

RAGLAN MINE: ACTION-ORIENTED SOCIAL RESEARCH PROGRAM

SYNTHESIS OF FINDINGS FOR ALL FIVE COMMUNITIES

JULY 2000





هد ∆م 22, 2000

J647PU674 こくらしてりらい "۶۵۶۵" D>5°-00° CVPP4cC_F94 PU.5CDF4c > ۲۵ کن ۵ 802407L4 DJ.000 CʻcLo ഛപ്രേന്ദ്.

۲ کم ک Γίλος 5Δ°C° ρες σαν με ρεργρανίας 5σ 24.ULD 404.C _م_ر ۱۰۶ م دے۵۰, ۱۰۶۲۶ می، Ь°Р°2156. >6500%. 894.Ce حاك ΔΓΔΓΔ2ης/ΣΑΛ. ΥΣΣΑΘΕ ۵۵٬۲۲۰ کر ってしゅりくっひ C94 SYMYPÜC D>5°~ dal_jc.

٥٩٠٢٥ ـ ١٩٠٥ ـ

200 --

November 22, 2000

Please find enclosed for your information a copy of the report entitled "Raglan Mine: Action-Oriented Social Research Program. Synthesis of Findings For all Five Communities".

This report summarizes the views of the Inuit regarding the impacts of the Raglan Mine Project as expressed in the 5 reports for each of the communities of Salluit, Kangigsujuag, Kangirsuk, Quaqtaq and Puvirnitug. This report also makes recommendations to the various organizations that may be involved one way or another with the Raglan Mine project.

If you need any further information, please do not hesitate to contact me at Makivik in Kuujjuaq.

Robert Lanari

Montreal

Fax (819) 254-8706 Fax (514) 634-3817

Fax (418) 522-2636

RAGLAN MINE: ACTION-ORIENTED SOCIAL RESEARCH PROGRAM

SYNTHESIS OF FINDINGS FOR ALL FIVE COMMUNITIES

JULY 2000

MAKIVIK CORPORATION

Robert Lanari

Simon Smith

TABLE OF CONTENTS

				Page
INT	1			
1.0	IMP.	3		
	1.1	Previ	ous Mining Activities	3
	1.2		ent Mining Operation	3
	1.3			4
	1.4	Envir	ronmental Monitoring	4
	1.5			5
2.0	IMPACTS ON THE ECONOMIC ENVIRONMENT			6
	2.1	Bene	6	
	2.2		6	
	2.3		7	
	2.4	Mine Closure		7
3.0	IMPACTS ON THE SOCIAL ENVIRONMENT			9
	3.1		Community	9
		3.1.1	↔	9
			Youth	9
			Elders	10
		3.1.4	Alcohol and Drugs	10
		3.1.5	Education and Qualifications	10
		3.1.6	Employment in Town	11
			Migration	11
		3.1.8	Inter-Community Relations	12
	3.2		The Mine Site	
		3.2.1	Alcohol	12
		3.2.2	Language	13
		3.2.3	Discrimination	13
		3.2.4	Counselor on Site	13
		3.2.5	Work Schedule	14
		3.2.6	Wages	14
		3.2.7	Job Stability	14
		3.2.8	Job Availability	15
CON	CLUSI	ON & R	ECOMMENDATIONS	16

INTRODUCTION

Makivik, in cooperation with the communities and the Raglan Committee have undertaken a social impact study in the communities of Salluit, Kangiqsujuaq, Kangirsuk, Quaqtaq and Puvirnituq.

This project is designed to be a management and information tool for promoting the harmonious integration of the mining activities into Nunavik for the benefit of the Inuit population. Its overall objectives are: to acquire a knowledge of the present social and economic situation of the communities, to assess on a regular basis the impacts of the project, to multiply the positive effects of the mining activities, to adequately prevent or correct potential or actual negative effects of the project, and to support Inuit efforts concerning economic and social development.

In this first phase of the study, the scoping phase, the goal is to identify community concerns and the perceived positive and negative changes related to the development of the mine. To this end, starting in late-1997, interviews have been conducted with 72 people from Salluit, Kangiqsujuaq, Kangirsuk, Quaqtaq, and Puvirnituq. Forty-eight of these people were interviewed individually, with the remaining 24 participants taking part in one of the four group interviews that were conducted.

To keep the community informed of the evolution of the social impact research project and, more importantly, to identify the concerns as perceived by those interviewed, documents entitled "Action-Oriented Social Research Program: Interviews on Raglan Mine" were produced for the communities starting in May 1998. Shortly thereafter, reports giving preliminary findings and a description of the work in progress were also given to the communities.

