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School of Combined Arms - Regular Course  
1946-1947

"BATTLE FOR IPO DAM  
LUZON CAMPAIGN"

43D INFANTRY DIVISION

*Division in a Double Envelopment*

Lt. C

Battle for Ipo Dam, Luzon Campaign, by Lt  
Col N. G. Bassitt, Inf. Command and Staff  
College. 1946-47.

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- Notes:
1. References A-3 and A-5 were derived from reference A-4.
  2. Regimental reports of this battle were not available.
  3. Footnote references are not made because the source of all facts are derived from one document.
  4. The author used reference A-4 particularly to refresh his memory and converted all source material to his own words.

### INTRODUCTION

The purpose of this monograph is to cover the operations of the 43rd Infantry Division, during the Battle for IPO DAM, from 1 May 1945 to 18 May 1945, and to cover the mopping-up operations of the Division until 1 July 1945.

The 43rd Division landed at Lingayen Gulf on 9 January 1945 and fought in the Luzon Campaign almost continuously until Japan sued for peace. Battles fought included the Fight for ROSARIO in LA UNION PROVINCE; west of BAMBAM and north of STOTSENBURG; and, in the ANTIPOLO NEW BOZOBOZO area, east of MANILA, and in the LAGUNA DE BAY area, east to include SANTA MARIA in LAGUNA PROVINCE.

The division was completing its mopping up operation in the NEW BOZOBOZO-LAGUNA DE BAY area when orders were received on 29 April to concentrate the division in the SANTA MARIA area, BULACAN PROVINCE, with the mission of relieving the forces containing the approaches to IPO DAM and initiating an attack to secure the dam, commencing on or about 7 May. The 112th Cavalry Combat team with the 169th RCT of the division attached, had been disposed along the line HOT CORNER - SAN JOSE - NORZAGARAY, containing the enemy in the IPO DAM area since March. This force had participated in costly reconnaissances in force against well organized defenses north and south of BIGTI. Efforts to drive in enemy outposts had been unsuccessful. Here also was one of the few Jap units that at times made proper use of its artillery by massing its fires. Anti-aircraft defenses were so effective that liaison planes did not dare search out the enemy artillery. Jap counterbattery technique was also skillful and forceful, and kept our artillery on its toes. Any unusual activity of troops, vehicles or patrols in the area west of BIGTI meant disaster for those who were so careless to expose themselves to the

observation of the Japs who held the PALISADES, which was the dominating terrain along the front lines. (See Sketches 1 & 2)

The enemy in this area was more than aggressive considering the fact that he had withdrawn and organized the IPO fortress in order to contain one of the important water sources for Manila, which Manila needed so badly. Local counterattacks and patrol actions against our outposts and patrols were well organized and persistent. Fruitless and costly were all attempts of our patrols to penetrate the formidable line running north and south of BIGTI. For over thirty days the containing force used intense air and artillery bombardment to try to break this defense, but all failed.

Manila and vicinity received its water supply from three sources: the NOVALICHES water shed and dam, the MONTALBAN water shed and dam, and the ANGAT water shed and IPO DAM. Thirty percent of the water depended upon the IPO DAM, which was in Jap hands. The enemy had closed the gates at the dam. This stopped the flow of water from the IPO DAM to the NOVALICHES dam which acted as a reservoir. During April the water supply in Manila grew critically short which caused the Commander-in-Chief of the Southwest Pacific to direct that IPO DAM be seized without delay and that all efforts be made to secure its installations intact.

The Commanding General, 43rd Infantry Division, directed his staff and subordinate unit commanders, to make a reconnaissance of the IPO area and be prepared to make recommendations to him as to the most likely scheme of manøuver which would most likely succeed in the attack of this well organized enemy defensive area. Reconnaissance was conducted in small groups with no more than one jeep on a given road at a given time and during daylight.

Commencing on 1 May the division started its movement to the SANTA MARIA area, under blackout conditions. Commencing the night of 3 May the division moved to its forward assembling areas, relieving the 112th Cavalry RCT and taking all precaution to preserve the element of surprise. Infantry areas were occupied in defiladed, wooded positions, and activity was held to the minimum. Bulldozers working under cover of darkness, prepared artillery positions which the artillery occupied after dark.

## GEOGRAPHICAL FEATURES

IPO DAM is located about fifty miles by road northeast of Manila, and is surrounded by some of the most difficult terrain to be found on Luzon.

North of IPO DAM the ANGAT RIVER GORGE presented a formidable barrier which was impassable to any troops in large numbers and even then it could be crossed only at certain places where fords existed.

To the south of IPO DAM the countryside was extremely rugged, consisting of a chain of steep hills covered with brush and broken up by deep valleys. It was entirely devoid of any road which could be used. Even though this terrain was less rugged than that to the north, to cross such terrain would be slow and exhaustive. Roads would have to be built through the steep hills. (It must be remembered that this time of the year is the beginning of the rainy season in this part of Luzon.) The entire southern area was dominated by a range of hills from which enemy artillery could be accurately directed against anyone approaching over the commanded terrain.

To the west and a part of this fortress area were the PALISADES which were precipitous and dominated the only road in the area, the METROPOLITAN road. This highway runs north and south between NORZAGARAY and NOVALICHES, with a junction at BIGTI running due east to the dam proper. It is about four miles from BIGTI to the dam. West of the METROPOLITAN road is rolling country which offered little cover or concealment except in its ravines and wooded areas. In the area east of the METROPOLITAN road the hills rise gradually culminating in the most dominating terrain features to the north and south of the dam. The area also contains the

SANTA MARIA RIVER which has its origin in the OSBOY-FORK RIDGE area.

It can generally be said that the entire area is not suitable for the use of tanks. Any hasty roads which are built in the area would require constant maintenance, ditching and restriction as to the amount of traffic in all weather. In wet weather such roads for all intents and purposes would become impassable for most vehicles, wheel or track laying.

(See Sketches 1 & 2.)

## THE BATTLE FOR IPO DAM

In compliance with orders received from XI Corps 29 April 1945 the division had as its mission the capture of IPO DAM and the destruction of an estimated 4500 Jap defenders. This called for a movement of about sixty miles from the south flank of the SHIMBU LINE to its north flank.

To attain surprise the secrecy of this move was essential. Commencing 1 May the division commenced its movement and by 3 May was in rear assembly areas awaiting the crystallization of the final plan and preparations for the attack. These positions were well back of the chosen lines of departure. During the move unit markings on all vehicles were covered and during the period prior to the attack normal daytime traffic, except for reconnaissance, was allowed to the 169 RCT only, other troops being required to move at night under strict light discipline. Essential reconnaissances by a minimum of personnel and vehicles were permitted. Troops scheduled for the attack lay quiet and motionless throughout the day and worked feverishly all night.

The artillery plan of fires was so designed to allow batteries to move into position and register in without indicating an increase in the strength in the area and at the same time to build up an easily recognized fire pattern. This pattern had as one of its purposes the spotting of landmarks which had been chosen to serve as guidepoints during the night approach march of the attacking troops.

