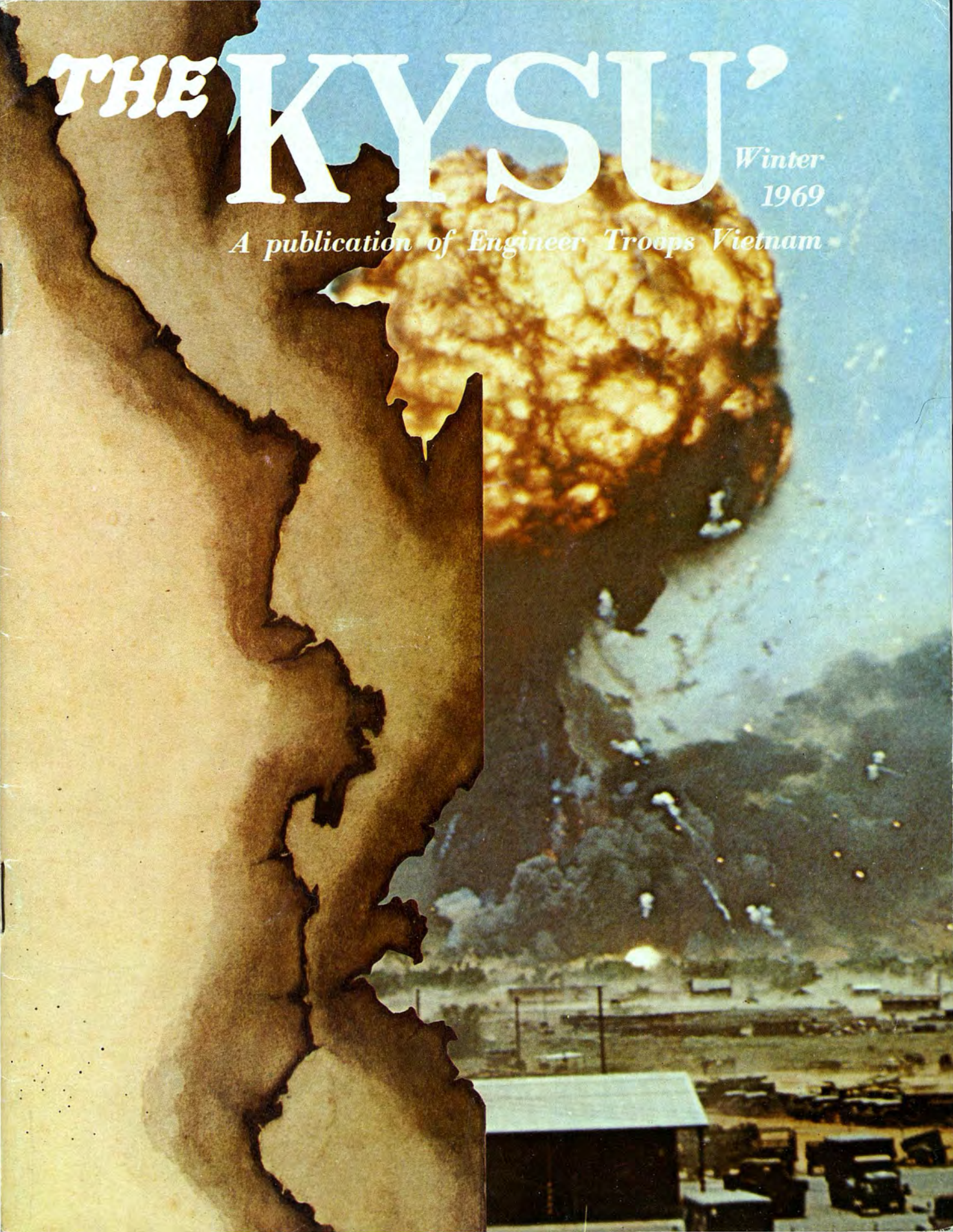


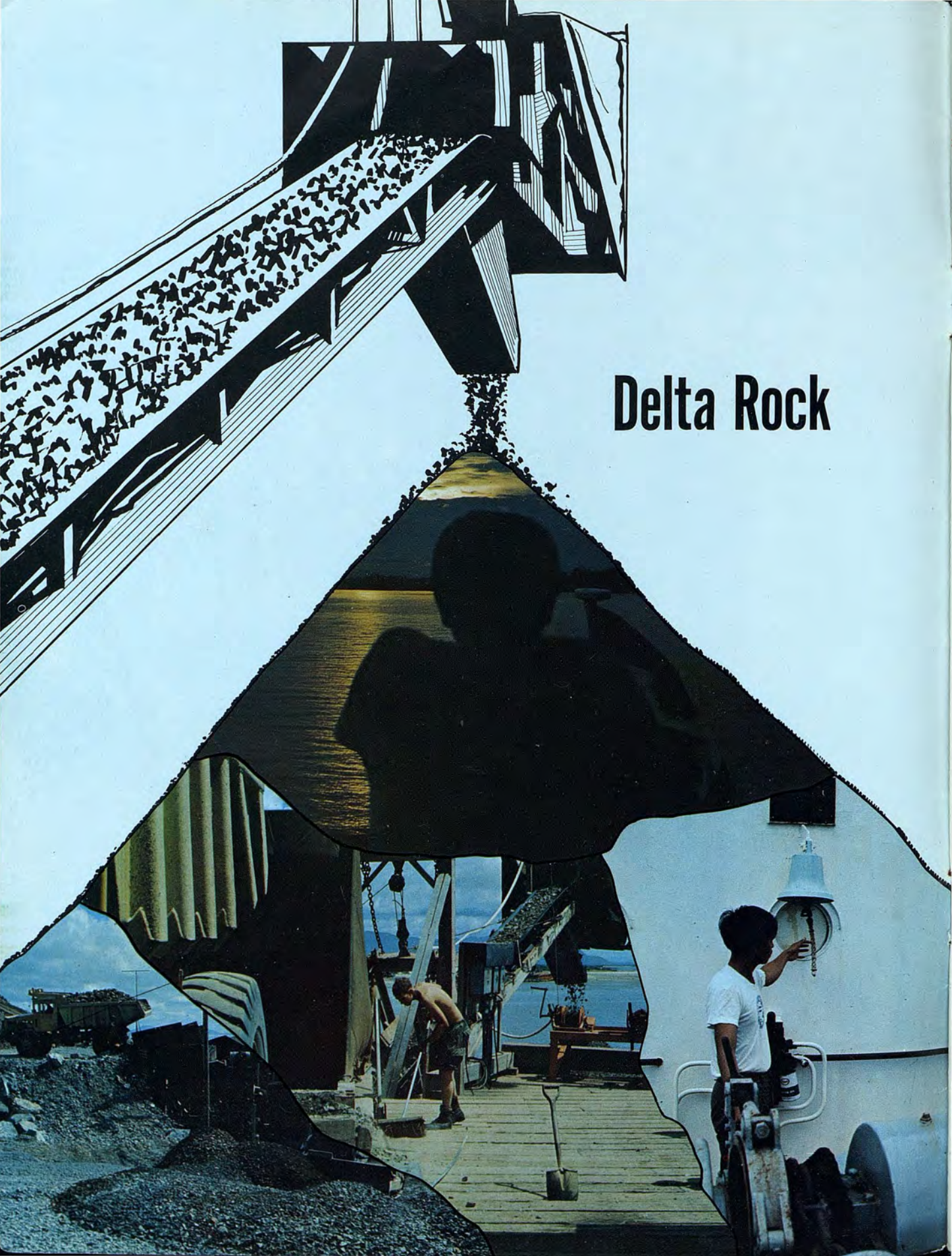
THE KYSU'

Winter
1969

A publication of Engineer Troops Vietnam



Delta Rock



THE KYSU'

Kysu' (pronounced Key' soo) is Vietnamese for engineer. This issue marks the completion of the magazine's first year of publication.