Analysis of the interviews was then undertaken and, starting in November 1999, reports to each of the five participating communities and to the Raglan Committee were produced. These reports, titled "Raglan Mine: Action-Oriented Social Research

Program. Scoping Phase: Analysis," described the issues and concerns that had been raised in the community.

This present report attempts to synthesize the five previous reports to the communities, bringing together all of the main issues that were raised in the interviews. It is the end product of a process started in 1997, but the results of the on-going study have been discussed, throughout the process, with the Raglan Committee and community representatives.

. . .

1.0 IMPACTS ON THE PHYSICAL ENVIRONMENT

1.1 PREVIOUS MINING ACTIVITIES

The mining activities undertaken within the region since the 1960's have impacted the physical environment to varying degrees, and may have contaminated some of the local wildlife. The Inuit are therefore very concerned about the environmental impact of any mining activity. For this reason, there is close scrutiny of Falconbridge's efforts to clean up affected areas. While Falconbridge is perceived favourably because of the consultation process with the communities, some Inuit now feel that Falconbridge is not living up to its responsibility of cleaning up the old Asbestos Hill site.

1.2 PRESENT MINING OPERATION

While Falconbridge is perceived as being more environmentally conscientious than previous mining operations, most interviewees agreed that some level of environmental impact on the land is inevitable. In particular, mine tailings are feared to be a contaminant of both the air and water.

Concerns were raised about the wind's ability to transport tailings dust over long distances. Indeed, some interviewees felt that due to prevailing wind patterns, communities further from the mine site may experience more environmental impacts than those that are geographically closer.

Another transportation route for tailing contamination is the water system. The Raglan mine is situated near many rivers and lakes, and interviewees expressed concern over the possibility of local water being contaminated.

However, some interviewees residing in communities far from the Raglan site predicted few local impacts. Yet despite this prediction, the need to remain aware of possible environmental impacts was asserted.

1.3 WILDLIFE

Some people spoke of concerns about the region's wildlife being negatively impacted by the mine. Of particular interest was the caribou population, which is acknowledged to migrate large distances. It is feared that these caribou will eat food close to the mine site, therefore being potentially contaminated, and then travel to the surrounding communities.

This concern of tainted wildlife also extends to inland fish populations, which may experience contamination from mine tailings. Interviewees observed that the mine's potential impacts on the wildlife will only be seen in the future.

1.4 ENVIRONMENTAL MONITORING

There was agreement among many interviewees that environmental monitoring is needed to quantify the physical impacts of the Raglan mine on the surrounding ecosystems. They recognize the difficulties, however, in determining which environmental effects are due to the mine's operation. Despite this difficulty, interviewees want on going monitoring projects to focus on the region's wind patterns, waterways, and animals.

Therefore, environmental monitoring is seen as a necessity to protect the surrounding wildlife. It is also identified as a possible source of employment.

1.5 SHIPPING

A few interviewees in one community expressed concern about the environmental effects of Raglan's shipping. In particular, they were concerned about the ship's impact on sea mammals. The possibility of an oil spill or shipwreck may also represent a threat to the community's physical environment, as ocean currents have the potential to transport materials over large distances. This community also expressed its hope that measures would be taken to smooth the ice after the ship broke it up during its winter passage.

.

2.0 IMPACTS ON THE ECONOMIC ENVIRONMENT

2.1 BENEFITS OF MINE EMPLOYMENT

There is a real increase in economic activity seen in some communities as a result of the mining project. Interviewees agree that villages are benefiting from the opening of the mine site, with incomes filtering from individual mine workers through the whole community. Local retail stores, in particular, are doing more business. Workers are also spending their wages on major purchases such as vehicles (snowmobiles, ATV's, canoes), and this is seen to increase the amount of hunting and fishing done by community members.

However, some community members from villages other than Salluit and Kangiqsujuaq (which have Raglan hiring priority) are not satisfied with the amount of economic activity the mine is generating for them. These people believe that local businesses would experience further benefits if the mine hired more local workers.

Most interviewees are very appreciative of the employment and income that Falconbridge offers. In contrast to past experiences with other mining operations and government, the interviewees commend Falconbridge for its treatment of Inuit. There is a perception that the Inuit of Nunavik are finally getting the good treatment that they deserve.

