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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

SUBJECT: 20th Engineer Brigade, Period 2 November 1968 to 1 November 1969 (U)

SEE DISTRIBUTION

1. Reference: AR 1-26, subject, Senior Officer Debriefing Program (U) dated 4 November 1966.

2. Transmitted herewith is the report of BG H. R. Parfitt, subject as above.

3. This report is provided to insure appropriate benefits are realized from the experiences of the author. The report should be reviewed in accordance with paragraphs 3 and 5, AR 1-26; however, it should not be interpreted as the official view of the Department of the Army, or of any agency of the Department of the Army.

4. Information of actions initiated under provisions of AR 1-26, as a result of subject report, should be provided ACSFOR OT UT within 90 days of receipt of covering letter.

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STU CT: Senior Officer Debriefing Report

Assistant Chief of Staff for Force Development
Department of the Army
Washington, D.C. 20310

1. Attached are three copies of the Senior Officer Debriefing Report submitted by PG H. R. Parfitt. The report covers the period 2 November 1968 to 1 November 1969 during which time PG Parfitt served as Commanding General, 20th Engineer Brigade.

2. PG Parfitt is recommended as a candidate guest speaker at appropriate service schools.

FOR THE COMMANDER:

[Signature]

C. C. McCullough
Assistant Adjutant General

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1. At the outset of this debriefing report I would like to make a few general comments about the engineer effort in Vietnam in order to put in proper perspective the remainder of my remarks which will mainly deal with problems and solutions thereto as I see them. Overall I would rate the engineer support rendered our combat troops in Vietnam as superior to that provided in World War II and Korea. In addition, special circumstances in this war have permitted the engineers to do a lot more work than ever before in nation building. Construction of major road networks; opening of secondary roads; a multiplicity of revolutionary development support projects such as school house construction, minor community projects of all types, and housing development work; all have contributed to improving the nation in such a way that the average citizen could see and appreciate what was being done by the U.S. troops to improve his lot. To many people reared in poverty and misery this was as meaningful or more so than our efforts to prevent communist domination of their country.

2. In my view it is wrong to credit the improvement in engineer support solely to the improved quality of the engineer soldier. It is rather the composite result of a great number of factors. Technological advances, some the result of military research others made possible by the pioneering of dynamic industrial firms, have permitted the introduction into the Army of tools and equipment far superior to that available fifteen or twenty years ago. Military training has generally kept pace with equipment advances and the soldier product reflects the corollary educational progress that our country's school systems have experienced in this past decade. Logistic support, still the weakest link in the chain, has managed to provide the essential supplies and equipment necessary to do a first class job. Finally, although far too few, there have been sufficient numbers of experienced personnel with previous combat and field experience who have provided the leadership without which success would have been impossible.

3. The rapid expansion of the Army and the engineer component thereof resulted in individual units with a thin layer of officer and NCO expertise. That the units have proved as efficient and effective as they have been is a tribute to the caliber of the limited numbers of skilled professionals available, the adaptability of American youth and the adequacy of the Army schools and special training.
programs. Nevertheless, a much more capable force would have resulted if more reserves and national guardsmen, either as units or individuals, had been called up. The reservoir of skills to be found in such units cannot be matched by activation of new units manned primarily by draftees and leavened with a lean nucleus of regulars.

4. There are minor modifications to TO&E's that I would make for ideal organization to optimize operations in the special circumstances of climate, topography and nature of the conflict in Vietnam. These recommendations have been submitted by separate action. Basically, however, I feel the structure of engineer units is sound and there is enough inherent flexibility to permit the astute commander to adjust to the specific circumstances in which he finds himself. It is in those cases in which major deviations have been made from the basic structure where we find ourselves in serious trouble. Specific examples are: the civilianization program where local nationals were provided in lieu of soldiers on the basis of 306 for 204 in some construction battalions; the full reduction to type B strength in the remaining construction battalions; plus substantial manning level cuts pro-rated across TO&E structures.

5. The civilianization program, though conceptually appealing, has been unsatisfactory in the 20th Engineer Brigade. Basically, prior to civilianization the battalions already had hired and were using effectively the maximum number of civilians in the skills in which they could be gainfully employed. These were primarily in the carpenter and mason skills. I would stress here that my disenchantment with the civilianization program is not to be construed as a voice against the use of civilians to augment troop capability. To the contrary, they are an invaluable adjunct and should be used to the maximum extent possible consistent with the tactical situation and the skills available. What I do oppose is the substitution of civilians for soldiers. We have found it impossible to hire the skills lost from the basic TO&E structure. The civilian employee is not available for guard and security missions nor is he on hand twenty-four hours a day. Thus there is lacking the flexibility a unit must have in the theater of operations. Though the situation is a rather static one in Vietnam units do move and the civilians will not generally accompany the moving unit. Where quite a range of skills may be found in centers of population, there is a dearth of such in the outlying areas. Where skills do exist there is competition for the better personnel by industry and the American contractor who pays a better wage. Finally, though the available civilian may eventually develop the necessary skill, such as a heavy truck driver, he rarely if ever has been able to perform adequately the corollary responsibilities for maintenance and record keeping.