The effectiveness of the engineer mission in Vietnam cannot be accurately measured without taking a look at the roles played by our allies. For this reason, Kysu' journeyed to Phuoc Tuy Province to visit the Army of the Republic of Vietnam (ARVN) Engineers at Vung Tau and the Royal Australian Engineers in Nui Dat.

Kysu' staff write, Specialist Four Curt Nelson, found the Vietnamese engineers engaged in a vigorous training program that is yielding good results (See story, page 21). Specialist Four Jock Pites traveled to Nui Dat where he recorded the efforts of the Aussies in that province. These engineers from "down under" bring a unique flare to their job.

Stories on firefighting in Vietnam, major engineer projects, the Delta Rock program and a pictorial on engineer churches in Vietnam round out the Winter 1969 edition of Kysu'.

SP5 Larry Mayo
EDITOR

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A QUARTERLY PUBLICATION OF
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Fighting fires in a combat zone is an exciting business. Hundreds of civilian and soldier firefighters pit their skills and equipment against the worthiest of adversaries—FIRE. First Lieutenant Doug Noble, 26th Public Information Detachment, writes about the men and their tools.

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Are there any essential differences between divisional and nondivisional engineer units and their missions? Specialist Five Ken Hammond provides the answer to this question and describes the job of the "grunt" engineers.

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Wherever the American G.I. is sent, he always has three things close at hand. Specialist Five Ken Williamson records one of them with his camera for Kysu'.

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The Royal Australian Engineers ply their trade in Phuoc Tuy Province with determination and skill. Specialist Four Jock Pites visits the Aussies to record their efforts. He found potent personalities and beverages in the Land of the 'Roo.

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U.S.-ARVN training encompasses almost all aspects of engineering and is flexible enough in scope to meet the needs of individual trainees as well as whole units. Specialist Four Curt Nelson writes that both ARVNs and Americans are benefitting from an exchange of knowledge.

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Specialist Five Mike Barry "Rides the Rockpile" down the Delta to bring back his story on the Delta Rock Program. Without this program construction in the Delta would be virtually impossible. Four quarries work night and day to keep the barges full and flowing.

Brigadier General John A. B. Dillard, Commanding General
Colonel Walter W. Hogrefe, Deputy USARV Engineer
Captain Edward D. Florreich, Information Officer
Specialist Five Larry S. Mayo, Editor
Specialist Five Ken Williamson, Staff Photographer



FIRE is the Enemy

By First Lieutenant Doug Noble

To battle the unique fires which they must face in a combat zone, firefighters have developed an impressive array of tools. The converted Armored Personnel Carrier (APC) has proven to be one of the best. It was designed by Chief Earl Peterson of Long Binh Station

The twisted and blackened skeletons of a jeep and a firetruck smoldered on the side of the road—grim testaments to the ferocity of the fire that only moments before had been raging through the magazines.

Chief Earl Peterson, hands jammed in his pockets and fire hat cocked forward onto his eyes, angrily kicked at a smoldering timber and said, "Something has got to be done about these ammo dump fires."

At that time, Long Binh Fire Station Number 1 simply did not have the equipment to deal with the unique fires which so often ignited and blossomed in the station's area of responsibility. The standard structure fires proved no problem beyond the fact there were too many of them. But their record in combatting them was excellent. But the ammo dump fires and the Petroleum, Oil and Lubrication (POL) point fires, which went from nothing to a roaring inferno in a flash, were something else.

Chief Pete believed that something special had to be concocted to battle these blazes. His observations came from years of fire-fighting experience and an intimate understanding of

Long Binh's and Vietnam's unique requirements. The problem was to find a workable solution.

That solution presented itself on a subsequent fire call.

Converging on the scene of a helicopter crash and fire in their conventional vehicles, Chief Peterson and his men were drawn up short. The chopper had crashed on inaccessible terrain.

Unwilling to stand idly by and watch the destruction, Peterson beckoned to his men and jumped onto a nearby Armored Personnel Carrier (APC) belonging to the Military Police. Armed with their fire extinguishers, the firefighters were soon pouring chemicals on the blaze.

Chief Peterson realized that with a few modifications on an APC, his problems could be solved. An APC is extremely mobile and has the added advantages of providing protection from heat and exploding rounds. Properly equipped, the APC would give the men of Fire Station 1 the tool they had needed so badly.

Imaginative solutions like this one have helped keep Vietnam's firefighters on top of their destructive enemy—fires of all description. The different types of fires encountered



PHOTOS BY SP5 KEN WILLIAMSON

Their Weapons are Water and Foam

daily in Vietnam by the hundreds of firefighters throughout the country include ammo dump fires, POL fires, pipeline fires, aircraft crash fires, grass fires and structure fires.

The men who fight them are scattered from the Delta to the DMZ. In fact, almost everywhere the Army has troops and supplies, there is a unit to provide fire prevention and protection. Originally these units were composed entirely of soldiers. However, now a lot of the fire stations are run by civilians employed by Pacific Architects and Engineers and under the supervision of the U.S. Army Engineer Construction Agency, Vietnam. This contract frees soldiers for other roles.

Unlike their stateside counterparts, Vietnam's firefighters are sometimes hampered by enemy ac-

tion while going about their job. One of the enemy's favorite tricks is to blow a section of pipeline and leave the area rigged with boobytraps for the unwary firefighter or repairman.

To combat this, an Explosives Ordnance Disposal Team is dispatched to the scene of every break to check the area out for boobytraps and mines. The firefighters themselves must remember to stay off the soft shoulders of the roads running along the pipeline. This area provides the best place for the enemy to conceal his traps. After the fire is doused, the EOD team checks before any repairmen are allowed to enter the break area.

To combat their enemy, the firefighters use water and foam—usually mixed one part foam to ten parts

water. The two can either be premixed or mixed at the scene of the fire. The foam comes in large drums, and the water is transported to the scene of the fire in pump trucks or tankers. Depending on the truck used, the capacity varies from 350 gallons to 5,000 gallons.

Sometimes, when the fire is in an inaccessible location, water and foam are transported to the blaze in large "buckets" by a Chinook helicopter. The Long Binh fire station's modified APC increases that unit's mobility. The APC can also carry 900 gallons of water and 160 gallons of high expansion foam.

New equipment, new ideas and constant vigilance are helping Vietnam's firefighters turn the tide of battle against an unrelenting foe. ▲



In many cases, Pacific Architects and Engineers hire and train Vietnamese Nationals to fight fires. A Vietnamese fireman (above) intently watches a fire from his position on the truck. Chief Peterson's converted APC dumps its load of foam on a petroleum fire (right).





The Divisional Engineer

By Specialist Five Ken Hammond

■ The differences are few. Except for minor changes in the list of equipment, greater air mobility and perhaps more "esprit de grunt," the typical divisional engineer battalion in Vietnam is remarkably similar to most nondivisional engineer combat Brigades.

"Remarkably" similar may be too strong. But somehow it seems that infantry engineers, by virtue of their close alliance with the infantry, should be a special breed. They are the engineers who work directly with the grunts. They wear the division shoulder patches that instantly symbolize fighting and tales of heroism. It almost seems that these engineers would be doing more exotic work than building bridges, repairing roads, minesweeping and detonating booby traps—the same tasks performed by nondivisional combat engineers. But such is not the case.



"No, there really aren't too many differences now between us and support (nondivisional) engineers," agreed Major W. Hogan, executive commander of the 26th Engineer Battalion. The 26th is organic to the largest infantry unit in Vietnam, the Americal Infantry Division in Southern I Corps.

"Both of us have contact with the enemy. The only real difference I can see is that maybe we go to Charlie, while Charlie comes to you."

Commanders in the 18th and 20th Engineer Brigades might take issue with Major Hogan's summation, yet because of the nature of the 26th's or any infantry engineer battalion's mission, what he says is by and large correct. Overriding similarities notwithstanding, there are certain distinctions between nondivisional and divisional engineers.