2.2 BUSINESS

Many interviewees spoke of business ideas and opportunities related to the mine, which they would like to pursue. Several ideas voiced during the interviews included opening a handicraft store at the mine site, offering guiding services to take mine employees fishing, and selling fish to the site for Inuit workers to eat. However, there was a feeling

among the interviewees that information about potential business opportunities was not readily available.

Some interviewees felt that communities were competing against each other for business contracts. This competition is perceived negatively, and there was encouragement for all communities to work together. One person suggested a way to enhance community cooperation: form a joint venture with Makivik in which profits are returned to the participating communities.

Even if the specifics of mine-related businesses differ, interviewees agreed that all business contracts should be given jointly, or exclusively, to the Inuit.

2.3 COMPENSATION MONEY

The vast majority of interviewees, when asked about using compensation money set out in the Raglan Agreement said that it should be used for purposes benefiting the whole community. To this end, each community had specific ideas for the funds, including the building of new structures like a playground, a recreation hall, a swimming pool, and a gymnasium. Other ideas, aimed at keeping youth busy and occupied, were upgrading community arenas and hiring staff to teach music, sign language, and traditional skills.

One community expressed the idea that all communities should get compensation funds based on the level of impact that they experience.

2.4 MINE CLOSURE

The closure of the Raglan mine is a subject that was raised in one of the communities. There is concern in the community over the foreseen costs related to the maintenance of the site's infrastructure after Falconbridge closes the mine. Interviewees also spoke of

their concerns regarding the mine closing earlier than its projected 20-year lifetime, fearing that they will not receive the full amount of compensation money stipulated in the Raglan Agreement.

.

3.0 IMPACTS ON THE SOCIAL ENVIRONMENT

3.1 THE COMMUNITY

3.1.1 FAMILY

Children are often the first ones to feel the effect of family stress. When a parent leaves for mine employment, children may be left in the community unattended. Interviewees in all five communities expressed concern for these neglected children.

Yet even families without children can feel the negative effects of mine employment. Jealousy due to infidelity, or the fear of it, is a major source of stress for some couples. It is also difficult for the person left at home to adjust to long absences of their spouse working at the mine site. It was acknowledged by many interviewees that young couples experience much more difficulty dealing with spousal separation than do older ones.

Because of these potential family problems, relatives of mine workers and applicants have often tried to convince them not to work at the mine site. It was noted also that spousal and family problems are exacerbated —but not created—by mine employment.

3.1.2 YOUTH

The Raglan mine is generally seen as a good opportunity for the youth of the communities to gain employment. Most interviewees agreed that there seemed to be few work options for youth in the communities, and they see the mine as a way for young people to learn valuable life skills, like dedication and discipline, while earning good pay.

Yet one community expressed concerns that its youth did not have the level of education needed to secure jobs at the mine. Another community expressed a concern about Raglan's role in youth straying from more traditional ways of life.

3.1.3 ELDERS

Some older interviewees spoke of feeling left out of the hiring process because they lack the education needed to qualify for employment. Some interviewees also thought that older community members should be given the opportunity to work at the mine.

3.1.4 ALCOHOL AND DRUGS

Interviewees from communities with many mineworkers mentioned that alcohol and drug use has increased noticeably in town since the opening of the mine. They see that increased alcohol consumption, by workers returning from the mine with more money to spend, has had an impact on the whole community. Even communities that had not experienced increased substance abuse recognized that it was a serious problem to watch for in the future.

3.1.5 EDUCATION AND QUALIFICATIONS

Education is seen by many interviewees as the main tool to gain employment and advancement. It is the key to obtaining a good job at the mine, but it also allows workers to find skilled employment once the mine closes.

Because education is so important to the interviewees, some wanted to see a change in the way that their children are educated. They call on the school board for more specialized programs and training to generate students' interest in mining.

Interviewees felt that lack of education and qualifications represents a serious barrier to many Inuit looking to obtain jobs at the mine site. Yet despite the need for qualifications

for some jobs, there was talk among the interviewees of jobs at the site, which don't require much education. Inuit employees lacking high levels of education, it is agreed, should definitely fill these positions.

This being said, a few people mentioned that education is not the only prerequisite for employment at the mine. Indeed, good work skills are also needed, and some people felt that a good work ethic, combined with the ability to learn on the job, is as important as schooling.

3.1.6 EMPLOYMENT IN TOWN

Interviewees from most communities agreed that there were few employment options available in their towns for prospective workers. The Raglan mine is therefore seen as an attractive employment source. However, some interviewees still see mine work as a last option, choosing first to look for employment in their own community. Moreover, a few people stressed the favourability of working in town compared to going away for mine work, even if the wages at the site were better than in town.

