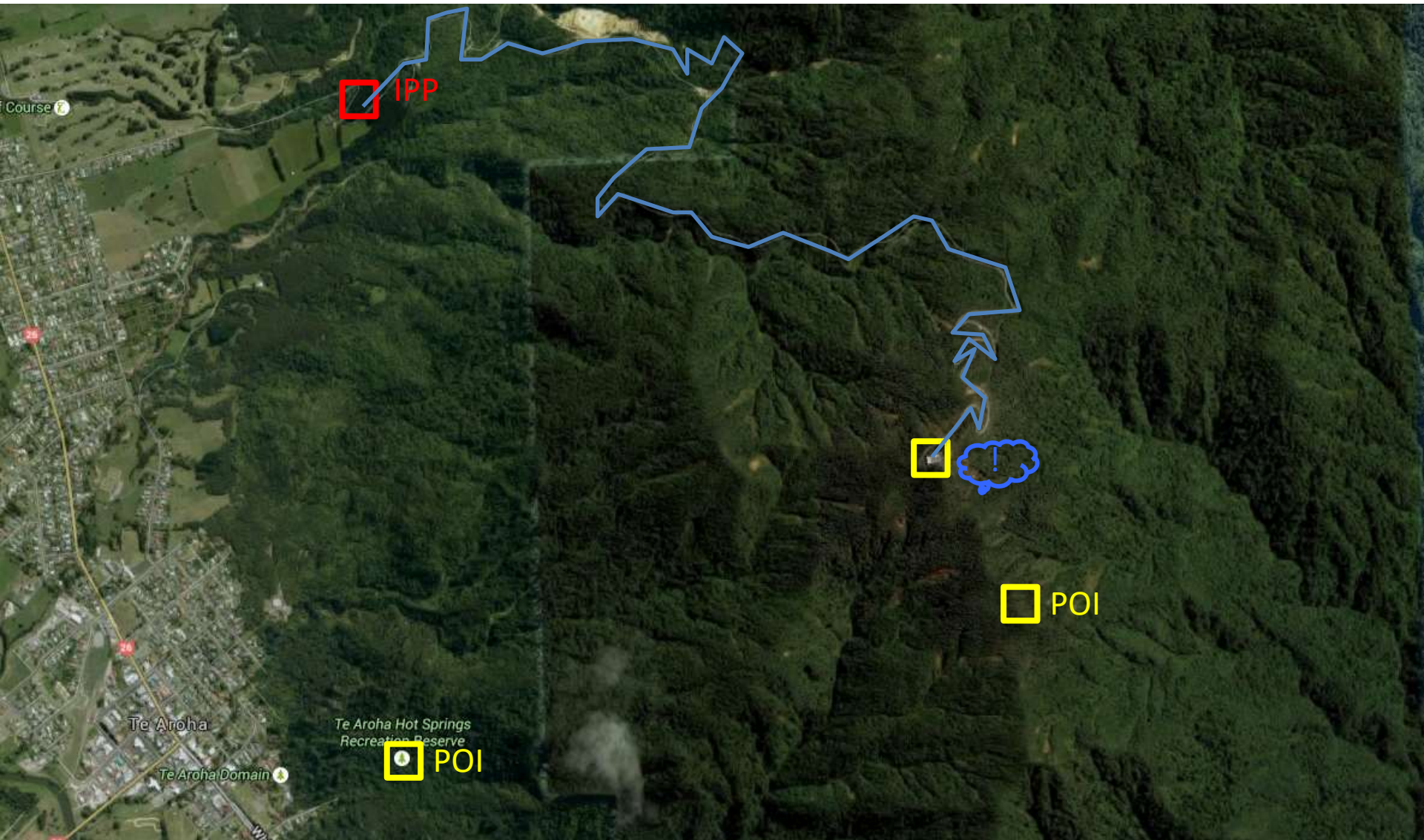
Car found at Car park
- IPP



Her intended route was believed to be heading to Mt Te Aroha (tower)