"Our primary mission is to provide engineering support for the Americal Division," explained Major Kirsch, operations officer for the 26th.

In contrast, many nondivisional engineer battalions work wherever, and for whomever, their skills are needed. Generally they are involved in more sophisticated projects which require more detailed design and involve more equipment. Even though they too are combat battalions, they are engaged in a great deal of construction. Road and airfield construction (to include paving); bridge and culvert installation; erection of buildings and protective revetments; and construction of hardstands and gunpads are examples of the more complicated jobs.

The men of the 26th move directly with, or as closely as possible with, the Americal infantrymen on many of their operations. These divisional

engineers concentrate on mine clearing; hasty repair of road interdictions; erection of short, floating bridges; construction of pioneer roads, airfields and landing zones; and the construction of fire support bases.

The 26th's close attachment with the infantrymen also provides the engineers with certain full time jobs on infantry-oriented tasks. Demolition work is one of these staples. Traveling in numbers of two or three, the men of the 26th accompany the grunts on patrols, detonating mines and booby traps, and when called upon to do so, act as tunnel rats. Engineers in the 18th and 20th Brigades perform those chores also, but not, as a rule, so often or so regularly.

The equipment roster in an infantry engineer battalion also differs slightly from that of nondivisional



Road reconnaissance by helicopter (above) and beach landing equipment are two jobs which the divisional engineers must be ready to handle on a moment's notice.

engineers. The divisional battalions generally have an organic float bridge company. The 26th has at least one piece of muscled gadgetry not usually found in nondivisional battalions. It is an Armored Vehicle Launched Bridge, a tank body topped with two long metal feelers which unfold as a collapsible bridge to cover a span of 65 feet. For the most part, other equipment, such as dozers, graders and trucks, is the same as that for most combat

engineer battalions.

The 26th also has a clear advantage over nondivisional engineers in air mobility. As an integral arm of the division's combat mission, the 26th enjoys free access to the Americal's huge air mobile force. Other battalions are generally more tied to land routes for mobility.

But the list of tangible differences soon exhausts itself. The 26th Battalion, like nondivisional engineer battalions, performs certain basic

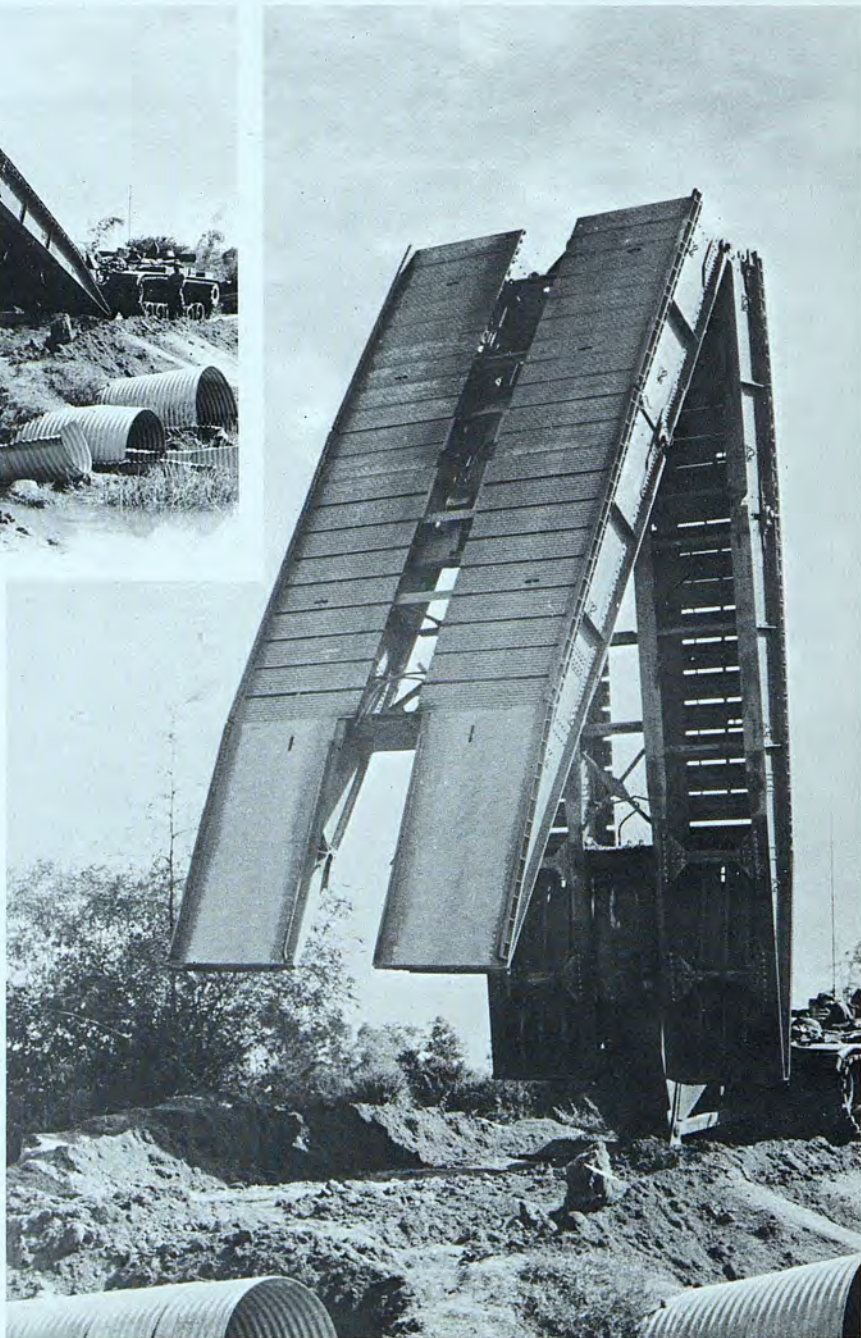
engineering duties in Vietnam. There simply are not a great many exotic tasks that cannot and are not performed similarly by combat engineer battalions.

Telling that to a 26th engineer, however, is no simple matter.

The typical response is something like: "Yes, we're like the rest of the engineers over here, only not quite. We're much like the grunts. I don't know; we're just not quite the same. I guess it's a little hard to explain."



Sometimes, the divisional engineers are called upon to bridge a river immediately. They usually solve the problem with Armored Vehicle Launched Bridge (AVLB).





Street Without Joy: Revisited

EDITOR'S NOTE: Years ago, in his novel "The Street Without Joy," French journalist Bernard Fall painted a desperate picture of a group of Vietnamese Villages. The sad residents of the area faced a grim situation. Has this situation changed? Kysu visited the 20-mile by 200 meter area along National Highway 1 to find out. PFC Mark Buls' report on the area today, which lies just below the Demilitarized Zone and just outside of Landing Zone Nancy, is given below.

By Private First Class Mark Buls

Some village oldtimers remember the dusty streets and villages before the smiles disappeared. But not many. It's been a long time coming to the residents of the area known as "The Street Without Joy," but optimism is on the horizon. The big flashy grins are still absent, but a guarded enthusiasm emerges sometimes like a mischievous child approaching a stern parent.

These encouraging signs have their origins in a bridge and a road—a half-completed road dubbed Route 555A. It is a startling example of

what U.S. planners are trying to accomplish in Vietnam.

Long a deserted complex of crumbling villages loosely held together by an up again down again road, this area is fast becoming a home with a future for Vietnamese refugees whose future and happiness has been held in suspended animation for years.

Engineers of Company C, 14th Engineer Battalion started the reversal of an exodus which saw thousands of families driven from their homes to the dubious sanctuary of refugee camps. It is their bridge and their road which is bringing them back. By Lambretta, by oxcart and on foot, more than a thousand families are estimated to have streamed across the bridge over the Song Thu Bon River in the month of August alone.