3.1.7 MIGRATION

Asked about the likelihood of mine workers leaving the community and Nunavik to find further employment in the mining field, interviewees from all communities had mixed reactions. Some respondents saw this migration as a positive outcome, saying that Raglan workers, after gaining experience at the site, would consider moving to other mining operations. Others disagreed; saying that even experienced workers would find it difficult to move from the community if the mine closed.

3.1.8 INTER-COMMUNITY RELATIONS

The issue of relationships between Nunavik communities was only raised by three of the five communities in this study. Those people interviewed in Salluit and Kangiqsujuaq did not express any concern with the way that other communities were dealing with the Raglan mine. The other three towns (Kangirsuk, Quaqtaq, and Puvirnituq) however, all mentioned some dissatisfaction with the way that communities related to each other and the mine.

One idea that emerged was that these three communities have a feeling of inequity in their level of participation and involvement in Raglan-related issues. They feel that they do not receive much information about these issues, and that other communities experience preferential treatment.

The hiring priority that Salluit and Kangiqsujuaq have for Raglan employment was spoken of negatively. Some interviewees blamed this priority, or lack thereof, as the reason for few community members being interested in mine work; they felt that they would never get jobs at the mine, so they didn't even apply for them.

3.2 THE MINE SITE

3.2.1 ALCOHOL

Interviewees from most communities mentioned that alcohol was readily available to those who worked for Asbestos Hill in the past, and that it had a negative impact on the workers. In contrast, the Raglan mining operation is a drug and alcohol free environment, and this substance ban is highly acclaimed by most interviewees. Yet the issue of alcohol was also linked to training for mine jobs; interviewees were concerned that workers who go away for training courses often get involved in alcohol and drug use.

3.2.2 LANGUAGE

Some interviewees who worked at the mine identified communication difficulties at the mine site due to the various languages spoken there. In fact, the language barrier at the mine site was mentioned as a reason for workers quitting their jobs. Some solutions that were mentioned included the use of translators, on the short term, to solve communication problems between foremen and workers, and the hiring of bilingual (French-Inuttitut) foremen in the future.

3.2.3 DISCRIMINATION

Some mime workers who were interviewed felt that Inuit employees were experiencing discrimination at the mine site. Interviewees felt that the Inuit workers were not being promoted as often as non-Inuit employees were. They expressed the idea that some foremen try to get Inuit workers to quit by giving them unskilled and "boring" jobs. There is some recognition, however, that Inuit workers might get only entry-level unskilled jobs because they lack seniority. One interviewee felt that some discrimination could be curtailed if non-Inuit workers received education about the Inuit people.

3.2.4 COUNSELOR ON SITE

Citing the potential family and social problems that may develop as a result of working at the mine, some interviewees spoke of the need for a qualified counselor or social worker at the mine site. There was a feeling that this counselor could help many employees work through a wide range of issues before they developed into bigger problems. It was also suggested that this counselor be an Inuk.

3.2.5 WORK SCHEDULE

There was recognition from some interviewees that the Raglan work schedule is much better than that used by past mining companies. However, some workers still find the separation from their family and community difficult to accept. Working over holiday periods and not being able to pursue traditional subsistence activities were mentioned as being particularly difficult. Indeed, the shock of adjusting to the work schedule was given as a reason for quitting.

3.2.6 WAGES

Interviewees agreed that incomes at the mine are good, but that more Inuit would be willing to leave their communities for mining work if the wages were better. There was also a call for some financial counseling for mine employees; many workers make more money than ever before, and they may have little idea how to manage it.

3.2.7 JOB STABILITY

There is a perception that younger employees are more prone than older workers to quitting their jobs. Homesickness and personal problems have been cited as possible reasons for quitting. Other reasons given by the interviewees include obtaining a job other than the one expected, the language barrier at the site, and the shock of adjusting to the work schedule.

3.2.8 JOB AVAILABILITY

One of the main topics that emerged related to mining job availability was the perception that, in some communities, few people showed interest in available mine jobs. One reason given for this lack of interest was the fact that people felt they were not receiving enough information about which jobs were available.

.

CONCLUSION & RECOMMENDATIONS

The issues, concerns, and potential impacts presented in this report are views gathered directly from individuals in the five participating communities and are reflected as accurately as possible in the present document. This study does not try in any way to validate or evaluate the issues and concerns raised by the communities. This would be the subject of another research and/or an exercise for the Raglan Committee and the community representatives. It is interesting to note however, that most of the issues identified in the study have in some way or another retained the attention of the regional organizations and the Raglan Committee, and that issues such as language and discrimination on site have recently been the subject of much controversy.