The final plan of attack when once crystallized called for a stealthy approach under cover of darkness from the rear assembly areas to the forward assembly areas and the lines of departure during the nights of 5 and 6 May. The attack was to take form during the night of 6-7 May as a

swift and wide envelopment from the south by two regimental combat teams, the 103rd and the 172nd Infantry Regiments. On the north the "Fil-American Yay Regiment" of guerrillas, which had been trained by and had fought with the division during the past two months, was to move on foot trails over the mountains north of the ANGAT RIVER and attack the objective from this direction in conjunction with the main attack from the south. The 169th regimental combat team in position facing the most formidable part of the Jap defenses, the PALISADES, was to continue to provide a screen behind which the southern assault forces assembled until the attack was made, at which time it was to assemble its flank elements in preparation for an attack to be co-ordinated with the inside flank of the envelopment. The night movement of the southern force was smooth, uneventful, and undiscovered. Elements of the 169 RCT which had been passed through were quickly assembled and redispersed in the 169 sector. The guerrillas on the north, moved quietly and steadily eastward through rugged mountains that dominate the dam from north of the ANGAT RIVER. (See Sketches 2 and 3.)

The only Americans with them were forward observer parties from the division artillery whose part in the attack was to play an important role for this gallant force.

The following attachments had been furnished to support the operation:

- Marking's Fil-American Yay Regiment (Guerrillas)
- 754th Tank Bn. (less Cos. A & C)
- Co. A, 82d Cml. Mortar Bn.
- 238th Cml. Service Plat.
- Btry. D, 198th AAA AW Bn.
- Btrys A & C (less Det.), 227th AAA S/L Bn.
- 161st AAA Gun Bn. (less Btry. A & D)

The following Corps artillery elements were placed under operational control of Commanding General, 43rd Division Artillery, reinforcing Division Artillery Fires:

517th F.A. Bn. (155 Mm. guns)

Btry. C, 465th F.A. Bn. (8" How.)

80th F.A. Bn. (155 mm. How.)

The attack commenced at 2200 on the night of 6th May. Shortly after midnight a comparatively bright moon appeared which helped facilitate the movement of the attacking echelons. By daybreak the 103rd Infantry had gained 5000 yards unopposed. 172nd Infantry had become cognizant of being canalized in the KAY BANBAN VALLEY, and was forced to separate its battalions, the 2d battalion moving into the 103rd Infantry sector. The left, third battalion, drove directly north from its assembly area north of HOT CORNERS toward FORK RIDGE.

The 3d battalion, 103rd Infantry, by noon 7 May had seized positions on Hill 1400, destroying light resistance, and was continuing north along this critical and dominating ridge line which it was necessary to occupy before it could be reinforced. By dark the 103rd had overcome heavy resistance on the north end of Hill 1410 while other elements of the regiment had passed on to the west of Hill 1410 to seize Hill 1000, thus organizing the key features which commanded the main route of advance of the division and denying to the enemy the excellent observation afforded by the ridges. Working closely behind the infantry, the 118th Engineer Battalion broke trails in support of each regiment, cutting hills apart, bridging gorges, and keeping in defilade where possible. The full weight of the 43rd Division artillery, powerfully reinforced, was thrown against the aero-photo targets in the path of the advancing infantry. Dive bombers

on air alert throughout the day concentrated their main effort against enemy anti-aircraft positions, so as to permit the employment of artillery liaison planes. Gains for the day averaged 8000 yards. The guerillas of Marking's Regiment on the north advanced 9000 yards over difficult terrain encountering numerous enemy patrols and driving in outposts. They had advanced to within 400 yards of FOUR CORNERED HILL, where they met effective enemy resistance.

During the period 8-10 May, the 103rd and the 172nd were still driving toward their objective and meeting with success. Hill 1805 and Mt. TACBIHAN were captured by 3d Battalion 172nd Infantry. Leading elements took care of the opposition as other elements swept on overcoming enemy and terrain simultaneously. It was essential that the enemy not appreciate where the main effort was being made; hence, the desire for speed and capture of the objective before the enemy could realize what was happening. In order to continue to deceive the enemy the 169th continued its aggressive probing in the BIGTI area against the dugin positions along the PALISADES. During this period the 169th gained some ground, gave it up and took other ground a few hours later. It is believed that the enemy concentrated his main forces opposite the 169th as had been hoped. On the 9th the guerrilla forces seized MT. KABUYAO (north of FOUR CORNERED HILL) destroyed an enemy observation post and continued its advance toward IPO. The 3d Battalion, 103rd, which had previously seized the ridges on the Division right flank, succeeded in destroying an artillery command post and killing 75 Japs at the position. Several enemy counterattacks which attempted to drive our troops from HILLS 1400 and 1410 failed.

Prior to the arrival of the Division in the area the enemy artillery had been very sensitive to the movement of our troops and would open fire without too much provocation. However, after the coordinated attack began, the Japs had become more conservative in the use of their artillery until during this period, 8-10 May, when its activity increased. Originally the enemy artillery positions had been so located and dug in so as to repel an attack from the west. However, our activity to the south caused him to redispense some of his artillery in new caves to meet our envelopment. The pieces, having been placed underground or well dug in in hill bunkers, made their location very difficult. It was almost impossible to silence them. By previous experience we knew the effectiveness of our cub planes, but we did not dare use them well forward because of the enemy antiaircraft pieces. Continued dive bombing of the antiaircraft positions had sufficiently silenced them to allow our cubs to venture well forward over the greater part of the target area. Once this was true the enemy did not fire his artillery as long as there was a plane in the area. As soon as the cub would leave all hell would break loose with massed artillery fires which the Japs had used only occasionally during previous battles.

During this period about 100 aircraft supported the attack of the Division.

Beginning with the first night after the attack, searchlights of the 227th AAA Searchlight Battalion furnished battlefield illumination, which was quite effective and helpful in restricting the movement of the enemy and facilitating the evacuation of our casualties during darkness.

On 11 May our forces had reached the enemy main line of resistance. (See Sketch 4.) From here on until the capture of the Dam on the 18th and at which time all organized

resistance of the enemy had ceased in the area, the battle for the dam had become a slugging match. Our advances were to become more costly and the rains which set in on the 13th caused us to pay for every foot of ground taken. On the 11th, the 3d Battalion, 172nd, was unable to advance in the FORK RIDGE area, after suffering heavy casualties. The Guerrillas were repulsed three times with heavy losses in their effort to take FOUR CORNERED HILL. In other sectors advances were limited to a few hundred yards against machine guns, mortars, and accurate artillery fire which varied in caliber from 75-150 mm.

