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REFERRED NO	C/
SERIAL NO	7195-3

EXHIBIT No. 003-049 1/2
 Date: Oct. 23, 2008
 Witness: Mr. Lambrecht, GOC
 Mainland Reporting
 courtreporters@shawbiz.ca

1180-3 (B Comd)

Headquarters
 Canadian Forces Base Suffield
 Ralston, Alberta
 TOJ 2NO

29 May 1981

Distribution List

ANNUAL NATURAL GAS - OIL DEVELOPMENT
 MEETING AEC - CFB SUFFIELD 20 MAY 81

Reference: A. Memorandum of Agreement dated 28 Oct 75.

Enclosed are the minutes of the last annual meeting for
 your retention and action as necessary.

Original signed by

G.S. Kells
 Colonel
 Base Commander

Enclosure: 1

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- Energy Resources Conservation Board
 - Attention: Mr. L.A. Bellows

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MINUTES OF A MEETING ON1981 NATURAL GAS - OIL DEVELOPMENTBETWEEN ALBERTA ENERGY COMPANY LIMITED ANDCFB SUFFIELD HELD IN THE BOARD ROOM 24TH FLOORSTANDARD LIFE BUILDING, CALGARY, ALBERTAAT 0930 HRS 20 MAY 1981Ralston, Alberta
26 May 1981REPRESENTATIVES

Chairman	Colonel .	GS	Kells	Base Commander CFB Suffield
Members	Mr	G	Morgan	Alberta Energy Company Limited
	Mr	R	Gimby	Alberta Energy Company Limited
	Mr	G	Brown	Alberta Energy Company Limited
	Mr	S	Balog	Alberta Energy Company Limited
	Mr	T	Mysyk	Alberta Energy Company Limited
	Mr	R	Ramsay	Alberta Energy Company Limited
	Mr	R	Williams	Alberta Energy Company Limited
	Mr	H	Barrett	Alberta Energy Company Limited
	Mr	J	Brumley	Archeologist, Ethos Consultants
	Mr	LA	Bellows	SEAC/ERCB
	Mr	D	Harrington	SEAC/Alberta Environment
	Dr	R	Edwards	SEAC/Environment Canada
	Colonel	TG	Forth	NDHQ/Deputy DGPU
	Major	AS	Johnston	NDHQ/DIO
Secretary	Major	DA	ELrick	Base Operations Officer, CFB Suffield

IN ATTENDANCE

Throughout	Colonel	RS	Webster	Commander BATUS
	Major	WGC	Bowles	GSO2 (Tac) BATUS
	Dr	CH	Baker	Chief DRES
	Mr	BG	Laidlaw	Head Field Operations Section DRES
	Mr	N	Lashuk	Alberta Energy Company Limited

INTRODUCTORY REMARKS

1. The Chairman welcomed everyone present to the seventh annual meeting and introduced Colonel Forth and Major Johnston from Ottawa, and Major Bowles, who recently assumed his appointment with BATUS.
2. Mr Morgan introduced the AEC representatives. He then presented a general review of progress to date, indicating that post-1981 there could be one to three producing wells per section and thanked everyone concerned for their cooperation during the past year.

ITEM	DISCUSSION	ACTION BY
I	<p><u>AREA DEVELOPMENT PLAN</u></p> <p>3. Mr Gimby, Director Gas and Oil Operations, reviewed the Area Development Plan making reference to the map. His speaking notes are at ANNEX A.</p> <p>4. In response to a question from Col Webster it was stated that oil potential of the Suffield Block has not been defined to date. Dr Edwards asked about the status of the Suffield Heavy Oil Project (SHOP), to which Mr Gimby replied that it is intended to activate the injection well approximately July 81.</p> <p>5. Mr Balog reviewed shallow gas development, addressing the future infill drilling programme. His speaking notes are at ANNEX B.</p>	
II	<p><u>AEC REPORT TO SEAC ON MIDDLE SAND HILLS OPERATING PLAN</u></p> <p>6. Mr Brown presented the report at ANNEX C, making reference to the map.</p> <p>7. Mr Bellows asked Mr Brown to comment on the recommendations of the Hardy Assoc Second Annual Report. Mr Brown pointed out that:.</p> <ul style="list-style-type: none">a. AEC do not intend to hire a fulltime environmental consultant;b. Kodiak Fall Rye grass seed is not available in sufficient quantity and AEC has stayed with the earlier recommendation of using a mixture of Crested Wheat and Russian Wild grasses; andc. The additional reclamation measures in the Hardy Assoc and Holtz/Zaal Reports have been carried out and are being monitored. <p>8. Dr Edwards suggested that the least persistant Crested Wheat grass be used on AEC seeding projects.</p> <p>9. Mr Brown further amplified AEC's adherence to the environmental impact recommendations concerning use of oversize tires in the Middle Sand Hills, on specific well signed routes and policing of vehicle load limits.</p> <p>10. The Chairman stated he was satisfied with the AEC reclamation programme in the Middle Sand Hills and complimented AEC on their efforts in this regard.</p>	

ITEM	DISCUSSION	ACTION BY
III	<p><u>REPORT ON HERITAGE RESOURCES</u></p> <p>11. Mr Brumley briefed the meeting on the results of the archeological survey of the Suffield Block between 1976 and 1980, making use of 35 mm slides. His speaking notes are at ANNEX D.</p> <p>12. The Chairman stated that the British Block Cairn and the Cactus Flower sites have been accepted as National Historic Sites.</p>	
IV	<p><u>CLASSIFICATION OF LAND FOR ARCHEOLOGICAL SURVEY</u></p> <p>13. Mr Brumley spoke briefly about this because the study is not yet complete. However, he pointed out that 40 - 60% of the Block had been cultivated in the past and on the direction of SEAC, would be excluded from further archeological survey. The study, requested by SEAC, to determine the low, medium and high densities of archeological material on the remainder of the Block, will be completed approximately Fall 1981.</p>	
V	<p><u>LONG RANGE DEVELOPMENT PLAN (LRDP)</u></p> <p>14. Mr Brown reviewed LRDP highlighting the following:</p> <ul style="list-style-type: none">a. AEC is five years ahead of the original schedule;b. Development of Area E is ahead of schedule as a result of AEC's early access to it;c. AEC would be interested in trading access to Area F for deep drilling, for earlier release of Area E should the situation develop in this way; andd. Development of Area E should be completed on schedule in 1982, after which coordinated access would be desirable. <p>15. His speaking notes are at ANNEX E. He stressed the need, post-1982, for early detailed planning with the military regarding coordinated access to all areas on the Block as AEC will not then have a dedicated area. Considerable discussion followed, the principal aspects of which are:</p> <ul style="list-style-type: none">a. <u>DRES</u>. Although DRES field activity is usually weather dependant, their plans, of necessity, are confirmed well in advance. Future work will require larger land areas which could include some of the training area.	

ITEM	DISCUSSION	ACTION BY
b.	<p><u>BATUS</u>. From 1982 rotations of exercise areas every two years will be more difficult because AEC will not have dedicated development areas on which to base their operations. By the mid-1980s it is likely that the addition of one Battle Group (BG) per year will reduce the number of days between BGs available for AEC development work in the exercise areas.</p>	
c.	<p><u>Chairman</u>. There may be a slight increase in use of Suffield by units based in Calgary. These would be small exercises, with short lead times for planning, but would not take place during the BATUS training season and would be relatively easy to coordinate.</p>	
d.	<p>Col Webster replied to a question from Mr Morgan that it is not possible to change all exercises annually.</p>	
16.	<p>In order to facilitate early planning it was agreed that the Commanders CFB Suffield and BATUS would, following Exercise MEDICINE MAN 2, determine the BATUS training pattern over the next two years with a view to possibly identifying those areas within the training area that could be made available to AEC for coordinated access (infill drilling). Concurrently AEC would try to identify which parts of the training area would best suit their needs for infill drilling. Results of the foregoing will be examined and jointly discussed to decide the way ahead by the end of June 1981.</p>	<p>CFB Suffiel BATUS DRES AEC</p>
VI	<p><u>REPORT ON ANNUAL INSPECTION OF MIDDLE SAND HILLS</u></p>	
17.	<p>Dr Edwards, on behalf of SEAC, briefly reviewed the Hardy Assoc Report, the Holtz/Zaal Report and the findings of the SEAC field tour April 1981. His speaking notes are at ANNEX F. In general SEAC is pleased with the reclamation programme. He highlighted a few locations where additional effort and close monitoring are still required.</p>	
18.	<p>Mr Harrington stated that:</p> <ul style="list-style-type: none"> a. The Middle Sand Hills operations have been a learning experience for all concerned agencies; b. Winter has proven to be the best season for development work in the Middle Sand Hills; and c. Prevention of environmental damage is preferable to the reclamation work required as a result of environmental damage caused by development activity. 	
19.	<p>Further discussion indicated SEAC would continue close examination of AEC's development applications and reclamation plans for future operations in the Middle Sand Hills.</p>	

ITEM	DISCUSSION	ACTION BY
VIII	<p>20. It was agreed that the October 1980 meeting between AEC and SEAC proved most beneficial and therefore Fall is the ideal time for future annual meetings.</p> <p><u>NEW BUSINESS</u></p> <p>21. Mr Harrington requested comments on the third draft of the Hardy Assoc (Lowry) Report by 15 June 1981. Mr Brumley was invited to submit a section on the archeological survey of the Suffield Block.</p> <p>22. The Chairman stated that this is his fourth annual meeting, the third in the Chair, and that he would be departing on posting this summer. After summarizing his experiences with the agencies represented he thanked those present for their cooperative participation.</p> <p>23. Mr Morgan expressed AEC's thanks to everyone involved. AEC's success could only be achieved through the excellent close working relationship and spirit of cooperation that they have enjoyed with the military and DRES. He specifically thanked Col Kells and Col Webster for their efforts, both he noted will be departing on posting this year. He thanked Col Forth and Maj Johnston from NDHQ for attending.</p> <p>24. <u>Adjournment</u>. The meeting adjourned at 1159 hrs.</p>	

Original signed by

D.A. Elrick
Major
Secretary

Original signed by

G.S. Kells
Colonel
Base Commander

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Attention: Mr G Morgan

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Attention: Dr. R. Edwards

Department of Environment Alberta:
Attention: Mr DG Harrington

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AREA DEVELOPMENT PLAN

Roger Gimby

- We now have approximately 1500 gas wells in operation producing through 2000 km of pipeline. Our total production capability is more than 250 MMSCFD and our current production level is approximately 200 MMSCFD.
- The map shows those shallow wells and pipelines in place as of April, 1980, the time of our last meeting, and those wells and pipeline systems added over the past year. Some 366 wells were drilled and 500 km of pipeline installed since April of last year.
- Our plans for the next operations year call for completion of initial development drilling in Area E and installation of facilities.
- Some 40 additional shallow gas wells will be drilled in Area E during the next twelve months and 230 km of pipeline installed to complete development as shown on the map.
- We are assessing further infill development drilling in Areas A, B, C, D and the Middle Sand Hills. These will be smaller infill programs which we would co-ordinate with training activities. We are having a problem co-ordinating this activity to enable us to drill the wells in the Sand Hills during the winter.