6. Manning levels are commonplace in the Army and most experienced officers have learned to live with them. However recent reductions, coupled with the civilianization program, have resulted in organizations which are top heavy. The portion of a battalion required for administration, security, mess, supply and general overhead is more or less fixed. This means that reductions come from the working components - the platoons and squads. Recently platoon projects have been manned by from 12 to 18 soldiers; a meager force indeed. It is my
view that any significant manning limitations that are prolonged in nature should be accommodated by zeroing out a battalion sized unit. This would insure that the overhead to worker relationship remains in reasonable bounds and results in ready recognition that the capability to perform work has indeed been substantially reduced. There is a common tendency to retain the illusion that, for example, 12 battalions can continue to perform 12 battalions worth of work even though the equivalent strength of one battalion has been lost by prorating manning cuts across the 12 battalions. The fact of the matter is that fully manned battalions can perform more work than the 12 battalions because of the reduced overhead drain.

7. There are two significant modifications that I suggest be made to TOo's; one involves the land clearing companies, the other the provision of a direct support maintenance capability to light equipment companies, particularly where used as they have been generally in Vietnam; i.e., attached to or in direct support of a combat engineer battalion.

8. Land clearing has received more attention and command interest than any other single facet of engineer support in Vietnam. The Infantry Commanders regard the land clearing capability as a tremendous plus in their struggle against the VC and NVA operating in heavy jungle. As a consequence they seek more effort in this specialty and more production from each land clearing element made available. In the past year tremendous strides have been made in this area of support. An additional land clearing company was added to the two already in the Brigade and all three assigned to the 62d Engineer Construction Battalion. These replaced the three construction companies of the battalion. Assignment to a combat battalion was considered but discarded since it was judged that maintenance capability was the key to success or failure of land clearing operations. The direct support maintenance capability inherent in a construction battalion, modified slightly to reflect the mix of equipment to be serviced, proved to be the critical ingredient in the success of the land clearing battalion. Details of the land clearing battalion organization, method of operation, and lessons learned have been included in other reports. It is only intended herein to highlight the importance of land clearing and to note the success obtained to date in use of a land clearing battalion.

Further tests of additional equipment for jungle clearing and secondary growth clearing are scheduled shortly and should be monitored closely. Particularly essential is the development of a satisfactory means of secondary growth clearing. I am not at all satisfied that the items to be made available for test will prove to be very beneficial and feel that major efforts should be continued to find better equipment for this purpose. I am much more optimistic that the D-9 with Rome Plow Kit, soon to be available for test, will provide an improved jungle cutting capability. Transport and support requirements will certainly pose serious problems and solutions to these will be critical in the decision on numbers, if any, of D-9's which should ultimately replace the D-7's. Efforts should also be continued in the field to improve cut techniques and optimize the organization and support equipment. For the conditions experienced to date in the 20th Engineer Brigade AOR it is quite apparent that the land clearing
companies should be provided with a full track capability. Support equipment
and supplies moved by wheeled vehicles have proved most unsatisfactory and
have limited flexibility of operations in the field. Again, arrangements have
been made to test this concept in the near future and I am confident the results
of such tests will be favorable.

9. The unique conditions in Vietnam where there are no front lines or rear
areas, with every unit subject to possible attack and in effect being in the
combat area, results in almost all units having a valid demand at times for
"Operational Support". Likewise the static nature of the war resulted in
requirements everywhere for permanent construction of all types. Consequently,
there has been a continuous heavy demand for a broad spectrum of engineer support
at all locations where U.S. and FWMAF's are located. It was found that these
requirements could be accommodated best by provision of engineer support on an
area basis. This meant that combat battalions were called upon to accomplish
some rather sophisticated construction and, on fewer occasions, the construction
battalions were tasked to perform pioneering and combat oriented missions. To
my surprise the combat battalion evidenced a considerable capacity to do quality
work on tasks more closely identified with the skills found in a construction
battalion. And when reinforced by a light equipment company they were able to
take on large heavy earth moving jobs. Their production was about equivalent
to that of the construction battalion. Though not desirable under normal cir-
cumstances, it was possible to operate satisfactorily with little more than the
provision of limited specialty skills and equipment. The major drawback in this
arrangement was the lack of a direct support maintenance capability. As a con-
sequence our combat battalions, usually found in areas most remote from logistic
support facilities and units, were hard pressed to keep a satisfactory maintenance
posture. The solution to this problem in my view is to modify the TOE of the
light equipment company to provide a direct support ordinance and engineer main-
tenance capability adequate to support its own equipment plus that of a combat
engineer battalion.