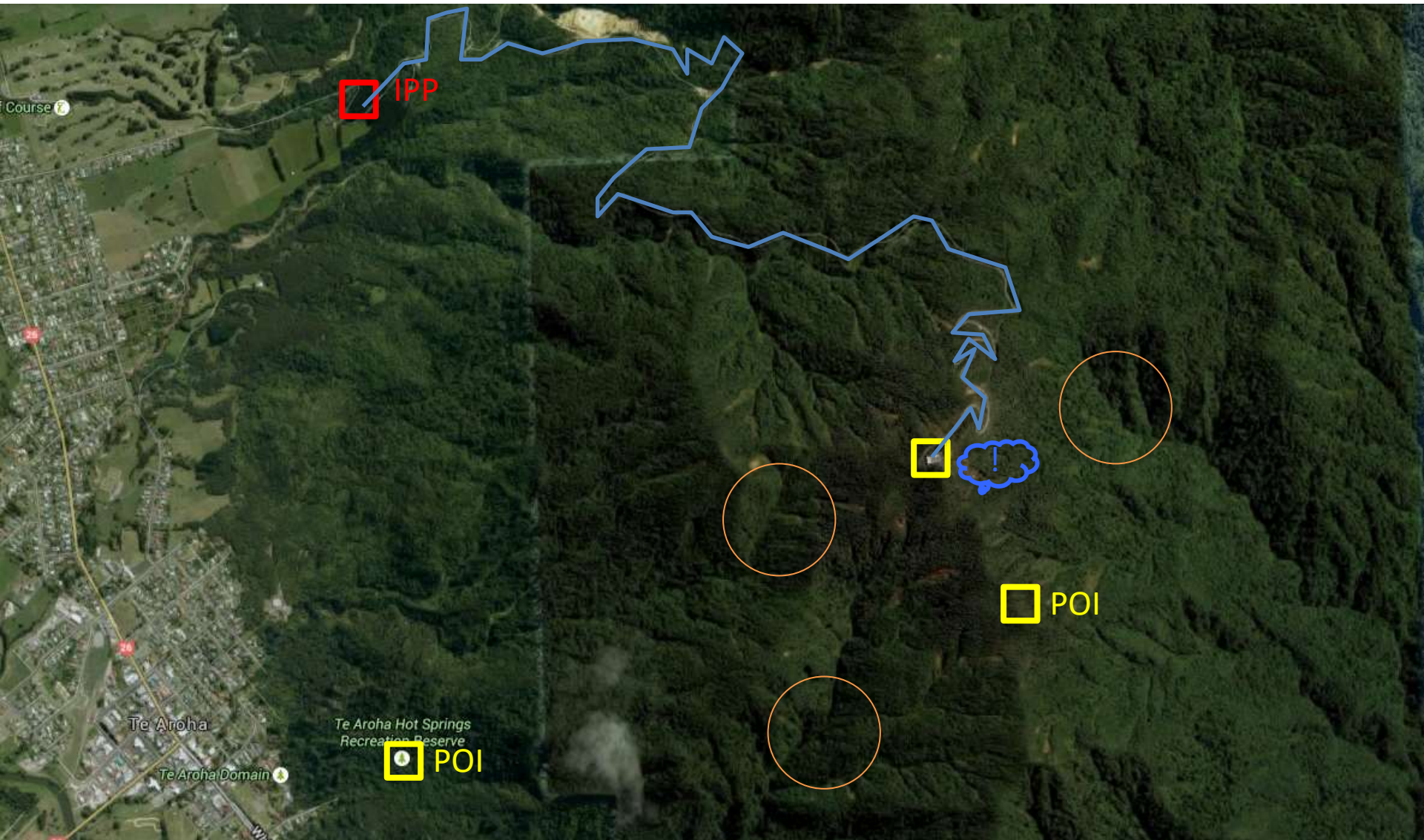




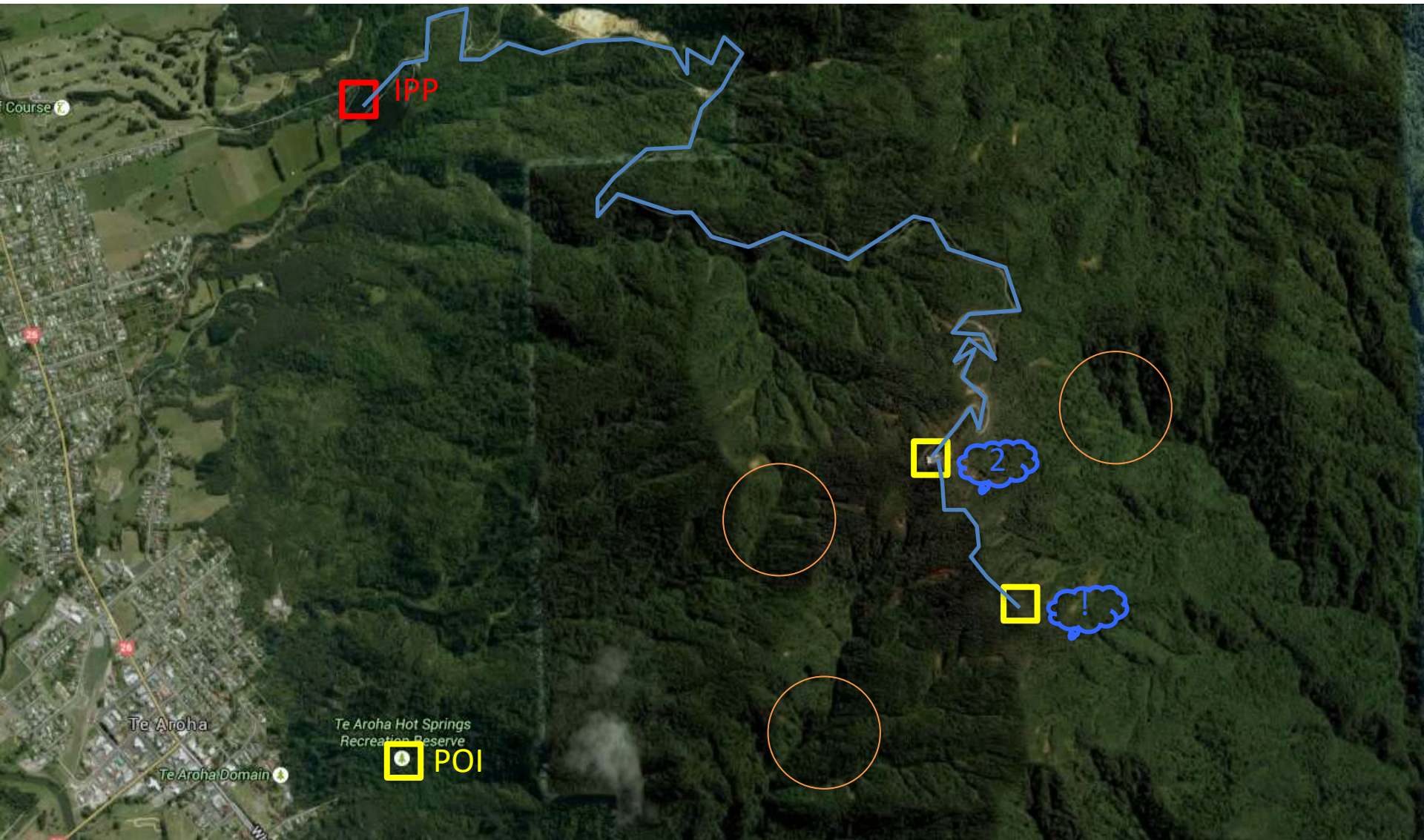


Waikato police: 1930hr - Team 1 head to first POI.