Following the massing of artillery fires the 1st Battalion, 103rd Infantry, and the 2nd Battalion, 172nd Infantry, attacked and seized HILL 815 on 12 May. At this time the 2nd Battalion, 103rd Infantry, was committed from the division reserve and swept Northeast from HILL 815 across the IPO RIVER toward the dam, overrunning an enemy bivouac and cutting the enemy's major line of communication with his forces to the South. The 3rd Battalion, 172nd Infantry, attacked after an intense artillery and air bombardment, but failed to gain ground in the FORK RIDGE area; the maneuvers of this battalion against the well organized hill south of the METROPOLITAN ROAD continued to weaken this battalion daily.

The importance of the artillery forward observers to the guerrillas on the north, as mentioned previously, came about on 12 May, when air support and well observed artillery fire brought about the seizure of FOUR CORNERED HILL, thus denying to the enemy this critical feature which was so important to both sides.

The division commander realizing the shift in enemy strength ordered the 169th Infantry to increase its demonstrations in order to take pressure off the enveloping forces.

When two rifle companies advanced boldly on SAN MATEO north of BIGTI, they were immediately engaged by a great volume of 150 mm. fire. The enemy counterattacked immediately, but our mortars repulsed them. When other elements of the 169th Infantry skirted the cliffs at BIGTI and penetrated the enemy's defenses, they drew medium artillery fire from the well placed positions in the caves north of METROPOLITAN ROAD. It is believed that the demonstrations of the 169th paid dividends since the Japs desperately counterattacked the 169th in piecemeal attacks while the 103rd and 172nd continued to advance toward IPO DAM.

During the night of 12-13 May the enemy attacked the 2d battalion, 172nd Infantry, on HILL 815, after laying an artillery concentration of approximately 500 rounds. This artillery fire came from all directions, the most damaging being received from the right rear of the battalion from well concealed enemy positions, east of HILL 1000, which <sup>positions</sup> the 103rd Infantry had not taken at this time. Approximately a battalion of infantry troops moved in on HILL 815 in what developed to be almost an all night attack. The counted enemy dead around HILL 815 at daybreak totaled 181. Our losses were 1 man killed and several injured. The attack was repulsed. However, it was now definitely apparent that the enemy had detected our main effort and would do all in his power to oppose our further move on the division objective. One more range of hills, the dominating feature of which was HILL 860 and to its west RED BANK, stood between us and the METROPOLITAN ROAD. This range was also the Japs last strong point before the dam could be taken. It now became more and more apparent that the going from here on would be tough.

As was so often true in the tropical battles of the

division, commencing on 13 May the division had to fight its second enemy. This time it was not the bugs and the heat and the stench of the jungles, but it was torrents of rain which drowned the landscape and made the roads impassable, which up to this time were barely sufficient to take care of the needs of the two regiments fighting to the south of the dam. Knowing that ambulances could not reach them, the walking casualties started to the rear; the non-walking, having no alternative, remained where they were, hoping that some provision would be made to evacuate them. (Even bull-dozers and tractors became stuck in the mud and immobilized.) The artillery, tanks and 4.2 mortars, which had been displaced forward close behind the infantry were immobilized and ammunition expenditure had to be critically curtailed until the roads could be opened.

In anticipation of such an emergency over 1,000 Filipino carriers had been secured. They rendered excellent service, but their efforts were indeed feeble in carrying the necessary supplies over terrain which was difficult enough for a person to walk over without a load. More carriers could not be secured because they were better paid and worked under less hazardous conditions in MANILA. (Competition between the armed forces in securing these carriers was evident.) To alleviate the condition, it was necessary to make guerrilla units into service troops to perform carrying missions; and, air drops were thrown into the effort of supply to keep the assault battalions moving. Evacuation remained the most critical deficiency, requiring ten hours or more to carry and transport them to the nearest surgical installation. On the 14th it became necessary to drag by men and tractors a portable surgical hospital as far forward as possible so that the more critical cases could be cared for near the front.

On the 14th, even though the rain continued to fall, a garbled message from a field artillery forward observer with the guerrillas brought good news. The guerillas had seized HILL 803, dominating IPO DAM from the north. This was to become the turning point of this operation.

The 169th Infantry was ordered to assemble one battalion and prepare it on one hour's alert to seize the PALISADES at BIGTI and employing tanks pass through the PALISADES and continue on the METROPOLITAN ROAD eastward to IPO DAM. Thorough reconnaissance was made by the regiment of the approaches; tanks and engineer troops were assembled in defilade near the SANTA MARIA BRIDGE south of BIGTI in preparation for the coming offensive of the 169th Infantry.

While these plans were being made for the all out offensive by the 169th Infantry, little progress had been made in opening the main supply route for the 172nd and 103rd. Wounded were evacuated using tractors towing one ton trailers with some difficulty. Supply drops from C-47's were successful and in good volume, but this could not take care of the evacuation. These C-47's were loaded and guided into the drop areas by personnel from the regiments. XIth Corps had made arrangements to secure for the exclusive use of the 43rd Division approximately four aircraft daily. This arrangement allowed the division to package, bundle and drop the exact supplies at the proper time and place without confusion.

Advancing up slippery hills, leading elements of the 103rd Infantry seized foothills on a southern spur of HILL 860, while other elements of the regiment drove north on the east side of the IPO RIVER, arrived within about 1,000 yards of the dam and reports the vital objective still intact. Throughout the night of 14-15 May intense and continuous artillery and mortar fire was received by all elements of

the 103rd and 172nd in their zones, except when our counter battery fire was placed on known enemy positions. Three banzai charges spent themselves against machine guns when the enemy attempted to storm the 1st Battalion, 103rd Infantry positions on the southern slope of Hill 860. The guerrillas on HILL 803 repulsed two counter attacks during this night but a fanatical counter attack the following morning drove them from one position on HILL 803 as hand to hand fighting broke out on the hillside.

On 15 May final plans were prepared for the all out coordinated attack to be launched on 17 May to seize the final objective. This plan called for a strong effort supplemented by the use of napalm to strike at the remaining stubborn defenses. The 169th was to advance a reinforced battalion to a forward assembly area south of BIGTI on the night of 16-17 May. Our advances during this day gained up to 700 yards south of HILL 860 against stubborn resistance. Even though the enemy artillery had been reduced in strength by our counter-battery fire, it continued to engage our forces on HILL 815 on the night 15-16 May firing 150 round of medium caliber at the 2nd battalion 172nd Infantry.

On the morning 16 May at about 1030, 158 fighter-bombers struck the PALISADE area and OSBOY RIDGE with 50,470 gallons of napalm. During this day, battalions were regrouped in preparation for the scheduled attack on the 17th. Also patrols probed east into the mountains from HILL 1410 to search out and destroy the enemy artillery battery which had been infilading our positions on HILL 815, as well as interdicting our supply roads. The results were the finding of a heavily defended strongpoint on a north spur of MT. BALABAC which the patrol was unable to reduce. After the massing of artillery fire on the position and a further probe by patrols the resistance had been reduced

but no artillery pieces were to be found. (I don't believe that these guns were ever destroyed. A few rounds were received from there as late as the middle of June). 1st Battalion, 172nd Infantry having been committed from division reserve made some progress from the KAY BANBAN VALLEY against FORK and OSBOY RIDGES. Supplies were massed on positions and communications were improved for the final assault. The 3rd Battalion, 169th equipped with scaling ladders made of bamboo moved quietly under cover of darkness into an assembly area in the SANTA MARIA RIVER bed about 2500 yards south of BIGTI.

