

NATIONAL PHOTOGRAPHIC INTERPRETATION CENTER



Secret

25X1

imagery analysis report

POL Storage Capacity  
North Korea, 1982 Estimate (S)

260

Secret

WNINTEL

Z-14599/82

IAR-0069/82

SEPTEMBER 1982

Copy 74

**Page Denied**

**SECRET**

25X1

## POL STORAGE CAPACITY, NORTH KOREA 1982 ESTIMATE (S)

### ABSTRACT

1. (S/WN) This report presents an imagery-derived analysis of North Korea's POL storage capacity and is the first NPIC report on that subject. The POL storage capacity, as it has been assessed in this report, is nearly double the 1975 estimate. This estimate shows that the POL storage capacity has continued to increase since 1975 in concert with the radical changes in the structure and mobility of the North Korean forces. This report contains ten annotated photographs, two maps, and a table. The information cutoff date is

25X1

### INTRODUCTION

2. (S/WN) In order to determine North Korea's POL storage capacity, 141 facilities, which have been placed into six categories, were reviewed (Table 1). The calculation of the total storage capacity at those facilities shows that North Korea's POL storage capacity is at least 10,370,935 barrels, which is nearly double the 1975 storage capacity estimate of 5,766,560 barrels.<sup>1</sup>

Category	1975 Estimated Capacity (bbl)	1982 Estimated Capacity (bbl)
Production	3,096,650	4,951,320
National level (Figure 1)	1,337,000	2,581,660
Regional level (Figure 2)	595,213	1,575,315
Naval	137,981	347,805
Air	125,486	288,645
Industrial	474,230	626,190
Total	5,766,560	10,370,935

This increase in the estimated POL storage capacity does not mean that the North Koreans have constructed enough new storage to have nearly doubled their capacity since 1975, but rather, is a result of several factors. The first and most important factor was a detailed recalculation, based on updated mensuration, of the storage capacity at all previously appraised facilities, which resulted in a net increase of 1,305,235 barrels. Second, storage facilities that existed, but were not assessed in the 1975 study, have been included in the present study. They have a storage capacity of 2,189,400 barrels. Third, storage facilities constructed since the 1975 study have also been included. These facilities include 11 national-level storage facilities with a storage capacity of 1,109,740 barrels. Table 1 lists the dimensions and capacities of all facilities. The results of this study represent a review of only the known POL storage facilities. A detailed, country-wide search for as yet undetected facilities was not conducted.

3. (S/WN) If imagery was available, each POL storage facility was reviewed during construction to determine the number of storage tanks per bunker. Many of these facilities are old or were constructed and earth covered between imaging. However, by examining multiple coverages of each POL storage facility, particularly during the winter months, and identifying and counting the air vents/valves on top of each tank, a reliable tabulation of the number of storage tanks per bunker, and therefore, of the overall capacity of the facility was determined (Figure 3). The validity of this methodology was strengthened by the fact that, in many instances, multiple coverages revealed that the number of tanks placed in bunkers at facilities under construction was identical to the number of air vents/valves observed after the tanks had been earth covered (Figure 4).

### BASIC DESCRIPTION

#### Production Facilities

4. (S/WN) The first full-scale petroleum processing plant built in North Korea is Unggi Petroleum Refinery (Figure 5), 14 nautical miles (nm) southwest of the Soviet border near the port of Unggi. This refinery, started in 1968 with Soviet assistance, became partially operational in late 1973. It is estimated to have a maximum daily output of 42,000 barrels. The crude oil and finished product storage capacity at the refinery is esti-

mated to be 2,582,200 barrels (Section I, Table 1). No differentiation has been made between crude oil and finished product storage. The refinery currently draws its crude oil from the large border transshipment facility at Yonghyon-dong. The storage capacity of the transshipment facility is estimated to be 261,000 barrels. The refinery also has its own rail loading/unloading facilities. A pipeline has been constructed from the refinery to the

**SECRET**

recently completed berthing facility at Unggi Port Facilities (Figure 6). The pipeline and berthing facility allow seaborne shipments to augment the cumbersome movement of crude oil by rail.

5. (S/WN) The second major petroleum refinery, Paengma Petroleum Refinery Ponghwa (Figure 7), is 8 nm east-southeast of Sinuiju and the Chinese border. Construction of this refinery, which was built with Chinese assistance, began in 1976. The refinery became partially operational in late 1978. It has an estimated maximum daily output of 42,000 barrels. The crude oil and finished product storage capacity is estimated to be 720,000 barrels. The refinery has its own rail loading/unloading facilities and draws its crude oil from the transshipment facility at Paengma Ri Petroleum Production Storage Southeast, 1.5 nm southeast of the refinery. The transshipment facility at Paengma-ri probably receives its crude oil from China via a pipeline that was first observed under construction in mid-1974. The estimated storage capacity is 1,152,520 barrels; no differentiation was made between crude oil and finished product storage.

6. (S/WN) Aoji Ri Chemical Plant and Synthetic Petroleum Refinery, the third petroleum production plant, is 14 nm southwest of the border transshipment facility at Yonghyon-dong. This petroleum production facility uses coal from adjacent mines to produce synthetic POL products. With the completion of the refineries at Unggi and Paengma, production at Aoji Ri has probably shifted to other coal-based products. However, for contingency purposes, its POL storage capacity of 235,600 barrels has been taken into account.

7. (S/WN) The total POL storage capacity of these refineries and transshipment facilities is estimated to be 4,951,320 barrels.

### **National-Level POL Storage Facilities**

8. (S/WN) The 17 national-level storage facilities are widely dispersed throughout the country along the main transportation routes (Figure 1 and Section II, Table 1). National-level storage facilities are either rail served or connected by a pipeline to the nearest rail spur. They serve both military and civilian consumers but are not ordinarily used as distribution facilities. The average storage capacity is in the 100,000-barrel range. Two types of storage facilities have been identified at the national level. The first type comprises bunkered or earth-covered, standard 9- by 3-meter horizontal storage tanks with a capacity of 420 barrels each (Figure 8). These facilities are designed to take maximum advantage of protective terrain and vegetation. Terrain usually dictates the number of tanks per bunker, but the range is generally from ten to 25. The second type of national-level storage facility comprises partially buried, vertical tanks (Figure 9). These tanks, each with an estimated capacity of 5,000 barrels, are partially buried in groups of six and then earth covered. The 11 national-level storage facilities constructed since 1975 are of this type. Prior to 1975, no national-level storage facilities existed south of Pyongyang; however, six of the new facilities are within or near the forward

corps area. The total capacity of the 17 national-level storage facilities is estimated to be a minimum of 2,581,660 barrels.

### **Regional-Level POL Storage Facilities**

9. (S/WN) The 58 regional-level storage facilities are more widely dispersed than the national-level facilities and are all along main transportation routes or near urban areas (Figure 2 and Section III, Table 1). Regional-level storage facilities are road and/or rail served, are directly involved in the distribution of POL to the military or civilian sector, have open storage for POL drums, and have an average storage capacity in the 30,000-barrel range. Nearly all of these facilities have tank and cargo trucks for the movement of POL. The total capacity of the 58 regional-level storage facilities is estimated to be a minimum of 1,575,315 barrels.

### **Naval POL Storage Facilities**

10. (S/WN) POL storage has been identified at 28 naval facilities (Section IV, Table 1). Twenty-five of these facilities were not included in the 1975 assessment. Most of the naval facilities are old and established, and the POL storage has been in place and earth covered for a long time, making it difficult to locate. An example of this can be seen in Figure 10. The use of multiple comparative coverages was necessary to locate and calculate naval POL storage. The total POL storage capacity of the 28 naval facilities is estimated to be 347,805 barrels. This estimate is clearly conservative because of the difficulty in identifying this type of storage.

### **Airfield POL Storage Facilities**

11. (S/WN) A review of 28 of the major North Korean airfields was made to determine whether the 1975 POL storage capacity estimate had changed. The problem of identifying POL storage at airfields was identical to that encountered at naval facilities. Most are old and established, and the POL storage has been bunkered for many years. However, the POL storage capacity of the airfields constructed since the early-to-mid-1970s was easier to estimate. POL storage was identified at these airfields during construction, facilitating a reliable calculation of storage capacities (Figure 11). The total POL storage capacity of the 28 major airfields is estimated to be a minimum of 288,645 barrels (Section V, Table 1). This estimate is conservative because the POL storage capacity of the forward area divert/dispersal airfields and the highway strips was not reviewed.