Task: Sign cut along track

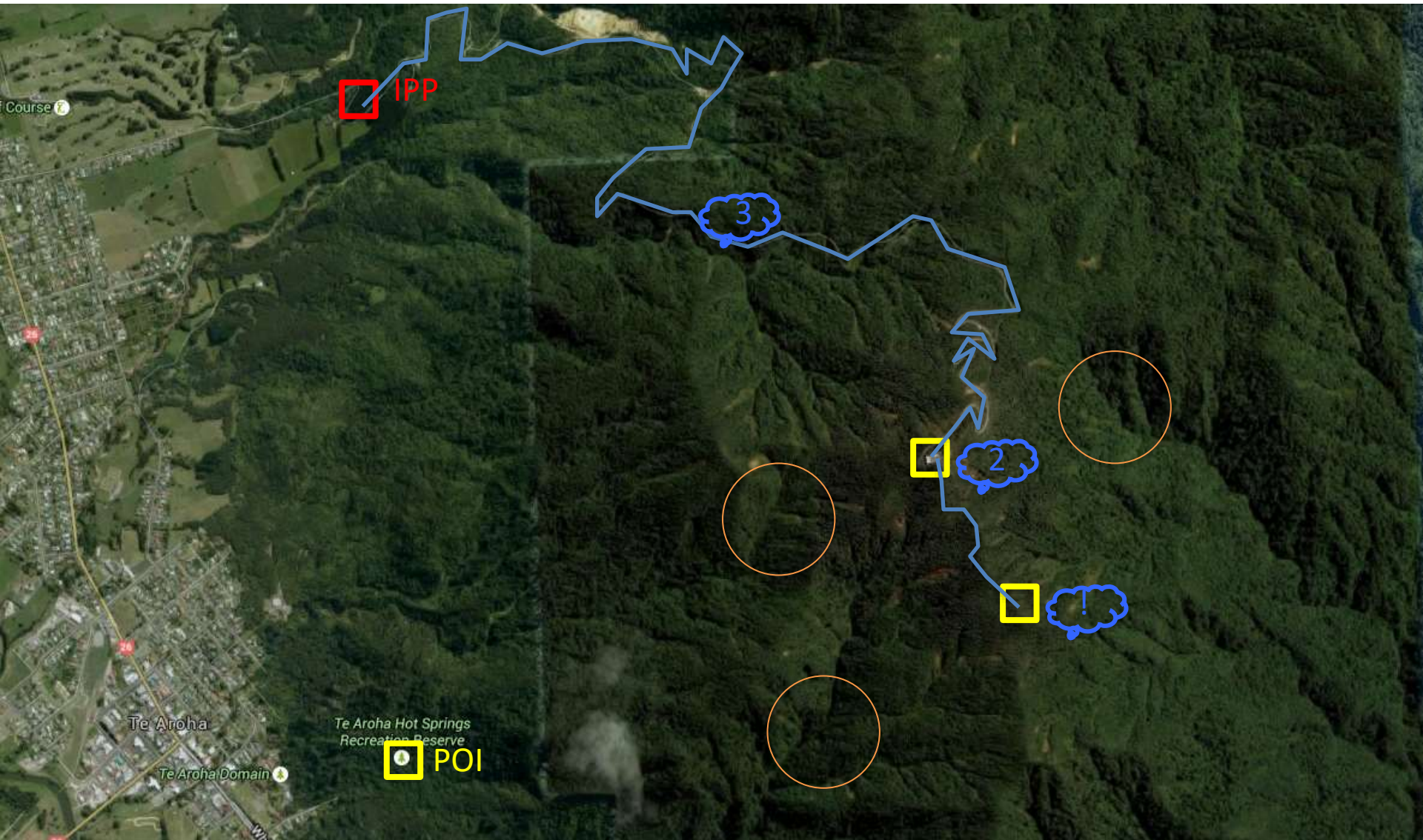


Waikato Police: 2000hr - Request and are given 3 mobile locate pings from Vodafone.