10. The policy of providing engineer support on an area basis and the alloc-
ation of available effort in accordance with a priority system for various cate-
gories of work has to date worked quite well. Engineer resources have been
employed efficiently while at the same time meeting all the urgent requirements
of the supported commanders. Although there have been some minor difficulties
arising from different interpretations of categories of work, these have been
satisfactorily resolved with the major supported units. Recently, however,
there has been an increase in the backlog of engineer work, particularly in
the high priority categories. This has been occasioned by an increase in combat
and operational support missions notwithstanding a lull in the current tactical
situation. Also, there has been added emphasis on secondary road develop-
ment and a major program directed in this area. This is a fine program and is sure
to enhance greatly pacification efforts but will require a significant expenditure
of engineer effort. The important LOC program involves a major commitment of
engineer forces which cannot be diverted if tight schedules are to be met. The
advisor and associated signal support facilities have been given a high priority
for construction and in many cases a most completion date. Although significant
reductions have been made in the backlog of base construction by deletion of less important projects, the remaining work is of high command interest and it too usually is given a directed completion date. Likewise several RDS projects have been assigned operational support priorities. The resultant effect of all this is to tend to make meaningless the priority system. It is imperative that strong command guidance be provided engineer forces and supported units to insure that the available forces are used to complete the most essential projects. Engineer units should not be left to sort this out themselves. This problem will become increasingly complex and difficult if and when additional troop reductions are imposed. It may be desirable to direct a given level of effort for a particular category of work such as, for example, the LOC program. I have already coordinated with II Field Forces and directed the implementation of this concept for the secondary road program.

11. The continual upgrade of perimeter defenses at our permanent complexes and major bases should be reviewed with a critical eye. Important as this work may be, I do not believe it should enjoy the operational support priority now given to it. Furthermore, renewed command emphasis should be placed on maximizing self help on these projects.

12. The Port Construction Companies of the 20th Engineer Brigade have been heavily engaged on critical bridge protective works. Construction of pier protective systems and mine and sapper booms has absorbed most of this special capability for the past six months and it appears likely to do so for the foreseeable future. Present designs require a major expenditure of effort and the completed structures have proven to be very vulnerable to damage from barge traffic. Though these protective works represent a savings in time and materials over the heavy structures originally contemplated, I am still not at all convinced that the protection afforded is consistent with the effort expended. The situation calls for a total reevaluation of the systems currently in use.

13. The LOC program has placed a heavy strain on the earthmoving capability of our engineer battalions and has taxed their capability in the field of quality control. The numbers of people available for design, testing, control, and inspection, as well as the equipment required for these purposes has been inadequate for the extensive road construction effort launched. These problems have largely been solved by:

a. Arranging for road design by civilian agencies which frees available troop personnel for required construction control and inspection.

b. Procurement of additional test equipment to augment available TO&E equipment.

c. Provision of specialty training for personnel needed to perform required tests.

d. Augmentation of TO&E equipment with larger commercial road-building machinery.
14. The LOC construction program got into full swing during the past year. Good progress was made during the early months of the dry season but this was overshadowed by results obtained later when standard commercial heavy construction equipment was received. However, the full effect of this machinery was never felt since it arrived too late in the construction season. It may be too early to judge the value of this innovation but the program appears to have great merit. The results of sustained operations over the next several years should tell the tale.

15. The commercial equipment is not as rugged as similar military equipment but has a greater capacity for work. Special care must be taken to avoid soldier abuse or neglect. The success or failure of the new concept may well hinge on how effective commanders are in insuring that this does not happen.

16. The originators of the concept of introducing standard commercial equipment were well aware of the major maintenance problems which could develop. Consequently they arranged for a civilian contractor to provide spare parts support (since the spares would not normally be found in the Army supply system) and to perform the actual maintenance. Again it is too early to judge the effectiveness of this arrangement. Many problems have been experienced to date but I am confident that these can and will be resolved.

17. I have not been satisfied with the results obtained from the logistics system. Overall the requirements for construction materials have been met on a timely basis although from time to time there have been critical shortages of some items, such as certain plumbing and electrical supplies and occasionally certain lumber sizes. Recently, however, there has been a critical shortage of many sizes of lumber which is delaying projects. Engineer support will deteriorate until stockage levels are improved. To be responsive each battalion needs a 30 day stockage level of construction materials for operational support projects.

