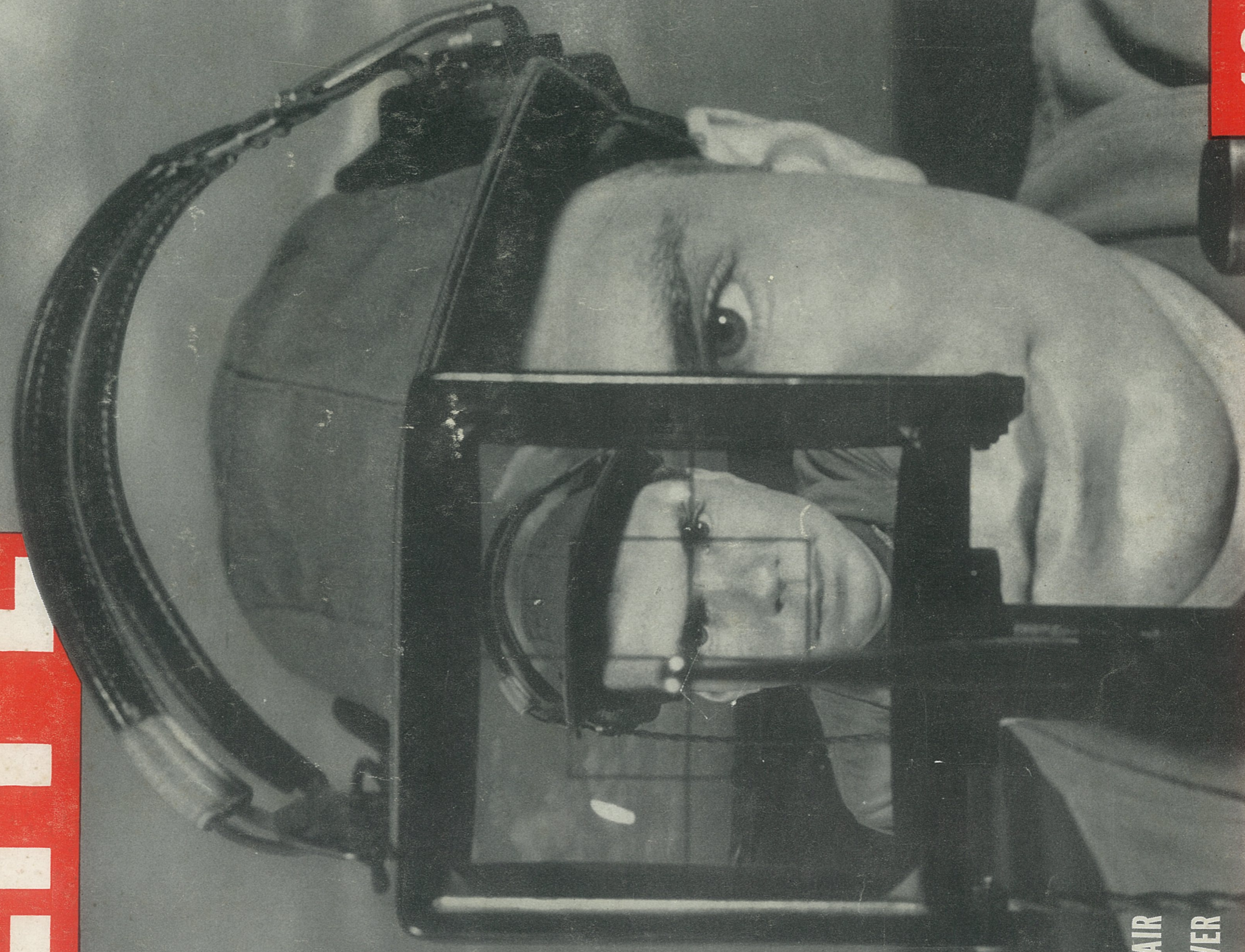


# LIFE



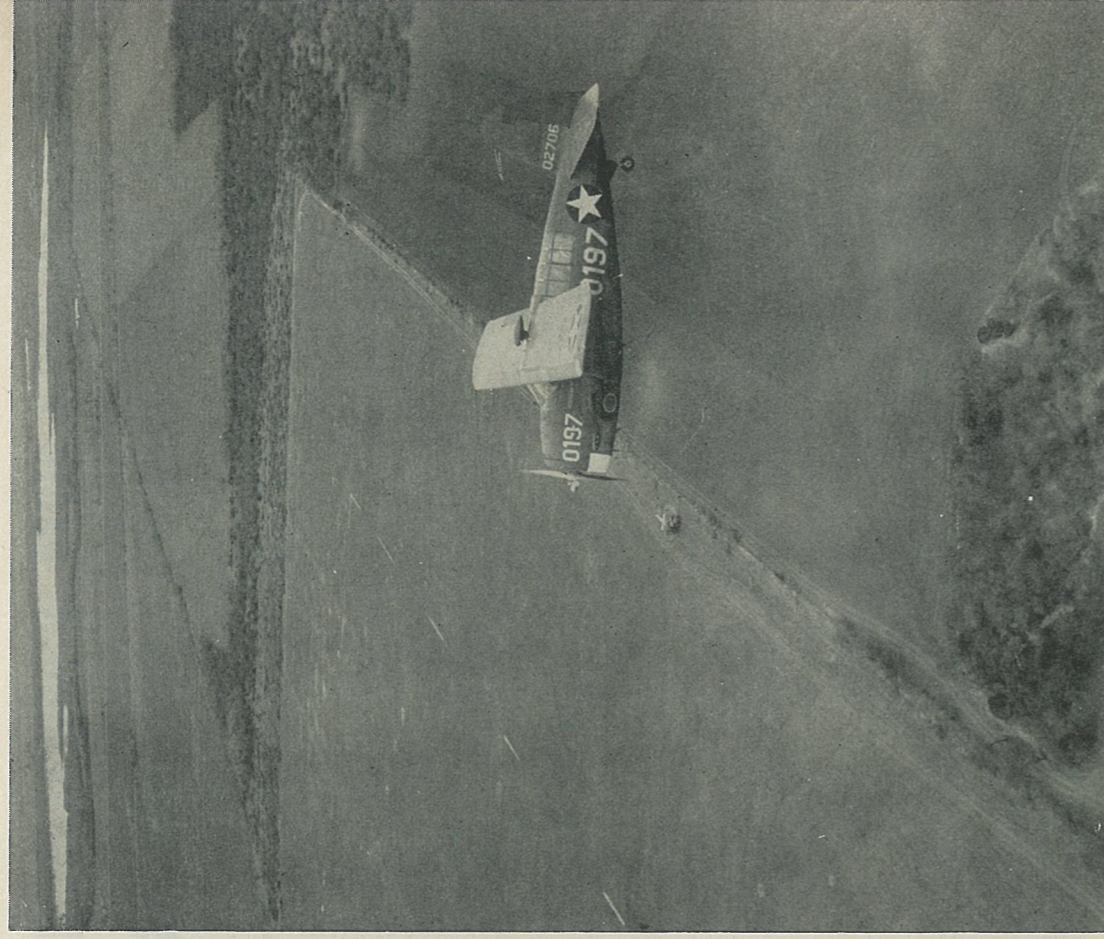
ARMY AIR  
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FEBRUARY 