One of the findings that should retain the attention for a better planning of future activities is the on-site impact versus the impacts in the communities. The interviews perceive the on-site impacts as more imminent than those occurring in the communities. This has been recognized by the Raglan Committee and some mine-related actions have already been undertaken, including the revision of the French language program and of the inter-cultural course offered to Inuit and non-Inuit employees, the hiring of a consultant specialized in mine tailings and of a Senior Inuit Relations Office, and the conclusion of an agreement between SMRQ and the community of Salluit regarding the changes brought to the shipping season in Deception Bay. But, for the immediate future, the impacts at the site still require the attention of all those concerned with these issues.

The present study has identified some perceived impacts and benefits of the project and has contributed to find solutions and remedial measures. The monitoring of a project such as Raglan however, has to be done on a continuous basis. Much work remains to be done, and the best solutions can only be found in the concerted efforts of the communities, the workers, the regional organizations, SMRQ and the Raglan Committee. To this end, the following recommendations are made to the various groups. The list does not pretend to

be exhaustive, it tries to address issues and topics that are not, in some way or another, already dealt with by the various stakeholders.

Regional Organizations

In order to keep a better flow of information between the regional organizations, more particularly Makivik, Kativik Regional Government, the Health and Social Services, and SMRQ:

Recommendation 1: the Regional Organizations should invite the Raglan Committee members to attend, from time to time, their Executives and/or Board of Directors Meetings.

Raglan related economic activities are few in the communities, more particularly in the communities than do not have first priority of employment and contracts:

Recommendation 2: in conjunction with SMRQ, the Regional Economic Development Department should seek ways to establish joint ventures with these communities.

Monitoring the environmental and social impacts of a development project is an on-going process. The first phase of this study is now completed. As mentioned, it has identified benefits, potential and probable problems and given indications as to remedial measures. The study also point out that future efforts should concentrate on the situation prevailing at the mine site:

 $\begin{tabular}{ll} \textbf{Recommendation} & 3: Makivik should continue this study with an emphasis on the workers' situation at the mine site. \end{tabular}$

SMRQ and the Raglan Committee

The communities have serious concerns regarding the impacts on the environment and SMRQ is the only one monitoring these impacts. Therefore the role played by the communities in the monitoring of the social and environmental impacts has to be increased:

Recommendation 4: To achieve this goal, an Environmental Liaison Officer who would assure a constant flow of information between SMRQ and the communities, should be hired.

The impacts of the tailings is an issue in itself and in order to better protect the environment and the wildlife:

Recommendation 5: SMRQ should monitor on a continuous basis the wind patterns, the wildlife and the quality of waters.

Over the years there has been frequent spills of oil and concentrate:

Recommendation 6: A more rigid policy should be established to avoid such spills.

The Raglan Agreement gives priority of employment to Salluit and Kangiqsujuaq. One of the consequences of this policy is that the other communities feel 'left out':

Recommendation 7: SMRQ and the Raglan Committee should make sure that the communities are well informed as to the reasons for this policy and, taking into consideration the priority of employment clause, SMRQ should make all efforts to increase employment for Inuit from these other communities.

The Raglan Agreement gives priority of contract to Inuit businesses:

Recommendation 8: SMRQ and the Raglan Committee should make sure that the communities are well informed about potential contracts and,

Recommendation 9: SMRQ should design contracts to render them accessible to Inuit enterprises in the communities and,

Recommendation 10: SMRQ should make sure that the communities have enough lead time to research and develop proposals.

The study has indicated that there are concerns regarding costs of keeping the facilities at the mines site and reduction of compensations if the mine closes earlier than expected:

Recommendation 11: SMRQ and the Raglan Committee to clarify with the communities the consequences of the closing of the mine.

The elders have quite often raised the issue that they are not considered to work at the site and this in spite of many years of experience of working at mining and mining related activities:

Recommendation 12: SMRQ to make all efforts to design employment on site so to integrate elders, unilingual Inuit and those with less formal education.

Having a social worker on site is a matter that comes out clearly in the study.

Recommendation 13: SMRQ and the Raglan Committee to look into the possibility of having a social worker/counselor on site, on a part time or full time basis.

Raglan workers and the communities

In order for the above organizations to better fulfill their mandate, to elaborate proper remedial measures, and to enhance benefits to the workers and communities:

Recommendation 14: the workers should be encouraged to use the grievance procedures in their collective agreement and,

Recommendation 15: the workers and the communities should make sure, through continuous communication with the other stakeholders and more particularly the Raglan Committee, that their general concerns are known and the proper remedial measures are taken.