May 20, 1981

Steve Balog

Shallow Gas Development

- The end of 1981 will see us having completed the initial development of the Suffield Block. Thereafter, our shallow gas development activities will involve infill development drilling where existing well densities of one or two wells/section may be increased.
- We see almost the entire Suffield Block, save the northern half of Area A and a portion of the NW/4 of Area B, as being prospective for further infill drilling.
- The purpose of infill drilling is to improve recovery performance where the drainage efficiency of existing wells is judged to be inadequate.
- To determine this drainage efficiency and if further drilling is economically feasible, it is necessary to evaluate productivity performance over at least a 4 - 5 year period.
- The problems could be of varying size due to the wide range of reservoir characteristics we have in Suffield, and the uncertainty of economic conditions.
- Our future engineering and evaluation programs will be designed however, for the purpose of identifying programs in concentrated areas with sufficient lead time to assess co-ordination with military training operations.

Deep Zone Evaluation and Development

- To date 310 deep tests have been drilled on the Suffield Block.
- Areas E and F are the only remaining areas to be extensively evaluated for deep zone potential.
- We expect to commence deep drilling operations in Area E with one rig on June 15th. Up to 25 exploratory tests will be drilled and follow-up development wells will be drilled depending upon exploration results.
- The deep zone potential of Area E will be fully assessed by the end of 1982.
- We are considering initiating deep zone exploration in Area F as early as 1982.
- As previously agreed, Area F exploration operations will be carried out during the winter drill season or in co-ordination with training activities if possible.

REPORT ON MITIGATION MEASURES TAKEN IN SAND HILLS

FOLLOWING 1980 DEVELOPMENT

REFERENCE:

- A. Hardy Associates Ltd.
Second Annual Report
- B. Holtz/Zaal Report for
SEAC Dated Oct 1980

The reclamation work carried out in the Middle Sand Hills by AEC during 1980 and the first part of 1981 was based primarily on the construction of the new Middle Sand Hills road and flowlining to connect the gas wells that had been completed the preceding year. :

For the most part, the work undertaken centered on the recommendation and comments offered by the two documents previously mentioned (Hardy Associates Ltd. Second Annual Report and Holtz/Zaal Report for SEAC - October 1980). Additional constructive suggestions from some of our own employees who work in this particular area were incorporated in the reclamation plan.

Before I bring your attention to the map which graphically outlines the specific areas under discussion I would just like to point out in effecting the repairs to some faulty flowline pipe it was necessary to disturb more surface soil than was normal in some areas of the sytem.

Some 3,200 ft of snow fencing has to date been put in place to negate wind erosion in the disturbed areas. The areas have again been seeded and loms fertilizer added to assist growth. Seeding took place during the last week of March and the first week of April. The grass seed mix of 50% Russian Wild Rye and 50% Crested Wheat was applied at 20 lbs/acre using a brillion grass seeder pulled by a vehicle fitted with oversize tires (picture on map). The fertilizer was applied at 40 - 60 lbs/acre.

The extreme wind condition experienced during the month of April did little to help our cause but we are hopeful that Saskatchewan did not reap all the benefits of our seeding program during the period. The recent rains in the general area are expected to help immensely.

Adequately signed, specific servicing routes to well locations, have been established to channel traffic away from the more sensitive regions of the Sand Hills. Area warning signs have been put in place to caution, and remind people entering the Sand Hills, of the fragile nature of the area and point out the restrictions for working in this most sensitive region of the Block. In addition, a route map has been developed for issue to users of this area. Hopefully, this will help to keep them on the straight and narrow.

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TO ANNEX C
TO 1180-3 (BCOMD)
DATED 26 MAY 1981

In addition to the reclamation work carried out along the new Sand Hills Road last year we identified four $\frac{1}{2}$ acre sites consisting of a total of nine plots which were hydroseeded this past April. We varied the amounts of materials used on each site and I will only point out here that the total materials used on all nine plots came in the order of:

- 2,640 lbs wood fibre mulch
- 300 lbs fertilizer - 23-23-0
- 80 lbs fertilizer - lomus
- 50 lbs soil stabilizer
- 80 lbs grass seed

We are now at that point in time of waiting to see the results of our labours. We will continue to monitor this area closely and adjust our reclamation plans accordingly.

In closing may I just take a moment to thank the members of SEAC for their interest and involvement in our reclamation program for the Sand Hills. We seek and appreciate your continued advice and guidance in this most important aspect of our development program.

Thank you.

John Brumley

1. Archeological Survey of all Development Locations Required

- Wherever possible, when site found in development location, relocation is attempted location in order to avoid it.
- When a development location cannot be relocated, the normal procedure employed is to record by mapping the archeological materials to be damaged and to test excavate a portion of the site in order to determine the kinds and amount of cultural material present and to obtain a controlled sample of it for analysis.
- To date, over 60 archeological sites located wholly or partially within development areas have been mapped or mapped and test excavated.

2. Stone Circles

- Most common kind of archeological feature on Suffield's reserve. Our work for AEC has resulted in mapping of over 70 of these features and limited to extensive excavation of about 20.
- Used to hold down edges of tipi's.
- Go through sequence of slides showing tipi ring excavation.
- Have maps and drawings of several cairn sites for general comparative data base to test future theories and ideas in relation to.

Stone Circles

- Have test excavated enough stone circle sites to be able to reconstruct range of cultural activities taking place; the intensity of these activities and the probable deviation of occupation.
- In general, sites occupied on camp for quite short period of time. Stone circles used on the reserve for at least the last 4,000 years.
- Have an adequate data base to finally begin examining the functional aspects of stone circles, i.e., how important were stone circles in holding down tents; are the number of stones a general indicator of weather conditions at the time the site was used. At present, our analysis indicates there is a very broad range in the size and number of stones comprising stone circles. They do not appear to be sensitive to seasonal wind direction and in fact, generally fewer stones in areas of prevailing wind.

Cultural Adaptation

- A general pattern is emerging of prehistoric land use on Suffield Reserve:
 - a. Seasonal utilization of reserve -- primarily from spring to fall. This seasonal utilization probably reflects level of cultural development of aboriginal cultural groups and their reliance on various resources such as wood for fuel, water and game animals.
 - b. Even during seasons when man occupied reserve, there is a clear preference for different locations on the reserve. This is believed at present to reflect the location of water for both man and animals and man's use of certain terrain as a pre-requisite of certain hunting techniques.

Closing Statement

Cairns

- Explain known functions of cairns and how probable function of most is probably still unknown.

What We Have Learned and What We Hope to Learn as a Result of This Research

- General: a better idea of what cultural groups occupied the Suffield Reserve -- information that can be used to expand our general knowledge of these groups.
- An understanding of the cultural adaptation of Indian groups occupying the reserve.
- Culture History
 - Extended our record of cultural groups occupying the reserve back in time from about 4200 Year B.P. to from 6 or 7,000 Years B.P.
 - Have radiocarbon dates from 3 sites giving us a better definition of the time range of known cultural groups.
- Stone Cairns
 - Have one of the few C-14 dates for a small stone cairn (ca AD 1100) and good inferential arguments for its use as an animal deadfall trap.

NOTES L R D P

George Brown

1. Display Map
2. Review W. No changes in principle - deep drill Area "F", 1982.
3. Problem post 1982 when no allotted area:
 - Infill based on maintaining production will be needed.
 - Economics will have an effect on additional drilling.
 - With no allotted area there is a need for advance planning. Indeed a knowledge of Military advanced planning on exercises to maximize the cost effectiveness of our drilling and flow lining.
 - As the Military move we must dodge at the same time. Juggle economics of production, infill and avoid costly down time.
4. We would like help in solving this problem and suggestions on how we can plan ahead in step with you. You may wish to discuss now, but a firm method can wait until we have both had a chance to think about it and discuss further.
 - Possibly our centurion guard can act as enemy?

SEAC REPORT

1. Hardy Associates Report - November 1980

- In general, AEC is doing a good job in minimizing environmental disturbance; however, there are several problem areas which require attention. These are:
 - a. Routing of ploughed in pipeline over strongly rolling dune topography when large sections of the pipe had to be dug up and repaired or repositioned.
 - b. Routing of trenched pipeline over high ground makes for the reclamation problems on the crests of hills. Hardy recommended a reclamation specialist be retained in the field to advise on pipeline alignment. Hardy also recommended that:
 - (1) All vehicles used in the program should use sand tires. This, we believe, is being complied with.
 - (2) Vehicles use only surveyed access roads and trails and that others be closed. We saw ample evidence that roads are posted closed on the tour.
 - (3) That load limits be set for vehicles using access trails. May be difficult.

Some additional reclamation measures were required, at specific road cuts, pipeline rows and well sites.

2. Hardy-Zaal Report

- Resulted from field inspections carried out in early October 1980 with the objective of identifying potential problem areas. A number of recommendations were made some of which were similar to those proposed by Hardy, i.e., access roads, on-site inspection, etc. I should point out that anyone reading just the conclusions and recommendations might get a negative picture of the effect of development in the Sand Hills. One must look at the data which shows a high proportion of the well sites examined to be in good condition.

3. SEAC Tour - End of April

- Firstly, we were really pleased to see that AEC are making a very serious effort to minimize the environmental disturbance associated with the gas developments. We noted that attention had been given to the problem areas previously mentioned, that unnecessary trails had been posted closed and that an effort had been made to stabilize disturbed areas such as Well site 6-14. Had the weather been more cooperative this spring, there would

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TO ANNEX F
TO 1180-3 (BCOMD)
DATED 26 MAY 1981

have been even more success. As it was, due to the strong winds and lack of moisture, some problems still remain and I will mention two: The Sand Hills Road is still of concern. We noted the ditch had been seeded and had taken well, but the tops of the cuts in places had not been seeded and were eroding badly. We were pleased to see that hydro-seeding had been employed on a trial basis and we think it has merit in more wide-scale application. We also noted pipeline routings that went over the crests of hills where erosion was problematic. Minor rerouting could possibly avoid these problems.

In conclusion, it was my impression that AEC has a strong commitment to ensure that disturbance is kept to a minimum and that there was ample evidence that disturbed areas were being satisfactorily reclaimed. Development in the Sand Hills is a learning experience for everyone involved and I think that the first lesson is that prevention of problems is better than trying to cure them after they have arisen.



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1180-3 (BComd)

Headquarters
Canadian Forces Base Suffield
Ralston, Alberta
TOJ 2NO

11 June 1982

EXHIBIT No. 003-049 2/2
Date: Oct. 23, 2008
Witness: Mr. Lambrecht, GOC
Mainland Reporting
courtreporters@shawbiz.ca

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ANNUAL NATURAL GAS/
OIL DEVELOPMENT MEETING
AEC/CFB SUFFIELD 27 MAY 1982

①

Reference: Memorandum of Agreement dated 28 Oct 75

Enclosed are the minutes of the 1982 annual meeting.
Paragraph 10 and Appendices 1 and 2 to Annex C are classified
CONFIDENTIAL for industrial reasons.