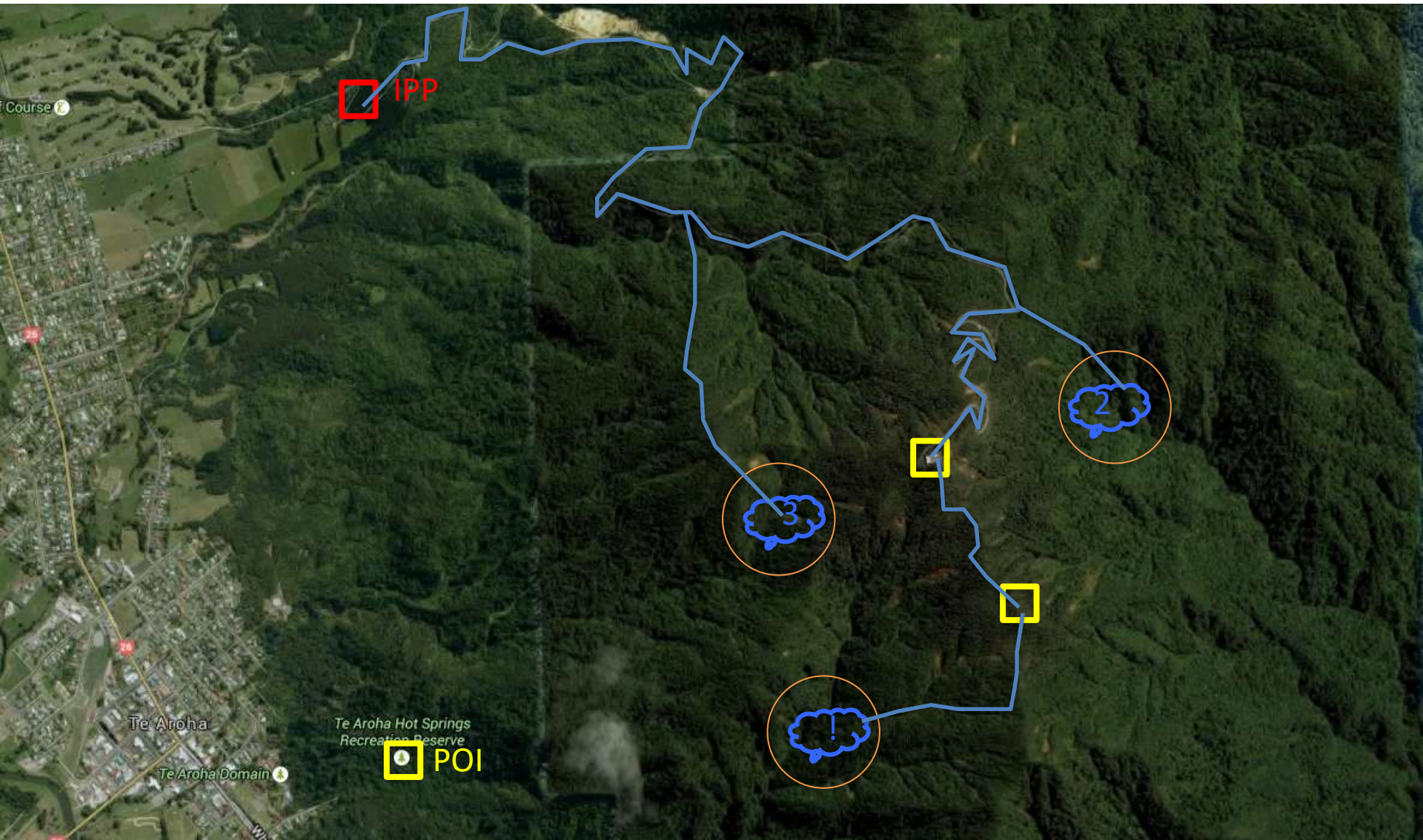
Waikato police: 2000hr – Team 1 continue to second POI - Team 2 head to first POI.