'6024'Cδ+ /2C'625'L°iC C'-LΔ' _2+' '6024'CDN'-_0'

≺∟△ 2000

∆ےد⁴۲۷

					上入り5つ
∇ Γ ⊲ δο 0 Γ ⊳ ΠοΓα					1
1.0	ላ ኖበ'፫ሊ▷< ለ'ናርΔԺ °ቦ° ၨቃር °ሁ <mark>ተ</mark> ና				3
	1.1	1.1 /\$&4J° D>9°&4%6°C/L4°			3
	1.2	اد ۲۰	ᢄᠵᡶᢛᡆ᠕ᡎ᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘᠘		3
	1.3	ÞΓ4∇ς			4
	1.4	⊲ ୯∩⊳<	6LadcCDaglac		4
	1.5	DL 0,4	₫°		5
2.0	LP<<	(-1640°c		6	
	2.1	₽₽٩°σ	۵۲ ۷ ۱۹۰۹ ۱۹۰۵ ۱۹۰۸ ۱۹۰۸ ۱۹۰۸ ۱۹۰۸ ۱۹۰۸ ۱۹۰۸ ۱۹۰۸ ۱۹۰۸		6
	2.2	۸٬۵۰٬۶			6
	2.3	4P=°CI	>JN' Padya'		7
	2.4	ዾ ፟፟፟፟ጙና°ፚ	۵٬ ۵٬۹۵۲۵ میر		7
3.0	∂ف∆	'D' /55C		8	
	3.1	ا مور ح			8
		3.1.1	Δc $\dot{\nu}$ A_c		8
		3.1.2	>8,ρ∇ _c		8
		3.1.3	$^{2}\Delta$ 3 Ca Δ		9
		3.1.4	د کاره ۱۶۰۴ که که ۱۵۲		9
		3.1.5	∇ C_rQQC $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$ $^{\prime\prime}$		9
		3.1.6	Λ a $^{\prime}$	10	
		3.1.7	۵۲۵۵، ۵٬۵۴۰۵۹		10
		3.1.8	᠑ᠳ᠘᠘ᡧᠳ᠘᠘᠙᠘ᠳ᠘᠘ᡧ		10
	3.2	2 ÞÞ5°σ4° -02°6σ			11
		3.2.1	$\Delta \Gamma \triangleleft \neg_{\rho}$		11
		3.2.2	D6D7c		11

∆ےد∛ارد

		L∧⊃५℃
3.2.3	୮ ዮႻჼ \ ▷Ⴖ゚ჄႻჼ	12
3.2.4	ΔΖΦ'\ΔΡ'\\σ-1° >> ٩°-σ-Φ\-Γ	12
3.2.5	٧٠٦، بار ٧٠٦، ١٩٠٧، ١٩٠٨ ك. ٢٠	12
3.2.6	Papchic	13
3.2.7	Λ a $^{\prime}$ Λ Λ c Λ C Λ D $^{\prime}$ a Λ c	13
3.2.8	Λ α Λ Δ	13
$^{\circ}$ C $^{\circ}$ J $^{\circ}$ J $^{\circ}$	14	
۸ کا ۲۶ کا ۱۲۵ کا ۱۲۵ کا ۱	15	

$VLQ_{P}PL_{P}L_{C}$

 $\mathsf{LP}^q\mathsf{Ad}^c$ $\Delta \mathsf{C}^b$ ' Ah^b $\mathsf{Da} \mathsf{C}^b$ S^b ' C^b S^b ' C^b Ah^c C^b C

 $CL^*a \quad \text{$b > h \land $c > 0$} \quad \text{$d^*P'(Ch - b - b \land b)$} \quad bL d^c \land a^c \rightarrow a^c \rightarrow a^c \land a^$

 $\Delta \Delta C = 0$ PYLNCD Y $\Delta \Delta C = 0$ $\Delta \Delta C = 0$ $\Delta C = 0$

 $\Delta \dot{\omega} \lambda' \dot{\Box} = \lambda \lambda \lambda \dot{\Box} = \lambda \dot{\Box} =$

 $\dot{C}^{b}dd = 2\lambda^{c} \Lambda^{c} \Lambda^{c} + \lambda^{c} \Lambda^{c} \Lambda^{c} \Lambda^{c} \Lambda^{c} \Lambda^{c} + \lambda^{c} \Lambda$