Commencing at 1030, 17 May the offensive was started by 220 fighter bombers spreading over 62,000 gallons of napalm along the METROPOLITAN ROAD defenses while the 169th Infantry struck north along the tops of the formidable cliffs seizing the PALISADES with light casualties. (See Sketch 5) In conjunction with this attack the tanks which had been assembled several days previously near the bridge over the SANTA MARIA RIVER were able to advance along the METROPOLITAN ROAD to the beginning of the BIGTI PASS to the PALISADES where tremendous boulders blasted from the cliffs had blocked the road. The engineers who were on hand commenced operations immediately to reduce this obstacle while other engineer troops blasted the caves under the cover of infantry riflemen along the PALISADES and along the METROPOLITAN ROAD.

At the time the 169th commenced its attack, the 2d Battalion, 172nd Infantry launched its attack northwest from HILL 815 and a southern spur of HILL 860 and quickly seized RED BANK which dominated the METROPOLITAN ROAD. At the time RED BANK was seized, enemy forces in disorganized bands attempted to withdraw through our lines in daylight not knowing that our troops had taken this dominant terrain feature. This battalion continued its advance along METROPOLITAN ROAD to the west against scattered resistance and seized

commanding ground north of OSBOY RIDGE.

In the 103rd Infantry sector the 1st Battalion seized the crest of HILL 860 while the 2d Battalion secured the junction of the ANGAT and IPO RIVERS thus completely blocking the enemy evacuation route to the south. This Battalion then attacked westward assisting the 1st Battalion in its reduction of pillboxes on HILL 860. From HILL 860 elements of the 103rd continued its advance to the north seizing the south end of the dam while the Guerrillas from HILL 803 fought through scattered resistance down the slope to secure the north end of the dam. All installations were secured intact, even though the enemy had prepared the gate for demolition using several hundred pounds of TNT. Fortunately, he failed to detonate his charge.

The only serious resistance remaining in the Division sector was being gradually eliminated at OSBOY RIDGE by assault parties supported by artillery and in the general area to the north of METROPOLITAN ROAD where mopping up was to continue for several weeks hence.

The METROPOLITAN ROAD was not secured until 18 May. The 2d Battalion, 169th Infantry relieved the 3d Battalion of that regiment at the PALISADES and then the 3d Battalion drove northeast along the METROPOLITAN ROAD, contacted the 172nd Infantry north of OSBOY RIDGE thus isolating this pocket of resistance. Elements of both regiments drove 1,000 yards north of the METROPOLITAN ROAD by nightfall seizing two key terrain features which insured the security of the METROPOLITAN ROAD for its entire length. These maneuvers allowed the flow of ambulances, supplies and troops to reach HILL 860 and the area of the dam, thus returning to normal the supply and evacuation of the battalions which had been nearly isolated in the HILL 860 area. Again on this day the 5th Air Force, this time using 251 aircraft, dropped

nearly 68,000 gallons of napalm upon enemy positions north of the METROPOLITAN ROAD. This day is remembered as a milestone in the history of the 43rd Division, not only because it seized the dam, but because it was the first day in over two months that not one round of enemy artillery was received by our troops. On the other hand our artillery continued to blast away at disorganized Jap groups seeking shelter in ravines and searching for routes of escape from the pincers which had forced them out of their almost impregnable defenses.

Mopping up had started on 18 May, and was to continue by elements of the division until 1 July when it was relieved by elements of the 38th Division. On 19 May all organized enemy resistance in the IPO area had ceased, most of the remnants of the Jap garrison having been driven north of the ANGAT RIVER or east of the IPO RIVER. Results of this battle include 34 field pieces and 109 vehicles captured, most of them being unserviceable. In addition, enemy losses included 4,062 enemy killed in action and 368 prisoners of war. Our losses were 172 killed in action, 708 wounded in action and 4 missing in action. The ratio of enemy to friendly killed in action was 23 to 1.

One of the interesting sidelights during the mopping up operations was the mass surrender of 27 Japanese soldiers and officers who were unable to escape because of their physical condition. As far as can be ascertained, except for one mass surrender in New Guinea, this was the largest such surrender of Japanese troops up to 27 May 1945.

During the most active and lucrative mopping up period, 20 May- 2 June, over 750 Japs were killed. The mopping up ranged to a distance over 10,000 yards north of the ANGAT through dense jungle and rugged terrain. East of the IPO and along the ANGAT RIVER to the northeast the Japs established several strong blocking points along wooded ravines.

Close contact was maintained with these forces during which time our patrols probed their positions almost daily. Each of these actions was generally preceded by heavy artillery and air bombardment. In the area east of the IPO, 450 Japs were counted dead during the mopping up period.

After the Division was relieved of its mission in the IPO sector the 103rd Infantry Regiment was assigned the mopping up mission in the CABANATUAN-DINGALEN BAY region where many of these same Japs who had escaped from IPO were killed or captured. To cross the mountains these straggler forces had to cross some of the most rugged terrain to be found in the Philippines.

The final active offensive operation of the division was performed by the 169th RCT when it was ordered on 2 June to extend the right flank of the division relieving the elements of the 38th Division in MT. ORO-MT. AYAAS- MT. HAPONANG BANOY area. The operation lasted until 12 June. For this operation, the Jap dead totaled 131 while our losses were 2 killed and 10 wounded.

## CONCLUSIONS

The mission of the Division called for a quick but carefully planned manøuver that could be costly in operations against the Japanese especially since the forces of the Division were divided. To have attempted a double envelopment in most other situations would have spelt disaster for a commander who dared give birth to such an idea, and possibly disaster to his troops as well.

The mere fact that the plan as executed was successful can do nothing more than add one more successful battle to the long list of battles which the Division fought during this war.

The battle for IPO DAM tested the stamina of our troops for fighting in mountains, over rugged terrain, up and down muddy valleys and under conditions where supplies could not be brought in except by airplane drops or by the backbreaking effort of carrying parties which at times during the dampaign was almost impossible.

The rainy period during the battle proved that our transportation is most inadequte to supply our troops in difficult terrain under inclement conditions. It also indicated that for evacuation purposes particularly, a helicopter type plane must be made available to infantry units under such conditions.

Even against the Japs the momentum of the battle had to be maintained or else a stalemate was indicated. In this instance the rains almost created a stalemate, having allowed the Japs sufficient time to change their defenses from the PALISADES front to the area south of IPO DAM.