22, 1943 **10** CENTS  
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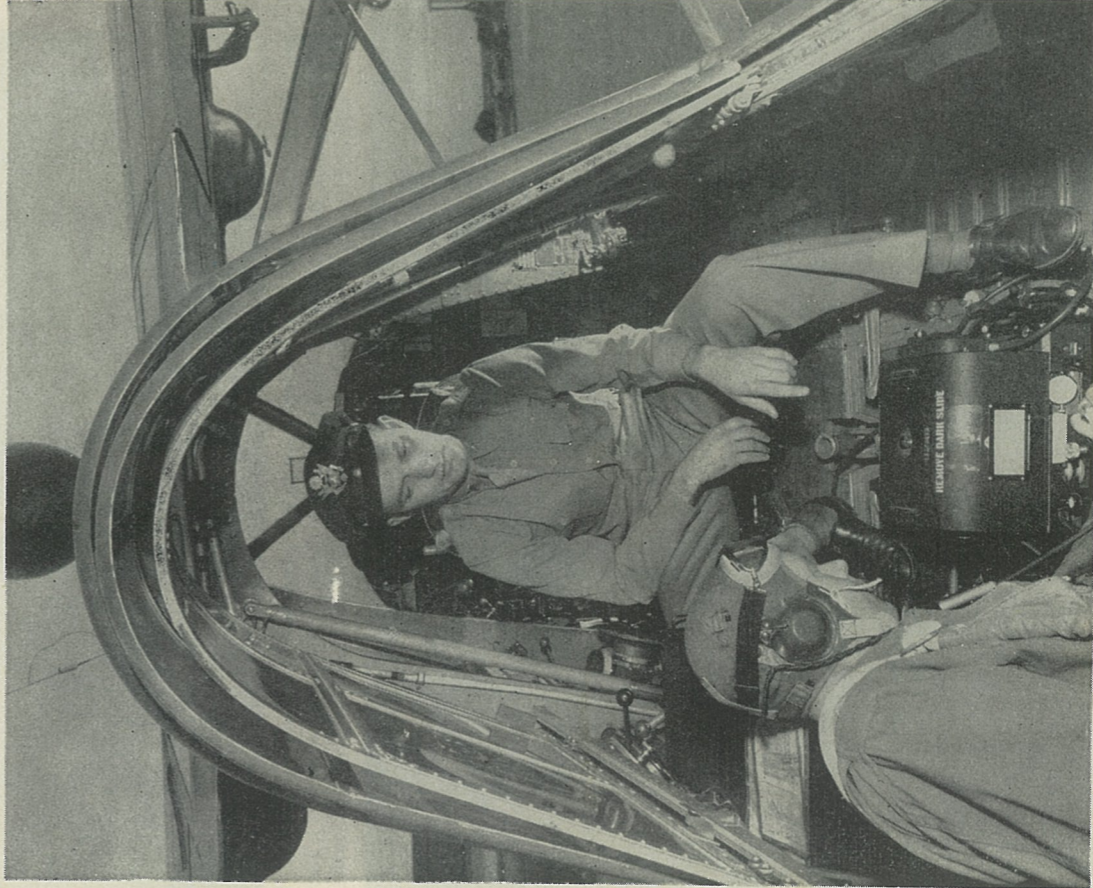
REG. U. S. PAT. OFF.