1.0 den'cld '45CD - "1° ic "l4°

1.1 78-45 DY96-496C7L49

 $\Delta \lambda^{\dagger} = \sigma^{5} - \sigma^$

 $b^{\circ} U \rightarrow b \leftarrow d^{\circ} U + c = b^{\circ} U + c =$

Prao, $\Delta \subset \mathcal{V}^c$ and $\Delta \subset \mathcal{V}^c$ and

1.3 ÞL ₹Δ°

 Δc^{n} $\Delta \Delta \Delta^{c}$ Δ^{b} b^{c} CLD^{d} Δ^{c} Δ^{b} D^{b} D^{c} Δ^{c} Δ^{c

1.4 48ND 6 6La 2 CD 0 6 6 5 6

CALA^LL', dend' blad'CDobb (d'àCDobe') ACbadbeal'Nobe'ldobball' AC'A'Dobball' CL'a ACCabdoball' Aadubande.

1.5 PL4.44

2.0 LP' < - 4 U + 4 U

 $PYQ = \Delta_c^c$ Δ_c^c Δ_c^c

Page AC AALPDE adsalled be bede Action in Coraling Page Action of the Coraling Page Action of the Coraling Page Action of the Coral Action of the

2.2 Asaric

 $\Delta \triangle^{-1}$ $\Delta \angle L^{-1}$ $\Delta \triangle L^{-1}$ $\Delta \triangle^{-1}$ Δ^{-1} Δ^{-1}

2.3 $\Delta PC^{C}DID = C^{U}C^{C}$ $\dot{P} = D + \Delta^{C}$

 P_{-} 'σης Q_{-} Q_{-}

2.4 D>5°00' D'00'CDo'U

3.0 △ف٢٥٢ كانم ٢٥٠٥ مانم ١٤٠٥

عال موروم

3.1.1 كدأ ماط د

3.1.2 DA 660°

 $5\Delta^{\circ}c^{\circ}\Gamma$ $D \rightarrow 5^{\circ}c \rightarrow 4\Delta^{\circ}$ $Cd^{\circ}a \leftarrow CD = 5d^{\circ}dS^{\circ}$ $A\Delta^{\circ}A \rightarrow Cd^{\circ}a \leftarrow CD = 5d^{\circ}dS^{\circ}$ $A\Delta^{\circ}A \rightarrow Cd^{\circ}a \leftarrow CD \rightarrow Cd^{\circ}a \rightarrow Cd$

3.1.3 ۵.۵۰δας

 Δ Core of the contraction of t

3.1.4 ΔΓΔ-Δ- ۵°Vi>° م-کΔ-

3.1.5 Acodos dela Atacordes

3.1.6 $\Lambda a d \Delta^c$ $\Delta a c^a \sigma$

3.1.7 4742° 2°N6°C5°

 $\Delta \Lambda_{\alpha} + D = \Delta \Lambda_{\alpha} + D =$

3.1.8 Decoblor bedoubling

3.2 P>5° σ 0° _00 ° 0 σ

3.2.1 ΔΓ٥٥٥

 $ωωε^{c}$ νω σΛω σΛων <math>σ ρ φωρσ σλο σνο <math>σλο σλο σλο <math>σλο σλο σλο <math>σλο σλο σλο <math>σλο σλο <math>σλο σλο σλο <math>σλο σλο <math>σλο σλο σλο <math>σλο σλο σλο <math>σλο σλο σλο σλο <math>σλο σλο σλο σλο <math>σλο σλο σλο

3.2.2 ▷ 6 ▷ / 6

 Λ a $^{\prime}$ $\dot{\Pi}$ a $^{\prime}$ A $^{\prime}$ $\dot{\Pi}$ a $^{\prime}$

3.2.3 FP-55067-5

 $\Delta = \Delta^{\circ}$ Δ° Δ°

3.2.4 A/4"\A>"6" - J >> 5" - J ALT

 Δc^{n} $\Delta \Lambda \lambda \lambda \lambda \lambda'$ $\Delta C \lambda \lambda' b' \sigma S \lambda' C' b <math>S \Delta^{n} \Delta^{n} b' \sigma \Delta^{n} b' \sigma S \lambda' b' \delta S \delta^{n} \delta^{n} b' \delta^{n} \delta$