Original signed by

J.K. Dangerfield
Colonel
Base Commander

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MINUTES OF A MEETING ON
1982 NATURAL GAS - OIL DEVELOPMENT
BETWEEN ALBERTA ENERGY COMPANY LIMITED AND
CFB SUFFIELD HELD IN THE CONFERENCE ROOM
BUILDING ONE, CFB SUFFIELD
AT 0900 HOURS 27 MAY 1982

Ralston, Alberta
27 May 1982

REPRESENTATIVES

Chairman	Colonel	JK	Dangerfield	Base Commander CFB Suffield
Members	Mr	RN	Gimby	Director Gas & Oil Operations/AEC
	Mr	GG	Brown	Senior Advisor/AEC
	Mr	S	Balog	Manager, Petroleum Engineering/AEC
	Mr	G	Cormack	District Production Manager/ AEC
	Mr	J	Mysyk	Drilling Superintendent/AEC
	Mr	NH	Barrett	Supervisor Range Safety/AEC
	Mr	WE	Davies	Senior Range Safety Officer/ AEC
	Mr	CJ	Crowe	Director General Properties & Utilities/NDHQ
	Major	AS	Johnston	Directorate of Land Operations & Training/ NDHQ
	Mr	DG	Harrington	Alberta Environment/SEAC
	Mr	LA	Bellows	Energy Resources Conservation Board/SEAC
	Dr	R	Edwards	Environment Canada/SEAC
Secretary	Major	DA	Elrick	Base Operations Officer/ CFB Suffield

IN ATTENDANCE

Throughout	Colonel	WA	Allen	Commander BATUS
	Major	WGC	Bowles	GS02 (Tactics) BATUS
	Dr	CH	Baker	Chief DRES
	Mr	BG	Laidlaw	Head Field Operations Section/DRES

.../2

~~CONFIDENTIAL~~

INTRODUCTORY REMARKS

1. The Chairman welcomed everyone present to the eighth annual meeting, explained that Mr. Gimby, Mr. Balog and Mr. Mysyk had been delayed by the weather and introduced everyone.

ITEM	DISCUSSION	ACTION BY
I	<p data-bbox="305 510 909 541"><u>MATTERS OUTSTANDING FROM 1982 MEETING</u></p> <p data-bbox="305 573 1068 699">2. <u>Item IV - Classification of Land for Archaeological Survey.</u> The Chairman asked to be brought up to date. Discussion involving Mr. Brown and Mr. Harrington indicated:</p> <ul style="list-style-type: none"><li data-bbox="386 735 1096 1014">a. Department of Alberta Culture, Historical Resources Division (Dr. Paul Donahue) stated by letter it was not necessary to survey low density areas and if AEC did not want to have medium and high density areas surveyed, SEAC approval would be necessary, otherwise AEC has Ethos Consultants (Brumley) clear the area.<li data-bbox="386 1050 1079 1234">b. The resultant standard operating procedure is AEC deals directly with Ethos Consultants who deal with, as necessary, Alberta Culture. While this runs smoothly, SEAC does not become involved.<li data-bbox="386 1270 1079 1365">c. AEC is reasonably satisfied they have received as much relief from archaeological requirements as possible.<li data-bbox="386 1400 1096 1495">d. There was no written study produced, but is in the form of a map. A copy will be provided to CFB Suffield. <p data-bbox="305 1528 1096 1780">3. <u>Item V - Para 15b - Long Range Development Plan (LRDP).</u> Colonel Allen confirmed the Army Board desire an increase to eight battle groups annually, commencing in the next two years; however, there are no firm plans now for the foreseeable future. He stated there are no plans for an increase in 1983 and one year's notice will be given of such an increase.</p>	

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ITEM	DISCUSSION	ACTION BY
	<p>4. <u>Item VI - Para 20 - Report on Annual Inspection of Middle Sand Hills.</u> Mr. Brown and Mr. Harrington clarified the intention as follows:</p> <ul style="list-style-type: none">a. Fall is the best time for secondary inspections and a meeting if necessary, but they do not replace the annual inspection and meeting, which is the normal routine.b. Fall inspections and subsequent meetings are the result of mutual SEAC/AEC initiatives based on any identified problems, when immediate reaction is considered necessary.	
III	<p><u>TESTING OF OIL WELLS IN AREA C</u></p> <p>5. 4500-3-1 (BComd) dated 7 Jan 81 approved the indefinite production or extended test status of specific oil wells subject to review at each annual meeting. Mr. Cormack reviewed the situation and following discussion, it was agreed that the status may continue subject to review in 1983. His speaking notes and location map are at ANNEX A.</p>	<p><i>Review AEC</i></p>
IV	<p><u>USE OF AREA E</u></p> <p>6. Mr. Brown announced the initial development, including deep drilling, has been completed in Area E; the AEC long range development plan is five years ahead of schedule; and, the company would like to return Area E to CFB Suffield with a view toward gaining access to areas in the EAST part of the Base.</p> <p>7. The Chairman asked for verification that Area E is now available for military training and all well heads etc are underground. Mr. Brown stated the well heads are below ground but the area clean-up is not yet completed. For practical purposes Area E reverts to training area forthwith.</p>	

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ITEM	DISCUSSION	ACTION BY
	<p>8. Mr. Harrington asked when, following completion of the clean-up, would CFB Suffield want to use it for military training, his concern being sufficient time for reclamation seeding to get established. The Chairman replied no military activity is anticipated in the near future which would disturb reclamation. Colonel Allen stated BATUS has no use planned for this year but requested access for reconnaissance and this was agreed.</p>	
V	<p><u>GAS AND OIL DEVELOPMENT IN 1982/82</u></p>	
	<p>9. Mr. Cormack summarized the development work completed in 1981. His speaking notes are at ANNEX B.</p>	
	<p>10. <u>CONFIDENTIAL</u>. The Chairman requested additional information about the Suffield Heavy Oil Pilot (SHOP). In addition to ANNEX B it was stated that the air compressor injects compressed air at 2200 psi; the reservoir was ignited approximately 1 Mar 82, and results have not yet been determined.</p>	
	<p>11. The following is a summary of replies to a series of related questions:</p> <ul style="list-style-type: none">a. There are no oil wells outside the Oil Access Area other than the seven at para 5; however, some wells have been completed as gas/oil wells and these are operating as gas wells. Oil production is hinged 100% on the economic situation.b. The result of 1981 development was as planned. Area E was completed to initial development stage and some infill drilling was carried out in Areas B, C, D and F.c. Initial development was confirmed as up to one well per section. Activities now are primarily aimed at infill drilling and will require coordinated access arrangements throughout.	

ITEM	DISCUSSION	ACTION BY
	<p>d. Seventeen wells were drilled during 1981 within the general area of mixed grasslands and all have been reseeded.</p> <p>e. Mr. Harrington requested a summary of the 1982 reclamation programme for the mixed grasslands.</p> <p>f. Colonel Allen expressed thanks for use of part of Area E this training season.</p>	AEC
VI	<p><u>FUTURE DEVELOPMENT 1982/83 AND 1983/84</u></p> <p>12. Mr. Gimby introduced this item by stating recent changes in AEC plans have been made due to Government of Alberta incentives. Consequently, a great increase in activity is planned for the next two years and this differs from the intentions announced last year.</p> <p>13. Mr. Balog then briefed the meeting making reference to the notes at ANNEX C and the maps at APPENDIX 1. A long, detailed discussion followed. The highlights of the conclusions reached are listed below:</p> <p>a. Mr. Balog defined "priority access area" as the area within which most development activity would take place on a regular basis. This area was further defined to be the land EAST of a line running NORTH through the middle of Area D from the SOUTH boundary to the NORTH end of Area F, then at 45 degrees to the WEST corner of the Middle Sand Hills.</p> <p>b. This area contains the principal ground allocated to BATUS for training and the three environmentally sensitive areas. Oil Access Area has been offered as a pasture vice FALCON and KOOMATI, should the PFRA choose to use it post 1982. In short, these areas would be very intensively used therefore coordination as far in advance as possible would be necessary.</p>	

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ITEM	DISCUSSION	ACTION BY
	<p>c. AEC have also requested summer access to YPRES (SOUTH half of Middle Sand Hills). In this area the topography is different from the rest of the Sand Hills but the soil appears to be sandy and sand dunes are evident. Although this, plus winter access to the Sand Hills and the proposed density of wells seems very ambitious, completion of 494 wells in one year through coordinated access has been achieved before. If summer access to YPRES is not authorized the programme would be more difficult to achieve but not impossible. The environmentally sensitive parts of YPRES would be treated as are those in the Sand Hills.</p> <p>d. SEAC would probably favour a very cautious approach to the summer access proposal. Additional soil assessments, a soils map and perhaps aerial photographs would be required to assess each development request. AEC agreed to provide this additional data with their summer access development programmes for YPRES, to SEAC in the normal manner. SEAC does not envisage issuing an approval for the whole area.</p> <p>e. Mr. Gimby stated AEC would not be in favour of adopting the additional environmental protective measures applicable to the Sand Hills (wide tires, signed routes, etc.) unless it was necessary.</p> <p>f. Colonel Allen stated, subject to further assessment, that it might be timely to re-orient the "APDS Range" and relocate Exercise JACKAL to the WEST in July 82, thus possibly freeing an additional two days access to AEC.</p>	<p>AEC SEAC</p> <p><i>Done.</i></p> <p>.../7</p>

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ITEM	DISCUSSION	ACTION BY
	<p>g. Dr. Baker referred to para 15a of the Minutes of the 1981 Annual Meeting - a DRES requirement for larger parts of the training area in support of some research projects. This would probably begin in a small way by Dec 82 and increase through 1983 and 1984.</p> <p>h. The Chairman emphasized the requirement of very detailed coordination which must include the maximum advance notice of changes in AEC plans or basic assumptions on which coordination is to be based. Mr. Gimby stated the AEC programme for 1982 is set now and involves minimal activity, while the 1983 and 1984 programmes are in the form of a forecast. Engineering work in support of the 1983 plan will start within a month. The Chairman requested AEC provide him with a map displaying the 1982 programmes.</p> <p>j. In view of the intensity of AEC and DRES activity programmed for the training area, Colonel Allen stated that it is essential access to the training area by BATUS be maintained between battle group exercises in order to do work necessary to keep training on schedule.</p> <p>14. Mr. Balog briefed the meeting on a proposed 1982 - 1983 facilities plan to service Area F. See ANNEX C and APPENDIX 2. Discussions revealed:</p> <p>a. Buried pipeline would cross the South Saskatchewan River in the general area of DROWNING FORD. Ideally, this would be completed in the Fall 1982 while the water level is low. An above ground shut-off facility would be located near the river crossing site.</p> <p>b. The implications of above ground facilities in the area of the river crossing would have to be assessed</p>	<p>AEC</p> <p>.../8</p>

ITEM	DISCUSSION	ACTION BY
	<p>against retaining the capability to conduct river crossing training exercises, in conjunction with live firing.</p> <p>c. The high pressure pipeline would probably be buried four to five feet deep vice the normal three feet depth.</p> <p>d. Dr. Edwards mentioned environmental considerations of a pipeline crossing the river; e.g., proximity to raptor nests and siltation affecting fish.</p>	
VII	<p><u>MIDDLE SAND HILLS DEVELOPMENT AND MITIGATION</u></p> <p>15. Mr. Brown briefed the meeting, making reference to the map. His speaking notes are at ANNEX D.</p> <p>16. Some discussion took place regarding the possibility of not needing to re-seed some areas of flowlining if the plough technique was used, followed immediately by compaction of the disturbed surface. Specific areas such as crests and turnings of flowlines would probably still need attention. Coordination of the two towing dozers would minimize surface disturbance.</p>	
VIII	<p><u>ARCHAEOLOGICAL SUMMARY</u></p> <p>17. Mr. Brown summarized archaeological survey work completed in 1981. His speaking notes are at ANNEX E. The Ethos Consultants Ltd. report "Archeological Examination of Energy Development Locations within the Suffield Military Reserve, Alberta During 1981" was distributed.</p> <p>18. The Chairman asked, in what form did Mr. Brumley in his report state the proposal to do some or all archaeological assessment during AEC development work, rather than prior to it?</p>	