So many, in fact, that the gutted and deserted hull of a village known as 'Uu Diem now rings with the laughter of children and the excited voices of village elders planning for schools and places of worship.

Bright, new tin-roofed buildings have sprouted along side of bullet-riddled walls. The sun slants through

the irregular patterns of chipped and blasted church walls, and craters yawn grotesquely in the back trails of the new village.

Why did the people leave and why have they come back? The Viet Cong and the North Vietnamese Regulars drove the people out. To the sad residents of the "Street Without Joy," the prevailing attitude seemed to be that it was far better to bide one's time in a refugee camp than to stay on their land and face certain death or oppression at the hands of the VC who dominated the area. They dominated the "Street without joy" by virtue of its inaccessibility to security elements.

The only means of access to the area was a badly rutted trail which undulated across the paddy lands, sometimes emerging high and dry and at other times disappearing beneath tons of silt and water. Army engineers have changed that and, although progress is at the half way point, an all-weather road has been elevated above the perennial slosh pits and water stands. This road sustains the travel of the returning refugees. It is also used by elements of the Army of the Republic of



PHOTO BY CPT ALBERT KRAUSE

Vietnam 1st Division and by the 101st Airborne Division.

The bridge, the road and the protective canopy of the military elements are compelling reasons for a people who already long to return to their homes.

The exact time of the return to the "Street Without Joy" can be dated. It coincides with the completion of the bridge over the Song Thu Bon River and the upgrading of Route 555A which will eventually link up with the coastal road which snakes by Ap Van Trinh.

As the bridge was pushed into its final week of construction, Vietnamese men with their families and household goods heaped on their trucks and carts began to line up on the Phuoc Phu side of the river. As the official ribbon-cutting ceremony which would open the bridge drew near, ripples of excitement flowed over the mass of Vietnamese families pressed together at the foot of the bridge. And as village elders cut the ribbons to open the bridge, the men, women and children pushed forward. The first trickle in a steady stream of families crossed the river and headed for abandoned homes in My Chanh and beyond.

Moving along the upgraded Route 555A, many found their homes demolished by the fighting. One old farmer with gnarled hands and a wispy beard rebuilt his home but says that it is very hard to make a living. When the Viet Cong came, they killed his water buffalo for food and his only son is not there to help him cultivate his 300 hectares of land (one hectare equals 10,000 square meters). He is serving in the Army of the Republic of Vietnam.

So the old man works 50 hectares by hand and waits for his son's return. "I am very patient," he says. He is also very happy to have his land, because he knows when the rice is harvested, he will be able to sell it in My Chanh. The road runs close to his farm.

Father Nguyen Nha Tu, generally known by his baptismal name of Father Joseph, is more vocal in his praises of the new road:

"Before security was established and the road was started, I could not even go across the river by ferry to Phuoc Phu to preach to my people. The Viet Cong were too strong. But now they are gone and the people

Long a deserted complex of crumbled and crumbling villages loosely held together by an up again down again road, this area is fast becoming a home with a future for Vietnamese refugees.



555A is Bringing Them Back

are friendly again. Because of the bridge and the road, I can go by motorcycle to see all my people. I even go to see my 20 families in Uu Diem on Fridays."

Father Joseph remembers the "Street Without Joy" before the smiles disappeared. He says that before there were so many people that he could not teach all their children. Classes had to be held in the old French trading post then. The school children even overflowed into private homes which were rented for the purpose.

Building a school now is difficult. The materials trickle in slowly, but the people are interested, and labor is abundant. For the future, a school similar to the 20-room school which formerly stood between Uu Diem and Xom Pho is planned.

Father Joseph hopes to find and teach bright students like 15-year-old Ho Oar whom he often chides, "You should come to school more often."

Ho Oar, or Joe as he has been

affectionately nicknamed by U.S. Engineers working on the road, would rather spend his time trailing after 25-year-old Captain Albert Drause from Baltimore, a company commander who handles most of the problems arising on the construction sites.

He says that the English-speaking Joe is invaluable in talking with the village elders who must agree with the engineers in matters such as providing fill for the road and the placement of culverts. Despite constant discouragement from the GIs, Joe pops up regularly in his capacity of interpreter. Understandably, he

is excited about the various activities of his people and the soldiers.

"There are even busses from Uu Diem that go to Hue now." Hue is the big, sprawling metropolis in Joe's life. "And soon there will be a school in Uu Diem like the one I go to in My Chanh."

But youthful enthusiasm is easier to cultivate than is that of the elders. They have seen too much and they have hoped silently before, only to see those hopes and aspirations buried by the Viet Cong and by the war.

However, as an Eastern philosopher said centuries ago, "Even the longest march starts with one small step." The engineers, their ARVN allies and the returning refugees have taken the first step. They are prepared to defend their right to take another . . . and another. ▲

PHOTO BY PFC MARK BULS



The Churches of Vietnam

...a converted hootch, an impressive chapel or a jungle clearing

Walking along a dusty road in Vietnam, a transistor radio looped through his belt and munching on a hot dog, an American GI sports two of three things that are never very far from him: his music and his food. The other constant companion of the American GI is his religion. This too is in widespread evidence in the Republic of Vietnam.

Facilities for religious services of all denominations are provided at most camps. The church or chapel may be a converted hootch, an impressive chapel designed and built by Army engineers, or an arching canopy over a jungle clearing. But the speaker is usually a man with extensive religious training and service, normally a U.S. Army Chaplain.

His pulpit may be an upended ammo crate on a shell-scarred hillside, a dilapidated sofa in an enlisted man's day room or a highly polished mahogany rostrum in a professionally-designed and constructed chapel on the shores of the South China Sea. But his message is real, and the need for his words is real.

