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CAPABILITIES OF THE ARGENTINE ARMED FORCES

1. Attached is a revised version of our initial Assessment of the Argentinian Military Capability which was issued, in a very raw state, on 5 Apr 82.

2. During the last 3 days we have acquired much additional intelligence from US agencies, from continental industries and from many other sources. Consequently this, the revised edition, differs substantially from its predecessor.

3. I would particularly draw your attention to the new intelligence now available on the Argentinian Air Force and the Port Stanley airfield; taken together these have led us to upgrade our earlier assessment of Argentinian air power.

4. This paper is of course primarily designed for the operational and planning staffs. Arrangements have been made to deliver a quantity of copies to the Task Force. It has also served to form the basis for last night's JIC Assessment (JIC(82)(N) 28) on Argentinian Capability.

5. Finally, it will need continual up-dating as further intelligence becomes available. We have this in hand.

DCDS(I)

7th April 1982

THE CAPABILITY OF THE ARGENTINE ARMED FORCES

8

DCDS(I)

INTRODUCTION

1. The Prime Minister has stated that HMG's aim is to achieve the withdrawal of Argentine Forces from the Falkland Islands and the Dependencies and to re-establish the British Administration. A Royal Navy Task Force has set sail for the South Atlantic. The Chiefs of Staff are considering the military options available and have directed that the Defence Intelligence Staff assess the capability of the Argentine Armed Forces to counter any United Kingdom military action in the South Atlantic designed to regain possession of the Falkland Islands.

AIM

2. The aim of this paper is to determine the capability of the Argentine Armed Forces to defend the South Atlantic and Falkland Islands against the United Kingdom Task Force.

ASSUMPTION

3. We assume that HMG will not order any action, other than special operations, against the mainland of Argentina.

SCOPE

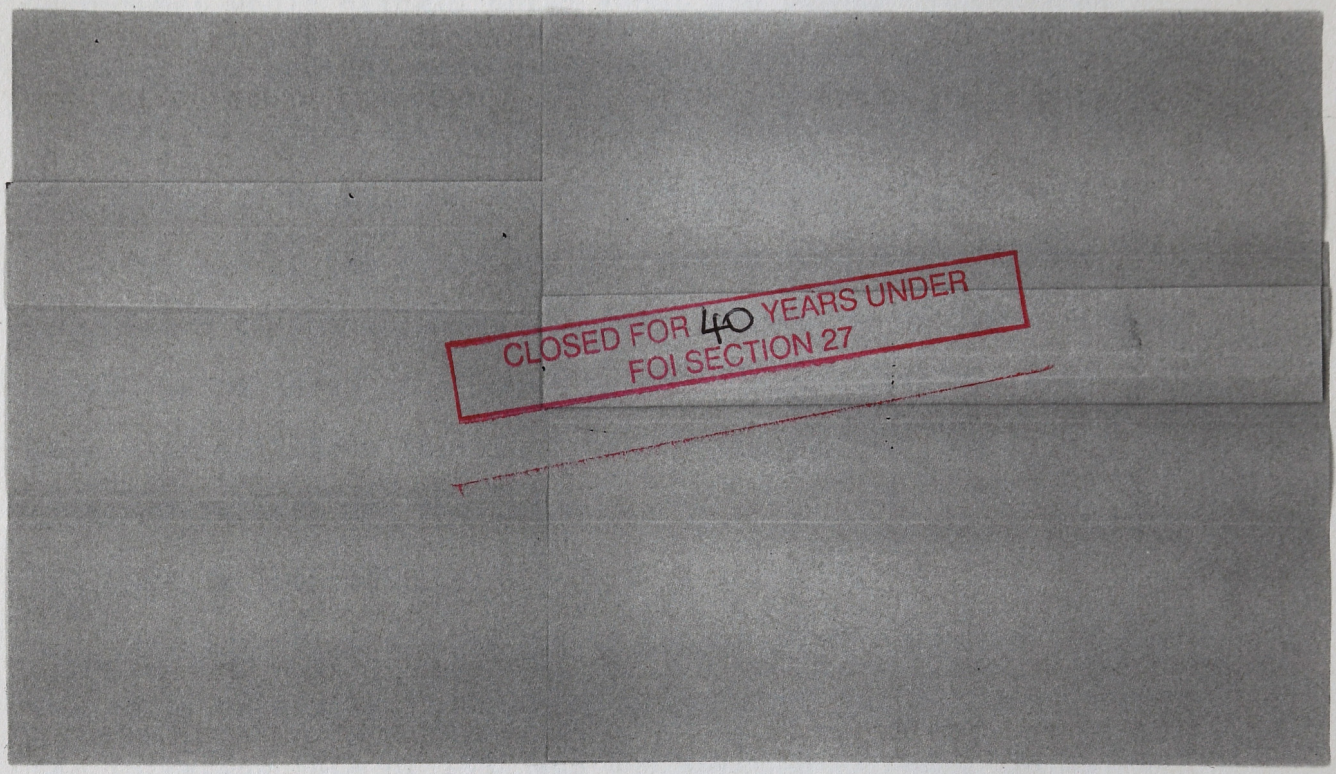
4. We consider first the relevant political and economic background before giving our assessment of the overall capability of the Argentine Armed Forces. We then look in some detail at the Argentine capability to defend South Georgia,

para 5

the South Atlantic Ocean and the Falkland Islands before discussing the Argentine strengths and vulnerabilities and finally drawing our conclusions.

THE POLITICAL AND ECONOMIC BACKGROUND

The Political Scene



6. The USSR have supported the Argentine cause although their abstention on the UN Security Council resolution shows a cautious approach. Muted Russian support will probably continue to be forthcoming given that they regard the Falklands dispute as a colonial issue and that they need Argentine grain. Nevertheless there is politically little in common between the two States.

The Argentine Aim

7. Over the past 15 years the Argentine Government has pursued its long-standing claim to sovereignty over the Falkland Islands. Having achieved its objective it is certain to resist strongly any attempt by the UK to re-assert her authority. Indeed, weakness on the part of the Argentine Government would quickly bring about its demise. President Galtieri has made it abundantly clear (1) that Argentina is prepared to defend the Islands by all military means and that everything is negotiable except the reversion of sovereignty.

8. The aim of the Argentine Government will be to retain possession of the Falkland Islands. Retention of South Georgia would, we believe, be a lower priority since its loss would have less political implications for the Junta. The Falkland Islands are the prize.

The Economic Background

9. The Argentine economy is in a poor state, and the country's wealth is unequally distributed with widespread poverty. In 1981 the inflation rate of 130% was the world's highest, the gross domestic product fell and the currency collapsed against the US dollar. Foreign debt rose, servicing it was a serious drain and the budget deficit increased considerably. The one bright spot has been recent large grain exports with the USSR taking three quarters of total sales. The present leadership have introduced an austerity programme but this has provoked large scale unrest. There is little hope of any substantial economic improvement in the short term.

Note:

1. JIC(82)(1A)12 dated 5 April 1982.

Confidence

10. The morale of the Argentine people and their defence forces is high after the capture of the Falkland Islands. The popularity of General Galtieri and his ruling Junta has risen very rapidly as a result of the invasion, despite serious anti-government clashes between protesters and government forces only days before. Nevertheless, this popularity is fragile and euphoric. It could evaporate dramatically if the Government suffered some significant reverse, particularly if this led to the loss of the Falkland Islands.

THE ARGENTINE NAVY

General

11. The Argentine Navy has a strength of about 30,000 men of whom some 30% are conscripts. Some of the professional officers and senior ratings are described as very good but these are in the minority. Of the 13 principal surface units 8 are more than 35 years old. By contrast the three French-built frigates and the two British Type 42 destroyers are modern, well armed and appear to have the pick of key personnel. The submarine force is similarly mixed, having two elderly Guppy types and two 8 year old German-built SALTA Class. The Naval Air Force has some 50 aircraft, of which 21 are usually embarked in the carrier. The Marine Corps (or Naval Infantry) has some 7,000 men.

12. The strength of the Navy lies in its ASVW capability. The EXOCET MM 38, similar to the Royal Navy version but with a less sophisticated homing head, is fitted to eight frigates and destroyers and possibly also to the second Type 42 although we have no confirmation as yet. The two German submarines are small, fast, quiet and well-armed. These modern units would, however, have to be positioned very accurately and handled with tactical skill to exploit their capabilities. We assess that the Navy lacks both tactical training and the logistic support fully to exploit their potential. Other weaknesses include a paucity of ocean reconnaissance assets and severe deficiencies in the radars of the older ships. The Navy is reported as unwilling to operate at night during normal exercises. Details of ships are shown in Annex A.

Anti Surface Warfare

13. Surface surveillance is provided by a small number of P2E Neptune and S2E Tracker aircraft, and by HFDF fitted in surface ships and submarines. The ship-fitted EXOCET is simple and rugged but only one practice firing has been reported. The carrier borne A-4 aircraft are most likely to be armed with bombs, although the radio control PESCADOR ASM with a range of 3.75 nm may be used. Shore-based Super ETENDARDs are reported to be fitting AM39 EXOCET, which could be operational in late April, but the Carrier is not believed capable of receiving the aircraft. The two SALTA Class submarines have the German SST torpedos and possibly the longer range SUT.

Anti Air Warfare

14. The A-4s of the Carrier Air Group are armed in the air defence role with two Sidewinder and 2 x 20mm cannon. They are trained to USN standards although they do not generally operate at night. The main air surveillance radars in the Carrier have suffered maintenance difficulties in the past and may be degraded. Both the Type 42 Destroyers have Sea Dart; the system in the one of the ships is known to have had defects which caused excessive miss distances in trials. The fire control systems in the old destroyers have considerable maintenance problems and are probably inadequate against modern aircraft and missiles.

Anti Submarine Warfare

15. Tracker and Sea King are used for ASW, the French DUBA 25 Sonar in the Type A-69 Frigates are reported as efficient but the Type 184M in the DLGs is believed to be poorly maintained. All escorts carry Mk 44 ASW Torpedoes. The ex-US Destroyers have Hedgehog and depth charges, and the French Frigates have a 2,200 metres range mortar. The Navy is believed to be proficient in set-piece ASW exercises but experience in tracking nuclear submarines is probably negligible. The SALTA Class Submarines are possibly the most effective platform but they are limited in mobility.

Mine Warfare

16. Very little intelligence is presently available on mining capabilities. Air-laid sea bed mines are known to be held and the two Guppys could lay mines if suitable types are held. There is no evidence of mine laying exercises but on the other hand the presence of six TON class minesweepers/ mine hunters suggests such a capability.

Serviceability

17. All of the major surface units are known to be operational with the exception of the 44 year old cruiser which might have come to the end of her seagoing life. One of the two Guppys has been in harbour for some time and may not be operational, while one A-69 Frigate was damaged during the occupation of South Georgia.

THE ARGENTINE ARMY

18. The Army has a total strength of some 85,000; this is made up of a regular cadre of officers and SNCOs with junior ranks being found from 1-year conscripts. Mobilisation plans exist but the Army's strength is not a limiting factor in the defence of the Falkland Islands

19. The tactical organisation of the Army is built round 12 brigades. Tactics and organisation follow the United States model but with local variations. There is an airborne brigade which is held at Cordoba as a strategic reserve. A more detailed account of the Army's capability and organisation, with reference, where appropriate, to the Marines, is at Annex B.