### **Industrial POL Storage Facilities**

12. (S/WN) Industrial POL storage is the most difficult category to estimate. The apparent lack of standard-sized POL storage tanks at industrial facilities throughout North Korea indicates that detailed mensuration of each facility would be required in order to determine overall storage capacity. In addition, a significant amount of tankage

SECRET

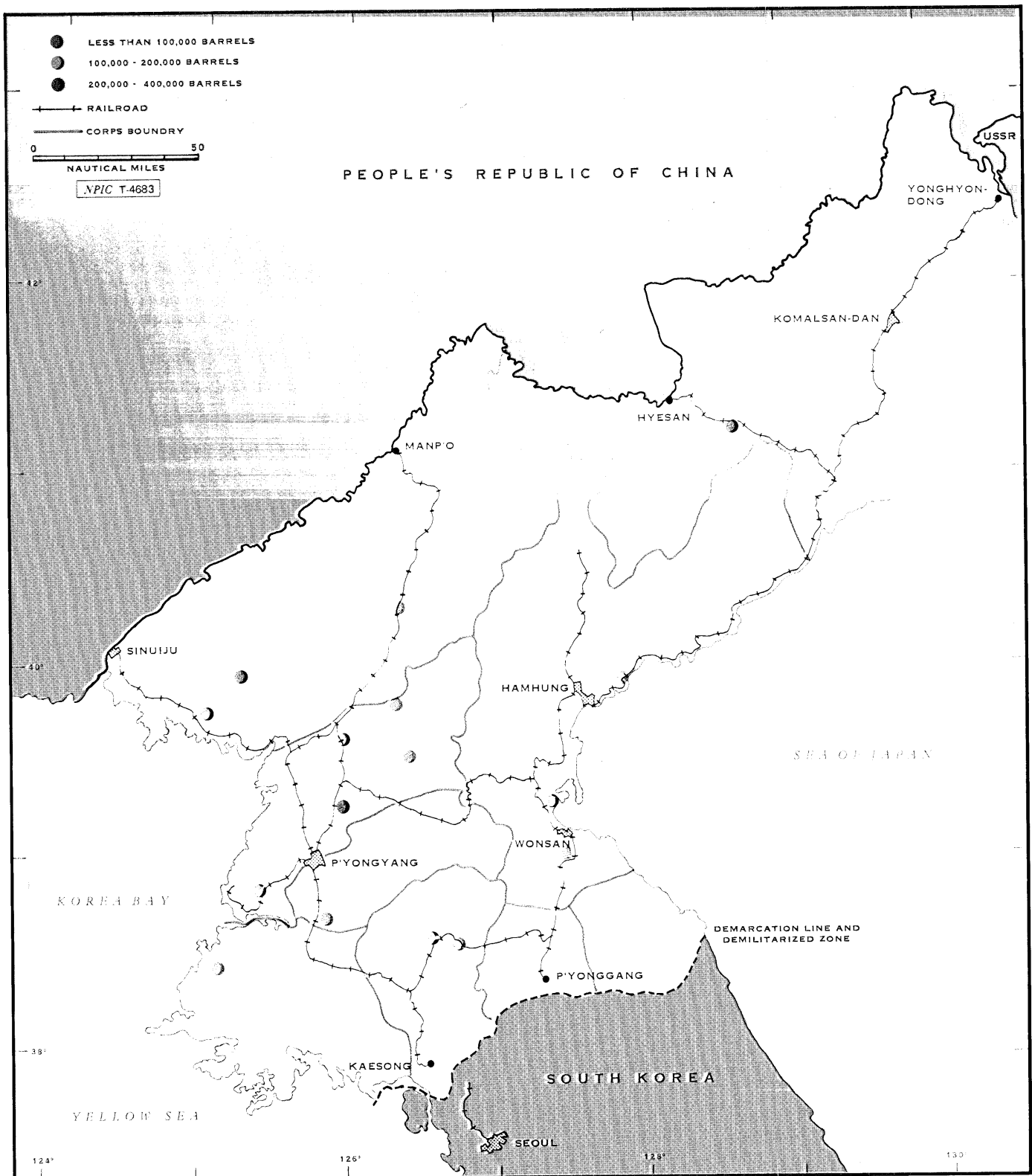


FIGURE 1. LOCATIONS OF NATIONAL-LEVEL POL STORAGE FACILITIES, NORTH KOREA

SECRET

SECRET

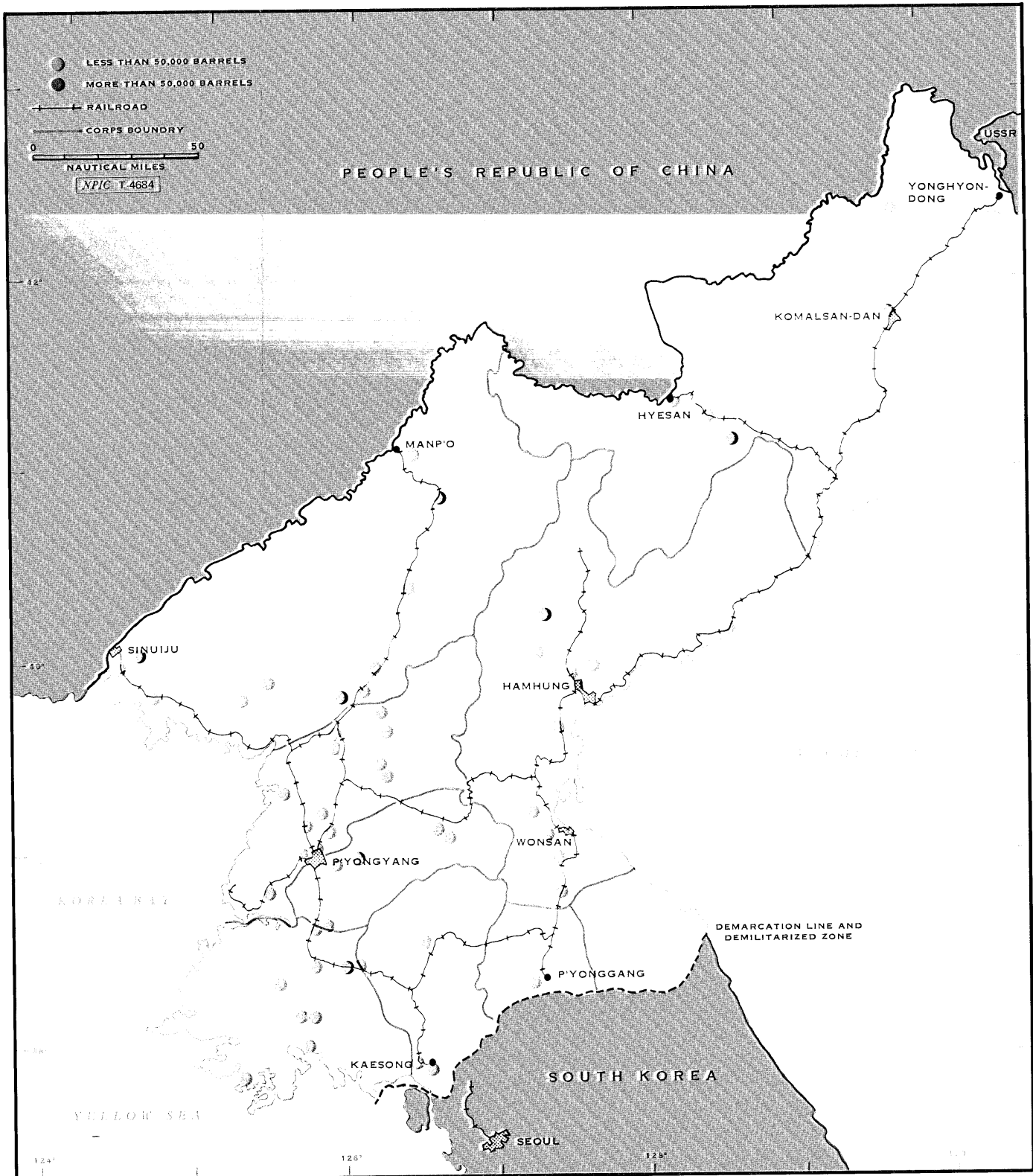


FIGURE 2. LOCATIONS OF REGIONAL-LEVEL POL STORAGE FACILITIES

SECRET

**SECRET**

at industrial facilities may be for nonpetroleum products and chemicals. Because of the scope of this report, the storage capacity of only three major industrial facilities was reviewed (Section VI, Table 1). The largest known industry-related POL

storage facility in North Korea is at Songnim Petroleum Production Storage Northwest, which has a storage capacity of 498,660 barrels (Figure 12). The total capacity of the three facilities is estimated to be a minimum of 626,190 barrels.