## LESSONS

1. The use of "artificial moonlight" proved a great advantage to our troops in view of the fact that the Jap was willing to sacrifice his forces by banzai attacks at night. He seldom, during daylight hours, dared venture beyond the front of his foxhole or cave.
2. Wet weather during this battle indicated that our transport was inadequate for operations in hilly terrain during heavy rains. The use of human transport was neither available in sufficient numbers nor could it endure the strain required of the carriers.
3. Air drops became our salvation in the matter of supply, but that did not solve our evacuation problems. A surgical hospital placed within about two miles of the front lines did help alleviate the evacuation emergency to a limited degree, but that was not the whole answer to our problem of evacuation. It is believed that a helicopter type plane must be provided for future actions of this nature.
4. The use of close air support is necessary in mountain warfare where it is impossible to shoot the enemy out of the ground. Napalm is very effective when dropped near the mouth of caves. Reports indicate that it has a tendency to suffocate the occupants.
5. For a double envelopment careful coordination is required and reserves for each enveloping element must be such that the enemy cannot take advantage of his interior lines and bring to bear a preponderance of force which might spell disaster to either flanking unit.
6. Regardless of how well a large scale operation is planned it can be only as successful initially as the accuracy of the maps upon which it is based. Our maps for the battle

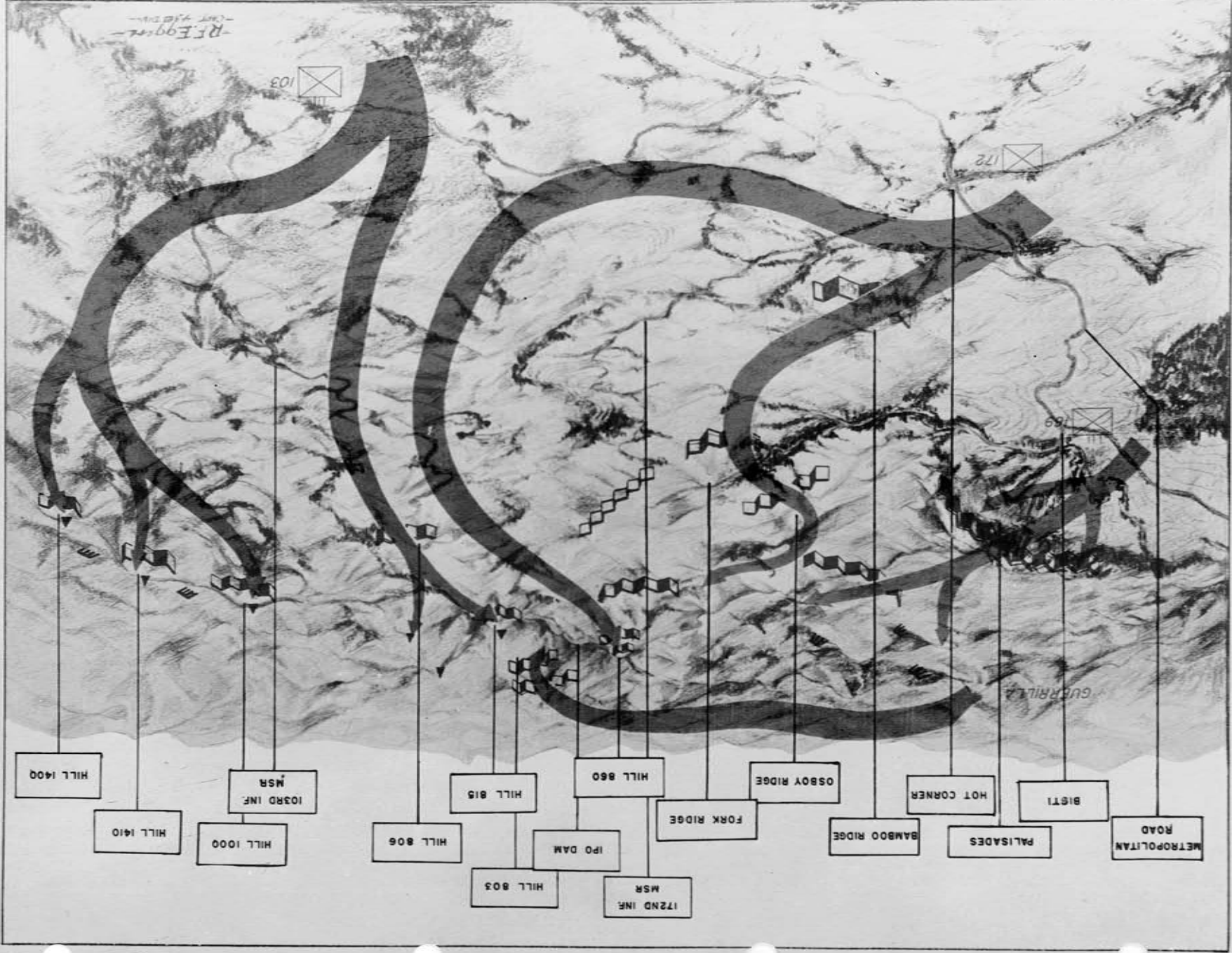
were most inaccurate. Maps of a scale of 1 to 25,000 had very little resemblance in some areas to the same map of a scale of 1 to 50,000. We discovered that artillery surveys in many cases were most essential for locating the enemy on the ground, as well as locating our own positions. Artillery smoke shells helped determine the location of our troops through sensing.