20. Training is generally effective, but the large proportion of 1-year conscripts, with the resultant turnover, limits the scope of training to company and platoon level; formation exercises are infrequent. There is little evidence of joint training of any sort. Although the army wide standard of all arms training must therefore be assessed as at the best weak, elite units (such as the Airborne Brigade and Marines) probably maintain a higher standard. The Army's morale and national pride are good, but its effectiveness, particularly under testing conditions and after one or two reverses, is more open to question.

21. The Army is equipped with a heterogeneous collection of weapons and vehicles, much of which has been acquired since 1977 from the United States and Western Europe, although some is

of local manufacture. Since the garrisons on the Islands will, however, not absorb anything like the total army strength, we can expect that they will be equipped with a choice of weapons designed to make the best use of what is available.

THE ARGENTINE AIRFORCE

General

22. The Argentine Air Force consists of 20,000 men, half of whom are conscripted for 12 months. There are some 300 aircraft of which only 175 have a combat capability. Most of the aircraft are old and equipped with simple weapons systems which limit their effectiveness at night and in poor weather. There is a general shortage of spares which restricts aircraft availability and financial constraints have limited flying training. There is little serious night flying and few intensive operations. Nevertheless it seems that, within these limitation pilots fly their aircraft with dash and flair. Providing their confidence is sustained and the weather is good the Argentines would make testing adversaries.

23. Argentine deployments and their training have so far been aimed at the land threat from Chile. Although there is a concentration of airfields in the northern half of this country, and there are relatively few in the South, there are sufficient for operations over the Falkland Islands. Most airfields, however, have little more than a runway; there is a marked absence of hardstandings, approach aids and technical support facilities. Only two airfields in the south have permanent Air Force units, thus the use of others would require a substantial logistic train. Our detailed assessment of the Argentine Air Force is at Annex C.

Offensive Support

24. The Argentines have about 130 offensive support aircraft but only 62 have any realistic capability to conduct operations at the range of the Falkland Islands. These are 5 Canberra B62's and 57 A4Bs. The remainder are light aircraft such as the turboprop PUCARA which have a modest weapons delivery capability.

25. The A4 has a flexible performance; it can lift 2000 lbs of weapons over a Lo-Hi-Lo radius of action of well over 500 miles from a 2400m runway, or 1500 lbs over 200nm from a 1250m runway. However, it lacks a modern navigation attack system and has visual weapons delivery. The Canberra suffers from the same shortcoming but its radius of action extends to 750nm for a Lo-Hi-Lo mission. The Canberra's present base is beyond the range of the Islands but it could deploy forward.

26. The A4s are based at Rio Grande in the far South from where they can comfortably reach the Falklands using external tanks. They could also operate from Port Stanley carrying 4000lbs over 120nm but this option would depend on the provision of fuel and weapons. In addition to bombs the A4 can deliver a range of ASMs. It has a secondary air defence role.

Air Defence

27. The Argentines have 35 dedicated air defence aircraft but only the eleven Mirage IIIs have an all-weather capability. The radius of action of this aircraft is 400 miles. It could not therefore provide air defence over the Falkland Islands from the Argentine mainland. The 24 Mirage 5s have a greater radius of action, some 600nm at height, but no all weather or night capability.

Currently about 12 Mirages are based at Rio Gallegos some 400 miles due West of the Falklands. The Mirage has a secondary ground attack role.

Transport Force

28. The Argentine Air Force has 23 transport aircraft (7 x C130 and 16 x FOKKER 27/28) capable of reinforcing the Falklands. Used at a high rate the serviceability would drop rapidly as there is a shortage of skilled maintenance and spares.

DEFENCE OF SOUTH GEORGIA

29. Terrain. The Island is uninhabited, rocky, largely barren, steeply mountainous and permanently covered by ice and snow. The central spine (The Allardyce Range) rises to heights of over 2000 metres and the summer snow line lies at a general altitude of 460 metres. There are no roads or tracks passable to either wheeled or tracked vehicles. GRYTVIKEN and PORT LEITH are the sites of old whaling stations and the only evidence of habitation. The coastline is steep, rocky and heavily indented. The best approaches are on the NE side of the island where almost all the bays have deep, clear entrances. Landing by LCT would be possible at the head of nearly all these bays.

30. Argentine Intentions. About 40 Argentine Marines have been landed on South Georgia with orders to secure Port Leith and Grytviken. They are lightly armed but they were instructed to offload sufficient stores for a prolonged stay. Since the island is some 700 nm east of the Falklands, reinforcement of the Marines can only be undertaken by sea and this would take considerable time and much effort. We doubt whether the Argentines intend this and they almost certainly regard the Marines as a token force to establish de facto Argentine sovereignty. South Georgia has at present little military value, but because it is a Falkland Islands Dependency it has real political significance. In our assessment, South Georgia on its own is not so important in the Argentines eyes that its loss would endanger the Junta. It is remote, the environment is hostile, and a major defence operation would absorb enormous

resources. In particular the operation would stretch the relatively small Argentine Navy to the extent that it would prejudice the security of the much more important Falkland Islands. Our assessment therefore is that the Argentines will not substantially increase the size of the present Marine force on South Georgia, nor would they seriously contest a reoccupation by the UK.

Concept of Operations

31. When considering his best course of action in defending the approaches to the Falkland Islands against the Task force the Argentine commander will be faced with a dilemma. He can take his principal ships forward to challenge the Task Force. thereby exposing himself to the SSN, or he can keep in shallow water and use his aircraft as the attack medium. If he takes the former he risks losing a major part of the Argentine Navy. If he adopts the latter he would be open to censure should the UK regain the Falklands.

32. It is difficult to make a judgement but there can be little doubt that the Argentine commander will be concerned at the possibility of a confrontation with the SSN, and he will be anxious to preserve his ships if only to guard against future domination by Chile. On the other hand the invasion of the Falkland Islands has rekindled the nationalist spirit and he may well take the bolder step. We assess that he will hold back at least until he believes he has identified the intentions of our Task Force. This will not preclude attacks by the Canberras on the Task Force out to the extremity of their radius of action of 750 nm.

Detection of the Task Group

33. In any event the first problem facing the Argentines in their Southern Atlantic Ocean operations is to locate our Task Force. The only applicable air assets they possess are the 3 Neptune and 12 Trackers. Although the Neptune has a radar which could give up to 80 nm range on the the Task Force and the aircraft has a radius of action of about 1300 mn, it can sweep only a comparatively small area of the South Atlantic. Furthermore, intensive operations would be difficult to sustain with so few old aircraft.

The Tracker, which could be operated from on shore or from the carrier, has a much shorter radius of action; it can remain on task for 4 hours at 100 nm. This aircraft is, however, likely to be also in high demand to provide ASW protection for the Fleet which will limit its availability for ocean surveillance. Both aircraft would be vulnerable to the air defences of our Task Force, and overall their capability cannot therefore be rated highly.

34. The 4 Argentine submarines, of which only 3 would be likely to be at sea at any time, might detect the Task Force, but in order to do so they would have to be positioned accurately since their sonar detection range would not exceed 20 nm. All the submarines are slow and they could not reposition successfully once they had dropped behind the Task Force. The Guppies are unlikely, because of their age, to sail deep into the Atlantic. It seems much more probable, given the low speed of the submarines, that they may instead by deployed relatively close to the Falklands so that they could more quickly rejoin operations. It would be disastrous if they were deployed well forward only to be by-passed.

35. The Argentines could use HF/DF stations ashore, and those at sea, to obtain bearings or a fix on the Task Force, but it is assessed that it will be impossible for the unsophisticated Argentine SIGINT Organisation to break our secure transmissions. It must, however, be recognised that the position of the Task Force could well be disclosed by other shipping or aircraft.

Attack on the Task Force

36. The longest range threat to the Task Force is potentially that from the four Argentine submarines; but they are difficult to position accurately given their slow speed and the short

detection range of their sonar. In an engagement, the two new submarines will not present an easy target and they are extremely quiet.

37. The only shore based air threat to the Task Force before it reaches the vicinity of the Falkland Islands will be from the Argentine Canberras. They will, however, be unable to locate or to attack in other than visual conditions and, given their weapons fit, they are unlikely to present a formidable threat.

38. The Argentine Carrier, with its aircraft, also poses a threat, but the ship is very vulnerable to counter action, especially by our SSNs. The A4Cs, which will probably be embarked on the Carrier, have an all-weather capability using bombs or short-range (maximum 12km) ASMs. We suspect that the latest Argentine aircraft, the Super ETENDARD, cannot be flown from the carrier because of catapult limitations, and the aircraft will therefore be operated only from shore bases. Since its radius of action cannot encompass the Falkland Islands from these bases it is unlikely to threaten the Task Force.

39. Some 8 destroyers and frigates are equipped with EXOCET which has a stand-off range of some 24 miles. Given the defensive capability available we do not believe that this missile will pose too significant a threat to the Task Force; but as it approaches closer to the Falklands the threat from shore-based air power will grow, particularly if the Argentines deploy the A4 or Mirage to the airport at Port Stanley (Airport details at Annex D).

DEFENCE OF THE FALKLAND ISLANDS

Terrain

40. General. The Colony consists of about 200 small islands with a population of some 1,800. The total land area is 12,200 sq km. Most of this is accounted for by the 2 largest islands, East Falkland and West Falkland. East Falkland consists of a Northern and a Southern land mass, both of roughly equal size, joined by a short isthmus. (The Southern half is called La Fonia). Port Stanley is situated in the NE of East Falkland and accounts for 1,000 of the inhabitants, the remainder being thinly spread over East and West Falkland. The coastline is heavily indented and would provide numerous amphibious landing sites. The highest ground is in the Northern half of East and West Falkland and is between 400m and 600m above sea level. Much of the land, however, lies below 30m. There are no trees except in a few places where they have been specifically planted. The vegetation largely consists of grass, heath and small heather-like shrubs, together with clumps of tussac grass up to 2m high. The scenery much resembles that of the Northern British moors and the Outer Hebrides.

41. Road Movement. There are only 50 km of roads with a rolled stone and concrete surface. These are located principally in and around Port Stanley. All other roads are unsurfaced cross-country tracks. Movement along these tracks and cross-country movement, is possible only for ½ tonne and 4 wheel drive vehicle due to bogs,

numerous small streams and boulders. Movement is even further restricted during the winter season (April to November). This summer, however, has been particularly dry and this is reported to have somewhat eased the normal difficulties.

42. Beaches. The rugged and heavily indented coastline of the 2 main islands includes numerous beaches, although only approximately 20 are of any significance, sprinkled round both islands. Most are sandy, but there are also some of shingle and a few of mud. Lengths vary from a few yards to over a mile. Kelp is a problem in some areas.

Ground Forces

43. Current Situation. It is assessed that the Argentines could have reinforced their initial occupation force and by now (6 April) achieved a strength of 3,000. The initial force consisted mainly of Marines, but elements of the Airborne Infantry and Infantry are now understood to be involved. The only heavy equipment we believe to be present are APCs, these being the LVTP-7 amphibious tracked armoured car with turret-mounted twin 12.8mm machine gun. The Argentine Marines hold 22 of these APCs. They are also equipped with 105mm artillery and it must be assumed that this is present, but we cannot as yet assess the number of pieces. There is some evidence that the Argentines may be planning to replace the Marines with Army units.