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ITEM	DISCUSSION	ACTION BY
	<p><u>Secretary's Note:</u> Page 13 of the report states:</p> <p>"During the fall of 1981 a number of wellsites and access roads were examined in the Sandhills (northeast corner, Area B), and no archaeological sites were noted. Very few sites have been recorded in this area of the Reserve, and those which have been recorded were generally found within one or two kilometers of the river. Based on archaeological work in similar ecological areas outside the Military Reserve it is known that the Sandhills do contain some potential for discoverig archaeological sites. The inability to locate sites in the Suffield Sandhills is believed to be due to relatively dense ground cover, the sand deposits which likely cover most archaeological sites, and the nature of the archaeological sites. In reference to the latter point, it is likely that most archaeological sites in the Sandhills do not contain recognizable stone circles but consist of stone tools, faunal material and other cultural items characteristic of buried prehistoric campsites.</p> <p>In view of the above-mentioned occurrences, it is suggested that archaeological examination within the Sandhills region east of the Fireguard (Twps 19 and 20, Rng 3 W4) be delayed until development is in progress. Examination would then consist of monitoring the pipeline ditching and/or wellsite preparation, recording any archaeological sites discovered, and conducting appropriate subsurface investigations. Subsurface investigations would only be carried out in instances where additional development activity would further damage sites observed. It is further suggested that the practice of not examining development locations within</p>	

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ITEM	DISCUSSION	ACTION BY
	<p>cultivated areas be continued. Hopefully, as archaeological investigations continue it may be possible in the future to further refine our knowledge of site location and density resulting in, perhaps, additional modification of archaeological research methods."</p> <p>19. Discussion led to the following conclusions:</p> <ul style="list-style-type: none">a. It is AEC's initial opinion that their responsibility should end when archaeological material is revealed during development work and any new procedure should not be more onerous on AEC than the present system.b. Although AEC have not yet formally agreed their reaction to the proposal, the initial reaction of SEAC is to maintain the current procedure until AEC request a change.c. It was suggested SEAC would have to make recommendations in the end due to the legislative limitations in the Act administered by Alberta Department of Culture (Act not applicable on Federal lands).d. The Chairman acknowledged the value to DND of the extensive archaeological information resulting from AEC operations.	<p>AEC</p>
IX	<p><u>REVIEW OF ANY CHANGES IN AEC RANGE SAFETY</u></p> <p>20. Mr. Barrett reviewed current range safety procedures and publications. There are no changes.</p>	<p>.../11</p>

ITEM	DISCUSSION	ACTION BY
X	<p data-bbox="321 300 803 331"><u>REVEGETATION OF NATIVE GRASSES</u></p> <p data-bbox="321 363 1063 489">21. This item concerns the paper submitted by Dr. Edwards and distributed with the agenda. The background and conclusions from discussion are listed below:</p> <p data-bbox="402 525 625 556">a. <u>Background</u></p> <ol data-bbox="462 588 1071 1480" style="list-style-type: none"><li data-bbox="462 588 1071 682">(1) The mixed grassland is one of three environmentally sensitive areas within CFB Suffield;<li data-bbox="462 714 1071 976">(2) EPS requested SEAC reconsider previous advice on the seed mixture to be used during reclamation work within the FALCON pasture as part of the mixed grasslands area. SEAC is not yet prepared to formally comment;<li data-bbox="462 1008 1071 1197">(3) SEAC originally directed that only native grass seed be used for reclamation within this area. Over the years this was changed, permitting use of crested wheat grass and other mixtures;<li data-bbox="462 1228 1071 1291">(4) Any new policy would apply only to future reclamation;<li data-bbox="462 1323 1071 1480">(5) The intent of the Canada/Alberta Agreement, regarding reclamation, is to be generally consistent with policies applied outside CFB Suffield. <p data-bbox="402 1512 641 1543">b. <u>Conclusions</u></p> <ol data-bbox="462 1575 1071 1795" style="list-style-type: none"><li data-bbox="462 1575 1071 1795">(1) SEAC will prepare terms of reference, including a very clear aim based on the report "Environmental Considerations on the Use of the Suffield Military Reserve for Tank and Artillery Training" dated 25 Aug 71, for a	<p data-bbox="1258 388 1404 430">FLAG H</p> <p data-bbox="1161 1575 1234 1606">SEAC</p>

ITEM	DISCUSSION	ACTION BY
	<p>study on the effects of using crested wheat grass and Russian wild rye mixture in the FALCON area.</p> <p><u>Secretary's Note:</u></p> <p>Authors: W.E. Stevens J.G. Stelfox A.A. Kjearsgaard</p> <p>(2) The terms of reference will be circulated to AEC and the Base Commander for comment/approval prior to letting a consultant's contract.</p> <p>(3) AEC will await SEAC recommendations and in the meantime will cease re-seeding within FALCON area, except at specific sites where stabilization is considered prudent.</p>	
XI	<p><u>FIELD INSPECTIONS BY ENVIRONMENTAL PROTECTION SERVICE (EPS)</u></p> <p>22. Dr. Edwards introduced the item by saying EPS had assisted SEAC in the past by conducting inspections which augmented AEC consultant's work related to reclamation in the Sand Hills and River Bank Zone. Although this type of inspection is probably not required anymore, it might be useful within the FALCON part of the mixed grasslands.</p> <p>23. Discussion then pursued several lines, the conclusions of which, were:</p> <p>a. <u>EPS Field Inspections:</u> SEAC has no "legs" therefore the committee cannot identify reclamation sites of concern, in advance of field tours. EPS could provide this service to SEAC. AEC welcomed such direction providing the company is not subjected to restrictions beyond those normally</p>	<p>A11</p>

ITEM	DISCUSSION	ACTION BY
	<p>applied to the industry. SEAC proposed and AEC agreed, EPS and/or AEC consultant's inspections could be carried out when considered necessary, subject to agreement by the Base Commander, SEAC and AEC to the need for it and associated terms of reference for each inspection.</p> <p>b. <u>Pre-Abandonment Certificates.</u> Considerable discussion followed on the procedures, timing, necessity of and jurisdictional aspects of this subject. It was agreed AEC will take the matter under advisement and SEAC will clarify their position.</p> <p>c. <u>SEAC Field Tours.</u> The Chairman mentioned the purpose of these tours is to monitor specific AEC development sites as an aid in providing advice to the Base Commander. The tours traditionally precede the annual AEC/CFB Suffield meeting. He proposed in future his staff would prepare a reconnaissance plan, based on input from all three participating agencies, in order to improve the effectiveness of the tours.</p>	<p>SEAC AEC</p> <p>B Ops 0</p> <p><i>Done</i></p>
XII	<p><u>STATUS OF DRES FIELD TRIAL AND RANGE CLEAN-UP PROGRAMMES</u></p> <p>24. Dr. Baker introduced this item by saying DRES has a very busy field trials season planned (May - Oct 82) and intensity of operations will be very much dependant upon the weather.</p> <p>25. Mr. Laidlaw then summarized current developments in the continuing range clean-up programme:</p> <p>a. Out of Bounds (Dangerous) Area 940690 and Out of Bounds (Dangerous) Area 893723 are now no more hazardous than the surrounding area and will be deleted from the map.</p>	

ITEM	DISCUSSION	ACTION BY
	<ul style="list-style-type: none">b. Out of Bounds (Dangerous) Area 903727 will be reduced in size and downgraded to Out of Bounds.c. Out of Bounds (Dangerous) Area 020740 will be reduced in size.d. Out of Bounds (Dangerous) Area 964782. Trenches will be backfilled and the area prominently marked and fenced. The status will not change.e. Residual hazards in Area E will be removed during the first week of June 82. <p>26. He stated the following field trials will require use of some of the training area:</p> <ul style="list-style-type: none">a. ROBOT-X which will have limited firings and an eventual downrange safety template requirement of 32 km; and,b. 5 inch/54 calibre augmented projectiles also having a downrange safety template requirement of 32 km, which will be tested in Nov/Dec 82.	
XIII	<p><u>IMPACT OF AEC PROGRAMME ON ROAD AND FIREGUARD MAINTENANCE</u></p> <p>27. The Chairman expressed the view that the work carried out by AEC as part of their programme reduces the effort required by CFB Suffield, for which he is grateful. However, should AEC reduce the effort in this regard in the future, CFB Suffield would require at least two years warning in order to procure additional maintenance equipment. Mr. Gimby noted the requirement and stated there is no reduction of effort foreseen at present. The Chairman directed the matter be reviewed annually.</p>	<p>B Ops 0</p> <p>.../15</p>

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ITEM	DISCUSSION	ACTION BY
XIV	<p data-bbox="305 285 727 317"><u>THE RANGE DEVELOPMENT PLAN</u></p> <p data-bbox="305 348 998 411">28. The Chairman briefed the meeting along the following lines:</p> <ul style="list-style-type: none"><li data-bbox="386 443 1079 789">a. A Base Development Committee has been formed, which includes some sub-committees, one of which is a Range Development Committee, with representation from CFB Suffield, BATUS and DRES. Its principal function is to produce a five-year development plan for the Range based on the aim of maintaining the training area as a Battle Area (field firing and manoeuvre area).<li data-bbox="386 831 1063 1199">b. With regard to the training area, this plan will include a cyclical programme of allotting areas for training and allow areas to "rest" from training use for a minimum of two years. Other aspects to be dealt with include range clearance programmes and procedures (debris and expended munitions) and development of a limited number of training facilities, for example a ford linking KOOMATI with the WEST side of the river and a rifle range.<li data-bbox="386 1241 1063 1713">c. The plan will be drafted for consideration by the Base Development Committee on 08 Jul 82. In the meantime it is his intention to "rest" KAP YONG and perhaps a portion of ORTONA from 1983 and sees training activities being relocated from those areas to Area E and NORTH of it. This conforms to the "wagon wheel" philosophy, first discussed last year, and which was a factor in selecting the area now being used for Exercise NORMANDY. This approach will enhance our administration of the training area and its use by AEC.<li data-bbox="386 1745 1063 1808">d. The plan will be reviewed annually and will be circulated to AEC.	