25X1

**Page Denied**

Next 3 Page(s) In Document Denied



**SECRET**

25X1

**Table 1.**  
**POL Storage Facilities, North Korea**

*This table in its entirety is classified SECRET/WNINTEL*

**SECTION I. PRODUCTION FACILITIES**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Unggi Pet Rfy	9	Vertical			145,000	1,305,000	
	24	Vertical			32,000	768,000	
42-18-31N 130-20-50E	6	Vertical			20,000	120,000	
	36	Vertical			5,000	180,000	
	55	Vertical			3,600	198,000	
	8	Vertical			1,400	11,200	
<b>Subtotal</b>						<b>2,582,200*</b>	<b>1,500,000**</b>
Yonghyon Dong Pet Prods	10	Vertical			3,600	36,000	
Stor 1	5	Vertical			1,400	7,000	
42-24-22N 130-37-09E							
<b>Subtotal</b>						<b>43,000</b>	<b>46,000</b>
Yonghyon Dong Pet Prods	4	Vertical			32,000	128,000	
Stor 2							
42-24-13N 130-37-26E							
<b>Subtotal</b>						<b>128,000</b>	<b>126,900</b>
Yonghyon Dong Pet Prods	5	Vertical			8,000	40,000	
Stor 3	10	Vertical			5,000	50,000	
42-24-24N 130-36-48E							
<b>Subtotal</b>						<b>90,000</b>	<b>123,750</b>

\*This is the total storage capacity without differentiating between crude and finished product storage.

\*\*This includes an estimated 1,000,000 barrels for crude oil and a theoretical finished product capacity of 500,000 barrels.

25X1  
25X1

25X1

25X1

25X1

**SECRET**

IAR-0069/82

Z-14599/82

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Paengma Pet Rfy Ponghwa	4	Vertical			45,000	180,000		25X1
	10	Vertical			26,000	260,000		25X1
40-04-20N 124-33-05E	11	Vertical			20,000	220,000		
	3	Vertical			10,000	30,000		
	6	Vertical			3,600	21,600		
	6	Vertical			1,400	8,400		
<b>Subtotal</b>						<b>720,000</b>	<b>Ucon</b>	
Paengma Ri Pet Prod	2	Vertical			194,000	388,000		
Stor SE	4	Vertical			145,000	580,000		
	2	Vertical			70,000	140,000		25X1
40-03-40N 124-34-45E	7	Vertical			3,600	25,200		
	9	Vertical			1,400	12,600		
	16	Horizontal			420	6,720		
<b>Subtotal</b>						<b>1,152,520</b>	<b>1,300,000</b>	
Aoji Ri Chem Plnt A Syn	6	Vertical			30,000	180,000		
Pet Rfy		floating top						
	5	Vertical			8,000	40,000		25X1
42-31-09N 130-21-02E	2	Vertical			5,000	10,000		
		floating top						
	4	Vertical			1,400	5,600		
<b>Subtotal</b>						<b>235,600</b>	<b>Unk</b>	
<b>Total for Section I</b>						<b>4,951,320</b>	<b>3,096,650</b>	

**SECTION II. NATIONAL-LEVEL POL STORAGE FACILITIES**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Najin Pet Prod Stor	3	Vertical			46,000	138,000		25X1
		buried			(Estimated)			25X1
42-13-12N 130-16-34E	2	Vertical			3,600	7,200		
<b>Subtotal</b>						<b>145,200</b>	<b>145,000</b>	
Huichon Pet Prod Storage	2 bunkers	Horizontal			420	21,000		
North	w/25 tanks	covered						
40-21-25N 126-18-25E	3 bunkers	Horizontal			420	25,200		25X1
	w/20 tanks	covered						
	9 bunkers	Horizontal			420	68,040		
	w/18 tanks	covered						
	4 bunkers	Horizontal			420	25,200		
	w/15 tanks	covered						
	11 bunkers	Horizontal			420	46,200		
	w/10 tanks	covered						
	1 bunker	Horizontal			420	3,360		
	w/8 tanks	covered						
<b>Subtotal</b>						<b>189,000</b>	<b>212,000</b>	
Kusong Pet Prod Stor	3 bunkers	Horizontal			420	31,500		
	w/25 tanks	covered						
40-02-03N 125-11-59E	4 bunkers	Horizontal			420	33,600		25X1
	w/20 tanks	covered						
	5 bunkers	Horizontal			420	31,500		
	w/15 tanks	covered						
	3 bunkers	Horizontal			420	15,120		
	w/12 tanks	covered						
	17 bunkers	Horizontal			420	85,680		
	w/12 tanks	covered						
	1 bunker	Horizontal			420	2,520		
	w/6 tanks	covered						
	1 bunker	Horizontal			420	1,680		
	w/4 tanks	covered						
<b>Subtotal</b>						<b>201,600</b>	<b>189,000</b>	

SECRET

Table 1. (cont'd)

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Tokchon Pet Prod Stor PUG [redacted] 39-48-24N 126-18-09E	1 bunker w/25 tanks covered	Horizontal			420	10,500		25X1
	4 bunkers w/20 tanks each	Horizontal covered			420	33,600		25X1
	1 bunker w/16 tanks covered	Horizontal covered			420	6,720		
	10 bunkers w/15 tanks each	Horizontal covered			420	63,000		.
	9 bunkers w/12 tanks each	Horizontal covered			420	45,360		.
	7 bunkers w/10 tanks each	Horizontal covered			420	29,400		
<b>Subtotal</b>						<b>188,580</b>	<b>189,000</b>	
Yongha Ri Pet Prods Stor PUG [redacted] 41-16-20N 128-38-02N	5 bunkers w/25 tanks each	Horizontal covered			420	52,500		25X1
	16 bunkers w/20 tanks each	Horizontal covered			420	134,400		
	7 bunkers w/15 tanks each	Horizontal covered			420	44,100		
<b>Subtotal</b>						<b>231,000</b>	<b>94,000</b>	
Pukchag Ni Pet Prods Stor SE PUG [redacted] 39-35-06N 126-21-38E	1 bunker w/25 tanks covered	Horizontal covered			420	10,500		25X1
	1 bunker w/17 tanks covered	Horizontal covered			420	7,140		
	3 bunkers w/20 tanks each	Horizontal covered			420	25,200		.
	8 bunkers w/15 tanks each	Horizontal covered			420	50,400		.
	11 bunkers w/10 tanks each	Horizontal covered			420	46,200		
	1 bunker w/5 tanks covered	Horizontal covered			420	2,100		
<b>Subtotal</b>						<b>141,540</b>	<b>133,000</b>	
Sain Ni Pet Prod Stor [redacted] 39-17-19N 125-53-53E						375,000		25X1
<b>Subtotal</b>						<b>375,000</b>	<b>375,000</b>	
Samho-dong POL Stor Area NW [redacted] 39-57-45N 127-49-58E	5 bunkers w/6 tanks each	Vertical partially buried			5,000	150,000		25X1
<b>Subtotal</b>						<b>150,000</b>	<b>Not assessed</b>	
Hwangju-up Pet Prods Stor PUG [redacted] 38-41-45N 125-49-33E	4 bunkers w/6 tanks each	Vertical partially buried			5,000	120,000		25X1
<b>Subtotal</b>						<b>120,000</b>	<b>Not assessed</b>	
Sindong-ni POL Stor Area W [redacted] 39-09-00N 127-20-10E	4 bunkers w/6 tanks each	Vertical partially buried			5,000	120,000		25X1
<b>Subtotal</b>						<b>120,000</b>	<b>Not assessed</b>	
Kwail POL Storage Area E [redacted] 38-26-30N 125-04-50E	7 bunkers w/6 tanks each	Vertical partially buried			5,000	210,000		25X1
	2 bunkers w/10 tanks each	Horizontal covered			420	8,400		
	1 bunker w/7 tanks uncovered	Horizontal uncovered			420	2,940		
<b>Subtotal</b>						<b>221,340</b>	<b>Not assessed</b>	

\* This site has a large amount of underground storage which precludes an accurate accounting of storage capacity. The 1975 estimated capacity of 375,000 barrels is reasonable.