44. Argentine Intentions. The Argentines probably intend the final strength of their occupying force to be that of an expanded brigade group, possibly five to six regiments totalling between 5,000 and 8,000 men drawn from their elite units. Because of their inability to cover all the beaches and because they

will probably assess that the vital ground is in the North of East Falkland (which includes Port Stanley, its population, its port facilities and the airport), they may be planning to occupy that area with up to three regiments. One further regiment (approximately equivalent to a British infantry battalion) could be then deployed to La Fonia and another to West Falkland. If they are to reach what we assess to be their desired maximum force level together with the associated stores and heavy equipment, the Argentines will need to make steady use of their air transport capability over the next 6 to 10 days. They will also need to make full use of their amphibious lift capability to bring in further heavy equipment. There is already evidence that the amphibious force is returning to base for this purpose, and in four days time it can be expected to have delivered another load to the Falkland Islands.

45. Defensive Preparations. The terrain will force the Argentines to adopt a static defence posture. There is little natural cover and the ground is both soggy and stony, making the preparation of defensive positions difficult and requiring considerable engineer stores. But there will be enough time before the arrival of our Task Force for the Argentines to prepare adequate defensive positions with overhead cover. They will be able to prepare an obstacle plan and to position combat supplies. There will be time to reconnoitre and improve routes for moving reserves and to build helicopter pads. Artillery, engineer plant (eg for airfield maintenance) and mechanical handling equipment is probably included in the list of equipment being moved by sea. Once battle is joined the movement of reserves

will be difficult unless they had use of helicopters. It is unlikely that many of these will be deployed on the island because of the high fuel and servicing penalties that they would incur.

46. Supporting Arms. Because the going is so bad it is probable that only a few tanks will be deployed to the islands. Fire support will be provided by artillery; both 105mm and possibly 155mm guns are likely to be deployed, although evidence for this is awaited. In any case, each battalion will have its integral mortar support. It is not known precisely how many but, given overall holdings of 81 mm mortars, the figure would be at least 8 tubes per regiment.

47. Light Air Defence. We would expect to see deployed a proportion of both of their holdings of Blow Pipe (120 missiles /20 launchers) and Tiger Cat (150/6), and in addition they may sea lift some of their 20 mm OERLIKON AAA guns (240) to the Islands. We do not believe any of these equipments have associated land based fire control radars and the effectiveness therefore of local ground-based air defence will be limited to daylight visual engagements in good weather. They would however be very effective against helicopters. Full details of Tiger Cat's capability are given in Annex E.

48. Sustainability. Given that there is a minimum 10 to 12 day build up period available to the occupation force in which to consolidate their supplies, we would assess that they will have ample time to stockpile sufficient supplies of ammunition and other combat supplies for a brief defensive operation. They may have difficulty however, in providing sufficient stocks of

artillery ammunition for 105mn and 155mm guns, if any are landed. If a blockade were to be applied, then provision of food (other than meat) water and general living conditions would pose the greatest problems. Similar conditions would, of course, apply also to the civil population, except that they are accustomed to making the best use of incidental sources of water whereas the Argentine military are likely to depend on the one main source of water above the far Western extremity of Stanley Harbour.

49. Morale. The Argentine Garrison will, in their present mood, probably fight tenaciously. But their forces have not seen active service for over 60 years. If exposed to protracted blockade and if they start to doubt their ability successfully to defend the islands, the Garrison's performance could be less than staunch. The bravura style of General Galtieri, a cavalryman, may well have washed off onto Army comanders at every level. Cold military logic may not be a feature of their appreciations.

Naval Operations

50. The Argentine Navy could in theory threaten the Task Force and also provide naval gun fire support (NGS) to the Island Garrison. We have dealt with the limited offensive capability of the Argentine Navy earlier at paragraphs 11 - 17. Its capability for NGS is theoretically good but is reported to be rarely practised.

Air Operations

51. Offensive Support. The Argentines will see offensive air support as a vital ingredient in their defence plans. Their nearest mainland base, Rio Grande, some 340 miles WSW of Port Stanley houses all 57 of the A4 fighter bombers. This deployment means that the aircraft can be used in the Falkland area with high sortie rates and a maximum bomb load.

52. There is little data available on which to base assessments of the scale of the attack that might be made from the air resources at Rio Grande. But they could mount 60 - 80 sorties per day, together with a few from the small force of Canberras and possibly some more from the carrier. The Falkland Islands are on the limits of range for Mirage III and V aircraft. Nevertheless if the Mirage force is concentrated on the more southerly Argentine airfields this could pose an additional threat to our surface and land forces on and near the Falklands, especially on the Western half of the Islands. We assess this as a serious threat to any assault force unless local air superiority can be achieved. The threat would be reduced if the Argentine bases were disrupted.

53. It is unlikely that attack aircraft will be based on the airfield at Port stanley since the pressing need there will be for air defence and the ground facilities would be critically overstretched by a mixture of air defence, attack and transport aircraft. The major limitation affecting all attack operations is likely to be the lack of a modern navigation attack system in Argentine aircraft, a factor that will restrict all operations to daylight and to visual conditions.

54. One final possibility might be the use of missile-armed helicopters based on one or more of the grass strips on the Falkland Islands. These helicopters might be used in ground support, or even to attack surface units at sea.

55. Air Defence. The six Mirage Vs presently (6th April) based at Rio Gallegos could provide some air defence cover over the Falkland Islands. Their time on station would be about 40 minutes after a transit of 420 nm from the base, but the aircraft would be limited by the lack of an all-weather capability and by the absence, as we assess it, of radar control.

56. If all or most of the other 18 Mirage Vs from Moreno (Buenos Aires) were redeployed to Rio Gallegos it would be possible to maintain a CAP over the Port Stanley area, though this would be a very inefficient use of resources that might quickly affect serviceability rates. The eleven Mirage IIIs at Tandil and Mariano could provide an all-weather capability. But they have a shorter range than the Mirage V and could only just reach the Port Stanley area from Rio Gallegos. They would need air-to-air refuelling to give any operational capability over Port Stanley. With only 2 KC 130 Tankers available, this concept of operations will be very constrained. The Aircraft Carrier could also be used to provide an all-weather Air Defence capability with its A4Cs, but it is likely to need these aircraft for its own protection. We assess that the best form of air defence for Port Stanley would be afforded by stationing, say, four Mirage aircraft on the airstrip there. Because of the lack of night operating facilities and as it is the more simple

as well as the lighter of the two types of Mirage, we assess that if Mirages are deployed to Port Stanley airfield they will be Mirage V.

57. We conclude that only a limited air defence capability is likely to be available to the Argentines at Port Stanley, and even then only in daylight and good weather.

STRENGTHS AND VULNERABILITIES

Strengths

58. The strengths of the Argentine position are:

a. Possession. They hold the Islands. Their determination and their confidence is riding high. But their morale may crumble in the face of a major reverse.

b. Time. They suspect that they have a few days before the first SSN will deploy into the operational area and 2 - 3 weeks before the Task Force arrives. During that time they may be able to monitor the progress of the Task Force with some accuracy. The time of passage also gives them the opportunity firstly, to pre-position their naval and air forces to best advantage; and secondly, to reinforce the Falkland Islands garrison, dig in and prepare for any assault.

c. The Garrison. Provided their lines of communication are not interrupted, they can build up the Garrison to the size they deem necessary. This is probably in the order of an enlarged brigade group of 5,000 - 8,000 men, together with supporting weapons. It will prove difficult to dislodge.

d. Air Power. The Argentines could launch limited air attacks on the Task Force during the approach phase, but only in daylight and good weather. They have considerable though unsophisticated offensive air capability from the mainland to an arc just to the East of the Falkland Islands, but only in reasonable weather.

e. The Civil Population. They hold the British population and may well be able to exploit their presence to deter any assault on the key military objectives, which coincide with the concentrations of population.

Vulnerabilities

59. There are, however, weaknesses in the Argentine Armed Forces, namely:

a. Navy. Their Navy cannot match the RN forces which will be deployed. It is especially vulnerable to the SSN attack. They lack afloat support. Progressively, the Argentinians will have difficulty in maintaining ships on station for protracted periods.

b. Air Defence. Their air defence capability over Port Stanley is likely to be limited in good weather, and negligible in poor weather and at night.

c. Inexperience of Joint Operations. The Argentine Armed Forces rarely work together and they lack practical experience of joint operations. The art of producing a cohesive and effective defence plan may be beyond them. Their command and control arrangements are likely to be brittle.

d. Limited Reconnaissance. The Argentines are unable to maintain 24 hours close in reconnaissance to the Falklands. Their open ocean surveillance capability is limited. Thus, although we may not achieve strategic surprise, our chances of gaining tactical surprise for an assault are high.

e. Lines of Communication (L of C). The Argentine Garrison is wholely dependent upon its L of C with the mainland. The sea link is highly vulnerable to interdiction, yet they cannot afford to neglect it. Stanley airport is the jugular vein of the air link, and it is susceptible to attack.

CONCLUSIONS

60. We conclude that the Task Force will hold the balance of military power at sea, except in clear weather, when it could be vulnerable to air attack.

61. We also conclude that the Task Force has the capability to repossess South Georgia with minimal risk. It can separately secure a bridge head on the Falkland Islands, but the Argentine Garrison will be hard to dislodge particularly if local air superiority is not achieved.

62. We finally conclude that if the Argentines were to suffer an early major reverse at sea this would substantially erode their confidence. Furthermore it would put at risk their ability to sustain the Falkland Islands Garrison, particularly if their offensive air support were degraded.

Annexes:

A. Argentine Navy and Naval Air force.

B. Argentine Army.

C. Argentine Air Force.

D. Airfields in the Falkland Islands.

E. Tiger Cat details.

ANNEX A TO
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DATED 6 APRIL 1982

for CRISIS CELL

ASSESSMENT OF ARGENTINE NAVY AND NAVAL AIR FORCE

ANTI SURFACE WARFARE

1. The Argentine Navy regularly practices surface surveillance using their P-2E NEPTUNE aircraft and a search rate of 22,000 square miles per hour (30% of a NIMROD capability). Their surveillance may be linked, if not initially triggered, by a two HF/DF sites. Long range surface surveillance could also be conducted by the C-VA embarked S-2E TRACKER aircraft or visually by shore based aircraft. ESM may also be used by their frigates or larger surface vessels and by their submarines.

2. Their best ASVW system is the two TYPE 209/1 diesel submarines if pre-positioned for force intercept; however the requirement for a dual ASW/ASUW role may limit salvo size. The German SST 4 torpedo is carried, with a range of 12/13/6.5 nm at 18/25/35 knots and an impact fuse.

3. MM38 EXOCET is widely fitted in 4 ex-US destroyers, 3 Type A 69 frigates and, possibly, in at least the older of the two Type 42 destroyers (neither ship had EXOCET on original build). This system is rugged and simple from the operators point of view and a better than 50% availability should be expected. With the limited missile range (23NM) and the difficulties of "over the horizon targeting", active radar would provide the surest means of targeting. The Argentines are not believed to have fired more than one EXOCET and may well experience difficulty in co-ordinating missile firings and gunnery. A total of 40 (max) missiles is considered their entire stock.

4. The SEADART system fitted to the 2 Type 42 destroyers is horizon limited to a range of about 18NM and has never been fired by the Argentines in the surface mode.