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ITEM	DISCUSSION	ACTION BY
XV	<p data-bbox="310 302 537 331"><u>OTHER BUSINESS</u></p> <p data-bbox="310 365 1068 457">29. <u>BATUS General Proposals for 1983.</u> Colonel Allen outlined his preliminary intentions as follows:</p> <ul style="list-style-type: none"><li data-bbox="391 499 1000 562">a. Exercise NORMANDY would remain in location for at least three years.<li data-bbox="391 594 971 657">b. Exercise CHINOOK would remain in location until 1983.<li data-bbox="391 688 1052 781">c. The APDS "range" and Exercise JACKAL would be relocated for the 1983 training season.<li data-bbox="391 812 1049 940">d. He would prefer to relocate Exercises GOPHER 1 and 2, and perhaps Exercise PRONGHORN (from KAP YONG and ORTONA areas).<li data-bbox="391 972 1000 1486">e. He described the exercise planning principles as:<ul style="list-style-type: none"><li data-bbox="451 1066 1042 1138">(1) minimize unproductive vehicle movement between exercise areas;<li data-bbox="451 1169 1042 1262">(2) BATUS could agree relocation of exercises five years in advance, but probably not in detail; and<li data-bbox="451 1293 1042 1486">(3) In many cases, there is flexibility sufficient to change specific sites and activities within specific exercises, without moving the whole exercise. <p data-bbox="302 1518 675 1547">30. <u>COMMENTS MR. GIMBY</u></p> <p data-bbox="378 1579 1062 1831">Mr. Gimby expressed his appreciation for the opportunity to meet with the representatives and for the resultant direction. AEC is entering a new era in its operations at CFB Suffield, in which the company will not have a dedicated area within which to work, therefore close coordination and cooperation will be</p>	

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ITEM	DISCUSSION	ACTION BY
XVI	<p>needed. He expressed regret concerning the impending posting of the Base Commander and wished him well. Also, special thanks were directed to Mr. Harrington, who will retire soon, for advice and assistance in the past.</p> <p><u>ADJOURNMENT</u></p> <p>31. The Chairman expressed his view that multi-use of CFB Suffield has been a success and is based on close liaison and cooperation between all concerned, especially between SEAC and AEC. He considers SEAC to be the most successful of his advisory committees. He noted that this was the last annual meeting which Mr. Harrington, the last original member of SEAC, would attend and thanked him for his assistance.</p> <p>32. The meeting adjourned at 1530 hours.</p>	

Original signed by

D.A. Elrick
Major
Secretary

Approved

Original signed by

J.K. Dangerfield
Colonel
Base Commander/Chairman

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ANNEX A
TO 1180-3 (BCOMD)
DATED 27 MAY 1982

AREA "C" OIL WELLS

There are presently seven oil wells producing outside the oil access area as shown on the attachment. Approval for indefinite production on wells 12-14, 12-7 and 4-31 was received January 7, 1981. The remaining four wells are on a test status which includes 6-2 oil well in Area E. It is proposed to continue with these wells on an extended test basis.

GAC/jz

Attachment

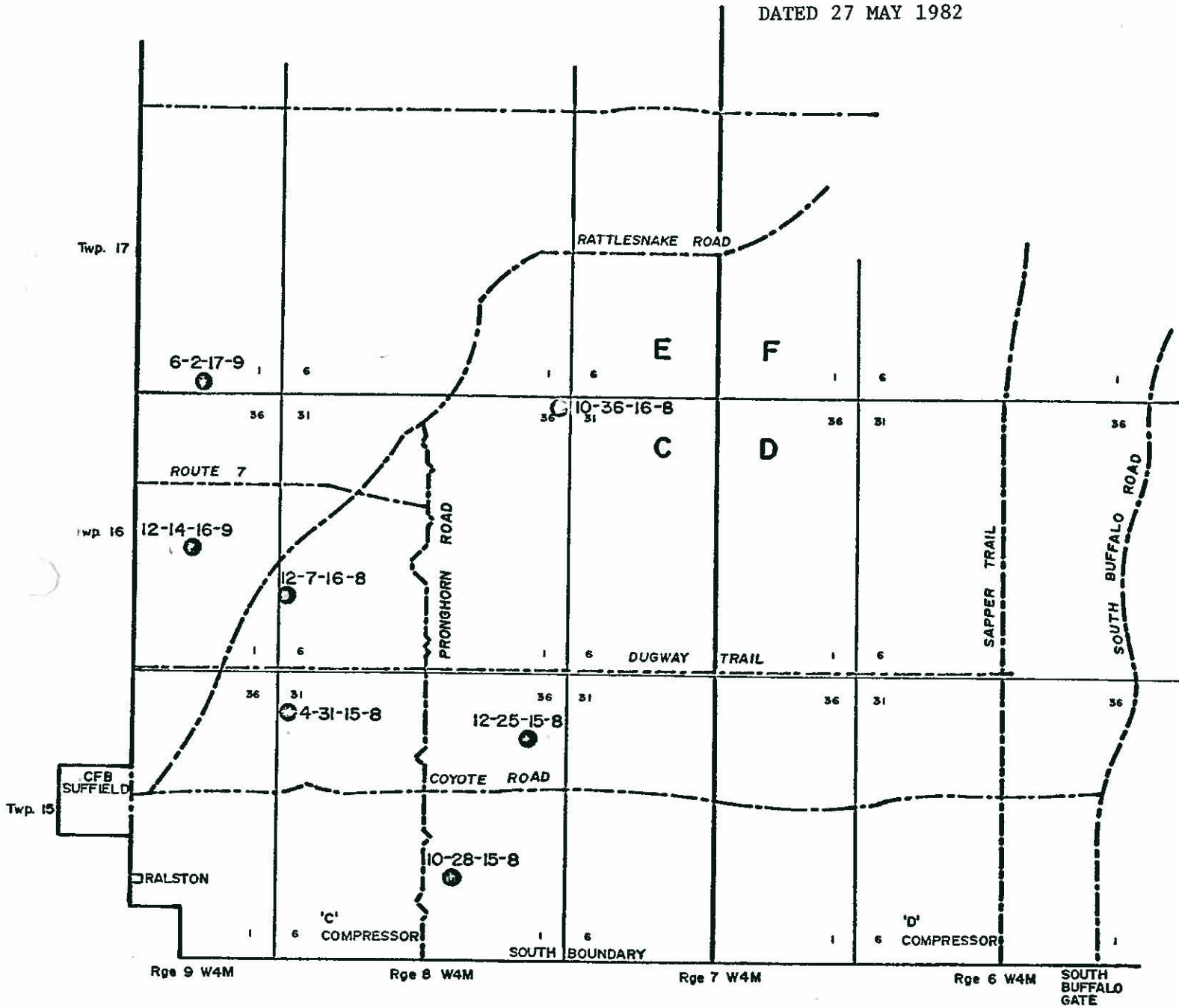
.../A-2

A - 1

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ANNEX A
TO 1180-3 (BCOMD)
DATED 27 MAY 1982



AREA 'C' OILWELLS

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ALBERTA ENERGY COMPANY LIMITED
Suffield Block Activities, 1981

During 1981, 214 wells were drilled, 289 km of pipeline was added, and a 2 200 horsepower compressor dehydration facility was added.

The largest portion of development work was carried out in Area E, which was closed to military training starting January 1, 1981. A total of 80 shallow gas wells, (including 7 shallow take-overs from the deep drilling program) 11 deep gas wells, and 1 oil well were drilled and 243 km of pipeline was installed to tie in 190 wells. Additionally, a 2 200 horsepower compressor and dehydration facility was installed, which is capable of processing 705 000 cubic meters (25 million cubic feet) of gas per day.

A summary of the work in the other areas is as follows.

Area A In this area, 8 shallow wells were drilled and 3.4 km of pipeline installed. A sulphur removal unit was installed at Station A-1 in order to meet sales gas specifications for maximum sulphur levels. The heavy oil fireflood project was under construction during 1981. The project consists of a 10 acre site with 4 producing wells, 1 air injection well, and associated oil treating facilities.

Area B In area B, 46 shallow wells were drilled and 7 were tied in with 5.1 km of pipeline.

...../ B-2

Area C In this area, 23 shallow wells were drilled, 14 shallow wells and 5 deep wells were tied in, with a total of 15.8 km of pipeline.

Area D AEC drilled 17 shallow wells in Area D, and 2 deep wells were drilled by Gulf, one of which was a gas well and the other dry and abandoned. There were 30 shallow wells tied in with 16.4 km of pipeline.

Area F There were 18 shallow wells drilled in this area. The pipelining activity is included in the totals shown above, as there is no Area F gathering system.

Koomati There were 3 shallow wells drilled and pipelined in Koomati with 1.5 km of pipeline. Additionally, a deep gas gathering system was added consisting of 4.1 km of pipeline to tie in 2 deep wells.

By the end of 1981, a total of 1905 wells had been drilled with the following breakdown:

53 deep gas wells
1777 shallow gas wells
75 oil wells

There were 1681 gas wells tied into the gas production system which includes 2316 km of pipeline and 9 compressor stations with 28 800 horsepower.

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ANNEX C
TO 1180-3 (BCOMD)
DATED 27 MAY 82

FUTURE DEVELOPMENT 1983/83 AND 83/84

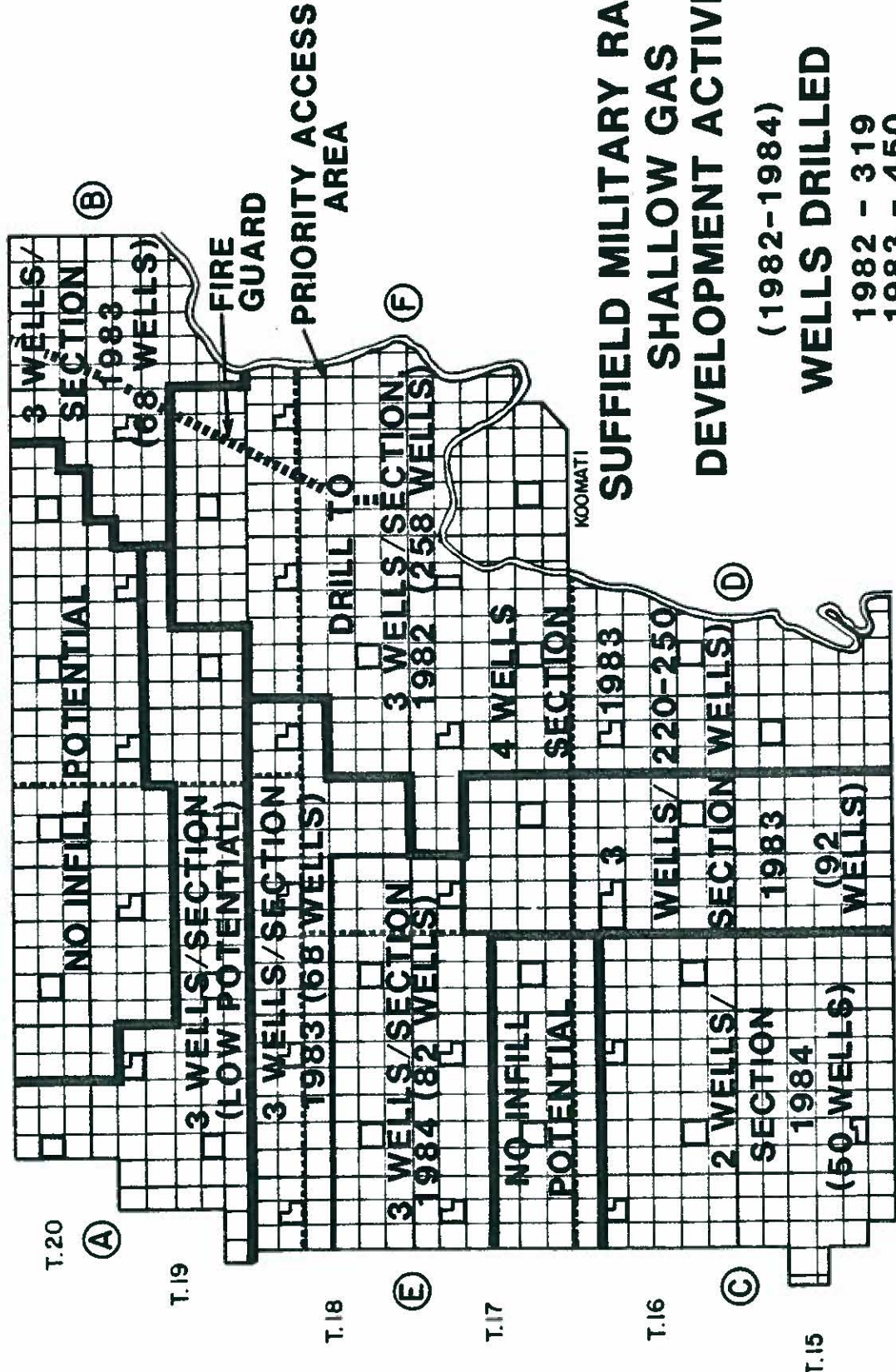
1. Introduction. Plans for 1982, 1983 and 1984.
2. Drilling Plans
 - a. Shallow gas development drilling - specific priority area of development.
 - b. Area F exploration to be conducted in winter months. Most activity will be a seismic programme this winter.
 - c. Potential for heavy oil development: perhaps 10 locations in 1982 and 30 - 40 locations in early 1983.
3. Facilities
 - a. Each area has a major gathering/compression system with the exception of Area F.
 - b. It has become apparent during the course of development, that a high capacity gathering system and compressor station is necessary to service the high productivity in the East-central portion of the Suffield Block.
 - c. We have given serious consideration to a centrally located station in Area F, but we now feel the best compromise of access and design considerations is a compressor station on the East side of the river in Koomati. (Reference Slide)