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Chiha Ri Pet Prods Stor South [redacted] 38-34-11N 126-44-06E	1 bunker w/5 tanks	Vertical partially buried			5,000	25,000		25X1
	1 bunker w/4 tanks	Vertical partially buried			5,000	20,000		25X1
	1 bunker w/3 tanks	Vertical buried			5,000	15,000		
	5 bunkers w/2 tanks each	Vertical partially covered			5,000	50,000		
	1 bunker w/15 tanks	Horizontal			420	6,300		
<b>Subtotal</b>						<b>116,300</b>	<b>Not assessed</b>	
Chuyon Ni Pet Prod Stor [redacted] 38-36-39N 126-35-10E	2 bunkers w/3 tanks each	Vertical partially buried			5,000	30,000		25X1
	3 bunkers w/2 tanks each	Vertical partially buried			5,000	30,000		
<b>Subtotal</b>						<b>60,000</b>	<b>Not assessed</b>	
Munjang Ni Pet Prods Stor [redacted] 39-45-20N 124-59-54E	10	Vertical buried			8,000	80,000		25X1
<b>Subtotal</b>						<b>80,000</b>	<b>Not assessed</b>	
Chondong POL Stor Area NE [redacted] 39-39-09N 125-55-30E	9 5 48	Vertical Vertical Horizontal			5,000 3,600 420	45,000 18,000 20,160		25X1
<b>Subtotal</b>						<b>83,160</b>	<b>Not assessed</b>	
Munchon Up Pet Prod Stor N [redacted] 39-18-15N 127-22-22E	4 bunkers w/3 tanks each	Vertical buried			8,000	96,000		25X1
	1 bunker w/6 tanks and 2 tanks	Horizontal covered			420	2,520		
<b>Subtotal</b>					210	420	<b>Not assessed</b>	
Yonggang-Up POL Stor Area WSW [redacted] 38-50-28N 125-19-44E	2 bunkers w/6 tanks each	Vertical buried			5,000	60,000		25X1
<b>Subtotal</b>						<b>60,000</b>	<b>Not assessed</b>	
<b>Total for Section II</b>						<b>2,581,660</b>	<b>1,337,000</b>	

**SECTION III. REGIONAL-LEVEL POL STORAGE FACILITIES**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Chongjin Pet Prod Stor PUG N [redacted] 41-49-49N 129-46-41E	—	—			—	55,000		25X1
<b>Subtotal</b>						<b>55,000</b>	<b>55,000</b>	25X1
Hyesan Pet Prod Stor East [redacted] 41-25-29N 128-15-14E	9 bunkers w/10 tanks each	Horizontal covered			420	37,800		25X1
<b>Subtotal</b>						<b>37,800</b>	<b>22,000</b>	
Yongha Ri Sup Dep A Pet Prod Stor [redacted] 41-13-15N 128-42-44E	3 bunkers w/25 tanks each	Horizontal covered			420	31,500		25X1
	3 bunkers w/20 tanks each	Horizontal covered			420	25,200		
	1 bunker w/15 tanks	Horizontal covered			420	6,300		
<b>Subtotal</b>						<b>63,000</b>	<b>61,000</b>	

\*This site has a large amount of underground storage and numerous cradle units which preclude an accurate accounting of storage capacity. The 1975 estimated capacity of 55,000 barrels is reasonable.

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Changjin Up Pet Prod Stor S [redacted] 40-17-13N 127-18-55E <b>Subtotal</b>	12 bunkers w/10 tanks each	Horizontal covered			420	50,400	51,660	25X1
Hamhung Pet Prod Stor [redacted] 39-56-51N 127-33-39E <b>Subtotal</b>	5 bunkers w/20 tanks each 5 bunkers w/10 tanks each	Horizontal covered Horizontal covered			420 420	42,000 21,000	69,600	25X1
Taecheon Pet Prod Stor [redacted] 39-57-19N 125-27-37E <b>Subtotal</b>	10 bunkers w/10 tanks each	Horizontal covered			420	42,000	21,000	25X1
Kujang Up Pet Prds Stor PUG [redacted] 39-51-37N 125-57-48E <b>Subtotal</b>	4 bunkers w/20 tanks each 6 bunkers w/10 tanks each	Horizontal covered Horizontal covered			420 420	33,600 25,200	63,420	25X1
Changa Ri Pet Prds Stor PUG [redacted] 39-48-34N 126-13-50E <b>Subtotal</b>	8 bunkers w/10 tanks each	Horizontal covered			420	33,600	24,780	25X1
Chaedong Nodongtuga Pet Prod Stor PUG [redacted] 39-32-52N 126-16-36E <b>Subtotal</b>	1 bunker w/7 tanks 8 bunkers w/6 tanks each 1 bunker w/5 tanks	Horizontal covered Horizontal covered Horizontal covered			420 420 420	2,940 20,160 2,100	28,923	25X1
Hwang Chon Pet Prods Stor [redacted] 39-11-41N 125-52-11E <b>Subtotal</b>	1 bunker w/10 tanks	Horizontal covered			420	4,200	30,600	25X1
Yangdok Pet Prods Stor SE [redacted] 39-10-09N 126-40-15E <b>Subtotal</b>	10 bunkers w/10 tanks each	Horizontal covered			420	42,000	41,000	25X1
Sungho Dong Pet Prod Stor PUG NE [redacted] 39-02-10N 126-04-52E <b>Subtotal</b>	15 bunkers w/10 tanks each	Horizontal covered			420	63,000	32,000	25X1
Kaesong Pet Prod Stor PUG W [redacted] 37-58-13N 126-28-43E <b>Subtotal</b>	3 bunkers w/10 tanks each	Horizontal covered			420	12,600	16,800	25X1
Pyongyang Pet Prod Stor PUG [redacted] 38-24-16N 127-17-46E <b>Subtotal</b>	3 bunkers w/10 tanks each	Horizontal covered			420	12,600	10,000	25X1
Tonggi Dong Pet Prod Stor [redacted] 38-03-32N 125-47-00E <b>Subtotal</b>	20	Horizontal aboveground			420	8,400	11,430	25X1
Ongjin Pet Prods Str South [redacted] 37-53-55N 125-20-13E <b>Subtotal</b>	5 2 bunkers w/10 tanks each	Vertical Horizontal covered			5,000 420	25,000 8,400		25X1

**SECRET**

SECRET

Table 1. (cont'd)

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Wonsan Pet Prds Stor NW PUG [redacted] 39-09-51N 127-23-09E	6 bunkers w/10 tanks each	Horizontal covered			420	25,200		25X1
<b>Subtotal</b>						25,200	25,000	25X1
Pongdu Ri Pet Prod Stor PUG [redacted] 41-19-01N 128-31-51E	10 bunkers w/10 tanks each	Horizontal covered			420	42,000		25X1
<b>Subtotal</b>						42,000	Not assessed	25X1
Munchon Up Pet Prds Stor PUG [redacted] 39-18-11N 127-15-01E	10 bunkers w/10 tanks each	Horizontal covered			420	42,000		25X1
<b>Subtotal</b>						42,000	Not assessed	25X1
Oun Ni Pet Prod Stor SW [redacted] 39-03-08N 127-25-45E	10 bunkers w/10 tanks each	Horizontal covered			420	42,000		25X1
<b>Subtotal</b>						42,000	Not assessed	25X1
Hyangsan Pet Prod Stor [redacted] 40-02-21N 126-10-20E	1 bunker w/10 tanks	Horizontal covered			420	4,200		25X1
<b>Subtotal</b>						4,200	Not assessed	25X1
Paengma Ri Pet Prod Stor PUG [redacted] 40-05-54N 124-34-39E	14 bunkers w/10 tanks each	Horizontal covered			420	58,800		25X1
<b>Subtotal</b>						58,800	Not assessed	25X1
Manpo-up Agri Stor Area [redacted] 41-09-25N 126-24-30E	1 bunker w/13 tanks	Horizontal covered			420	5,460		25X1
<b>Subtotal</b>						5,460	Not assessed	25X1
Chungsan Ni Pet Prod Stor PUG [redacted] 40-13-30N 128-37-18E	6 bunkers w/10 tanks each	Horizontal covered			420	25,200		25X1
<b>Subtotal</b>						25,200	Not assessed	25X1
Kanggye Pet Prods Stor South [redacted] 40-54-40N 126-38-00E	1 bunker w/22 tanks	Horizontal covered			420	9,240		25X1
	1 bunker w/17 tanks	Horizontal covered			420	7,140		25X1
	3 bunkers w/15 tanks each	Horizontal covered			420	18,900		25X1
	2 bunkers w/9 tanks each	Horizontal covered			420	7,560		25X1
	3 bunkers w/6 tanks each	Horizontal covered			420	7,560		25X1
<b>Subtotal</b>						50,400	Not assessed	25X1
Koin Nodongjagu Pet Prod Stor [redacted] 40-29-39N 126-24-52E	2	Vertical			5,000	10,000		25X1
	1 bunker w/14 tanks	Horizontal covered			420	5,880		25X1
	1 bunker w/13 tanks	Horizontal covered			420	5,460		25X1
	2 bunkers w/12 tanks each	Horizontal covered			420	10,080		25X1
	2 bunkers w/10 tanks each	Horizontal covered			420	8,400		25X1
	5 tanks	Horizontal covered			140	700		25X1
<b>Subtotal</b>						40,520	Not assessed	25X1
Sangtong Ni Pet Prods Stor West [redacted] 40-05-30N 127-18-50E	2 bunkers w/10 tanks each	Horizontal covered			420	8,400		25X1
	2 bunkers w/5 tanks each	Horizontal			420	4,200		25X1
<b>Subtotal</b>						12,600	Not assessed	25X1