Whether it is war or the separation

PHOTO BY SP5 KEN WILLIAMSON

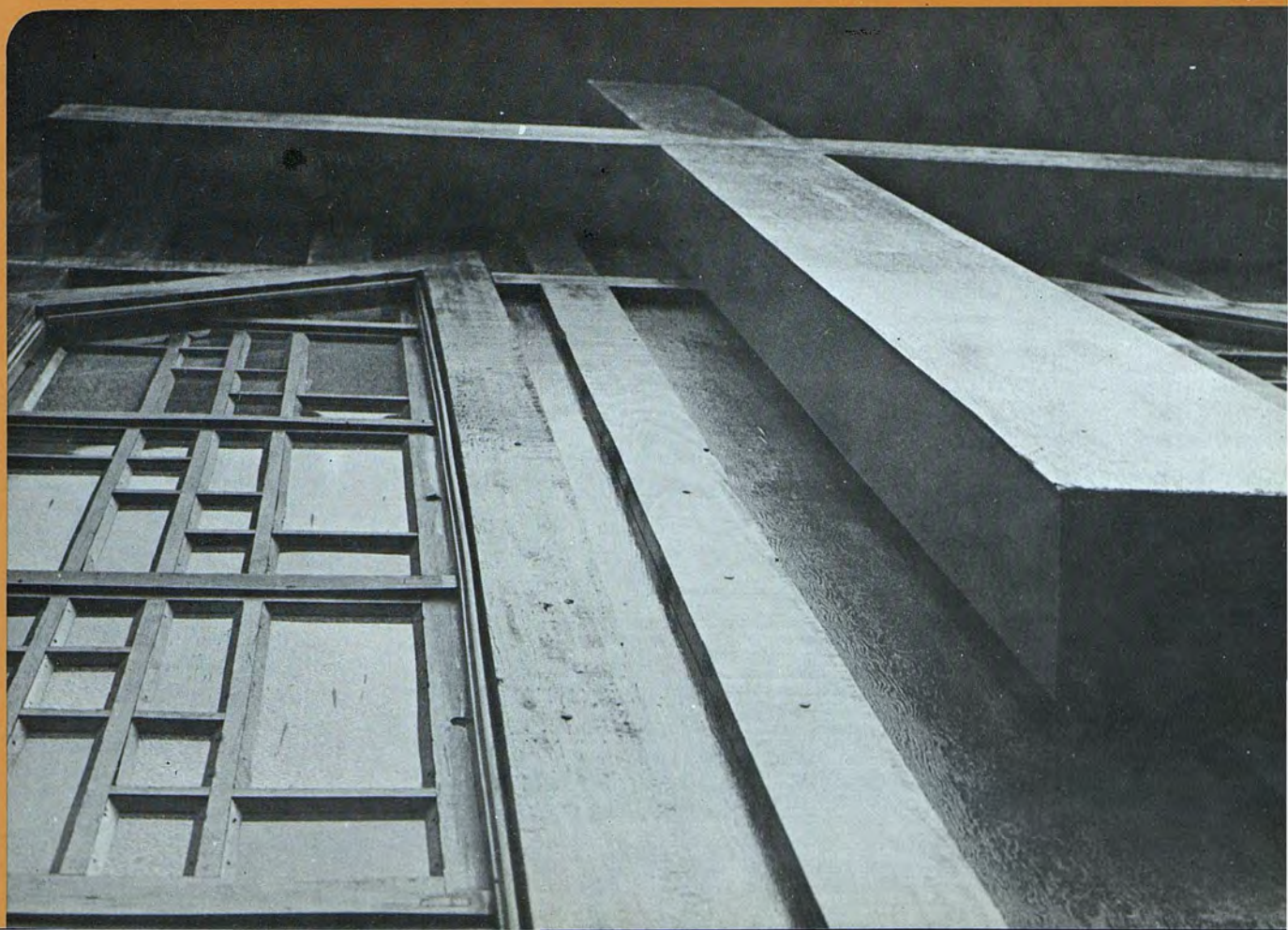




PHOTO BY SP5 KEN WILLIAMSON



from loved ones that brings a man closer to his God, the G.I. must and will have his religion. This need is as basic as nourishment for his body.

From Thanh Tri to LZ Nancy, from Cam Ranh to Rach Gia, military chapels have sprung up. Some of them were designed by the Army—others were spontaneous, springing up after duty hours of salvaged and hoarded lumber and materials shaped by experienced and careful hands.

Some are little more than places to get in out of the rain. Others are architectural jewels in a sea of dust dappled military hootches and billets.

The chapel at Dong Ba Thin is an example of the latter. Situated

on the shores of the South China Sea, the building is the pride of the 18th Engineer Brigade which has their headquarters there. Massive timbers rise in the familiar "A frame" shape so popular in the States. Multi-colored glass panels merge in an impressive array of stained glass windows which grace more illustrious cathedrals and chapels throughout the world. The quiet solemnity of the heavy wood and the calm tranquility of the dimly lit interiors combine to create an atmosphere of reserved and respectful silence—a highly-prized commodity in a war zone.

Further down the coast at Phan





PHOTO BY SP5 KEN WILLIAMSON

Rang, the chapel is not so elaborate, but it is distinctive. The soldiers here have converted a one-story hootch into a readily recognizable church. The bootch was painted white, and a simple steeple was erected on its roof. Lacking the splendor of some of the more elaborate churches, the Phan Rang chapel nonetheless serves the purpose. Regularly scheduled services for all denominations are

held there weekly.

It's true that some soldiers must hold their services huddled around the chaplain in the open. The chaplain visits them when it is operationally possible, like a circuit rider of old. The only difference is that the chaplain will more than likely drop from the skies aboard a Huey or a fixed wing aircraft. Many chaplains spend their weeks hopping around

from one unit to the next talking to the men where he finds them at work.

These drop-in services will always be necessary in a war zone, but wherever the G.I. has parked his belongings for any length of time, he has constructed a church. Home is not home without some sort of religious house. ▲

The Royal Australian Engineers

By Specialist Four Jock Pites

They come from cold, barren mining towns in the Northern Territory, from golden, ripe wheat fields in Victoria, and from sprawling cattle stations in Tasmania.

Their homes of record are Sydney instead of New York City, Melbourne instead of Chicago, and Brisbane instead of San Francisco. Instead of Budweiser and Pabst, they drink Victoria Bitter or Queensland Yellow, and they drink a lot of it.

Like their ale, their personalities are potent and their language is biting and colorful.

They discuss the war and the Army much the way we do. (Taking a bloke away from his bird just isn't easy ya' know!) For every argument for or against being here, they have counter arguments. But they will still relate to you a familiar statement that starts off: "It's something we have to do . . ."

Like us they do it. Day after sweat-filled day they live and work as we do—talking of good friends and good times, what they're missing and what they're doing, of things they left behind and things they're going back to.

To meet the blokes who comprise the 17th Construction Squadron, Australian Force Vietnam, Royal Australian Engineers, all one has to do is catch a Wallaby Flight out of Ton Son Nhut to Nui Dat.

It wasn't always that easy though. The first men arrived in 1965, bringing the knowledge and equipment to work hard and the spirits and dart boards to play hard. Despite the Australian accent and being in a portion of the country where the scenery invokes images of kangaroos bouncing about and Koala bears frolicking in the trees, the Land of the 'Roo is still Vietnam—Phuoc Tuy Province southeast of Saigon.

There are approximately 8,000 Australians serving in Vietnam.

About 800 of these soldiers are Army engineers. Slightly less than half of these belong to the 17th Construction Squadron. The other men belong to the 1st Field Squadron and other smaller engineer units.

The officers may remind you of English actors in knee socks and shorts out of a movie like "Burma Road." But the swagger stick and the native-powered fan no longer exist. These men are efficient. They spend their days planning how to utilize the least number of man hours and materials to build something advantageous and profitable.

A good example of this is the wells they have drilled throughout the province. These wells are sufficient to provide the people in the area with an all year supply of water. Instead of complicated electric or gasoline-powered pumps in remote areas, a simple windmill is built.

A basic need—a simple device—excellent results.

The Australians even turn the actions of the enemy into benefits for the people. In late summer 1969, a vital bridge on National Highway 15 (QL 15) connecting Saigon and Vung Tau was blown. Instead of building a new bridge they built what is now the Rach Hoa causeway. Harder to destroy than a bridge, there now exists behind the causeway a shallow fresh water reservoir, suitable for citrus farming and shrimp breeding, bringing new industry to the area.

People working in the land of the 'roo have observed that many of the province inhabitants act as if the war were over. It is just an attitude as best one can tell. Yet, the residents are building and planning for the future as if peace were truly at hand. The Australian engineers are riding the crest of this progressive feeling. Baria market, the largest shopping area in the province, originally stood in the heart of the province capital Phuoc Le. There was much traffic and congestion, and the province chief asked for help in moving the market to an open area on the edge of the village.

The Aussies were happy to oblige and moved 8,000 cubic yards of rock to the new site where it was used to fill a wide, flowing marsh. Now the villagers are building three-

A Wallaby Flight Takes You To...

story buildings and permanent market stalls that rival the main areas in Saigon.

Lambretta space is plentiful in the giant parking lot provided by the Australian engineers.

The goals of the Aussies are the same, but somehow they accomplish their task with a different style. They drive their dirt-hungry dozers on the "wrong" side of the road.

The playful children who dance along the street at their approach have learned to mimic the famous

salute—palm facing you. Instead of stars on the fenders of their land rovers, they have painted red kangaroos ('roos, they call them). The men are the same though—lean and bronzed and working with dedication and determination.

One monument to their determination to help the people is the Baria hospital. Once a dirt-encrusted, shabby group of ramshackled buildings setting in a sea of mud, the hospital is fast becoming a 190 bed medical facility with 60 trained

medical technicians.

Because of the swampy land around the hospital, the Australians had to build their own streets into the building complex, just to lay a firm foundation to haul in building materials. They are adding sanitary facilities, a good water supply, improved waste disposal system and electrical service.