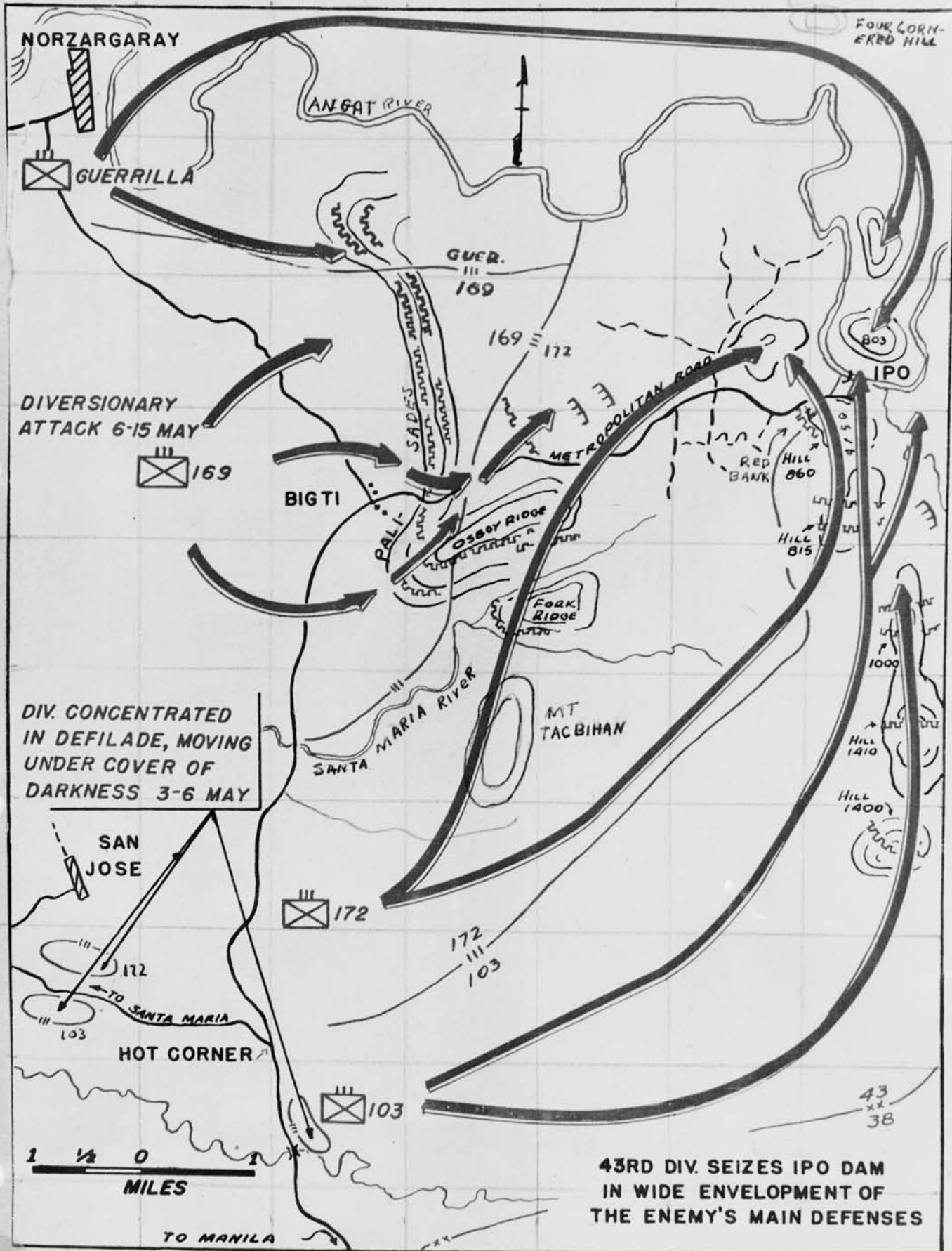
7. Recoilless weapons were tested on a small scale during the battle and proved themselves quite effective against the enemy caves. However, it must be remembered that once having been fired these weapons must be moved for they draw counter fire almost immediately.
8. 90 mm. antiaircraft guns proved to be most satisfactory in supplementing the fires of the field artillery because of their long range, and all around traverse.
9. Even though our forces had been battling the defenses of the PALISADES for two months without success, the Division knew that if it must take IPO DAM it must by-pass this formidable obstacle, in which the Japs had so cleverly dug their caves. The lesson learned here is that even in cave warfare formidable positions may have to be by-passed by wide envelopments.
10. During the desperate days when the rains came, in order to be sure that each element of the Division received the proper supplies in the right quantities, cargo planes were assigned to the Division for drop missions. Balanced packages were prepared, loaded and dropped by personnel of the Division. This not only proved economical, but assured that the troops were receiving what they required in the proper quantities.
11. During the battle, if any one piece of equipment could have been classed as indispensable, it was the liaison plane. This "weapon" stopped all enemy artillery fire

and even small arms fire when it appeared over the horizon. The Japs learned to respect it even though it carried no armament.

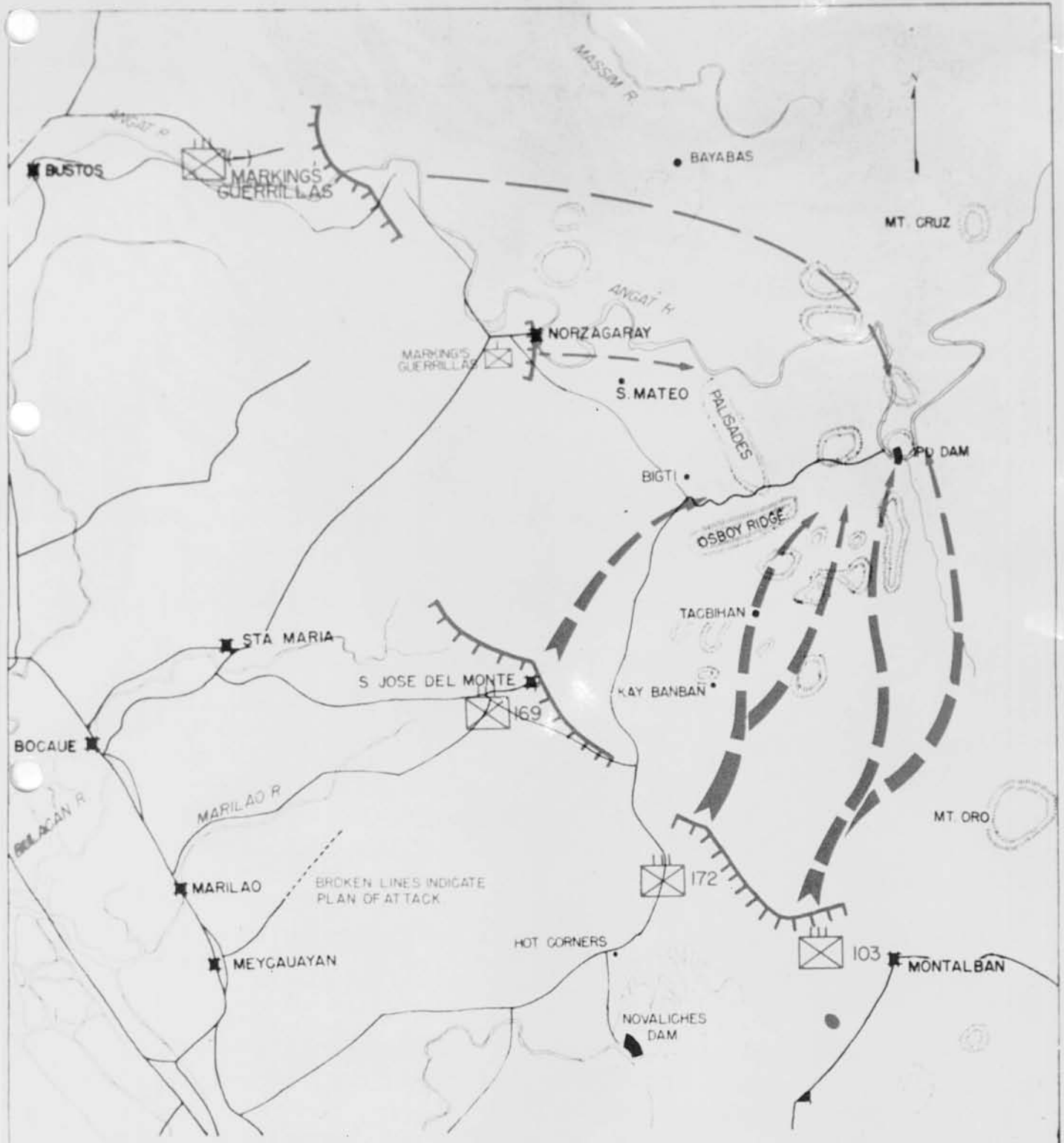
12. It was learned definitely and by costly experience that wire lines will not "stay in" during wet weather when laid near roads and that the wire laying equipment available to the elements of a division are not capable of keeping up with a division's advance when the terrain and weather will not allow the use of vehicles. It is believed that a wire line could be laid from a helicopter type plane cross country and away from roads and trails. The radio proved to be an indispensable piece of equipment, but even the set that could be carried by an infantryman had its limitations. Lack of range and interference by masks were the two most evident limitations.
13. The principle of the use of corridors and cross corridors (or compartments) may be argued by tacticians, but it was conclusively learned that a dominating terrain feature still remains the key to any defensive position or offensive action.