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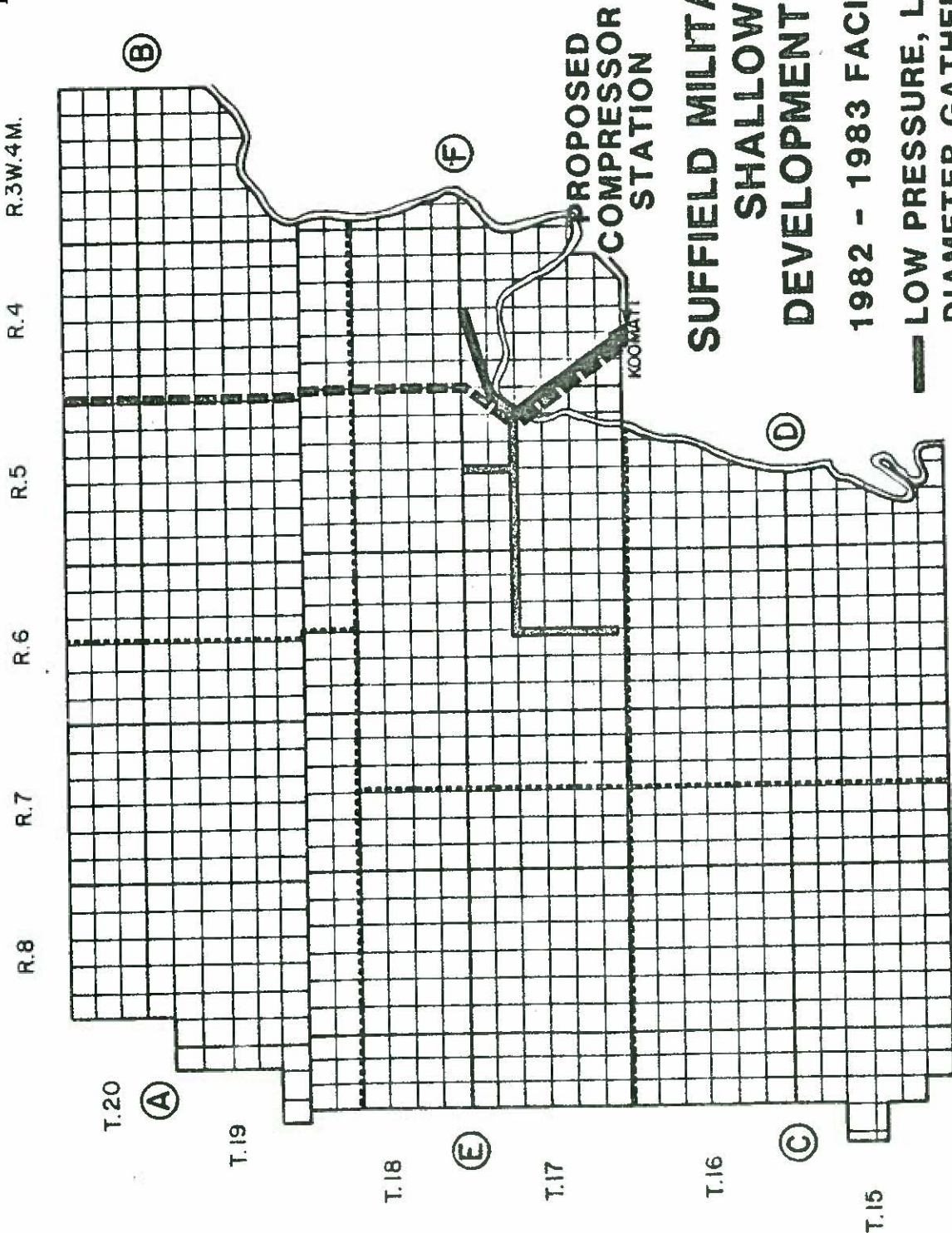
APPENDIX 1
TO ANNEX C
TO 1180-3 (BCOMD)
DATED 27 MAY 1982

R.3W.4M. R.4 R.5 R.6 R.7 R.8



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APPENDIX 2
TO ANNEX C
TO 1180-3 (BCOMD)
DATED 27 MAY 1982



**SUFFIELD MILITARY RANGE
SHALLOW GAS
DEVELOPMENT ACTIVITY**

1982 - 1983 FACILITIES PLAN

- LOW PRESSURE, LARGE DIAMETER GATHERING SYSTEM
- HIGH PRESSURE SALES LINE

1982.05.27

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ANNEX D
TO 1180-3 (BCOMD)
DATED 27 MAY 1982

REPORT ON MITIGATION MEASURES TAKEN
IN MIDDLE SAND HILLS
1981/82

REFERENCE: A. W.O.E.S. REPORT 1981

THE RECLAMATION WORK CARRIED OUT IN THE MIDDLE SAND HILLS BY AEC DURING THE OCTOBER-NOVEMBER 1981 TIME FRAME CONSISTED OF WORK ON TWO ROAD OR ROUTE SITES AND TWO WELL LOCATIONS. THEY ARE IN FACT THE LOCATIONS WE VISITED DURING THE 1ST DAY OF THE TOUR.

THE SITE SELECTION WAS BASED ON THE RECOMMENDATION OFFERED IN THE WOES REPORT. THREE ADDITIONAL WELL LOCATIONS RECOMMENDED FOR RESEEDING WERE NOT COMPLETED AT THIS TIME DUE TO THE SUDDEN ARRIVAL OF WINTER. THEY HAVE, HOWEVER, BEEN INCLUDED IN THE SEEDING PROGRAM WHICH IS JUST STARTING ON OUR 1981/82 WINTER WELL PROGRAM IN THE SAND HILLS. THE THREE LOCATIONS I SPEAK OF ARE SPECIFICALLY 16 OF 16 - 19 OF 3, 16 OF 20 - 19 OF 3 AND 7 OF 29 - 19 OF 3.

(REFER TO SITES ON MAP)

.../D-2

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ANNEX D
TO 1180-3 (BCOMD)
DATED 27 MAY 1982

THE SEED MIXTURE USED ON THE SITES WAS THE 1-A SEED MIXTURE RECOMMENDED BY WOES, MADE UP OF CRESTED WHEAT GRASS, RUSSIAN WILD RYE, ALFALFA AND, IN PLACE OF THE RECOMMENDED SLENDER WHEAT GRASS, WE HAD TO SUBSTITUTE CANADIAN BLUEGRASS DUE TO THE NON-AVAILABILITY OF THE FORMER.

THE WELL RECLAMATION PROGRAM, WHICH IS NOW UNDERWAY, IS USING THE RECOMMENDED 1-B SEED MIXTURE OF CRESTED WHEAT GRASS, PERENNIAL RYE GRASS, ALFALFA AND CANADIAN BLUEGRASS. WE ARE INTENDING TO USE THIS SAME SEED MIXTURE ON THE FLOWLINE ROUTES IN THE SAND HILLS WHEN THAT PROGRAM GETS UNDERWAY LATER IN THE YEAR. AT ANY RATE, SEEDING OF THESE LINES WILL NOT COMMENCE BEFORE SEPTEMBER 15 IN ORDER TO MAXIMIZE THE ADVANTAGES OF THE FALL RAINS WE CAN EXPECT (HOPEFULLY) AT THAT TIME OF YEAR.

COMING BACK TO THE PRESENT, I WOULD LIKE ONLY TO POINT OUT THAT IT IS OUR INTENTION TO MONITOR CLOSELY THE RESULTS OF OUR WORK ON THE FOUR SITES MENTIONED EARLIER AND CONTINUE TO IMPROVE ON THEM AS THE GROWTH PATTERN EMERGES TOGETHER WITH THE ADVICE AND RECOMMENDATION OF OUR CONSULTANTS.

D - 2

~~CONFIDENTIAL~~

1981 ARCHAEOLOGICAL PROGRAM ON THE SUFFIELD MILITARY RESERVE: A SUMMARY

John Brumley
Ethos Consultants Ltd.

Archaeological work conducted on the Suffield Reserve in conjunction with energy development activities during 1981 can be divided into two components: (a) the ongoing examination of energy development locations and mitigation of archaeological sites present, and (b) the description, analysis, reporting, and interpretation of 72 archaeological sites mapped and/or excavated in conjunction with development activities over the last five years.

During 1981, a total of 302 wellsites, 182km of pipeline right-of-way and a single gravel pit location were archaeologically surveyed (Saylor 1982). A total of 22 archaeological sites were located during these investigations. Mitigation was undertaken at 16 sites and consisted of relocating the development area (13 sites), fencing (2 sites), relocation and fencing (1 site), and mapping and test excavation (1 site). An evaluation of archaeological fieldwork conducted within the Sandhills area suggests that the frequency of archaeological site discovery is quite low, although much of the area is considered of high site potential. This situation may reflect a higher frequency of totally buried sites and the inability of survey techniques employed to detect such sites. It is recommended that in the future, archaeological examination not be conducted after the locations are surveyed in, but rather after initial development activities have occurred. Thus, in wellsites, examination would take place after mud and flare pits are constructed and pipeline right-of-ways would be examined after the ditches were excavated. This procedure would thus not mitigate the effects of these developments on sites present, but would allow for their discovery and formulation of mitigation procedures for subsequent work in the same area.