They are also building kitchen facilities for the staff and a small wing on one of the wards. At the same time the Vietnamese have

The Baria Hospital (Bottom), a dispensary on Long Son Island (Right) and the many water wells the Aussies have constructed in

Phuoc Tuy Province (Below, left) are examples of the "tasks" which they have completed in their Area of Responsibility (AOR).



PHOTO BY SP5 KEN WILLIAMSON



The Land of the 'Roo



"Taking a Bloke Away From His Bird Just Isn't Easy, Ya Know."

caught on to the idea and are making their own improvements, including a major addition to another one of the wards.

The Australians, too, are faced with the problem of solving unusual engineering problems. One of these involved the construction of a dispensary on Long Son Island, just off the southern tip of the province near Vung Tau.

To get materials and men to the job an arrangement was made with the U.S. Army to use a landing craft to haul the rock and sand to the island a truckload at a time. The shallow water and narrow channels prohibited any other means of transporting the materials.

Even with this, the materials must be off-loaded on a corner of the island some distance from the native village of thatched huts and exotic

temples. The materials are hauled in small boats through a twisting, vine-covered waterway which laces the edges of the island. Despite the handicaps, an isolated village will soon have an adequate medical facility.

Even the Vietnamese fishing industry is feeling the aid of the Australians. At one site a mountain of sand was moved across a road to fill a mangrove swamp so a boat building firm could expand its facilities. The boats are built by hand using primitive tools and ancient methods, but turning out some of Vietnam's finest fishing sampans.

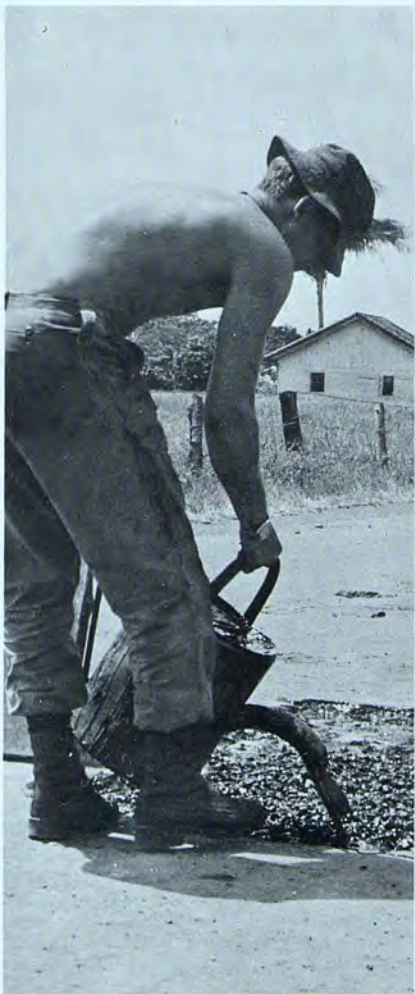
The Aussies haven't forgotten there is a war going on. They do their share of combat engineering—land clearing, road building, and troop housing. They build rifle ranges for Vietnamese military train-

ees and teach Vietnamese to operate their equipment.

They use the term "tasks" instead of missions. They fall out in the morning for a "parade" instead of a formation. They call their privates "sappers" and their master sergeants "warrant officers." Even so, the name of the game is engineering, and the results are good.

Should you visit them, you may have trouble translating the English into English. You may also lose your shirt playing darts, your dignity drinking their potent beer, and your skepticism watching them work. But you'll remember them—the Royal Australian engineers, because "Well there, Yank, there ya go ya see!"

That's the way it is in the "Land of the 'Roo."▲



Like U.S. Engineers, the Aussies must perform their share of mundane missions. Road repair and construction, vertical construction and maintenance are all part of an engineer's duty day.



U.S.-ARVN Training;

Benefits on Both Sides

By Specialist Four Curt Nelson

The men worked slowly and deliberately—sometimes too slowly for their American instructors—as if they had all the time in the world. This, at first, puzzled some of the U.S. troops assigned to training these Army of the Republic of Vietnam (ARVN) Engineers.

The minds of the trainees were sharp, and they seemed eager to gain the experience and knowledge which the U.S. Army Engineers could give them.

The initial frustration on the part of the instructors was caused by a basic misunderstanding of the Vietnamese way of learning. Gradually, the Vietnamese approach to learning the operation of a quarry began to show results. As one U.S. soldier explained, "After a couple of weeks, they began to work smoothly and

efficiently. Their approach to the program probably saved a lot of time. They didn't make too many mistakes, because they took their time and carefully learned their jobs."

This lesson and many others in ARVN-U.S. relations were learned by the men training ARVN Engineers during a six-weeks course at the Vung Tau Quarry operated by the 94th Engineer Detachment (Quarry).

The ARVN troops trained at that site were men from the 505th Heavy Equipment Company, 5th ARVN Engineer Group (Const.) and five men from the 705th Heavy Equipment Company, 7th ARVN Engineer Group (Const.).

The six-weeks course at the Vung Tau Quarry has been of great benefit

to both ARVN and U.S. soldiers. The ARVNs, although having had three years experience before coming to Vung Tau, had never worked on equipment as big as that of the U.S. Army at Vung Tau. The U.S. Engineers got a big lesson in understanding.

The ARVN forces have many approaches to training that differ greatly from the U.S. approach, and their methods are often just as effective, if not more so. The training program at Vung Tau is typical of training programs for Engineers throughout Vietnam.

There are four Engineer construction groups and four combat Engineer groups in the Army of the Republic of Vietnam. All of these groups are engaged in some type of ARVN-U.S. training as well as their

own training programs. The 5th ARVN Engineer Group, which coordinated the Vung Tau project, is the oldest of the construction groups and perhaps the best trained, according to Major Thomas H. Buschke, U.S. advisor to the group.

The first type is the school training. Every soldier goes through the Vietnamese equivalent of basic training. Most of the Engineers go on to attend the Republic of Vietnam Armed Forces Engineer School located near Phu Cuong. There are specialized courses there for officers as well as enlisted men.

The second category of training is done at unit level within the group. In this type of training, individuals who have already attained the needed skills, train other men within the unit. Much of this training is similar to our on-the-job training (OJT), but is not limited to that alone. Special classes and training sessions are held as needed to develop or improve the skills to operate new equipment or use new engineering methods. Teams that have acquired the skills will go to other units within the group and even to units in other groups to conduct training.

This category is closely related to the third type, which is the training done with U.S. Army Engineer units.

Training programs in ARVN units

often seem too detailed and lengthy to consider. However, unlike his American counterpart, the Vietnamese has had practically no experience with modern machinery. His experience lies with more primitive engineering methods prior to his entry into service. Therefore, all education must start at a much more basic level than needed for the U.S. trainee.

The current program of "Vietnamization" of the war has added to the motivation for more comprehensive and detailed training. The level of ARVN training will play a major part in "Project Switch." This is the program for transferring Engineer equipment to the ARVN Engineers.

Lieutenant Colonel Hguyen Ba Luu, executive officer, 5th ARVN Engineer Group, is enthused about this program which will bring more equipment to his units. He pointed out, however, that "the transfer of this equipment is dependent on two things, the TO&E requirements at the unit level and the training that the men in the unit have received."

As the men become qualified to operate the equipment and it then becomes available, it is turned over by the U.S. to the ARVN units.

ARVN-U.S. training encompasses almost all aspects of engineering and

is flexible enough in scope to meet the needs of individual trainees as well as whole units.

Second Lieutenant Doan Duy Dat, a platoon leader in the 505th Heavy Equipment Company, is the ARVN officer-in-charge of the training at the Vung Tau Quarry. He explains that the training there, "... is designed to impart new skills to the trainees and to strengthen the knowledge they already possess."