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Sinuiju Pet Prods Stor PUG [redacted] 40-02-36N 124-26-23E	2 1 bunker w/12 tanks 3 bunkers w/10 tanks each 1 bunker w/9 tanks 1 bunker w/8 tanks 3 1 1	Vertical Horizontal covered Horizontal covered Horizontal covered Horizontal covered Horizontal aboveground Horizontal aboveground Horizontal aboveground			3,600 420 420 420 420 420 420 315 210	7,200 5,040 12,600 3,780 3,360 1,260 315 210	25X1 25X1
<b>Subtotal</b>						<b>33,765</b>	<b>Not assessed</b>
Toksangwan Pet Prods Stor [redacted] 40-01-15N 127-40-31E	7 bunkers w/10 tanks each 1 bunker w/5 tanks	Horizontal covered Horizontal covered			420 420	29,400 2,100	25X1
<b>Subtotal</b>						<b>31,500</b>	<b>Not assessed</b>
Hoeryong Pet Prods Stor SE PUG [redacted] 42-23-55N 129-47-50E	7 bunkers w/10 tanks each	Horizontal covered			420	29,400	25X1
<b>Subtotal</b>						<b>29,400</b>	<b>Not assessed</b>
Kuyon Ni Pet Prods Stor N [redacted] 38-29-10N 126-01-05E	11 bunkers w/15 tanks each	Horizontal covered			420	69,300	25X1
<b>Subtotal</b>						<b>69,300</b>	<b>Not assessed</b>
Kuyon Ni Pet Prods Stor NE [redacted] 38-28-44N 126-04-02E	2 bunkers w/12 tanks each	Horizontal covered			420	10,080	25X1
<b>Subtotal</b>						<b>10,080</b>	<b>Not assessed</b>
Sukchon Pet Prods Stor [redacted] 39-24-40N 125-36-50E	2 bunkers w/15 tanks each 1 bunker w/10 tanks	Horizontal covered Horizontal			420 420	12,600 4,200	25X1
<b>Subtotal</b>						<b>16,800</b>	<b>Not assessed</b>
Pukchang Ni Pet Prods Stor [redacted] 39-29-42N 126-17-15E	6 bunkers w/6 tanks each	Horizontal covered			420	15,120	25X1
<b>Subtotal</b>						<b>15,120</b>	<b>Not assessed</b>
Kosan Pet Prod Stor S [redacted] 38-51-06N 127-25-39E	1 bunker w/6 tanks 1 bunker w/5 tanks 1 3 3 4	Horizontal covered Horizontal covered Horizontal covered Horizontal aboveground Horizontal aboveground Horizontal aboveground			420 420 420 420 315 210	2,520 2,100 420 1,260 945 840	25X1
<b>Subtotal</b>						<b>8,085</b>	<b>Not assessed</b>
Kangso Up Pet Prod Stor PUG [redacted] 38-52-51N 125-30-14E	6 3 bunkers w/10 tanks each 1 bunker w/6 tanks	Vertical Horizontal covered Horizontal covered			5,000 420 420	30,000 12,600 2,520	25X1
<b>Subtotal</b>						<b>45,120</b>	<b>Not assessed</b>
Panjong Ni Pet Prods Str [redacted] 38-20-48N 127-27-40E	1 bunker w/10 tanks 1 bunker w/9 tanks 1 bunker w/7 tanks	Horizontal covered Horizontal covered Horizontal covered			420 420 420	4,200 3,780 2,940	25X1
<b>Subtotal</b>						<b>10,920</b>	<b>Not assessed</b>

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Sinwon Ni Prob Pet Prods Stor Caves [redacted]	1 bunker w/12 tanks	Horizontal covered			420	5,040	
38-13-05N 125-42-40E	1 bunker w/4 tanks	Horizontal covered			420	1,680	
<b>Subtotal</b>						<b>6,720</b>	<b>Not assessed</b>
Pyongyang Pet Prods Stor NNE PUG [redacted]	3 bunkers w/10 tanks each	Horizontal covered			420	12,600	
39-05-48N 125-43-38E	9 bunkers w/10 tanks each	Horizontal covered			210	18,900	
	2 bunkers w/6 tanks each	Horizontal covered			210	2,520	
	11	Horizontal in the open			420	4,620	
	1	Horizontal in the open			210	210	
<b>Subtotal</b>						<b>38,850</b>	<b>Not assessed</b>
Pyongyang Pet Prods Str [redacted]	18	Horizontal in the open			420	7,560	
39-06-35N 125-47-30E	3 bunkers w/4 tanks each	Horizontal covered			210	2,520	
	1 bunker w/3 tanks	Horizontal			210	630	
<b>Subtotal</b>						<b>10,710</b>	<b>Not assessed</b>
Hwangju-up Pet Prods Stor PUG [redacted]							
38-42-45N 125-49-33E	1 bunker w/6 tanks	Horizontal covered			420	2,520	
Area A at YC 494870	5	Horizontal in the open			420	2,100	
<b>Subtotal</b>						<b>4,620</b>	<b>Not assessed</b>
Hwangju-up Pet Prods Stor PUG [redacted]							
38-41-45N 125-49-33E	3 bunkers w/12 tanks each	Horizontal covered			420	15,120	
Area B at YC 435866							
<b>Subtotal</b>						<b>15,120</b>	<b>Not assessed</b>
Hamhung Pet Prods Stor North [redacted]	2 bunkers w/12 tanks each	Horizontal covered			420	10,080	
39-59-41N 127-32-28E	1 bunker w/9 tanks	Horizontal covered			420	3,780	
<b>Subtotal</b>						<b>13,860</b>	<b>Not assessed</b>
Sondong Ni Pet Prods Stor [redacted]	1 bunker w/10 tanks	Horizontal covered			420	4,200	
39-43-20N 127-26-50E							
<b>Subtotal</b>						<b>4,200</b>	<b>Not assessed</b>
Sariwon Pet Prods Stor [redacted]	3 bunkers w/10 tanks each	Horizontal covered			420	12,600	
38-29-31N 125-48-14N	15	Horizontal aboveground			420	6,300	
<b>Subtotal</b>						<b>18,900</b>	<b>Not assessed</b>
Sahgpan Ni Pet Prod Stor [redacted]	1 bunker w/15 tanks	Horizontal covered			420	6,300	
39-51-07N 125-15-58E	1 bunker w/4 tanks	Horizontal covered			420	1,680	
<b>Subtotal</b>						<b>7,980</b>	<b>Not assessed</b>
Sunan Up Pet Prods Stor [redacted]	3	Vertical covered			8,000	24,000	
39-12-01N 125-46-00E	1 bunker w/6 tanks	Horizontal covered			420	2,520	
	1 bunker w/6 tanks	Horizontal covered			315	1,890	
<b>Subtotal</b>						<b>28,410</b>	<b>Not assessed</b>