**Photo-reconnaissance assignment** is laid out by Major E. C. French for Lieut. Carl Schubach, of the armored forces, whose Brooks Field training will qualify him as Army aerial observer.



**"Bumble Bee" observation trainer** is a slow and roomy Curtiss O-52. Observer learns to "shoot" his target and manage his cameras in this. Later he may use fast tactical planes.



**Observer installs camera** in rear of plane. This Fairchild K-3B is usually supplanted on battlefronts by newer models whose vertical and oblique shots at high altitudes cover vast territory.

# PHOTO RECONNAISSANCE

## Air observers learn basic rules at Brooks Field

**E**yes of the Army"—that's what they call the air observers who fly over enemy lines in the fastest planes in the world to "shoot" installations, terrain and troop concentrations, and then hurry back to headquarters with facts that determine strategy of both the ground and air forces.

U.S. operations overseas in the last year have proved the fallacy of using slow hovering planes characteristic of observation squadrons before we went to war. Enemy anti-aircraft and fighter fire was so deadly accurate as to nullify observation missions in such planes. At the same time, the absolute necessity for air observation to precede all ground and air movements was re-emphasized. Consequently cameras have now been perfected for use in the fastest planes flying at altitudes where the human eye is helpless on detail. P-38 fighter planes are the favorite photographic "ships" on the African front. Their extreme speed and 40,000-ft. altitude capacity give them comparative safety from enemy fighter planes and anti-aircraft shells that blacken the sky below. Equipped with three cameras, the lone pilot-observer of such a plane can photograph 20,000 square miles on a single mission. But only when he brings these pictures home is his mission completed. Low photo flights with hedge-hopping approaches for safety are also performed on occasion. On such missions over Africa, armed P-39's, P-40's, or P-51's in the range of 350 m.p.h. and more are used.