Sergeant Giao, one of the NCOs at the site and a 17-year veteran in the Vietnamese Army, saw a more personal benefit in the training and mentioned that he was learning how to manage a crusher crew and to act in a supervisory capacity. Upon completion of his six weeks of training, SGT Giao will return to the ARVN Quarry at Chau Thoi where he will serve as the training NCO for the 62 men who operate the quarry there.

Corporal Quan, an Engineer with the Vietnamese Army for seven years, was thrilled with the opportunity to work on more advanced equipment and praised his American instructors. "I like to work with the G. I., because he is very good," he remarked.

There are many variations to the ARVN-U.S. training. At Cu Chi, the ARVN trainees are living with



PHOTO BY CPT FRANCOIS VOORSTAD



their American counterparts. Chief Warrant Officer Terrance-Blair Kirby, the U.S. Maintenance Advisor to the 5th ARVN Engineer Group, feels that the "live-in" policy, "... will be a valuable asset to their training."

The trainees at Cu Chi are training with the 554th Engineer Battalion of the U.S. Army and are learning how to operate 10-ton rollers. Staff Sergeant Hoa, responsible for supervising the Vietnamese troops at that site, is an example of the well-trained Vietnamese soldier. SGT Hoa spent nine months at Ft. Belvoir, Va., in addition to attending all levels of Vietnamese training.

CW3 Kirby is pleased with the progress of the trainees he has worked with. He says the philosophy is to give specialized training to as many people as possible. "This will provide a wider spectrum of knowledge. A nucleus will be formed from which this knowledge can be circulated within the structured ARVN units."

The ARVN-U.S. training has only begun to scratch the surface of the skills needed by the Vietnamese. Anticipating the possible withdrawal of the majority of the U.S. Army Engineers, efforts are being made by both the U.S. and Vietnamese to accelerate the training programs.

There is no fixed time table for the entire training program, though many possible areas of training have been planned. Experience has already shown that the program could go on indefinitely, or at least until the ARVN Engineers assume the total responsibility for the Engineer effort in the Republic of Vietnam.

The progress that has already been made seems to indicate that this goal is steadily approaching reality. ▲

All training falls in one of three categories: formalized schooling, unit level or on-the-job. The three different approaches to instruction make the program all-encompassing and at the same time flexible.

The Vietnamese engineers work and train with U.S. engineers at the Vung Tau Quarry. Many of them have had quarry experience, but not with anything as large as the equipment at Vung Tau.



Down a Not So Lazy River

By Specialist Five Mike Barry

Next to rice, rock is the Mekong Delta's most important product. Trouble is, the Delta doesn't produce rock.

There just isn't any to produce. For mile-upon-mile, the Delta is muck, celebrated mire, where nothing but plants can stand without a rock base.

For three years now, U.S. Army Engineers have been using rock to open this region to commerce and allied combat units. The "Delta Transportation Plan" made rock available for the mission.

Approved in December 1967, by the Commander, U.S. Military Assistance Command Vietnam (COMUSMACV), the plan has kept approximately 150,000 tons of rock floating to the various permanent

and temporary off-load sites throughout the Delta each month. Without such a scheme, the scope of construction in this region would have been greatly limited.

Like many rock-and-road stories involving the Engineers in Vietnam, the weird odyssey of rock for the Mekong Delta also begins amid the dust and din of a quarry. From the slate-gray slopes of four military rock quarries comes a perpetual tumble of granite chunks and chips bound for the land of ooze several hundred kilometers south:

Vung Tau, reputedly the world's most productive military rock plant, Thu Duc and plants at Nuy Sam and Nuy Sap.

Conceived by MACV and born in the earth, the Delta Rock story

finally surfaces at De Long Pier, eight miles from Vung Tau Quarry, and at the Thu Duc loading site. Here, efforts of the engineers and Luzon Stevedoring Corp., Republic of the Philippines, mesh to form the most interesting rock off-load operation in Vietnam.

Engineers grind out the granite with impressive regularity, and the stevedores tow it out to sea, then up the Mekong River to off-load sites at Dong Tam, Vinh Long, Binh Thuy, Phung Hiep, Soc Trang, Cai Be, Roc Soi, Long Xuyen, Cau Lanh, My Thuan, Binh Minh and Tan An. With 21 tug boats and 104 barges for hauling, the operation is expensive.

But as one engineer executive says, "It's the only practical way to meet



rock requirements down there. Without this plan, we couldn't do very much road building in the area."

Aside from the novelty of towing rock mountains up and down the country's waterways, the chronicle of Delta Rock has two other interesting features: its magnitude and the unification of effort behind the operation.

Most of the responsibility for Delta Rock lies with the producers. The four quarries must work night and day to keep the barges full and flowing.

"Oh, there's pressure," says Captain Francis T. Voorstad, commanding officer of the 94th Engineer Detachment (Quarry) at Vung Tau. "Producing for the whole Mekong Delta is hard work, because you have to depend on so many variables that are really out of your hands.

"If the crushers break down, we lose time... and more time if we can't get parts. That might mean empty barges at De Long..."

True to their reputation, Captain Voorstad's men produce much of the rock for the Delta. In an average week, Vung Tau quarry men produce 18,000 tons. It adds up to about 80,000 tons of crush monthly. Thu Duc turns out 60,000 tons of Delta-bound rock every month, and plants at Nuy Sam and Nuy Sap average approximately 32,000 tons.

Though the figures are impressive and say plenty about what rock producers are doing for the Delta, engineer planners point with most pride to the unity behind the whole operation. The "Delta Transportation Plan" integrates operations by Vietnam's Ministry of Public Works, the Army of the Republic of Vietnam (ARVN) and the U.S. Army, Vietnam.