5. The use of attack aircraft in iron bomb attacks is probable although unlikely at night. It is believed that some air launched AM 39 EXOCETS have been purchased, but are not yet serviceable. They are not believed to have ARMs. The Air Force could provide a limited ASUW capability with its A-4B/C and CANBERRA aircraft but effective co-ordination of air operations is lacking. Close range ASW operations using 5 naval ALOUETTE helicopters with AS-11/12 missiles could possibly be conducted from the CVA or Type 42s. The state of training and co-ordination of these operations is likely to be of low quality.

ANTI AIR WARFARE

6. The primary Argentine naval AAW weapon system would be the SUPER ETENDARD of which at least 5 have been delivered. These probably cannot be operated from the CVA, whose catapult and arrester gear are reported to be inadequate. SKYHAWKS could provide a limited AAW capability with primitive AIM-9 AAMs but would require excellent fighter direction which is probably, limited due to air search radar maintenance problems. The SEADART system on the Type 42s has never been fired since arrival in Argentina and on the SANTISIMA TRINIDAD is believed to have been ineffective since building due to MK 19 gyro instability; the two ships with this system have a magazine capacity of 22 missiles each - no reloads are available from ashore.

7. Air search radars, with the exception of Type 965 and Type 992 in the Type 42's, are old and are reportedly ineffective. Fire control radars on the old ex-US ships do not have an ECCM capability and are reported to be suffering from maintenance problems. Detection ranges on the Sea Harrier are assessed at a maximum of 80 miles but this will reduce to horizon range (9 - 12 miles) when the Harrier is at low altitudes.

8. Point defence on all ships would mainly be gunfire and Seacat on the Cruiser (which is reportedly in harbour and whose system is suspect); this capability is limited due to obsolescent systems and, on the CVA, restricted to hand powered 40mm guns. Deployment of hand held BLOWPIPE SAMs is possible but would be limited to daylight operations only.

9. Therefore, unless the SEADART systems are serviceable, AA defence is limited to guns.

NAVAL GUNFIRE SUPPORT

10. The single 6" gun cruiser is not believed to be serviceable and remains in port as at 4 April; it must be assumed that they could get her to sea by the end of April and that she has a full outfit of ammunition.

11. The Argentines do have at least 33 guns of 100mm or greater with a NGS capability; the ex-US destroyers are most likely to be used in this role due to their large magazine capacity and system reliability.

12. Effectiveness in NGS would be limited due to probable lack of training and exercise. The condition of fire control systems and turret alignment is unknown but is unlikely to be accurate.

EMBARKED AIRCRAFT CAPABILITIES

13. A-4C Skyhawk. Capable of 600 kts but normal attack speed 450 kts. Main offensive armament is iron bombs but it could probably only launch from the carrier with 4,000 lbs; rocket pods may also be available. Defensive armament is the AIM - 9A/B Sidewinder (but only 2 missiles per aircraft are carried) and 2 x 20 mm cannon. The aircraft does not have a modern nav/attack system and would be ineffective at night or in poor weather. The aircraft has a good low level performance and is highly manoeverable. The Sea Harrier should be able to outfight this aircraft.

14. S-2E Tracker. Sonobuoy and MAD capable. No details available on state of the system but generally a poor ASW aircraft. Capable of four hours on task, 100 miles in ASW role.

15. SH-3D Sea King. Capable of 4 hours on task in ASW role. Probably has Mk 44 torpedo. Not as sophisticated as the RN Sea King and unlikely to perform effectively at night.

Land Based Aircraft Capabilities

16. T-28 Trojan. No firm knowledge. Believed to be twin seat propellor driven trainer fitted with air to ground rocket rails.

17. Super Etendard. Transonic single seat attack fighter, optimised for low and medium altitude operations. It has a highly sophisticated and accurate Nav/attack system. Armament - 2 x 250 kg bombs and 4 x 400 kg bombs, Magic air-to-air missiles or rocket pods. 5 aircraft were reported to be fitting EXOCET AM 39 missiles and could be completed by late April.

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18. P2L Neptune. A very old maritime reconnaissance ASW aircraft. No further details available regarding performance.

19. SA-330 Puma-Transport. Troop carrying helicopter. A wide range of armament can be carried but no details available on Argentinian fit. Max cruising speed 146 kts, can carry 16 troops. Maximum range at normal cruising speed 355 miles.

20. Aloutte 3. Light helicopter with accommodation for pilot and 6 personnel. Max speed 113 kts. Max range 298 nm.

ANTI SUBMARINE WARFARE

21. The Argeninians do not often get the opportunity, if ever, to exercise with high performance SSNs. They apparently consider their best ASW platforms to be the 2 x Type 209/1 submarines which have a limited broad band passive search capaiblity with their sonar. Surface ship sonars are limited to the surface duct and the medium frequency Type 184M in the 2 x Type 42s is the most capable but requires constant and careful attention to achieve this capability. The ex-US sonars are obsolescent and would be of very limited use. The DUBA sonar on the Type A-69 frigates would be capable of close range operations only.

22. The TRACKER and SEAKING aircraft are capable of JEZEBEL operations; this equipment is similar to that used by the UK but the aircraft on board processing equipment (which is unknown) determines the effectiveness - this equipment is unlikely to be as sophisticated as that used by the UK or US.

23. ASW torpedoes known to be in the Argentine inventory include the US MK 44 Mod 0 and MK 37; the MK 46 Mod 0 may also be held. The West German SUT wire guided torpedo has also been reported but this is not confirmed. Frigates and larger ships also have 375mm mortar (2200m range), Hedgehog (274m range) and depth charges. Aircraft would probably drop the UK MK 43 torpedo. The general assessment of their ASW capability against the UK threat is low.

MINE WARFARE

24. Argentine mine stocks are unknown but may consist of US air dropped Type 52/55 mines. The Type 209 submarines do not have the modifications to lay mines but the ex US submarines do. No German mines have been sold or manufactured. The Argentinians conduct an apparently vigorous MCM programme with their six ex-British Ton class coastal minesweepers, demonstrating their awareness of the mining threat.

25. Both the P-2 and TRACKERs are assessed as being capable of dropping mines.

COMMAND AND CONTROL

26. With the exception of the two Type 42s, the Argentines have a varied collection of old communications equipment. The CVA and two type 42s are configured to link data by an updated Ferranti CAAIS but they are not believed to have the operational proficiency to make effective use of this capability.

27. They are not believed to have a secure voice capability; they use the US MK 10 IFF system, probably with their own codes. Integrated Air Force and Naval Air Force operations are not known to have taken place. Each of the armed forces is autonomous and little if any experience of joint operations is available to them. Control of exercises is vested in the individual arm's Commander in Chief and there has been no apparent co-operation or co-ordination.

SUSTAINABILITY OF OPERATIONS

28. The Argentine Navy is known to suffer from electronics maintenance difficulties. Also, after short periods at sea, ships require alongside maintenance with often diffcult to obtain spares requirements. The major surface units are believed to be RAS capable from their single large tanker (which is currently limited to 13 kts) although they normally refuel in port and at anchor. The CVA is limited in operations as it can only carry 290 tonnes of A gas and 333 tonnes of jet fuel. Stocks of fuel supplies are unknown, but are probably sufficient for short term operations. The Argentine merchant marine consists of about 200 general cargo, tanker, and passenger vessels, of over 1,000 tonnes, most under national control, available for national resupply purposes. The Argentine Navy does not have a centralised logistic control system which apparently multiplies individual ship supply problems. A-4 Skyhawk operational availability is running at about 40%.

29. The sophisticated modern equipment in the two Type 42s will present major sutainability problems; the SANTISIMA TRINADAD is known to suffer from a MK19 gyro defect from building which will probably render both the gun and missile systems ineffective. Given the known maintenance problems of these systems and the inability of the Argentines to obtain spares, it is unlikely if more than one fire control channel is available between the two ships.

30. The old ex US cruiser is unlikely to be capable of serious surface action but may be capable of NGS. She is known to have machinery problems and has, so far, remained in harbour. Since her most obvious application would have been during the initial invasion, it is unlikely that she is capable of putting to sea.

31. The Argentine Naval Force, given the low capacity of their only underway replenishment tanker, is unlikely to be able to sustain operations continuously at sea for longer than 3 - 4 days.

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THE ARGENTINE NAVY

AIRCRAFT CARRIER (ex COLOSSUS Class) VEINTICINCO DE MAYO	-	37 years old. Refitted 1969. Carrier Air Group of estimated 21 A/C. Usually comprising 11 Skyhawk, 6 Tracker, 4 Sea King. No other main armament. Speed 25 Knots max. Endurance: 1200 miles @ 14 knots 6200 miles @ 23 knots.
CRUISER (ex US BROOKLYN Class) GENERAL BELGRANO	-	44 years old. Possibly unserviceable. 15 x 6" MK 47 guns MER 30000^{x} 8 x 5" MK 25 guns MER 15000^{x} 2 x Qiad Seacat launches - 70 missiles MER 5000^{x} Unlikely to have surface capability with Seacat. Can carry 2 x unspecified Helo. Speed: estimated @ 15 knots. Fire control v. old and unlikely to cope wiht modern targets or against jamming.
GUIDED MISSILE DESTROYERS (British Type 42) HERCULES, SANTISIMA TRINIDAD	-	Modern DLGs. Capability as for UK Type 42 but information suggests TRINIDAD Seadart system is suspect. In addition HERCULES carries 4 x EXOCET MM 38. Both have 2 Triple Mk 32 Torpedo tubes. Not known whether equipped with Mk 44 or Mk 46 Torpedoes. Speed: 30 knots. Endurance: 4000 miles @ 18 knots.
DESTROYERS - (ex US FLETCHER Class) ROSALES ALMIRANTE STORNI	-	39 years old. Basic gun armed destroyers with very old fire control. 4 x 5" Mk 38 MER 16000^{x} 6 x 3" Mk 50 MER AA 6000^{x} 4 x 21" Torpedo tubes MER 15000^{x} 2 x Triple Mk 32 Torpedo tubes Hedgehog & DC.
(ex SUMNER Class) SEGUI HIPOLITO BOUCHARD PIEDRA BUENA	-	38 years old. Armament as for FLETCHER Class but with twin 5" mountings. In addition 4 x EXOCET MM 38.
(ex GEARING Class) COMODORO PY	-	37 years old. 4 x EXOCET MM 38. 6 x 5" Mk 38 (twin mountings). Same ASW weapons as other destroyers

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FRIGATES (French Type A.69) DRUMMOND, GUERRICO, GRANVILLE	- Almost new. 2 x MM 38 EXOCET 1 x 100 MM GUN 2 x Triple Mk 32 Torpedo tubes
PATROL CRAFT	- 7 of various types. All gun armed only. Two are ex US Tugs. Two have 3 x 4" guns. Three are 40 MM gun armed ex US Auxiliary Ocean Tugs - good range.
SUBMARINES (SALTA Class-German built) SALTA SAN LUIS	- 1200 tons. Delivered 1974. 8 forward torpedo tubes, 6 reloads (SST). 10 kts surfaced. 20 kts max dived for short burst.
(ex US GUPPY) SANTA FE SANTIAGO DEL ESTERO	- 2000 tons. 6 forward torpedo tubes. Four aft. 14 reloads. 18 knots surfaced. 15 kts max dived for short burst.
MINESWEEPERS/MINEHUNTERS	- 6 ex-British TON-Class. Refitted in UK in 1968.
LIGHT FORCES	- 12 assorted German, Israeli, and US Types.
AMPHIBIOUS UNITS	
LANDING SHIP DOCK (ex US LSD 5) CANDIDO DE LASALA	- Range: 8000 miles @ 15 kts. Lift (troops) 18 Officers 182 troops
LANDING SHIP TANK (ex US LST 1044) CABO SAN PIO	- Range: 9500 @ 9 kts. Lift (troops) 18 Officers 116 troops
LANDING SHIP TANK (ex MOD US De Sota Country Class) CABO SAN ANTONIO	- Range: Not known. Lift (troops) 30 Officers 604 troops
4 ex US LCMs 8 ex US LCVPs 7? Argentinian LCVPs 15? LARCs	