The Southwest Pacific presents a different problem. There enemy opposition is less intense but flight ranges are much greater. So cameras are mounted in bombers, medium and heavy, and depend on surprise, high altitude and defensive armament for protection.

Students training as pilot-observers, air-crew members, or air-borne ground officers (*see cover*), learn the principles of photo reconnaissance at Brooks Field, Texas, under the command of Colonel Stanton T. Smith. For elementary problem illustrating basic technique, turn page.

Photo Reconnaissance (continued)

## “SHOOTING” A RIVER IN PREPARATION FOR MAKING ARMORED FORCE CROSSING

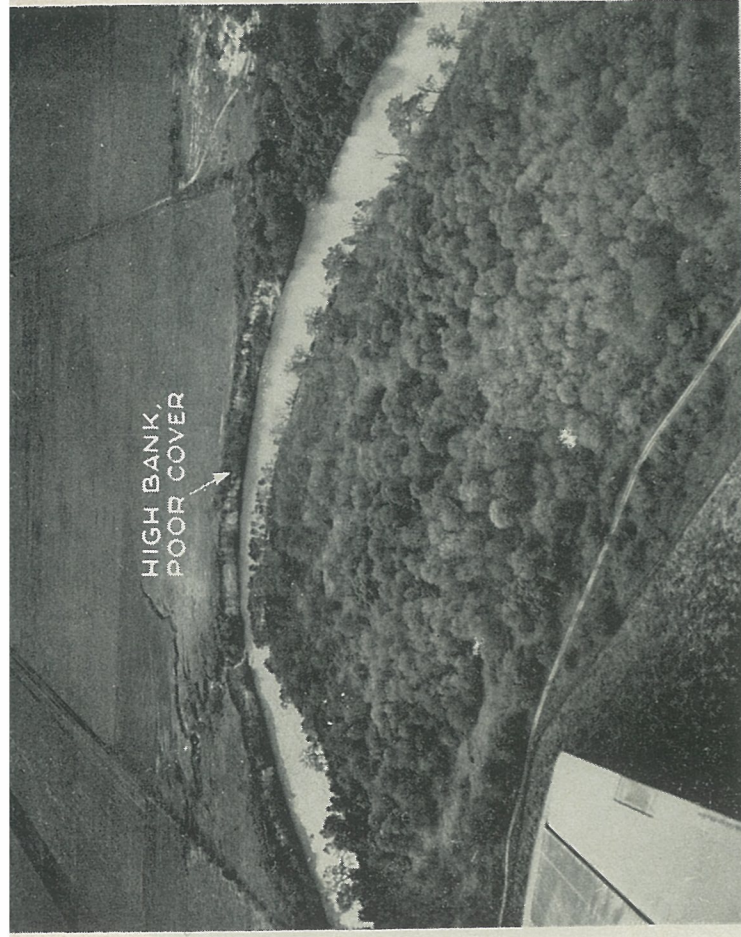
**O**n these two pages is set forth a simple military problem such as the students at Brooks Field are trained to solve by photo reconnaissance. The aerial camera plays the part of a detective in this game of military maneuver. The problem:

An armored-force unit located on a highway at the right of the river that S's down the L-shaped picture is ordered to cross this stream into enemy territory. Because he is unfamiliar with the river terrain which may seriously expose his force to enemy guns, the unit commander sends out his aerial cameraman with instructions to photograph the river and a thousand yards back from each bank in order to make up a reconnaissance strip. The result of this photo-flight mission, performed at an altitude of 5,000 ft., is the L-shaped picture here which is in the hands of the commanding officer within an hour after the plane takes off.