Panoramic View IPO Area  
SKETCH-1



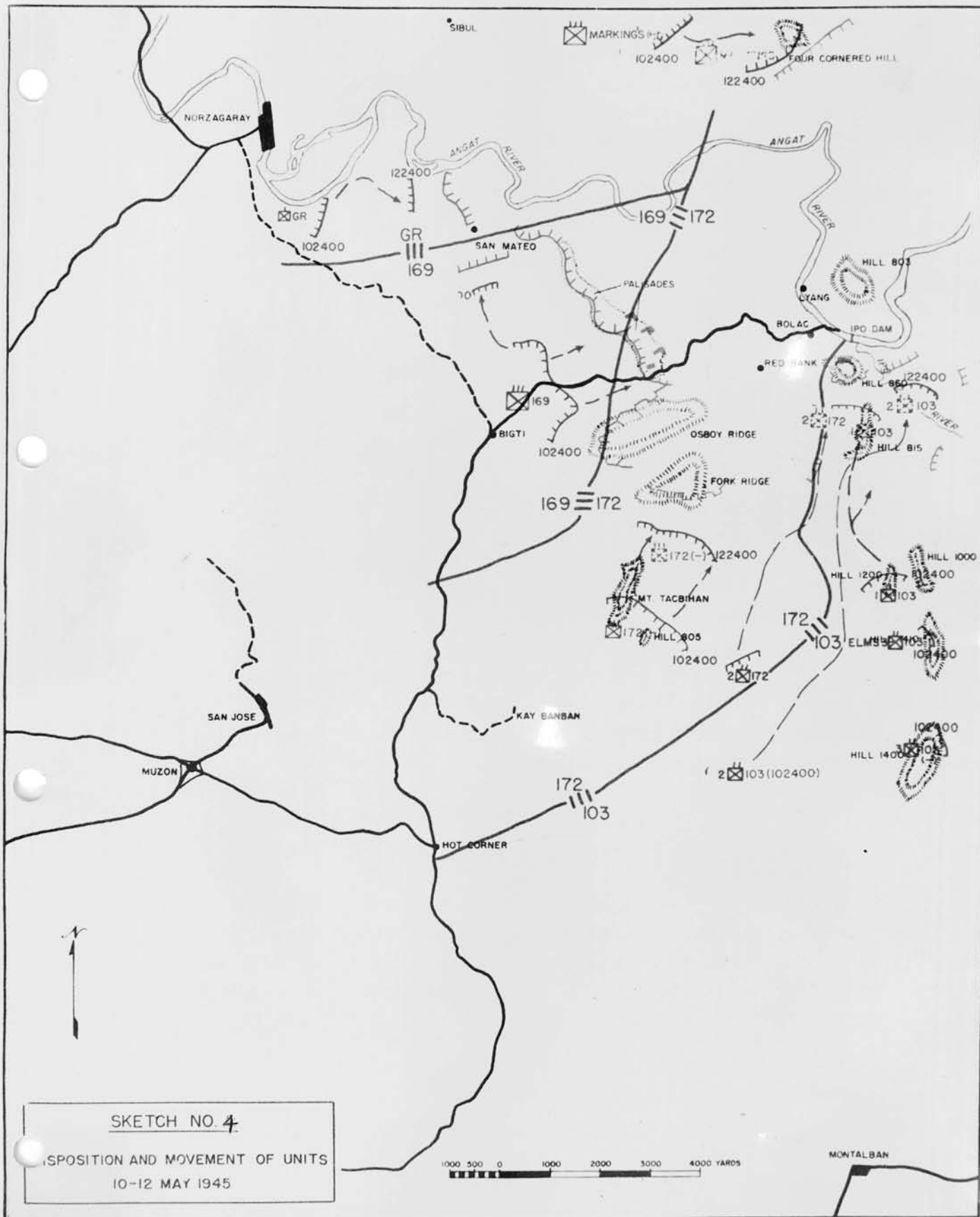


SKETCH-2



SKETCH 3

43d INFANTRY DIVISION DISPOSITIONS ON 6-MAY 1945, AND PLAN TO SEIZE IPO DAM





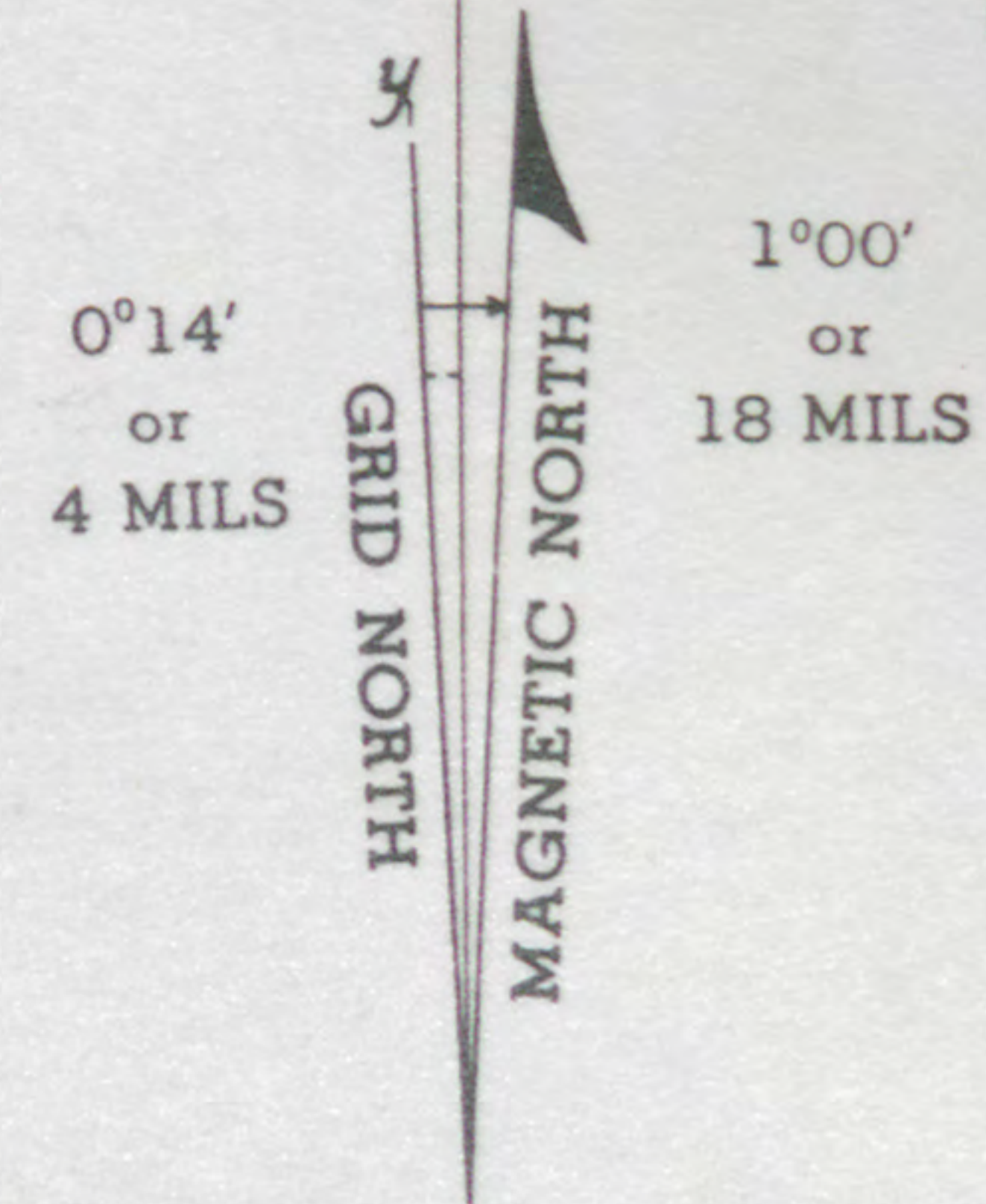
SKETCH NO. 5  
 POSITION AND MOVEMENT OF UNITS  
 17-18 MAY 1945

1000 500 0 1000 2000 3000 4000 YARDS

small scale photography using Multiplex aero-projectors, missions 348 Z-1 and 348 Z-3 and large scale photography missions 354 Z-2, 348 Z-3 and 356 Z-3, Dec. 1944 by 91st Photo-Recco Wing, 5th AF, U.S. Army.

ADDITIONAL INFORMATION from Terrain Study 94, Oct. 1944, Terrain Handbook 41, Nov. 1944, and Road Folder for Luzon Nov. 1944, AGS, SWPA.

CONTROL from Field Surveys of U.S.C. and G.S., 1901 to 1927, and Luzon, 1:50,000, AMS, S712, 1st Edjtion.