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32. NAVAL AIR FORCE

Units	Type	Total	Principal Bases
3 Attack Sqns	*A-4C Skyhawk	11	Commandante
	T-28A Trojan	5	Espora NAB
	Super Etendard	5	(Bahia Blanca)
1 ASW Sqn	S-2A Tracker	6	"
	*S-2E Tracker	6	"
1 Patrol Sqn	P-2E Neptune	3	"
1 Helicopter Sqn	Alouette 3	9	"
2 Helicopter Sqns	*SH-3B Sea King	4	"
	SA-330 Puma	2	"

* Embarked

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THE ARGENTINE ARMY

STRENGTH AND DISPOSITIONS

1. The Army has a total strength of some 85,000; this is made up of a regular cadre of 20,000 officers and SNCOs and 65,000 one-year junior conscripts. Whilst annual discharges and inductions run from November to February, the more elite units recruit throughout the year in order to maintain overall readiness.

2. Mobilisation plans were practised during the 1978 Beagle Channel crisis when the Army was able to increase its strength to 115,000 by M+15 and to 250,000 by M+180.

3. The Army's combat elements are grouped into four Corps whose locations are shown at Appendix 1. Its tactical organisation is built round twelve brigades (two of which were not programmed to be at full strength until 1984-85). Tactics and organisation generally follow the US Army model with local variations. Brigade strengths vary from 3,100 (Airborne Infantry) to 4,500 (Infantry). The outline of the four Corps is at Appendix 2 - 5. About half the combat strength is based in the Capital and in the provinces of Buenos Aires and Entre Rios (ie in the NW). The remainder is dispersed along the borders with Chile and Brazil. The organisation of the Marines includes at least one brigade and is shown at Appendix 6.

4. The Airborne Infantry Brigade is based at Cordoba and is held in strategic reserve. It is made up of three Light Infantry Regiments (two are airborne), an artillery battalion and supporting arms.

5. Training is generally effective but the large proportion of one-year conscripts, with resultant turnover, limits the scope of training to company and platoon level; formation exercises are infrequent. Although the Army-wide standard of all arms training must therefore be assessed as at the best to be weak, elite units (eg airborne) probably maintain a higher standard. The Army's morale and national pride are good, but its effectiveness, particularly under testing conditions and after one or two reverses, must be open to question.

EQUIPMENT

7. The Army is equipped with a heterogeneous collection of weapons and vehicles from the United States, Western Europe and some of local design and manufacture. Much of it has been bought since 1977. Supplies of modern equipment are, however, inadequate and shortages exist in field formations. We expect these shortages and inadequacies to be less pronounced in elite formations. Major equipment holdings and capabilities, where known, are at Appendix 7.

8. Armour. The armoured elements are equipped with a variety of tanks of the AMX 13 variety. It should be noted that fifty eight Panzerjaeger K with a 105mm gun are held. Armour protection on all armoured vehicles is light.

9. Artillery and Air Defence. Artillery and Air Defence are areas of comparative weakness in the Army as a whole; only twenty four 155mm SP guns are held (there are 168 towed). Most Air Defence is provided by Bofors and Oerlikon, but some Blowpipe and Tigercat missiles are held. There is no evidence that any Air Defence fire control radar is held.

LOGISTICS

10. The Beagle Channel crisis in 1978 disclosed weaknesses in the logistic system. The movement of large numbers of troops, ration resupply and coordination between all 3 services were particularly weak. Although lessons may have been learnt since 1978, the Army's logistic capability in full scale operations is probably still one of its weakest aspects. It should, however, be able to mount limited operations at a place and time of its

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APPENDIX 2 TO
ANNEX B TO
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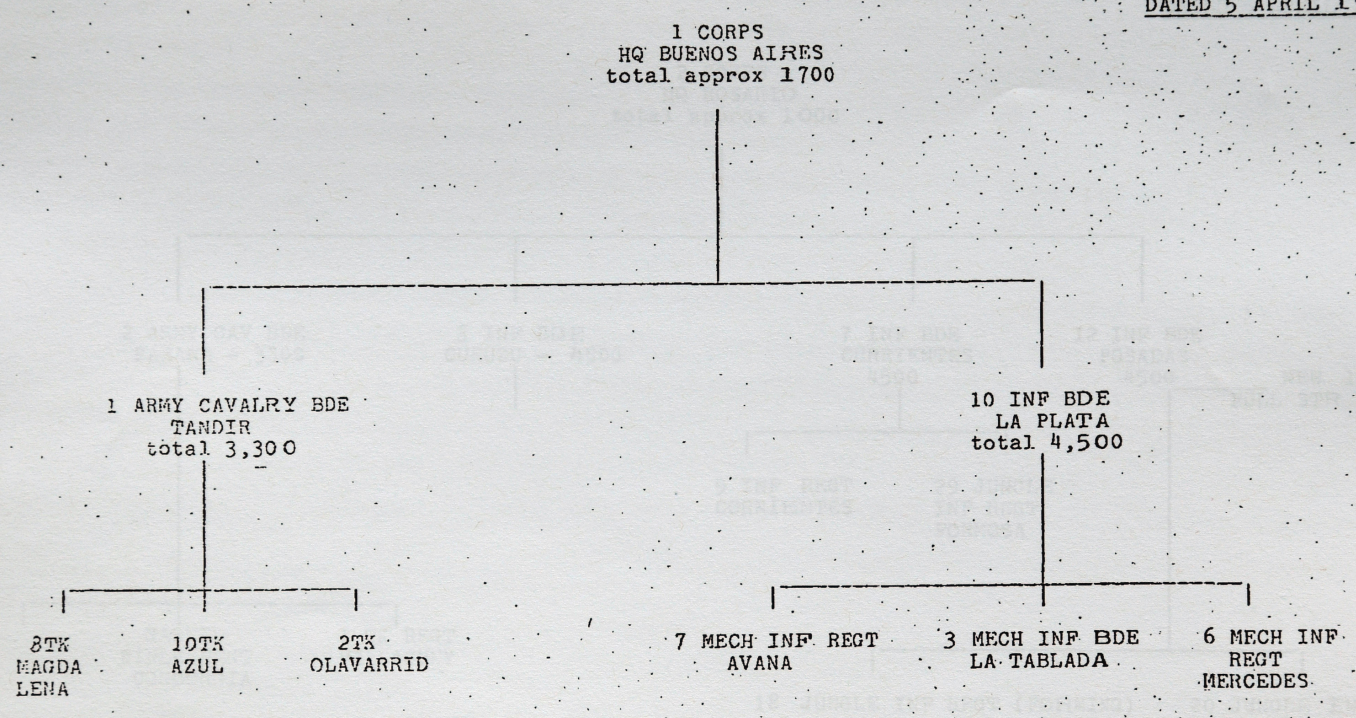

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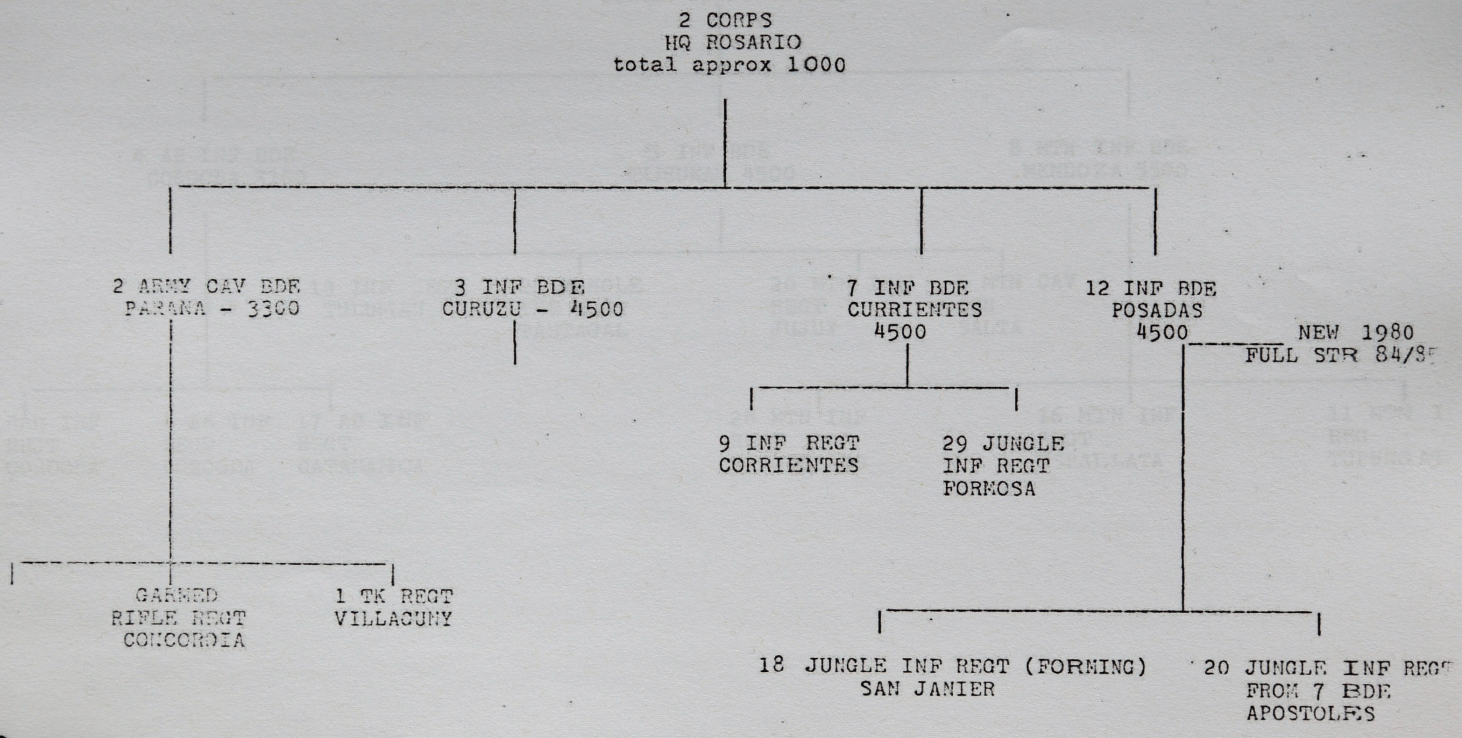
APPENDIX 3 TO
ANNEX B TO
DCDS(I)726
DATED 5 APRIL 19[illegible]