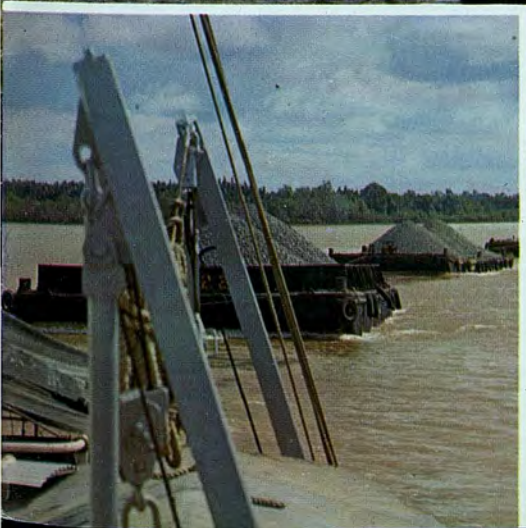
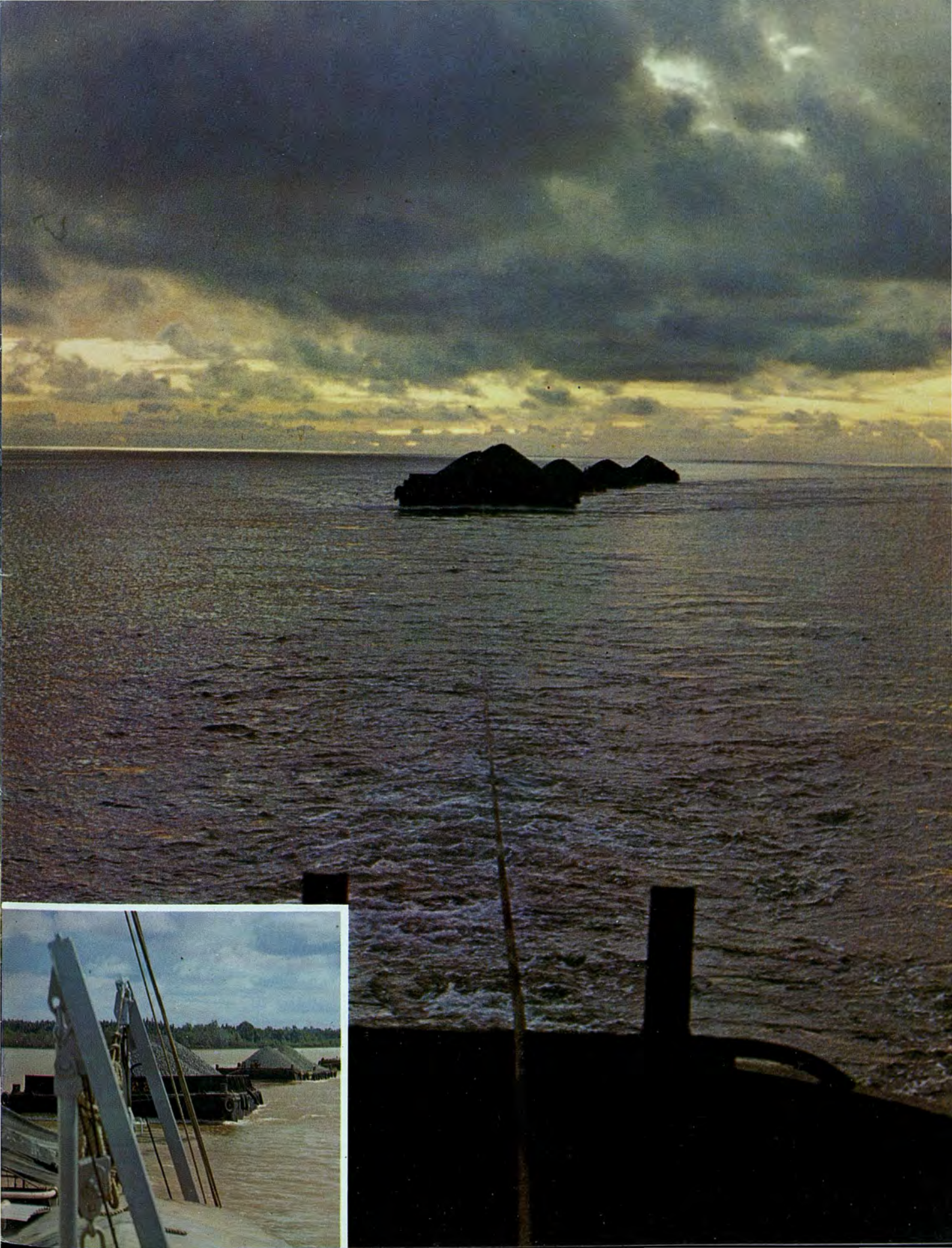
These three bodies forecast their rock needs for certain time periods, then submit them to MACV. From there, the forecasts are forwarded to the Delta Rock co-ordinator, a staff officer of Military Assistance Com-

mand Director of Construction (MACDC), determines what portion of each forecast will be filled at rock discharge sites.

Finally, the quarries receive their production quotas. After that, it's a matter of having barges available, loading them and tugging them to the off-load sites. From there, Military Sea Transport Service (MSTS) tugs pick up the loaded barges at their mooring buoys and ferry the loads to dispatch points.

The beauty of this, as emphasized by lines of communication (LOC) planners, is that all the rock comes from a single, joint effort. All the control, all the troop construction requirements are pooled. Then all available transportation assets are

Winding down the Delta River, mini-mountains are headed for off-load sites in the Delta. From there they are trucked to construction sites.



used to get the rock moving to the job.

As one engineer puts it:

"We'll use anything we can get our hands on to move that rock . . ."

Though fast and effective, the program is not without its trouble spots. Hauling 150,000 tons of rock every month and pressing to raise that

ceiling is bound to spawn a few problems. And if it isn't crusher breakdowns or lack of parts, then it's the Viet Cong.

VC gunners periodically try to sink those minnie mountains in the Mekong River. Occasionally, a barge isn't at dock when its needed or maybe a tug isn't available. Any one

of a hundred different things can and does pop up to plague co-ordinators of the program. The program is more than worth the headaches through. And as long as the solutions can be found as quickly as the problems crop up, Delta Rock will continue to find its way to construction sites along the Mekong. ▲

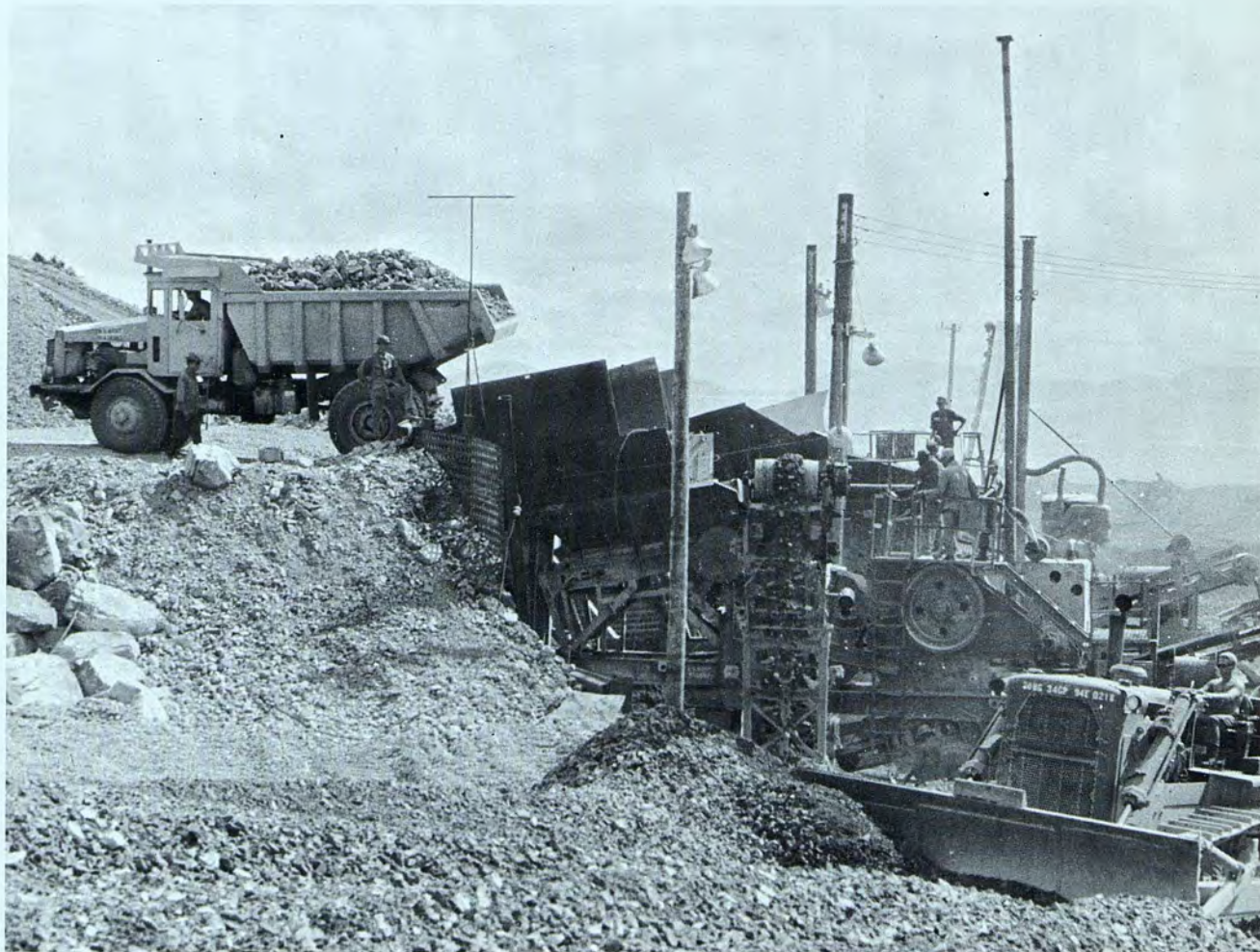


PHOTO BY SP5 KEN WILLIAMSON



*If It's Home
It Must Have
a Church!*

(Kysu' Pictorial, Page 13)

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*Royal
Australian
Engineers*