18. Strange as it may seem for a combat theater with first priority on resources, there have been considerable shortages throughout the brigade of TOQ1 authorized items of equipment. Efforts to improve the fill of critical mission essential equipment were fruitless. There was basically no improvement in this area during my year of command. Throughout the period more than 40 percent of the critical line items had less than 87 percent fill. The one item that I identified from the outset as the most critical shortage within the brigade—the contact maintenance truck—received no fill. The actual on hand status has dropped from 67 to 56 which represents approximately 67 percent of the authorization for this item. It is only fair to state at this point that although fill has not generally improved because of significant numbers of score outs the input has upgraded substantially the condition of most of the items of equipment on hand.

19. Problems abound in the field of maintenance. There is little expertise either among the officers or the NCO's on the subject of maintenance management.
or inspection. Thus, even when the strongest command emphasis possible is brought to bear, improvement is painfully slow, if at all noticeable. I believe more time and attention must be exerted in our school system on this subject. Furthermore, care should be taken to insure that officers are given maintenance assignments early in their careers. Finally, the best officers should be given responsibility for maintenance management in the field. Those so selected should be given a short course of instruction before leaving COMIN.

20. Perhaps even more critical in the maintenance field than the lack of supervisory know-how is an inadequate supply of repair parts. Units have an unsatisfactory PLL fill and are unable to obtain parts promptly when a piece of equipment is deadlined. Direct support elements have inadequate ASL's and feel the adverse effects of a sluggish parts supply system. The failures here are not solely with the supplier. A lion's share of the blame must be laid at the feet of the units who do not seem to be able to follow the procedures necessary to make the system work. Demand data is not properly maintained; requisitions are improperly filled out; and follow through is haphazard. Within the supply agencies too, there are problems. Inability to identify and classify parts continually results in no fill when in fact depots have items. Requisitions are lost, status data is often late or not provided at all. The end result of all these circumstances is poor repair parts support.

21. Great efforts have been exerted by the supplier and the customer to make the system work. Special classes have been held for the supply clerks; specialists from the depot, support units, and the Inventory Control Center have made presentations to Brigade personnel explaining how the system works; supply expediters are numerous and vigorously seek to resolve problems as they occur; emphasis has been placed on using special handling systems; redball and redball expanded programs have been established to aid the customer; and vigorous CMMI's have sought to reveal and correct deficiencies. Notwithstanding, an unsatisfactory situation exists. Since repeated vigorous and sustained efforts have failed to improve matters, a better way must be found to handle this problem. We have not, in my view, arrived at a satisfactory solution to the age old repair parts problem.

22. Vigorous efforts have been exerted to expand the scope and extent of engineer contacts with our Vietnamese counterparts. These include: informal social functions; participation at all levels in Vietnamese activities; provision of organized training for heavy equipment operators, mechanics, quarry and crusher specialists, and others as required; joint construction projects; exchange of visits to active projects; and close coordination to insure that all are aware of the total programs of the engineers in III and IV Corps.

23. Considerable progress has been made in our efforts to assist in the development and expansion of the ARVN engineer capability. To obtain optimum results continued command emphasis is required and special attention must be given to remove the psychological barriers to success that exist. The U.S. soldiers, NCO's and officers have a tendency to be impatient with their Vietnamese counterparts and very often have a preconceived notion that they are of inferior intelligence and have a limited capacity for skilled work. This stems from language
difficulties and a natural unfamiliarity of the ARVN soldier with our equip-
ment and way of doing things. The Vietnamese officers and soldiers, on the
other hand, are supersensitive to any inference of their inferiority and quite
naturally resent any impression of condescension or domination by outsiders.
These biases in the main are unfounded but a realization that they exist and
strong action to avoid their pitfalls is necessary if maximum progress is to
be made. Best results are being obtained in those areas where fruitful associa-
tions have resulted in a mutual respect for each other. I am very pleased with
the results to date. The ARVN engineer projects and activities that I have
observed have strengthened my confidence in the ARVN engineer officer and
soldier. I have been particularly impressed with the strong, able leadership
provided by several of the key officers with whom I have come in contact. My
main reservation about the ability of ARVN to provide quality sustained engineer
support, and to fill the gap left when U.S. troops leave, is the difficulty
which will be experienced in maintaining equipment. I am not so much concerned
about the ability of mechanics but rather the problems inherent in providing
essential spares and repair parts—an area in which, as I have already mentioned,
we ourselves have floundered. Special attention must be paid to insuring a
satisfactory solution to this problem or all of our efforts to train and upgrade
ARVN engineer capability will have been for naught.

I have found this assignment professionally challenging and personally
rewarding. The response of the soldier to the difficult challenges that face
the engineer in the hostile environment of Vietnam has been very reassuring.
I found that the more difficult the task, the more austere the conditions, the
greater was the morale, dedication and effort exerted by the engineer soldier.
I am very proud of the way in which the engineer support mission has been per-
formed and leave with great satisfaction at having been for a short time a
part of this effort.

H. R. PARHITT
BG, USA
Commanding
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