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APPENDIX 4 TO
ANNEX B TO
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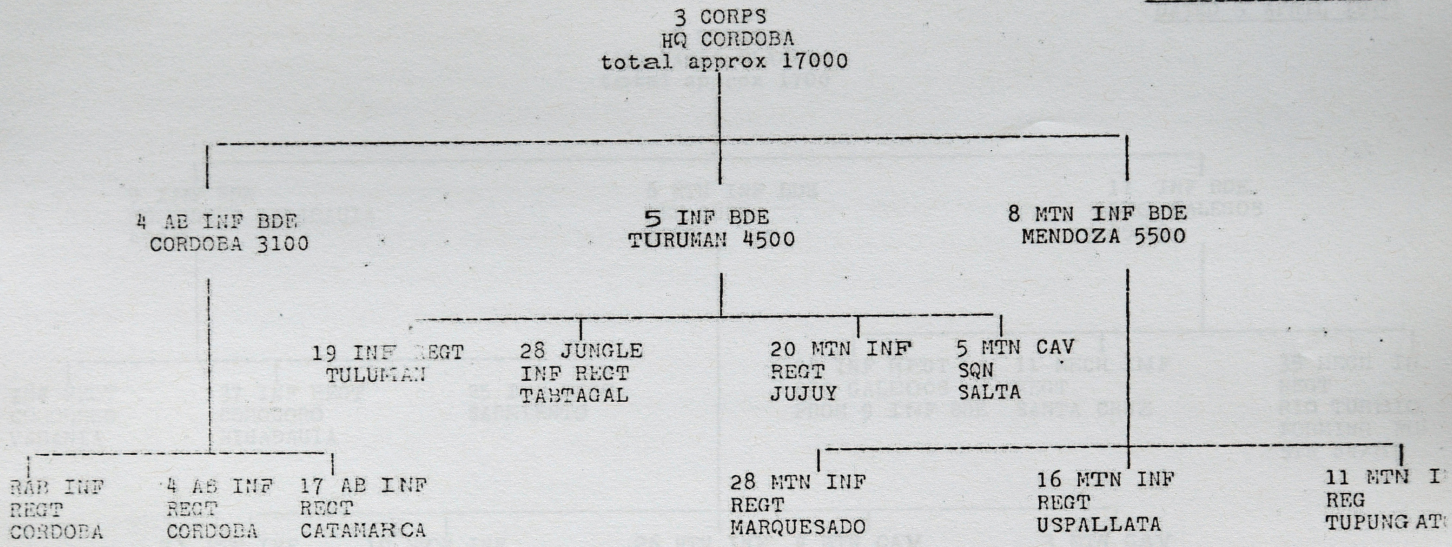

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APPENDIX 5 TO
ANNEX B TO
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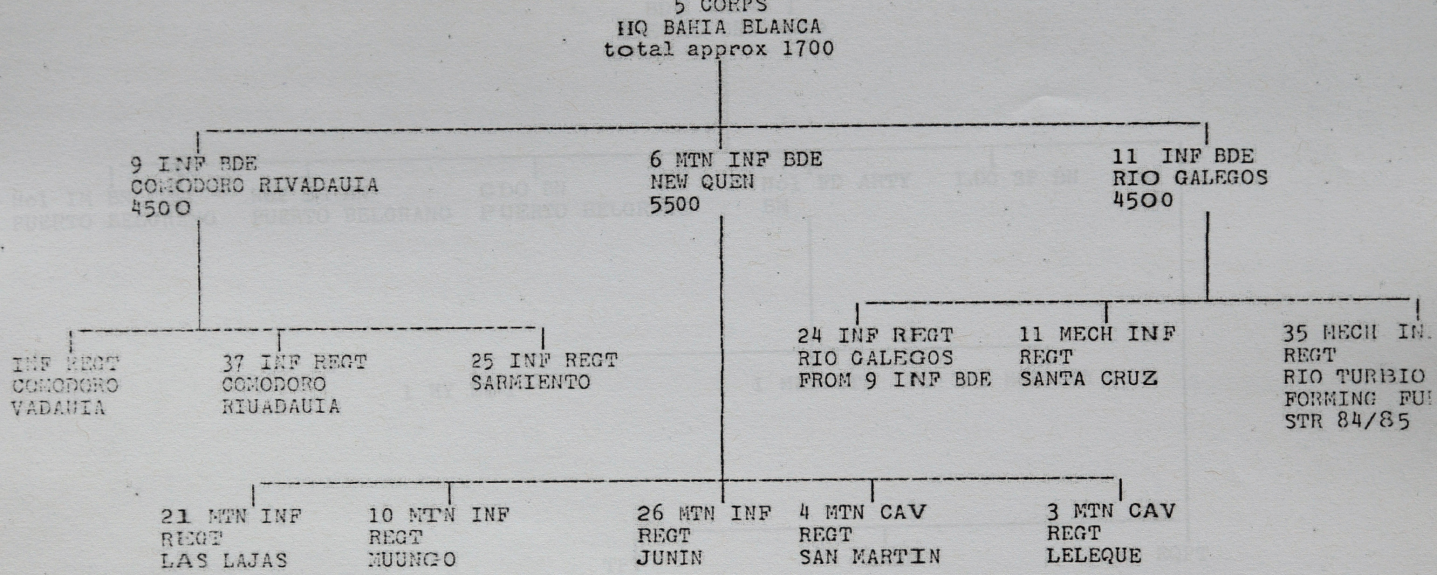

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APPENDIX 6 TO
ANNEX B TO
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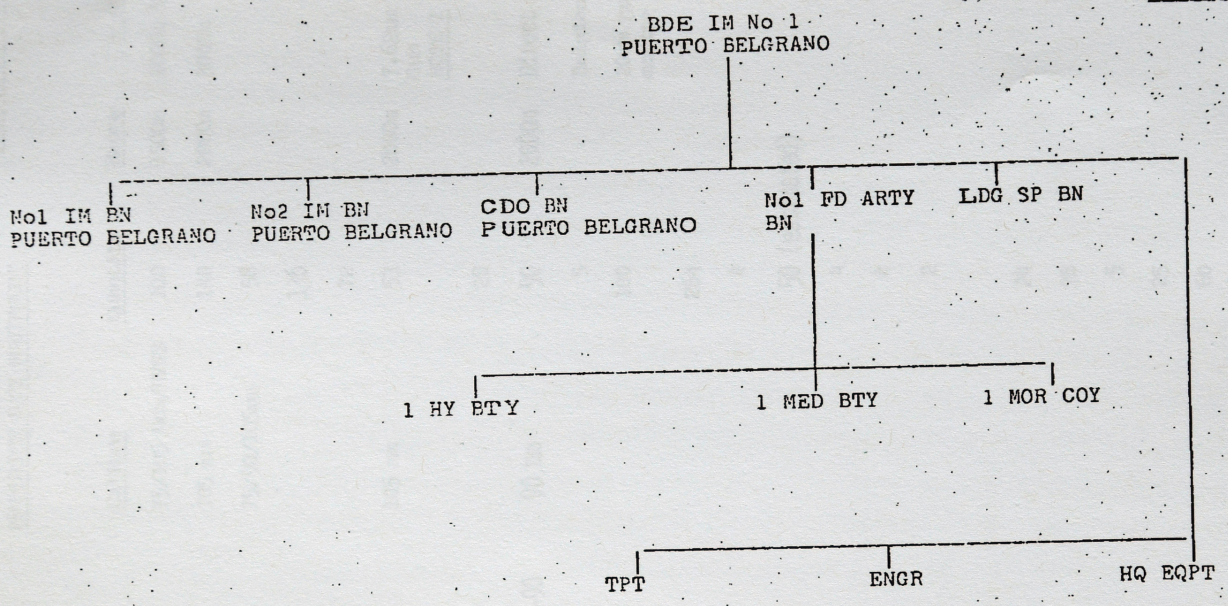
DATED 5 APRIL 1982



ANNEX B TO
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DATED 5 APRIL 1972

ARGENTINE ARMY EQUIPMENT

1. Armoured Vehicles

Type	Calibre	Quantity	Range	Remarks
Mk 4 Sherman	75/105 How/HVSS	100	1500m	2000m Static
M47 Medium Tank	105 mm	140	2000m	3000m
AMX-13 Light Tank	75/90/105mm	58		
M5 Half Tracks		136		
MOWAG Grenadier		72		
Jagdpanzer K	105 mm	53	2000m	7.62mm Turret Gun NOTE 1
APC AMX-VTT		28		
Panhard APC AML H-90	90 mm	90	2000m	Direct Fire
EDX SC		5		Belgian
TAM VCTP APC		100		20mm gun or mortar
M113 APC		264		
AMX VC1 APC		4		
LVTP-7 ACP		50 (estimated)		
M-577 ACP		4		
LVTP ARV		4		
AMX-13 AVLB		2		

2. Artillery

155mm SP gun F3	24
155mm Gun L-33	78
155mm How	5
155mm Gun	25
155mm How	60
105mm How/Gun	144

Note:
1. This tank is a light Austrian tank not to be confused with the German Panzerjager tank.

Type	Calibre	Quantity	Range	Remarks
105mm How		6		
105mm Pack How R-56		90		Total 105 = 240
75mm Bofors Gun L-40		260		
3. AAA Guns				
90mm AA gun		20		
40mm AA gun L-70		6		
40mm AA gun		16		
40mm AA gun		80		
35mm AA gun		6		
30mm AA gun		36		
20mm AA gun		240		Total AAA = 404
4. AA missiles				
Blowpipe		120		20 posts
Tigercat		35		3 fire units no radar
Roland 2		NK		Mtd on 'shelter' AFV unconfirmed
5. Rockets and Recoilless Artillery				
127mm Rocket (SAPBA)				
105mm Rocket (Pampero)				
105mm 90mm and 75mm recoilless				
100mm Cobra/Mamba				
3.5 in Rocket Launcher				
Blowpipe		120		20 posts
Tigercat		35		2 fire posts no radar
Roland 2		NK		Mtd on 'shelter' unconfirmed

COS TS5(1)

	Type	Quantity	Remarks
6.	ATGW		
	MOT	1000 (unconfirmed)	
	MAMBA	NK	
	COBRA	50 launchers	
7.	Mortars		
	120mm Brand	117	
	120mm LR Mortar	57	
	81mm Mortar	551	
	81mm Brandt	NK	
	81mm L Mortar	NK	Argentine produced
8.	Army Aviation		
	Bell OH-130	4	Light Helicopter
	UK-12	4	Light Helicopter
	UH-1H	22	Utility: some armed (rockets and MG) 1 lost
	Bell 212	1	Utility
	Puma	8	1 lost
	SA-415B LAMA	12	Utility Helicopter
	AB-109	9	Armed Helicopter
	CH-47c	2	Medium lift Helicopter
9.	Communications		
	VRC-321	100	UK HF radio vehicle set
	VRC-322	73	UK HF radio vehicle set
	TRC-300	482	HF manpack
	HF Transmitter	10	UK

Type	Quantity	Remarks
Grandset (?)	4	Compatible with VHF 4600 and Phillips VHF 3600
SFH 192 (SFL)	NK	Probably fitted in TAM tank
COLLINS 719d-2A	NK	Probably fitted in TAM tank
DATOTEK Dx16	NK	Secure speech system probably fitted in TAM

COS TS5(1).