Contour in

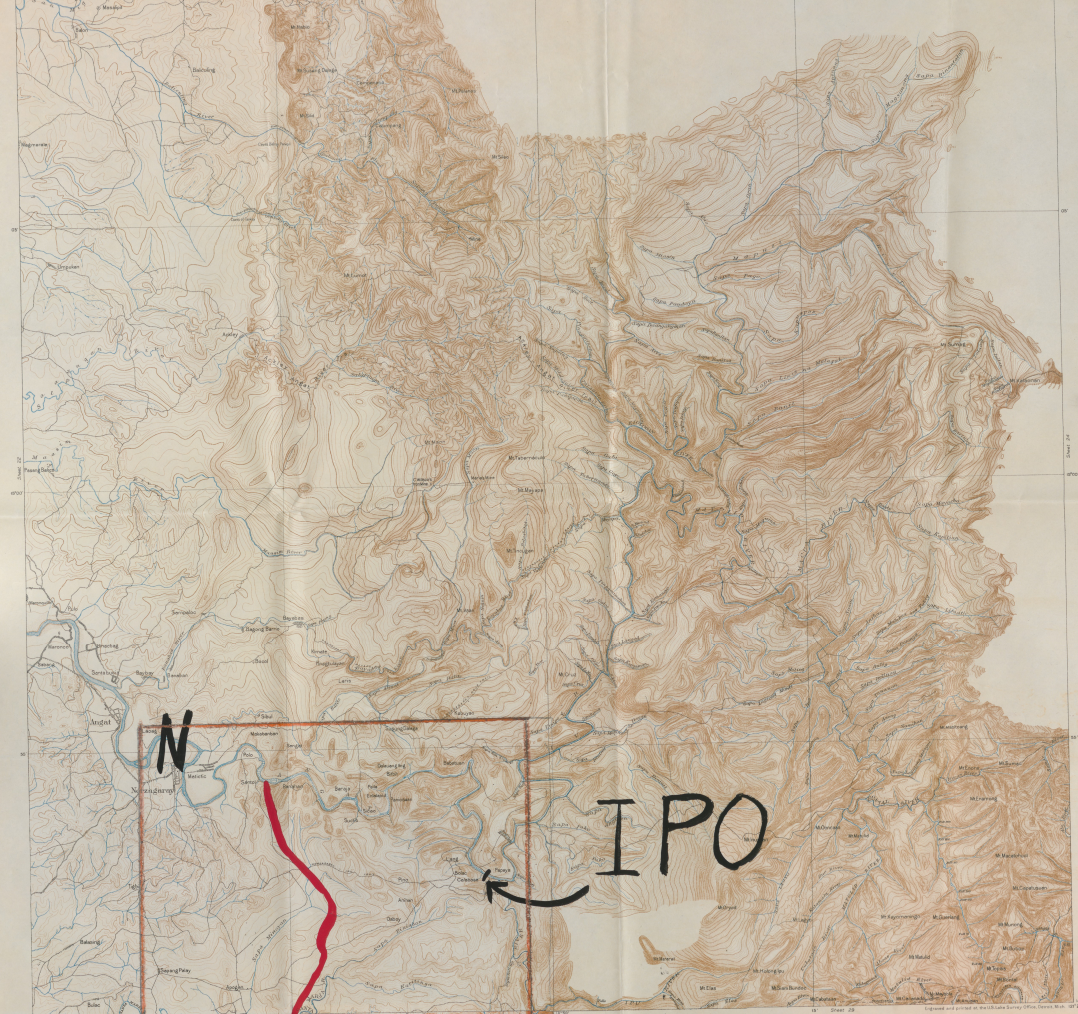
APPROX MEAN DECLINATION 1945  
FOR CENTER OF SHEET  
ANNUAL MAG CHANGE 1' INCREASE

Use diagram only to obtain numerical values. To determine Mag North line, connect the pivot point "P" on the south edge of the map with the value of the angle between GRID NORTH and MAG NORTH, as plotted on the degree scale at the north edge of the map.

**CAUTION:**

This map was produced from aerial photographs. Due to lack of accurate ground control, distances on this map may be at variance with actual ground distances.

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Office Department Engineer  
Bureau of Reclamation  
Washington, D.C.  
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