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

25X1

**SECRET**



**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Kaesong Pet Prods Stor SE [redacted] 37-57-10N 126-34-36E	1 bunker w/10 tanks	Horizontal covered			420	4,200		25X1
<b>Subtotal</b>						<b>4,200</b>	<b>Not assessed</b>	
Yangdok Pet Prod Stor East [redacted] 39-12-37N 126-43-21E	3 bunkers w/24 tanks each	Horizontal covered			420	30,240		25X1
	1 bunker w/13 tanks	Horizontal covered			420	5,460		
	1 bunker w/12 tanks	Horizontal covered			420	5,040		
	1 bunker w/10 tanks	Horizontal covered			420	4,200		
	1 bunker w/8 tanks	Horizontal covered			420	3,360		
<b>Subtotal</b>						<b>48,300</b>	<b>Not assessed</b>	
Oryongpo Pet Prods Stor [redacted] 39-54-00N 126-03-40E	1 bunker w/10 tanks	Horizontal covered			420	4,200		25X1
	1 bunker w/8 tanks	Horizontal covered			420	3,360		
<b>Subtotal</b>						<b>7,560</b>	<b>Not assessed</b>	
Singye Pet Prods Stor Caves [redacted] 38-31-30N 126-32-10E	3 bunkers w/10 tanks each	Horizontal covered			420	12,800		25X1
<b>Subtotal</b>						<b>12,600</b>	<b>Not assessed</b>	
Sain Ni Pet Prods Stor West [redacted] 39-15-54N 125-49-33E	14 bunkers w/5 tanks each	Horizontal covered			420	29,400		25X1
<b>Subtotal</b>						<b>29,400</b>	<b>Not assessed</b>	
Kaechon Pet Prod Stor PUG [redacted] 39-41-05N 125-54-38E	2 bunkers w/10 tanks each	Horizontal covered			420	8,400		25X1
	13	Horizontal aboveground			105	1,365		
<b>Subtotal</b>						<b>9,765</b>	<b>Not assessed</b>	
Koman-dong POL Stor Area E [redacted] 39-29-19N 125-52-22E	2	Vertical			8,000	16,000		
	2	Vertical			5,000	10,000		25X1
	18	Horizontal aboveground			420	7,560		
<b>Subtotal</b>						<b>33,560</b>	<b>Not assessed</b>	
Samsa Dong POL Stor Area SW [redacted] 39-02-30N 126-55-45E	1 bunker w/6 tanks	Horizontal covered			420	2,520		
	2 bunkers w/6 tanks each	Horizontal covered			210	2,520		25X1
	25	Horizontal in the open			210	5,250		
<b>Subtotal</b>						<b>10,290</b>	<b>Not assessed</b>	
Sinwon POL Stor Area SE [redacted] 38-12-55N 125-47-35E	1	Vertical			8,000	8,000		
	2	Vertical			5,000	10,000		25X1
	1	Vertical			3,600	3,600		
<b>Subtotal</b>						<b>21,600</b>	<b>Not assessed</b>	
Tongnim POL Stor Area [redacted] 39-51-50N 124-43-18E	2 bunkers w/10 tanks each	Horizontal covered			420	8,400		25X1
<b>Subtotal</b>						<b>8,400</b>	<b>Not assessed</b>	
Tokchon POL Stor PUG W [redacted] 39-45-04N 126-15-27E	4 bunkers w/10 tanks each	Horizontal covered			420	16,800		25X1
<b>Subtotal</b>						<b>16,800</b>	<b>Not assessed</b>	
<b>Total for Section III</b>						<b>1,575,315</b>	<b>595,213</b>	

**SECRET**

IAR-0069/82

**SECRET****Table 1. (cont'd) SECTION IV. NAVAL POL STORAGE FACILITIES**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Najin Port Facilities	1	Vertical			3,600	3,600		25X1
	2 bunkers w/5 tanks each	Horizontal covered			420	4,200		25X1
42-13-30N 130-17-15E	9	Horizontal aboveground			420	3,780		
	4	Horizontal aboveground			315	1,260		
	3	Horizontal aboveground			210	630		
<b>Subtotal</b>						<b>13,470</b>	<b>Not assessed</b>	
Chongjin Pet Prod Stor 1	1	Vertical			5,000	5,000		
	1	Vertical			3,600	3,600		
	2	Vertical			1,400	2,800		25X1
41-46-07N 129-46-52E	3	Horizontal aboveground			420	1,260		
<b>Subtotal</b>						<b>12,660</b>	<b>Not assessed</b>	
Chongjin Shipyard								25X1
Area A	1	Vertical			5,000	5,000		
41-46-15N 129-47-50E								
Area B	2	Vertical			200	400		
41-46-15N 129-47-30E	2	Horizontal aboveground			420	840		
	26	Horizontal aboveground small			50	1,300		
	7	Horizontal aboveground			150	1,050		
	6	Horizontal aboveground			100	600		
Area C	2	Vertical			1,400	2,800		
41-45-18N 129-46-20E	2	Horizontal aboveground			315	630		
<b>Subtotal</b>						<b>12,620</b>	<b>Not assessed</b>	
Chongjin Pt Fac	1	Vertical			3,600	3,600		25X1
41-46-44N 129-49-38E								
<b>Subtotal</b>						<b>3,600</b>	<b>Not assessed</b>	
Chongjin Pt Facs West	2	Vertical			1,400	2,800		
	3	Horizontal aboveground			315	945		25X1
41-45-36N 129-45-56E								
<b>Subtotal</b>						<b>3,745</b>	<b>Not assessed</b>	
Odaejin-nodongjagu Port Facs	2	Vertical PUG			8,000	16,000		25X1
41-22-57N 129-46-57E								
<b>Subtotal</b>						<b>16,000</b>	<b>Not assessed</b>	
Kimchaek Pet Prod Stor Pt Fac	1	Vertical			20,000	20,000		
	1	Vertical buried			8,000	8,000		25X1
40-39-37N 129-12-47E	1	Vertical			5,000	5,000		
	1	Vertical			1,400	1,400		
	7	Horizontal aboveground			420	2,940		
<b>Subtotal</b>						<b>37,340</b>	<b>35,235</b>	
Yongdae-nodongjagu Port Facilities	11	Horizontal aboveground			420	4,620		
	2	Horizontal aboveground			315	630		25X1
40-28-35N 129-03-40E								
<b>Subtotal</b>						<b>5,250</b>	<b>Not assessed</b>	
Yongamni Chung Chon Pet Prod Stor	1	Vertical			1,400	1,400		
	7	Horizontal aboveground			420	2,940		25X1
40-24-25N 128-54-37E								
<b>Subtotal</b>						<b>4,340</b>	<b>Not assessed</b>	

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Tong Ni Port Fac	1	Vertical			1,400	1,400		25X1
[REDACTED]	4	Horizontal			420	1,680		25X1
40-04-12N 128-16-23E		aboveground						
<b>Subtotal</b>						<b>3,080</b>	<b>Not assessed</b>	
Tojin Port Facility	3	Horizontal			420	1,260		
[REDACTED]		aboveground						25X1
40-04-11N 128-14-25E	1	Horizontal			315	315		
	1	Horizontal			210	210		
<b>Subtotal</b>						<b>1,785</b>	<b>Not assessed</b>	
Hongwon Port Fac A	1	Vertical			1,400	1,400		
Pet Prod Stor	8	Horizontal			420	3,360		
[REDACTED]		aboveground						25X1
40-01-13N 127-58-44E								
<b>Subtotal</b>						<b>4,760</b>	<b>Not assessed</b>	
Sinpo Pet Prod Str								
[REDACTED]								25X1
Area A	1	Vertical			1,400	1,400		
40-01-34N 128-10-24E	3	Horizontal			420	1,260		
		aboveground						
	3	Horizontal			210	630		
		aboveground						
Area B	1	Vertical			20,000	20,000		
40-01-34N 128-10-15E	1	Vertical			1,400	1,400		
	2	Vertical			200	400		
	2	Vertical			50	100		
	1 bunker	Horizontal			420	10,080		
	w/24 tanks	covered						
	7	Horizontal			420	2,940		
		aboveground						
	3	Horizontal			210	630		
		aboveground						
Area C	1	Vertical			8,000	8,000		
40-01-30N 128-10-10E	1	Vertical			3,600	3,600		
	2	Vertical			1,000	2,000		
<b>Subtotal</b>						<b>52,440</b>	<b>64,746</b>	
Mayangdo Pet Prod								
Stor PUG NW								
[REDACTED]								25X1
40-00-05N 128-11-10E								
Area A at DV 298282	2	Vertical			8,000	16,000		
		buried						
Area B at DV 299280	2	Vertical			8,000	16,000		
		buried						
Area C at DV 313271	2	Vertical			8,000	16,000		
		buried						
<b>Subtotal</b>						<b>48,000</b>	<b>Not assessed</b>	
Mayangdori Nvl Repair	1	Vertical			1,400	1,400		
Yard A Stor UG	2	Vertical			200	400		
[REDACTED]								25X1
39-59-42N 128-12-10E								
<b>Subtotal</b>						<b>1,800</b>	<b>Not assessed</b>	
Samhodong Boatyard	6	Horizontal			420	2,520		
[REDACTED]		aboveground						25X1
39-56-18N 127-52-45E	2	Horizontal			210	420		
		aboveground						
<b>Subtotal</b>						<b>2,940</b>	<b>Not assessed</b>	
Yoho Ri Naval Base	12	Horizontal			420	5,040		
[REDACTED]		aboveground						25X1
39-52-26N 127-46-55E								
<b>Subtotal</b>						<b>5,040</b>	<b>Not assessed</b>	
Hungdogi Dong Pet	4	Vertical			1,400	5,600		
Prod Stor	3	Horizontal			420	1,260		
[REDACTED]		aboveground						25X1
39-49-50N 127-38-05E	17	Horizontal			315	5,355		
		aboveground						
<b>Subtotal</b>						<b>12,215</b>	<b>Not assessed</b>	
Munchon Up Nvb and	4	Horizontal			420	1,680		
Shipyards		aboveground						
[REDACTED]	11	Horizontal			315	3,465		25X1
39-18-51N 127-24-05E		aboveground						
	1	Horizontal			210	210		
		aboveground						
<b>Subtotal</b>						<b>5,355</b>	<b>Not assessed</b>	