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ASSESSMENT OF ARGENTINE AIR FORCE

AIRCRAFT CAPABILITIES

1. A-4 Skyhawk. The 57 A-4B Skyhawk aircraft are the mainstay of the ground attack force. The type first flew in the mid 1950's and it has been in the Argentine Air Force inventory since the 1960's. The avionics fit reflects 1950's technology a simple navigation and weapon aiming system. Despite the simplicity of the aircraft, however, the Argentines have been unable to maintain an adequate spares back-up with the result that half of the aircraft remain unserviceable; some of these could no doubt be pressed into service in a wartime situation. The aircraft has 5 load carrying suspension points and is fitted with two integral 20MM canons. The quoted maximum load is 10,000 lbs however a more realistic load would be 2 x 1136 litre fuel tanks and 3 - 5,000 lbs of stores (bombs, rockets or Bullpup ASM). The Skyhawk can carry 3 Bullpup missiles which have a range of 6NM. The radius of action will be dictated by the aircraft configuration. Typical examples are:

a. External Fuel, 2,000 lb weapons, R of A 540 nm, but requiring 2,400 m runway.

b. Full internal fuel, 1,500 lb weapons, R of A 200 nm requiring a 1,250 m runway (eg Port Stanley).

2. The Skyhawk has an in-flight refuelling capability and can also act as a tanker itself. However the Air Force has 2 x KC - 130 tanker aircraft and in-flight refuelling is regularly practiced between this aircraft and the Skyhawks. It has been reported that some Skyhawks are armed with the Israeli "SHAFRIR" (short range,

IR homing) dogfight air-to-air missile and it is possible that a number are equipped with Sidewinder. Thus, although the aircraft is used predominantly for ground attack and bearing in mind that the missiles are essentially short range, possibly fitted for self defence, the Argentines might nevertheless see the aircraft being used in a visual air defence role.
warhead. The missile is radio command guided along the line of sight.

3. Canberra B62. The Argentines have 5 x B62 and 2 x T64 Canberras. The T64 has no bomb aiming equipment and is not discussed further. The B62s are fitted with; radio altimeter, VHF radio, Doppler navigator, autopilot, T4 and SFOM bomb sights. The following weapons may be carried:

a. Bomb Bay. Up to 8,000 lbs ballistic bombs or 7,000 lbs retarded bombs or 650 gallon ferry tank.

b. Wing pylons. (1 each wing). Various sized bombs or SNEB rocket pods can be carried.

4. Limited evidence suggests that weapon delivery accuracy is good, perhaps the best in the Argentine Air Force, but, precise results are not available. Attack profiles can be expected to range from low to medium altitudes.

5. The radius of action with full internal fuel and 2 x 250 gallon wing tip tanks is 750 nm at high level or 270 nm at low level. If the bomb bay tank is filled, then the weapon load is all carried on the wing pylons and the radius of action is extended to 1200 nm.

6. The main base of the Canberras was previously thought to have been PARANA (3147S, 6029W), but some or all of them might now be based at RIO CUARTO (3305S, 6416W). From this latter location the 5 aircraft just have the range (1200 nm) to reach the Falklands, but armed only with 2 x 1,000 lbs bombs. Operations from PARANA place the Canberra outside the range of the Falklands.

7. MIRAGE III. This, the 'E' variant which first flew in 1961, and the Mirage 5, are the most modern aircraft in the Air Force and form the interceptor force. The primary navigation aids are Doppler and Tacan with assistance from the CYRANO fire control radar (See Appendix 1).

8. A passive warning system is fitted and provides warning of I and low J band pulse or CW illumination of the aircraft.

9. A maximum payload of over 4,000 kg is possible. The aircraft has a centre line station and 4 hardpoints under the wings. The centre line and inboard station can carry 1,300 kg loads and the outboard pylons 200 kgs. Two 30 mm canons are fitted in the wing roots and 455 kg bombs and rocket pods can be carried for attack missions. Matra 530 or SHAFRIR AAMs can be carried on air defence missions.

10. Radii of action are as follows:

Intercept profile All high level	-	Full internal fuel 2 x 1,300 litre external. 2 x AAM 2 x 30mm canon	400 NM
Attack Low-Low-Low	-	Full internal fuel 2 x 1,300 litres external. 30 mm canon 2 x 1000 lb bomb	250 NM
Attack High-Low-High	-	As above	400 NM

11. Mirage 5. This aircraft and its weapon carrying capability is similar to the Mirage III but the Mirage 5 has simplified avionics (gunsight, radio compass, no radar but possibly is fitted with Israeli range only pulse doppler radar). The aircraft is capable of operating from semi prepared strips and at a normal operational weight would need a ground roll of some 5,000 feet (1,700 M). Radii of action are as follows:

Intercept All high level	-	Full internal fuel 2 drop tanks 2 SHAFRIR 2 x 30 mm canon	600 NM
Attack Lo-Lo-Lo	-	Full internal fuel 2 drop tanks 2 x 1,000 lbs bombs or rocket pods 2 x SHAFRIR 2 x 30 mm canon	275 NM

12. Although it can not yet be confirmed, the Mirage 5 might be fitted with a Lear-Siegler inertial navigation and attack system.

13. Sabre. The status of the F-86 Sabre is unknown. The aircraft is essentially a sub-sonic air defence aircraft fitted with 4 x 0.5 inch machine guns, although it can be employed in a limited ground attack role. The Sabre is a very manoeuverable aircraft when engaged in close air combat and could be a match for the Harrier; however it relies on good ground control for an air intercept and the weight of shot on target of its machine guns might be inadequate. Maximum radius of action in a high level profile with full internal and external fuel is 1,000 nm. The maximum tactical radius is 530 nm.

14. Pucara. The Argentine aircraft industry has produced its own turboprop COIN aircraft named Pucara. It is a simple aircraft capable of operating from short, semi prepared strips in the order of 1,000 feet and in addition to its 2 integral 20mm cannons it can carry 3,300 lbs of weapons or fuel on its 3 underwing suspension points.

ARGENTINE AIR FORCE

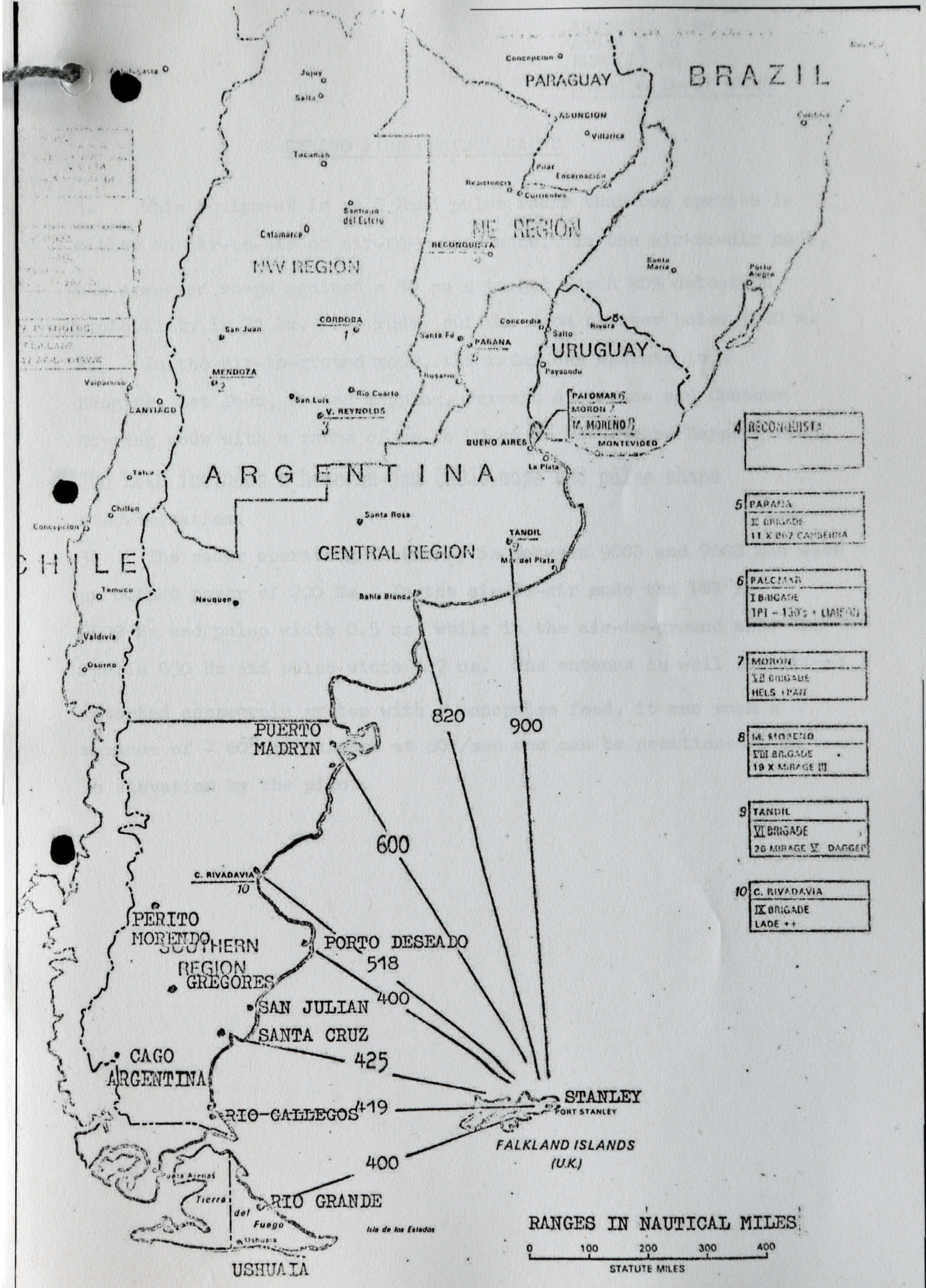
SUMMARY OF UNITS

Units	Type	Total	Principal Bases
1 Bomber Sqn	Canberra B-6	9	PARANA OR RIO CUARTO
2 Interceptor	Mirage III	11	TANDIL, MARIANO -
	Mirage V	24	MORENO & RIO GALLEGOS
Fighter/	A-4 Skyhawk	56	RIO GRANDE
Bomber Sqns	F-86F Sabre	15	MENDOZA
2 Attack Sqns	T-34B Mentor	17	RECONQUISTA
	UH-1H Iroquois	5	"
	IA-5A Pucara	40	"
2 Helicopter	Bell 212	2	MORON
and Search	Sikorsky S-58T	2	"
Sqns	Sikorsky S-61N	1	"
	Sikorsky S061R	1	"
	Piper PA 31 Navajo	1	"
	C-47 Douglas Skytrain	1	"
	HU-16B Albatross	3	"
	Aero Commander 500U	5	"
	Hughes Model 500	11	"
	Swearingen Merlin IV	2	"
	SA 315 B Lama	5	"
4 Transport Sqns	Lockheed Hercules	7	PALOMAR
	Boeing 707	1	"
	Fokker F-27	10	"
	Fokker F-28	6	"
	IA 50 Guarani II	12	"
	C-47 Douglas Skytrain	1	"
	DHC-6 Twin Otter	6	"
1 Photographic Sqn	IA 50 Guarini II	3	"
	Lear Jet 35	2	"
4 Training Sqns	MS 760 Paris	37	CORDOBA
	T-34B Mentor	31	"
5 Support Sqns	T-34 B Mentor	1	"
	Cessna 182	2	"
	C-47 Douglas Skytrain	5	"
	Hughes Model 500	3	"
	Aero Commander 500 U	2	"
	IA 50 Guarani II	2	"
	A-4 KC130	2	"