Task: Sound & Light Line & Sign cutting

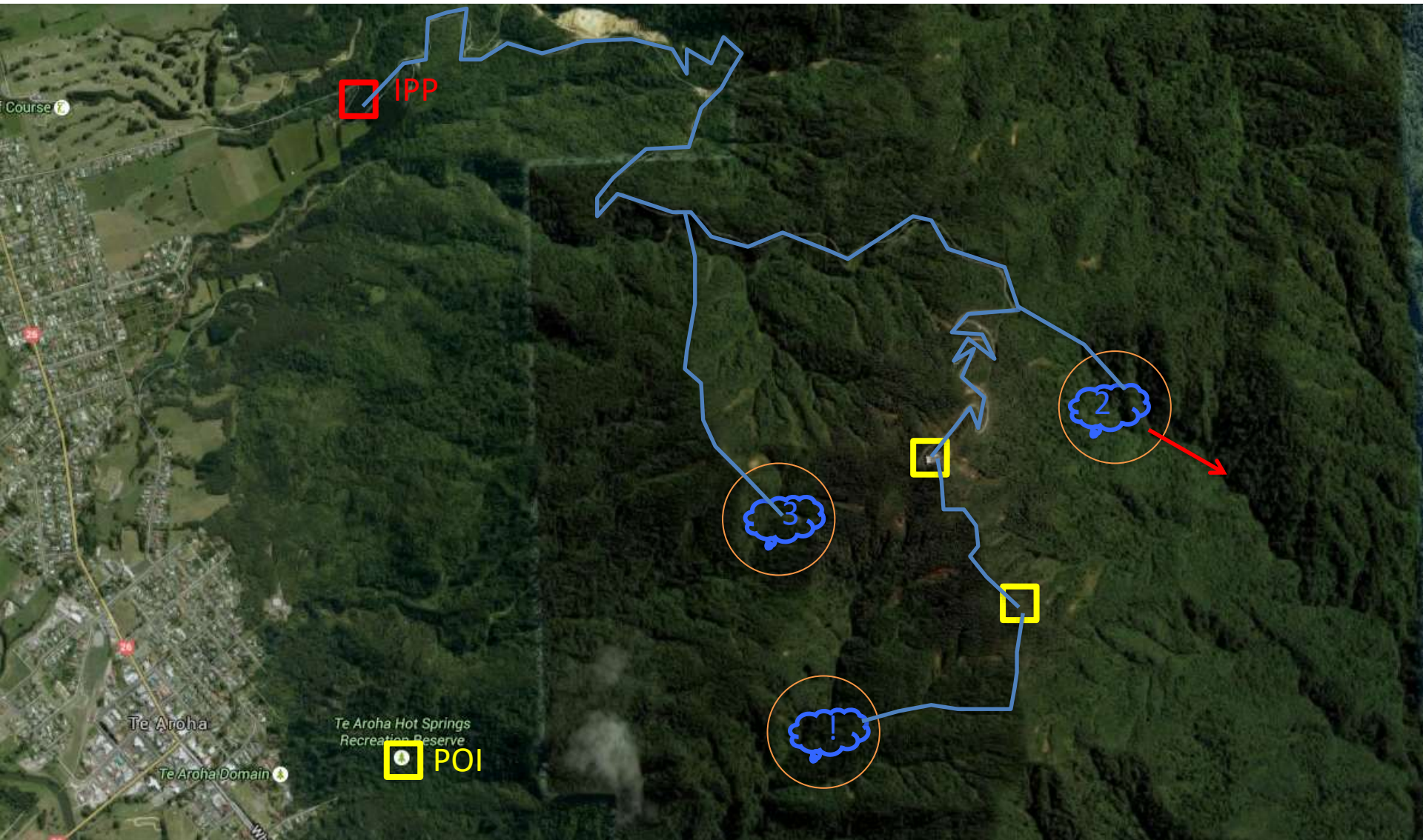


Waikato police: 2000hr – Team 3 head to first POI. (SOP)