SECRET

Table 1. (cont'd)

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Wonsan Pet Prod Stor	3	Vertical			1,400	4,200	
Provincial Gov't	38	Horizontal			420	15,960	
		aboveground					25X1
39-09-13N 127-28-01E							
<b>Subtotal</b>						<b>20,160</b>	<b>38,000</b>
Wonsan Shipyard 1	1	Vertical			1,400	1,400	
							25X1
Area A	10	Horizontal			420	4,200	
39-09-12N 127-28-00E		aboveground					
	11	Horizontal			315	3,465	
		aboveground					
	5	Horizontal			210	1,050	
		aboveground					
Area B	1	Vertical			3,600	3,600	
39-09-15N 127-27-54E		Horizontal			420	2,940	
		aboveground					
	6	Horizontal			315	1,890	
		aboveground					
	4	Horizontal			210	840	
		aboveground					
Area C	1	Vertical			3,600	3,600	
39-10-00N 127-26-20E		Horizontal			420	1,260	
		aboveground					
	2	Horizontal			315	630	
		aboveground					
	3	Horizontal			210	630	
		aboveground					
<b>Subtotal</b>						<b>25,505</b>	<b>Not assessed</b>
Nampo PT Facs	2	Vertical			3,600	7,200	
	2	Vertical			1,400	2,800	
38-43-29N 125-24-43E		Horizontal			420	11,760	25X1
		aboveground					
	3	Horizontal			315	945	
		aboveground					
<b>Subtotal</b>						<b>22,705</b>	<b>Not assessed</b>
Nampo Supreme Nav	5	Horizontal			420	2,100	
Hg A Shp Rp Yd		aboveground					25X1
38-43-07N 125-23-04E							
<b>Subtotal</b>						<b>2,100</b>	<b>Not assessed</b>
Cho-do Naval Facility	8	Horizontal			420	3,360	
		aboveground					25X1
38-31-59N 124-52-24E		Horizontal			420	4,200	
	1 bunker	covered					
	w/10 tanks						
<b>Subtotal</b>						<b>7,560</b>	<b>Not assessed</b>
Cho-do Nav Base South	2	Horizontal			420	840	
		aboveground					25X1
38-30-10N 124-51-55E							
<b>Subtotal</b>						<b>840</b>	<b>Not assessed</b>
Pipa Got Naval Base A	4	Horizontal			420	1,680	
Ship Rp Yd		aboveground					25X1
38-35-17N 124-59-17E							
<b>Subtotal</b>						<b>1,680</b>	<b>Not assessed</b>
Haeju Naval Rp Yd	17	Horizontal			420	7,140	
		aboveground					25X1
37-59-45N 125-42-12E		Horizontal			315	1,260	
		aboveground					
<b>Subtotal</b>						<b>8,400</b>	<b>Not assessed</b>
Sagon Ni Pet Prods Stor	2	Vertical			5,000	10,000	
		buried					25X1
37-49-48N 125-20-51E		Horizontal			420	1,680	
	1 bunker	covered					
	w/4 tanks						
	1 bunker	Horizontal			420	420	
	w/1 tank	covered					
	1 bunker	Horizontal			315	315	
	w/1 tank	covered					
<b>Subtotal</b>						<b>12,415</b>	<b>Not assessed</b>
<b>Total for Section IV</b>						<b>347,805</b>	<b>137,981</b>

**SECRET****SECTION V. AIRFIELD POL STORAGE FACILITIES****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)	
			L	W				
Samjiyon Airfield [redacted] 41-54-26N 128-24-35E Area A	1 bunker w/24 tanks	Horizontal covered			420	10,080		25X1
	2 bunkers w/21 tanks each	Horizontal covered			420	17,640		25X1
	5	Horizontal in the open			420	2,100		
	1 bunker w/12 tanks	Horizontal covered			210	2,520		
	14	Horizontal in the open			210	2,940		
Area B	1 bunker w/18 tanks	Horizontal covered			420	7,560		
	1 bunker w/5 tanks	Horizontal covered			420	2,100		
	3	Horizontal covered			210	620		
<b>Subtotal</b>						<b>45,570</b>	<b>1,657</b>	
Orang Airfield [redacted] 41-25-36N 129-39-02E Area A	10	Horizontal covered			420	4,200		25X1
Area B	4 bunkers w/2 tanks each	Horizontal covered			420	1,680		
Area C	6 bunkers w/2 tanks each	Horizontal covered			420	5,040		
<b>Subtotal</b>						<b>10,920</b>	<b>8,044</b>	
Hyosan Airfield [redacted] 41-22-33N 128-12-25E	3	Horizontal covered			420	1,260		25X1
	3	Horizontal aboveground			315	1,575		
	2	Horizontal covered			315	630		
	3	Horizontal covered			210	630		
<b>Subtotal</b>						<b>4,095</b>	<b>789</b>	
Manpo Airfield [redacted] 41-08-14N 126-21-34E	1 bunker w/10 tanks	Horizontal covered			420	4,200		25X1
	1 bunker w/9 tanks	Horizontal covered			420	3,780		
<b>Subtotal</b>						<b>7,980</b>	<b>6,635</b>	
Hwangsuwon Airfield [redacted] 40-40-46N 128-09-09E Area A	1 bunker w/12 tanks	Horizontal covered			420	5,040		25X1
	1 bunker w/5 tanks	Horizontal covered			420	2,100		
	2 bunkers w/4 tanks each	Horizontal covered			420	3,360		
Area B	1 bunker w/8 tanks	Horizontal covered			420	3,360		
	1 bunker w/6 tanks	Horizontal covered			420	2,520		
	1 bunker w/2 tanks	Horizontal covered			420	840		
<b>Subtotal</b>						<b>17,220</b>	<b>10,036</b>	
Changjin Up Airfield [redacted] 40-21-53N 127-15-50E	19	Horizontal aboveground			420	7,980		25X1
	4	Horizontal aboveground			315	1,260		
<b>Subtotal</b>						<b>9,240</b>	<b>3,190</b>	

**SECRET**

Table 1. (cont'd)