Unit	Type	Total	Principal Bases
Additional Air Force Utility Aircraft	T-39 Sabreliner	1	NOT KNOWN
	Cessna 182	11	
	IA-50 Guarani II	2	
	C-47	8	
	Aero Commander 500	6	
	DHC-2 Beaver	3	
	DHC-3 Otter	1	
	Bell 212	5	

AIRFIELDS

NAME	COORDS	R/W (ft)	ELEV (ft)
GEN URQUIZA	34 47 44S 60 28 48W	688 x 147 Asphalt	243
DR MARAINO MORENO	34 33 42S 58 47 20W	7874 x 131 Asphalt	105
TANDIL	37 14 08S 59 13 44W	8366 x 157 Concrete	574
EL PLUMERILLO	32 49 55S 68 47 05W	9885 x 177 Concrete	2310
VILLA REYNOLDS	33 43 48S 65 23 08W	7545 x 164 Asphalt	1591
MORON	34 40 38S 58 38 36W	10334 x 131 Asphalt	98
EL PALOMAR	34 36 37S 58 36 42W	6910 x 164 Concrete	58
RECONQUISTA	29 11 30S 59 41 30W	6447 x 164 Concrete	157
GEN ENRIQUE MOSCONI	45 47 14S 67 27 46W	7710 x 164 Concrete	190
PUERTO DESEADO	47 44 09S 65 54 07W	4921 x 98 Asphalt	266
PUERTO DESEADO NAB	47 43 12S 65 55 31W	4800 x 110 Asphalt	271
RIO GALLEGOS	51 36 27S 69 19 28W	11647 x 136 Concrete	66
SANTA CRUZ	50 01 12S 68 35 00W	6562 x 98 Asphalt	371
RIO GRANDE	53 46 45S 67 45 00W	6561 x 130 Concrete	43
PUERTO MADRYN(CIV) Capable of landing C47	42 45 24S 65 05 47W	7283 x 262 Graded Earth	446
PUERTO MADRYN(NAV) Capable of landing C47	42 47 3S 65 01 04	4921 x 164 Graded Earth	230


PARAGUAY
BRAZIL
Concepcion
ASUNCION
Villarica
Pilar
Encarnacion
Resistencia
Corrientes
Santiago del Estero
Catamarca
Tucuman
Jujuy
Salta
NE REGION
RECONQUISTA
NW REGION
Santa Maria
Porto Alegre
Cordoba
San Juan
Santa Fé
PARANA
Concordia
Salto
Rivera
URUGUAY
Paysandu
Rosario
MENDOZA
Valparaiso
San Luis
Rio Cuarto
V. REYNOLDS
SANTIAGO
PALOMAR
MORON
M. MORENO
BUENO AIRES
MONTEVIDEO
La Plata
ARGENTINA
Talca
Chillan
Concepcion
Santa Rosa
TANDIL
CENTRAL REGION
Mar del Plata
CHILE
Temuco
Neuquen
Bahia Blanca
Valdivia
Osorno
820
900
PUERTO MADRYN
600
C. RIVADAVIA
PERITO MORENO
SOUTHERN REGION
PORTO DESEADO
518
GREGORES
400
SAN JULIAN
SANTA CRUZ
CAGO
ARGENTINA
425
STANLEY
FORT STANLEY
419
RIO-GALLEGOS
FALKLAND ISLANDS
(U.K.)
400
Punta Arenas
Tierra del Fuego
RIO GRANDE
Isla de los Estados
Ushuaia
USHUAIA
4 RECONQUISTA
5 PARANA
X BRIGADE
11 X B62 CANBERRA
6 PALOMAR
I BRIGADE
1PI - 130's + UAIS07
7 MORON
XII BRIGADE
HELS (PAF
8 M. MORENO
VIII BRIGADE
19 X MIRAGE III
9 TANDIL
VI BRIGADE
26 MIRAGE V DAGGER
10 C. RIVADAVIA
IX BRIGADE
LADE ++
RANGES IN NAUTICAL MILES
0 100 200 300 400
STATUTE MILES

Appendix 1 to
Annex C to
DCDS(I) 26
Dated 6 April 1982

CYRANO FIRE CONTROL RADAR

1. This equipment is an I Band pulse radar that can operate in either an air-to-air or air-to-ground mode. In the air-to-air mode, the assessed range against a 10 sq m target for a 90% detection probability is 21 km. The radar suffers from clutter below 3000 m.

2. In the air-to-ground mode, the radar can operate in a Ranging, Let Down, Ground mapping, Terrain Avoidance and Contour Mapping mode with a range of up to 90 km in the Ground Mapping mode. The ECCM includes a home-on-jam (HOJ) mode and pulse shape discrimination.

3. The radar operating frequency is between 9000 and 9600 MHz with an output power of 200 Kw. In the air-to-air mode the PRF is 2000 Hz and pulse width 0.5 us, while in the air-to-ground mode the PRF is 650 Hz and pulse width 1.7 us. The antenna is well stabilised inverted cassegrain system with a monopulse feed, it can scan a maximum of $\pm$ 60° in azimuth at 50°/see and can be positioned $\pm$ 60° in elevation by the pilot.

ANNEX D TO
DCDS(I)/26
DATED 5 APRIL 1982

AIRFIELDS IN FALKLAND ISLANDS

MINOR STRIPS

1. There are 32 small landing strips in the Falkland Islands. They are mainly grass and they range from 1000 ft to 3000 ft long. They are designed for use by light civil aircraft up to Britten Norman Islander aircraft. Four of them have been drained and were kept open through last winter.

PORT STANLEY AIRFIELD

2. Construction:

a. The airfield was constructed by a British Civil Engineering Contractor for ODA and was completed in 1977. The existing runway (08/26) is 4100 ft long, 147 ft wide, and was designed for FOKKER F27/F28 aircraft. Design LCN was 25 but the strip is known to be up to LCN 40 in many places. Construction is 300mm of compacted crushed stone mainly on in-situ white sand. The pavement is surfaced with a minimum of 32mm of Asphalt, but it is up to 100mm thick in places.

b. Aids. RT, WT and NDB.

c. Lighting. No fixed lighting.

d. Usage. The existing airfield has been recently repaired and it should be able to take a large number of C130 sorties without serious deterioration. With regular minor repairs it should stand up to heavy usage for several months.

e. Fuel. No fuel is stored on the airfield. There is a storage capacity of 50,000 litres in Port Stanley Town belonging to the Argentine Air Force. Until the invasion, aircraft refuelling was by bowser.

f. Aircraft Parking Apron. There is a small asphalt apron (270 ft x 180 ft) near the terminal building. This would be too small to take more than three C130 Hercules, but there is a car park nearby which could be converted by Argentine engineers in a few days, and which could then take additional aircraft.

3. Airfield Development by Argentine Engineers. Argentine Air Force Engineers constructed a temporary airstrip 4000 ft long 50 ft wide in 1971 near Rookery Bay between Port Stanley and the existing airfield. This airstrip was surfaced with US AM2 aluminium surfacing expedient which was lifted and removed from the Falkland Islands in 1978. With the engineer plant available on East Falkland Island, augmented by extra plant which is known

to be intransit from Argentina, the Air Force Engineers could level and surface a completely new airstrip on a suitable site like the one previously used at Rookery Bay. Alternatively in 2 to 3 weks it is estimated that the existing airfield could be extended to 6000 ft maximum if a surfacing expedient such as the US AM2 was imported. We have no knowledge of Argentine ability to provide bulk refuelling facilities on shore. There are several sites near the airport where an LST could beach, and this could be one way of bringing in a large quantity of fuel in drums or tanks. Even if they have no dracones and pillow tanks they could very quickly set up a significant resreve of aviation fuel near the airfield.

4. Argentine Air Force Air Transport Operations from Stanley. If pressed, the Argentine Air Force should be able to operate C130 Hercules into Stanley Airport carrying a maximum payload of 17000kg. In addition the FOKKER F27 and F28s could fly in fully laden. All this assumes that the aircraft do not refuel at Stanley and that they arrive from the nearest mainland base. Because there is no permimeter track and the apron is restricted, the number of sorties will be limited. They shold have no difficulty however in unloading and clearing a minimum of say 12 aircraft per day, which would give an inward airlift in the order of 200 tons of stores per day.

5. Argentine Offensive/Defensive Air Operations. The Argentine Mirage III, Mirage V and their A4 Skyhawks could operate from Stanley Airfield with almost full payloads to defend the island. The limited parking area would again be a problem. If the Argentine Air Force Engineers choose to improve this, however, there is no reason why, say, 4 of these fighter aircraft could not operate from Stanley. The factor most likely to limit the sortie rate is that of fuel supply. With forward planning and the engineer work described above it must there fore be assumed that the Argenine Air Force could give themselves at least some air defence cover.

TIGERCAT - TECHNICAL DETAILS AND EVASION TACTICS

TECHNICAL DETAILS

1. General. TIGERCAT is disigned to be effective against targets either directly approaching or those offering small crossing distances or approach angles.

2. Operating data/limitations. Operating data is as follows:

a. Ranges. maximum 4500m, minimum 1375m (most effective range in the bracket 1800-3200m).

b. Engagement Envelope. maximum target speed 275 m/s (530kt); maximum target height 2750m; maximum crossing distance 650-800m.

c. Visibility Requirements (optical tracking)

(i) Target at 440kts, minimum visibility necessary is 5000m.

(ii) Target at 550kts, minimum visibility necessary is 5800m.

d. Blind areas. To prevent the missile being fired directly over the director there is a 'mandatory' blind sector varying between 36^0 and 66^0 dependent on launcher/director separation.

EVASION TACTICS

3. General. TIGERCAT employs optical tracking and the missile speed is relatively slow, hence its relative ineffectiveness against crossing targets. Tactics to be employed will naturally depend on whether or not the locations of the fire control units are known accurately, and what other air defence systems are employed, but the following guidelines should be considered.

4. Locations of Fire Units Known. Where locations of Fire Units are known accuratley, approach speeds head-on should be kept as high as possible, preferably above 530kts. Attacking aircraft should fly as low as possible and make full use of target screening while weaving to offer a crossing target to the missiles.

Location of Fire Units Unknown. While adopting the same tactics as in 4 above, every opportunity should be taken to mask the aircraft from likely fields of view. As the missile control requires optical tracking, any interruption to the ability of the tracker to maintain visual contact, particularly at small approach angles will reduce the possibility of accurate acquisition and launch.

6. Flying Above Operating Envelope. The maximum engagement target height is 2750m (9000ft). Provided there is no air defence threat above this level, flying at 9000ft or above will additionally keep the attacking aircraft clear of AAA and small arms fire. (As the Sea Harrier has a radar, detection ranges at this height should enable enemy aircraft to be identified well outside AAM engagement envelopes.)

7. Tactics following TIGERCAT firing. As soon as the pilot becomes aware that a TIGERCAT missile has been fired against him he has a number of possible evasion options. Flying low and diving for 'cover' could break the visual tracking sequence; running away from the missile at speeds in excess of 200m/s (390kts) should ensure the round drops astern and presenting a crossing target more than 800m from the fire control unit should prevent the missile successfully following the attacker.