3.2.6 Pap 5 5 9 C

3.2.7 A - 2 L A C A C A D J - - D C

3.2.8 $\Lambda a d \Delta^c \Delta \Delta^c a \Delta \sigma^c \sigma^c \sigma^c$

$\Delta C^{\dagger} = \Delta C^$

የት የተረመ ር ተረ የተረመ ር ተረ የተረመ ር ተረ የተረመ ጋኒ የ በተረ ነ የተረመር ነው የተመደር ነው የተመደ

 $\Delta \subset \ensuremath{^{\circ}}$

ארריסאררינס, עררי סטטונלף ארא

Λσ4ρηλας Δλίωρνας Δλίωρνας Δλίωρνας Δνίωρνας Δνίσρος Δλίωρνας Δλίωρνας Δορίσνας Δορίσνας Δορίσνας Δορίσνας Δορίσνας Λημηωρίς Διώ Δορίσνας Λημηωρίς Διώ Δορίσνας Λημηωρίς Διώ Δορίσνας Διμηωρίς Διμωρίς Δορίσνας Διμημοιρίς Διμωρίς Δορίσνας Διμημοιρίς Διμωρίς Διαστικός Διαστικός Διαστικός Διαστικός Διμωρίς Αναριανίς Αναριανίς

የተከተከተ የተከተከተከተ የተከተከተ የተከተከተከተ የተከተከተ የተ

 $\dot{C}^{b}d \quad \dot{C}^{b}\Delta \dot{C}^{c} \quad \Delta \leftarrow C_{\Lambda} + D^{c} \dot{C}^{c} \dot{C}^{c} \quad \Delta \dot{C}^{c} \dot{C}^{c} \quad \Delta \dot{C}^{c} \quad \Delta$

paccer ulaum

ዕስሆነላይ ነት ይላም ነ፤ ውዲሮርኒና በቦህበነባና የልዕት የነርጋናላይ የና ናልካርት ሀበርላር የነርጋርነላይ የነጋታ ነት የነውር ነር ዕካላ እየተመረተ ወደ ነጋ ነት የነውር ነር ዕካላ እየተመረተ ነውር ነር ዕካላ እየተመረተ ነር ዕካላ እየተመረተ ነውር ነር ዕካላ እየተመረተ ነር ዕካላ እየተ

 $5\Delta^{\circ}$ C^J' ΔC° U+' LP'<CAU+'A' σ -CD' $\Delta P'$ DLCD' ΔC° O' ΔC° O'

bladed APP APP APP AS COLLET COLLET ACCOLDED A COLLET ACCOLDED ACC

ዻኃበሁናላው 3: LP የልፊና 6 ተረበና ተረላይ የ ርር ተርግ የውንተና ተር Δ የለርታ የነጋበት ለፍተናት የውዕር የተርጉ ምንዮታት ወንተና ተላልተር የ

Daic $\Delta \gamma \dot{L} = \Gamma \gamma b D L \Delta \gamma c$ $\Delta \ell D c$ $\Delta \ell D c$ $\Delta \ell L = \delta c \Delta c d c$ $\Delta \ell D$

ዕ**ነበርነ ዕት ላ፥ ር**ቤ ጋት ዕቀላ ለቱ ዕቴ ጋሀ, ዕኖበ ርሌ ነር ይህ ነር ወደ ነር ይህ ነር

ዻጋበሆናት ህን ታላጭ 5: $d<\Delta$ ዕሪ የተናተመመ መተገ የተመመመው አንር የተመመመው አንር የሚያ የተመመመው አንር የሚያ የተመመመው አንር የሚያ የተመመመው አንር የሚያ የመልግር የሚያ የመመመው አንር የመመመው አንር የሚያ የመመመው አንር የመመመው አንር የመመመው አንር የሚያ የመመመው አንር የመመመመው አንር የመመመው አንር የመመመመው አንር የመመመው አንር የመመመ

CL°der d'sjrle'Dr dab'crle'D' D'rds-r Dyserdcorldo's:

7: d<Δ°d< D>5° σ σ σ σ σ σ σ δ°ι σ

 $5\Delta^{b}$ C^{a} Δ^{b} Δ^{c} $\Delta^{$

 $^{\circ}$ $^{\circ}$

ዕስሆነ ላይ ላይ ላይ የ፡ ዕሩ ይዩት መመር ለው የነት የ፡ ዕጭ የ

 6 DP 5 CD 7

CL'34 $\Gamma\Gamma$ 046 C' Γ 06 C Γ 0507L4 647 Γ 1746 Γ 0546 Γ 16 Γ 0640 Γ 16 Γ 064 Γ 16 Γ 17 Γ 16 Γ 18 Γ 18 Γ 18 Γ 19 Γ 1