Preparation of the report on the 72 archaeological sites mapped and/or test excavated between 1977 and 1981 was also initiated. Two of the three volumes comprising this project have been completed. The third volume is complete except for the final summary, discussion and conclusions section. The writer originally intended to complete this section by late December or January and to have the third volume complete by that time. However, three other projects the writer was involved in at the same time were pursuing lines of investigation which would provide significant results for interpreting the Suffield data. Thus, completion of volume three was deferred until the studies were completed and their results could be incorporated into the report at no additional cost to Alberta Energy Company. It seems warranted to briefly note what those projects are and how they will aid the final Suffield volume.

.../E-2

Brumley (1982) analyzed a 4200 year old Oxbow campsite located in the city limits of Medicine Hat. A major focus of this project was the functional analysis of aboriginal cultural material recovered. A conceptual model to interpret various types of cultural material was developed which is of particular value in understanding and interpreting the non-descript quartzite and argillite stone tools commonly found at the sites excavated on the Reserve.

Also, Brumley et al. (1982) prepared a report for Alberta Environment presenting an assessment of archaeological resources within the proposed Forty Mile Coulee Reservoir Project south of Bow Island. A component of this report was the development by the writer of a settlement model for all of southeastern Alberta which interprets patterns of aboriginal settlement within the region in response to a number of resources, the most important of which are surface water, game availability and fuel. This model was developed in large part on the results of archaeological research on the Suffield Reserve and the model will be employed in interpreting this material in volume 3 of the Suffield report.

Quigg and Brumley (1982) are just completing a project for the State Historical Society of North Dakota involving the review and appraisal of all major stone circle studies in the northern Plains; and the development of a research design for future stone circle studies. One component of this report involved a major review of recent historic and ethnographic documents dealing with aspects of aboriginal life most relevant to an understanding of stone circles and aboriginal settlement systems. Involvement in this project has given the writer a number of insights into stone circles which will be incorporated into volume 3.

Although I regret that the final mitigation volume has not been completed as yet, I hope the foregoing discussion indicates the reasons why and justifies the delay. A completion date for this volume is definitely scheduled for the end of June, 1982.

Although not completed, I can discuss in general terms some of the conclusions reached as a result of the mitigation work conducted on the Reserve.

The South Saskatchewan River valley and its margin was the most extensively utilized area of the reserve. Wood for fuel, surface water, and abundant game occurs here more commonly on a year-round basis than in any other area of the Reserve. Favorable topography within and adjacent to much of the river system made it ideally suited for employment of the variety of individual and group hunting techniques utilized by aboriginal man. Exposed river gravels provide the most accessible and concentrated source of both fine and coarse grained lithic materials for tool production. Archaeological research within and adjacent to the Reserve indicates the valley was occupied on a year-round basis probably with an emphasis on early spring to mid or late fall.

.../E-3

~~CONFIDENTIAL~~

ANNEX E
TO 1180-3 (BCOMD)
DATED 27 MAY 1982

Away from the river valley where most of the sites mitigated for A.E.C. are located, woody fuel is totally absent or sparsely distributed; surface water is commonly absent or present only seasonally; and topography can be quite level and featureless. This makes a variety of aboriginal hunting techniques difficult or impossible to employ. Campsites are normally small; usually containing no more than 1 or 2 stone circles. This suggests hunting by individuals or small groups. A few bison kill sites are known but even these are relatively small in comparison to kills along the river valley. The amount of cultural material present at most stone circle campsites is relatively sparse suggesting only brief occupation. Tools present are typical of implements used for butchering meat. However, the low frequency of bone and heat fractured stone indicate animals killed were being only lightly butchered, with processed meat intended for immediate consumption. Little meat was apparently stored for later use.

The location of most excavated sites near seasonal water bodies as well as the distributional pattern of stones comprising stone circles suggests most sites on the open prairie were occupied from mid-spring to mid-summer.

Examination of stone circle density per square mile in relation to their distance from the nearest water indicates stone circle density is quite high within 0-1 mile of the river and from 14 - 15 miles from the river. Between these two peaks, stone circle density falls off dramatically. Significantly the average distance travelled daily by historic aboriginal groups, is close to the distance interval between these two peaks. Thus, many of the stone circle sites may reflect short-term camps of groups enroute through the area.

The foregoing comments have been intended to point out just a few of the major findings as a result of the A.E.C. mitigation program on the Suffield Reserve. The writer has found the last year particularly exciting archaeologically. After pursuing archaeological research in southeastern Alberta for 10 years, I feel we are finally at the point where we are beginning to more than simply document what we find at archaeological sites. We have reached a level with our data base where we can begin to perceive patterns in why sites are located where they are and why they do or do not contain certain types of cultural material. The archaeological research conducted on the Suffield Reserve in conjunction with energy development has been a major contribution in reaching this point.

.../E-4

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

ANNEX E
TO 1180-3 (BCOMD)
DATED 27 MAY 1982

References

- Brumley, John H.
1981 Result of salvage excavations at the Southridge Site, Ea0q-17. Report prepared for and on file with the City of Medicine Hat, Alberta.
- Brumley, J.; B.J. Dau and L. Heikkila
1981 1976 to 1980 salvage investigations on the Suffield Military Reserve, Alberta. 3 volumes. Report prepared for and on file with Alberta Energy Company Ltd.
- Brumley, John H.; M. Leigh Heikkila and Stanley Saylor
1982 Historical Resources within the Forty Mile Coulee Project: An inventory and planning document. Report prepared for and on file with Alberta Environment. Edmonton.
- Quigg, J.M. and J. Brumley
1982 Stone circles: A review, appraisal and future directions. Report prepared for Division of Archaeology and Historic Preservation. State Historical Society of North Dakota. Bismarck.

~~CONFIDENTIAL~~

MEMORANDUM

3300-1-8.

1180-3 (Ops)

11 May 82

Distribution List

1982 NATURAL GAS-OIL
AEC/CFB SUFFIELD MEETING - 27 MAY 82

- Refs: A. 1180-3 (Ops) dated 07 Apr 82
B. 1180-3 (Ops) dated 10 May 82

1. This meeting will take place in the conference room of Building No 1 (Headquarters and main laboratory of DRES) from 0900 hrs 27 May 82. Some of the 18 participants will arrive by aircraft. An official luncheon will take place in the Suffield Garrison Officers' Mess from 1200 hrs.

2. The purpose of this letter is to summarize support requirements, most of which have already been set in motion and to initiate others. Support is required as follows:

a. B Security O

- (1) Establish a reserved parking area on the East side of the street in front of the Officers' Mess from the PMC's parking place to the corner opposite the Base Headquarters Building. Sign the area to the effect "AEC/CFB Suffield Meeting Parking only";
- (2) Reference B includes the names of participants. Use it to expedite access through the main gate.
- (3) Supervise use of the reserved parking area from 0830 - 0900 hrs 27 May 82.

b. Photography. BIO has requisitioned photographic coverage for a group photograph at 0900 hrs 27 May 82.

c. Manager Suffield Garrison Officers' Mess. The proposed format for the lunch is 1200 - 1230 hrs drinks, 1230 - 1330 hrs luncheon in the dining room. Please see to the following:

- (1) a selection of menus from the B Foods Svcs WO to me by 17 May 82;

.../2

(2) a steward available to the BComd 1200 - 1230 hrs; and

(3) recommend wines once the menu is agreed.

This luncheon will be financed as official entertainment. No seating plan is necessary.

d. BTNO. A staff car/wagon is required as stand-by at the airfield from 0820 hrs to 0900 hrs 27 May 82, should the weather be inclement, to transport up to four participants to Bldg 1. Aircrew will be looked after by AEC.

3. AAC Det BATUS has been asked to marshall incoming aircraft.

Original signed by

D.A. Elrick
Maj
B Ops O
305

DISTRIBUTION LIST

ACTION

INFO

BTNO
B Security O
Manager, Officers' Mess

BIO
BPSO
Secretary, Officers Mess
(Capt Parle, Ord Coy BATUS)
BSM



Canadian Armed Forces
Mobile Command

Forces armées canadiennes
Force mobile



3300-1-8.

1180-3 (Ops)

Headquarters
Canadian Forces Base Suffield
Ralston, Alberta
TOJ 2NO

10 May 82

Commander
British Army Training Unit
Suffield
Ralston, Alberta
TOJ 2NO

ANNUAL AEC/CFB SUFFIELD
NATURAL GAS-OIL MEETING 27 MAY 82

Reference: A. 1180-3 (BComd) dated 29 May 81 (Minutes of a Meeting)

1. During the 1981 meeting it was indicated that by the mid 1980's an additional battle group would likely be added to the Exercise Medicine Man series. Reference, para 15b refers.
2. We would appreciate being advised of the current situation prior to 26 May 82, please.

Original signed by

D.A. Elrick
Major
for Base Commander



1180-3 (Ops)

Headquarters
Canadian Forces Base Suffield
Ralston, Alberta
TOJ 2NO

10 May 1982

Distribution List

1982 NATURAL GAS-OIL DEVELOPMENT
MEETING ALBERTA ENERGY COMPANY (AEC)/
CANADIAN FORCES BASE SUFFIELD

Reference: 1180-3 (Ops) dated 07 April 1982

1. The agenda for this meeting is attached at Annex A.
2. Please note the meeting will take place in Building 1, the main laboratory and headquarters of Defence Research Establishment Suffield (DRES) which is located directly opposite the Suffield Garrison Officers' Mess. In order to meet access control requirements any last minute additions to the attendance list should be passed to the Secretary as soon as they are known and you are requested to arrive promptly by 0850 hours.
3. Attendance will be as follows:

a. Representatives

Chairman	Colonel J.K. Dangerfield Base Commander CFB Suffield
Members	Major AS (Al) Johnston Directorate of Land Operations Training NDHQ
	Mr CJ (Joe) Crowe Director General Properties & Utilities NDHQ
	Mr Roger Gimby Director Gas & Oil Operations, AEC
	Mr GG (George) Brown Senior Advisor AEC
	Mr Steve Balog Manager, Petroleum Engineering, AEC
	Mr G.A. (Gordon) Cormack District Production Manager, AEC

Members

Mr John Mysyk
Drilling Superintendent, AEC

Mr Hank Barrett
Supervisor Range Safety, AEC

Mr WE (Bill) Davies
Senior Range Safety Officer, AEC

Mr Doug Harrington
Alberta Environment, member of SEAC

Mr Lloyd Bellows
ERCB, member of SEAC

Dr Roger Edwards
Environment Canada (CWS), member of SEAC

Secretary

Major DA (David) Elrick
CFB Suffield

b. In Attendance

Colonel WA (Tony) Allen
Commander British Army Training Unit Suffield (BATUS)

Major WGC (Billy) Bowles
GSO2 (Tactics), BATUS

Dr CH (Chester) Baker
Chief, Defence Research Establishment Suffield (DRES)

Mr BG (Bryan) Laidlaw
Head, Field Operations Section, DRES

Original signed by

D.A. Elrick
Major
for Base Commander

Attachment: Annex A - Agenda

Enclosures: Environment Canada WLU 300-7/09, 28 Apr 82
DRES 7795-3 (FOS), 20 Apr 82

DISTRIBUTION LIST

EXTERNAL
ACTION

NDHQ: Attn: DGPU
 DLOT 3
Commander BATUS (2)
Chief DRES (3) (one for Security)