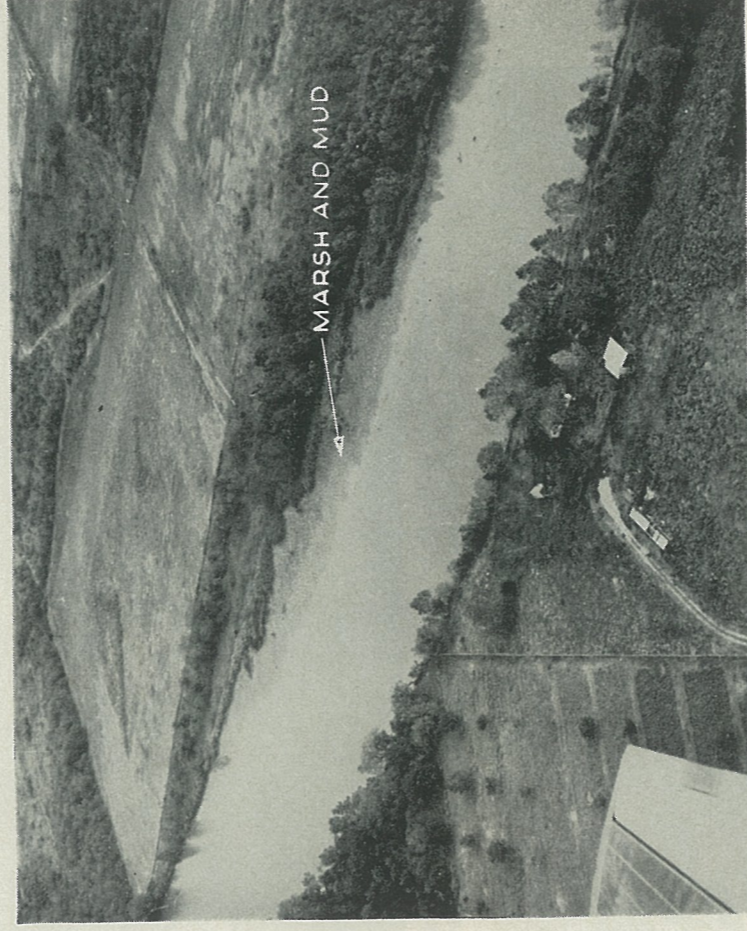
One look at this reconnaissance strip tells the commander and his photo interpreter a lot about their problem. They note the narrow parts of the river, consider the woods on either bank that offer best coverage for troops moving up for a crossing. The little farm roads running right to the river's edge suggest possible crossing places. From marshes and trees in the stream the commander deduces that the river has a shallow muddy bottom which means that his heavy mechanized equipment cannot ford it and that the engineers will have to supply a ponton bridge. But where?

Auxiliary oblique views (pictures A, B and C) brought back by the aerial photographer guide the commander in checking off the bad spots where he should not attempt a crossing because of mud flats, marshes or mud banks. He then figures out four possible crossings along rest of the river. His desire to stick near the big river bend is prompted by tactical as well as practical reasons. There is likely to be little enemy resistance on the land bulge. The opposing leader would hesitate to concentrate troops where they would be exposed to crossfire from both angles of the bend and could be easily flanked once the armored unit was over. Finally the commander selects Route 1 as the best because: 1) the armored unit can assemble in the wooded area on the friendly side of the river in full strength before starting across; 2) in that wood there is a small road that leads to the river's edge; 3) the river is narrow and shallow and has low banks on either side, hence it is easy for an advance fording party to get over and assist in throwing the ponton bridge across; 4) the armored equipment can scoot across to the hostile side and assemble under cover in the woods opposite.

**Photo-reconnaissance strip** shows the four good routes by which an armored unit can make a river crossing by use of a ponton bridge. The quadrilateral areas lettered A, B and C correspond in plan to the oblique pictures A, B and C, and emphasize points to avoid.



**A** High clay bank on the far side of the river makes this a poor spot for a ponton bridge, in spite of the fact that the stream is narrowest at this point. Also, on the enemy side, the cultivated fields stretch open and flat, offering no cover to protect forces after crossing has been made.



**B** Marshy area and mud would force unit to extend an extremely long ponton bridge to keep equipment from miring if it tried to cross here (from top to bottom of picture). The river is wide and the lack of cover on both sides of crossing would give away movements to the enemy.

