

ADDENDUM TO EUROPEAN JOURNAL OF NAVIGATION , VOL. 6 NO.2 , JULY 2008 . ARTICLE : WHERE TO  
SEARCH FOR THE EARHART LOCKHEED ELECTRA .

An additional from aboard the airplane received radio message @ 0519 GMT reads by transcription : "HEIGHT 10,000 FEET POSITION 150.7 EAST 7.3 SOUTH CUMULUS CLOUDS EVERYTHING OK". The transmission was considered an error by one of the operators in the communications circuit , not acknowledged and not used in the articles , since the coordinates are far away from the Lae to Howland great circle passing over the region of Nukumanu Island @ 874 miles off Lae , whereas additionally the coordinates transcription was ambiguous : were the .7 and .3 notations decimal parts , or arc-minutes ? Recently Mr. G.Lapook , following the air navigator's usage to express in degree and minutes , mentioned the possibility that the first leg was flown to the island Choiseul in coordinates 157°-E ; 7°03'-S at a distance 692 mls off Lae . Examining the possibility of this option to match the theories in EJM , 2008 , July , and 2011 , April & December brings to light that it excellently matches the used navigation model in more than one respect . From Lae to the village Ghagara , 157°-E ; 07°03'-S on the east coast of Shortland Island between Pakengghosu and Lolomikilo a course 092 must be flown for 692 miles , meeting the island's west coast between Sasamungga and Dara . From Pakengghosu to the pre-computed fix in 159°07'-E ; 04°33'.5-S , a 040 true course must be flown over 214 miles , to arrive at 0718 GMT when the next position was transmitted . The total distance from Lae for this case was 906 mls , accounting for an overall 124 mph average speed , 130 mph on the Lae – Ghagara leg and consequently 107 mph to the sunset fix : the flight evidently suffered increasing head wind fields when nearing the Nukumanu region . Another omission in a radio message can now be explained : at 0418 GMT Lae operator Balfour received : "7,000 FEET SPEED 140 KNOTS ..(SOMETHING CONTAINING 'LAE') ..EVERYTHING OK" . The aircraft was then over , or in the immediate vicinity of Harehare on the island Ghaomai , 611 mls off Lae : probably the completed message contained "..ABOUT 600 MILES FROM LAE.." When having a good , in this event , optically fixed position at hand , it is not necessary to actually observe sunset (or sunrise) at a pre-computed position : drawing the rhumb line in the chart immediately delivers the compass course to set . When eventually the on-board sunset region appears by time-speed-distance dead reckoning , checked by a row of sun position lines and a superficial observation , you can safely order the pre-computed fix coordinates to be communicated , and mr.Noonan acted accordingly for 0718 GMT , this time point being 1 ½ minutes before actual pre-computed sunset . Evidently , by the via Choiseul 59 mls detour , Noonan in anticipation avoided the heavy rain squalls by the weather forecast given for a region 250 miles off Lae on the great circle path , with the aircraft still heavily loaded with gasoline . This new concept for the first trip legs confirms again that the navigator voted for better be safe than sorry . For the pre-computed sunrise fix next morning a same prevailing opinion as for the sunset pre-computed position is in force : when having Nikunau (or Tabiteuea, Beru) available as a pre-dawn fix , it was not necessary to actually observe sunrise , since the coordinates could be drawn in the chart and the rhumb line traced for a DR approach , for our case per example checked by a row of moon position (speed-) lines . The eventually resulting cet.par. 141 mph mean ferry speed accounts for slightly less averaged head winds : 21 in lieu of 25 mph , ETA 1909 GMT and some influence on the maximum ferry length , 2,820 instead of 2,740 mls in the event of unchanged mean wind speeds between Nukumanu and Howland . The conclusion maintains that no other islands than Howland , or Baker , could be reached .

Jan 22 , 2012 – H.A.C.van Asten