INTERNAL
ACTION

B Ops O (2)
B Security O (2) (one for main Gate)
B Compt (less atts & encls)

INFORMATION

B Adm O
BCEO
RTSO

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Alberta Energy Co Ltd
Attn: Mr R Gimby

Environment Canada
Attn: Dr R Edwards

Environment Alberta
Attn: Mr DG Harrington

Energy Resources Conservation Board
Attn: Mr LA Bellows

INFORMATION

Mobile Command Headquarters
Attn: Deputy Commander

ANNEX A to
1180-3 (Ops)
Dated: /O May 82

AGENDA

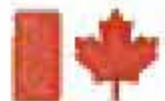
FOR THE 1982 NATURAL GAS-OIL DEVELOPMENT MEETING

TO BE HELD IN THE CONFERENCE ROOM BUILDING NO 1

CANADIAN FORCES BASE SUFFIELD

AT 0900 HOURS 27 MAY 1982

<u>ITEM</u>	<u>SUBJECT</u>	<u>SPONSOR</u>
I	Introduction	Base Commander
II	Matters Outstanding from 1981 Meeting	Base Commander
III	Testing of Oil Wells in Area C	AEC
IV	Use of Area E	AEC
V	Gas and Oil Development in 1981/82	AEC
VI	Future Development 1982/83 and 83/84	AEC
VII	Middle Sand Hills Development and Mitigation	AEC
VIII	Archeological Summary	AEC
IX	Review any changes in AEC Range Safety	AEC
X	Revegetation of Native Grasses	SEAC
XI	Field Inspections by Environmental Protection Services (EPS)	SEAC
XII	Status of DRES Field Trial and Range Cleanup Programmes	DRES
XIII	Impact of AEC Programme on Road and Fireguard Maintenance	Base Commander
XIV	The Range Development Plan	Base Commander
XV	Other Business	
XVI	Adjournment	Base Commander



Environment Canada Environnement Canada

Canadian Wildlife Service Service canadien de la faune

Your file dossier

Our file Notre dossier

WLU 300-7/09

1000, 9942 - 108 Street
Edmonton, Alberta
T5K 2J5

CFB SUFFIELD
CENTRAL REGISTRY
FILE 1180-3
DATE 3 MAY 82

April 28, 1982

Major D.A. Elrick
Headquarters
Canadian Forces Base Suffield
Ralston, Alberta
TOJ 2N0

NAME	INITIALS	DATE
Bofo		

Dear Sir:

1982 Annual Meeting, DND-AEC-SEAC

In response to your request of 7 April 1982, please be advised that the following SEAC members will attend the meeting:

- Mr. Doug Harrington, Alberta Government
- Mr. Lloyd Bellows, ERCB
- Dr. Roger Edwards, Environment Canada

I would like to include two items on the agenda. These are

- 1) Revegetation with native grasses
- 2) Field inspections by EPS

a copy of a discussion paper related to item 1 is attached.

As far as travel arrangements go, I believe that AEC is arranging a tour of their operations for the 25/26 May which SEAC members will be attending, and will therefore be staying overnight in Medicine Hat. Travel to the meeting will therefore be by private vehicle or by private aircraft (myself).

Yours sincerely

Original signed by

R. Edwards, Head
Ecological Assessment
Canadian Wildlife Service

cc D. Harrington
L. Bellows

Attach.

R. Edwards

SEAC - Suffield Environmental Advisory Committee

Re: Reclamation at wellhead sites and Pipeline right of ways, CFB Suffield. In evaluating the success of reclamation of hydrocarbon activity disturbances, the question of the intent of the reclamation work needs to be answered. Is the intent only to mitigate against instability, or is it to restore the disturbed land to its natural state? Consistent with our discussions with DND on other land uses, we feel that the latter is clearly the desired objective. As such, reclamation will not be complete until native cover is re-established.

It is felt that the present approach to revegetation is not conducive to achieving the objective of maintaining native cover on CFB Suffield. Rather, the sole use of foreign grass species in reclamation at wellhead sites and pipeline right of ways, we feel, has resulted in vivid scars of disturbance which, without remedial measures, will persist as such for at least the next half century.

The strategy for restoration of the native cover on CFB Suffield should, in our opinion, reflect the natural succession. As such, only native species should be used in future reclamation work; and in order to facilitate the re-establishing of the natural plant community sociology the seed mixture should be diverse and include non-grass species. As well, means for reverting those areas where foreign grasses have established to native cover need to be developed and implemented.

In 1977, S. Smoliak recommended that Crested Wheatgrass or Russian Wildrye be used, both for their usefulness in stabilizing soil and their desirability as forage for use by livestock. He indicated that if use of native species was

essential a mixture of Slender, Western and Northern Wheatgrasses be used. Subsequently, a mixture of Crested Wheatgrass and Russian wildrye has been used almost exclusively, with relatively good, although variable results in stabilizing disturbed areas. The use of this simplistic and foreign culture has, however, resulted in perpetuating the visual disturbance and adulterating the native grassland community.

During 1977 also, Jaques reported the successional pattern of revegetation of disturbed sandy soils as follows:

"Psoralea lanceolata (Surf pea) and Oryzopsis hymenoides (Rice grass) are primary invaders of the bare sand. Elymus canadensis (Wildrye), Calamovilfa longifolia (Prairie Sandgrass), Chrysopsis villosa (Golden Aster) and Artemisia cana (Silver Sage) quickly follow. Koeleria cristata (June grass) Linum rigidum (Yellow Flax) and Stipa comata (Speargrass) are common invaders at a later stage. The final stable stage is made up of the Artemisia cana/Stipa comata - Agropyron dasystachyum (Silver Sage/Speargrass - Northern Wheatgrass) community."

We feel it reasonable to expect that the spontaneous revegetation by these species reflects their adaptedness and that they therefore would be most appropriate for artificially revegetating disturbed sites. As well, the RRTAC manuals on plant species suitable for reclamation work confirms Rice Grass, Sandgrass and June grass as drought tolerant and suited to reclamation in sandy soils, which, as you know, exist in the low to moderate trafficability areas of CFB Suffield.

The presence of the non-grasses, Scurf pea, Golden Aster and Yellow Flax in the natural succession from bare soil to climax vegetation suggests that these species are well adapted to, and have a definite role to play in restoration of disturbed sites. Off hand, it appears that the use of the spreading leguminous Scurf-pea in particular would be inherently beneficial in reclamation of loose and nutrient deficient soils. It should be pointed out that in our report of the 1980 assessment of the hydrocarbon activity in the Middle Sandhills area it was indeed noted that indigenous flora including non-grasses appeared more effective at establishing itself in disturbed areas.

While we feel that the suitability of the native grasses is amply demonstrated by the foregoing, testing of the non-grasses may be deemed necessary.

In the past, besides species suitability, objections to proposed use of native species have been made on the basis of seed availability and cost. It should, therefore, be pointed out that all native grasses listed, with the possible exception of E. canadensis, are readily available from local seed dealers such as Prairie Seed Ltd. of Edmonton. In the event that non-grass species should be desired, seed supplies could readily be developed through contractual arrangements with them.

As for cost, native grass seeds do cost between 10-20 times as much as the non-native varieties. In relation to the overall cost of reclamation, and including potential for success, however, the additional seed cost is relatively small. In terms of total development cost and value to be

received, the seeding costs would be extremely small to an environmentally concerned corporate citizen.

Finally, as alluded to before and expressed by Smoliak in his letter in 1977, it is unlikely that the areas seeded to Crested Wheatgrass and Russian Wildrye will be restored to native vegetation within the foreseeable future, unless further measures are taken. Such measures could involve underseeding, plow down, burning or chemical control and reseeding. None of these measures is without considerable drawbacks (eg. competitiveness, erosion, chemical contamination).

Herbicidal control followed by reseeding, however, appears most feasible in that it would not fully remove the cover, and thereby not create erosion potentials. It would eliminate the strong competition, and permit the establishment of native species. Such herbicides as Round up, Kerb, Dowpon M and Hoedown appear to be suited for effecting control of the target species.

However, we feel those herbicides as well as other methods should be further evaluated before large scale use. It appears to us that the parcel of land having Crested Wheatgrass established on it in the Falcon block would be ideally suited for the laying out of experimental plots.

In summary, we suggest that at its upcoming meeting, SEAC:

- a) undertake to approve only seed mixtures of diverse native species.

- b) undertake to have non-grass species indigenous to CFB Suffield evaluated for their utility in reclamation, and have suitable species subsequently included in the recommended seed mixture, and
- c) undertake to have measures for restoring Crested Wheatgrass and Russian Wildrye seeded areas to native species evaluated and implemented.

JFJZ/sz



3300-1-8

1180 - 3 (Ops)

Headquarters
Canadian Forces Base Suffield
Ralston, Alberta
TOJ 2NO

07 April 1982

Distribution List

1982 NATURAL GAS - OIL DEVELOPMENT MEETING
ALBERTA ENERGY COMPANY/CANADIAN FORCES BASE SUFFIELD

Reference: A. 1180-3 (BComd) dated 29 May 1981
(Minutes of 1981 Annual Meeting)

1. The 1982 Natural Gas - Oil Development Meeting will take place commencing at 0900 hours, 27 May 1982 at Canadian Forces Base Suffield.

2. The purpose of the meeting is to consider any revisions to the Long Range Plan; to review the preliminary Area Development Plan as defined in the Memorandum of Agreement dated 28 Oct 1975 and 14 Nov 1977; and to resolve any problems of mutual concern.

3. As in the past, representatives to the meeting are requested from the following:

- a. Headquarters, Canadian Forces Base Suffield;
- b. Alberta Energy Company Limited;
- c. Defence Research Establishment Suffield;
- d. Suffield Environmental Advisory Committee;
- e. National Defence Headquarters; and,
- f. in attendance, Commander and GSO2 (Tactics), British Army Training Unit Suffield.

4. To facilitate preparation of an agenda and administrative preparations for the meeting you are requested to provide the personal particulars, including christian names, of your representative(s), proposed agenda items and travel arrangements to this headquarters for the attention of the Base Operations Officer, by 03 May 1982. Nil returns are required. The agenda will be issued by 14 May 1982.

*3 B ops &
2 hrs discussed this
with 20 BPSO and have
no points for the agenda
Cmms
Suffield
13 Apr 82*

*3 BOP.
PA in file please.
le
B upo
13 Apr 82
325*

5. Please also include, if applicable, a copy or summary of any lengthy or potentially controversial presentation you plan to make at the meeting. In any case a copy of presentations or similar papers should be made available to the Secretary during the meeting for attachment to the minutes.

Original signed by

D.A. Elrick
Major
for Base Commander

DISTRIBUTION LIST

External

Action

NDHQ Attn: DGPU ✓
 : DLOT ✓
FMCHQ Attn: DComd
Chief DRES (2) ✓
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 Attn: Mr. R. Gimby
Department of Environment Canada ✓
 Attn: Dr. R. Edwards
Department of Environment Alberta
 Attn: Mr. D.G. Harrington
Energy Resources Conservation Board
 Attn: Mr. L.A. Bellows
Commander BATUS (2)

Internal

Action

B Ops 0
B Adm 0 ←
BCEO
BCompt
BTSO ✓
RCO ✓