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982	1975
			L	W		Estimated Capacity (bbl)	Estimated Capacity (bbl)
Uiju Airfield [redacted] 40-09-07N 124-29-57E							25X11
Area A	1 bunker w/5 tanks	Horizontal covered			420	2,100	
	9	Horizontal aboveground			420	3,780	
Area B	1 bunker w/3 tanks	Horizontal covered			420	1,260	
Area C	1 bunker w/8 tanks	Horizontal covered			420	3,360	
	3 bunkers w/2 tanks each	Horizontal covered			420	2,520	
<b>Subtotal</b>						<b>13,020</b>	<b>7,119</b>
Panghyon Airfield [redacted] 39-55-30N 125-12-35E	1 bunker w/8 tanks	Horizontal covered			420	3,360	
	1 bunker w/5 tanks	Horizontal covered			420	2,100	25X1
<b>Subtotal</b>						<b>5,460</b>	<b>1,496</b>
Taechon Airfield [redacted] 39-54-02N 125-29-28E	3	Horizontal covered			420	1,260	
<b>Subtotal</b>						<b>1,260</b>	<b>771</b>
Toksan Airfield [redacted] 39-59-40N 127-36-53E	1 bunker w/11 tanks	Horizontal covered			420	4,620	
<b>Subtotal</b>						<b>4,620</b>	<b>2,937</b>
Kaechon Airfield [redacted] 39-45-02N 125-54-14E							25X1
Area A	13	Horizontal aboveground			420	5,460	
	4	Horizontal aboveground			315	1,260	
Area B	4	Horizontal open storage			420	1,680	
	1 bunker w/4 tanks	Horizontal covered			315	1,260	
	4 bunkers w/2 tanks each	Horizontal covered			315	2,520	
<b>Subtotal</b>						<b>12,180</b>	<b>7,497</b>
Sondok Airfield [redacted] 39-44-42N 127-28-25E							25X1
Area A	1 bunker w/4 tanks	Horizontal covered			420	1,680	
	4 bunkers w/2 tanks each	Horizontal covered			420	3,360	
Area B	1 bunker w/6 tanks	Horizontal covered			420	2,520	
	7	Horizontal aboveground			420	2,940	
Area C	1 bunker w/12 tanks	Horizontal covered			420	5,040	
	7	Horizontal aboveground			420	2,940	
<b>Subtotal</b>						<b>18,480</b>	<b>9,489</b>
Pukchang Airfield [redacted] 39-30-07N 125-58-01E	1 bunker w/5 tanks	Horizontal covered			420	2,100	
	1 bunker w/2 tanks	Horizontal covered			420	840	25X1
	3	Horizontal aboveground			420	1,260	
	2	Horizontal aboveground			315	630	
<b>Subtotal</b>						<b>4,830</b>	<b>6,819</b>

Table 1. (cont'd)

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982	1975	
			L	W		Estimated Capacity (bbl)	Estimated Capacity (bbl)	
Sunchon Airfield								
<div>39-24-34N 125-53-35E</div>								25X1
Area A	2 bunkers w/3 tanks each	Horizontal covered			420	2,520		25X1
Area B	5 bunkers w/2 tanks each	Horizontal covered			420	4,200		
Subtotal						6,720	2,878	
Sunan Airfield								
<div>39-12-10N 125-40-21E</div>								25X1
Area A	1 bunker w/7 tanks	Horizontal covered			420	2,940		
	10	Horizontal aboveground			420	4,200		
Area B	2 bunkers w/6 tanks each	Horizontal covered			420	5,040		
	3 bunkers w/3 tanks each	Horizontal covered			420	3,780		
	3 bunkers w/2 tanks each	Horizontal covered			420	2,520		
Subtotal						18,480	5,356	
Mirim Airfield								
<div>39-00-50N 125-50-45E</div>								25X1
Subtotal						1,260	2,208	
Wonsan Airfield								
<div>39-09-49N 127-29-12E</div>								25X1
Area A	13	Horizontal aboveground			420	5,460		
Area B	1 bunker w/10 tanks	Horizontal covered			420	4,200		
Area C	7	Horizontal aboveground			420	2,940		
	4	Horizontal aboveground			315	1,260		
Subtotal						13,860	8,269	
Onchon Airfield								
<div>38-54-24N 125-14-04E</div>								25X1
Area A	1 bunker w/6 tanks	Horizontal covered			420	2,520		
	2 bunkers w/4 tanks each	Horizontal covered			420	3,360		
	7	Horizontal aboveground			420	2,940		
Area B	1 bunker w/6 tanks	Horizontal covered			420	2,520		
	1	Horizontal aboveground			420	420		
Subtotal						11,760	5,833	
Hwangju Airfield								
<div>38-39-03N 125-47-29E</div>								25X1
Area A	12	Horizontal aboveground			420	5,040		
Area B	1 bunker w/4 tanks	Horizontal covered			420	1,680		
	7 bunkers w/2 tanks each	Horizontal covered			420	5,880		
Area C	2	Horizontal aboveground			420	840		
Area D	1 bunker w/4 tanks	Horizontal covered			420	1,680		
	8 bunkers w/2 tanks each	Horizontal covered			420	6,720		
Subtotal						21,840	9,035	

**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Koksan Airfield [redacted] 38-41-13N 126-36-21E							25X1
Area A	2 bunkers w/10 tanks each	Horizontal covered			420	8,400	25X1
	1 bunker	Horizontal w/6 tanks			420	2,520	
Area B	5	Horizontal aboveground			420	2,100	
	1	Horizontal aboveground			210	210	
Area C	4	Horizontal aboveground			210	840	
<b>Subtotal</b>						<b>14,070</b>	<b>9,480</b>
Hyon-ni Airfield [redacted] 38-36-39N 127-27-14E	2 bunkers w/11 tanks each	Horizontal covered			420	9,240	25X1
<b>Subtotal</b>						<b>9,240</b>	<b>5,914</b>
Kwail Airfield [redacted] 38-25-23N 125-01-16E							25X1
Area A	8	Horizontal aboveground			420	3,360	
Area B	2 bunkers w/10 tanks each	Horizontal covered			420	8,400	
<b>Subtotal</b>						<b>11,760</b>	<b>4,874</b>
Taetan Airfield [redacted] 38-07-41N 125-14-49E	3 bunkers w/10 tanks each	Horizontal covered			420	12,600	25X1
<b>Subtotal</b>						<b>12,600</b>	<b>4,031</b>
Haeju Airfield [redacted] 38-00-15N 125-46-50E	1 bunker w/9 tanks	Horizontal covered			420	1,890	25X1
<b>Subtotal</b>						<b>1,890</b>	<b>1,129</b>
Nuchon Ni Airfield [redacted] 38-14-10N 126-07-30E	7	Horizontal aboveground			420	2,940	25X1
<b>Subtotal</b>						<b>2,940</b>	<b>Not assessed</b>
Kuum Ni Airfield [redacted] 38-51-45N 127-54-19E	5	Horizontal aboveground			420	2,100	25X1
<b>Subtotal</b>						<b>2,100</b>	<b>Not assessed</b>
Kwaksan Airfield [redacted] 39-43-44N 125-06-45E	1 bunker w/4 tanks	Horizontal covered			420	1,680	25X1
	1 bunker w/2 tanks	Horizontal covered			420	840	
	2 bunkers w/2 tanks each	Horizontal covered			210	840	
<b>Subtotal</b>						<b>3,360</b>	<b>Not assessed</b>
Sonchon Airstrip [redacted] 39-55-01N 124-50-28E	3 bunkers w/3 tanks each	Horizontal covered			210	1,890	25X1
<b>Subtotal</b>						<b>1,890</b>	<b>Not assessed</b>
<b>Total for Section V</b>						<b>288,645</b>	<b>125,486</b>

**SECTION VI. INDUSTRIAL POL STORAGE FACILITIES**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Songnim Pet Prds Str NW [redacted]	1	Vertical			145,000	145,000	25X1
	4	Vertical			70,000	280,000	25X1
38-45-12N 125-35-45E	2	Vertical			32,000	64,000	
	23	Horizontal aboveground			420	9,660	
<b>Subtotal</b>						<b>498,660</b>	<b>419,000</b>



**SECRET****Table 1. (cont'd)**

Name/BE No/Geo Coords	Tanks	Type	Dimensions (m)		Capacity per Tank (bbl)	1982 Estimated Capacity (bbl)	1975 Estimated Capacity (bbl)
			L	W			
Tanchon Pet Prds Stor	5	Vertical			10,000	50,000	
Magnesia Plant	4	Vertical			8,000	32,000	
	1	Vertical			5,000	5,000	
40-25-25N 128-55-02E							
<b>Subtotal</b>						<b>87,000</b>	<b>55,230</b>
Yongwon Ni Pet Prod	2	Vertical			8,000	16,000	
Stor SW	1	Vertical			5,000	5,000	
	21	Horizontal			420	8,820	
39-33-15N 125-50-24E		aboveground					
	14	Horizontal			315	4,410	
		aboveground					
	30	Horizontal			210	6,300	
		aboveground					
<b>Subtotal</b>						<b>40,530</b>	<b>Not assessed</b>
<b>Total for Section VI</b>						<b>626,190</b>	<b>474,230</b>

25X1

25X1

25X1

**REFERENCES****IMAGERY**

(S/WN) All interpretable satellite imagery acquired through [ ] was used in the preparation of this report.

25X1

**DOCUMENT**

1. Dept of the Army. SRD-12-I-S/[ ] *The North Korean Army Logistics System*, Vol 1, Apr 76 (SECRET [ ])

25X1

25X1

\*Extracted information is classified SECRET, [ ]

25X1

(S) Comments and queries regarding this report are welcome. They may be directed to [ ] Asian Forces Division, Imagery Exploitation Group, NPIC, [ ]

25X1

25X1

**Secret**

**Secret**