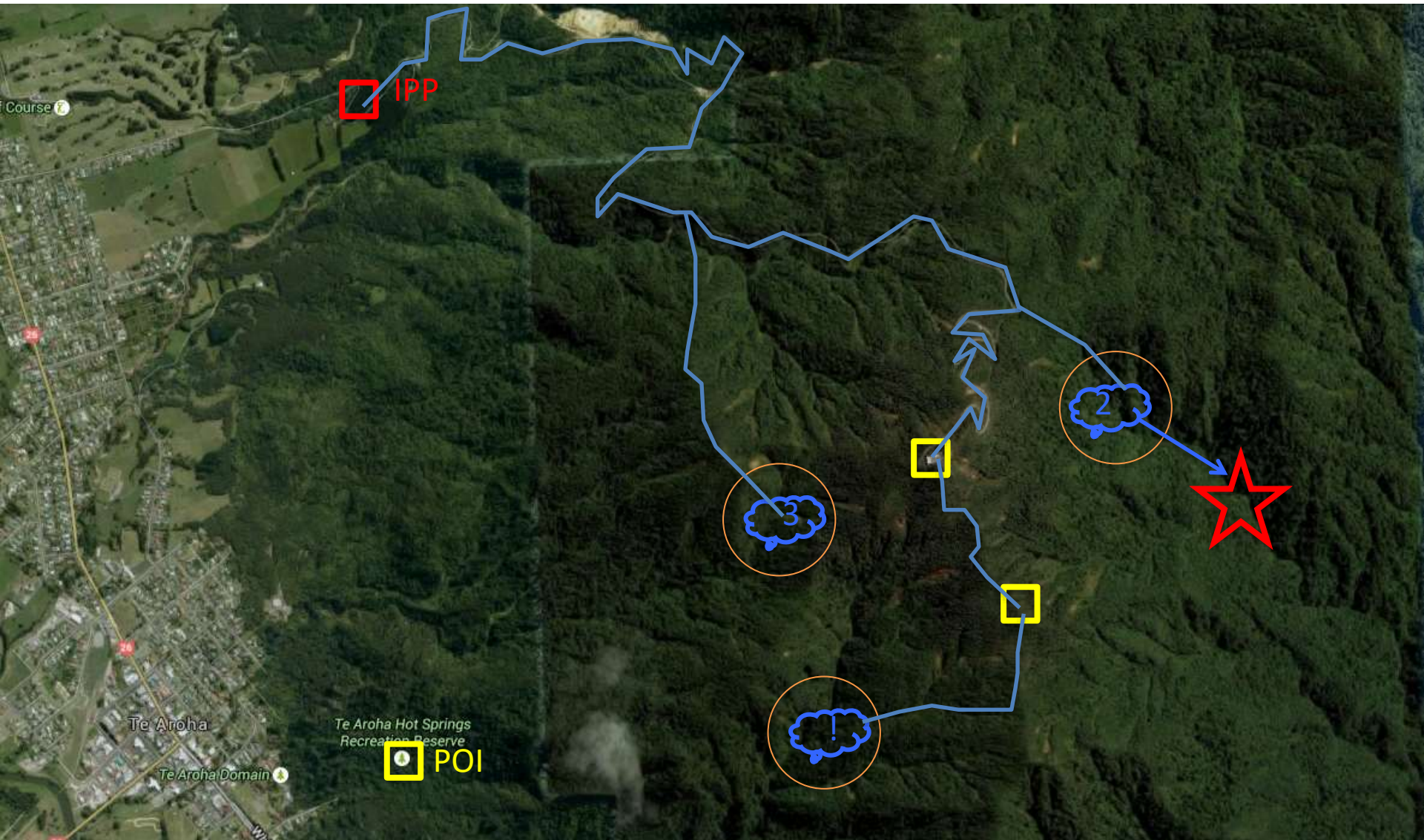
Task: Sound & Light Line



Waikato police: 2200hr – Team 1 head to first MLP – Team 2 head to second MLP
– Team 3 head to third MLP **Task: Sound & Light Line**



Waikato police: 0030hr – Team 2 hears a female voice. Then no response.



Waikato police: 0100hr – Team 2 locates MP.

Condition: Moderate hypothermia – No longer responding to SLL. Had pants and bra on when found.
Conscious, breathing rapidly, rambling speech.



2 days later: Police follow up: Thought was heading down river towards Te Aroha.

'Left mistaken for right'

Techniques

- What techniques were used in this case study?

Techniques

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Attractant

Sound Light Line

Visual

Purposeful wandering

Sign Cutting

Techniques

- What techniques were used in this case study?

Attractant

Sound Light Line

Investigation

Mobile Locate

Visual

Purposeful wandering

Sign Cutting

Scenario – Operation Bryant

Sharon has still not been found, it has been 5 hours since the search started. It is not night time.

Mobile & Responsive

- What core technique would be most effective?